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ROMAN TOWNS:
THE WHEELER INHERITANCE

A REVIEW OF 50 YEARS' RESEARCH

Edited by STEPHEN J GREEP

Roman Towns: the Wheeler inheritance

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Front cover Mortimer and Tessa Wheeler sorting pottery during excavations at Veru lamium (Courtesy of Verulamium Museum)

Back cover Tessa Verney Wheeler at Verulamium

ROMAN TOWNS:
THE WHEELER INHERITANCE

The excavations at Verulamium between 1930-34, the publication of 'verulamium: A Belgic and Two Roman Cities' in 1936 and the opening of the Verulamium Museum in 1939, each significant landmarks in the study and interpretation of Roman Britain, were celebrated by a conference in St Albans in late 1989. The papers presented at this conference have been revised for this volume which contains the results of 50 years' research on the largest towns of Roman Britain, with up-to-date summaries ofcurrent thinking. It contains a blend of the historical and modem ideas of not only the towns of Roman Britain but also aspects of material culture which have affected their interpretation.

Well illustrated throughout, the volume includes contributions on Carmarthen (James), Caerwent (Brewer), Cirencester (McWhirr), Colchester (Crummy), London (Milne), Silchester (Fulford), Winchester (Qualmann), Wroxeter (Webster). and Verulamium (Niblett), togetherwith coins (Davies), inscriptions (Tomlin). mosaics (Johnson). wall painting (Ling) and small towns (Bumham) and a historical 'keynote' paper (Todd).

Tessa *Verney Wheeler* at Verulamium

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Preface

The papers which form this volume were presented to a conference between 17th-19th November 1989. The conference, chaired by Professor Martin Biddle, represented the culmination of a series of events to mark the 50th anniversary of the Verulamium Museum, St Albans. The conference was attended by over 150 delegates, many of whom expressed a desire to see the papers published. This led to approaches to the Council for British Archaeology, who agreed to produce the present work. The conference (and this volume) was split into two halves. Following the keynote paper of Professor Todd, papers were delivered on the history of research over the last 50 (or so) years on a variety of Roman towns and on a selected series of groups of material culture. The choice of subjects was somewhat random, depending upon availability of speakers, time and degrees of research. As editor I have attempted to preserve the spirit of the conference in not enforcing a rigid unity of approach on the authors, but allowed a fairly liberal interpretation of the original brief - as was taken by the speakers in any case!

The authors were given the opportunity to update their papers in 1992. That the volume has taken four years to come to print has inevitably meant that the papers presented here have lost a little of their immediacy, though not, it is hoped, their importance. With one exception (Canterbury) all the papers presented at the conference are included. In addition a summary of work at Carmarthen has been added, since although not presented at the conference (Heather James was a delegate) it seemed an ideal opportunity to offer a much needed synthesis. Philip Crummy's contribution has been split, at his request, into two separate papers.

SJG, Newcastle
12 April 1993

Introduction

In 1929 Earl of Verulam sold to the corporation of St Albans a large part of the site of the Roman city of Verulamium. This was followed by an approach to the Society of Antiquaries with a view to excavation and preservation. The then Keeper of the Museum of London, one Mortimer Wheeler, was invited to undertake the task, under the auspices of the Verulamium Excavation Fund (St Albans Museums 1989).

The publication of *Verulamium* by the Wheelers in 1936 greatly influenced subsequent ideas on the research and excavation of Roman towns in Britain. The results of these campaigns provided for the first time an account of the development of Verulamium and its pre-Roman antecedents. Inevitably, their ideas and conclusions have been modified (eg Davies & Saunders 1984; Niblett 1987; this volume) but this publication was undoubtedly as of great importance for the study of Roman towns in Britain.

During the excavations of 1930-33 a small wooden building, serving as the first 'Verulamium Museum' had been opened and had proved extremely popular with local residents. Though the excavations ended in 1933 the 'museum' was still open in 1934 when Tessa Wheeler, co-director of the excavations and a popular figure locally, appealed for the rapid construction of a site museum. The death of Tessa Wheeler, a locally much-loved figure, in 1936 (Hawkes 1982, 134), prompted the collection and presentation of a petition to the City Council specifically asking that her work should be commemorated. The erection of a site Museum would, it was felt, be a suitable memorial and the one she herself would have chosen (Greep 1984).

At 2.45 pm on the 8th May 1939 in front of a large crowd of onlookers an event described by the Herts Advertiser of the day as 'of outstanding importance in the history of the ancient city of St Albans' took place. After addresses by the city Mayor (Mr T F Elm), the Chairman of the Museums committee (Mrs Wix) and Dr R E M Wheeler (Keeper of the London Museum) the Verulamium Museum was declared officially open by the Earl of Harewood. The museum door was opened with a ceremonial silver gilt key and a memorial tablet unveiled before the principal guests were shown around by the newly appointed curator, Philip Corder and Wheeler; the general public were admitted after 5.30 pm.

The part played by the Wheelers, and Tessa in particular, in persuading the council to finally build the museum is recorded in a plaque in the entrance hall to the museum:

> In grateful and affectionate remembrance
> of Tessa Verney Wheeler, whose energy
> and enthusiasm contributed so largely to
> the success of the Verulamium
> excavations this tablet is placed here by
> her friends in St Albans.
>
> MCMXXXVIII.

Corder in his short discussion of the building of the Verulamium Museum noted that 'The Museum may be regarded as a memorial to that (ie Tessa Wheeler) great scholar, archaeologist and beloved teacher, who planned it but never lived to see its completion' Corder 1939, 123.

Tessa Wheeler died tragically in 1936, following an operation, and was buried at St Stephen's Church, St Albans. Her cremated body was placed in a tile tomb over the top of which were secured two full-size Roman bricks from Verulamium, It is to her that this volume is dedicated.

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Part I:
the towns

1 The cities of Roman Britain: after Wheeler *Malcolm Todd*

What this conference celebrates had its starting-point sixty years ago in 1929. A sizeable area of the site of *Verulamium* had been acquired by the City Council of St Albans for use as a public park. The Society of Antiquaries was approached for its advice on how the ancient site might be treated before the park was laid out. Dr R E M Wheeler, then Director of the London Museum, had already marked down *Verulamium* as a prime site for the investigation of Roman urbanism in Britain, following his series of major excavations on mainly military sites in Wales. Interests thus converged, or were persuaded to converge, as so often when Wheeler took a hand. His own words of twenty-five years later set the scene (Wheeler 1955, 99-100).

> The Corporation of St Albans had recently acquired nearly half the ancient site for use as a park and playing-fields, and had had the enlightened thought that the opportunity might be taken to carry out a tentative exploration there. Alfred Clapham as secretary of the Society (of Antiquaries), Dermot Casey and I attended upon the Mayor and Corporation at a hospitable luncheon which was served to us in the charming Regency town hall overlooking the busy market-place. It so happens that I have had a long experience of mayors, and am amongst their most fervent admirers. They represent the heart of England, these proud, courteous, friendly, sensible folk, who rise from their railway-ticket offices and their shops to attend in state to the affairs of their fellow-citizens. And the mayor on this occasion was no exception. He was Mr Ironmonger, the butcher; folk used to come from miles round to buy his honest sausages, and surely an honest sausage is the hallmark of a worthy butcher. We sat at his table, drank an unadventurous Graves, and then rose in turn and made our little speeches. (One of Mr Mayor's predecessors had in the year 429 entertained at just such a table as this the warrior-saint Germanus when, after paying homage to St Alban, he had led the local levies to victory against the advancing Picts and Saxons. Just so had Mr Mayor now invited us to lead the way to new victories, but these victories would be won on the playing-fields of *Verulamium* . . .).
>
> Thereafter for four summers (1930-33) we industriously sought these victories, toiling at the problems of, and arising from, *Verulamium,* and toiling always with the loyal backing of the civic rulers and their officers. It was a happy episode.

There were three directors of excavation: Wheeler, Tessa Wheeler and T Davies Pryce, the expert on terra sigillata. The main excavation programme ran for four seasons, from 1930 to 1933, but there was to be important work later on the theatre (Kenyon 1935) and on two other sites within the Roman city. The *dramatis personae* were an impressive assembly. Baillie Reynolds directed work for three seasons on the Roman gates. Kathleen Kenyon excavated on the Fosse earthwork and later on the theatre. 'lb Dermot Casey there fell the difficult operation of work in Prae Wood, and to A W G Lowther the task of survey and planning. Among the digging force there were Thalasso Cruso (later Hencken), Joan du Plat Taylor, Ione Gedye, Leslie Scott (later Murray Threipland), Kitty Richardson and Norman Davey. No doubt there were many others whose careers flowered in later years.

The excavation naturally attracted a great deal of attention. So did the excavation report when it appeared as the eleventh volume of the Research Reports of the Society of Antiquaries in 1936 (Wheeler & Wheeler 1936). Wheeler's reconstruction of the history of *Verulamium,* the first to be attempted of a major Romano-British city since the 19th century work at Silchester (Bushe-Fox's disinterment of Wroxeter cannot rank as reconstruction), was challenged as soon as it was published, notably by J N L Myres in a polished but savage review in *Antiquity* (Myers 1938). 'An unfinished task'; 'An air of finality which is both needless and misleading': these were two of the milder judgements in this famous piece of elegant sabotage. Myres was at his most mordant when summing up the report as a whole. 'It seems not so much to epitomize as almost to caricature by over-emphasis the salient features of urban history in the western Roman Empire'. A caricature Wheeler's account of *Verulamium* surely was, albeit a brilliant and persuasive one. It was cogent enough to leave an indelible impression on R G Collingwood's treatment of urban history in his contribution to *Roman Britain and the English Settlements,* also published in 1936. The Wheeler-Collingwood construct of 2nd century growth, followed by 3rd century recession, a precarious revival in the earlier

4th and a wretched end early in the 5th enjoyed a wide currency in the following thirty years. Not until the excavations in war-damaged cities after 1945 was the essential evidence gathered to support other views. But it was at *Verulamium* again that the next major advance was made. Sheppard Frere's work in the fifties and early sixties provided not only a corrective to Wheeler's account of that city, but more constructively, an urban sequence which was firmly based on meticulously observed stratigraphy, a grasp of the essentials of urban planning, and a detailed record of all the pottery finds and small objects (Frere 1972; 1983; 1984). Work in the war-damaged centres of London, Canterbury and Exeter before Frere's campaign at *Verulamium* had been informative, but the results were constrained by lack of the necessary funds for large-scale investigation. Partly as a consequence, this work was not notably coherent (Fox 1952; Grimes 1968). After the *Verulamium* excavations of 1955-61 came the boom of urban archaeology in the sixties and early seventies. Much important work was carried out at Canterbury, Cirencester, Colchester, Gloucester, Leicester, Lincoln, London, Winchester and Wroxeter; some of this work was published. The welter of information now available on Romano-British cities is intimidating in its sheer bulk and it is not surprising that there has been no attempt at synthesis since John Wacher's book of 1974 (Wacher 1974). Much more of the basic record needs to be published before such a synthesis will be viable. The comments that follow are intended merely to draw attention to a number of themes that call out for further treatment or which might be examined in other ways. Probably none of these themes would figure in a 'research design' of the kind so much in vogue at present.

To look at the total distribution of cities in Roman Britain is to realise that the province was not urbanised in the sense that, say, southern Spain or western Asia Minor was. In Britain and northern Gaul we find a wholly different scale of urbanisation than in most of the provinces around the Mediterranean. We cannot therefore make meaningful comparisons between the cities of *Britannia* and those of *Narbonensis* or *Numidia.* To do so would be to ignore the working of entirely different social orders and economic systems. Differences of scale must also be borne in mind when considering the size of communities. Cities in North Africa, Greece and Asia Minor give every indication of housing much larger populations than those of the north-western provinces. No ancient figures exist, of course, for Britain, but a population of 10,000 is not likely to have been exceeded by many cities, if by any A population of 5,000 to 10,000 will probably have been on the large side. My own guess (it can be no more than that) is that cities of medium size, such as Wroxeter, Leicester and Winchester contained between 2,000 and 4,000 people in all at their peak. Such populations are equivalent to those of minor country towns in southern England today. Our ideas about what such communities were capable of in the creation of an urban order must take account of population sizes that today would seem relatively modest. One of the most striking facts about Romano-British cities is that their rate of growth, judged by the crude information that is all that is available to us, was slow, and remained so over some three centuries.

The hierarchy of cities has become something of an obsession with Romano-British archaeologists. *coloniae, municipia* and *civitates* have been ranked in a rigid order of precedence which may look convincing at first sight but is false in its precision. We know very little about how these concepts should be defined in the western provinces. It is not clear, for example, that Roman citizenship was granted collectively to western provincial communities or if such a grant had any ineluctable link with a particular kind of urban constitution. There is thus considerable uncertainty about what a 'chartered' city was. *Municipia* pose particular problems. It is often assumed that *municipia* were chartered cities, ie were created by a *lex.* There is no satisfactory evidence for this and it would seem to involve insuperable legal difficulties, since *municipia* were communities governed by their own laws. (Millar 1977, 400). The sharp divisions which archaeologists often draw between *coloniae, municipia* and *civitates* are thus far from clear in the ancient legal evidence. Emperors might issue legal pronouncements which were addressed to all kinds of cities without distinction. In frontier provinces like Britain, where the favour of wealthy patrons might be weakly expressed, if at all, the point is of some significance. The status of a *colonia* might seem elevated in the legal sense, but what did it mean for the human communities themselves? The evidence from early Colchester and Gloucester is revealing here, not least for the modest living-space of the early colonists. In later contexts, can we really claim that the Romanity of the *coloniae* of Gloucester and Lincoln was more marked than that evidenced by, say Silchester, Cirencester or Canterbury? I doubt it, and as time went on any minor differences will have become even less meaningful. The fact is that across the provinces the range of city statuses was bewilderingly wide, but the distinctions were marked by local honours and *munera,* not by the circumstances of the original creation. What was important was the favour enjoyed by cities from emperors, senators and other wealthy patrons. The first two groups can scarcely have figured prominently in Roman Britain. It was thus upon the leading families in the cities that the main burdens will have rested and they cannot have come close to emulating the wealth of the urban oligarchies of the Mediterranean provinces.

The provision of public buildings and what this meant in terms of urban status have been central to the study of Romano-British cities, and reasonably so. But some aspects of the subject have been dealt with along rather formulaic lines, without proper regard to what was involved by the construction of these buildings. These structures might range from the large to the immense and they were being built

by communities that were still in relative infancy The logistics required to bring into being structures like the second *forum* of *Londinium* (Marsden 1987), for example, can only have imposed great strain on the resources of that community in the late 1st or 2nd century. The fact that a dozen or so cities in southern Britain were engaged in putting up major buildings at about the same time no doubt stimulated an economic boom, but it must also have required a concentration of effort which was very taxing for relatively small communities.

The point is relevant to the time needed to construct temples, *fora,* baths, and later defences. Archaeologists often assume that to define the date at which the foundations of a building were laid is to know its entire building history. In most cases, of course, only the foundation survives for examination, but that does not necessarily give us the whole story. The public buildings of cities were the greatest structures erected in Britain before the high Middle Ages and the time needed to complete the construction of a *forum* and *basilica* might run to decades rather than years. This seems to have been the case with the second *forum* and *basilica* of *Londinium*. Elsewhere, there are suggestions of halts and changes during construction, as seems to have been the case in the *forum* at Leicester (Mellor & Hebditch 1973). The revelation that timber fora might precede those in stone, as at Silchester (Fulford 1985) and perhaps at Exeter (Bidwell 1979, 73), must raise the question of what might have been missed elsewhere in smaller-scale or less detailed excavation.

The starting-date of many public buildings has provided matter for long discussion. The prevailing tendency has been to narrow down dates to the seventies and eighties, under the influence of Tacitus, *Agricola* 21 and the date of the *Verulamium* forum inscription (Eck 1970, 48-9). It is steadily becoming obvious that this date-range is much too narrow. Although some *fora* may have started in the seventies, others were probably not begun for another twenty years or even longer. The stone *forum* at Silchester probably dates from about 100, as does that at Exeter. The Leicester *forum* may have been laid out or begun in the eighties or nineties, but it was not completed before 120 at the earliest. That at Wroxeter was dedicated, presumably in its completed state, in 128/9. *Thermae* seem to belong to a later stage in urban planning. Those at Leicester, Wroxeter and probably Exeter, for example, were built in the Hadrianic-Antonine period.

The *metatio* of early cities has received a great deal of attention over the past decade, partly in relation to their military origins, chiefly in connection with the units of measurement used by Roman surveyors (Walthew 1978; Duncan-Jones 1980; Crummy 1982, this volume, chapter 12). None of the individual studies of Romano-British cities seems to be entirely convincing, though none can be rejected out of hand. The discussion of the systems of measurement that might have been employed in the layout of cities is reminiscent of the notorious medieval debate about many angels could dance upon the point of a pin. Within theoretical limits, argument can proceed quite merrily, When we turn to the empirical data, difficulties unfold. It is very much a matter of how the measurements of streets, insulae and buildings are achieved; what is measured from and what is measured to. That units of measurement were employed would probably be allowed by everyone. That standard units of measurement were scrupulously adhered to is a much less plausible proposition. The simple fact that such different series of units have been put forward by students of the same data would seem to suggest that the degree of standardisation was not marked. I do not wish to damn ingenuity and the subject is clearly an important one. But as yet the procedures followed by Roman urban surveyors have not clearly emerged. The assumption usually made that the main features of a town-plan are necessarily contemporary is dangerous, though contemporary elements can of course be distinguished. Building programmes that extended over several decades are unlikely to have been completed without modification to a carefully drafted master plan, though the end-product might give that impression. The point recurs when we consider the construction of public buildings (above).

Study of the defences of cities has occupied a great deal of energy and time in the past half-century, the circuits of most cities receiving at least some attention and a few, including Silchester and Lincoln, large-scale examination (Fulford 1984a; Jones 1980). It is now better appreciated that occasional sections are of relatively limited use in providing information on the structural history of a circuit. Much more effective, where it is possible, is extensive examination of whole sectors of defences, as has been undertaken at Cirencester, Silchester, Lincoln and London. Urban defences are clearly still an important subject, potentially revealing on the history of cities as well as their topography and physical development, and they have attracted their share of general studies and controversy Philip Corder's conspectus (Corder 1955) was helpful for its focus on the changes which were made to urban circuits in the late Empire. John Wacher's percipient disinterring of a series of earthwork defences, unmatched in an urban context in any part of the Empire, threw important light on the origins of urban defences in Britain (Wacher 1962). In pursuing the general historical aspects of defences, however, there has been a marked and hazardous tendency to seize upon a few historical occasions, recorded or assumed, and use them as a framework for the chronology of urban defence across the entire province. Thus, the earthwork defences have been variously linked with occasions in the later 2nd century, ranging from disturbances in the reign of Marcus Aurelius to Clodius Albinus' bid for power in 196/7 (Frere 1987, 241). External towers and wide ditches were for long assigned to a programme of restoration carried through by Theodosius after 367. All this involved highly speculative association between approximate dates supplied by archaeological evidence and histori-

cal events which were assumed to have left their impression on the cities of Britain. In fact, the earthwork defences of cities may date from any time between the mid 2nd century and the early 3rd on the evidence available from excavation. There is no good reason to concentrate all of them upon a single occasion, the bid of Clodius Albinus for instance. Even if Imperial sanction for their construction was required, itself by no means certain, it does not follow that all the native communities made an instant response.

This point is reinforced by what we now know of the dating of circuits in stone. Some stone walls were already provided in the 2nd century, notably at the *coloniae* of Colchester and Lincoln. In the native *civitates,* stone defences are now seen to date from a period beginning about 230 and extending over the following fifty or sixty years. It becomes more and more reasonable to see them as a reaction to the invasions suffered by Gaul about and after the mid 3rd century. What there is no warrant for is an assumption that they were built at about the same date. At several cities there are strong indications that the building of the defences in stone was carried out in a far from unified programme. It would hardly be surprising that circuits of one or two miles in length took many years to construct and that interruptions to the work occurred. Such indications are offered by the walls of Cirencester, Lincoln, Silchester, and probably Exeter. As with large public buildings, we too readily assume that defences were erected in much too short a time. Schemes begun with high ambitions need not all have been carried through to the original plan or to a fixed timetable. That, at least, seems to be indicated by considerable variation within individual circuits.

The modifications to urban circuits in the late Empire have also been linked with the historical record with a questionable precision. The addition of external towers to many city and town walls is not well dated in the great majority of cases. There is certainly no warrant for seeing this work as part of a single programme dating to 368 and later, or indeed to any single occasion. One of the towers at Caerwent was evidently already in existence before 350 (Casey 1983, 122). In view of the external towers on the Saxon Shore forts and the urban circuits of Gaul from the later 3rd century onward, it would not seem implausible that towers were added to city defences in Britain in that same period, though secure dating evidence is scarce. The supposed association between the building of towers and the provision of artillery appears to be supported by neither reason nor evidence. Few of the towers were designed to take fixed artillery and there is no independent evidence for the skilled crews needed to maintain and operate *ballistae.* Nor it is easy to see how *ballistae* could have been effective against the kind of rapid raids that barbarian attackers would favour. Ancient artillery was used to best effect in sieges, either in defence or attack. It seems unlikely that 4th century cities in Britain faced sieges as a matter of course, if at all.

A subject on which too little progress has been recorded in recent decades is urban housing. This must be regarded as perhaps the most neglected aspect of the urban archaeology of Roman Britain. And yet few are more important, for how a society housed itself says much about its social organisation. The main types of urban house are well established. It is clear that Italianate plans are very rare, if they are present at all. Much more prominent are houses of one or two ranges, the latter in an L-shaped plan, or courtyard houses, occasionally with outbuildings. Houses occupying an entire insula, as well recorded in *Gallia Narbonesis* and in the *Tres Galliae,* seem to be unknown. The simple block of four or five rooms appears to represent the simplest urban dwelling. Complexes which might have been divided into apartments are not readily discernible and residences of an urban proletariat seem notable by their absence. The prevailing picture, as revealed by the most fully recorded town-plans, those of Silchester, Wroxeter, *Verulamium* and Caerwent, is of a relatively limited number of large residences which dominated the townscape. This has long been noted in the case of Silchester and Caerwent, and it is now increasingly evident at, for example, Colchester, Exeter, Leicester and Cirencester. These large *domus* at Silchester and Caerwent number no more than twelve or fifteen and presumably housed the principal families of those communities. What does this imply for the social fabric of these cities? It would suggest the continued influence of a powerful and limited number of curia1 families, able to maintain their position over a lengthy period. The stability of so many large residences suggests that in many, perhaps most, cities local power was centred on a relatively small number of families. If this was the case, it might further help to explain the evident lack of urban development in the late Empire. What is observed in Britain could be yet another reflection of that retreat from munificence which is so obvious in the cities of the 4th century. Local magnates now spent on their own properties and pursuits what they had earlier made more freely available to their communities. If this course was followed by the *curiales* in 4th century Britain, it could help to account for the rapid collapse of orderly urban life after 400. There was no space in the changed world of the 5th century for an urban oligarchy,

There has been far too little attention to the economic life of cities, perhaps due to the fact that no specifically urban economy existed. Towns and cities were heavily reliant upon the agricultural base of their territories and the crafts that were associated with it. But that does not absolve us from all responsibility in studying economic activities which did take place in cities, or in attempting to distinguish between the local economy, existing in the relationship of the town with its hinterland, and the more broadly based economy, which might link the town with a much wider world. This is exacting work, but there is no doubting its importance. Ian Richmond's paper on industry in cities, delivered to a conference on *civitates* in 1963, was by no means exhaustive on

the subject. (Richmond 1966). There is much more to discuss now. At last some of the industrialised crafts are beginning to reveal themselves, for example the leather-working of London and the bone-working of Colchester. It remains true, of course, that the centralised extractive industries were not based on cities by and large. Potteries and metal-extraction were mainly centred in rural locations, in many cases on large estates, we might suspect. Towns like *Durobrivae* and Charterhouse-on-Mendip might flourish on such activities, but the cities seem to have derived little direct benefit.

As ports, however, some cities may have played a role far more significant than appears at present. There has been admirable work, of course, on the waterfront of Roman London, much of it now available in excellent publications. But the potential of other cities and towns in this respect has not been exploited to the full. It seems likely that inland ports, of which London in the early Empire is so conspicuous an example, may prove to be the most fruitful centres for examination, so few cities or large towns lying on the coasts of Britain. Lincoln and Gloucester both invite investigation into this aspect of their history, as do York and Exeter. All of these will have been easily accessible to Roman shipping; three of the four were major ports in the medieval centuries. Several smaller places were probably ports rather than merely minor towns. These include Brough-on-Humber, Caister-by-Yarmouth and Sea Mills. Further, the legionary bases of Caerleon and Chester were probably not only supplied by sea, but may have acted as ports of entry for goods destined for a wide market.

More work on the economic base might explain some of the phenomena which have been interpreted by some commentators as indicating urban decline (Reece 1980). That communities did not remain static over four centuries is hardly surprising and change might well be mistaken for decline if the evidence is treated partially or without proper care. That cities of the early Empire differed from those of the 4th century is a truism, not a discovery. They were, after all, components of a different Empire. What we lack for the Romano-British city from the 2nd to the 4th centuries is any convincing social and economic framework, and there will be little progress here until more attention is paid to such subjects as housing, the suburbs, crafts and minor industries, and less to public buildings and defences. Of the few Roman cities which lie largely clear of later structures, Silchester and Wroxeter still offer most in these respects, backed up by *Verulamium* and Caerwent. Concentration of research effort, adequately funded, at one or two of these could only be fruitful.

Another crucial point must be made when considering the social and economic history of the Romano-British city. During the 2nd and 3rd centuries there developed in the South and Midlands a considerable number of towns, greatly varying in size and perhaps in standing. A traveller in 4th century Britain would probably have recognised that he was in a land of minor towns, not of cities. That these towns had impinged on the economic life of the cities, and probably taken on something of their social and religious functions as well, is a possibility that deserves serious attention. The striking lack of physical development displayed by cities after the late 2nd century may have been largely due to the growth of so many minor towns, which were to serve as subsidiary but effective local centres.

We have come a long way since Wheeler drank the unadventurous Graves with the good mayor of St Albans sixty years ago. Wheeler's reconstruction of the history of *Verulamium* has been replaced by a more broadly based fabric. But we should give him credit for putting social and economic history in the forefront of the study of the Romano-British city, where it properly belongs. That is far from evident in every excavation report that has been published since, however full their treatment of building-plans and pottery sequences might be. Whatever view hindsight allows us to take of Wheeler's work at *Verulamium*, the objectives he outlined are still worth aiming at and they are still a long way off.

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2 The rise and fall of Roman London

Gustav Milne

Introduction

Before beginning his work in *Verulamium* Mortimer Wheeler was the Keeper of the London Museum and wrote a major synthesis on Roman London (RCHM 1928). In it, he argued that the settlement was founded early in the Roman period and developed as a boom town which, in spite of the destruction in the rebellion in AD 60, quickly rose to prominence. It succeeded to the title of provincial capital and expanded to become the largest town of Roman Britain. It survived through the Dark Ages in some form, a bastion of civilisation which pointed the way forward for the re-urbanisation of the country in the early medieval period. *Londinium* was therefore seen as a town with a special status, performing a unique role in the province which, like James I, it seemed to rule by divine right.

But was *Londinium* really any different from other Roman towns? This paper summarises some of the principal additions to our understanding of the provincial capital in the fifty years since Wheeler's influential report was published, concentrating particularly on the last 10 to 15 years work. To his inventory we can now add domestic buildings, a fort, sections of the town wall, temples, cemeteries, major monuments, the bridge and harbour, various public buildings and an amphitheatre. In addition, detailed finds research has greatly improved our ability to date developments in *Londinium*. As a consequence, we now believe we have a greater understanding of the settlement's relatively unplanned origins in c AD 50, the planned expansions from AD 70-120, developments and contractions in the 3rd and 4th centuries, and its abandonment in the 5th. Thoughts on the role and function of the town have also changed: indeed, like so much of the work on *Londinium*, ideas are still developing as new data are assessed and more familiar data reinterpreted. No assessment of the material to hand can therefore be seen as anything other than personal or provisional, while a paper of this length can lay no claims to being comprehensive. All it attempts to do is focus attention on some of the issues currently under debate, and will concentrate on questions relating to chronology, continuity and status.

It is a salutary exercise to compare the development of *Londinium* described in 1928 with that drawn up after:

a) the controlled excavations conducted by the Roman and Medieval London Excavation council from 1947-62 (Grimes 1968);
b) the first spate of rescue excavations in the 1960s (eg Merrifield 1965; Philp 1977; Marsden 1980); and
c) the more recent work of the Museum of London's Department of Urban Archaeology (eg Hill *et al* 1980; Milne 1985; Miller *et al* 1986; Per-ring 1991; Brigham 1990a, 1990b).

One wonders precisely how different the *Londinium* viewed from 2028 will be from that viewed 100 years before. It should come as no surprise that the current views of Roman London are radically different to those described over fifty years ago. The data on which the Wheeler essay was based did not come from a programme of controlled excavations such as the one he mounted in *Verulamium*, but on some 250 years of chance discoveries by men such as John Coyners (Burnby 1984), Charles Roach-Smith (Roach-Smith 1859) and Henry Hodge (Marsden 1987, 5-7); consequently the observations tended to be of the exceptional, rather than the commonplace. Perceptions of *Londinium* drawn from such evidence can be very misleading. The popular picture of a town filled with masonry buildings furnished with mosaic floors (perpetuated in the permanent display in the Museum of London's gallery) can only be shown to be inaccurate once the far more ephemeral evidence for hundreds of humbler brickearth-walled building has been labouriously recorded.

The vast increase in primary data collected from stratified sequences excavated since 1973 will take some considerable time to evaluate, not least because the programme of rescue excavations in the City of London and its suburbs is still continuing. In addition to reports on finds from Roman London (eg Jones 1980; Miller *et al* 1986; Pritchard 1986), the present proposals to publish the excavations in London may be summarised thus: sites examined before 1973 – that is those excavated by Professor Grimes' Roman and Medieval London Excavation Council and those by the Guildhall Museum - are currently the responsibility of P Marsden and J Shepherd (eg Marsden 1975; Wilmott 1982; Shepherd 1986). A selection of sites excavated before 1982 have been or are being published by separate teams in a series of area studies designed to establish a chronology of development in specific zones of the town (eg Perring & Roskams 1990; Maloney & de Moulin 1990; Williams 1993); the harbour (Brigham 1990b; Milne 1985); the Forum and Basilica (Brigham 1990a; Marsden 1987; Milne 1992) and so forth. The work conducted by the DUA's sister unit (the Department of Greater London Archaeology) on areas adjacent to

or beyond the walled town are part of a quite separate publication programme (eg SLAEC 1978; Whythead 1986; Beard & Cowan 1988; Hinton 1988; Yule 1989). Unfortunately there are as yet no clearly defined plans to publish any of the other DUA sites not included in those programmes or the majority of those excavated after 1982. In other words, when the current HBMC-funded publication programme comes to an end in 1992, the Department of Urban Archaeology will have a ten-year backlog of unpublished excavation even larger than the one it inherited in 1973. This point cannot be stressed too highly and must be clearly understood by anyone attempting to understand Roman London just by reading the published evidence: only a fraction of the data available will be in print, and it is not known how representative that fraction will be. However, the details of all the published and unpublished sites will be available to those wishing to consult the Excavation Archives housed in the Museum of London. No officially-approved published synthesis of the archaeology of Roman London is at present planned.

Chronology

To begin to understand *Londinium*, the chronology of its development must first be established. Only then can the implications of the pattern which emerges be assessed, a pattern which may point to military or mercantile origins for the settlement, for example, The chronology for *Londinium* has been built up by the careful recording of occupation sequences in all parts of the city, together with a study of the associated finds, a process which only began in a systematic way in 1947. The work is still continuing, but what follows is a broad outline of a pattern which seems to be materialising.

Study of the Roman road system suggests that the initial crossing of the Thames was not at London but at Westminster. However, after the military invasion force had moved on beyond the subdued south-east corner of the new province, a settlement grew up on the north bank of the river over a mile downstream of the first crossing. It lay opposite a series of islands on the Southwark shore, at a point where the tidal Thames at was at its narrowest at high tide. The dating evidence from sites north and south of this crossing suggests that settlement began sometime after AD 50, that is after the legionary fortress at Colchester had been converted into the first provincial capital. *Londinium* seems to have developed as a relatively unplanned nucleus along the main east-west Roman road opposite this Thames crossing, which seems to have been served by a ferry rather than a permanent bridge in this early period. The initial landing place on the foreshore may be represented by a flint and chalk surface, subsequently replaced by an openwork timber landing stage some time after AD 70, and subsequently by a timber bridge a decade or so later.

This upgrading of a ferry by a bridge mirrors the development of the settlement as a whole, for the town seems to have been radically replanned on a much grander scale after AD 70, in the aftermath of the Boudiccan revolt. The new town was noticeably more extensive than the settlement in AD 60, and by AD 100 had a full complement of public buildings: *forum*, temples, bath-houses, amphitheatre, harbour works and warehouses. However, the majority of the contemporary domestic buildings were not of masonry construction, but were built of brickearth and timber.

The town continued to develop vigorously on both banks of the Thames in the early 2nd century, with the construction of a larger *forum* and *basilica* complex, an extension on the waterfront and a fort to house the provincial Governor or his bodyguard. However, expansion was arrested before the end of the 2nd century. The area actually occupied began contracting, and never again reached the size it had attained in the earlier years of that century. When the town wall was constructed in *c* AD 200 around the northern settlement, it enclosed substantial areas of unoccupied land since the line was diverted north of the settlement area to encompass the military fort at Cripplegate, and west to the banks of the River Fleet. At no time did the Roman city ever occupy the entire area surrounded by that wall, and thus population calculations based simply on the size of the walled area are of little value or consequence. *Londinium* may lay claim to having the largest walled area in the province, but it was certainly not the most populous late Roman town in the province, and it has yet to be proved that it held that distinction in the late 1st or early 2nd century. Only when the extent of contemporary settlement in all the other major towns has been established will that point be satisfactorily resolved.

That the settlements on both banks of the river contracted substantially in the 3rd and 4th centuries is clear. Nevertheless, talk of a collapse or of impoverishment seem unjustified, for although the late Roman town was certainly smaller, it contained many well-appointed private buildings. However, it lacked the wide range of public buildings that had graced the early Roman town. No public baths building has been found which could have served the 3rd century settlement, several roads and the harbour works were no longer maintained as public facilities beyond the 280s; even the *basilica* seems to have contracted and was ultimately demolished by or in the early 4th century. The role and status of *Londinium* had changed once again, quite as radically as it had in AD 70. By the end of the 4th century, the south bank settlement had been abandoned and the north bank settlement was enclosed behind a robustly-constructed riverside wall, joined to the defensive landward circuit. At the start of the 5th century, the small community presumably had the means and felt the need to defend itself.

Continuity

When the Department of Urban Archaeology was established in 1973, all the talk was of 'Continuity': it was widely assumed that life continued in some form within the late Roman town of *Londinium* throughout the Dark Ages, and that the town described by the Venerable Bede in the 730s was the direct descendant of the settlement once destroyed by Boudicca. All the archaeologists had to do was find the evidence to prove it. However, whenever an untruncated late Roman occupation sequence was recorded, it was found to be sealed by deposits of dark grey silt which were in turn cut by pits containing pottery no earlier than the late 9th or 10th century, or, more rarely, sealed by occupation levels of a similar late Saxon date. The latest Roman occupation horizons seemed to be late 2nd century on many sites in the western part of the city, late 3rd or early 4th on some site around the forum area, and late 4th and early 5th on some parts of the waterfront terrace. The timber quays themselves do not seem to have been maintained or repaired in the 4th century: they were sealed beneath foreshore deposits over which waterfront embankments were raised, not in the 5th to 9th centuries, but in the period after AD 900. All the archaeological evidence therefore points to the Roman settlement contracting and finally failing in the 5th century, but reviving in the late Saxon period some 400 and 500 years later. The archaeological research leant no support to the 'London as a bastion of civilisation in the Dark Ages' school of thought, and also seemed to fly in the face of such documentary evidence as there was for a thriving 7th and 8th century emporium. Perhaps the single most important discovery that has transformed our perception of the Roman town was that of the mid-Saxon settlement of *Lundenwic*, outside the old Roman walls in the Aldwych. This is seen as a new foundation on a new site, a development quite independent of any direct classical antecedent. At a stroke, this discovery not only explained away the dearth of mid-Saxon material within the City, but also removed the rationale for the continuity argument for once and for all. Once it became clear that the Roman settlement did not have to linger on for centuries to attract the attentions of 7th century Saxons, *Londinium* could die in peace in the 5th century (perhaps earlier than some other town such as *Verulamium),* as the archaeological evidence had long protested. No British town can boast an ancestry older than mid Saxon: London is no exception.

Status and function

In a passing reference to the settlement in AD 60, Tacitus mentioned that *Londinium* was not, at that time, dignified with the title of *colonia.* When the town actually received its charter is not recorded in any surviving document or inscription, but buildings thought to represent the forum and basilica were erected between AD 70 and 80, *Londinium* must therefore have been considered as a 'town' in the legal sense by that date. This new civic centre was modest when compared with others in the province, such as Silchester or *Verulamium* (Marsden 1980, 41-5), suggesting that the newly-planned town was not considered as an exceptional settlement in the redesign of the province effected in the aftermath of the Boudiccan uprising. It is possible that the provincial capital was still Colchester, the first British town to be defended with a stone wall, until at least AD 90. However, at least part of the provincial administration was probably based in London in the AD 60s, since the *Procurator* Classicianus was buried there. By the mid 2nd century there can be little doubt that London was the centre for the Governor's staff, as shown by the fort at Cripplegate for 1,000 *singulares,* the enigmatic residence in Southwark perhaps used by *beneficiarii consulares* (Yule 1989), and the tombstones and inscriptions associated with *speculatores* and the *legatus juridicus.* It had once been suggested that a complex of masonry walls in the Cannon Street/Bush Lane area of the City formed part of the provincial Governor's palace (Marsden 1975). This identification has been questioned (Milne 1985, 130), not least because the so-called south and east 'wings' are not structurally integrated, and the published plan does not resemble any other known palace, such as the larger building at Fishbourne. Even more damning are the results of the excavations underneath Cannon Street Station in 1988-9, which showed that, contrary to expectations, the southern 'wing' did not extend any further west of where it had been previously observed, while the hoped-for symmetry of the hypothetical complex was further damaged by the absence of a west 'wing', since the bank of the Walbrook lay much further to the east than some had suspected. That the Governor was based in London in the 2nd century seems certain: where his residence lay remains open to speculation, excavation and reinterpretation.

To sum up, *Londinium* was not designed as a provincial capital in AD 50 or in AD 70 but seems to have been operating as a capital by the early 2nd century, by which time the forum and basilica had been redesigned on a grander scale. However, the status of *Londinium* clearly changed again in *c* AD 300 with the demolition of much of the basilica, at a time when the town was no longer functioning as a major trans-shipment centre either, as the excavations in the harbour area clearly show. All this suggests that the role and status of the town was subject to fundamental changes, perhaps reflecting equally major changes in the running of the province as a whole. What seems clear is that *Londinium* was not one town, but several: it began as a relatively unplanned settlement; it became a major trans-shipment centre as well as the provincial capital with a wide area of responsibility; it ultimately contracted into a down-graded, perhaps even disgraced, administrative centre, its harbour disused, its public building demolished. Was the catalyst for

change political judgements made by the Roman administration, a consequence of events such as native unrest or an outbreak of plague, or just market forces? Although a combination of factors seems likely, London's late Roman contraction must be at least partially explained by the contemporary fall in river level (Brigham 1990b) which moved the tidal head of the Thames downstream, taking with it London's role as a natural harbour at the conjunction of up-river and coastal traffic with the road network. But any study of *Londinium* as a port or as a provincial capital must take into account its position and function in relation to the other towns in the province, and thus must await the publication of the result of recent work in many other towns. Like London, towns such as Colchester, York, Cirencester and Lincoln all undertook provincial responsibilities at some stage, so detailed comparisons with them are crucial. Again, since London functioned as a major trans-shipment centre in the late 1st and 2nd centuries, its development must be compared and contrasted with other major ports such as Dover or Richborough.

The last fifty years, especially the last twenty years, have seen much data collected, through which a new picture of *Londinium* is emerging: its rise was rapid, its zenith short-lived, its falls slow, graceful and final. The chronology of its developments are clear, but the reasons why need our full attention. Nevertheless, the more that is learned about *Londinium* and its contemporary towns, the less exceptional it seems. From the medieval period onwards, London was an exceptional town, in terms of size, function and role, but this fact must not influence our judgement of the Roman town. *Londinium* does not seem to have played as central a role in *Britannia* as London subsequently did in England: both settlements may have shared a common site and part of the same celtic name, but their status was as different as their street systems.

Postscript

This paper was written in 1989, and much has happened since then. The Department of Urban Archaeology and its sister unit the Department of Greater London Archaeology were both closed down in December 1991 and replaced by the much smaller Museum of London Archaeology Service, which no longer employs the author. A series of important articles, reports, and a book by D Perring have been published between 1989 and 1993: although none of that recent material is considered in the summary, the bibliography has been revised and updated.

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3 Silchester: the early development of a civitas capital *Michael Fulford*

Introduction

The research project of the Society of Antiquaries to excavate the entirety of the Roman town of Silchester ended in 1909. A 'complete' plan of the intra-mural area had been obtained, but only limited trenching, mostly on the pre-Roman defences, had been carried out in the extra-mural area. The lack of any chronological framework encouraged Molly Cotton to undertake two seasons of excavation (1938-9) on the Roman and pre-Roman defences (the Outer Earthwork) (Cotton 1947). Much of this work took place in the context of a consolidation programme by the Office of Works on a stretch of town wall on the north-eastern side. The discovery from aerial photographs of a hitherto unknown, but early defence (the Inner Earthwork), led to a four-season campaign by George Boon on that and a second ('primary') Outer Earthwork on the west and north-west side of the town (Boon 1969). This took place at the time of the first serious appraisal of Roman Silchester (Boon 1957), subsequently extensively revised as *Silchester: The Roman Town of Calleva* (Boon 1974), which incorporated the interim results of the only substantial excavation to have taken place inside the walls since 1908. This concerned a re-examination of the Christian church outside the south-east corner of the *forum* in 1961 (Frere 1976). With the taking into Guardianship of the remainder of the town wall in 1966, fresh excavations were carried out on the defences between 1968 and 1978 (Collis 1983; Fulford 1984). A major excavation of the hitherto unexplored amphitheatre took place after it was taken into Guardianship in 1979 (Fulford 1989), while the first sustained programme of work in the intra-mural area was undertaken on the site of the *forum-basilica* between 1980 and 1986 (Fulford 1985; 1987(a); 1987(b); forthcoming). The object of this project was to examine the origins of *Calleva* by excavating the late Iron Age and early Roman sequence which had been sealed by the construction of the stone *basilica.* In the extra-mural area, intensive and long-term surface collection took place in the 60s and 70s (Corney 1984) and was followed by a more wide-ranging survey by the Department of Archaeology, University of Reading in the 1980s in the parishes of Silchester and Mortimer West End. The purpose of this contribution is to assess how the fruits of work carried out in the 70s and 80s have influenced our perceptions of the development of *Calleva.*

The Late Iron Age Oppidum (Figs 1-2)

For a contribution whose focus is the early Roman development of *Calleva,* it is not appropriate to discuss the late Iron Age oppidum at length. In so far as they concern this period, the interim results of the 1980-6 excavation have been described elsewhere (Fulford 1987(a)). Little evidence was revealed of occupation before about 20/10 BC. Then the central area of the gravel plateau on which the settlement lies appears to have been organised into a system of rectilinear areas or compounds divided by metalled and unmetalled streets and roadways on a north-west/south-east-north-east/south-west orientation. By the time of the Roman invasion of AD 43, the most extensively investigated central area beneath the Roman *basilica* had been enclosed by a strong fence or palisade. Besides wells, there was evidence of some internal subdivision and at least one rectangular structure of several phases within that compound. Rubbish pits immediately inside the enclosure contained a rich array of imported artefacts, particularly ceramics, and the detritus of bronzeworking. Similar evidence came from the adjacent, possibly unfenced areas, and one pit contained numerous fragments of moulds for casting terrets and similar items. Silver and tin alloys were also being worked (Northover forthcoming). All of this occupation was associated with a deposit 5-10 cm thick of black earth.

An important consideration is the size of *Calleva* and the state of its defences at the time of the Roman conquest. Where recent excavations have reached the subsoil, particularly on the southern side of the town, these have shown that the black earth deposit reached towards, but not beneath, the Inner Earthwork, which itself sealed early occupation to the south (Boon 1969, 13-14; Fulford 1984, 233). On the basis of the scraps of pottery found beneath its bank, Boon had been inclined towards a date for it post AD 25 (1969, 14), but the contexts of the ceramic parallels from the *basilica* excavation point to a late 1st century BC *terminus post quem* for its construction (Fulford 1987, 275). The question of date is, however, complicated by the suggested evidence for the location of the entrances which coincide closely with the principal east-west and north-south thoroughfares adopted in the Roman period and which led Boon to regard the defences as dating to the eve of the Roman conquest (1969, 15; 1974, 45). The question of the entrances

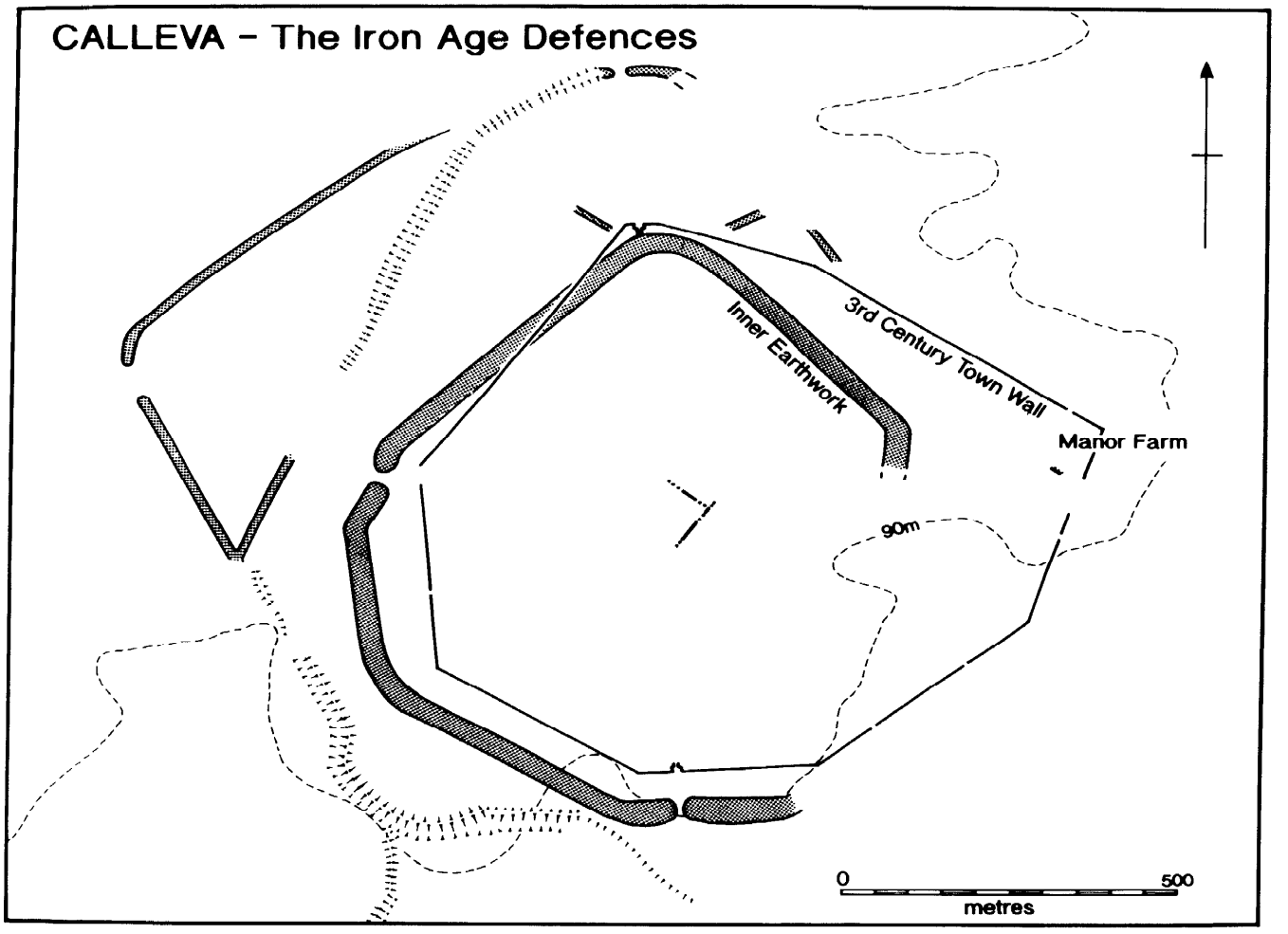

Figure 1 Calleva: *Iron Age Defences and central 'streets' (standing earthworks hachured)*

and their date has only been tested at the south where evidence for a causeway interrupting the course of the ditch was reported (Boon 1969, 11). Such an arrangement of the entrances, broadly aligned with the cardinal points, conflicts with the evidence for the internal layout of the oppidum on a north-east/south-west-north-west/ south-east orientation as well as for the date of the street grid which is argued as being no earlier than very late Flavian (see below). The problem would be resolved if the causeways could be shown to be deliberate backfill and hence difficult to distinguish from the natural. To accept a very late pre-Roman date for the defence not only pre-supposes a more or less undefended oppidum for most of its history, but that somehow no later pottery came to be added to what is otherwise (for Silchester) a comparatively early assemblage sealed beneath the bank of the Inner Earthwork, A *terminus post quem* of 20/10 BC provides a starting point for the development of the distinctive black earth layer which seems to be contained within the Inner Earthwork and to be a feature of the late Iron Age and pre-Flavian Roman occupation. This being so, by the early 40s *Calleva* consisted of a flourishing settlement extending over about 80 acres (32.5ha) within the boundaries of the Inner Earthwork.

The date of the standing outer earthworks on the northern and western sides is still not certain, but it is very probable that they lie within the late Iron Age (Fulford 1984, 79-83). There is no evidence on the northern side for pre- or early Roman occupation between the Inner and Outer Earthworks; to the south there is no evidence for the continuation of extra- mural occupation after the construction of the Inner Earthwork. As they survive, the defences of *Calleva* do not obviously compare with the dykes which protect the approach to *Camulodunum* from the west. However, the cutting of a mains-water

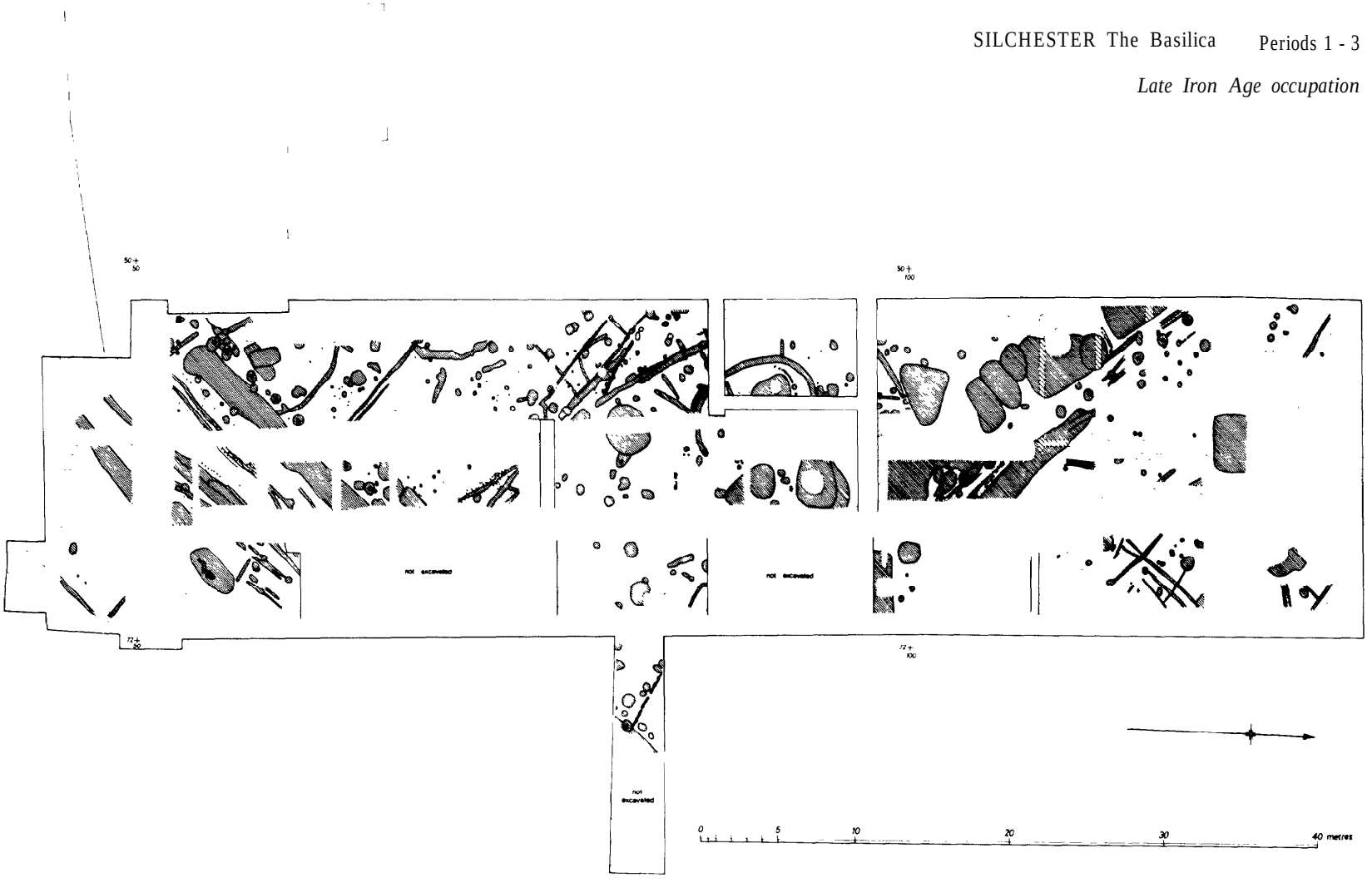

Figure 2 *Late Iron Age occupation on the site of the Roman* basilica

pipe-trench around the eastern side of the town in 1988 produced results which suggest that the situation was more complicated than has hitherto been thought. Traces of two substantial pre-Flavian ditches were revealed in this area (Fig 1). Similar evidence of a substantial pre-Flavian defence has recently come to light on the eastern side of Chichester (Down 1989, 60-66).

What kind of population inhabited pre-Roman *Calleva?* The evidence that we have points to separate compounds within the settlement and, although most of our knowledge derives from one compound, specialist activities are not confined to it. Metalworking evidence relating to the working of precious metals, perhaps for coin production, as well as tin and copper alloys has been found in all three compounds revealed by excavation on the site of the *basilica.* The presence of imported ceramics in large quantities implies the presence of traders, both those working in the hinterland of *Calleva* and those trading out of Britain. Other artefacts also point to the importance of local and long-distance trade in the economy of the settlement. With Eppillus Rex *(c* AD S-10) we can identify *Calleva* as a 'royal' residence from the CALLEV mark on his coinage, but whether this was the case with other Atrebatic leaders is uncertain, although probable. Since there is no archaeological evidence for a break in occupation or for a major change in the character of the occupation, it is likely that *Calleva* was a 'royal' residence from 20/10 BC (Tincommius onwards). On the assumption that Verica was ejected from *Calleva* before he fled to Rome in AD 41 and that the settlement had been subsumed within the paramount kingdom of Cunobelin and his successors in the AD 3Os, it is likely to have remained the residence of a leading man and his retainers, despite the absence of conclusive numismatic evidence. Although issues of Epaticcus, son of Tascionvanus, are rare from *Calleva* itself, there are numerous finds from the Waltham St Lawrence (Berkshire) and Wanborough (Surrey) temple deposits which are otherwise dominated by issues of all three Atrebatic leaders. Stylistically, however, there are differences between the style of Epaticcus' coinage and that of Verica (Burnett 1991). Associated with the retinue, of, say, Epaticcus, would surely have been some kind of bureacracy to take account of the tax or tribute rendered to the chief, the production of coin as well as the traffic in merchandise in and out of the settlement. We might tentatively identify the compounds as representing the residences of individual members of the warrior elite and their dependants, each of whom was able to call on craftsmen and merchants to supply luxurious and essential needs. Admittedly this picture is built on fragmentary and circumstantial evidence, but it does lead to the important question as to whether *Calleva,* as it is now beginning to emerge, could support a significant population in the absence of a resident elite whose rule was imposed on the surrounding countryside from which it could draw its subsistence and tribute.

There is no clear evidence as to how much the population depended on farming the immediate hinterland. Certainly there is scant evidence of contemporary farms either between Silchester and the valleys of the Kennet, Loddon and Thames to the north and east, or between it and the chalkland settlement in the Kingsclere to Basingstoke region to the south and west (Fig 3). While the study of macrobotanic evidence from the town has not yet produced evidence of cereals grown, say, on chalkland soils, the evidence of pollen from the lower fill of one of the early wells suggests that the surrounding woodland which probably gave the settlement its name *Calleva* still remained largely uncleared before the end of the 1st century BC (Wooders forthcoming). This was already at a time when some settlement not only occupied the central part of the plateau, but the periphery as well - as evidenced by the remains of a structure sealed beneath the bank of the Inner Earthwork.

For further insight into the nature of the community of *Calleva,* it is helpful to turn to the important evidence from the King Harry Lane cemetery of the neighbouring oppidum of *Verulamium* which dates to the first forty years or so of the 1st century AD (Stead & Rigby 1989). The burial data point to a complicated, stratified social organisation with a marked bias towards males in the burial record. This has certain implications for the interpretation of the King Harry Lane burial plots and whether they relate to 'normal' families or male-dominated warrior or, as is more likely, merchant retinue groups (Fitzpatrick 1991). The difference is crucial, for the composition of the population, the specialisation of its labour, etc, have important consequences for the transformation of the native centre into a Roman town (see below).

Calleva as a legionary or vexillation fortress

Given the evidence for such a rich and sizeable settlement at the time of the Claudian conquest, it is surprising that so little evidence of Roman military occupation has so far emerged (Boon 1969, 44-5; 1974, 47-8; forthcoming (a & b)); the more so if the site served as a focus of native opposition and a base for Caratacus in the early-to-mid 40s. There is a strong continuity of style between the main issue of coins marked CARA, which is assigned to Caratacus, and that of Epaticcus. It is also well represented in the Waltham St Lawrence and Wanborough hoards. Tantalising evidence emerged in the excavation beneath the seating bank of the amphitheatre in 1979. Associated with a V-shaped ditch were masses of pottery wasters of Claudian or Claudio-Neronian date. This is an unusual group of material, but some of its characteristics are shared by pottery of similar date from the military assemblage at Kingsholm (Glos) (Timby 1989, 88-9). Similar, military associations were adduced to account for the character of certain organised cattle butchery

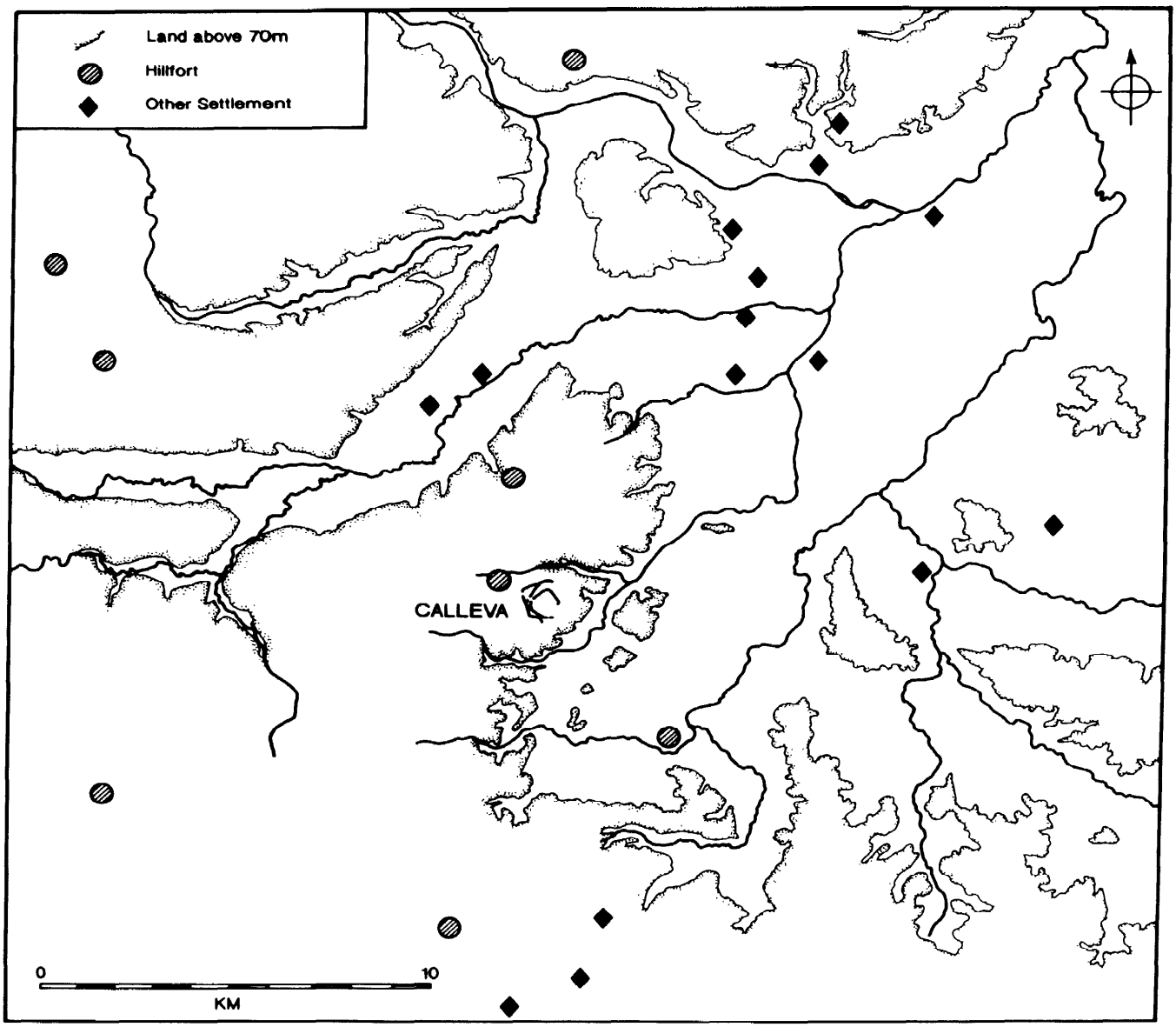

Figure 3 Calleva *and its immediate hinterland: the distribution of later Iron Age settlements and hillforts*

evident in pre-Flavian contexts on the south-western side of Silchester (Maltby 1984, 202; Sommer 1986). None of this recent material, any more than the older finds of military equipment from the site, offers anything more than circumstantial evidence for a military garrison. Boon has drawn attention to the military style of the street-grid (1974, 55) and Sommer has seen this as the strongest plank in his argument for a pre-Flavian legionary fortress at Silchester (1986, 642-3). Further consideration of a military garrison at Silchester rests on two additional pieces of evidence: the interpretation of a substantial pre-Flavian timber building in the centre of *Calleva* and the date of the street grid.

The excavations on the site of the *basilica* revealed evidence for two successive periods of Roman timber buildings between the late Iron Age and the construction of the stone *basilica* in the 2nd century. Both phases are oriented on the cardinal points and are therefore at variance with the Iron Age layout. Evidence for the earlier phase comprised two, if not three, ranges set round an open space on a north-south/east-west orientation (Fig 4). The best preserved was the western range. It measured some 55.6 by 10m, was sub-divided into ten rooms and was fronted by a verandah. The construction trenches which ran off under the later forum suggested a slightly more massive construction for the

adjacent north range. At the southern end of the west building, indications pointed to the existence of an attached southern range. These structures are considered to form part of a courtyard building, whose overall north-south dimension is 68m. What is the date of this structure? In an interim report a Neronian date was argued on the basis of finds from apparently associated occupation layers and the construction trenches of the west range (Fulford 1985, 45). However, further excavation made it clear that the west range had been substantially rebuilt and that material from construction trenches could only be regarded as a *terminus* post *quem* for that re-build. It could also be shown that the Iron Age black earth and the tops of some of the pits outside the limits of the Roman building continued to accumulate rubbish during its lifetime in the pre-Flavian period. At the same time a clear distinction could be drawn between material from the external sequence and that which was sealed by the courtyard building. From those contexts, which includes two wells and a number of pits, the latest material was of Tiberio-Claudian date. Given the date-range of material from deposits outside of it, a Claudian date, conceivably from as early as AD 44-5, seems tenable, for our first Roman building. Of course archaeological evidence cannot allow us the luxury of precision and it does not deny us the possibility of arguing for a date in the late 40s. However, the date cannot be advanced too far without encountering the problem of explaining the contrast between the absence of Claudian or Claudio-Neronian material from beneath the building and its presence immediately outside it.

The choice of an early date is important because it undoubtedly influences our interpretation of this first Roman building. With a late Claudian date, it is more likely that it would relate to the development of a civil town either as part of a Cogidubnian kingdom or as *caput civitatis Atrebatum*. A military interpretation at the date would seem implausible. An earlier Claudian date reverses the situation, even if it does not lead to certainty of interpretation. Matters would be helped if it was possible to offer a decisive interpretation of the building, but there is considerable ambiguity in assigning military/civil roles to pre-Flavian timber buildings in isolation. The matter is not helped by the relatively small number of metalwork finds associated with this period. The volume of Claudio-Neronian material *in toto* is not overwhelming, but it does include more military metalwork to complement that already catalogued from the early excavations (Boon 1969, 43-5; forthcoming (a)). The character of the early Roman coins, both official and unofficial, is also consistent with a military occupation (Boon forthcoming (b)). It is, however, with the plan of our building that the closest parallels can be found. Assuming the interpretation of layout is correct, we can compare it with that of military *principia*. Since the west range did not contain the expected *basilica* and *aedes*, they may lie within the more massively constructed north range, in which case the building would have faced south. One point is clear, the west range is not axial with the east-west street which leads towards the entrance of the later, masonry forum and which has been compared with the *via praetoria* of a legionary fortress. There are few Claudio-Neronian or pre-Flavian timber *principia* with which to compare our building, but such dimensions as we have compare with those of the probable headquarters building at Longthorpe (Frere & St Joseph 1974) as well as with other 1st century legionary or vexillation *principia* (Exeter, Haltern) (von Petrikovits 1975, 68-75, Bild 14; table in Pitts & St Joseph 1985, 86). The relatively well preserved portion of our building can be compared with the range of offices which flank the courtyards of headquarters buildings. There are parallels, too, with the plans of courtyard-type store buildings which consist of ranges of small rooms, sometimes fronted by a verandah facing into the courtyard. In their proportions the longer sides are between one third as much again to twice the length of the shorter (von Petrikovits 1975, 84-7, Bild 20). On the face of it the comparison between a large store-building and our Silchester structure is good, but the location of such buildings is always peripheral within the fort. Given the central position of our building in relation to both the natural topography and the layout of the native oppidum, the interpretation as a *principia* seems more likely. Nevertheless, without further corroborative evidence, the case for a fortress phase, whether artefactual or structural, must remain provisional.

A Claudian fortress at Silchester makes a great deal of sense. First it takes control of a major native centre and one possibly to be associated with the continuing resistance of Caratacus in 43–44/5. At the same time the native centre is the obvious nodal point from which to assume a wider control of Atrebatic and allied territory One aspect of that control would have been native lines of communication of which as yet we know little. By the time the Roman road network came to be laid out, *Calleva,* as many writers have observed, was well placed in relation to both north-south and east-west communication. How much this relates to pre-Roman routes and how much to the activities of the Roman army of conquest and pacification will probably remain unresolved. Military finds from sites along it would suggest that the line later taken by the road which led south-west towards *Sorviodunum* and then *Durnovaria* was that followed by part of Claudius's army. Too much emphasis has been placed on the maritime aspect of the conquest of southern Britain (eg Webster 1980; 1988 (a)). Important, if not vital, to the question of supply, the location of major campaign bases close to the south coast, as for example at Chichester, would not have been well suited for campaigning westwards, involving as it would the frequent crossing of major estuaries and constant attention to an exposed flank and the peoples of the hinterland. An axial approach to the conquest of the south and south-west, which followed the commanding and clear ground of the chalk, along with sea-

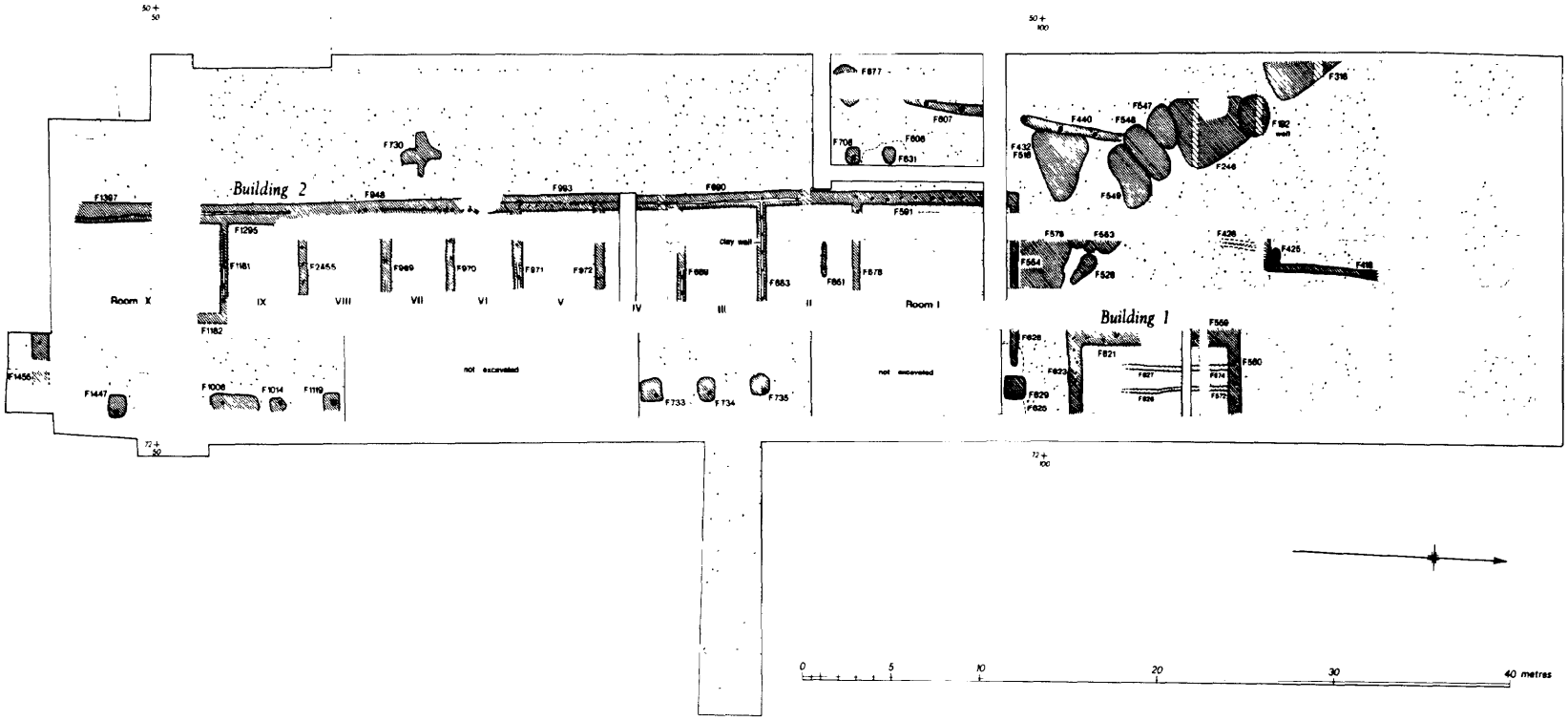

Figure 4 Calleva: *plan of the west range of the Claudian (?)* principia *and pre-Flavian* forum

borne logistical support, would have been judicious. *Calleva* is therefore an entirely logical location for a campaign base. Although it is beyond the scope of this contribution to explore the military implications of this interpretation for the Claudian conquest, it would seem likely that it was the base of a vexillation of, if not the entire *legio II Augusta.* The timescale of that occupation cannot be easily resolved on the basis of archaeological evidence alone, but it is unlikely to have gone beyond AD 49, the year by which,as Tacitus tell us, the twentieth legion had vacated *Camulodunum* and the province's first *colonia* had been founded *(Annales* XII, 32). Frere has also taken this date as providing the *terminus post quem* for the setting up of the town of *Verulamium* and the construction of timber shops along the Watling Street frontage of Insula XIV (Frere 1972). This represents the first Roman development close to the centre of *Verulamium*. The reason for not adopting a similar historical model to account for the first Roman building in the centre of *Calleva* is a significant discrepancy in date between the Tiberio-Claudian material sealed by our first building and the Claudio-Neronian rubbish which accumulated outside it.

Implications for the early civil development of *Calleva*

The Roman army would have been presented with the massive defences of the Inner Earthwork as well as the subsidiary outer fortifications to the west. Following practice elsewhere, as Todd has described, it would have been sensible to have made use of those fortifications (Todd 1985). Evidence gathered by Boon suggested that the infilling of the ditch was begun between about AD 50 and 60 and that the core of the street-grid which overlies it is Flavian (1969, 9, 12, 39). Unless it has been sealed by later streets, there is no evidence for any other defensive circuit within that of the Inner Earthwork. The area enclosed by the latter would have provided almost twice as much space as a single legion would have required, but we do not have any knowledge about the disposition of other early buildings. Further excavation is required to elucidate this. Nor do we have evidence for the internal streets of the fortress; but, if the interpretation of a south-orientated *principia* is proved correct, we would expect a *via praetoria* striking south and more or less bisecting Insulae VII and VIII. There is no evidence of this, although such a line would intersect with an extrapolated course of the Chichester/Winchester road at a point where it would cross the Inner Earthwork (Fig 5). A subsequent readjustment of the course of this road is suggested by the way its course is bent back around the tail of the Outer Earthwork towards the later south gate. The corresponding *via decumana* is equally enigmatic. It is just possible that the *via principalis* is preserved in the east-west street which leads out to form the road to *Sorviodunum,* which, it is argued above, would have been one of the directions of early campaigning from *Calleva.* A wooden pipe-line (and the only one of its kind known from *Calleva) runs* along its northern edge past Insula XV and XVI into III where it served what must have been an early building subsequently sealed by a spread of gravel. The plan of the building was not recorded during the early excavations, but it could very well have been pre-Flavian. On the other hand, if the *Sorviodunum* and *Aquae Sulis/Corinium* roads originally had a common point of origin inside the Inner Earthwork, that would lie close to the line of street between Insulae XIII and XV whose course corresponds with that of the *via praetoria* leading from the later forum entrance (Boon 1974, folding plan). However there is no context for such an east/west street within a postulated fortress layout and the origin of that street must be later (see below). The question of the whereabouts of the main streets of the putative fortress once again draws attention to the date of the crossings of the Inner Earthworks. In proposing a military layout of the kind sketched above, a question mark is raised about an early Roman date for all crossings fossilized by the later street grid. Given that London did not begin to develop before the 50s, there is probably no context for a London road before then (Merrifield 1983, 23-40).

As to order within the proposed fortress, it does look as if rubbish was being dumped on the south-western side just inside the Inner Earthwork. This would account for the remains from military-style cattle butchery mentioned above. Regarding the *annexes* or *canabae* of the fortress, the evidence of pottery manufacture points to some activity on the eastern side around the site later occupied by the amphitheatre. Recent area excavation to the north between the town wall and the Outer Earthwork by Rye House revealed no certain traces of Claudio-Neronian occupation. Clearly, while there is much to be tested by further excavation, it has to be remembered in what context such speculation has been made.

What happened to the native population of *Calleva?* If the military interpretation is correct, whatever residual population survived the Roman annexation would certainly have been removed beyond the Inner Earthwork, assuming that it was not simply taken into slavery. It is not unreasonable to suppose that the native population was expelled from *Calleva* and that the servicing of the garrison would have been in the hands of camp-followers who had followed the army to Britain, In the context of aggressive campaigning, it is hard to envisage a substantial native population co-existing with the army and its own dependants. Only to the south and west are there surface finds of Claudio-Neronian date, but these need not imply the existence of structures (Corney 1984, 253, 257, Fig 68).

As we have seen, one of the problems thrown up by the first Roman timber building beneath the masonry *basilica* is that, while it shares the orientation of the Flavian street-grid, its own plan is not axial with at least two elements of that arrange-

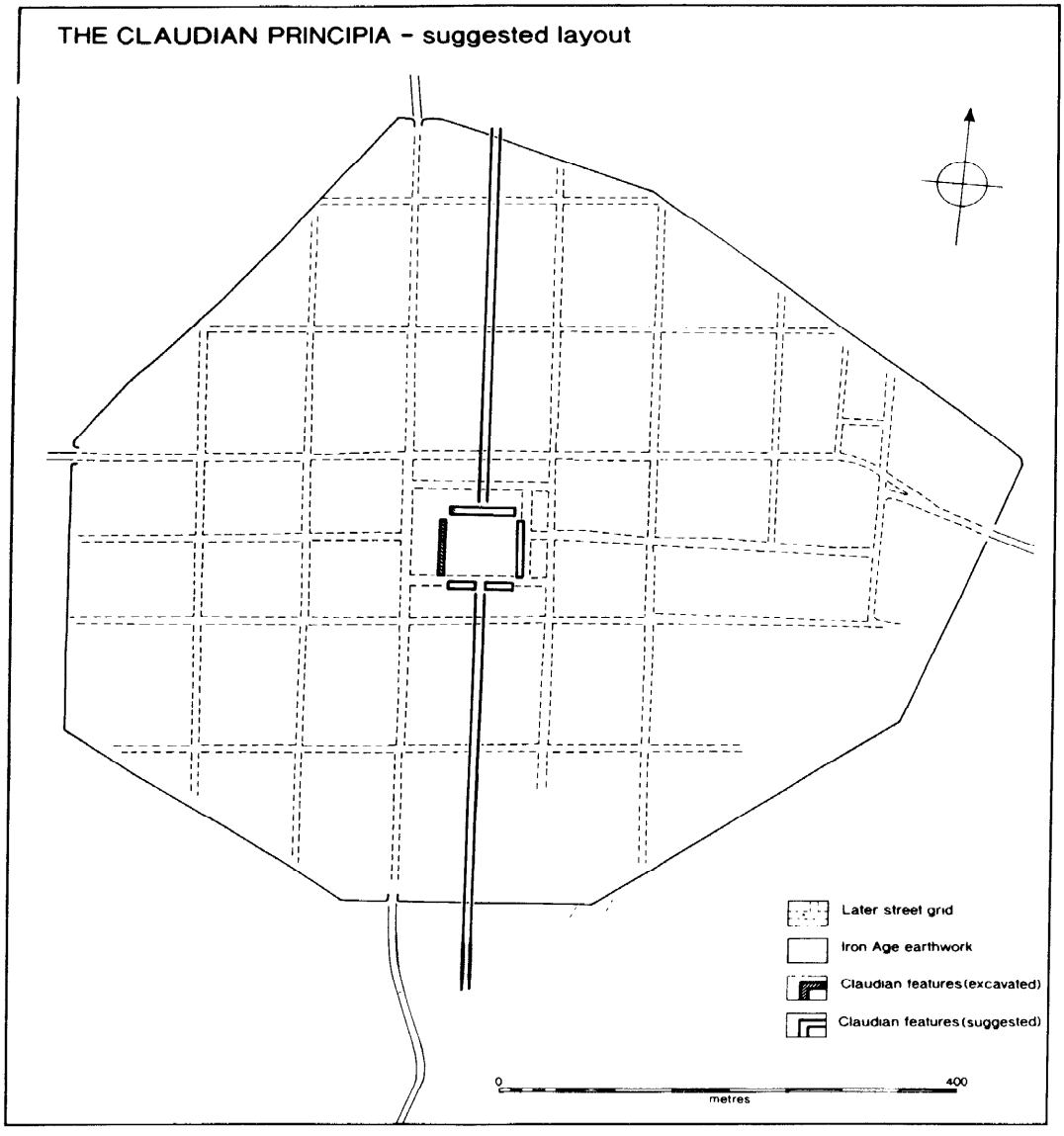

Figure 5 Calleva: *hypothetical reconstruction of Claudian (?)* principia, via praetoria *and* via decumana

ment, the east-west *via praetoria* and *via decumana* which bisect the insula module to east and west of the Flavian and later *fora-basilicae.* In addition, large open spaces would lie between it and the adjacent streets of the Flavian arrangement. At the same time, by sharing the same orientation as the street-grid as well as that of the successor buildings on its own site, it raises the problem of the date and context of all those buildings which did not conform with the north-south/east-west orientation. These have been seen to belong to an 'old town plan' (Fox 1948) which, with divergences of 2 to 16 degrees, conforms to the axis of the town baths, themselves 9 degrees askew to the adjacent street. She argued that these buildings related to an early and haphazard arrangement but, with the exception of the baths (below), none is independently dated, Yet none can be earlier than our central pre-Flavian building. The buildings were recorded by the early excavators and, by the standards of their excavation, they have been represented *de facto* by masonry footings. With the exception of public buildings, residential and workshop buildings were generally of timber construction before the Antonine period elsewhere in south-eastern Britain and there is no reason to believe that Silchester is exceptional in this respect.

It would therefore seem unlikely that the buildings *as excavated* should pre-date the street-grid. If they do reflect any early town layout, the implication is that they had been faithfully rebuilt over the centuries on their original pre-Flavian plan. On the other hand, the divergence of orientations could be taken as evidence for the lack of insistence on an organised layout away from the centre of town at any time during the history of the town. If they do reflect the perpetuation of earlier arrangements, there are two possible contexts for them. One is that the orientation of buildings harks back to the pre-Roman arrangement of *Calleva,* the second that it relates to an intermediate street-grid between military withdrawal and the decision to remodel it in the form that has become one of the hallmarks of the Silchester plan. In favour of the former is the fact that the majority of these buildings lies among the outer insulae and thus in areas perhaps least affected by military arrangements and not swept away by a formal fort layout. Equally in this context they could have originated as buildings of the fortress canabae. Clearly it is crucial to try to establish the dates of the origins of some of these building for, if there is a connection with the pre-Roman organisation of *Calleva,* it will have implications regarding the continuity of ownership between the late Iron Age and early Roman period. Nevertheless, a context for less strict control of planning at the periphery could well be found after the imposition of the street-grid, particularly if, in their initial form, the streets did not lead as far as the Inner Earthwork. Moreover, it is salutary to note that some kind of secondary structure was erected alongside the west range of our timber building, but at an oblique angle, in the late pre-Flavian period (Fig 4).

To pursue the early development of *Calleva* is fraught with difficulties when, if we follow the model of a military phase, we have secure evidence for only one building complex of Claudian date. As with military building in the fortress at *Camulodunum* and later at Gloucester, it was retained, apparently unchanged in its essentials, after the military evacuation. At some stage the west range was rebuilt, possibly after a fire. Otherwise the building stood until the Flavian period and there is no evidence for any lengthy break in occupation. Would it have been appropriate to have retained other military buildings as such barracks? The allotment of equal shares of property and land makes sense in the context of a *colonia* when it is important to establish fair shares for all veterans, but whether a similar policy might have prevailed in the context of the setting up of a civitas to be administered by an *ordo* composed of members of its aristocracy is open to question. A lack of firm civic discipline, which might account for the presumed early, haphazard layout discussed above, could have been a feature of Cogidubnus' administration, when *ad hoc* buildings took the place of what went before.

What was the status of pre-Flavian *Calleva*? If we are right to believe that the civitas of the Atrebates was one of those handed over to Cogidubnus after AD 49 or in the early 50s, then, if we are to assume that Tacitus was describing legally constituted civitates, it was probably established from the outset as *caput civitatis,* ie following the military withdrawal *(Agricola,* xiv); the transfer to Cogidubnus following later when circumstances dictated. In fact little may have been done to alter the fabric of the settlement before it was granted to Cogidubnus, if this did, in fact, take place.

The interesting question remains as to the nature of that earliest town and the character of its population. The military occupation/legionary fortress drove out the original occupants and the population attendant on the fortress may, in large part, have followed the garrison and the source of their income. With such discontinuity from the pre-Roman period, the intriguing question remains how, and by whom, the new town was occupied. It is all very well to assume that the administration was placed in the hands of the tribal aristocracy but, if this was the case at the outset (and there is no evidence), how were native leaders induced to take up residence within the town? This is complicated by the fact that no town in 1st century Britain has yielded evidence of town houses or similar. As Walthew showed, it is the villas which stand out as the earliest examples of high-status Romanized dwellings in Britain (Walthew 1975). These issues are raised to show that the transformation of the native centre to the Roman town was not straightforward and that it would be a mistake to assume continuity or a resumption of pre-Roman organisation and functions, except in the sphere of tax-collection in the place of equivalent pre-Roman arrangements (and how this was organised in the pre-Flavian period is far from clear). It is perfectly reasonable to argue that one kind of town ended with the Roman conquest and that a completely new order was established after the withdrawal of the Roman garrison. If there is anything in the idea expressed above that elements of the 'old town plan' reflect the pre-Roman distribution of property, then one procedure in allocating space within the Roman town may have been to take account of pre-Roman arrangements and this might have ensured that, where there was no conflict with the new street layout, old property boundaries might be restored. This seems inherently unlikely as such an arrangement could only have affected the peripheral area within the Inner Earthwork.

A further dimension relating to the establishment of the civitas capital is subsistence. In the pre-Roman period, it seems unlikely that the settlement could have survived without food being brought in from an extensive hinterland such as the tribal territory. An undeveloped local agriculture would have presented problems to a new population trying to establish itself in the 50s and 60s. There was some scope for local production in and around the town, but otherwise subsistence would have depended on the income from three sources. First, there were opportunities presented by trade and service; all westbound traffic from London would have passed

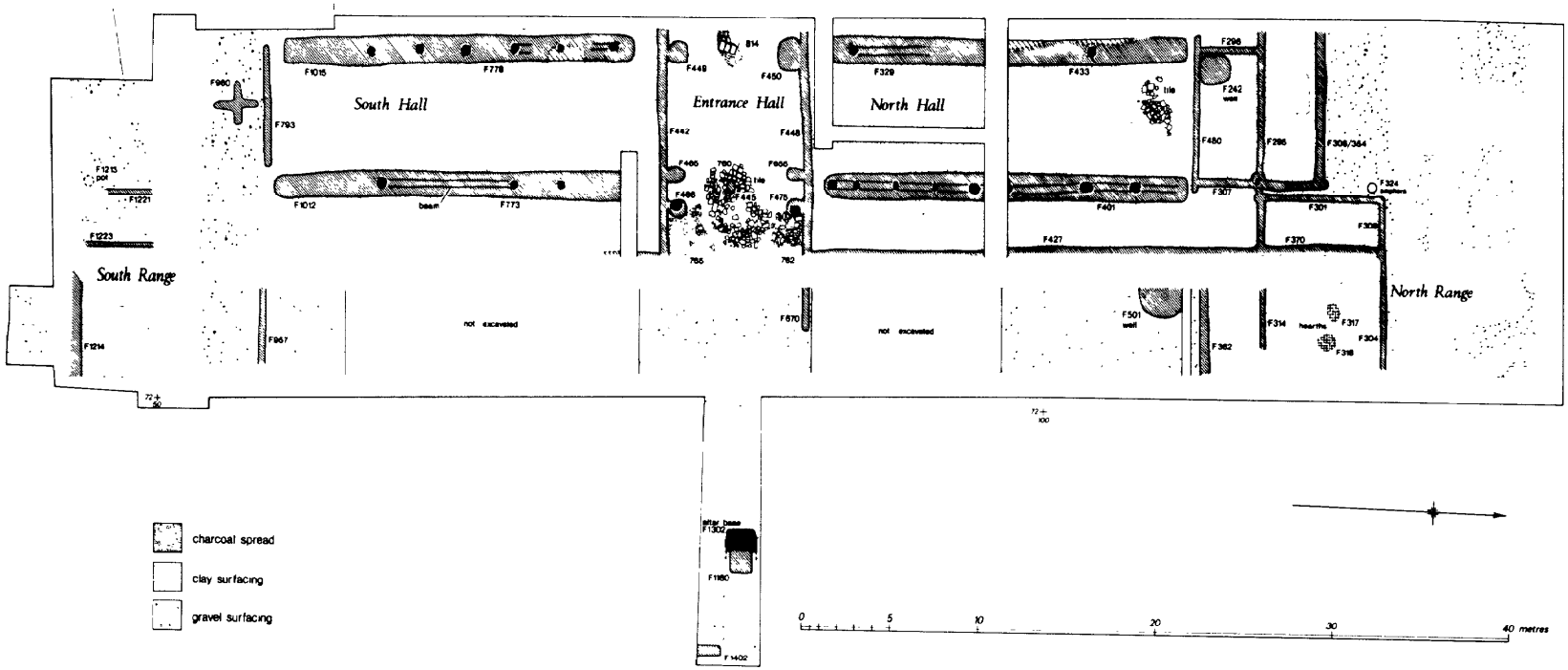

Figure 6 Calleva Atrebatum: *Flavian* basilica

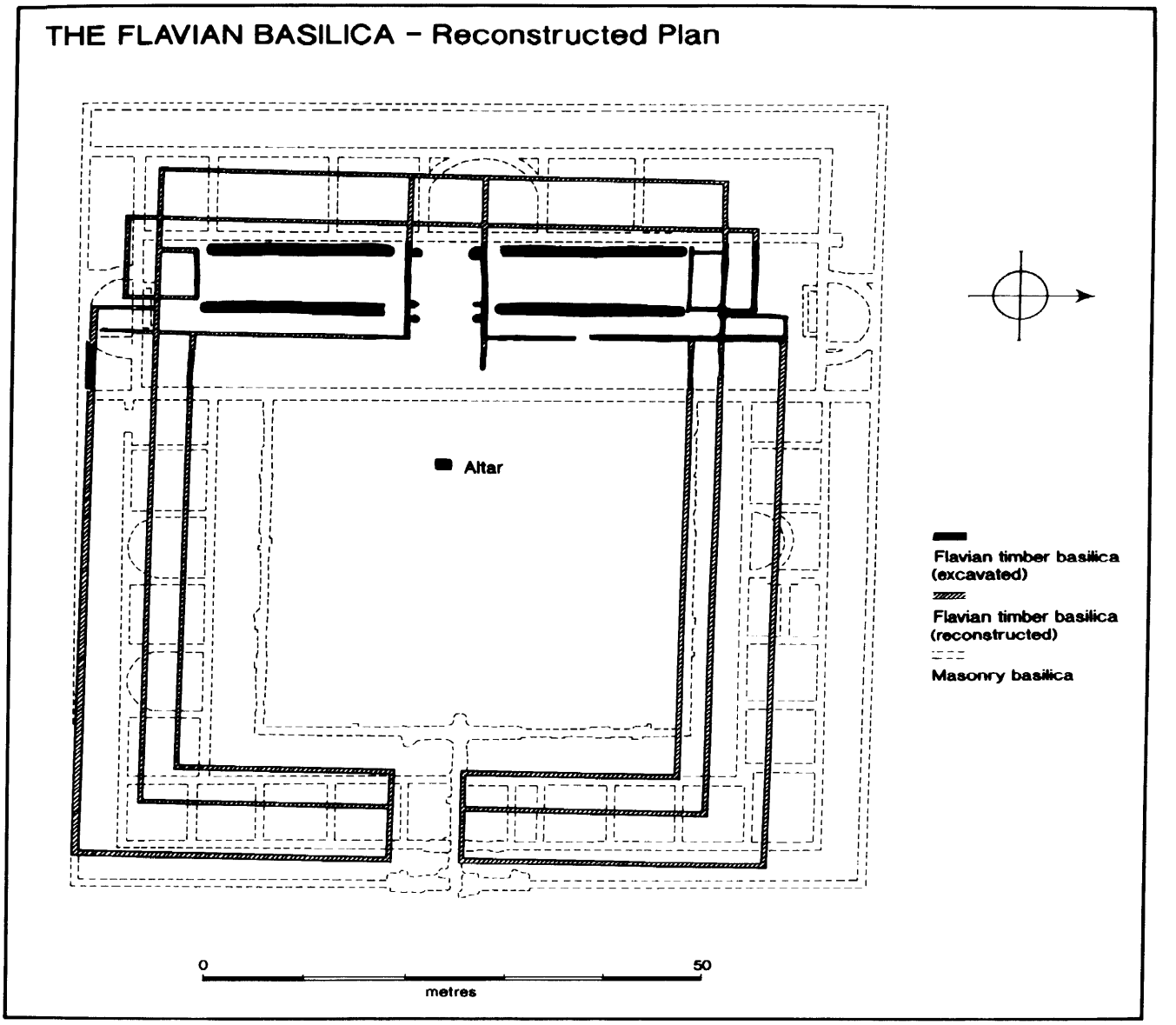

Figure 7 Calleva Atrebatum: *Reconstruction of plan of Flavian* forum-basilica

through *Calleva*. Here the early development of shops in Verulamium, Insula XIV, exploiting traffic to and from the north-west along Watling Street provides a helpful parallel. Secondly, the bureaucracy, such as it was, incurred in administering taxation and law within the civitas would have generated a source of income for some. A third potential source would be that derived from the servicing of the tribal aristocracy, who could draw on income from their country estates. This assumes that members of that aristocracy took up residence in *Calleva* and there is no evidence of this.

The reign of Nero (AD 54-68) bring with it the evidence of imperial involvement in construction work at *Calleva*. Four examples of flat, bonding tiles stamped NER CL CAE AVG GER have now been found in *Calleva* on the site of the *basilica* as well as the public baths (Boon 1974, 44, 467; Fulford, forthcoming). There is also the example from the presumed site of the tilery at Little London, about a mile south-west of the town. While none of these tiles is certainly associated with any structure (that from the baths comes from an adjacent pit and those from the basilica are from residual contexts), it is

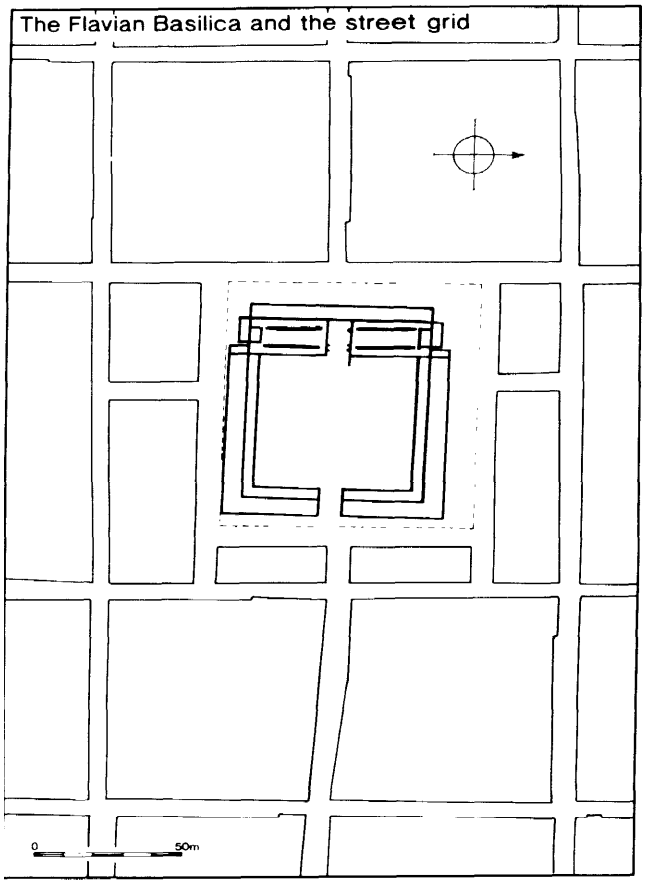

Figure 8 Calleva Atrebatum: *the Flavian* forum-basilica *and street-grid*

possible that the building of the public baths was undertaken at this time. The latter are certainly early, but there is also the possibility that they were started in order the serve the garrison. However it is unlikely that the colonnade of Bath stone which was later destroyed by the laying-out of the ultimate street-grid dates before the 50s or 60s as the exploitation of the quarries could not have started before about AD 47 at the very earliest. Indeed the earliest date for the exploitation of lead from the nearby Mendip Hills is AD 49 *(RIB* II.1, 2404.1). Apart from the baths, there is no other evidence for buildings of masonry construction of Neronian date. However, unstamped imbrices and tegulae could have been used extensively for roofing. The tiles imply imperial support for a building programme more extensive than for just one building. Does this, as has been suggested, mark particular support for Cogidubnus or does it relate to building on property which had reverted to the imperial *patrimonium* on the death of the client king or, as Frere suggests, on the death of a *princeps* of the Atrebates (Frere 1987, 280, 293, n 9)? Either way, if it was intended simply to advance the amenities expected of a royal or civitas capital, the very fact that it was necessary indicates the poverty of resources and/or initiative in *Calleva.* Indeed the imperial contribution could be taken as evidence of a lack of appropriate royal or tribal authority and participation in *Calleva.* This in itself once again raises the question as to how far the conquest had destroyed links between *Calleva* and its hinterland. Was their a local elite, sufficient and strong enough to take on the role of an ordo? Even if we could determine whether the tiles were pre- or post-Boudiccan, their date would not be conclusive in determining whether they related to help given in Cogidubnus' lifetime or during the reorganisation that followed his death when part or all of his kingdom reverted to the emperor (cf Barrett 1979). With or without Cogidubnus and Nero there is as yet very little evidence of urban activity at *Calleva* before the Flavian period. The baths remain the only element of the town for which a pre-Flavian date remains possible (but see below). The amphitheatre has a Neronian/early Flavian terminus post *quem* and, in the light of earlier discussion about the significance of different orientations in the town (particularly at the periphery of settlement), its own cannot be used as evidence of a pre-Flavian date. Although the political circumstances seem different, the state of *Calleva* between *c* AD 50 and *c* AD 80 may not, in practice, have differed very much from that of those southern towns which had suffered during the Boudiccan rebellion and whose development was subsequently delayed. Albeit somewhat later, the situation of Wroxeter between the departure of the legion and the establishment of the Hadrianic civitas capital may be analagous (Webster 1988(b); this volume).

Calleva Atrebatum: Flavian to early Antonine

That the situation was perceived to be unsatisfactory is evidenced by the major developments which took place at *Calleva* from the Flavian period through to the mid 2nd century, The pre-Flavian courtyard building on the site of the basilica was replaced with a larger timber structure also arranged around a courtyard, but on an east-west rather than a north-south axis (Fig 6). It occupied much the same area as the succeeding masonry *forum*-basilica and, given the overall similarity in plan, it is reasonable to interpret the whole as a *forum-basilica* (Fig 7). The west range consisted of a *basilica* divided by a cross-hall which led from the forum towards the presumed site of the *aedes* in the west range. On the same east-west axis was an altar base in the forum and this alignment was also shared by that of the wide street, the so-called *via praetoria,* which can now be shown on the basis of aerial photographs to align with the London road. The southward deflection of this street between Insula V/VI and XXIX/XXI is real and is not the result of a cumulative surveying error during the original excavations (Fig 8). Whether this street led to a temple quarter (XXX) or was subsequently

interrupted by it can only be established by excavation. The latter seems more likely because of the otherwise striking alignment with the London road east of the town. A securely stratified slightly-worn-to-worn coin of AD 77-78 suggests a date in the early or mid 80s for the construction of the timber *basilica* (Fulford 1985, 48-9; forthcoming). The fact that the timber *forum-basilica* is oriented with the only street which is out of alignment with the rest of the grid and therefore likely to be a survivor of the early layout is highly significant. On one interpretation it demonstrates not only that the early layout continued to prevail in the mid-Flavian period, but that the later grid cannot be earlier than the mid 80s at the very earliest. Another interpretation would lay stress on this being the only certain *terminus post quem* for an early grid. Even if we suppose that other elements of this layout are earlier, the *via praetoria* itself is likely to be contemporary with the timber *forum-basilica* with which it is integral. The *terminus post quem* of *c* AD 90-120 obtained by Mrs Cotton for a street towards the periphery of the grid no longer seems late (Cotton 1947).

The strong possibility of an early 2nd century date for the entire later street-grid can now be canvassed. In this context it should not be overlooked that a well within one metre of the principal north-south street and close to the site of the later south gate stood open in the first half of the 2nd century. We do not know when the well was dug, but it could be contemporary with the early 2nd century hearth adjacent to it. Had the street already been in place, it is hardly likely that a new well would have been constructed alongside it (Fulford 1984, 35-6, 156-63). With evidence for the persistence of the early grid to the end of the 1st century, we can no longer be so confident of a pre-Flavian date for the baths. However, whereas it was felt necessary to leave the timber *forum-basilica* and the street leading to it unaltered when the decision was taken to renew the street-grid, different sentiments prevailed over the baths and the demolition of the portico fronting the street. Perhaps it was the relative age and condition of the two structures which influenced the decision.

Why was a new street-grid necessary? although we do not know the limits of the early arrangement, the most likely explanation is that a substantial extension of the original arrangement was necessary This may provide a *terminus ante quem* for the origin of all the buildings which share a variety of different orientations from that of the later grid and which lie towards the periphery of the town plan. It was the need to provide a structure for these and subsequent developments which necessitated the new grid.

The full extent of the later street grid is not certain, but there is little evidence for it extending much beyond the line of the later 2nd and 3rd century defences (Fig 9). Indeed the remains of the Inner Earthwork probably acted as a deterrent to expansion; it is only on the latter's eastern side that settlement spread across it to any notable extent. Much of the case for a more extensive grid rests on the evidence of Mrs Cotton's excavations between the town wall and the Outer Earthwork on the north-west side (Cotton 1947). In the narrow trenches she employed, the identification of a gravel street intersection in the context of a gravel subsoil may have been mistaken. Certainly recent area excavation around Rye House has produced no further evidence in support (Frere 1989, 316). Nevertheless the corresponding absence of burials inside of that north-western stretch of outer earthwork suggests that it may have continued to serve as a boundary to delimit the residential area in that direction. Indeed this is reinforced by the presence of late 1st/early 2nd century cremations beyond it (Corney 1984, 293-97). The existence of burials on the inner as well as the outer side of the Rampier Copse earthwork implies a different situation to the south-west; there the old Inner Earthwork may have continued to serve as a limit (Boon 1974, 185) and there is no evidence of late 1st century occupation between it and the Outer Earthwork. What, apart from the take-up of land, controlled the eastern and southern extent of the grid is not clear, although natural topography, as on the south-east, was an important factor. The course of the old Inner Earthwork probably served to reinforce a natural limit on expansion to the south, while similar obstacles outside the course of the old Inner Earthwork, such as the 1980 pre- or early-Flavian Manor Farm ditch, existed on the eastern side (Fulford 1984, 3741). The latter remains the only evidence for possible defence of this period, although Winchester has produced some evidence for early Flavian defences (Biddle 1965, 235-8; 1970, 281-5).

The amphitheatre was beyond the limits of either street-grid and shared a different orientation from both. Recent excavation has provided a Neronian/early Flavian *terminus post quem* for the construction of this monument (Fulford 1989). Like the near-contemporary *forum-basilica* all its structural work employed timber. Though smaller than Maumbury Rings, the arena has a similar surface area to that at Cirencester *(ibid,* Figs 77-79). The arena is unusual in having a circular plan and the wooden terraces erected on the seating banks could have seated 3,600 to 3,700 or taken as many as 7,500 standing spectators.

The origins of structures which conform strictly to the street-grid must post-date it; in this respect the *mansio* is likely to be early 2nd century or later. With the possible exception of the Manor Farm ditch, there is no evidence of late 1st century defences. Whatever role the town had played in provincial administration beforehand, it can be reasonably certain that it served as *civitas* capital of the Atrebates from the Flavian period onwards. This fits well with the suggestion that the appointments of *iuridici,* possibly in AD 78, 79 and 81, to assist the *legatus pro praetore* were occasioned by the death of Cogidubnus and the need to oversee the administration of his kingdom (Boon 1969, 38-9; 1974, 44; Birley 1981, 208--214). But perhaps their ap-

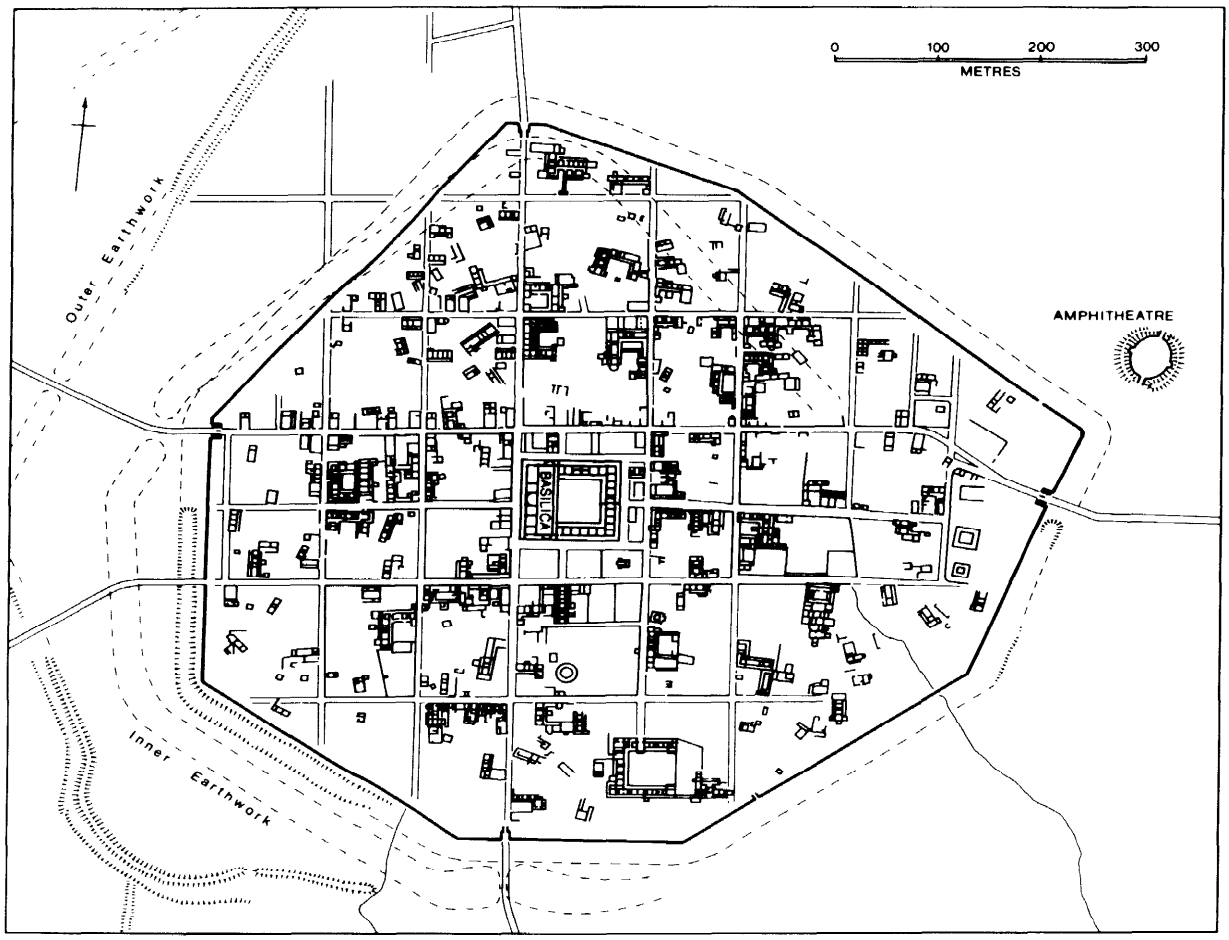

Figure 9 Calleva Atrebatum: *the early 2nd century street-grid and the town plan*

pointments should better be seen in the context of the Flavian advance northwards and the general need to make administrative arrangements in the demilitarised midlands and south (Frere 1987, 183–4).

Although it no longer has significance in connection with the pre-Flavian origins of the Roman town, it is still remarkable that both in its later street-grid and in its principal public buildings early 2nd century *Calleva* still displayed a remarkably 'military' aspect to its character. While the resemblance has been dismissed by some (Blagg 1980, 29–30; Millett 1990, 72), the similarity between the plan of the Flavian *basilica* as far as we can reconstruct it and its masonry successor and that of a *principia*, even to the positioning of the *aedes* is very striking. If the *aedes* provided a focus for the veneration of the capitoline triad or the imperial cult, the absence of separate *capitolia* in Britain is more explicable. The military flavour of later 1st and early 2nd century *Calleva* can be seen as an extension of the situation under Nero, reflecting a lack of local resources and initiative. The choice of the *forum-basilica* plan and accompanying street layout reinforces a view which presupposes some difficulties experienced by Rome in promoting the urban process in Britain.

The early Roman history of *Calleva* is undoubtedly complicated. In the course of less than fifty years the settlement underwent three substantial changes. The native arrangement was swept away in the Claudian period and, as we have argued, replaced by a legionary or vexillation base between *c* AD 44 and *c* 49. This provided an as yet ill-defined framework for the succeeding civil settlement whose nature and character still remain largely unknown in the pre-Flavian period, even to the extent that we may be wrong to regard the place as urban or as a civitas capital before the Flavian period. Thereafter, from the early Flavian period onwards, a succession of major developments took place. Surviving elements of the military phase were removed with the construction of the Flavian *forum-basilica* and its related re-orientation of the street-plan. The baths,

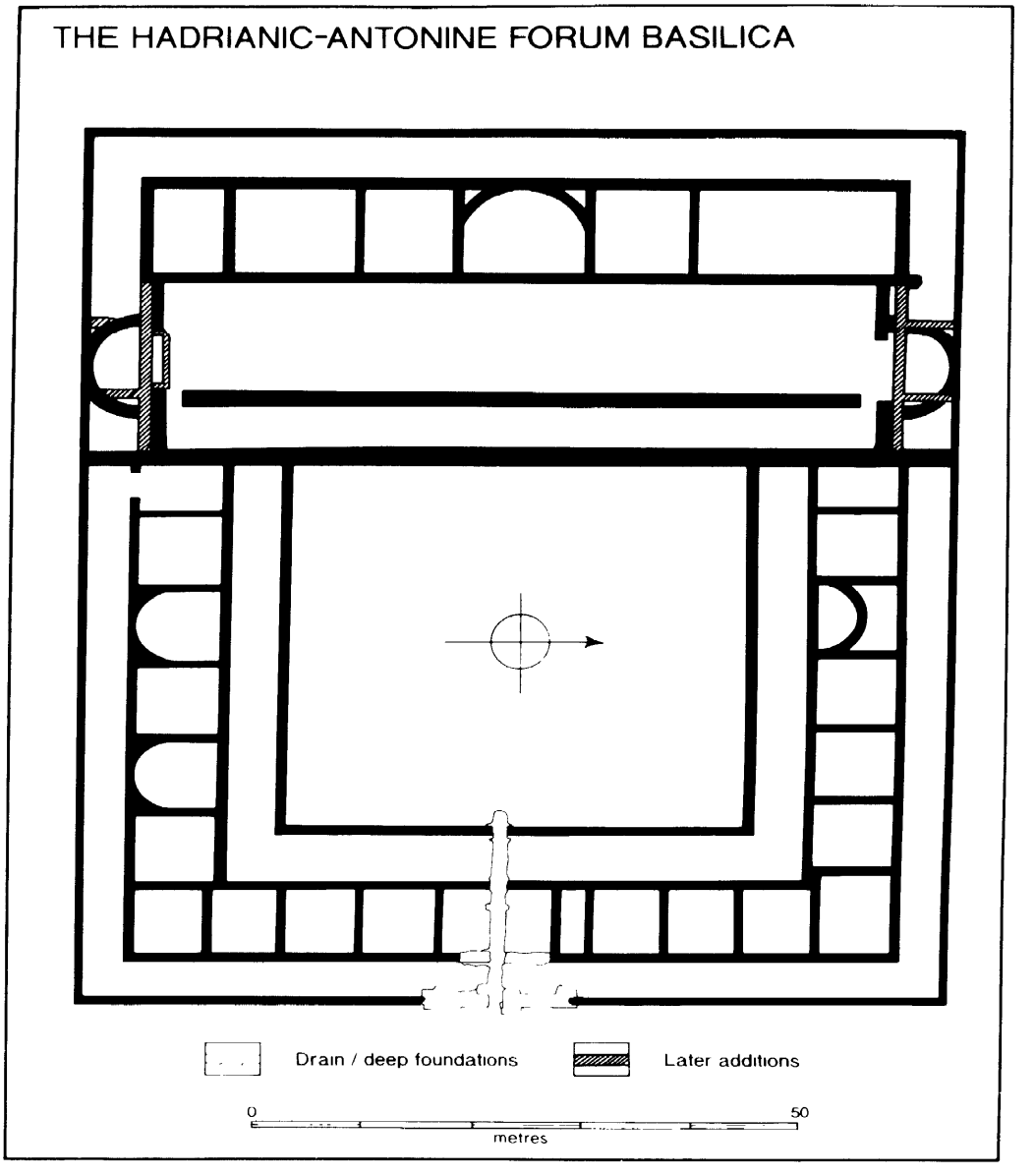

Figure 10 Calleva Atrebatum: *the Hadrianic-early Antonine masonry* forum-basilica

whose location is determined by the adjacent water-supply, *may* represent the only public building to survive pre-Flavian *Calleva.* Such a radical reorganisation can be paralleled in Exeter and, somewhat later, in Wroxeter, where civitas capitals replaced legionary fortresses with considerable internal rearrangements (Webster 1988(c)). If the early grid had been predicated to some degree on the extent of the fortress layout, the construction of a new street-grid in the early 2nd century emphasised the inadequacies of the former arrangement. At the same time it demonstrates that the period up to the early-to-mid 2nd century continued to be one of real growth within *Calleva.* The reconstruction of the

forum-basilica in stone in the Hadrianic–early Antonine period seems to make the highwater mark of the town in terms of the provision of monumental architecture.

The sequence described for *Calleva* emphasises the very different trajectories followed by each of the south-eastern towns which occupied the sites of major native centres (cf Todd 1989). As a colonia, but also occupying the site of a legionary fortress, the development of 1st century *Camulodunum* with its temple to the deified Claudius, was understandably different from that of its neighbours (Crummy 1984; 1988). Although experiencing some degree of military occupation the development of *Verulamium*, which one might have expected to be similar to that of *Calleva*, was different again. Flavian and later expansion continued to build on the inherited pre-Boudiccan structure without any radical re-arrangement and the town had certainly achieved municipal status by the Flavian period, if not earlier (Frere 1983). The evidence from early Canterbury is less informative, with little to go on to characterise the nature of the pre-Roman settlement or that of its Claudio-Neronian successor (Bennett 1985). The late 1st century, however, as at Silchester, seems to have provided the context for major development. The principal elements of the street grid seem to date from then with the theatre-complex belonging to the late lst-early 2nd century. As a central feature of the town, this building provides a link with *Verulamium*, serving to set the two apart from Silchester. Chichester, with its epigraphic evidence for pre- or early Flavian monumental architecture under Cogidubnus may also have more in common with these two (Cunliffe 1978, 180–81). The early development of Winchester remains enigmatic, but Biddle sees little evidence for urbanisation before the Flavian period (Biddle 1983, 111).

Collectively the evidence seems to indicate that urbanisation was a delicate plant which required careful nurturing to ensure its continuing existence in the Flavian period and afterwards. At Silchester indications of outside support, both under Nero and then from the Flavians onwards, are more evident than in cities like Canterbury, Chichester and *Verulamium*. Although towns directly affected by the Boudiccan rebellion were slow to recover, development was also slow at *Calleva* and it was not until the early 2nd century that the later street-grid, which is one of the most celebrated elements of the Silchester plan, was in place. It was not until the mid 2nd century that the city boasted a *forum-basilica* comparable with that of *Verulamium* and London (Fig 10).

Acknowledgements

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4 The development of Roman Colchester

Philip Crummy

It is very appropriate that Colchester should be one of the towns included in a volume such as this because Colchester is where Wheeler carried out his first archaeological excavation. The site concerned was the Balkerne Gate, the excavation of which Wheeler took over in 1917 after one of the excavators died (Wheeler 1921; Hull 1958, 16–21). Curiously enough Wheeler interpreted the Balkerne Gate wrongly – he knew there was something odd about his interpretation of the remains but did not spot the fact that the central part had been a free-standing monumental gate. This was all the more surprising since later in Verulamium he was to excavate two other examples of this kind of structure without realising his error. However he did lift the archaeological study of Colchester onto a different plane and effectively set it off on the course it is on today. He carried out the first proper area excavations in the town when in 1920 he uncovered a street and some houses in the Castle Park (Wheeler 1923; Hull 1958, 81–5). This, combined with the discovery that the so-called vaults of Colchester Castle were part of a great classical temple, enabled him to produce the first attempt at a plan of the street system of the Roman city (Fig 1; Wheeler 1923, 39). He did this by constructing a grid based on the positions and alignments of the gates, the temple and the street he excavated in the Park. The result still compares well with the latest plan (Fig 2).

Much has happened in Colchester since Wheeler's time, especially over the last twenty years when the town has seen large archaeological investigations in advance of the construction of several developments on an unprecedented scale. The largest and most recent of these was at Culver Street where the archaeological excavations proved very informative (Figs 4–8; CAR 6).

The major archaeological event in the town centre was the discovery of the fortress in 1973. Key sites in relation to the fortress generally (Fig 3) are Lion Walk (which led to its discovery (CAR 3, 3–9), Culver Street (CAR 6) and, to a lesser extent, Gilberd School (CAR 6).

The Culver Street site was bisected throughout the Roman period by a north–south street which originated in the military period as the *via principalis.* Lining the west side of the street were the six barracks of the First Cohort whilst opposite were three roughly square buildings of which at least one was likely to have been tribune's quarters (Fig 4). The defences and parts of the centurions' quarters of the barracks in the south-east corner of the fortress were examined at Lion Walk. The Gilberd School site, although much smaller than the other two sites, was of considerable value because it enabled *contubernia,* the men's quarters, to be investigated for the first time.

In about AD 50, after the Twentieth Legion had been withdrawn, the defences of the fortress were filled in, or at least partly so, and a group of public buildings was laid out on the site of the annexe which had existed on the east side of the fortress (Fig 3). These included the Temple of Claudius and presumably a theatre and administrative buildings. Of the five insulae formed over the annexe, at least four seem to have contained public buildings. The new buildings and street grid were laid out on a slightly different alignment to that of the fortress and the defences of the fortress were not replaced. Details of the sequence have been published in several places (most notably in CAR 3, 3–9 and Crummy 1988, 29–31).

After the evacuation of the garrison, the barracks at Culver Street were retained for use in the new colony but the large buildings on the opposite side of the *via principalis* were demolished and a new street on a slightly different alignment to that of the fortress was laid out to pass over the site of the northern one of these. Timber-framed houses were erected along the frontage of the new street and similar houses, not so clearly defined during the excavations, were built along the east side of the former *via principalis* (Fig 5).

The Boudican Revolt took place about ten years after the foundation of the city yet many of the barracks survived long enough to be destroyed during the fire including the barracks at Culver Street (or at least those parts of them which were examined by archaeological excavation). But this pattern was not repeated everywhere. At Lion Walk it was only the four most northerly of the six which were kept – and even then the retention was only partial, and restricted to the centurions' quarters apart from the northern block. The rest of these buildings and all of the southern pair were demolished and the area left vacant, later to be cultivated. More drastically, the barracks at the Gilberd School had been demolished prior to the fire and a new street lined with buildings constructed a short distance to the north.

In general many of the military buildings must have been demolished, especially in the *praetentura.* This is made apparent by the east-west streets laid out at the time of the foundation of the colony (Fig 3). These penetrated well into the fortress, thus

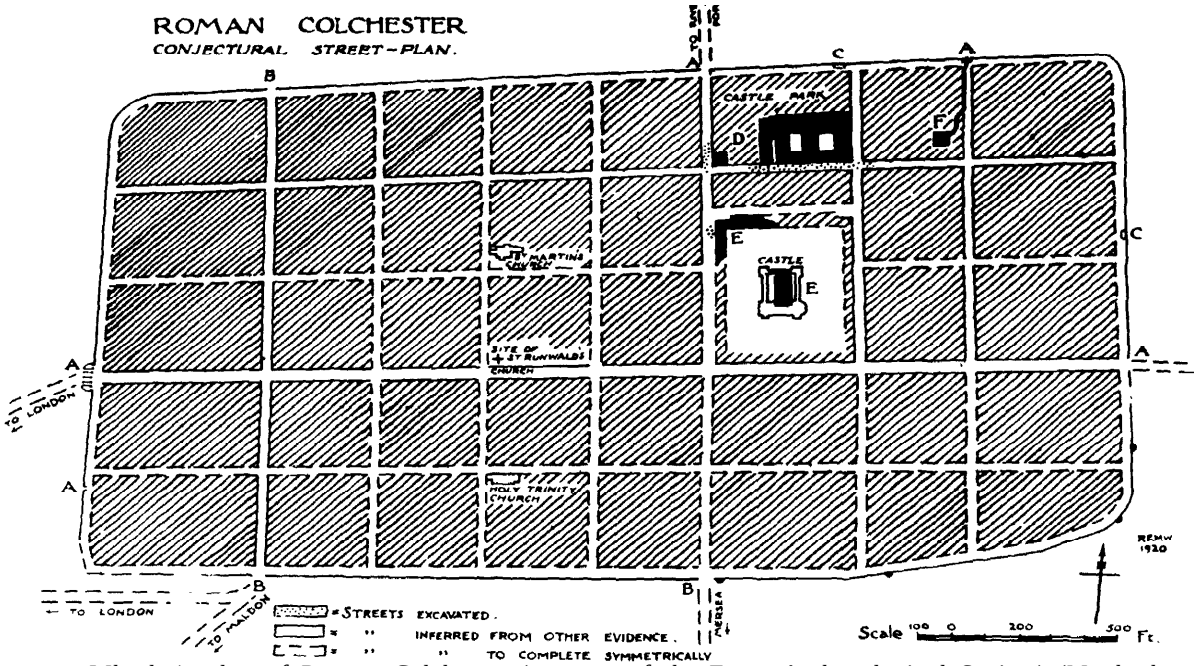

Figure 1 Wheeler's plan of Roman Colchester (courtesy of the Essex Archaeological Society) (Much the same plan but with less interpretation appeared earlier in Wheeler and Laver 1921)

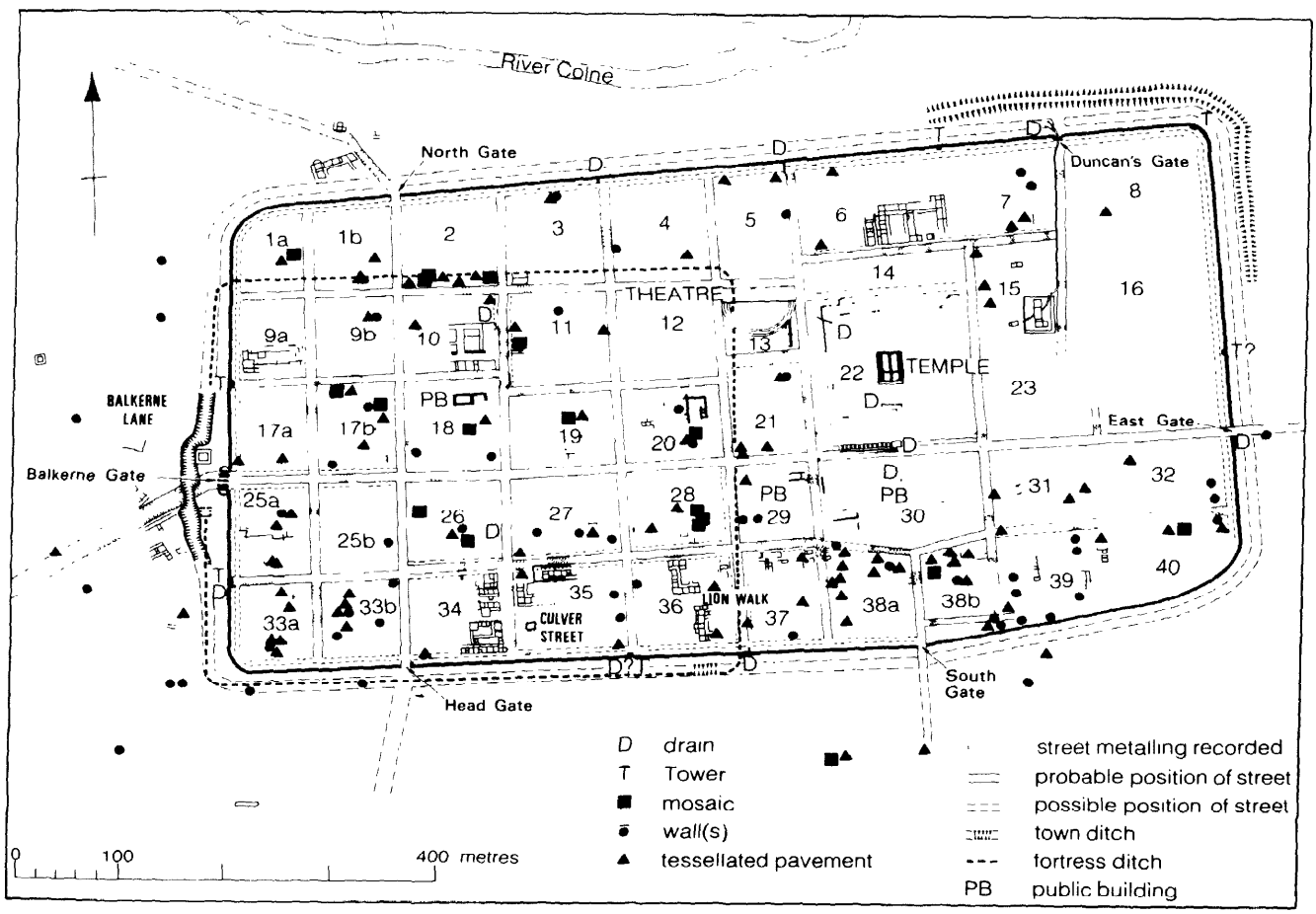

Figure 2 Most recent plan of Roman Colchester

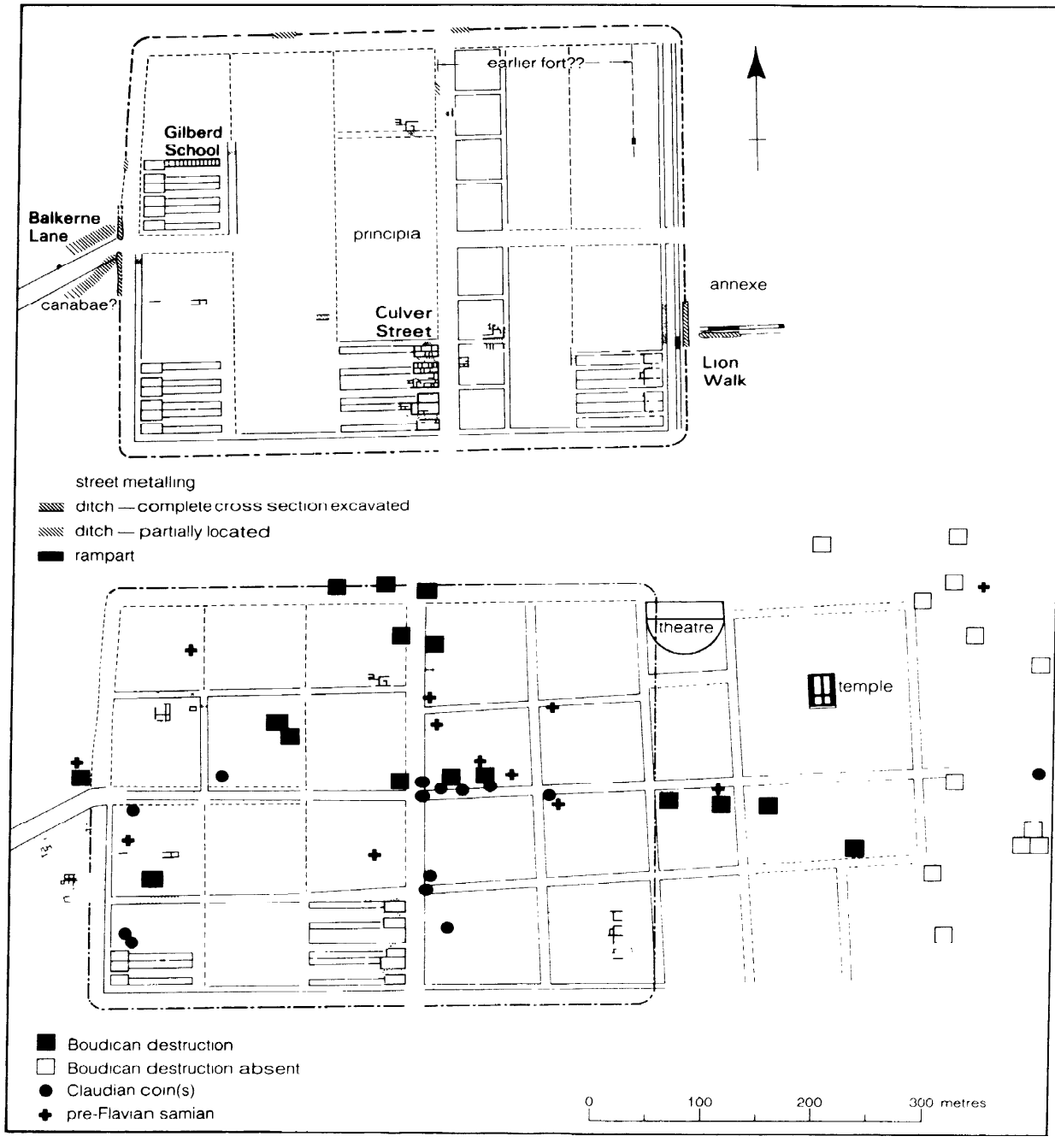

Figure 3 Plans of the fortress at Colchester (above) and the pre-Boudican city (below)

implying that their construction, as at Culver Street, must have necessitated considerable clearance of buildings.

Just before the fire, the city seems to have been well populated. The only vacant area of this period yet recognised within the area of the former fortress was on the site just mentioned of the barracks at Lion Walk. Another indication of a strong demand for building land particularly on prime sites comes from the Balkerne Lane site where, just outside the backfilled fortress defences, there existed a series of very long narrow buildings packed along the frontages of the street leading westwards out of the city.

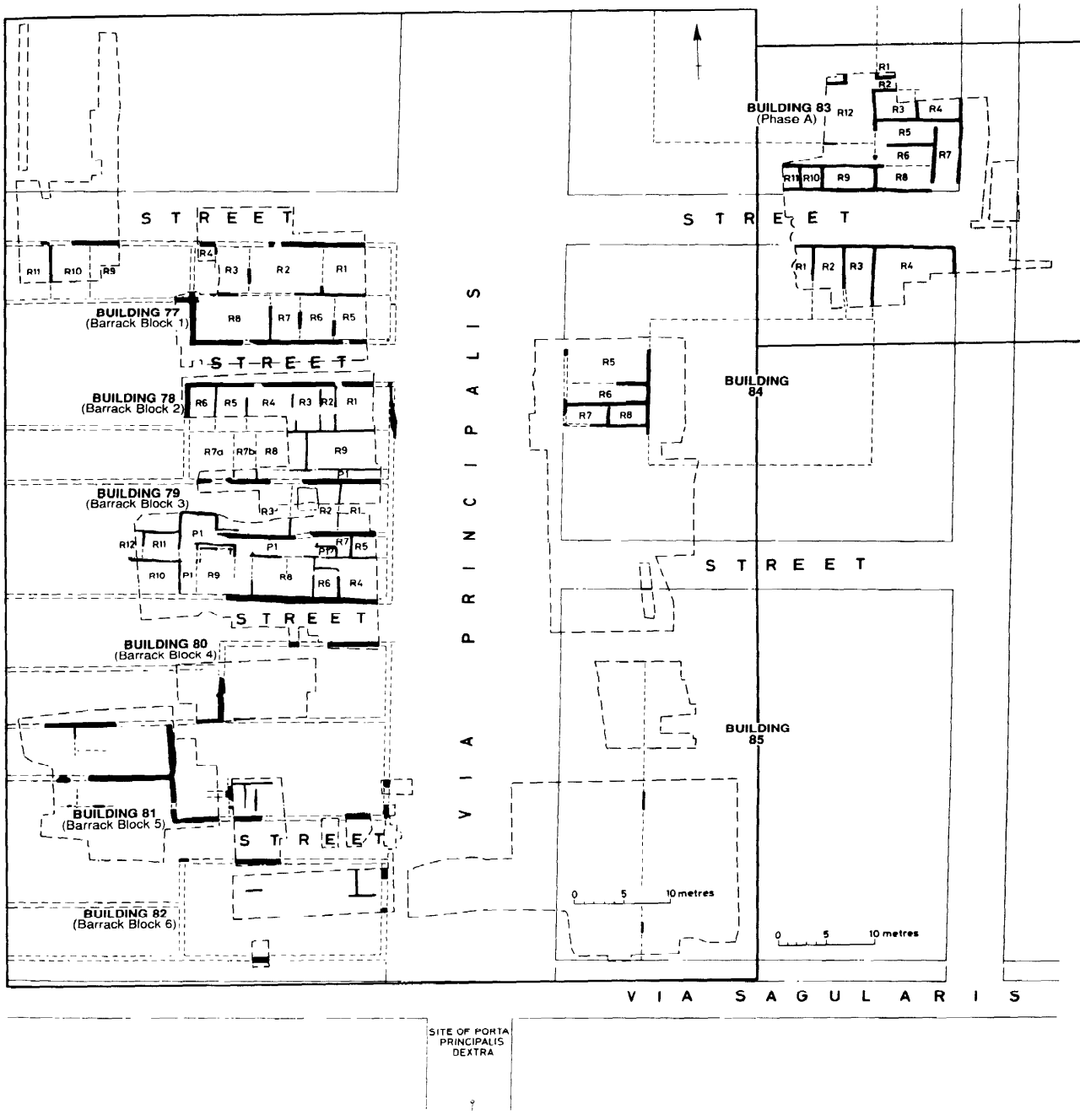

Figure 4 Outline plan of Culver Street c AD 44–49

The destruction of the city in AD 60/1 seems to have been a fairly comprehensive affair because there are few sites where evidence of the fire is absent. However despite the apparent ubiquity of the destruction, it was possible to re-establish the street system as it had been before the fire and to build new houses on pre-Boudican plots. The survival of plot boundaries has come out quite clearly at Culver Street showing that at least in some parts of the city the houses and other buildings must have been rebuilt one by one rather than there having been large-scale redevelopment schemes of wide areas.

It is too difficult to say how quickly the city recovered after the fire. Rebuilding is likely to have

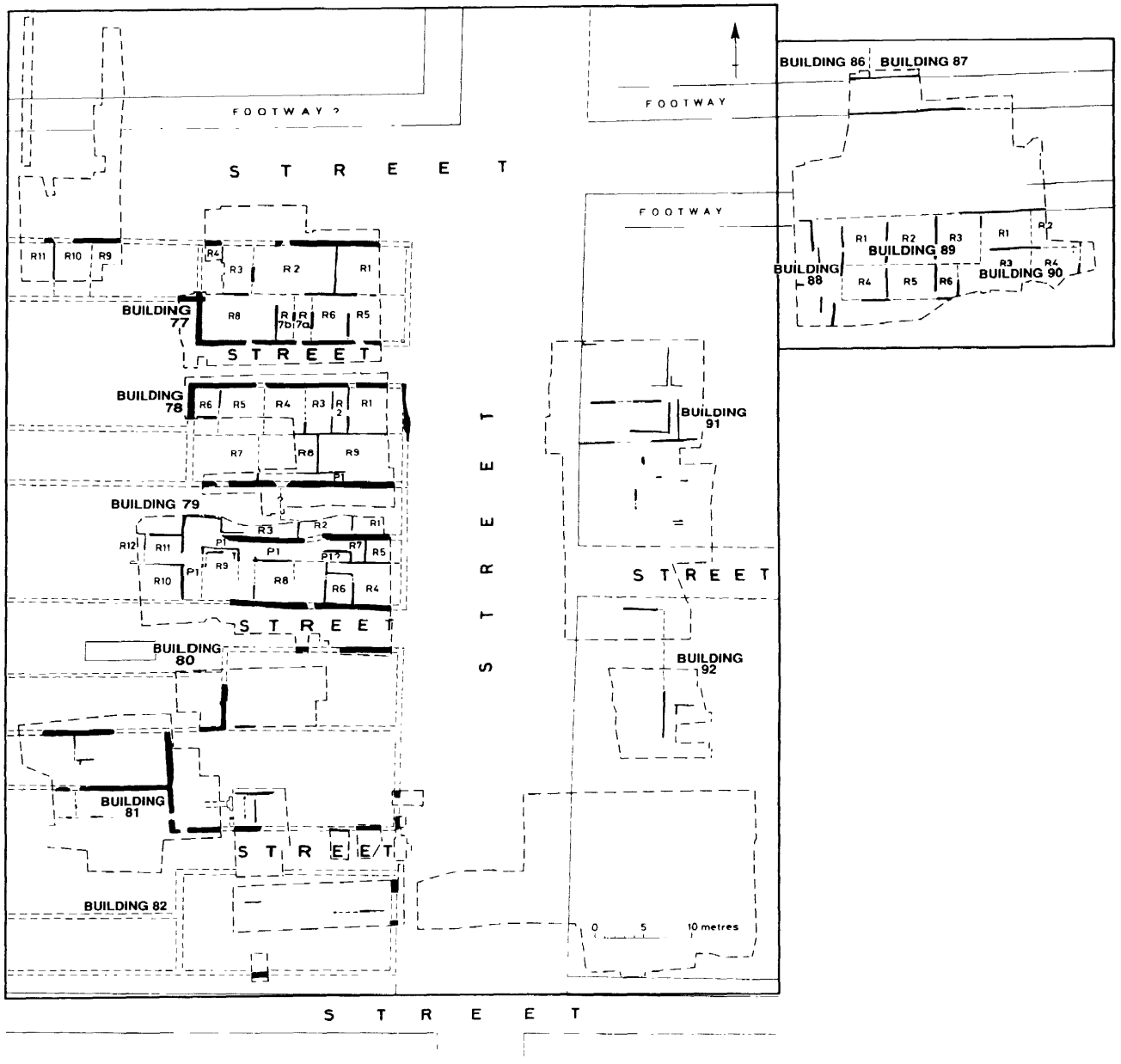

Figure 5 Outline plan of Culver Street c AD 49-60/1

started more or less straight away although in a sense the city probably never full-recovered, at least not to its former density of buildings.

At Culver Street, parts of the site were not rebuilt but instead remained more or less vacant and in time came to be used for cultivation (Figs 6 & 7). Part of the evidence for the latter was provided by a small square granary which was constructed in the eastern part of the site, probably in the 2nd century. The building had been demolished and subsequent cultivation continued long enough for a thick layer of soil to develop over its foundations. Later an oven, probably for drying corn, was built on its site. The oven was dug into the soil sealing the remains of the granary thus indicating that there had been a substantial period of time between the demolition of the granary and the construction of the oven. Around the end of the 2nd century, some small

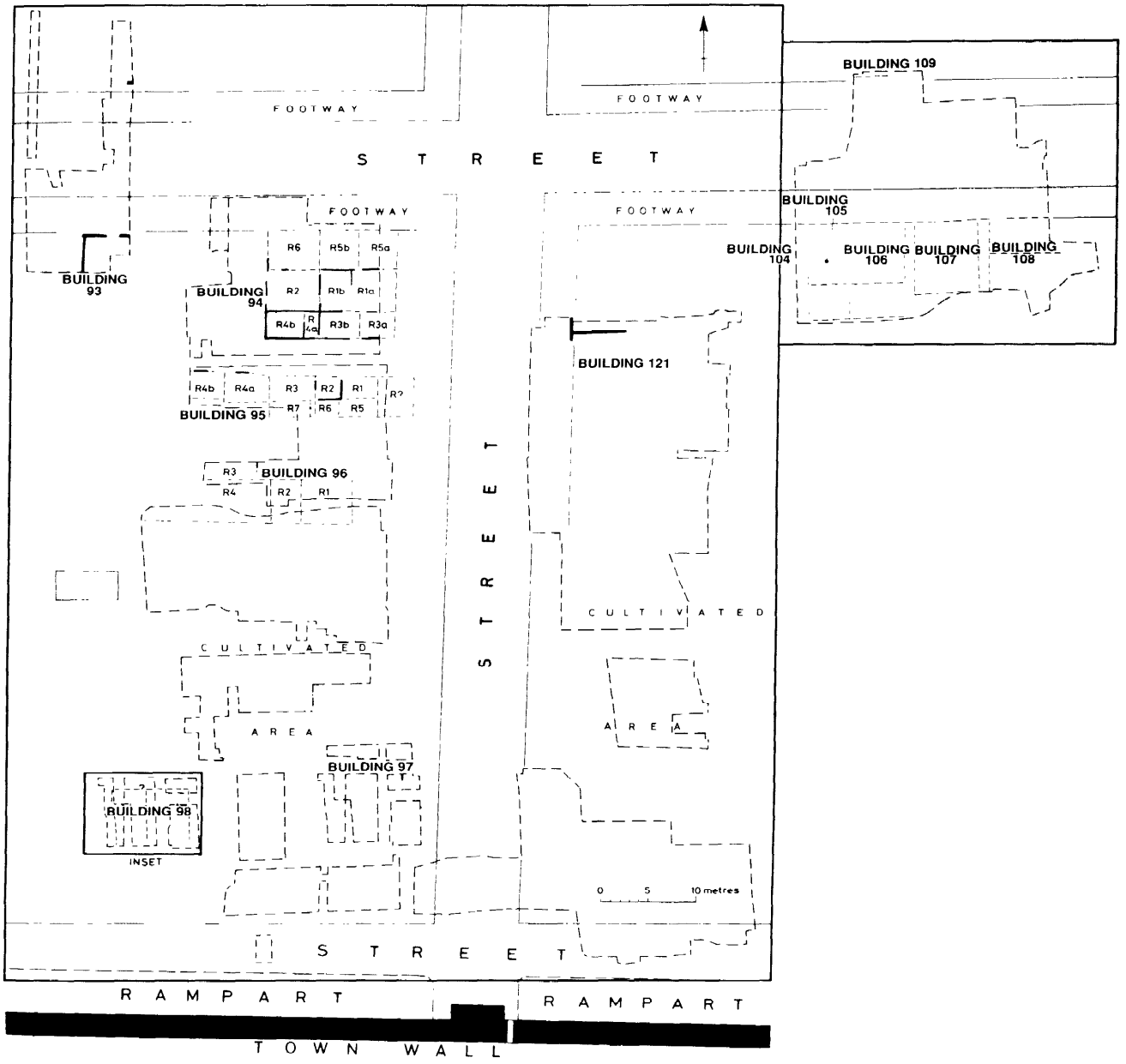

Figure 6 Outline plan of Culver Street c AD 60/l-150/200

buildings (Fig 7: Buildings 117-119) were erected in the south-west part of the Culver Street site. These too were probably associated with the cultivation.

The dating of the city wall has always been a problem. Ros Niblett showed in the 1960s that it had been free-standing and predated the rampart (Dunnett 1971, 68-9). The two subsequent sections at Lion Walk (CAR 3, 70-3) and Culver Street (CAR 6) have confirmed that conclusion although now the date for the construction of the wall has been tentatively brought forward into the 1st century, to c AD 65-80 [1], [2]The 2nd and early 3rd centuries saw in Colchester, as in other towns, the appearance of substantial, better-built town houses, usually with tes-

Figure 7 Outline plan of Culver Street c AD 150/200-275/325

sellated and mosaic floors. At least seven such buildings existed at Culver Street (Fig 7). The largest of these was a courtyard house measuring about 40m across which took up the north-west corner of its insula and contained at least four mosaics. Other examples have been dug at North Hill (Dunnett 1967), Middleborough (CAR 3, 159-174; Building 70) and Lion Walk (CAR 3, 52-66; Buildings 19 & 20).

Now whilst the size and quality of these houses could be taken to imply a period of prosperity, the number of houses generally seems to suggest that there had not been a parallel growth in the size of the population. Estimating the latter with any deg-

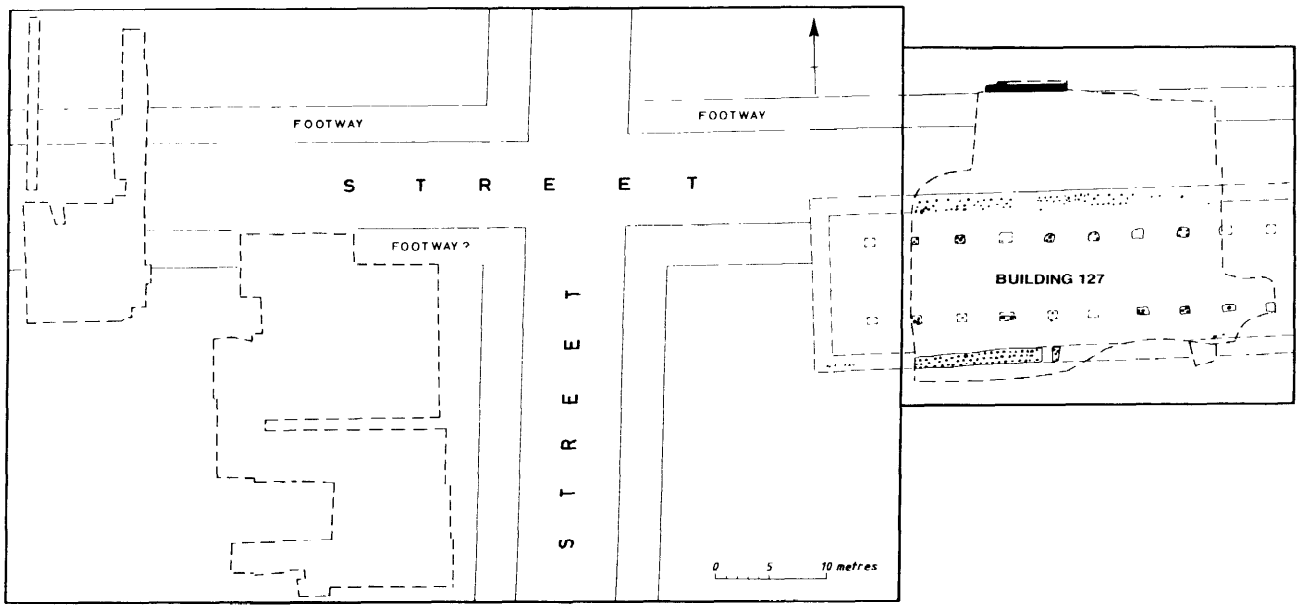

Figure 8 Outline plan of Culver Street c AD 275/325-400+

ree of confidence is almost impossible. However if Insulae 34 and 36 (Lion Walk and Culver Street) were typical of insulae which did not contain public buildings, then the average such insula is likely to have contained about six or seven houses. This suggests a total of only around 300 houses for the entire city and thus, very crudely, a population which is unlikely to have numbered more than a few thousand.

By the 3rd century the open cultivated areas within the walled part of the city were substantial. Probably these were distributed around the edges but only large-scale excavations near the centre of the town can confirm this.

The most interesting evidence for cultivation comes from the Balkerne Lane site, just outside the city walls. Here the surface of cultivated land had been sealed in the late 3rd century when upcast from the widening of the defensive ditch had been used to form a counterscarp bank. Nine beds were quite clearly visible as undulations in the surface of the cultivated soil. The soil is distinctive and is the same kind of material as that at Culver Street and Lion Walk. It is fairly homogeneous in colour and texture and has been formed at the expense of underlying layers. In places, repeated turning over of the ground has led to the loss of practically all the earlier layers to leave little more than truncated features cutting into natural (CAR 3, 138-141).

In the 1970s, excavations at the extramural sites at Balkerne Lane and Middleborough showed that the suburbs declined practically to the point of extinction between AD 275 and 325. This was at a time when the defences were tightened up by widening the town ditch and closing the Balkerne Gate. All this must be seen against the background of the Saxon Shore forts, particularly of the forts at Bradwell-on-Sea and Walton Castle which provided Col-Chester with some protection (CAR 3, 19). Dates for the construction of these two establishments are uncertain but it is thought that they probably belong to around this time.

However, the decline of extramural occupation does not seem to have been matched by a swelling of the numbers of houses inside the walls. Presumably the overall decline of the city was too severe for any relocation of the inhabitants of the suburbs to have had much of an impact.

In the 4th century, the open area within the city walls became larger as houses were knocked down without replacement. By around 325, all of the houses at Culver Street had been demolished, All that was standing was a large aisled building on the north side of Insula 34 (Fig 8) and possibly the ?corn-drying oven. The aisled building was over 45m long and had been built on the site of at least two houses. There were no traces surviving of any floors or wall plaster so that it may have been quite a basic structure. In the light of the evidence for cultivation in the adjacent area, the most plausible explanation for the building was that it was an agricultural barn.

The situation at Lion Walk may have been much the same since here as half of the six houses had been knocked down without replacement by the mid 4th century (CAR 3, 70). Although it is not clear if the

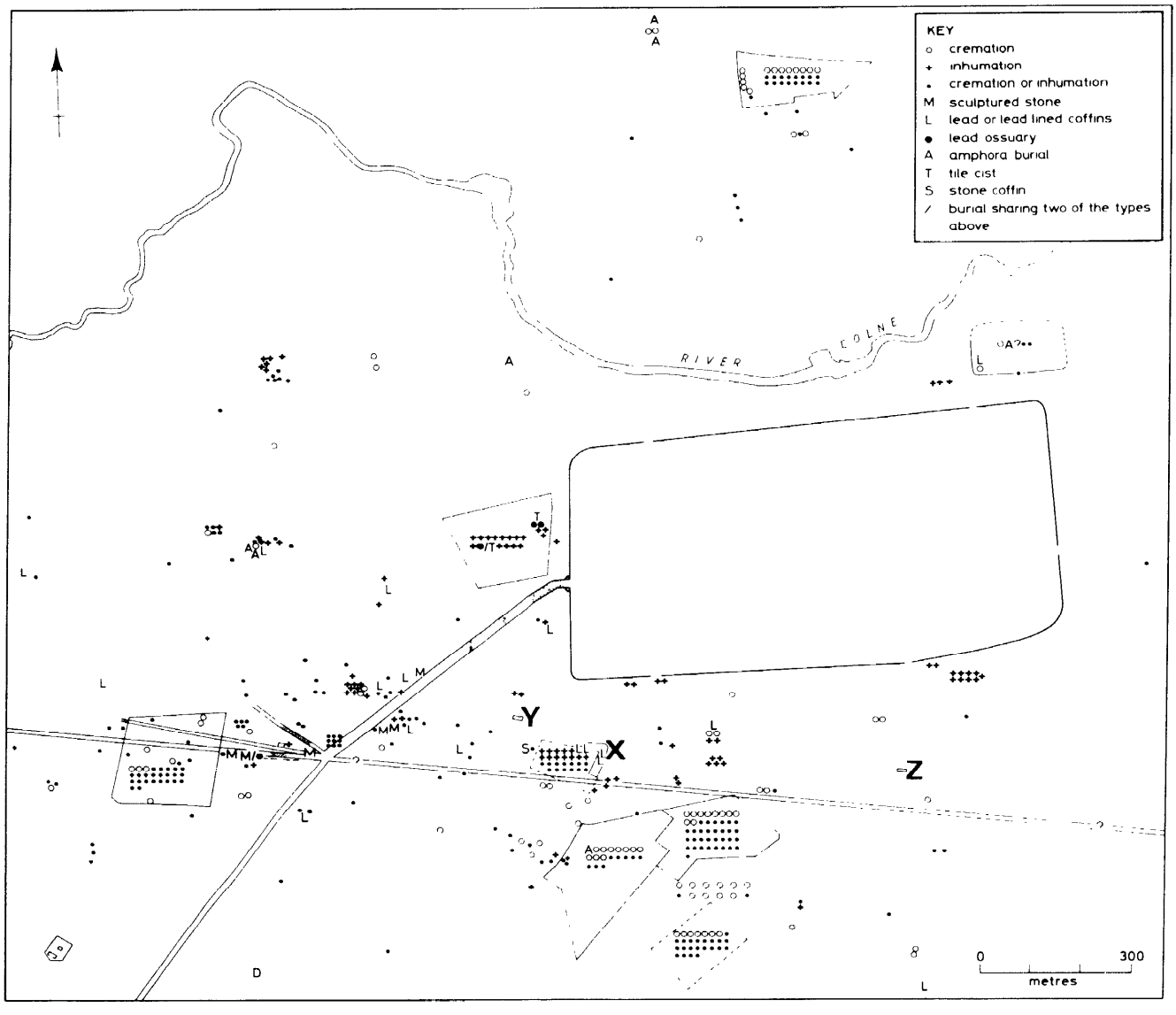

Figure 9 Plan showing the distribution of cremations and inhumation burials around the walled part of Roman Colchester: Sites excavated in the 1970s and 1980s: X: Butt Road (over 700 inhumations and 3 to 5 cremations), Y: Maldon Road (18 inhumations), Z: St John's Abbey Grounds (34 inhumations)

sites of these demolished buildings were used for cultivation, one conclusion seems inescapable, namely that built-up areas of the city were in decline.

The shrinking of the suburbs is neatly mirrored in the distinctly different distributions of inhumations and cremations. Broadly, the cremations are of 1st and 2nd century date whereas the inhumations belong to the period from the 3rd to the first part of the 5th centuries. The distribution plan (Fig 9) shows very clearly how on the whole the inhumations occur closer to the city walls and thus suggests that cemetery areas were allowed to creep inwards during the 3rd and 4th centuries.

Of all the cemetery excavations which have taken place in Colchester, easily the most important is that of Butt Road. Excavations finally finished in 1988, the total number of excavated inhumations being 742. There were effectively two cemeteries, the first and smaller being of 3rd to early 4th century date. Here the burials were lying roughly north-south. In the second cemetery, the bulk of the inhumations were aligned east-west and were of 4th century date. These are seen as being Christian

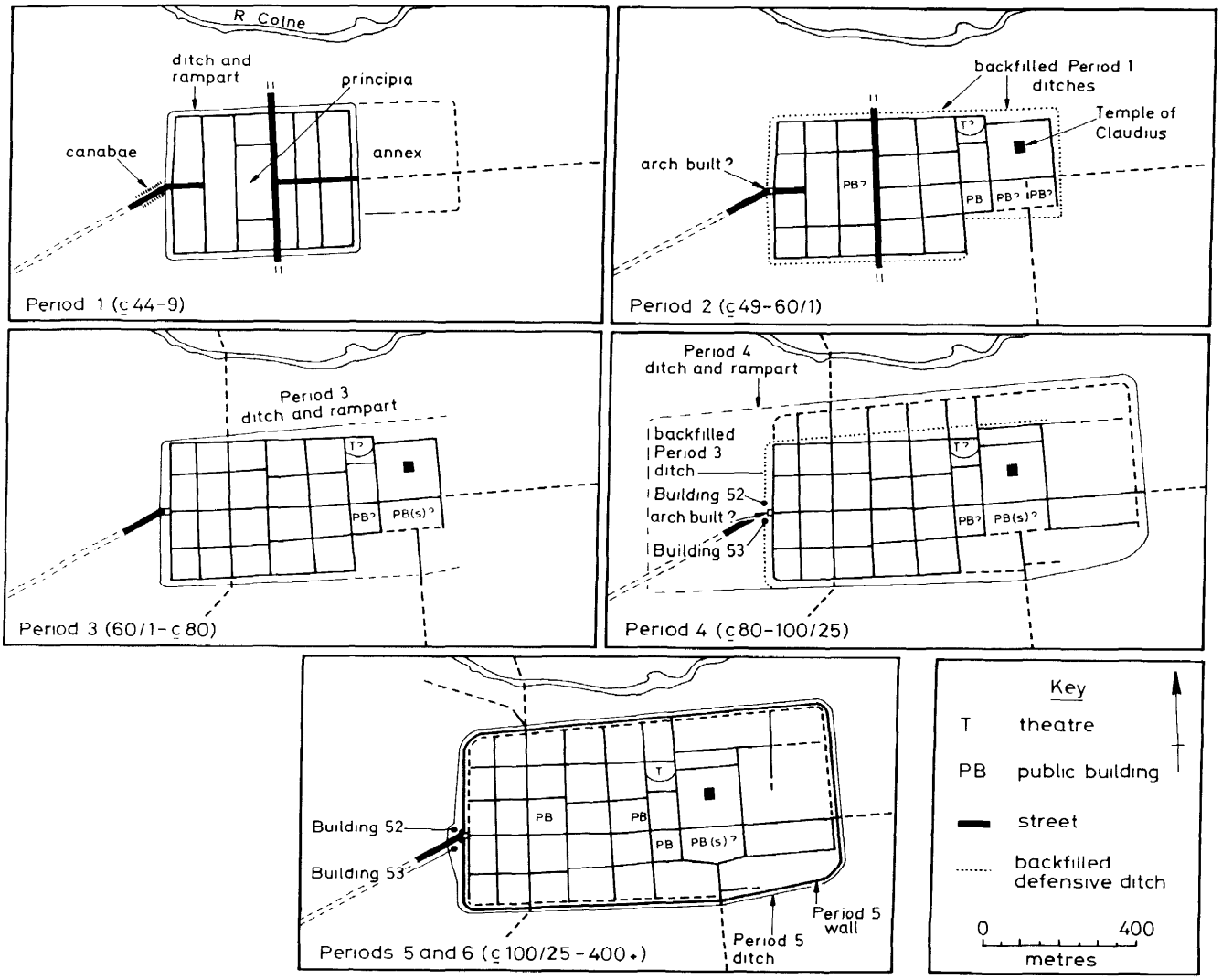

Figure 10 Possible sequence of the development of Roman Colchester

and contemporary with an east-west building which is interpreted as a church (Crummy 1980, 264-8 superseded by CAR 9).

Little can be said about the end of Roman Colchester at least in terms of hard fact (CAR 1, 22; CAR 3, 19). Curiously the sites to provide the greatest concentration of late Roman finds are not the ones already mentioned but two small sites on Colchester High Street (Cups Hotel dug 1973 (CAR 6) and Angel Yard dug 1986). Could it be that by the middle of the 4th century, the city had shrunk to the extent of being concentrated around little more than one street?

After the end of the Roman city, some of the houses were left standing; this much is suggested by topsoil and broken roof tile which overlay the floors of some buildings. Thin but widespread Anglo-Saxon occupation within the walls from the 5th century onwards is indicated by the discovery of three huts, two at Lion Walk (CAR 1) and one at Culver Street (CAR 6), and a scatter of contemporary finds in and around the walled part of the city (CAR 1, 1-24).

The transition of fortress into colony and the subsequent sequence of changes to the defences made it possible after the Lion Walk and Balkerne Lane ex-

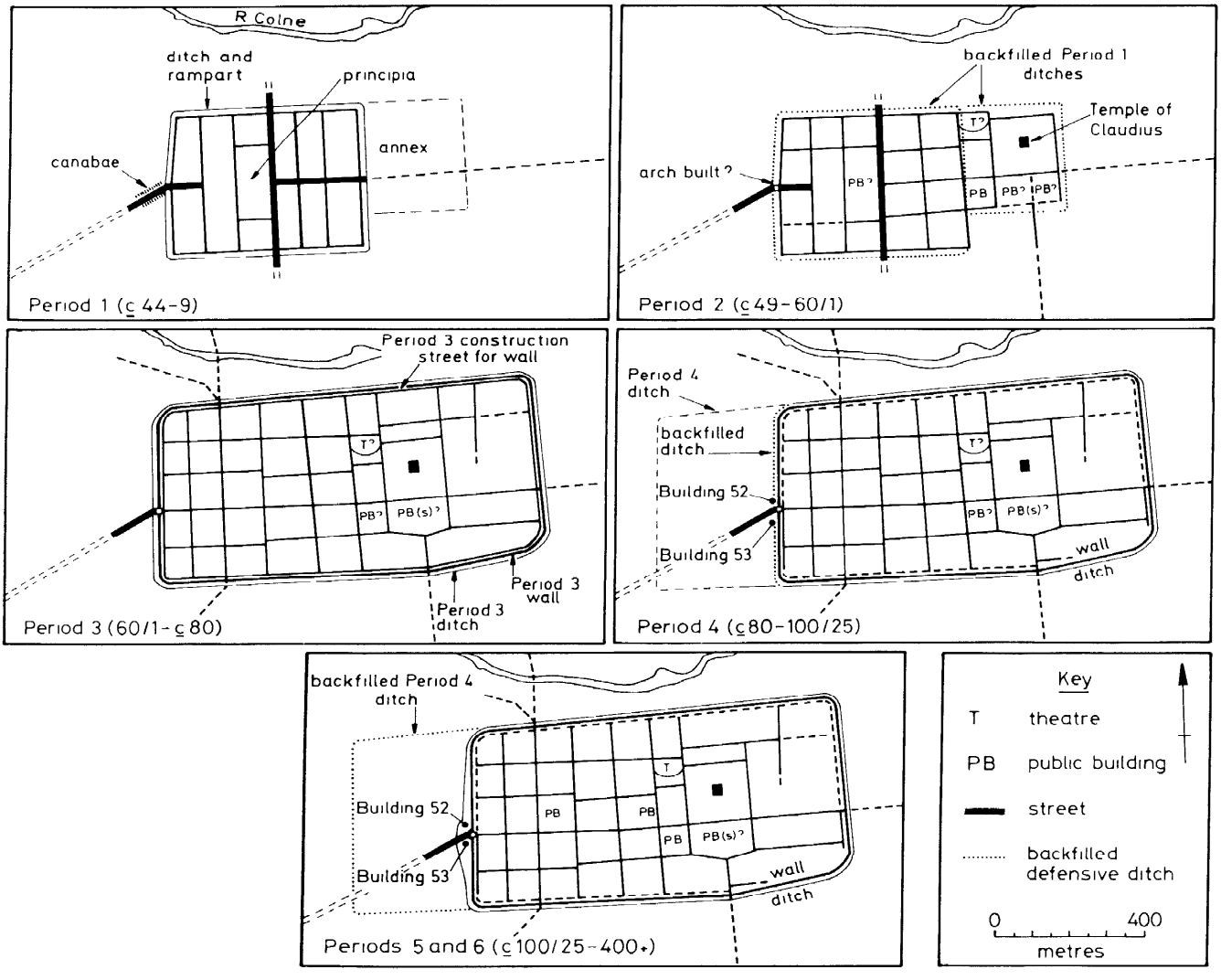

Figure II Alternative possible sequence of the development of Roman Colchester

cavations to see the development of the city in terms of six phases (CAR 3, 11-15). However the recent re-dating of the city wall would, if correct, necessitate revision of the sequence.

The original sequence (Fig 10) was based on the assumption that the building of the city wall and the re-instatement of Period 5 of the Period 3 ditch at Balkerne Lane had been contemporary developments. Since the construction of the Romano-Celtic temple appears to have predated the Period 5 ditch, then it follows that the wall must have been built after the temple. Excavation of the latter indicated that it could not have been built before c AD 100/125, a *terminus post quem* which therefore must apply equally to the wall. And from this it follows that the Period 3 ditch, finds from which clearly indicate an immediately post-Boudican date for its backfilling, must have been part of the defences which predated the wall and existed within the period AD 60/1 to *c* AD 100/125. This argument was developed further by taking other factors into account to envisage a defensive circuit of Period 3 date which was smaller than that subsequently represented by the city wall. The full case for this interpretation is set out in CAR 3, 11-15.

The new interpretation (Fig 11) is based on the earlier date for the construction of the wall, ie c AD 65-80. To accommodate the new date, it has to be assumed that the wall and the Period 3 ditch are parts of the same scheme. The Period 4 enlargement of the defended part of the city can still be fitted into the new interpretation but the new area would have

been separated from the rest of the city by the wall even although at least parts of the Period 3 ditch had been backfilled.

The second scheme assumes an earthwork addition to the walled city, an action which on the face of it seems incongruous. On the other hand, the scheme is attractive in several ways. It simplifies the sequence by removing the need to postulate a separate defensive circuit for the period AD 60/l- *c* AD 80, the archaeological justification for which is otherwise slender, and it also avoids the problem of having to explain why the Period 4 rampart was removed in those places where it coincided with the site of the later free-standing wall. But primarily, it suits the dating evidence from the Lion Walk and Culver Street sections for the construction of the city wall and moreover, by placing the event shortly after the Boudican revolt, the construction of the wall can be set in an historical context. Tacitus wrote that the colony had no fortifications at the time of the Boudican attack *(Annals* xiv, 32), a statement supported by excavation (CAR 3, 8). Out of the inevitable recriminations in the aftermath of the revolt, presumably there came the resolve that a wall had to be built around the colony to ensure that it could never be so vulnerable again.

Pushing back the date of the wall also means that the monumental arch which Wheeler unwittingly examined at Balkerne Lane (CAR 3, 1213) can be dated with more confidence to c AD 50 and seen as having been erected to mark the foundation of the colony The arch could only have been built when there were no defences at Balkerne Lane. This means that, with the scheme of town development as proposed in CAR 3, there were two possible periods for its construction, namely AD 49-60/1 (Period 2) or AD 80-100/25 (Period 4). If, however, the wall was built c AD 65-80, then there is no choice but AD 49-60/l. It is just conceivable that the arch was built immediately after the revolt, presumably to record the defeat of Boudica and the recovery of the city But this would mean tight programmes for the building of the arch and wall and a spectacular level of ineptitude in the planning of both projects since whoever conceived of the arch would hardly have visualised the monument being encased in the Balkerne Gate especially when the arch was less than a few years old.

Wheeler may have missed the obvious at the Balkerne Gate, but he may well prove to have been right about the date of the walls all along. He dated these to AD 61-85 and saw them as a reaction to the Boudican revolt because of the date of the pottery 'found in association with the original foundations' (Wheeler & Laver 1921, 143). Although his 'original' foundations were not primary at all but those of our Period 2 (CAR 3, 121-3), they nevertheless belonged to the parts of the gate which were built at the same time as the wall.

Notes

1 Confirmation of the new date is subject to tl forthcoming CAR 10.

2 During the conference, I explained how sam les of lime deposits on the surface of the wa had been examined by Graham Morgan wl had concluded that these have been residues repeated lime washing. More recent analys by Mr Morgan has led him to believe that tl deposits may have a natural origin after all.

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5 Cirencester - *Corinium Dobunnorum*

Alan McWhirr

Wheeler was never directly involved with the archaeology of Cirencester. He never dug in the town, was never associated in any advisory way with its museum, not sat on any of the committees which were responsible for excavations at Cirencester. He did, however, give the inaugural lecture to the newly formed Cirencester Archaeological and Historical Society on the 2nd January 1956. Over 400 people attended his lecture in the Corn Hall where gave an address on 'Digging up the Past'. Interestingly, the founder President of the Society who introduced Wheeler was the Speaker of the House of Commons, Mr W S Morrison and to quote from the *Wilts and Glos Standard*, 'Of Sir Mortimer, Mr Morrison said amid laughter that although he was well known to television viewers there was more to him than that. He had managed to combine in a most effective way the qualities of the scientist and scholar with those of the humanist'.

If we look back to the 1930s when Wheeler's work at *Verulamium* was receiving so much media attention, those living in Cirencester would have had considerable difficulty in recalling any archaeological activity in their town. They would have had to cast their minds back to 1922 when, by accident, a Roman building with several mosaics was exposed to view. W St Clair Baddeley was called in to supervise the uncovering of the building and record the mosaics. He duly reported the discoveries in *The Builder* (9th June 1922), the local newspaper *Wilts and Glos Standard* (17th June 1922) and briefly in the *Journal of Roman Studies* (XI, 1921, 209). In the same year Baddeley also dug a trench across the Roman western defences in the grounds of the Union Workhouse, Watermoor Lane, now the offices of the Cotswold District Council.

Despite this lack of archaeological activity, the 1930s saw one major advance in the archaeology of Cirencester, for in 1938 a new Museum was provided by the Urban District Council. This brought together the objects in the private museums of Lord Bathurst and Wilfred Cripps, to provide a collection which still forms the backbone of the present museum.

It is perhaps surprising that Wheeler did not become more involved with Cirencester; it offered tremendous potential and being the second largest Romano-British city, it would, in the hands of someone like Wheeler, have generated considerable national publicity He must have been well acquainted with the area from his time at the National Museum of Wales, Cardiff, and in connection with his excavations at Lydney, Gloucestershire, in 1928-9.

It was not until a year after the formation of the Cirencester Archaeological and Historical Society that the major campaign of excavation at Cirentester, which was to last some twenty years, began. Dr Graham Webster dug in Dyer Court in 1957 (Webster 1959), Mary Rennie in Ring Street in 1958 (McWhirr 1986) and also in Parsonage Field (Rennie 1971), and one of Wheeler's protegees, Kitty Richardson dug in the town in 1959 (Richardson 1962). She had previously dug with Wheeler at Maiden Castle and also went on his expeditions to France, This activity in the late 50s led to the formation of the Cirencester Excavation Committee in 1958 under the chairmanship of Professor Sir Ian Richmond.

It was in 1960, just as Professor Frere's excavations were coming to *an* end at *Verulamium*, that Professor John Wacher was asked to become Director of Excavations at Cirencester. As there were few large national excavations in 1960 on which to work, many of the personnel who annually dug with Frere moved west to Cirencester for their annual dose of archaeological masochism! If you wanted to cut your archaeological teeth by taking part in such an excavation *Verulamium* and then Cirencester were the obvious choices. Winchester was to follow some two years after the start of work at Cirencester.

As was the case in many towns in the early 1960s, Cirencester did not have any full time archaeological presence to watch over the quite major developments which took place during that decade. In fact, it has never been possible to establish a full time unit in the town, which in retrospect may have been a mistake and due to lack of effort by those of us working at the town at the time. Whatever the case may be, there never has been a permanent archaeological presence in the town and most of the excavation work which was necessary had to be done at fixed times of the year by people who could engage upon archaeological research during vacations from university, polytechnic or school. The work at this time was funded almost entirely by Department of the Environment (its predecessors and successor) with small grants from the local authority, Society of Antiquaries and Haverfield Trust. Funding was only available in those early years for digging - *none* for post-excavation work. Consequently a huge back-log of publication built up and is still being dealt with. This seems to be a problem that still exists with urban archaeology, Even where established archaeological units have budgeted for post-excavation work, the prompt production of excavation reports eludes many.

A great deal has been written and said about the development of archaeological techniques on urban sites and I think that it is worth stressing that the excavation of large areas, or open-area excavation as some refer to it, was employed by Professor Frere at *Verulamium* and not surprisingly also adopted by Wacher, who had been trained by Frere, at Cirentester. Clearly on some sites it was impossible, because of limitations imposed on the excavations, to open up large areas and excavators had to resort to smaller trenches, but on the whole during the 1960s and 1970s excavations at Cirencester were conducted in this way.

So presumably, after two decades of archaeological investigations at Cirencester we are in a position to give a definitive account of the city's historical development - the second largest city in Britain, in terms of the defended area. It is certainly true to say that we know more now than we did 30 years ago when Professor Wacher began digging, but it is important to point out that even after nearly 20 years of regular excavations, less than 4 hectares of the 97 hectare town have been looked at, ie about 4%, *and* not all of that 4% has been excavated completely. This means that the sample examined is *small* and perhaps too small upon which to base any conclusions. And yet, we continue to do so!!

It is this question of the size of the sample which caused Wheeler problems when others took the results of his excavations on the town defences at *Verulamium* and applied them to other Romano-British cities. Even though he dug several sections across the defences, his sample was, in percentage terms extremely small, and as we now know did not produce a representative sample of dating material.

Our samples are still, in the majority of cases, too small to work out the evolution of town defences properly and one thing we have learnt at Cirencester is that such defences are much more complicated to understand than we at first thought. At Cirencester, it is estimated (on the generous side) that, at the most, 60m of the town's defensive circuit has been examined - that is, 60m out of 4km, which is a maximum of 1.5%. How risky it is to try to write an account on the town's defences from such a small sample!

Nevertheless, it is necessary to attempt an outline of the development of the town's defences and in view of Wheeler's interest in such matters it would seem appropriate to begin this brief review of Cirencester with a summary of what is known. This model will, no doubt, have to be modified as, and when, more work is carried out.

The city was first defended at the end of the 2nd century by an earth bank with associated ditches. Professor Wacher showed that the monumental stone *Verulamium* Gate was contemporary with this bank (Wacher 1961). Subsequent excavations have also revealed that stone internal towers, which have been located in two places, were also contemporary with the earth rampart. Perhaps contemporary is the wrong word to use for the excavations have shown that the towers and gates were built before the rampart was thrown up (Brown & McWhirr 1966). They may have been built together as part of a unified scheme. Alternatively, it might represent a course of action which had to be modified as it was being built and therefore appear to be a single plan.

During the first half of the 3rd century, the earth bank was cut back so that a stone wall could be built between the bank and ditch. Earlier excavations found that the masonry wall around the town was of two thicknesses 1.2m and 3.0m and it was only when David Brown examined a stretch of the defences some 230m north-west of the *Verulamium* Gate that he was able to show that the wider wall was the later of the two. It looks, therefore, as though it was found necessary to replace the narrow wall for some reason or other with a more substantial one. There is no obvious reason in terms of the localised conditions and so one must look for other explanations.

The final modification to the defences was the addition of external towers, or bastions, which took place in the middle of the 4th century.

The dating of defences is always difficult and in years to come, when a larger sample of the defences has been examined, we will undoubtedly see a refinement of the dates attributed to the various phases just outlined, and, indeed, even more phases.

Wheeler was involved for a number of years with the excavation of the military *ludus* or amphitheatre at Caerleon and would, no doubt, have been extremely interested in the work carried out on Cirencester's amphitheatre, or bull ring, as it is known locally. The most startling result to emerge from Professor Wacher's excavation was his suggestion that the amphitheatre was turned into a fortified retreat for the survivors of the late-Roman town (Wacher 1975,314). This was based on his finding in the arena of a large timber building and on a reduction in the size of the north-east entrance (Wacher 1964). The timber building was considered to be late Roman and the alterations to the entrance were said to be associated with a scatter of late Roman pottery and coins. The material from these excavations is currently being processed and in due course the evidence for this interpretation will be presented fully.

Wheeler reminded us in the introduction to *Archaeology from the Earth* published in 1954, that the excavator is not digging up *things*, he is digging up *people*, and so I think that it would be most appropriate to spend some time talking about people. We can learn about actual people from inscriptions and from their skeletal remains. In addition we can gain some idea about their artistic tastes from wall plaster, mosaics, sculpture and other works of art.

Various craftsmen working in, or around, the town have left their mark in one form or another. An altar found in 1899 in an area known as Ashcroft mentions Sulinus the son of Brucetus *(RIB* 105). A Sulinus is also mentioned on a statue base found in Bath *(RIB* 151) where it is also stated that he is the son of Brucetus, thus making it highly likely that it is the same person. On the statue base from Bath he

is described as a sculptor and if it is the same person as commemorated on the altar then we know that Sulinus, a sculptor, lived in Cirencester.

For some, as yet unexplained, reason tiles and bricks made in the Cotswolds were often stamped and many found their way to Cirencester (McWhirr & Viner 1978). Tiles have been found in the town bearing similar groups of letters, TPF, TPFA, TPFB, TPFC and TPLF and also some bearing the letters TCM and LHS. Various explanations have been given for their meaning, but the fact that we have one name in full, ie ARVERUS, must mean that these groups of letters are abbreviated names. Whether the group with the TPF followed by A, B or C indicate joint names or various *officina* in a large brick field is not certain.

Several people who lived and died in Cirencester have left us personal details on their tombstones. The earliest is probably Philus whose headstone, sadly still in Gloucester Museum and not in Cirencester, was discovered in the military cemetery to the south of the auxiliary fort *(RIB* 110). It is suggested that this tombstone is 1st century in date and that Philus was a camp follower, perhaps a trader. He is represented on the stone wearing a hooded cloak.

A group of three tombstones found in 1971 give further insights into those living in Cirencester (McWhirr 1973). Unfortunately, only the names and ages are recorded and we are not told anything else about these individuals. Even so, they provide us with actual names of people and accurate ages at death - assuming that those who erected the headstones had their facts right, which may not have been the case.

One of the tombstones records a juvenile named Aurelius Igennus aged 6 years and 10 months, whose father's name, Aurelius Euticianus, suggests a Greek background. Nemmonius Verecundus is commemorated on another of the stones. This stone is an excellent example of the monumental mason's craft with well-cut lettering and the lightly scored guide lines that were used for each row of letters. Having taken the trouble to prepare the stone and to cut such fine letters, it is strange that he should have to squeeze in the 'o' and 'm' on the first line. Interestingly, Verecundus was 75 when he died. The last one of this group of three found together was erected to a Lucius Petronius who was 40 when he died.

Other individuals are known by name from inscriptions. They include Julia Casta aged 33 *(RIB* 113), Publia Vicana *(RIB* 111) and Casta Castrensis *(RIB* 112), all recorded on tombstones, and Sabidius Maximus *(RIB* 104), who is mentioned on an altar. In addition to these civilians we also know the names of two members of the Roman army who were stationed in Cirencester from their tombstones, which were found in the same area as that set up to Philus. Both were cavalrymen attached to auxiliary units. One was Sextus Valerius Genialis *(RIB* 109), and the other Dannicus *(RIB* 108).

We also know the name of a high ranking member of the Roman administration whose seat of office was in *Corinium*. A rectangular base for a column found in 1891 records part of the name of the governor of *Britannia Prima (RIB* 103). The surviving part of the name reads Lucius Septimus, and the presence of this inscription in Cirencester is usually taken to imply that Cirencester was the capital of the province of Britannia Prima.

Since the excavation of the Bath Gate cemetery in the 1970s it has been possible to say a great deal more about the people who lived and worked in *Corinium*. Whatever figure we put on the population of the city over the 400 years or so of its existence there must have been at least 100,000 people who died and were buried in the town's cemeteries. If, however, we use a higher figure for the population, which has been suggested, then there might have been many as a quarter of a million interred in the graveyard, although it should of course be remembered that during the first two centuries they would have been cremated. The excavations recovered some 400 skeletons in various states of completeness and so again we come up against the problem of the size of the sample that has been studied. Four hundred skeletons out of possible 50-100,000 is indeed a small sample. Another difficulty with the study of the skeletal remains concerns their date. Archaeologically it was impossible to date all but a few of the burials. However, there is good reason to believe that most were 4th or early 5th century. It is difficult to say how long into the 5th century they were buried in this cemetery. Bearing in mind Wacher's idea of the city's late population retreating into the adjacent amphitheatre then they might have used it until quite late into the 5th century, or dare we say even into the 6th, remembering that the Battle of Dyrham took place in AD 577.

So what did those living in Cirencester in the 4th and 5th centuries look like? Of the 107 male skeletons from which it was possible to calculate height the men averaged 5' 6½" and 44 women 5' 2". Men ranged in height from 5' 3" to 5' 11½", and women from 4' 10" to 5' 6¾".

There are difficulties in ageing skeletons, especially of those individuals who achieved old age. Calvin Wells, however, did produce an age estimate of variable reliability for 239 adults - 167 male, 72 female. Mean age at death of males was 40.8 years and females 37.8, ie the males outliving the females by 3 years, which Calvin Wells points out is very common in early societies. The histogram shows the spread of ages of death, with male deaths peaking at around 48-53 and female being fairly even. At this stage it is interesting to remember the tombstone of Verecundus who died aged 75.

Arthritis was common amongst the inhabitants of Cirencester; 80% suffered. Five skeletons indicated the congenital defect of spina bifida and there was evidence of poliomyelitis. Three cases of gout were detected and 15% of the skeletons exhibited fractures. Six people had been decapitated. The state of the teeth was extremely good and there was no evidence of dental filling, ornamentation or the use of false teeth.

Further work is being undertaken on these skeletons by various people. Helen Bush is looking at aspects of health and nutrition and non-specific indicators of stress. Charlotte Roberts is studying the paleopathology of leprosy and tuberculosis in Britain. In due course it will be possible to say more about these who once lived *in Corinium Dobunnorum* from these and other studies of this important collection of skeletal remains.

Continuing with the theme of people it is interesting to speculate on the city's population. Clearly there is at present no reliable way of estimating how many people were living in the town at any one time. One only has to look at the town plan and remember how little has actually been examined to realise that we cannot use the number of buildings as an indicator of population size. Likewise, the number of graves located cannot give any idea of the number living in the town at any one time as only a small fraction have survived.

Professor Frere has suggested by analogy with known population figures for later towns that the larger civitas capitals held around 5,000 people and Cirencester may fit this model (Frere 1987, 253). However, in view of its elevated status as a provincial capital Frere points out that it might have had as many as four times that number of people.

It has been sometimes suggested that the size of the amphitheatre is directly related to the size of the population, but this idea must be suspect. The Cirencester amphitheatre was laid out towards the end of the 1st century when the city's population was relatively small. The size of the amphitheatre does not seem to have changed over 400 years whereas it is almost certain that there would have been ups and downs in the size of the population. In addition, the amphitheatre would no doubt have been used on market days when the town's population was swollen by those arriving from the country to attend the market. For what it is worth the plan of the amphitheatre indicates that some 5-6,000 people could be seated to watch the activities which took place there.

We still know little about the inter-relationship between the city of Cirencester and the countryside around. We can speculate about the spheres of influence of the town and the extent to which services were used by the surrounding population. The work of Dr David Smith in identifying schools of mosaicists who were probably based in the town gives some idea of the extent of *Corinium's* influence. It is hoped that in years to come we shall learn more about the economic ties between city and country,

Various accounts of the past 30 years work have appeared in print and with the series of excavation reports now underway the story of the history and development of Cirencester is gradually unfolding, This account is far from comprehensive. It has selected a number of themes which one assumes would have been of interest to Wheeler.

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6 The City of *Viroconium* (Wroxeter) : its military origins and expansion under Hadrian

Graham Webster

The military origin of *Viroconium* has been well established with the discovery of the presence of a legionary fortress for *Legio* XIV and later for *Legio* XX from *c* AD 56 to 90 (Webster 1988, 10 and 120-36). When the fortress had ceased to provide any military purpose, its buildings were demolished, the site left as a flat plateau and handed over to the *civitas* for the building of the first city (referred to as the early civil phase). Its inhabitants would have been mostly retired legionaries who had settled near the fortress with their native wives and families.1 There would also have been traders, craftsmen and native locals who provided the essential services.

All this was dramatically changed by the visit to Britain of Hadrian in AD 122. Its purpose was to determine the limits of the Roman Empire and strengthen its defences. The Emperor also needed to associate himself with the frontier armies, to secure their loyalty, as well as to stiffen discipline and root out abuses. His purposes were set out clearly in his biography in SHA. Although this collection of imperial biographies has been shown to be a mixture of blatant piecemeal copying and pure invention (Syme 1968) that of Hadrian[2] would appear to have been taken from a reliable source. The emperor had been forced by the extravagant eastern conquests of Trajan to realise that Rome could no longer afford such large imperial expansions. He was the first emperor to adopt the policy of a fixed frontier and to reject the grand Augustan concept of spreading the beneficent rule of Rome to whole of the world.

This emerges very clearly in the stated purpose of building the Wall which bears his name in Britain. It was to divide Romans from barbarians, (qui *barbaros Romanosque divideret; SHA,* Hadrian, xi, 2). The implications of this were far reaching and this would appear to have been fully appreciated by the Emperor (Birley 1956). The future of the Empire, he now saw, depended on the frontier provinces and no longer on Italy. The Emperor, therefore, saw his task as increasing the prosperity of these areas and above all, introducing the Roman ideal of urbanism and, with it of course, a market economy. As Hadrian visited his provinces, he founded new towns and gave fresh life to the old ones by providing new buildings *(SHA,* Hadrian, xix, 2; Webster 1988, 140) often at his own expense *(SHA,* Hadrian, xix, 9).

The Emperor would have found much of Britain, in the north and west, very underdeveloped as most of these areas had from the middle or end of the 1st century been under military control. The idea of implanting the urban ideal in these areas would have been very appealing and especially the resulting economic consequences. The extent of his municipal munificence in Britain has yet to be established archaeologically, but there are already possible indications at London where the evidence of samian from the large *forum* suggests a construction date not likely to be earlier than c AD 90 (Merrifield 1983) and Lincoln (inf M Jones).

At *Viroconium,* there has been no such doubt after Donald Atkinson's recovery of the 169 fragments of a large and magnificent inscription from the forum, (Atkinson 1942, Chapter XIV; *RIB* 288) dating the dedication securely to AD 130. When the great arch of the entrance collapsed or was demolished, it fell onto the main north-south street.

Below the forum, Atkinson found an earlier and unfinished bath-house, and this discovery has led to much discussion. This has centred on the pottery associated with the construction of the Baths (Atkinson 1942, 23). Atkinson's conclusion was that 'the evidence of coins and the samian agree in implying a date very near AD 90, for the abandonment of the area, and, so, for the beginning of the construction of the Baths'. This pottery was recovered from timber buildings with clay floors (Atkinson 1942, Chapter II), and clearly pre-dating the baths. From the 1955-58 excavations below the *macellum* on the east side of the main north-south street, it can now be established that these timber buildings belonged to the early city, built over the reduced fortress, c AD 90, and which was, in turn, demolished to make way for the great Hadrianic civil buildings. It is, however, difficult to fault Atkinson's dating of the pottery (Atkinson 1942, Chapter XXVI; based on Bushe-Fox 1913; 1914; 1916), except to suggest that much of it is residual and also with our present better understanding, some of the vessels could be later, probably extending the date into the 2nd century

The problems presented by the early baths have been discussed by several authorities on Roman Britain; Sheppard Frere's solution was that it could have been military (Frere 1974, 117; Todd 1981, 123), but at that time the site of the legionary fortress was not known. The idea was also mooted that it was a failed Flavian initiative (Salway 1981, 185).

The discovery of the north and west sides of the defences of the legionary fortress in 1975 (Webster 1988, 123-4), clarified the problem, since it was seen that the early baths and Hadrianic forum were beyond the west side of the fortress. Further excavations, which terminated in 1985, concentrated on the area of the *macellum* in the south-west corner of

the eastern of the two large Hadrianic *insulae.* A major discovery was that of the early city built after AD 90 over the demolished and levelled remains of the fortress. The houses were very similar in construction of those found by Atkinson below the east side of the forum.

A study of the city street plan (Fig 1) clearly indicates a serious irregularity in pattern, first noticed in the 1960s (Webster & Stanley 1962-3). The block of *insulae* in the south-east part of the city show a regular pattern lacking in those to the west and north. When the plan of the fortress is superimposed on the city plan, it is seen that these regular blocks occupy the area of the fortress. These *insulae* are of course, civil, but they preserve the alignment of the fortress plan and the continuity of the *via praetoria* and part of the *via principalis.* The latter can still be traced, but only at its north and south ends, since the central length has been absorbed into a civil insula, doubtless that of the first civil *forum,* which normally occupied a central position.

It would appear logical to assume that the more irregularly planned areas of the city to the west and north are part of the expansion of the city under Hadrian. This, however, will need to be demonstrated by further excavations. The suggestion is, however, supported by the placing of the two large Hadrianic civil *insulae* and which, one must presume, were intended as the new centre of the enlarged city. The planning was on a grand scale, the two *insulae* together covering an area of 7.23 acres *(c* 3 hectares), It was probably the largest civil project outside London.

The 1955-85 excavations made it possible to study the Hadrianic buildings of the *macellum,* and those parts of the bath-house to the east of it. It soon became apparent that there were two building periods in some of the walls and two unused foundations were also found (Fig 2). In the case of the west wall of the *macellum,* the two construction periods were clearly discernible from the different mortars used, and that the wall of the south colonnade also had two periods, but on different alignments as clearly seen at the west end (Fig 3). Also the earlier of these later walls had deeper foundations with dressed masonry in the central area. This wall had later become buried when the ground level was raised in period 2. The effect of this change is that the foundations of the second period were found to be partly resting on top of the earlier wall, which had become totally buried (Fig 4). This change of alignment and level suggests a time interval between the two periods during which the presence of the earlier wall had been forgotten. There was another important feature of this earlier wall - at one point it ceased with a stepping down of the courses (Fig 4). This strongly suggests that it was the intention to insert an entrance at this point, which was mid-way on the south side of the *forum piazza.* In the later baths period, this was not required but the pre-determined planning had created a central open space which was adopted as a colonnaded area with a *piscina.*

The problem of the length of the time interval in the eastern *insula* can only be solved by critically stratified artefacts. The date of the dedication of the forum given by the inscription, suggests that it could not have been extensive. The earliest possible date for starting the early baths would be AD 123/4, allowing for plans to be prepared and sent from Rome. This allows only five to six years for completion and dedication of the *forum.* The only pieces of helpful evidence comes from the upper filling of Well 1 (Atkinson 1942, 114). From the bottom of the well came two military objects, a camp kettle and a *dolabrum,* and they clearly indicate a military origin, filled in at the time of the reduction of the fortress c AD 90. This was outside the western defences and must have been in a annex. From Atkinson's description it would seem that this filling was subject to several sinkages up to the laying down of the foundation of the *forum* surface. From this upper filling came a *mortarium* with a stamp of the potter BONOXVS (Fig 5). To quote the reports: 'The *mortarium* E 10 was found higher up than most of the other pottery and may be as late as AD 120', which is a very accurate estimate. Bonoxus was a potter who worked at Hartshill, a western extension of the large Mancetter factory. What appears to be an indentical stamp has been found *in* the *colonia* at York, and according to Kay Hartley, his period of production was AD 120-160 (Perrin 1990, Fig 136, 1563 and p 273). What is not known is at what period of his working life was this particular stamp used. A time interval also had to be allowed for use and *mortaria* were strong kitchen vessels. There is, however, an indication on the *mortarium* itself in the form of a thin slip over the inner working surface. In this case, the slip is still present, clearly indicating that the vessel had little use and may have been discarded soon after purchase and use. The earliest possible starting date for the building of the early baths would have been AD 123/4, allowing for the plans to be prepared and, possibly, even sent from Rome. This allows only four to six years for the original scheme to be abandoned and, the *forum* built and dedicated, allowing also for the demolition and levelling over the early baths. One is tempted to suggest this vessel was produced early in the potter's work life - or that he began earlier than AD 120. If the original scheme had been sponsored by the Emperor this major problem would have been reported to him. This would have taken time as Hadrian's imperial activities involved long journeys to the frontier provinces. Many may have been using the military baths left for this purpose by the legion and the need for this facility was not so immediate. But such suggestions must remain pure speculation until further excavations will eventually provide the correct answers.

The only evidence in the eastern insula is the pottery from a metallurgical waste dump in the south-west corner of the *portico.* But this did not produce any samian or coins and the changes in coarse pottery over such a short period are not easy to

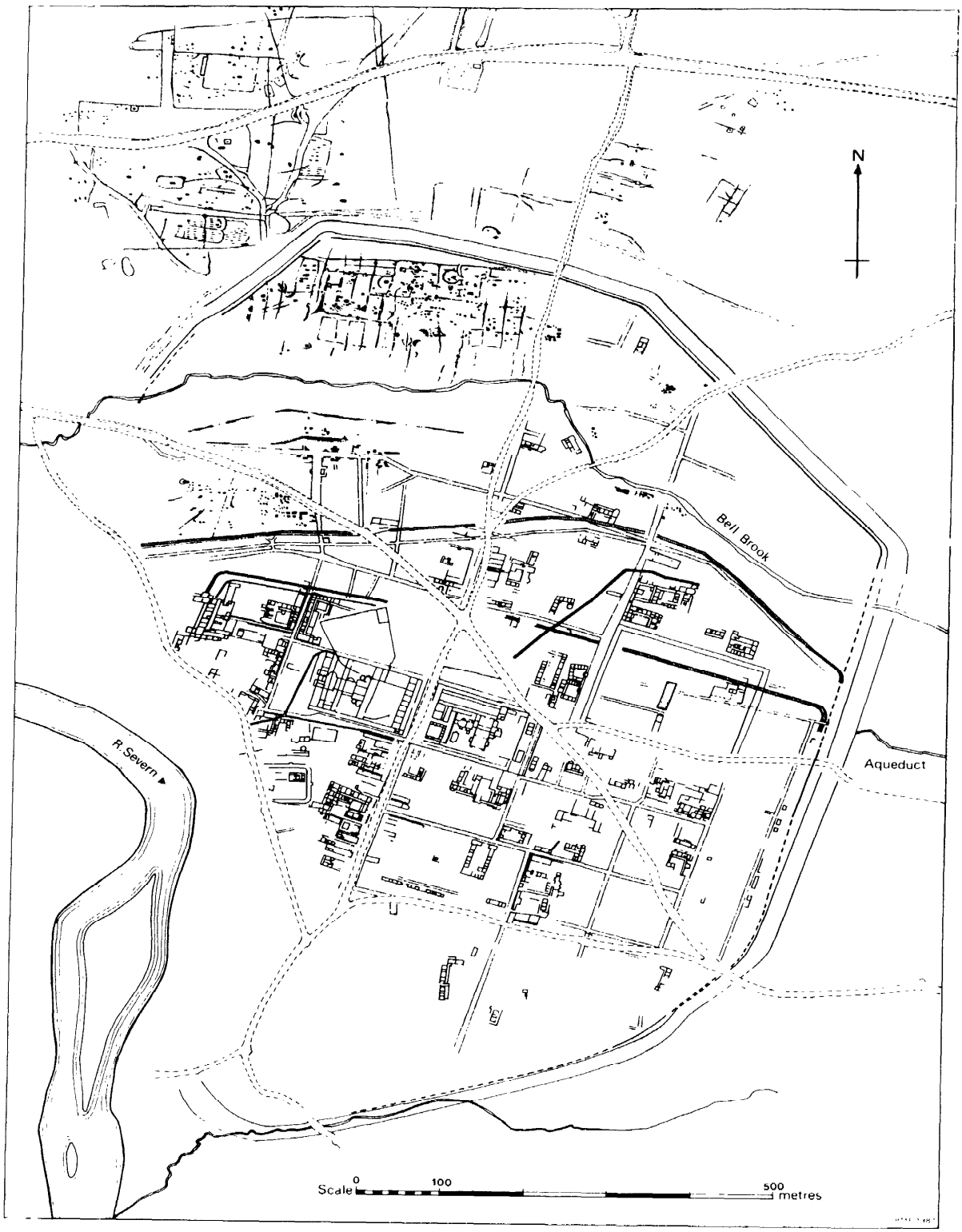

Figure 1 Plan of Viroconium (wroxeter) drawn from aerial photographs. Reproduced by kind permission of David Wilson, Arnold Baker and Philip Barker; each of whom reserve copyright (Drawn by Barrie Eccleston)

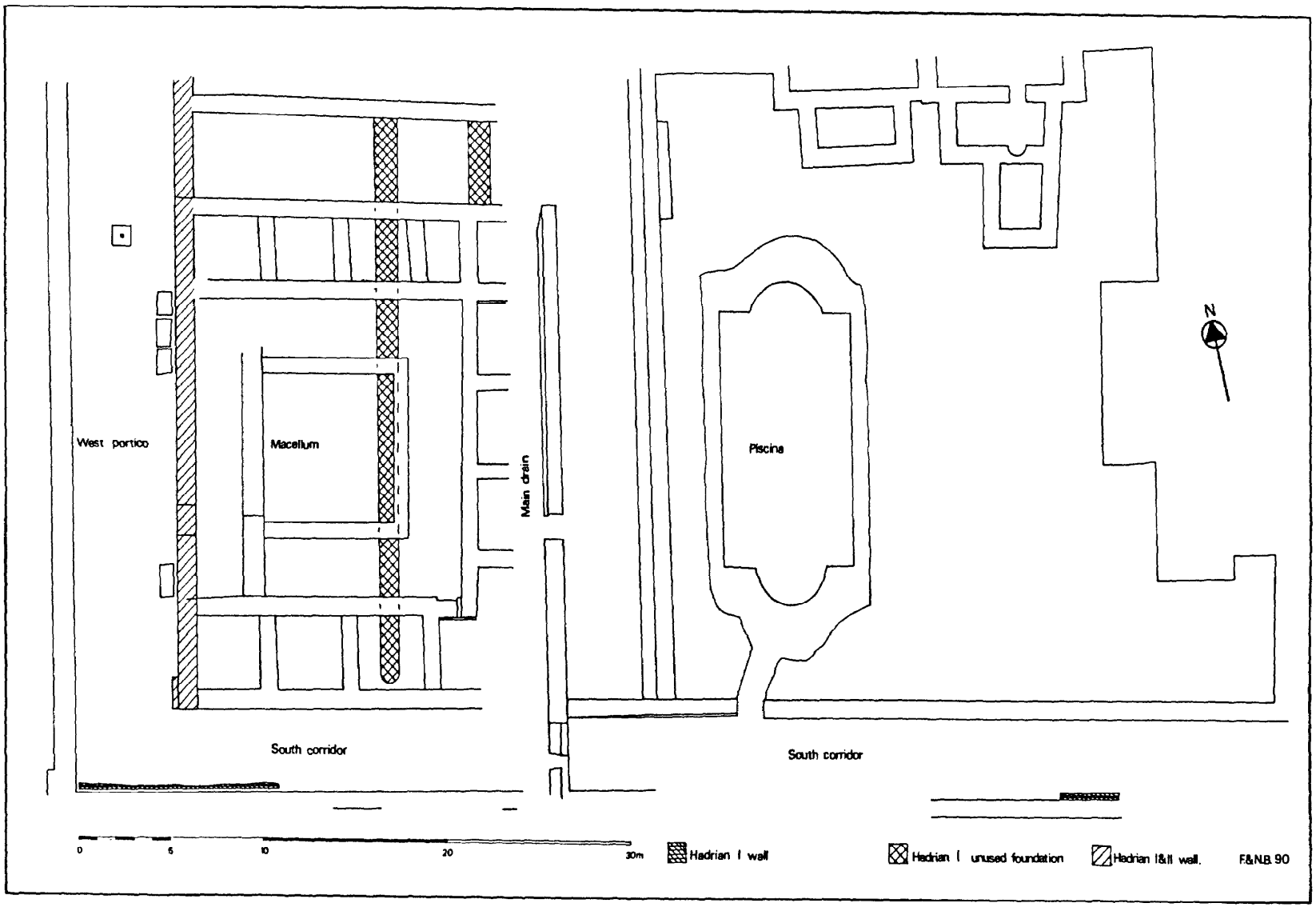

Figure 2 Showing the two periods of Hadrianic walls in the SW *corner of the baths insula*

Figure 3 (left) Hadrianic periods I and 2. Walls of the south colonnade side by side, the earlier one on the Left side

Figure 4 (below) Hadrianic periods 1 and 2 in the south colonnade wall

assess. The only comparison one can make is with the pottery from Hadrian's Wall at the time of its abandonment in AD 142. There is a Wroxeter *mortarium* (No 642) which is virtually identical in shape to one from the Birdoswald *Vallum* fill and stamped by AVSTINVS, (Swinbank & Gillam 1950, Fig 1, 8 and p 58) whose date of activity is given by John Gillam as AD 140-160, but suggesting that this may have started earlier. However, in the more recent Corbridge report, his production period is given as AD 120-165 (Bishop & Dore 1988, 265, No 124). The difficulty in comparing near contemporary pottery can be seen to be considerable. Another way of attacking the problem could be by looking at a slightly later group, such as the Antonine I assemblage from Newstead (Richmond 1959, Fig 7, 5-18 and p.31), dated by John Gillam to AD 140-163. This small group of thirteen vessels includes two *mortaria* with thick and angular rims (Nos 5 and 18), totally unlike anything from the Wroxeter deposit. The two black burnished dishes, one (No 9) has a wavy line decoration, and the other (No 12) a square rim, again unparalleled in the Hadrianic

pottery at Wroxeter. No 15 is a large jar in a hard whitish-buff fabric, with a blue-grey surface and which could well be a reduced Sever-n Valley ware, common at Wroxeter, but at a slightly later date. It is however, comparable to Wroxeter dump No 383. This Newstead group clearly demonstrates that the Wroxeter Hadrianic II deposit cannot be as late as AD 140. The gap between the opening of the forum in AD 130 and the start of new buildings in the eastern insula cannot be more than five or six years, Otherwise, Antonine types of pottery would be present.

The growing body of evidence now appears to indicate that the great original scheme of Hadrian faltered and that building work ceased when the

Figure 5 Mortarium stamp of Bonoxus found by D Atkinson in his upper filling of well 1 below the forum

bath-house was partly built and the work in the eastern *insula* was at a very early stage. When the fragments of evidence of the first building plan are assembled (Fig 2) it would appear to indicate that it had been the original intention to erect a *forum* in the eastern insula. This would certainly help to explain the unusual and awkward L-shaped plan of the second phase baths, and the central colonnaded open space with its *piscina* (open pool), which is a peculiar feature for Britain. The question which remains unanswered is why the functions of the two *insulae* were changed. A possible solution can be found in the plan of the early baths. This is clearly on the Mediterannean model with a large open colonnaded palaestral area. This was designed to allow unclothed bathers to exercise and sport themselves prior to entering the bath-house. But there is a limited number of days in the year when such activity is possible in Britain, and this basic fact must have been appreciated by the members of the tribal *ordo* as soon as the building work had advanced far enough to reveal this plan. The *palaestra* covered a large area (170 x 240 feet - Atkinson 1942, Fig 19) and the width was too great to have been able to convert it into a basilican hall and, what was even more critical, was the 3ft width of the exterior walls which was too insubstantial to carry the roof needed. It may have occured to someone that the erection of a large basilican hall had already been started for the forum planned for the eastern insula. Furthermore, there was an urgent need for a forum to provide the necessary market, whereas the inhabitants may have still been using the military bath-house in this central area of the fortress and left intact by the army for this purpose.

Notes

1 Roman soldiers could only marry after honourable discharge from the army, but most of them had arrangements with local women and produced families on the expectation of this being granted.

2 Hadrian is said to have written an autobiography (SHA 1, 1, xvi, 1).

3 *imperium sine fine*, Virgil, *Aeneid* i, 279.

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7 *Venta Silurum:* a civitas-capital

Richard J Brewer

Venta Silurum, now Caerwent, lay some 9 Roman miles to the east of Isca (Caerleon), the fortress of the Second Augustan Legion. It is mentioned as *VENTA SILURUM* in the 3rd century road-book, the *Antonine Itinerary,* and *as VENTASLURUM in the 7th* century *Cosmography of Ravenna. These are the only* two documentary sources to refer to it (Rivet & Smith 1979, 493). *Venta* sat astride the main Roman road from Gloucester to Caerleon and was close to the Welsh terminal of the Severn ferry which was established in Roman times between Sudbrook and Sea Mills *(Abona)* on the Bristol Avon. Its 4th century walls, among the best-preserved in Britain, form a quadrilateral of some 44 acres (18ha), making *Venta* one of the smallest tribal capitals of Roman Britain (Fig 1).

A settlement existed at Caerwent from the late 1st century AD, only a short time after the conquest of South Wales had been brought to a successful conclusion. The growth of a settlement so soon after the occupation is not surprising when it is considered that the whole area to the east of the River Usk had been under Roman control since the mid 50s, more than twenty years before the rest of South Wales. Recent excavations have, however, thrown doubt on the extent of the settlement in the late 1st and 2nd centuries AD. It would certainly appear that the regular layout of the street grid was not established in its final form much before the beginning of the 3rd century The question as to when *Venta* received the status of a civitas-capital still remains to be answered.

Until the present programme of excavations began in 1981, very little work had taken place at the Roman town in the last fifty years. To understand our present state of knowledge, therefore, I must take the liberty of going further back in time. The first archaeological investigation purely in the interest of research was conducted in 1855 by Octavius Morgan, Deputy-Lieutenant of Monmouthshire and its Member of Parliament for many years, a Vice-President of the Society of Antiquaries, a Fellow of the Royal Society and a prominent member of the Caerleon Antiquarian Association. He saw to it that the work was supervised by one of the best men of the day, J Y Akerman, Secretary of the Society of Antiquaries. Two sets of foundations were opened on the north and west margins of *Insula* XX, one being a bath-house. The report (Morgan 1856) provides a careful description of the state and character of the remains, and of the objects found in each room; but it was to be many years before archaeologists were confident enough to use even coins to give some idea of the chronology of remains such as these.

No attempt was made to continue the researches begun by Morgan, and it was to be more than forty years before work commenced in earnest at *Venta.*

The Caerwent Exploration Fund

The reasonably complete plan that we have of *Venta* is largely the result of excavations that took place between 1899 and 1913. This was a remarkable amateur endeavour that in some ways, notably in the keeping of site-notes, was superior to the Society of Antiquaries' better organised and more famous explorations at Silchester. The work was instigated by the Clifton Antiquarian Club, Bristol, founded in 1884 to arrange meetings and excursions of archaeological interest in the West of England and South Wales (Boon 1989). By 1899 the Club had drawn up a scheme of work, and after successful trial trenches had been dug in the south-west corner of the town, a committee was formed to be known as 'The Caerwent Exploration Fund'. Supervision of the work fell mainly to two members of the Club — Alfred Hudd, an excellent local antiquary, and Thomas Ashby, who became Director of the British School at Rome. In the Edwardian era, there was still only a dawning perception of the value of stratified evidence, and there was little understanding as to the desirability of recording the layers in which finds had been made, or of their particular association with structural features. At the time, the recovery of the plan, the structural features and the function of buildings were the chief attainable ends. In most cases only the uppermost buildings were explored, and any earlier structures, especially those constructed of timber, were left untouched, The chronological detail is largely lacking therefore. The greatest worth of the whole operation lies in the generalised picture of a Romano-British town which emerged from it, as at Silchester of the same period. By the time the explorations drew to a close in 1913, eleven of the twenty *insulae* had been trenched. The resulting plan, however, is one of the late Roman town, and very little light was thrown on the origin and early development of the settlement.

Modern excavations

Later investigations have been of a more limited nature and have done little to improve our knowledge beyond a skeletal chronology. In 1923, V E Nash-Williams was entrusted with the exploration of

the public baths, opposite the *forum,* under the supervision of Dr R E M Wheeler, then Keeper of Archaeology at the National Museum of Wales (Nash Williams 1930, 229-50). Two years later, the Office of Works began the clearance and consolidation of the south side of the town wall, and Nash-Williams returned to make a thorough and most valuable examination of the whole structure, detecting its numerous building lengths and raising the number of towers from three to six *(ibid,* 251-88). By the fortunate finding of a 'stratified' coin in one of the towers, Nash-Williams was able to suggest a date of c 330 for their construction. For many years, the Caerwent towers constituted the only dated series in Britain. P J Casey's examination of the north-west corner tower in 1971, however, brought to light valuable evidence regarding the date of the construction of the towers, and showed Nash-Williams' interpretation of the stratigraphy to be incorrect (Casey 1983). A coin hoard found in the builders' debris indicates that the towers were added in or very soon after AD 350, and Casey argues, using original correspondence *(ibid,* 75, Fig 10), that the coin (AD 330-5) found by Nash-Williams may have come from the builders' debris of the wall construction itself.

Much of the work undertaken at Caerwent in more recent times has concentrated on the defences. In 1930, W F Grimes, then Assistant Keeper at the National Museum of Wales, cut sections on the north side of the town wall in advance of the construction of the by-pass road. Here he discovered the first of the five towers now known to exist on that side (Grimes, 1931). The wall south of the west gate, and the remains of the gate itself, were examined by Nash-Williams in 1930-35, as consolidation proceeded (Nash-Williams 1933 and 1953). O E Craster, then Inspector of Ancient Monuments for Wales, examined the east gate in the winter of 1949-50 (Craster 1954). Despite all of this work, the dates of the construction of the original earthen rampart and the addition of the town wall are still open to question.

Figure 1 Aerial view of Caerwent from the south-east (West Air Photography)

Before the present programme of work, the only excavation to be conducted within the walled area in the last fifty years was on a site in Pound Lane, the *insula* to the west of the *forum-basilica*. Gerald Dunning, Inspector of Ancient Monuments, uncovered in 1947–8 a sequence of shops fronting the main Roman Street, and part of a large courtyard house to the rear (Dunning 1948). The results have never been published, but the excavation was significant, because for the first time it gave a glimpse of a timber phase of construction associated with the very foundation of a settlement in the late 1st century AD.

Some recent discoveries

Judicious application of the Ancient Monuments and Town and Country Planning Acts has prevented any development, besides modest extensions, within the enclosed area since the 1930s. Hence, much of the town remains open g-round, and we have one of the very few opportunities not only to study large areas of a civitas-capital, but also to display the remains of the excavated buildings to the public. In 1981 the National Museum of Wales began a programme of research excavations. Three sites have been investigated; a large courtyard house in the north-west comer of the town; the *basilica* at the very heart of the town, and the adjacent Romano-Celtic temple. The latter two sites are held in Guardianship, and their excavation was funded by Cadw: Welsh Historic Monuments. The aim of these excavations is to improve our knowledge of the origin and early development of *Venta.* Work continues on the site of the *forum-basilica.*

The programme of research began with the excavation of a previously unexplored plot within the north-west comer of the town *(Insula* I). The earliest building on this site was constructed in the late 2nd or early 3rd century AD; before that the plot had been vacant. Only a single room of this building lay within the excavated area. Its walls, less substantial then those of the later buildings, probably stood only a few courses high, the superstructure being timber-framed, A well, over 10m deep, was sited immediately outside the north-west corner of the house. There was no evidence of steening, but near the bottom a red clay lining may have formed a backing to timberwork. This lining and also the lower deposits produced over 4,000 animal bones, virtually all long bones of cattle which had been cleaved longitudinally to extract marrow, a process that was possibly being carried out commercially.

In the late 3rd century the first building was demolished and a much larger house was constructed. It occupied the northern part of the plot, and the rest of the ground was enclosed for a garden and yard. Unfortunately the plan of this house is incomplete, but it seems to comprise a long central corridor which gave access to rooms on either side. The house was of sóme pretension, for there is evidence from several rooms for elaborately decorated walls and ceilings, and the central corridor had a fine mosaic floor.

The latest Roman building on this plot was a very substantial dwelling (I.28N), measuring 30m by 45m (Fig 2). It ranks among the larger Caerwent houses, and provided a high standard of accommodation. Built in the early part of the 4th century AD, the house consisted of a number of rooms ranged round two courtyards. On the whole, the southern ranges were quite plain, although two rooms (2 and 3) had plain tessellated pavements, and another chamber (7) had been heated by a hypocaust. In the south-west comer, an extremely large room (6), with several sleeper walls to raise the floor above ground level, probably served as a store. The rooms on the northern side of the house were far more elaborate and served as the main living quarters. There was much evidence for brightly painted walls, and the two principal rooms had been heated by hypocausts. Both of these heated rooms (11 and 14) had patterned mosaic floors to judge from the *tesserae* found in the robbed-out basements. The corridor surrounding three sides of the smaller northern courtyard also had a mosaic floor, with a different pattern on each side.

Did this large house have any function other than as a residence? A resistivity survey of *Insula* I, (Aspinall *et al* 1983) revealed an uncrowded development. Two other houses were identified — one L-shaped, the other a winged house — as well as a number of smaller buildings and walled yards which may have served as barns, byres, paddocks and orchards. The plan of Caerwent reveals other farm-buildings, mainly on the outskirts of the town, and it would seem likely that some of the town's inhabitants were working the land both inside and outside the defensive walls. The large store-room in house I.28N and the insertion of a corn drier in the southem courtyard may also point to such an agricultural function of this property. Both Cirencester (McWhirr 1986) and Silchester (Boon 1974, 255–61) have also provided clear evidence that farms existed in towns.

The Romano-Celtic temple, east of the *forum,* was first explored in 1908, and the Edwardian plan reveals tantalising glimpses of earlier structures that were not fully revealed (Ashby *et al* 1910, 4-7). The temple proper was the only building uncovered during the 1899–1913 excavations to be left open for public inspection, After many years of neglect, it was taken into Guardianship in 1967 and the remains were consolidated. The re-excavation of the temple complex and the adjacent strip-building (IX.18N) was conducted between 1984 and 1988.

The earliest phase on this site was represented by a large timber building, 16m by l0m, of post-trench construction (Fig 3, phase 1). This building consisted of living quarters at the north end and a workshop containing hearths to the south. On its western side was a verandah and entrance hall giving access to the broad north-south street (18m wide). The pottery indicates a date in the late 1st/early 2nd century for the construction of this building.

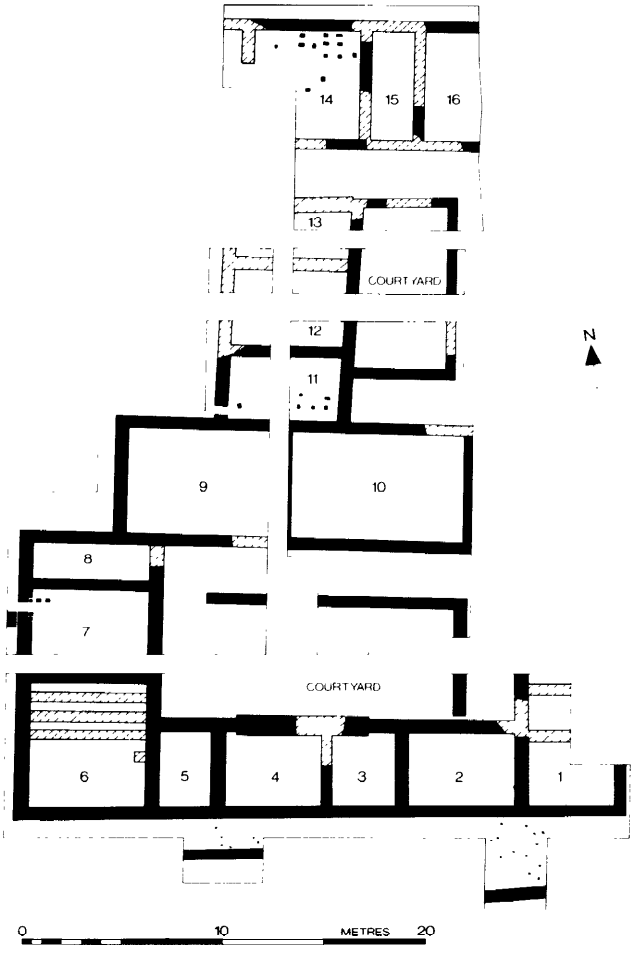

Figure 2 Excavation of the courtyard house 1981-4 showing the latest building (early 4th century AD) (Drawn by NP Friend)

It had been suggested that the foundations encountered beneath the temple in 1908 may well have represented the remains of an earlier sacred building (Lewis 1966, 50). This is not the case, however, for prior to the construction of the temple, the plot had been occupied by an open yard, which probably belonged to the adjacent strip-building (Fig 3, phases 3–5). Numerous furnaces and hearths show that this strip-building functioned as a workshop; a small room at the front serving as the shop itself, and a large workroom behind. A single room at the rear of the premises, badly robbed in the medieval period, probably served as the living quarters. This workshop was rebuilt in stone on at least three occasions, and with each redevelopment the frontage encroached further on the main street.

In *c* AD 330, the Romano-Celtic temple was constructed on what was essentially open ground. The temple complex was no respecter of the original street lines, for both the main (east-west) and side streets were encroached upon considerably. The temple proper consists of a square *cella* with an apse at the back projecting into the surrounding ambulatory; on the south side is the entrance porch. Unfortunately neither the 1908 nor the present excavations have thrown any light on the deity worshipped there. The only items from the site that can be considered as appertaining to cult-objects are the head of a bronze serpent and a piece of bone inlay in the form of a bird's head (Ashby *et al* 1910, 5, Figs 2 and 3). The recent excavations have shown that many details went unrecorded in the 1908 investigations and that the temple complex was far more elaborate than previously envisaged. The temple lay within a walled precinct closed on the fourth side by a long hall fronting the main street (Fig 3, phase 6). The hall had central doorways in both long walls and an entrance in the short axis opposite the apsidal east end (Fig 4). Architecturally the hall was quite elaborate, having been embellished with pilasters along its length and a tessellated floor, plain except for a patterned panel directly in front of the apse. The workshop to the east of the *temenos,* which Nash-Williams erroneously suggested was an entrance hall for the temple (Nash-Williams 1952, 93–5), was also rebuilt *c* AD 330.

Substantial later alterations to the temple complex included the addition of a range of rooms to the inner side of the entrance hall, and the construction of two half-domed niches, presumably designed to hold statuary, one either side of the temple porch. The temple was kept in good repair late into the 4th century, for a coin of Valentinian was found beneath repair-work to the foundations of one of the pilasters in the entrance hall.

The *Civitas Silurum*

The recent excavations have thrown doubt on the extent of the settlement in the late 1st and 2nd centuries AD. The comer plot of *Insula* I had been vacant at least to the end of the 2nd century AD, if not slightly later. Evidence from the adjacent Pound Lane site, indicates that the courtyard house VII.27N, which was the first building on that plot, was not constructed until the early 4th century AD. The only early structures identified so far, are a wooden hut, probably part of a pottery complex, beneath the Pound Lane shops (VII.26N), and the late 1st/early 2nd century timber building under the temple. The public baths, opposite the *forum,* may also belong to an early period of the town's development (Nash-Williams 1930, 229–50). It would appear, therefore, that *Venta* may have been no more than a sprawl along the main Roman road to Caerleon in the 1st and 2nd centuries, and that the regular layout of the street grid was not established in its final form much before the beginning of the 3rd century

So when did *Venta* receive the status of a civitas-capital? The early 2nd century has generally been held as the date when the Silures passed from mili-

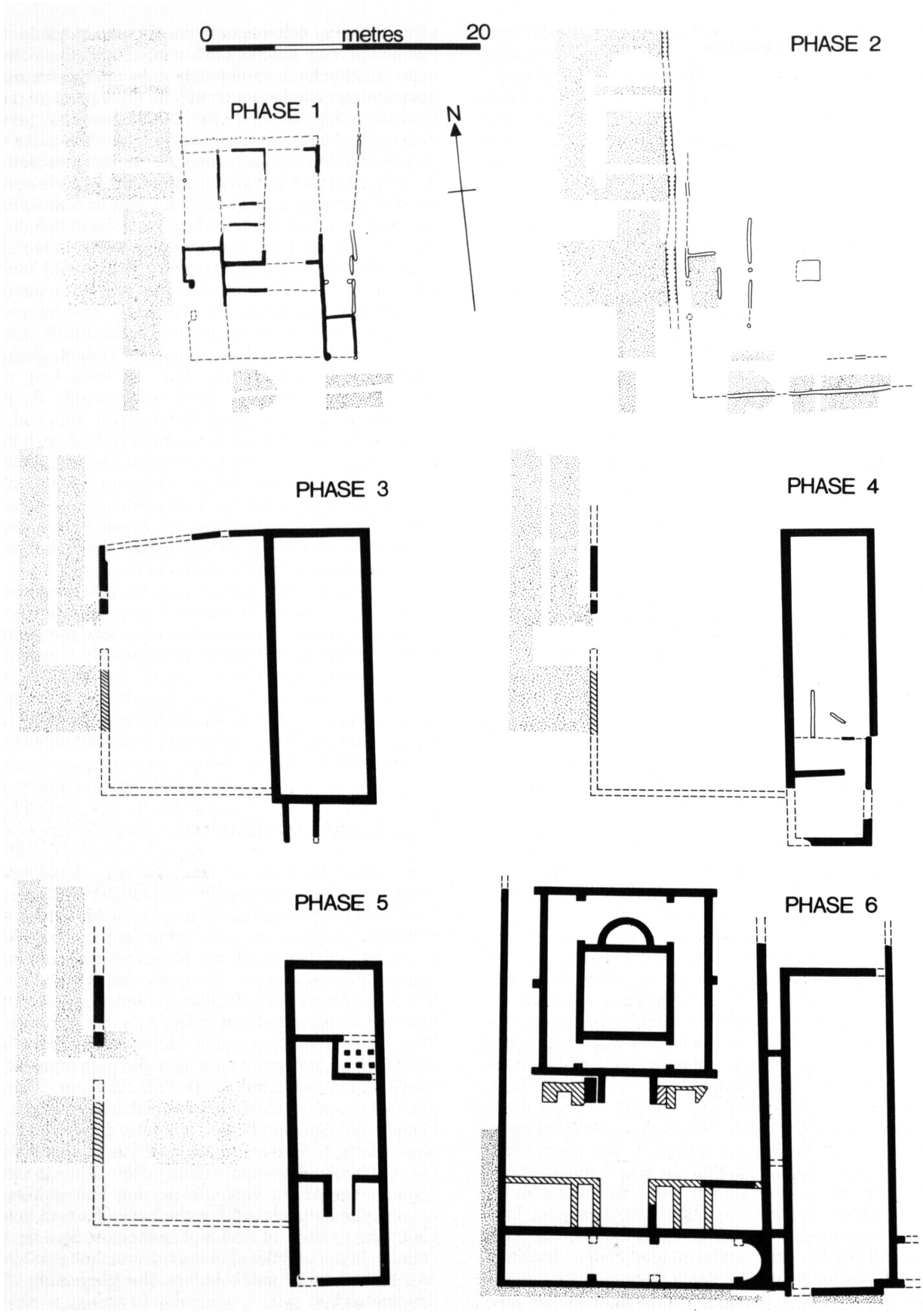

Figure 3 Excavation of the Romano-Celtic temple and adjacent workshop 1984-8. Phase 1: timber building (late 1st/early 2nd century AD); phase 2: open yard; phases 3-5: workshop and yard; phase 6: temple and adjacent workshop (c AD 330) (Drawn by NP Friend)

tary control to a civil administration and were granted the status of a *civitas peregrina,* with their own elected council *(ordo)* and magistrates. This situation would seem to be reflected in the withdrawal of many of the garrisons from South-East Wales for service on Hadrian's Wall (Davies 1980, 264-70, Figs 17.8 and 17.9). However, the apparent late development of *Venta* must cast some doubt on such an early date for the creation of the *Civitas Silurum.* The existence of a constituted *res publica* is attested in an inscription (Fig 5), cut on a statue-pedestal, which was erected towards 220 (Ashby *et al* 1904, 119-122, Pl XII; *RIB* 311). It was set up in the town by the tribal assembly in honour of a former legate of the Second Augustan Legion, Tiberius Claudius Paulinus, who had been a patron of the *Silures* (Birley 1981, 188-190). Paulinus went on to become governor of *Gallia Narbonensis* and then *Lugdunensis,* before returning to the governorship of Lower Britain in 220. This last post is not recorded in the Caerwent inscription, which must, therefore, have been set up shortly before he returned to Britain.

It is generally held that the existence of a *forum-basilica* building, the seat of local government, is sufficient indication of the existence of a self-administering native community in Roman Britain. So if we could date the Caerwent building we should obtain a *terminus ante quem* for the creation of the *res publica civitatis Silurum.* This provided a strong motive for initiating new work on the site of the *basilica.*

Occupying the whole central *insula* north on the main street, the *forum-basilica* measures about 80m north-south and 56m east-west. It was explored in 1905, 1907 and 1909 (Ashby 1906, 128-130, and Ashby *et al* 1909, 569-582), but these investigations did not provide any firm indication as to when the building was first erected. The earliest coin from the site was a *sestertius* of Nerva, but we are not told where it came from. A better indication, though a less precise one, may be provided by the style of the Corinthian capitals which supported the nave roof; a style developed in the Rhineland, which was in fashion from the late 1st to the middle of the 2nd century AD (Brewer 1986, 49-51, no 82, Pl 27; at Silchester similar capitals date to *c* 150, see Fulford 1985, 58-9).

In 1987, work began on the excavation of this large public building (Fig 6). To date, the rear range of the *basilica* and a large area over the east end of the great hall, including the judicial tribunal (Room 10), have been uncovered. Some walls of the rear range survive almost 2m above ground level, having been incorporated in 19th century farm buildings. Thick layers of demolition material, mainly decayed mortar and plaster, were excavated in several rooms of the rear range. These levels produced very little building stone and roofing material, which suggests that the *basilica* had been systematically demol-

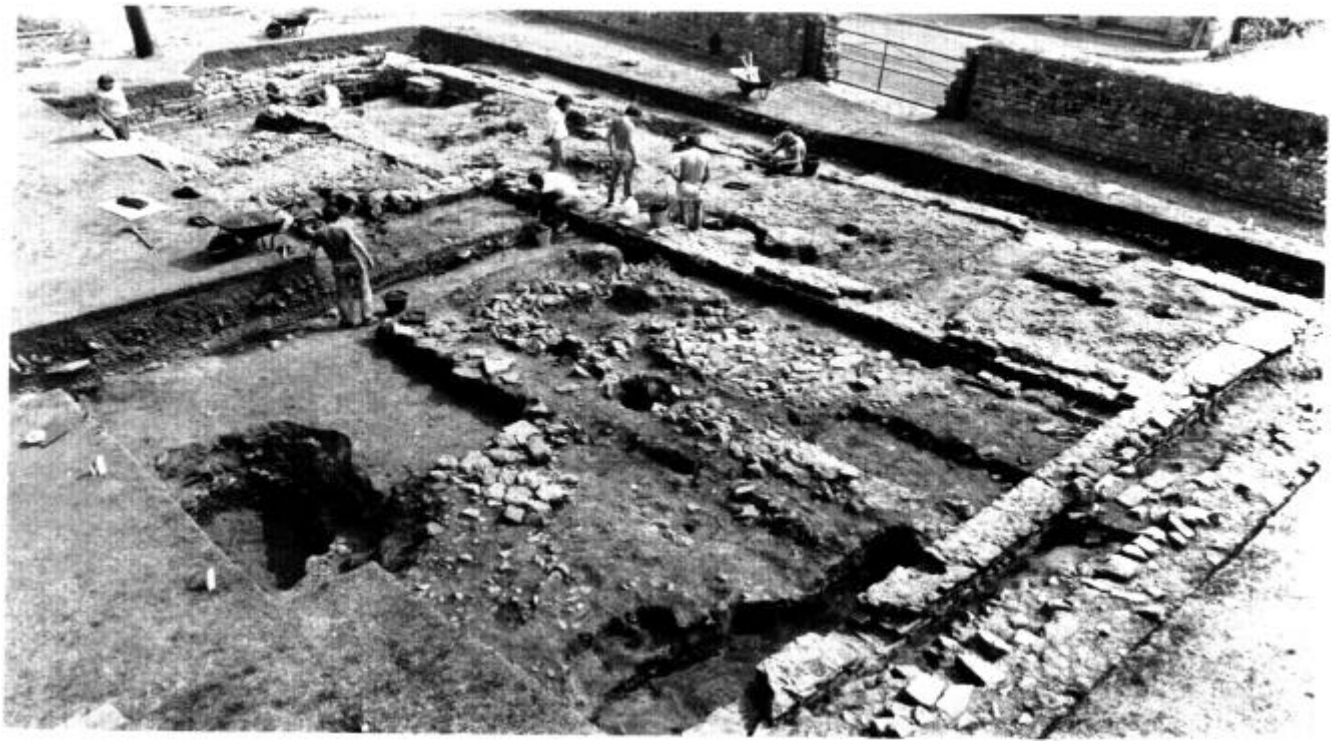

Figure 4 Romano-Celtic temple: the Long entrance hall and added range of rooms, Looking south-east

Figure 5 Statue-base inscribed by the Silurian local authority at Caerwent in honour of Tiberius Claudius Paulinus, legate of II Augusta, subsequently a provincial governor in Gaul, and in Britain. Found in 1903 (RIB 311)

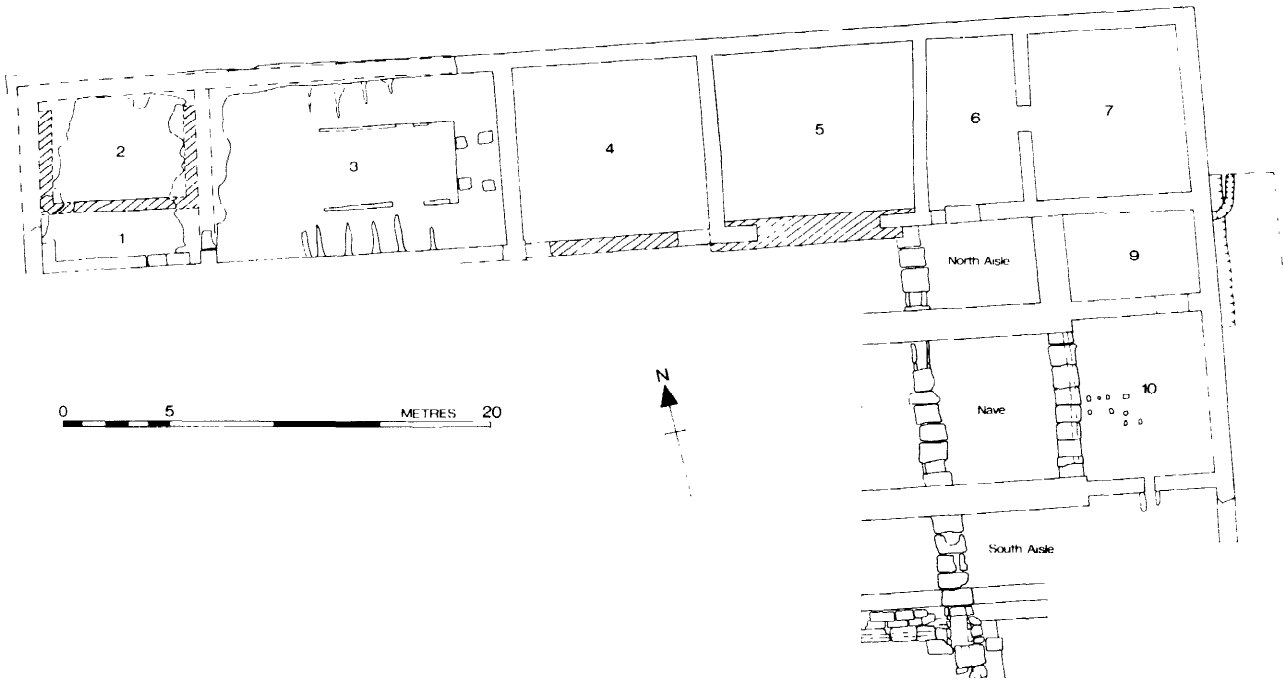

Figure 6 Excavation of the basilica *1987-9 (Drawn by NP Friend)*

ished. The coins from these layers indicate that the building had been largely dismantled to its present ruined state by the middle of the 4th century. Activity post-dating this demolition was found at the east end of the north aisle (Room 9) and in the nave. In the former, there was evidence of industrial activity in the form of a furnace which had been almost totally destroyed, while in the nave there were several circular hearths surrounded by numerous stake-holes.

The function of some of the rooms in the rear range has been identified. Room 3, the largest room, can be shown to have served as the *curia* or council chamber (Fig 7). In its latest phase, mosaic panels, now largely destroyed, adorned the floor of the room; one along the west side at the entrance to the chamber and another at right-angles down the middle, thus forming a T-shape. The rest of the room was floored with *opus signinum*. Cutting the concrete floor, either side of the mosaic, and the south wall were shallow channels which had carried the timber framework of the benches on which the *decuriones* sat. At the east end of the chamber were the stone bases of a stepped wooden dais from which the *duoviri iuridicundo* presided over meetings of the *ordo*. Such arrangements are depicted on a 3rd century coin from a city at the opposite end of the Roman Empire (Fig 8), which demonstrates how closely the form of tribal administration was modelled on that of cities, The features described have been nowhere else observed in Britain. The rooms to the west (1 and 2) originally formed a single room, which served as an antechamber to the *curia. This* room was accessible by a doorway from the great hall. At a late stage in its history, the room was subdivided. Room 1 served as a small vestibule to the curia with benches on the south and west sides. In Room 2, deeply founded walls were inserted against the existing side walls, and to judge from the number of tufa voussoirs, these probably supported a vaulted roof. The wall dividing Rooms 1 and 2 does not appear to have risen much above floor level, and it may have been the foundation for some kind of screen, similar to those found fronting the strongrooms in some military *principia* (for example at Vindolanda, see Birley 1977, P1 50, and for an ornamental screen from Caerleon, see Brewer 1986, 43, no 62). Could Room 2 have been the treasury? The central room (4) in the rear range, with a wide arched entrance opening on to the great hall, was probably the *aedes* or civic temple. The floor of this room was raised considerably above that of the great hall, as in the Silchester *basilica* (Boon 1974, 115).

Excavation of the east end of the nave and judicial tribunal (Room 10) has thrown light on the structural history of the building. In the late 3rd century it appears that the *basilica* underwent a massive rebuild. A structure of scaffolding was erected; six rows of regularly spaced post-holes were uncovered within the area of the nave and tribunal. The nave roof was probably stripped and the columns dismantled. As part of this reconstruction, the stylobate walls were raised, as were the floor levels. These works were probably necessary because of subsidence, as was clearly observed in the undulating

concrete floor at the end of the north aisle (Room 9). Structural problems may have existed from the outset, for two large pits - one cut against the front wall of the *basilica* in the south aisle and another against the west wall of the tribunal - both dug through the earliest floor-levels, can only have served to inspect the foundations. No cracks were evident in the surviving walls, however, and there are no obvious reasons for the subsidence. The only problem encountered in way of explanation was the poor levelling of the upcast from the deep foundations and the cut for the huge box-dram traversing the *basilica.*

Although a large area has been cleared down to the natural, the thick deposits of the original construction have produced very few finds, and there is still no conclusive evidence as to when the building was first erected. A small number of fragmentary sherds were recovered, and of these the latest probably fall within the Hadrianic period. The structural sequence is very simple; three floor levels have been

Figure 8 Reverse of a bronze coin of Trebonianus Gallus (AD 251-3), issued at Alexandria Troas, depicting the local council in session

Figure 7 Basilica: *the* curia *from the north-west, showing remains of the framework for seating-banks and stone bases for the magistrates' dais*

uncovered in the nave, the earliest showing signs of extensive wear, and the latest belonging to the reconstruction at the end of the 3rd century. No features were encountered beneath the *basilica*, and it appears that it was constructed on a green field site,

Further speculation at this stage would be fruitless. Only a very small percentage of the town has been investigated to modem standards, and much more work is required before a clearer picture of the origins and early development of the settlement is achieved. I would hope that the next fifty years will fill in the many gaps in our knowledge.

Postscript

Excavation of the original construction levels of the *forum-basilica* in 1992 and 1993 produced five coins -two of Vespasian, one of Domitian, one of Nerva and one of Trajan, the last a *sestertius* minted in AD 112-114. Both the numismatic and ceramic evidence indicate that the *forum-basilica* was erected in the earlier part of the 2nd century, probably during the reign of Hadrian.

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8 Roman Winchester *Kenneth E Qualmann*

Introduction

This paper is largely that presented at the 'Roman Towns' conference and has three main sections. The first briefly outlines what was known or theorised about Roman Winchester in the 1930s; the second part describes the advances made in the succeeding 50 years; and the final section summarises the results of some recent excavations and the new ideas this work has generated. This third section has been expanded by comparison with the original paper, to provide slightly greater detail of site evidence. Since November 1989, the Archaeology section of Winchester Museums Service has reached agreement with English Heritage about the publication of much of the site information referred to in the third part of this paper. A series of eleven publications is planned, but those of the greatest relevance here are the summaries of work undertaken on the Oram's Arbour Iron Age enclosure, on the Roman Cemeteries, the Roman Suburbs, and on the Defences of the town. These intended publications are referred to by short titles in the text below, with fuller descriptions in the bibliography.

Sites are referred to by two and three-letter codes followed by numbers: these can be identified and located by reference to Figure 3.

The Ward-Evans inheritance

Fifty years ago, Winchester archaeology was dominated by a single figure. Sydney Ward-Evans was well-known to most Wintonians for his prolific contributions to the local papers, for his daily presence at the side of any trench or excavation likely to disturb the 'soil of the centuries' and for the information boards he placed at his own expense on numerous locations in the City

Ward-Evans came from a wealthy Surrey family and, after service in the First World War as an interpreter and considerable foreign travel, he settled in Winchester in 1926 at the age of 43 (Parker 1983). Almost immediately, he took on the self-imposed duties of 'Honorary Archaeologist' to the City. Despite long spells of illness and increasing poverty, he observed and recorded information on literally hundreds of building sites in Winchester in the 1920s and 1930s.

Partly as a result of poor health, Ward-Evans never directed a controlled excavation at Winchester, though he was commissioned by the County to maintain a full-time watching brief during construction of the Castle Avenue offices in 1930-31 (Fig 1). His published 'Notes' on this work (Ward-Evans 1931), reveal much about the attitude of a man to what may best be termed his calling.

He was an enthusiast and populariser who saw as one of his main responsibilities the explanation of the city's past to the layman in non-technical terms. Archaeological discoveries, though of very great interest in their own right, essentially provided for him an opportunity to open a door to the past for the public.

This approach makes it difficult to find any clear statement of Ward-Evans' overview of the development or character of Roman Winchester. Nevertheless, passing remarks gathered from more than 200 press articles can be drawn together to provide a summary of his understanding of *Venta Belgarum* some fifty years ago.

Of key importance to Ward-Evans was the pre-Roman origin of urban settlement at Winchester. While he speculated that the Oram's Arbour earthworks to the west of the later defences were likely to be of Iron Age origin, he was passionate in his advocacy of the existence of intensive pre-Roman occupation immediately below the Roman town, which he saw as its direct successor. He was apparently able to persuade Christopher Hawkes of this interpretation (WMS History File AA 2.104), or at least of his evidence (Hawkes *et al* 1930).

It appears that Ward-Evans supported the view expressed by Warren (1914), that the main elements of the Roman town plan - the defences and the street grid, but also the functions of particular areas - were largely reflected by those of the medieval city (Fig 2). To this accepted wisdom, however, he added detail of his own observation. He had found no evidence to show the Roman defences had ever been masonry-built; and he argued that occupation evidence was found distributed throughout the defended area, and was not confined mainly to the area south of the High Street as claimed in the *Victoria County History* (Haverfield 1900).

Perhaps of greatest value was Ward-Evans' work on the cemeteries of Roman Winchester. His observation of 18 separate sites led to the identification of six burial grounds, four of these of considerable size. His surviving records are most detailed, and of greatest use today, when they describe the funerary remains identified at sites like Hyde Church Lane to the north of the town and St Martin's Close to the east.

Fifty years of subsequent research have, of course, greatly modified the picture of *Venta Belgarum* which Ward-Evans would have presented. A full description of these results goes well beyond the scope of this paper. I have, therefore, focussed upon a few

of the areas of interest to Ward-Evans to illustrate the development of our understanding of Roman Winchester.

Advances in knowledge, 1947-1972

Ward-Evans died in poverty July 10th 1943, and was buried in a communal grave. Though his efforts in his later years were much reduced as a result of illness and the need to raise money, his loss to Winchester was greatly mourned, especially as, in the words of an obituary *(Hants Chron* 17.7.43), he 'left no successor' to his archaeological work.

This proved not quite to be true, for, perhaps stung by the loss of their Honorary Archaeologist, Winchester City Council appointed their first full-time Museum Curator less than four years later. Frank Cottrill came to Winchester from Leicester, but had received much of his early professional training under Mortimer Wheeler, including excavation at *Verulamium* (Lewis forthcoming). In addition to more traditional curatorial duties, Frank Cottrill continued the kind of rescue recording begun by Ward-Evans. This was especially important as post-War redevelopment gathered pace, with large-scale office construction and road widening providing the major opportunities.

Cottrill also organised excavations, at first with the assistance of local amateur groups under his own direction, but later by encouraging promising young archaeologists to take an increasing role. These included Barry Cunliffe and John Collis, both of whom were working in Winchester in the later 1950s. lb the former fell the initial task of writing up the results of some of this post-War programme.

In his paper on 'Winchester City Wall' Cunliffe (1962) showed that there was evidence for at least two main phases of the Roman town defences: an earthwork of perhaps the 1st century AD; and a wall of *c* AD 200 cut into the front of the earlier earthwork and backed by a further ramp. The course of the early defences was uncertain, but the wall was thought to follow the line of its medieval successor, except perhaps, at the south-western salient.

Two years later, Cunliffe (1964) was able to publish the results of more extensive excavations, carried out between 1949 and 1960. These led him

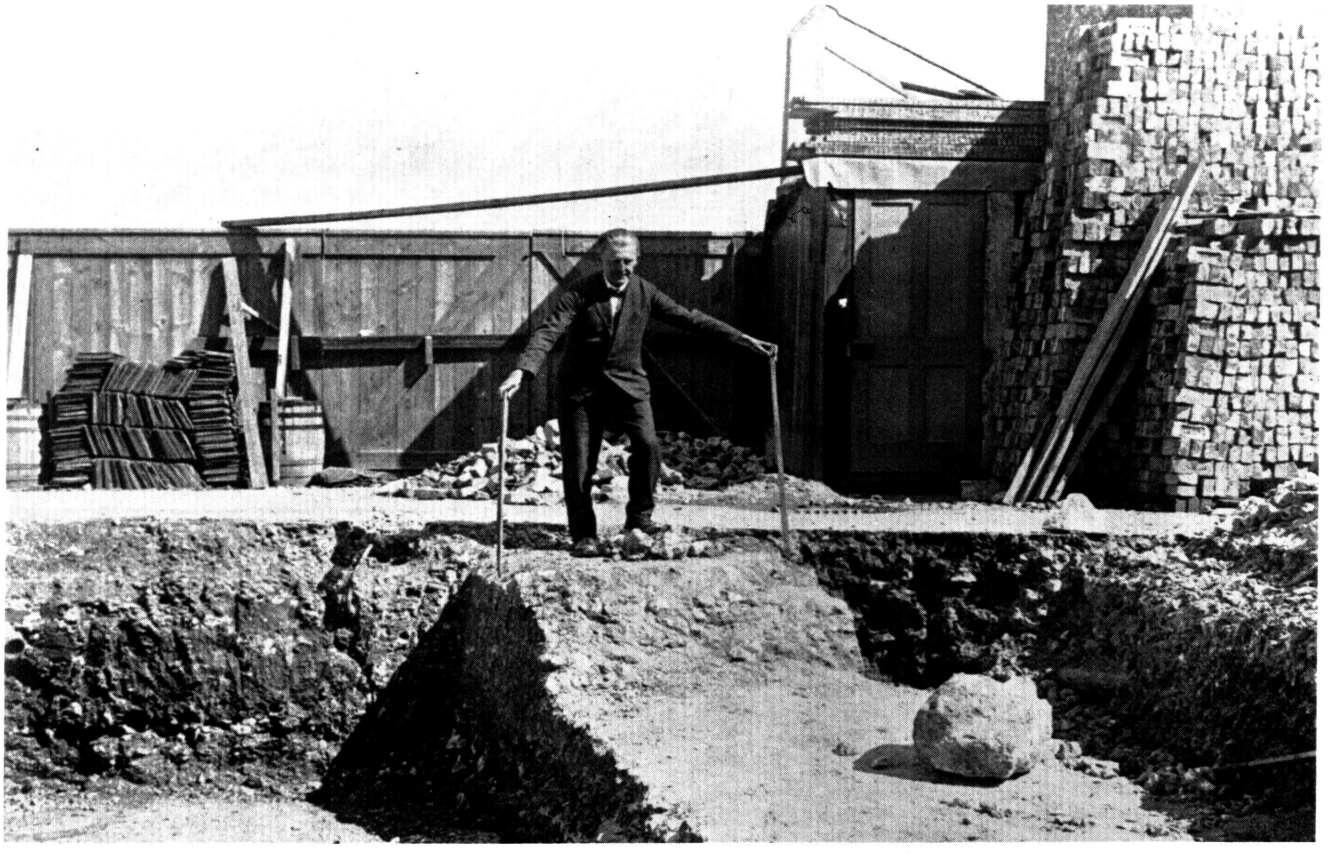


Figure 1 Sydney Ward-Evans (1883-1943) indicating the location of the City wall at the Castle Avenue, Winchester site, c 1930. Winchester Museums Service

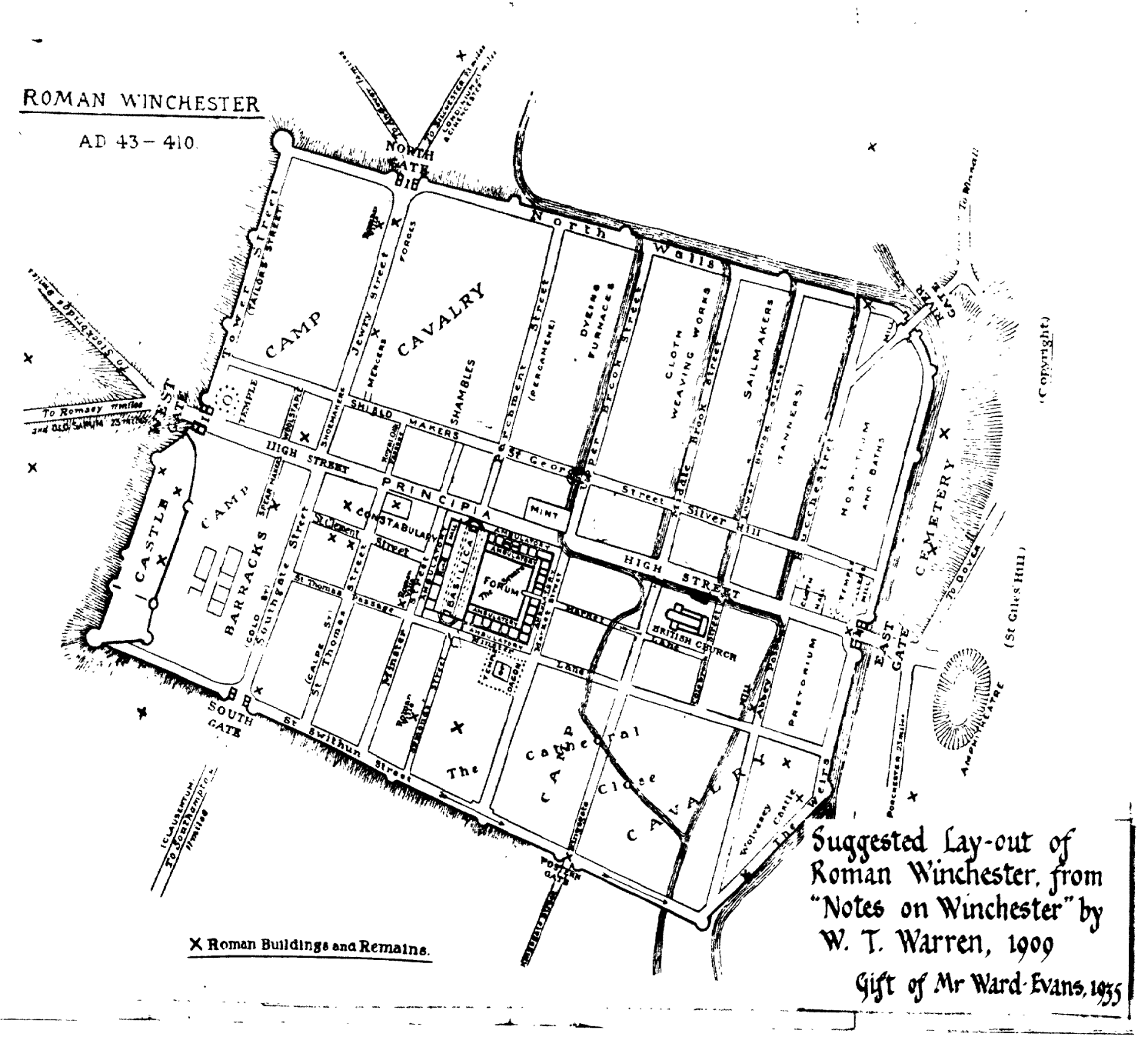
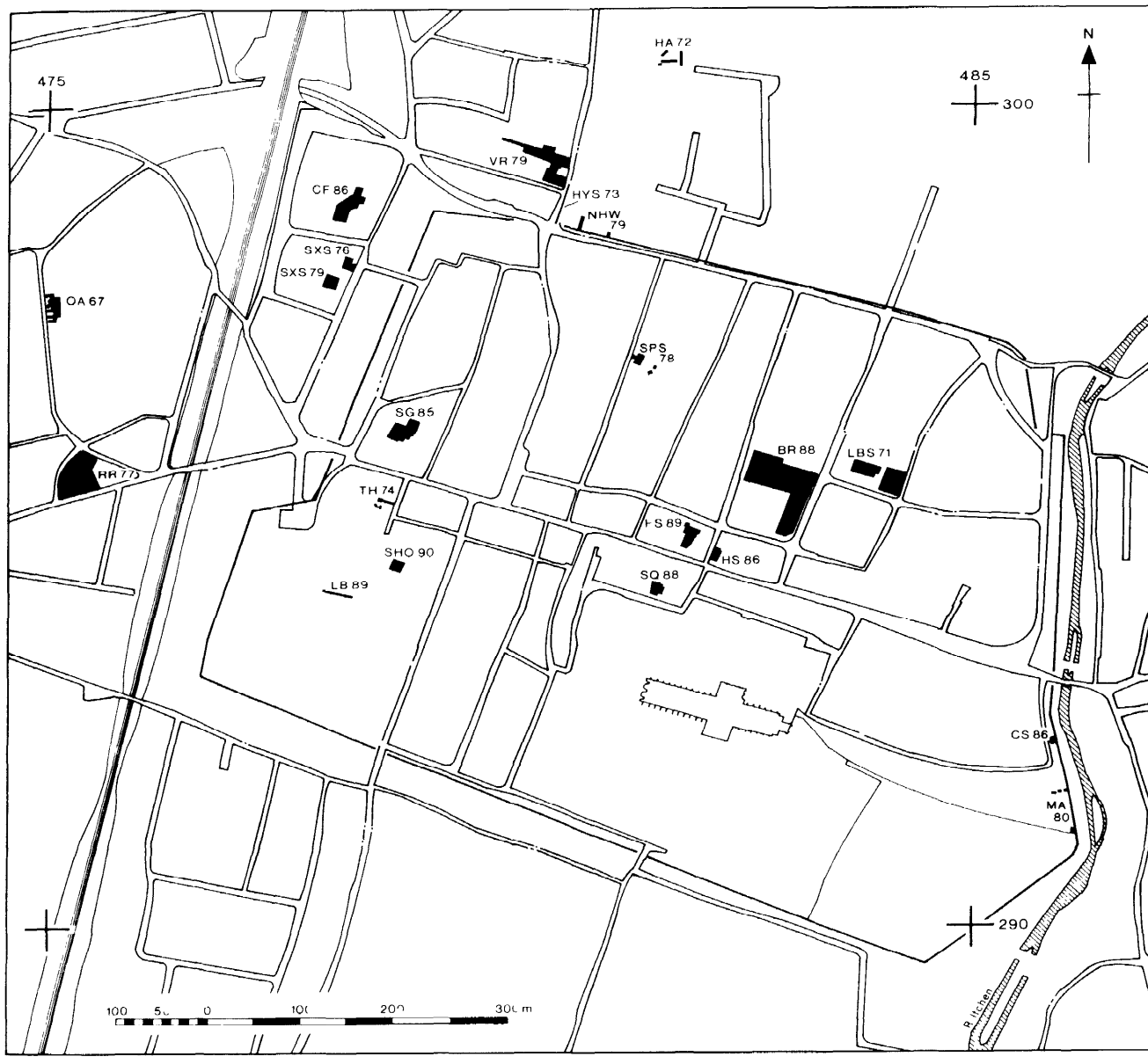


Figure 2
Plan of Roman Winchester as published by Warren (1914) and annotated by Ward-Evans. Winchester Museums Service



BR	the Brooks
CF	Carfax
CS	Colebrook Street
HA	Hyde Abbey
HS86	126 High Street
HS89	118 High Street
HYS	Hyde Street electricity cable
LB	Lower Barracks
LBS	Lower Brook Street
MA	Magdalen Almshouses
NHW	North Walls
OA	Oram's Arbour
RR	Romsey Road
S G	Staple Gardens
SHO	Southgate Hotel
SPS	St Peter's Street
SQ	The Square
SXS	Sussex Street
TH	Trafalgar House
VR	Victoria Road

Figure 3 Location of the main sites mentioned in the text. Dates shown are the final year of multi-season excavations. (Drawing: M Burden)

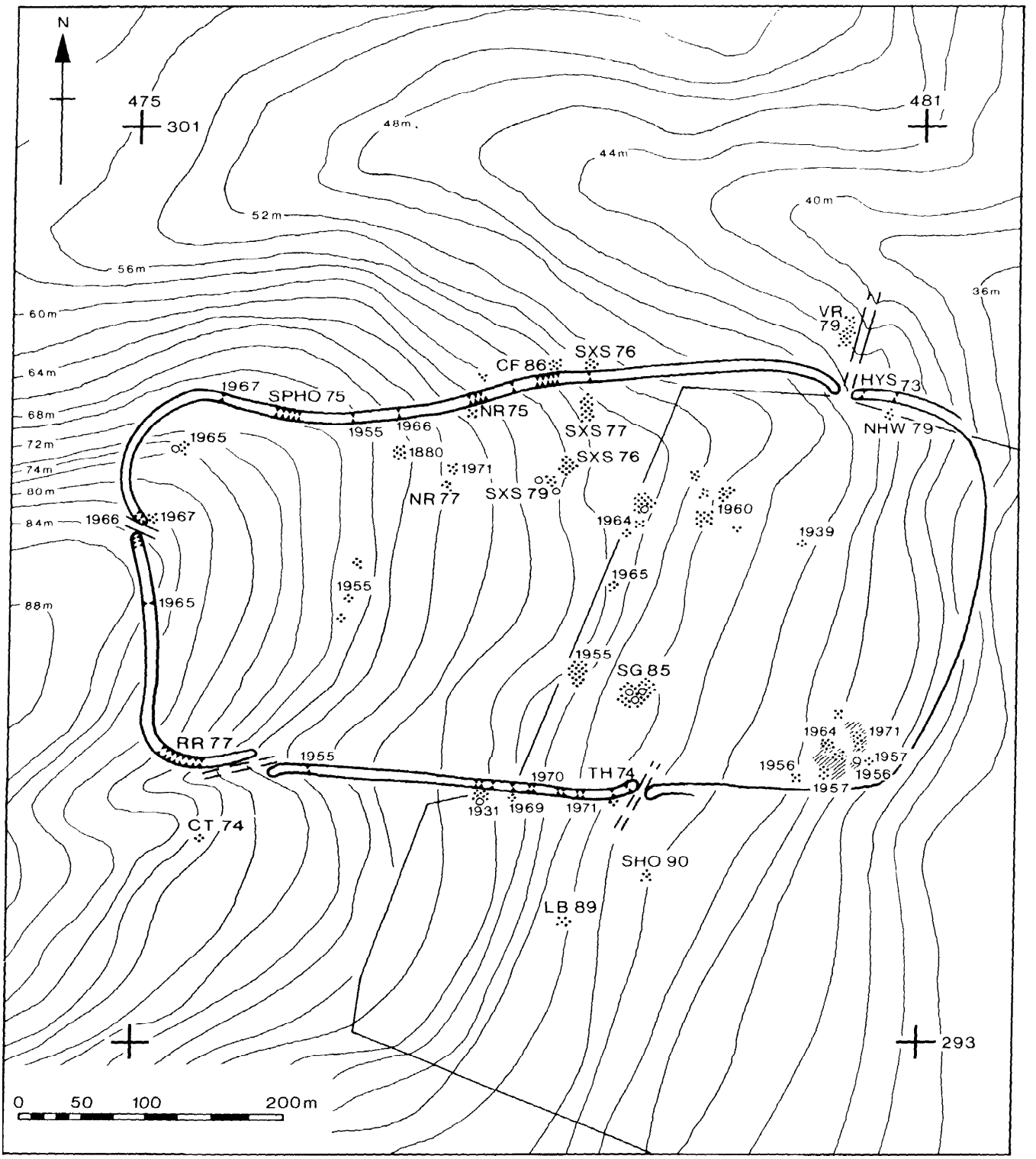


Figure 4 Evidence for Middle and later Iron Age activity at Winchester, plotted against likely pre-Roman contours. Stipples indicate occupation evidence; small circles, structures; hatching, the 'earthwork' (Cunliffe 1964); broken parallel lines, possible trackways. For identification of the sites, see Figure 3. The line of the Roman town wall is shown for reference. (Drawing: M Barden)

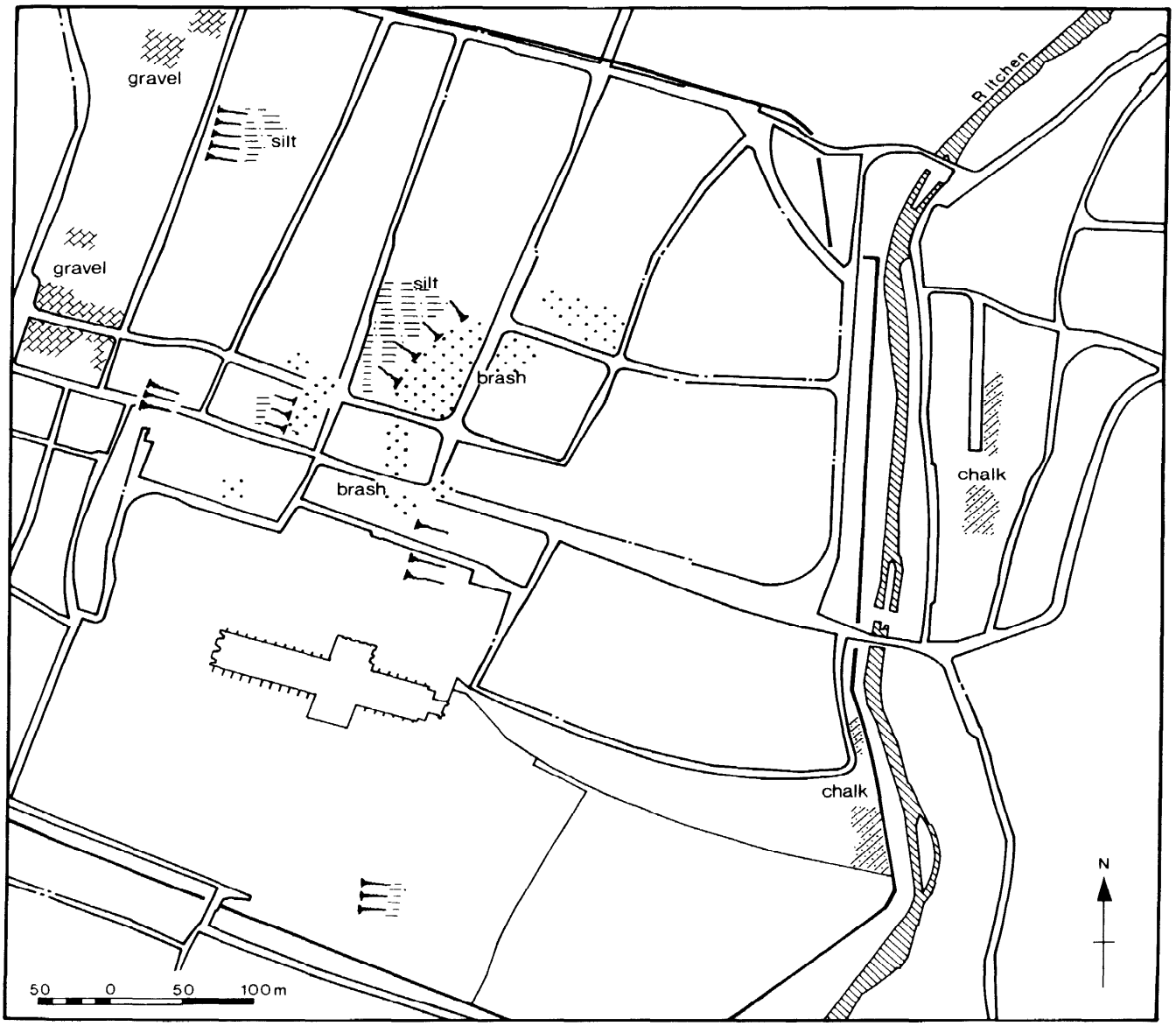


Figure 5 Pre-Roman deposits identified in the eastern part of Winchester: alluvial chalk brash and alluvial silts in the valley bottom; gravel capping rock chalk and soliflucted chalk on the slopes to the west and east. (Drawing: M Barden and author)

to conclude that there had been extensive occupation on the western side of Winchester in the 2nd and 1st centuries BC, but that it would be unwise to assume this was either a defended settlement or that it continued to the time of the Roman conquest.

By the time Cunliffe's publications were appearing, a new phase in the development of Winchester archaeology had begun. Following excavation on a site north of Cathedral Green in 1961, the Winchester Excavations Committee was established and its Director, Martin Biddle, soon developed plans for a ten year programme of large-scale excavation,

Even in its early stages, this programme yielded important results for an understanding of Roman Winchester. The first verifiable elements of the Roman street plan were drawn together with the

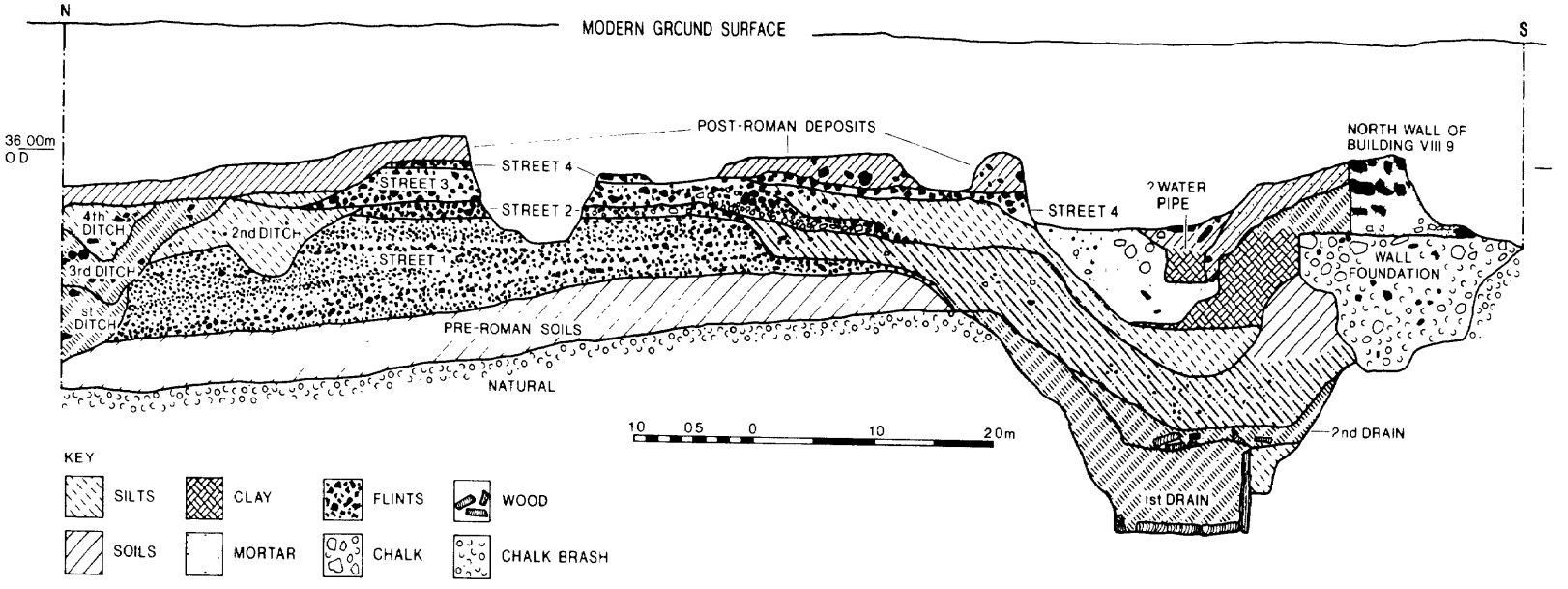


Figure 6 Cross-section through Roman street surfaces and associated drains excavated at the Brooks site, Winchester (BR on Fig 3). (Drawing: M Barden)

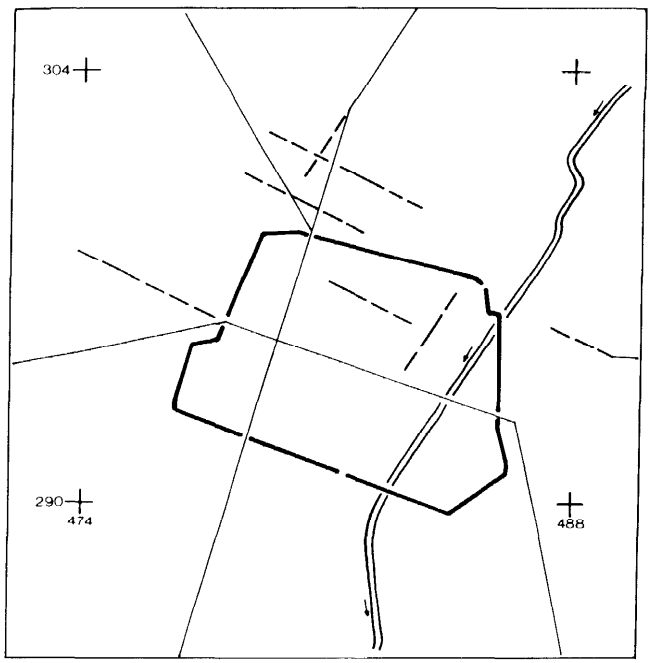


Figure 7 Elements of a possible street grid at Winchester; based on the conjectured early course of the River Itchen. Long-distance roads and the line of the Roman town wall are shown for reference. Scale 1:10,000. (Drawing: author)

results of the 1962-3 excavation seasons (Biddle 1964). In the following year (Biddle 1965), further possible elements were added to the 'grid' which was tentatively dated to the late 1st century AD. This work also made it possible to demonstrate more conclusively than before that the streets of modern Winchester reflect a late Anglo-Saxon plan substantially different to that of the Roman period (Biddle & Hill 1971).

The 1967 excavation season marked two important developments (Biddle 1968). First, the nature and probable pre-Belgic date of the Oram's Arbour earthworks to the west of the town defences was finally and conclusively established by the excavation of an inturned entrance on its western side. Second, excavation began at Lankhills School, which proved to be the northernmost part of the extensive northern cemetery of *Venta.* The eventual investigation, by 1972, of 451 graves demonstrated the enormous source of information the Roman town's burial grounds represented (Clarke 1979).

The 1969 excavation season clarified the interpretation and dating of the three phases of the Roman town defences first recognised in 1964 (Biddle 1965, 1970). The 1st century earthwork was succeeded by an enlarged rampart of late 2nd century date, cut back to take a stone wall in, perhaps, the early 3rd century. Equally important, all three phases were found to enclose the southwestern salient, previously thought to have been an extension formed to provide a site for the Norman castle.

The final season of the Biddle programme confirmed the defensive sequence, dating the earliest phase to c AD 75, and pointed to possible 4th century alterations (Biddle 1975). The possibility of an early fort in the Brooks was suggested by the discovery of a pre-Flavian ditch as the Lower Brook Street site; certainly this feature seems to have determined the alignment of a street immediately to the west, which followed a different line to that of the main grid.

This brief summary has hardly done justice to ten years of intensive excavation and research. Nevertheless, a picture of the main elements of Roman Winchester as understood at the end of that programme can be described (Biddle 1974). While parts of the Oram's Arbour enclosure were densely occupied in the 1st century BC, there appears to have been a break of as much as 100 years before the first Romano-British settlement appeared. This may originally have grown up at the junction of long- distance roads, perhaps protected by a detachment of troops housed in a fort. If the latter existed, its life was brief but a civil settlement soon developed in the Flavian period. By the end of the 1st century the town had at least partial defences, a grid of streets, and public buildings - probably a *forum* and *basilica.*

By about AD 200, the defences were rebuilt and town house construction increasingly made use of non-local stone. The population was growing in the 4th century, when considerable changes to the character of the town occurred, not least the arrival of people from Continental Europe. Modification of the town defences may also have taken place.

Recent work, current questions

At the completion of Martin Biddle's programme of excavations in 1971, Winchester City Council agreed to the establishment of the permanent post of City Rescue Archaeologist. Initially seconded to the Director of the Winchester Research Unit, the position now forms part of Winchester Museums Service.

Partly because of policy and partly because of the focus of proposed new development (Biddle 1983), investigation concentrated on extra-mural areas between 1972 and 1981. This work provided opportunities to further elucidate the character of the pre-Roman Oram's Arbour settlement largely to the west of the later town, and also to examine five cemetery areas. A series of small sites also allowed access to parts of the defensive circuit.

More recently, redevelopment within the town centre has resumed, as a result of a changed political and economic climate, and the publication of the draft Winchester Area Local Plan (Winchester City Council 1983). This document has provided the framework within which new development can take place in Winchester. Of equal importance has been the gradual acceptance of a 'developer pays' policy.

While, in some cases, the resulting archaeological programmes have had to be selective, access and resources have been provided at a level which was almost impossible to achieve in the late 1970s. Major excavations, and important new information for an understanding of the Roman town, have resulted.

Much of the data gained since 1972 confirms the outline of the main elements of Roman Winchester established as a result of the Biddle programme and briefly described above. Other recent results will require considerable post-excavation analysis before their significance can be fully appreciated. But some new ideas about *Venta Belgarum* are beginning to emerge, and are presented below under three headings: the Iron Age context of Roman settlement at Winchester; the topography of the site in the 1st century AD; and the development of the street plan.

Iron Agecontext

Evidence for Middle and Late Iron Age settlement has been recovered from seven sites since 1972; the defences of the Oram's Arbour enclosure have been recorded in five excavations and five watching briefs during this period (Qualmann forthcoming, Oram's Arbour).

This work has shown that settlement spread over a wide area of the spur of the chalk downland on the western side of later Winchester by the 3rd century BC. Some areas (SXS79 and SG86) have provided evidence for intensive activity, with superimposed phases of occupation. Other sites have demonstrated the extent of settlement, from the northern edge of the spur at Victoria Road (VR79) to the Lower Barracks excavation (LB89) some 650m to the south.

It seems increasingly clear that the construction of the Oram's Arbour defences post-dates much, perhaps even the main period, of this settlement, and can best be placed at the beginning of the 1st century BC. Furthermore, though the defended area probably extended over more than 20 hectares (45 acres), it did not include all of the preexisting settlement. Work at three recent sites has helped to provide an interpretation of this large, defended enclosure which appears to have declined, in terms of settlement activity, in the decades immediately preceding the Claudian invasion.

In 1974 a small excavation and watching brief at Trafalgar House (TH74) showed that the course of the Oram's Arbour ditch here turned to the north. While possible that this represents the eastern side of the Oram's Arbour enclosure, evidence from its northern side shows that the defence continued farther down hill. The 'inturn' at TH74 is therefore likely to represent an entrance (Qualmann forthcoming, Oram's Arbour).

In 1977 a watching brief on the north side of Romsey Road (RR77) revealed the south-west corner of the Oram's Arbour enclosure. The bottom of the ditch was found to be fairly level, at about 75.50m OD, in the western part of the site. To the south and east, however, the ditch bottom sloped quite sharply downward to a depth of 73.10m OD. This slope is much greater than the natural hill slope, which is here about l:11, and suggests either that the ditch was deliberately deepened, or that it maintained a constant depth as it sloped into a pre-existing feature. Analysis of some 17 sections through the ditch has shown that it is almost invariably cut to a consistent depth below the contemporary ground surface. An earlier feature of considerable size may therefore have existed here.

As it leaves the West Gate, the present-day Romsey Road follows the line of the Roman road to Old Sarum (Margary 1955, Route 45a) and runs in a wide hollow way up to 4.5m deep, It had previously been assumed that this feature formed gradually during the Roman period and subsequently However, the evidence quoted above suggests that the hollow way was already forming in the 1st century BC, prior to the construction of the Oram's Arbour ditch. An east-west routeway and, almost certainly, a further entrance into the Iron Age enclosure are implied.

Between 1972 and 1979, large-scale excavation took place outside the North Gate of Winchester. In the southernmost part of the site (VR79), a 5m wide track running north-south had worn a hollow way up to 1.3m deep in the natural chalk. The earliest silts in the bottom of the hollow shows that its formation had been completed by the mid 1st century AD. Its main period of use may have been contemporary with the Middle Iron Age activity recorded on the same site, to the north and west, though no direct stratigraphic relationships survived (Qualmann forthcoming, Oram's Arbour). What does seem certain is that considerable traffic continued to use the track until about the time of the Roman Conquest. Two nearby sites (NHW79 and HYS73) have provided evidence to suggest that the Oram's Arbour defences ran less than 50m away to the south. Again, an entrance to the settlement is very likely to have been provided where the trackway met the defences.

These three sites, combined with the full excavation of an in-turned entry at Oram's Arbour (Biddle 1968; OA67 on Fig 3), have therefore shown that the Oram's Arbour enclosure may have been provided with a series of entrances, and that these entrances were located where pre-existing routeways ran through the defences. The siting of the enclosure may have been determined as much by a wish to control these routes as to defend any existing settlement (Fig 4).

If this explanation of the pre-Roman enclosure at Winchester is correct, it may help to explain the apparent discrepancy between the lack of closely datable evidence for settlement in the immediately pre-Roman Iron Age, and the establishment of a *civitas* capital at the end of the 1st century AD. The intervening period may have been characterised by less intensive permanent occupation, but retention of the function of the enclosure as a central place in the communications network, perhaps used on a seasonal basis for trade and religious purposes.

Topography

The line of the eastern defences of the Oram's Arbour enclosure is still not known with certainty. While recent work along the High Street has shown the possible existence of a substantial ditch along the line of St Peter's Street (Qualmann forthcoming), there is also clear evidence for an 'earthwork', formed by heightening and scar-ping the existing gravel terrace edge, in this area (Cunliffe 1964, 21). Such a construction may have formed the downhill defence (Fig 4).

Whatever the form of its eastern side, the Oram's Arbour enclosure seems to be deliberately located above the Itchen valley floor. Something of the complexity of deposits which have formed the flood plain can be seen in a cross-section compiled from the results of a series of bore-holes, but the archaeological significance of the various river gravels, peats and periglacial deposits for early settlement received little attention until recently.

Interest was initially stimulated by excavation at St Mary Magdalen Almshouses (MA80) in 1980 (Qualmann forthcoming, Defences). The main objective here was to record a series of sections through the eastern town defences prior to building extension. The earliest phase of the Roman defences, dated elsewhere to *c* AD 75, was not present; the late 2nd century rampart was found to overlay several phases of earlier Roman domestic settlement,

This settlement, in turn, overlaid a plough-scarred natural chalk sub-soil consisting of solifluction debris produced under periglacial conditions. While a common enough occurrence on the lower slopes of chalk downs, this deposit was somewhat unexpected at this site just a few metres from the main channel of the Itchen. There was a complete absence of alluvial deposits.

More recently, the large-scale excavation at the Brooks (BR88) has added substantially to our understanding of the topography of the valley bottom in the 1st century AD. The varying character of natural in this area of Winchester had previously been noted (Qualmann, 1991); and its elucidation was one of the major objectives of the Brooks excavation (BR88). Full excavation of the area alongside Middle Brook Street revealed the natural subsoil to consist of a distinctive alluvial chalk deposit which sloped away quite steeply to the north and especially to the west where it was overlaid by alluvial silts (Fig 5).

Similar chalky deposits have been recognised at Lower Brook Street (LBS71), where referred to as 'chalky alluvial brash' (Biddle 1975, 295), and at a series of recent excavations in the High Street (HS86, HS89 and SQ88). Most notably, at 118 High Street (HS89), the subsoil was again found to slope away to the west.

The emerging picture is one of a series of 'islands' of chalky brash separated by braided channels of the river Itchen, as first suggested for the area of Wolvesey Palace though in a post-Roman context (Biddle 1987, 239). The course of the main channel in the 1st century AD is not known, but the evidence from St Mary Magdalen Almshouses (MA80) and Colebrook Street (CS86) shows that it is likely to have been considerably farther west than today. These chalk islands appear to have been relatively well-drained and, while apparently not occupied in the pre-Roman period, were chosen for early Roman settlement.

The structure of such settlements, if any existed, is not known. Access must have been difficult across the low-lying areas, and a programme of drainage and in-filling was needed if this area was to become part of a permanent settlement.

Evidence for major Roman drainage work has now been identified at the Brooks site, where a substantial channel, more than 4m wide and 2m deep, was cut through the chalk island to drain the area to the west (Fig 6). It seems likely that these works were related to the initial construction of an east-west street, which formed part of the grid of the fully developed Roman town (Scobie *et al,* 1991).

Street plan

Where evidence is available, the elements of the main Roman street grid at Winchester have been dated to about AD 100. The plan seems to be most regular in the area around the forum, where insulae about 125m square are recorded.

The 1971 excavation in Lower Brook Street (LBS71) revealed a street which ran on an alignment different to this main grid. Possibly as part of a re-organisation here late in the Flavian period, this new street was established on the line of the earlier, possibly military, ditches. While entirely possible that this was determined by local factors without wider implications (Biddle 1975, 298), it is interesting to consider discoveries from three more recent sites which seem to demonstrate a similar plan.

At Hyde Abbey (HA72), some 225m north of the town defences a road serving a suburban settlement was excavated (Qualmann forthcoming, Roman Surburbs). From the 15.5m length of road recorded, the alignment appears to be at right angles to that at LBS71. In 1927-29 Ward-Evans recorded a Roman road on a construction site in Hyde Church Lane *(Hunts Chron* 21.12.29). While no detailed plans of this discovery survive, it may have been a continuation of the HA72 road to the west. Apparently parallel to HA was a 9m length of road excavated at VR79 some 150m to the south but just about 80m outside the North Gate. Here road metalling ran just outside the bank and ditch which bounded the 1st century AD cemetery.

A third observation of road metalling on an alignment apparently parallel to HA72 and VR79, at a construction site in St Peter's Street (SPS78) must be treated with caution because of the small area recorded under rescue conditions. Nevertheless, these sites present the intriguing possibility of an alternative framework in the northern part of the town and in the adjacent suburb to that provided by the grid

around the forum (Fig 7). Possibly related are the long-distance Silchester road (Margary 1955, Route 42a), before its final change of alignment to approach the North Gate 600m north of Winchester, and the minor road which was found to run through the entrance of Oram's Arbour enclosure towards the West Gate (Biddle 1968, 256).

While it has been noted above that the discoveries at both LBS71 and VR79 seem to take their alignment from early, probably pre-Flavian features, neither the date of this possible 'alternative street grid' nor its place in the development of Roman Winchester can yet be stated with certainty. Where absolute dating is available, the earliest street surfaces appear to be no earlier than about AD 100. Yet at two sites, HA72 and OA67, the earliest metalling was found to overlie a slight hollow-way implying a previous period of use. However, it is clear that the roadways at HA72, OA67 and LBS71 all continued in use during the 3rd and 4th centuries; only at VR79 did the road go out of use - here overlaid by a timber structure in the mid 4th century. At present, any simple division into 'early' and late' street systems can not be supported.

Summary

The main objective of the previous section has been to show how recent work has contributed to our evolving understanding of Roman Winchester. While advances have most certainly occurred, it would be wrong to think that anything approaching a full picture of the development of Roman Winchester is yet available. This is partly because the sample, even after fifty years of excavation and recording, is still small; but also because much of the work undertaken still awaits complete post-excavation analysis. A summary of some current thoughts, especially about the early development of the Roman settlement, may nevertheless be useful.

Though probably not densely occupied at the time of the Claudian invasion, the Gram's Arbour enclosure was located at a junction of routeways which were in active use during the first half of the 1st century AD. The area was important to communications and possibly as a centre for trade and other activities.

While little new evidence has recently emerged to clarify the nature of the earliest Roman settlement, the close mesh between at least some elements of the Iron Age enclosure and the defences of *c* 75 AD (Biddle 1983) implies that the location remained important.

A growing understanding of the topography of the contemporary valley floor has led to two tentative conclusions: that one or more 'chalk islands' existed and were occupied early in the Roman period; and that the main channel of the river Itchen flowed on a course at least partly farther west than today

Considerable engineering operations were apparently undertaken, by about AD 100, to provide a well-drained site in the valley bottom. This work may have been related to, perhaps was essential to, the construction of the forum and basilica, and the establishment of a street grid. It is possible that diversion of part of the main channel of the river and the construction of a complete circuit of defences to the west of the new channel, were the final stages in the development of the plan of *Venta Belgurum*, completed by the end of the 2nd century,

The existence of an 'alternative grid' for parts of the settlement cannot be adequately explained by reference to the sequence described above, nor can dates easily be ascribed to either its origin or its main periods of use. It is, however, possible that an early river channel, running northeast to southwest just to the east of the LBS71 site, provided the 'parent' alignment seen in widely separated parts of Roman Winchester.

The accumulated evidence of fifty years investigation has taken our understanding of Roman Winchester far beyond that of the 1920s and 30s. But it would be wrong to conclude this paper without mentioning two themes in the work of Sidney Ward-Evans which remain relevant today

In his dedication to rescue recording, Ward-Evans demonstrated a respect for the archaeological resource and a willingness to respond to unexpected opportunities. In his keeness to communicate his discoveries, Ward-Evans attempted not simply to amuse and entertain, but to involve the public in their past.

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9 *Verulamium* since the Wheelers

Rosalind Niblett

Pre-Roman *Verulamium*

Fifty four years ago the then Dr and Mrs Wheeler published the report on their excavations in St Albans in the early 1930s, under the title *Verulamium - a Belgic and Two Roman Cities*, a report which itself became a monument in the history of Romano-British studies, (Wheeler & Wheeler 1936). The Belgic City of the Wheelers' title referred to Prae Wood, which lies a short distance west of the Roman town, in the Gorhambury estate. Although the Wheelers never suggested that Prae Wood comprised the entire pre-Roman settlement, it was seen as the nucleus of that settlement, with the main occupation area in region 1, and livestock enclosures in region 2, (Wheeler & Wheeler 1936, 11).

Extensive work, particularly in the 1970s and early 1980s, has drastically altered this view, through a combination of excavation, aerial survey and field walking. The results are summarised on Figure 1 (based on work by Chris Saunders), which illustrates the current view of pre-Roman *Verlamion*. Prae Wood, far from being the nucleus of pre-Roman settlement, can now be seen as simply part of an extensive complex, covering not only the higher ground south of *Verulamium*, but extending down into the valley floor and across to the other side of the river Ver.

A few features on Figure 1 are post-conquest but others are certainly pre-Roman, and while some are obviously territorial or defensive, many must simply represent trackways, stockyards and fields. Indeed it is possible to detect individual farmsteads, not only at Prae Wood, Childwickbury and Gorhambury, but also at Bedmond Lane and Lindum Place, (marked BL and LP respectively on Fig 1).

Three cemeteries are known, ranging in size from 140 cremations (King Harry Lane), to 5 *(Verulamium,* Insula XXVIII); fragments of moulds for casting coin blanks, indicative of high status metal working, have been recorded on 9 sites on both sides of the river, while it has been suggested that a possible ditched enclosure beneath the *Forum* may have been a focus of settlement in the pre-Roman period - possibly a religious or chieftain's centre (Frere 1983, 3).

Fifty years ago pre-Roman *Verulamium* was seen as a proto-urban centre occupying a clearing in dense woodland, (Wheeler & Wheeler 1936, 13-4), but analysis of river-laid deposits from beneath the mid 1st century levels on the north-west side of *Verulamium* has shown a remarkably low incidence of tree pollen and instead high levels of grass and cereal pollen. This implies that at some time prior to the construction of the Claudian defences on the north side of *Verulamium,* extensive areas upstream had already been cleared of forest and were being farmed, indicating in turn a well populated countryside (Dimbleby 1978, 112-5). This is a situation that fits well with the pattern of widespread occupation in the valleys of the rivers Ver and Lea as shown on Figure 2, which shows the distribution of sites in the *Verulamium* region that were occupied in the first half of the 1st century AD.

The major problem as far as pre-Roman *Verlamion* is concerned, however, is not so much one of extent as of date. The Wheelers dated the initial occupation of *Verlamion* to the time of Tasciovanus, starting perhaps in roughly 10 BC (Wheeler & Wheeler 1936, 9). This seemed reasonable in 1936, and indeed still seems reasonable - after all Tasciovanus minted coins with the mint mark *Ver, Verl,* and *Verlamio,* which presumably refers to a centre somewhere in the vicinity of *Verulamium*. The coins of Tasciovanus actually found in the *Verulamium* region however are comparatively few in number and late in the series (Haselgrove 1988, 27-8). In addition, not only the coins but the imported pottery both at Prae Wood and in the King Harry Lane cemetery suggest that it was not until after the reign of Tasciovanus, shortly before AD 20, that *Verlamion* became a major centre of wealth and trade. Until the second quarter of the 1st century AD the wealthiest local centres seem to have been at Braughing and Puckeridge (Partridge 1981, and Potter & Trow 1988), Welwyn, (Stead 1967) and Baldock (Stead & Rigby 1986), suggesting that the main areas of occupation lay along the route through the Chilterns to the midland plain provided by the river Lea (Fig 3).

The massive dykes north and west of *Verulamium* are surely indications of social and economic importance, but the evidence of expensive imports in graves suggest that this was not achieved much before c AD 15-20. Assuming that the *Verlamio* of the coins of Tasciovanus was in the same general area as *Verulamium,* it may be simply that the focus of the late 1st century BC settlement has not yet been found, although Gorhambury, with evidence of the social importance of its occupants is a possible contender (Neal *et al* 1990, 89-92).

Much of the evidence shown on Figure 1 comes to us courtesy of the fact that the area lies in agricultural land, and so is picked up either during field

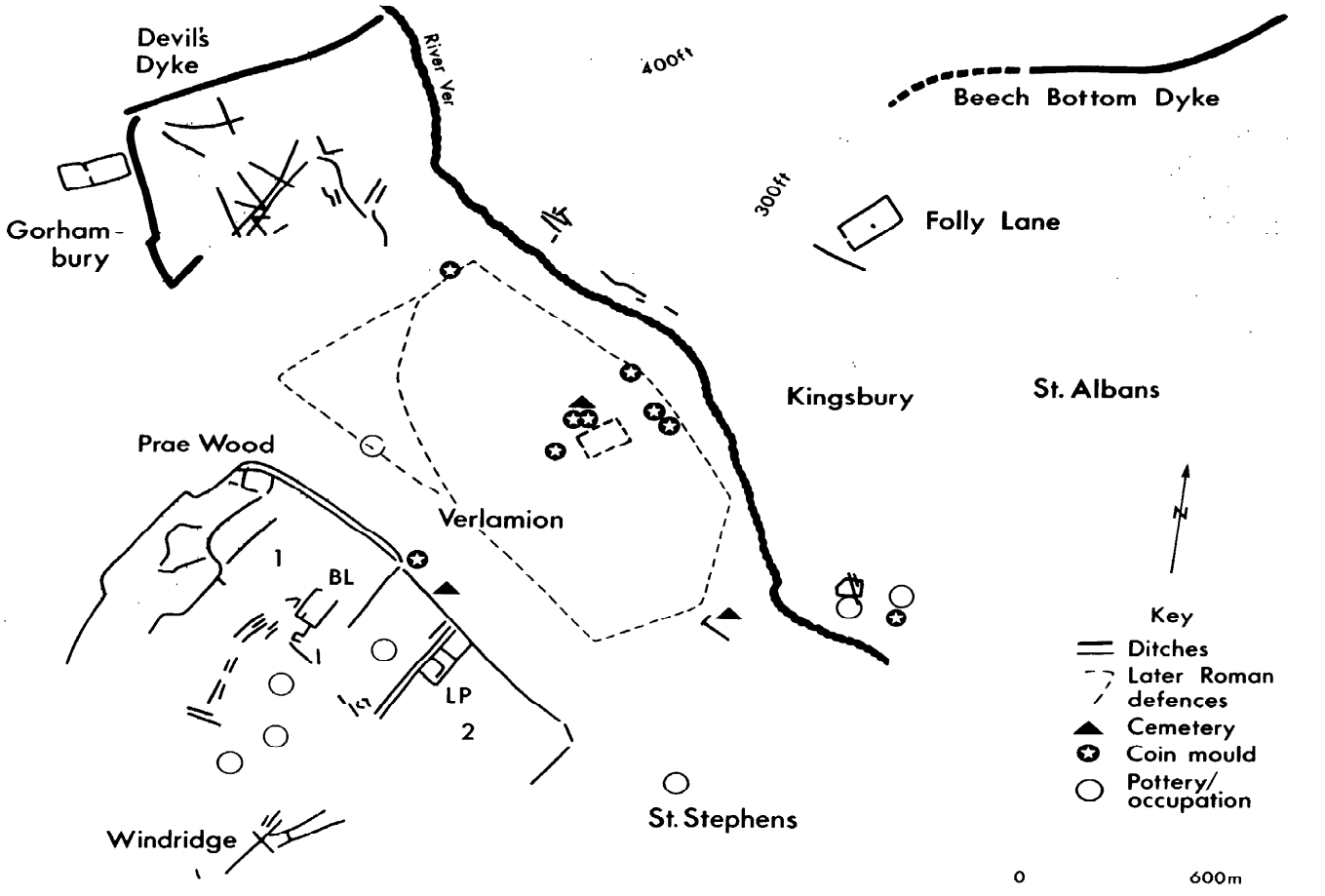

Figure 1 *Pre-Roman* Verlamion, *the current view*

walking or through aerial survey - areas covered by modern St Albans in particular would not reveal this sort of evidence. It is clear, however, that a very large area is involved, virtually anywhere within which may have been occupied. Equally, the centre or focus within this area, if any existed, may have lain in different places at different times. A focus of settlement in the 1st century BC may have been quite different to one in the 1st century AD. It would take the discovery of just one rich cemetery or occupation site to change our view of local late Iron Age settlement radically.

Nevertheless it is frustrating to realise that when the Wheelers started work *in Verulamium* in 1930 the precise location of the *Verlamio* of the coins of Tasciovanus was unknown, and 60 years later we still know relatively little of *Verlamio* before c AD 20.

The Conquest Period

Before discussing the early Roman town, it may be helpful to summarise what precisely the Wheelers meant by two Roman Cities.

The picture that emerged as a result of the Wheelers' excavations was that of a modest settlement near the ford in the river Ver that was destroyed in the Boudiccan revolt. This initial settlement was replaced by the first of the two Roman Cities which the Wheelers suggested was centred somewhere north of the forum and which had its floruit in the late 1st and early 2nd centuries; this town was defended by the Fosse earthwork. The second Roman city which was centred on the *Forum* under St Michaels church and vicarage, was defended by the town walls. The Wheelers dated both the town walls and the forum to between about AD 125 and 150. This town they suggested suffered a serious decline in the 3rd century, saw a brief revival around AD 300, and gradually declined in the course of the 4th century.

This picture of a Flavian town defended by the Fosse, superseded by a Hadrianic town with walls and *Forum,* served as a model for the history of *Verulamium* until the important series of excavations by Sheppard Frere between 1955 and 1961 in the area north of the *Forum.*

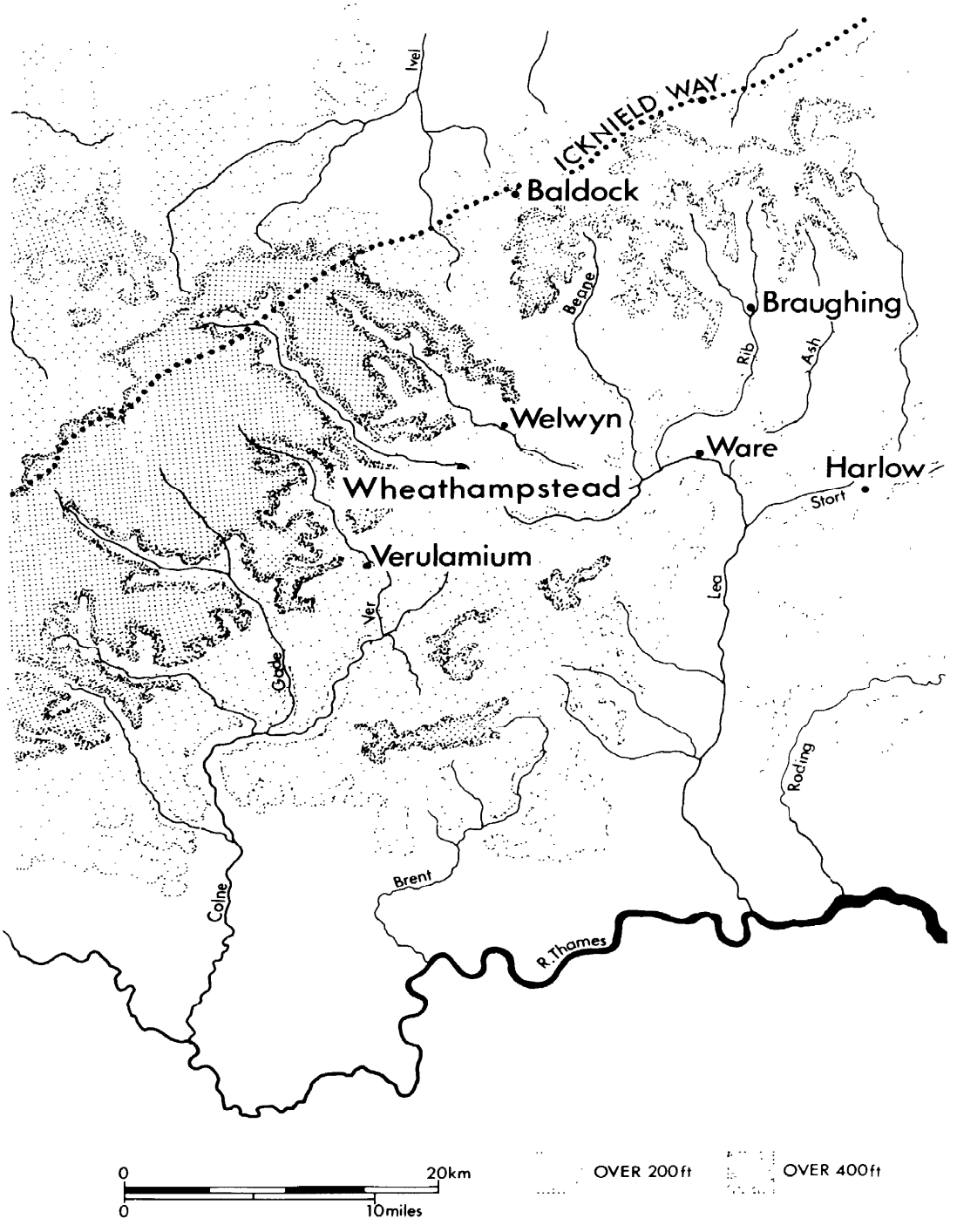

Figure 2 Pre-Roman settlement in the Verulamium *region*

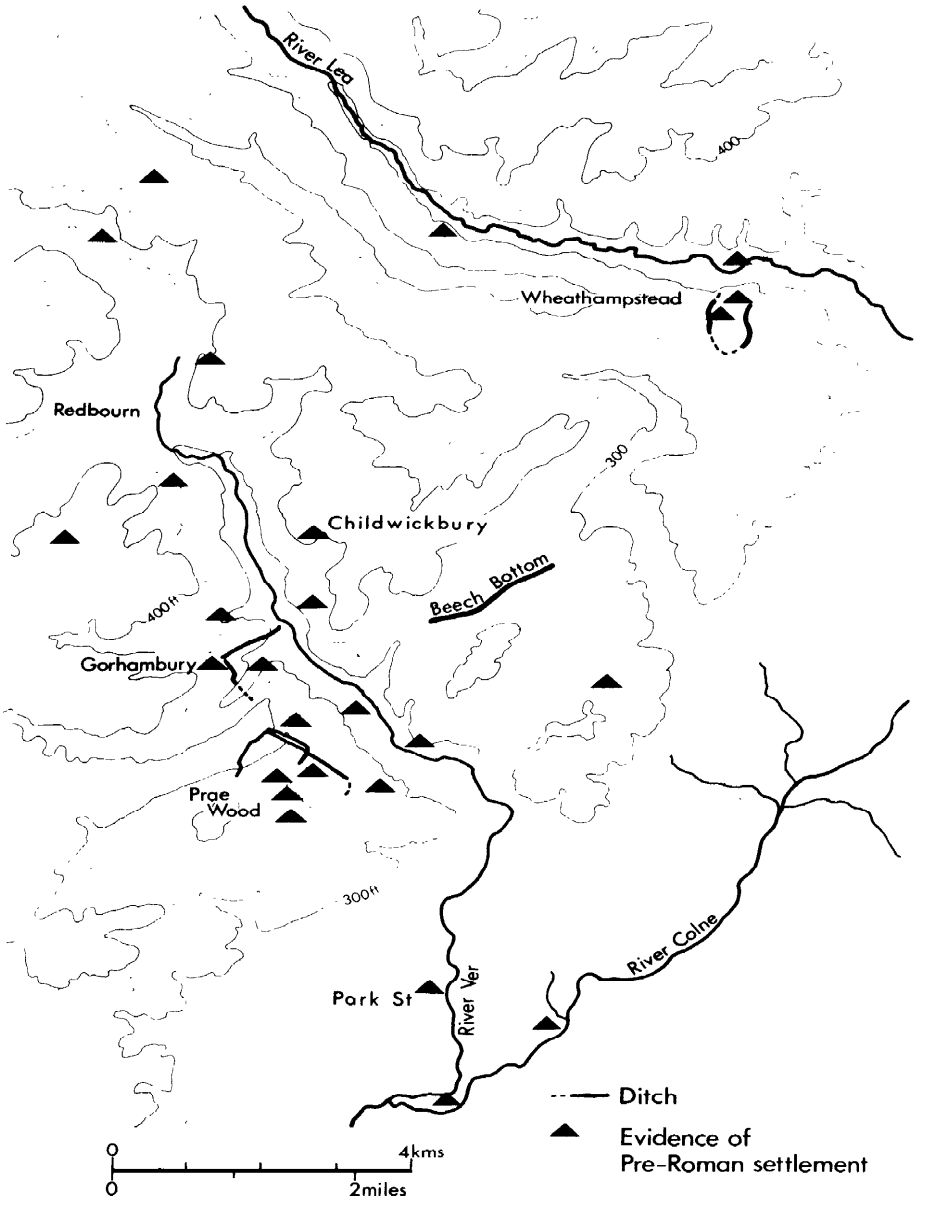

Figure 3 Major Late pre-Roman Iron Age settlements

Three major discoveries in particular led to drastic reassessments. These were; first the recognition in 1955 of a previously unsuspected 1st century earthwork defence - the 1955 ditch - which enclosed an area of 100 acres with the *Forum* occupying a central position within it; secondly the discovery of the *Forum* inscription, which provided a date of AD 79 for the completion of the *basilica*, and proved that from the Flavian period onwards the *forum* had stood squarely in the centre of the area later enclosed by the town walls; and thirdly, the demonstration in 1957 by Sheppard Frere that the town walls dated not to the Hadrianic period, but to the late 3rd century, c AD 275.

These three advances demolished the Wheelers' model of two Roman Cities that had held good for 20 years. It was replaced by a picture of a town that steadily expanded from the mid 1st century, albeit with periodic setbacks, such as the Boudiccan revolt and the early Antonine Fire that destroyed large tracts of the town in about AD 155. The Fosse earthwork fitted into this new scheme as an intermediate and unfinished earthwork defence, started sometime after the early 2nd century when the 1955 ditch was falling into disuse, and pre-dating the construction of the town walls in the second half of the 3rd century (Frere 1964 and 1983, l-25).

Today, 60 years after the Wheelers first started digging here, and 35 years on from Frere's first *Verulamium* season, not surprisingly the picture has changed yet again.

What is immediately clear from the plan of pre-Roman *Verulamium* is that at the time of the conquest the area of the Roman town was not what a modern developer would hail as a green field site. On the contrary there was very widespread occupation of varying sorts scattered over much of the area, although of course there were also wide tracts of open land as well. All the same it is quite conceivable that pre-existing occupation influenced the layout of the Roman town.

Any discussion of early *Verulamium* has to consider the possible whereabouts of a conquest period fort. Richard Reece has pointed to the fact that the quantity of Claudian coins from *Verulamium* is very small, and not sufficient to indicate the presence of a fort here for any length of time (Reece 1984, 14-5). Nevertheless finds like the large portion of a military *lorica* found in 1964 in a mid 1st century rubbish pit a short distance outside the south gate of the town, certainly indicate the existence of a fort somewhere at *Verulamium*, although positive traces of it are proving elusive. The fort has generally been thought to lie in the area roughly between the *Forum* and the river. In 1956 Frere found a Claudian turf rampart beneath the 3rd century town defences on the north-east side of Insula XXVII (Frere 1983, 37-44) and in 1966 Dr Anthony excavated a timber gateway associated with this bank (Anthony 1970). It has often been suggested that the bank formed part of the fort defences, but unfortunately the plan of the gateway bears no resemblance to that of any known fort gate, added to which no Claudian structures that can be shown to be military have yet been found in the area behind the turf rampart. The distribution within the area of the Roman town of conquest period remains is shown on Figure 4, and although these certainly suggest a concentration of occupation in the centre of the later Roman town, and in particular around the mid 1st century ditched enclosure beneath the Roman *Forum*, it must be stressed that there is no sign of any structure or remains of any sort in this area that can be recognised as military. The items of military equipment were found as rubbish in later deposits, often associated with metalworking debris in late 1st or 2nd century contexts, where they were clearly being used as scrap.

The course of Watling Street, cutting across the town street grid and apparently aiming for the *forum* area, has often been taken as evidence for an early fort in this area. Excavations in Insula XIII in 1987 have shown however that Watling Street never crossed this insula, even in the pre-Flavian period, (Frere 1988, 455). Instead the corner of the insula had been occupied from the mid 1st century onwards by timber buildings aligned on the main street grid of the town. So Watling Street, rather than being aligned on the fort, seems rather to be aiming for an early settlement which already in the mid 1st century reached as far south as Insula XIII.

In 1990 there is still no clear evidence for a fort under *Verulamium* and now that it is clear that a much larger area was occupied in the pre-conquest period than was previously thought, the time has come to look for the fort elsewhere.

A possible site lies a kilometre south east of the Roman town at Windridge Farm, (Fig 1) which was clearly an area occupied in the Tiberian period. Field walking over several years has resulted in an impressive collection of late pre-Roman pottery and metalwork, together with early Roman material, including over 100 lead sling shots (Greep 1987, 183-4). This concentration of pre-Roman material alongside Roman military equipment, must raise the question of a conquest period fort in the vicinity

Finally it is just possible that a conquest period fort stood for a short time on the other side of the river on the slightly higher ground at Kingsbury, a site that commands the ford in the Ver and overlooks that settlement next to it (Fig 4). Kingsbury was an area defended in the late Saxon period, and Chris Saunders has drawn my attention to a ditch excavated in 1982, which apparently enclosed the flat ground on the top of the hill. A handful of pottery of generally early Roman date was found unstratified on the site, but the ditch itself, although completely silted up, was sterile. At the time of the excavation the ditch, which had been re-cut, was dated to the late Saxon and Medieval period (information from the excavator, C Saunders). It is quite possible however that the original ditch was Roman and part of an early defence, and that the re-cut was part of the Saxon work, while the medieval town ditch in this part of St Albans ran somewhere else altogether.

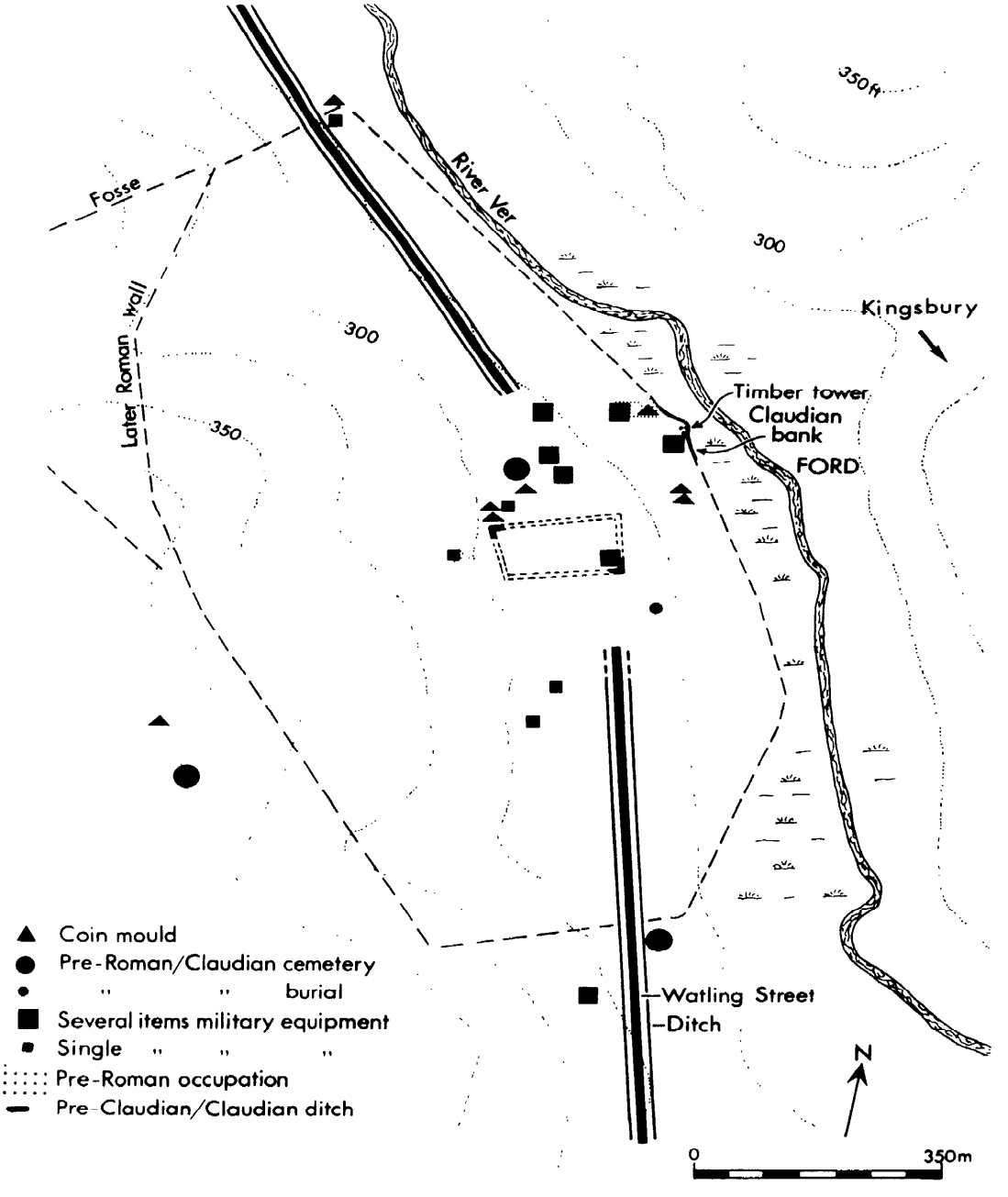

Figure 4 Verulamium *in the conquest period*

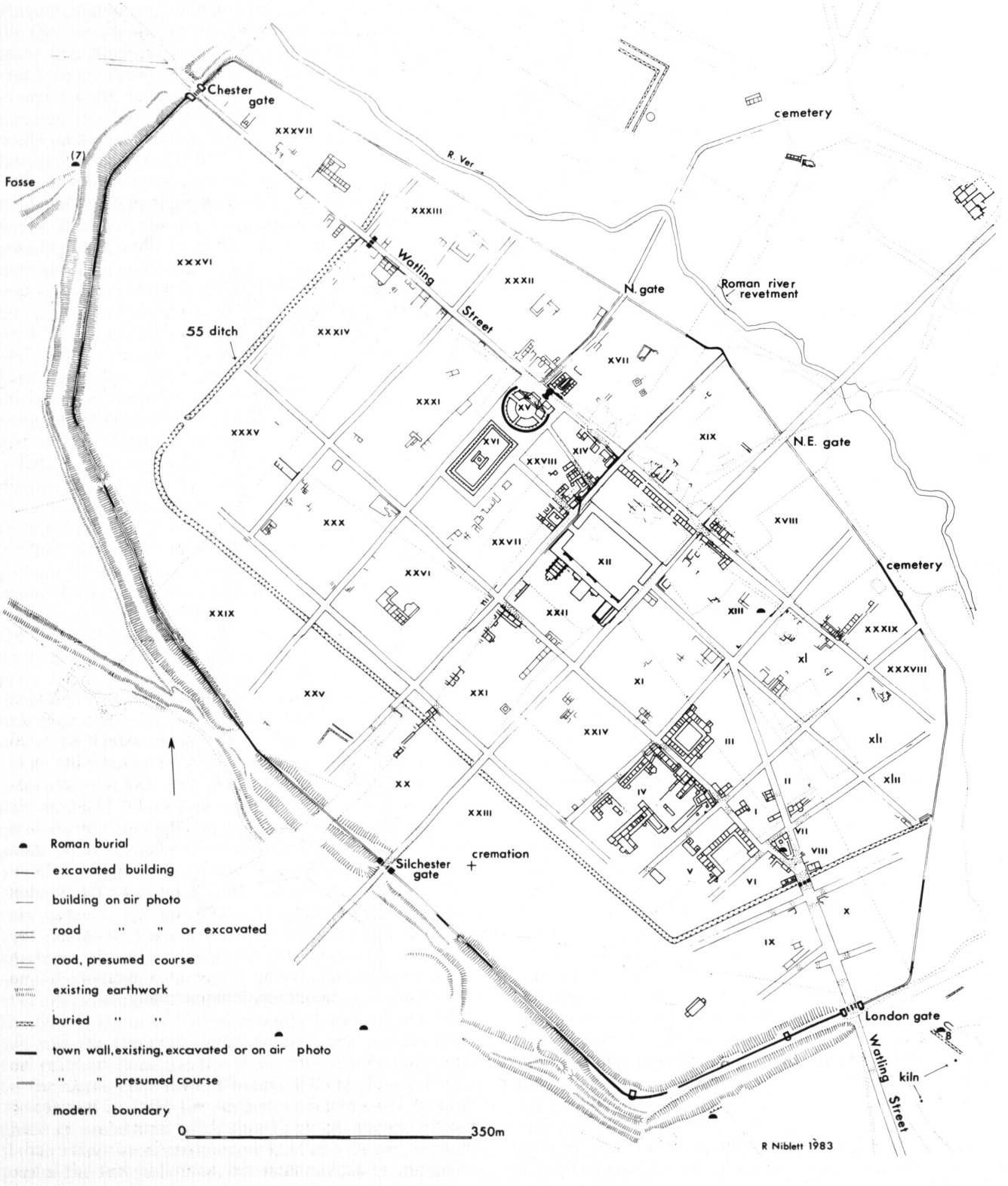

Figure 5 Plan of Roman Verulamium

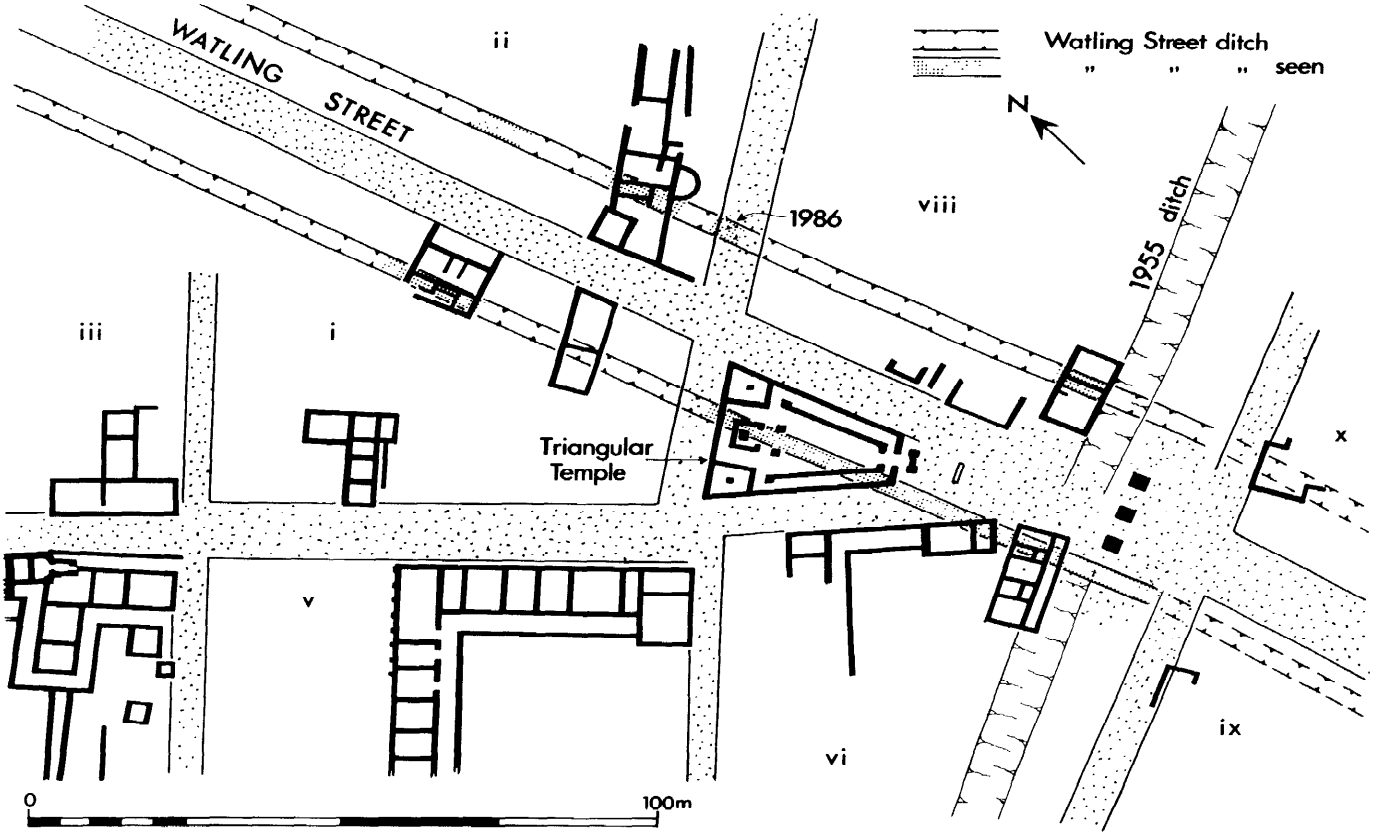

Figure 6 The Watling Street ditches in Insula I-X.

Since this paper was written, new evidence has come to light suggesting that any conquest period fort at *Verulamium* is likely to have been relatively small and short-lived. Excavations in 1992 revealed a remarkable burial 700m east of the Roman town, at Folly Lane (Fig 1). The burial lay at the centre of a rectilinear ditched enclosure measuring 115 x 190m and produced unusually rich grave goods, as well as evidence for elaborate funerary rituals (Niblett 1992). The burial dates from the early Roman period *(c* AD50) and was clearly that of an individual of exceptional importance - presumably a local leader. The fact that he was able to maintain his status and by implication his wealth, suggests that some kind of *modus vivendi* had been established between the ruling native faction and the Roman authorities - a state of affairs that may well have obviated the need for a long-established Roman fort at *Verulamium*.

The Early Roman Town

In 1964 Sheppard Frere published a plan of pre-Boudiccan *Verulamium* as it appeared in 1961, as a result of his series of excavations (Frere 1964 and 1983, Fig 4). This plan shows a town covering an area of 105 acres, with an extensive street grid and defended by the 1955 ditch. When this plan was published it was thought that much of the area enclosed by the 1955 ditch was occupied in the mid 1st century. The insulae of the north-west side of the *Forum*, Insulae XIV; XVII, XIX, XIII, XXII and XXVIII, have all been shown by excavation to have been occupied at the time, and most of these sites show signs of burning, presumably during the Boudiccan revolt. On the other hand, evidence for pre-Flavian occupation in Insulae I-X (the insulae excavated by the Wheelers), merely consists of the occurrence of Claudian coins mentioned in the Wheelers' report (Fig 5).

The Wheelers published their report very quickly after the end of the excavations, and in doing so were forced to omit much of the detailed evidence - most of the pottery, the sections and nearly all the details on the earlier levels that underlay the 2nd century masonry houses that they excavated. Nevertheless on all the sites excavated by the Wheelers earlier levels were examined and scrupulously recorded in notebooks, which are now preserved in the

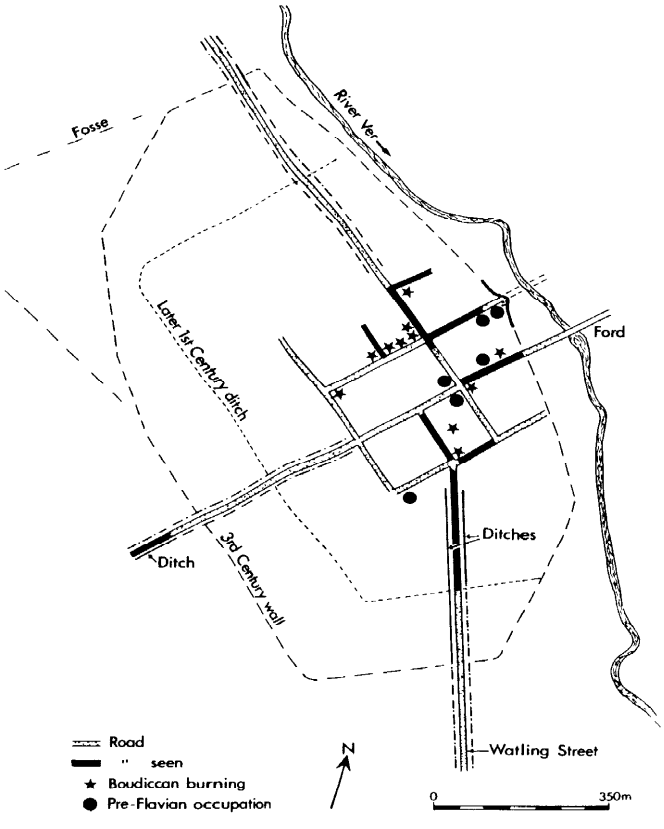

Figure 7 *Pre-Flavian* Verulamium

Verulamium Museum. The finds from these levels were all labelled with the page number of the notebook and the layer number, so it is quite a simple, though tedious and time-consuming task, to tie all the pottery and coins in the museum back to their appropriate contexts. It is a tribute both to the meticulous methods pioneered by the Wheelers, and the care of successive directors of the *Verulamium* Museum, that after a lapse of over 50 years, the 'Wheeler archive' is still easily intelligible and can be used to cast new light on the history of Roman *Verulamium*.

One of the results of research into the Wheeler archive has been the demonstration that there is very little pre-Flavian material from *Verulamium* south of Insula III, and that in particular the Claudian coins are nearly all survivals in later levels associated with later pottery. The only exception was material derived from the ditch flanking Watling Street.

In 1933 the Wheelers excavated the triangular temple in Insula VII, and beneath it they found a ditch running along the south west side of Watling Street. In fact this ditch had been found first in 1930 but had been mistaken for a number of large pits. A large ditch, on one side of Watling Street only, always looked anomalous and a close study of the Wheeler notebooks for 1930 and 1933 suggested that there was a corresponding ditch on the other side of the street, which had been described by the Wheelers as a number of sunken pit dwellings. When these were put on a plan they could be seen to form a band, exactly the same distance from the street as the ditch on the south-west side, and indicating the existence of a corresponding ditch on the north-east side of Watling Street. A trench dug in the south corner of Insula II in 1986 to test this hypothesis revealed a ditch of precisely the expected dimensions and date on precisely the expected position (Fig 6 and Frere 1987, 329).

The Watling Street ditches are not normal road side ditches, but much more substantial affairs, over a metre deep, nearly 3m. wide, and set 10m. away from the edge of the street, so that the whole arrangement - street, berm, and flanking ditches - occupied a tract 28m. across. This is clearly not the sort of arrangement suited for a town street, but it is not unknown for rural roads, outside towns. It follows that when the Watling Street ditches were dug in the mid 1st century, this area lay outside the town, and that the 1955 ditch was not contemplated. So instead of defending the pre-Boudiccan town, it now seems more likely that the 1955 ditch was dug in the Flavian period, when the Watling Street ditches in this area were in the process of being filled in. Incidentally this may have been the time when *Verulamium* became a *municipium,* with the *Forum/Badica* complex recently completed and the town extended and defended. Tacitus writing in AD 98 would still be correct in describing it as a *municipium,* a status which is rather difficult to match with the small and unimposing pre-Flavian settlement.

The current view of pre-Flavian *Verulamium* is shown in Fig 7. The rectilinear street grid had been laid out in the late 40s or 50s (Frere 1988, 455), but it covered an area of only about 50 acres - half the size previously thought, and much more in keeping with the size of other contemporary towns. Structures were generally built of timber and daub, although there is evidence for two masonry buildings (Saunders 1982b, 203 and Frere 1975, 258). Most of the pre-Flavian occupation sites show signs of destruction by fire, although not all seem to have been destroyed in this way. Whether or not this settlement had defences is unknown, but it is possible that the turf rampart and timber gate in Insula XVII in fact defended the Claudio/Neronian town, rather than a fort, which, as has already been suggested, may lie elsewhere.

The 2nd century town

The Wheelers dated the main wave of building to the second quarter of the 2nd century, relying very largely on coin evidence; after all Roman pottery studies were still in their infancy in 1936. Recent

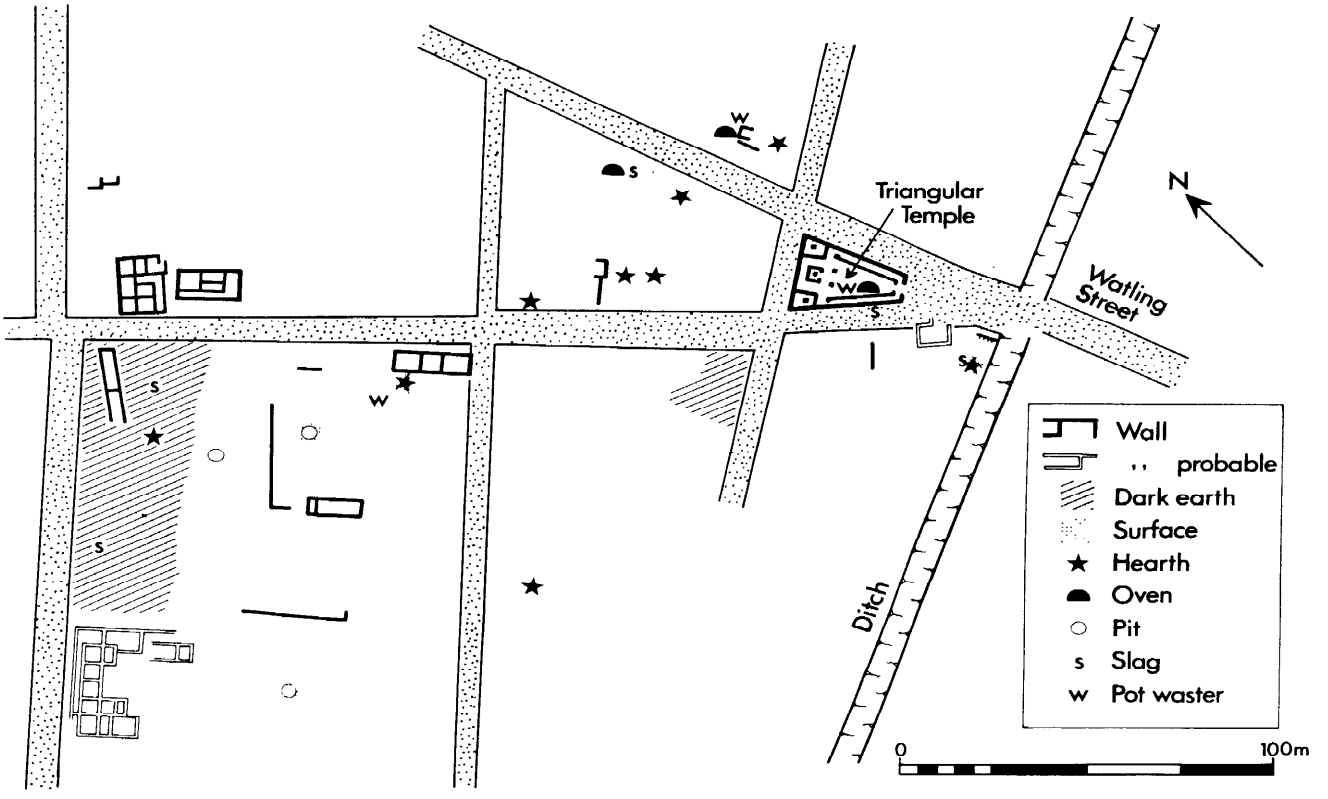

Figure 8 Occupation predating the Antonine Fire of Insulae I-VIII

examination of the pottery from the layers beneath the buildings however, has shown that on the whole the Wheelers dated these houses rather too early, and that in fact they were not built before the later 2nd century. On the other hand many of these buildings can be shown to have replaced earlier structures, most but not all of them timber built, and some of them destroyed by the fire of *c* AD 155 which destroyed large tracts of *Verulamium* (Niblett 1987a, 59).

Figure 8 summarises the pattern of occupation in the early 2nd century in this same area, as it appears today. The buildings are all recorded on plans, sections or notes in the Wheelers' records. Interesting points are the number of small masonry buildings, combined with large 'garden walls', alongside widespread traces of industry, particularly in the form of metalworking slag. A recurring feature found in excavations in *Verulamium* is evidence of widespread industrial activity in the later 1st and 2nd centuries, giving the impression of almost frenzied activity over much of the town. After the fire of AD 155 this industry seems to drop off, possibly being replaced by more agriculturally based activities,

The Wheelers' method of tackling the excavation of *Verulamium* was to dispatch groups of navvies to dig long narrow trenches which were then expanded when buildings were encountered. This method of excavating, the only one feasible in the early 1930s, had the inevitable drawback that timber buildings in particular may not always have been detected. It is possible that some of the apparently isolated hearths were in reality either inside, or adjacent to, fairly ephemeral structures. On the other hand it is impossible to believe that the clay, gravel or chalk floors of such buildings would not have been recognised by the Wheelers, together with the accompanying concentrations of tile and building debris, so although the open areas shown on Figure 8 may not have been as empty as they appear, nevertheless there were probably significant expanses of land in this part of the town which were never built over.

Some of the open areas were surfaced with clay or cobbles on which layers of silt accumulated, but it is becoming increasingly clear that by the first part of the 2nd century there were areas covered by dark, humic soil - presumably deriving from cultivated areas - close to the centre of *Verulamium*. The north corner of Insula IV, occupied in the late Antonine period by a masonry house, was extensively trenched by the Wheelers in 1933. It is apparent from their sections that the building occupied land which had previously been unoccupied and probably cultivated, while an extensive layer of humus and

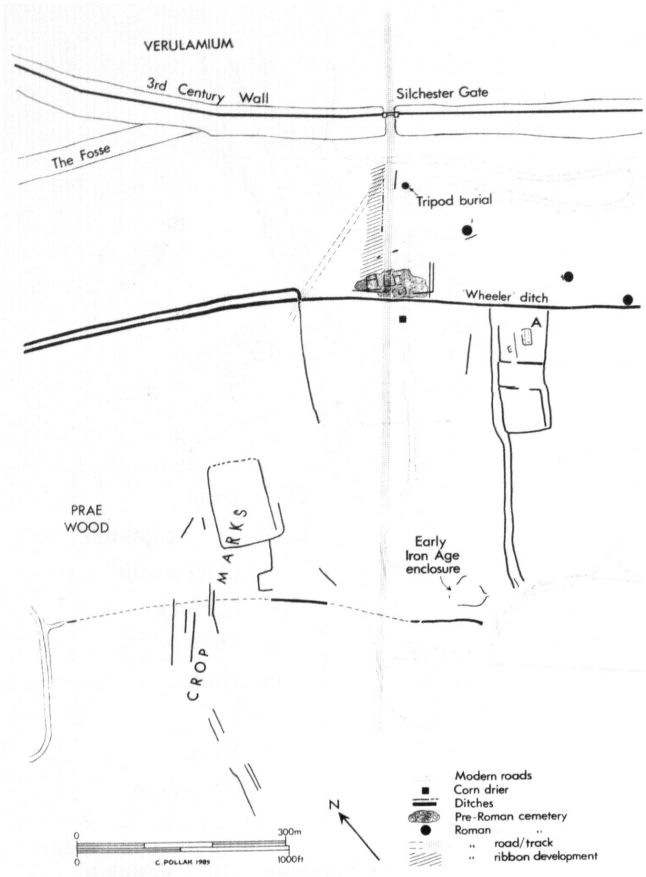

Figure 9 Pre-Roman and Roman features south of the Silchester Gate

domestic rubbish is recorded beneath building 2 in Insula V. A similar situation has been encountered more recently during rescue excavation in Insula XIX where a mid 1st century structure was overlain by a thick layer of humic soil which was not surfaced until nearly a century later (Niblett forthcoming).

Further away from the town centre the area between the 1955 ditch and the town walls never seems to have been densely occupied (Hinchliffe 1978, 29, and Niblett 1987b, 22). North of the *forum* field walking and aerial survey have revealed ribbon development along Watling Street, but away from the street frontage signs of occupation are sparse. Similarly tree planting in the 1930s in the southern part of *Verulamium*, between Insula XXIII and IX, revealed no sign of occupation, although the excavation of nearly 200 tree holes here in 1938 was watched by A W Lowther. Timber buildings would not be easily detected by aerial photography or geophysics, but traces of occupation in the form of tile and pottery should have shown up in field walking or tree planting.

This low density of building does not necessarily mean a low population, so much as a large area available. Ribbon development along the main roads outside the town is well attested. Occupation along the Silchester road from the mid 1st to mid 3rd century has been published recently (Stead 1989, 5-79), and widespread industrial occupation outside the London Gate was sampled in the 1960s (Anthony 1968). More recently Paul McCullough has recorded signs of 2nd century occupation 30m outside the North gate, while further buildings are known on the other side of the river including a late 2nd century bath house (Frere 1975, 258, Fig 12)

So just as in the pre-Roman period occupation sprawled over a wide area, so in the 2nd and 3rd centuries, while there may have been a busy commercial, administrative and perhaps social centre round the *Forum*, away from this central area, occupation was sparser and interspersed with open areas, presumably occupied by gardens, orchards and perhaps small holdings. Indeed the inhabitants of *Verulamium* must have continued to be very much concerned with agriculture. Not only are there several villas within a few kilometres of the town (for instance Park Street, Gorhambury, and the unexcavated winged corridor villa known from aerial photography at Childwickbury), but there is clear evidence for farming even closer to *Verulamium*, farming which presumably was based in the town itself. Some of the trackways and enclosures shown in Figure 9, outside the Silchester Gate were certainly of Roman date, as is the corn dryer and building A. At Prae Wood itself there is a large quantity of Roman tiles and later Roman pottery, too much to be explained simply in terms of the contents of household middens brought out to manure the fields, and it is likely that some, at least, of the numerous banks and ditches in the wood date from the Roman period (Hunn 1980, 28). It is worth noting the subsidiary Roman road that branches off the main road 25m outside the Silchester Gate, to run in the direction of Prae Wood (Fig 9).

In this context the building excavated in 1986-8 in the south corner of Insula XIII, one of the central insulae of *Verulamium*, is of particular interest. The building was re-built several times between the mid 1st and 4th centuries, although apparently always on very similar lines. At all phases it was timber built, although in the 3rd and 4th centuries some of the outer walls had flint and mortar footings. It was burnt down during the Antonine fire of the mid 2nd century at which time it incorporated two small granaries with quantities of burnt wheat, as well as numerous hearths and ovens, including one possibly used for dyeing, and one for metalworking. Clearly a number of processes were going on in this building, but the similarity of its plan to that of a small villa, is very striking (Fig 10).

Late Roman *Verulamium*

A pattern of occupation originating in the 1st century and based on well-spaced buildings interspersed with open areas persisted throughout the Roman period. Figure 11 shows houses excavated by the Wheelers in Insulae I-X and dated by them to the 4th century, by which time certain areas pre-

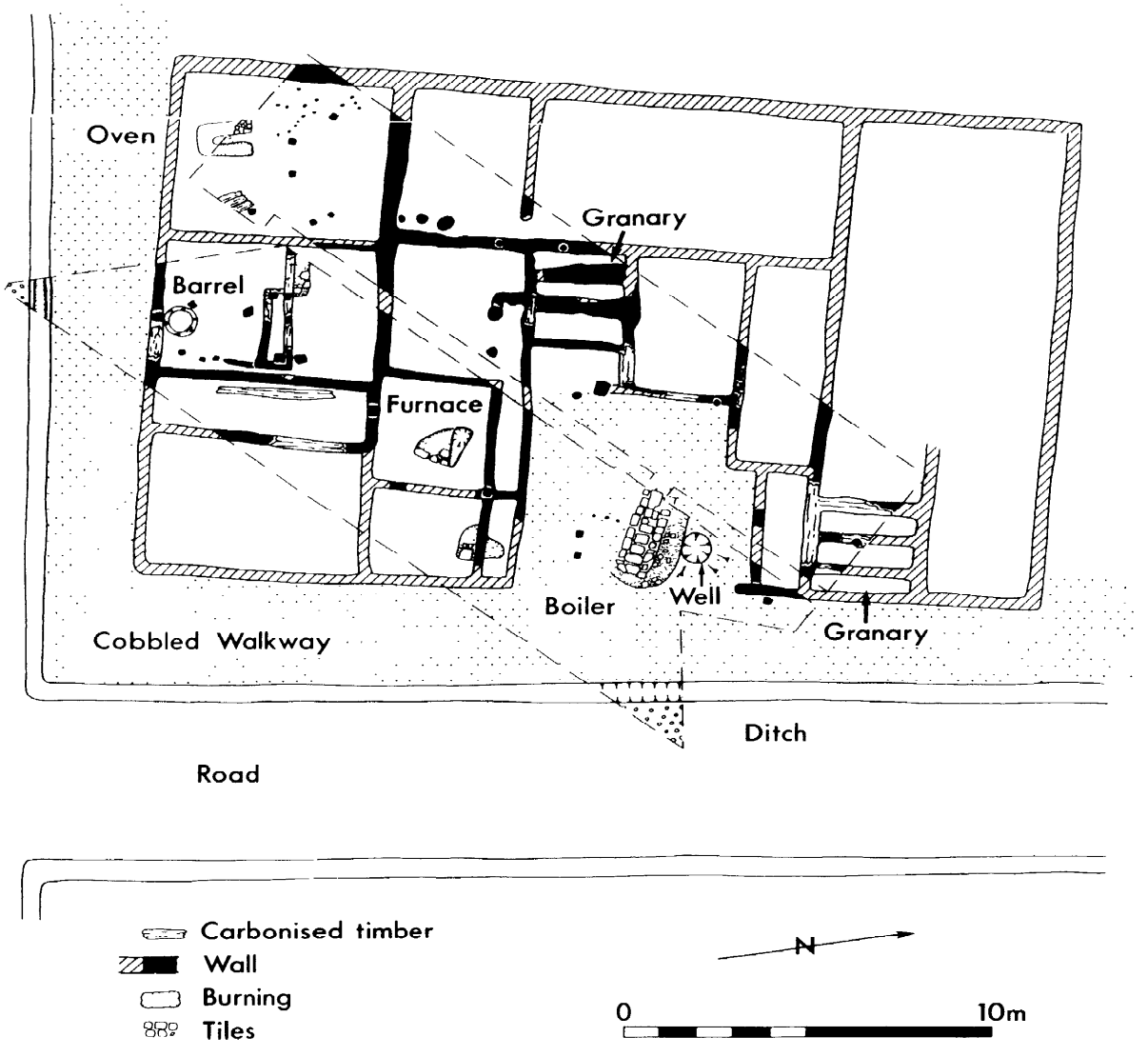

Figure 10 Insula XIII, building 5 c AD I55

viously occupied, had gone out of use (compare Figs 8 and 11). The hatched areas on Figure 11 denote deposits described in the Wheeler notebooks as 'black greasy loam' or 'black clayey soil' lying on the late 2nd and 3rd century floors - with the bases of walls rising up through the dark earth. This sounds very like the black earth layer known from London and elsewhere which resulted from gardening or agricultural activities.

There is increasing evidence for occupation over much of *Verulamium* continuing into the 5th century. The evidence from Insula XXVII, next to the *Forum*, is well known (Frere 1983, 212-24). Here a large, masonry house, built in *c* AD 380, was first adapted to accommodate a corn dryer, and was later replaced by a large masonry barn which was in turn cut through by a new timber water pipe bringing water to the central part of the town at some time well into the 5th century.

Less dramatic evidence for continued occupation into the 5th century comes from various parts of the town. In Insula XIX, opposite the east corner of the *Basilica*, the floor for a timber building was terraced into a previously open, cobbled area at some time after AD 380. Lying on this surface was a quantity of late Roman material, including a sherd of amphora, imported from the east Mediterranean (Williams forthcoming). In Insula II, two phases of timber build-

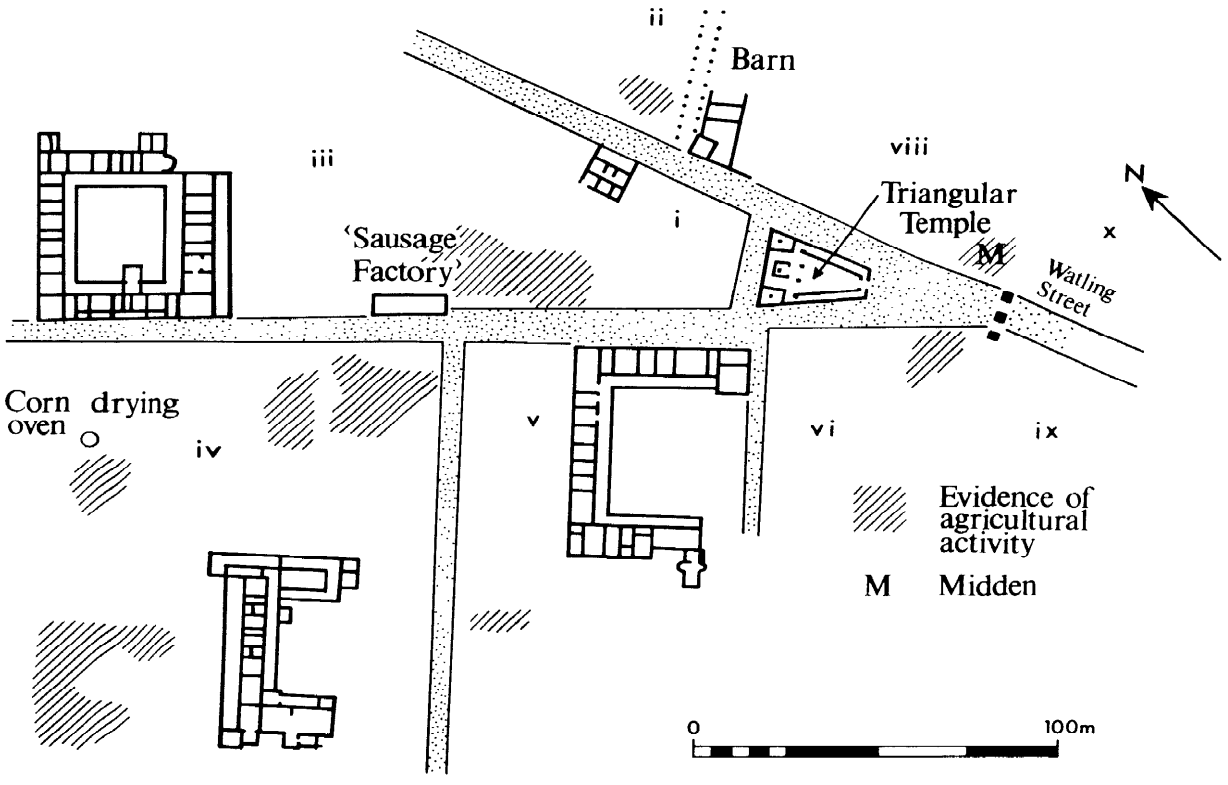

Figure 11 4th century buildings, Insulae I-X

ings were cut through the latest surface of Watling Street at a time when pottery and coins had apparently gone out of use, presumably at some point in the 5th century (Frere 1987, 329). At a similar date the latest Roman building in the west corner of Insula XVIII was re-floored with rough clay surfaces associated with a metal working hearth (Frere 1977, 401).

As a result of the research into the Wheeler archives, nearly all the late Roman coins from the excavations can now be tied back to their original contexts instead of being treated (as in the original report), as a global total. It can now be demonstrated that the bulk of the 4th century coins from the Wheeler excavations came from the triangular temple in Insula VII or from a large midden 20m east of it in Insula VIII. 4th century coins from elsewhere in the Wheeler excavations are extremely rare, particularly issues after 330; later 4th century coin loss on the sites excavated by Frere is also below average for late Romano-British town sites in general (Reece 1983, 17).

When the coins from the triangular temple and the midden outside it are compared with the pattern of coin loss in the Insula XVI temple and the theatre, which, in the later 4th century was used as a dump for rubbish (presumably from the temple), the pattern can be seen to be very similar (Fig 12). In other words it appears that in the later 4th century, although there was widespread occupation in the town, very few coins were lost on domestic occupation sites, particularly in the areas excavated by the Wheelers, where we have already noted there is evidence for large areas of un-built-up land. By contrast, coins were lost in large numbers in two of the town's temples and in the areas of rubbish tipping adjacent to them. Furthermore, people were dropping coins in these places right down to the time when fresh coinage stopped coming into the country The coins from the Gorhambury estate collection show a similar pattern to those from the temple and theatre (Reece 1984, 15-17). In fact the Gorhambury coins, which on the whole have been picked up over the years in the course of farming, are probably derived from either the temple *or* its *temenos,* or from the theatre. Both lie in the estate, which, apart from ribbon development along Watling Street, appears never to have been densely built up other than in the temple/theatre area (see Fig 5).

The current picture of late Roman *Verulamium* is therefore one of widespread occupation, increasingly in timber buildings, amidst areas of open, cultivated land; a trend that had already started in the 1st century. At the end of the 4th century pottery and

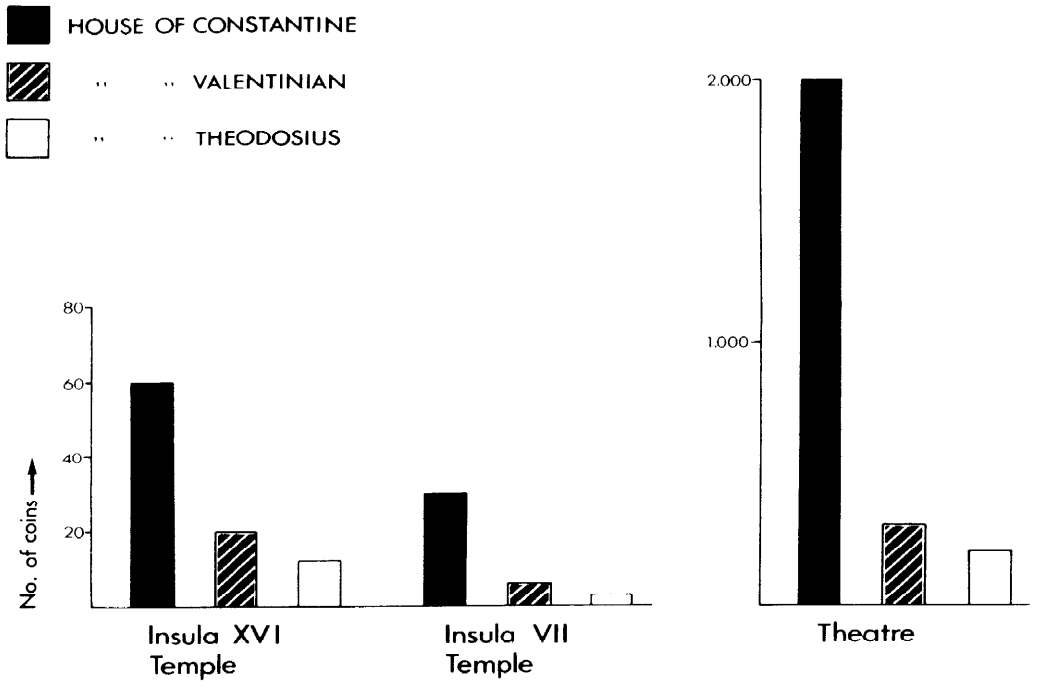

Figure 12 Late Roman coins from Insulae VII, XVI and the theatre

coinage went out of use, but the standard of living was not necessarily particularly low, witness the new water pipe in Insula XXVII and the imported amphora from Insula XIX. One of the most interesting aspects of the late town is the continued use of two temples, the triangular temple apparently dedicated to Cybele, and the Insula XVI temple which was probably associated with the worship of Mercury, no doubt in one of his Celtic manifestations, and was renovated at some time after AD 379. Since by the end of the 4th century *Verulamium* was an established centre of Christianity (Biddle 1986, 14; Thomas 1981, 104), the question arises as to what the temples were being used for. It is possible that they were simply rubbish tips, where the latest Roman coins were dumped along with other household rubbish at a time when coinage was going out of use. It is possible that both temples had been converted to Christian churches; this is a possibility that was put forward many years ago for the Insula XVI temple on the basis of an apparent change of alignment (Lowther 1937; Lewis 1966, 144), though there is not even this slight evidence for such a use for the triangular temple. Or is it possible that in the early 5th century there were indeed two Roman cities; the Christian community, whose focus was possibly already shifting towards the Shrine of St Alban on the other side of the river Ver, and a pagan community perhaps still drawing support from the town and surrounding countryside, and continuing to use the old temples of *Verulamium?*

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10 Roman Carmarthen *Heather James*

Carmarthen was recognised by antiquaries as the site of Ptolemy's *Maridounon* and the Antonine Itinerary's *Moridunum* from the late 16th century onwards. Casual finds of Roman material in the 18th and 19th centuries, in particular from the eastern end of the town, confirmed the location, but there was uncertainty as to the nature of the settlement. Was it a small town, as Haverfield percipiently guessed in 1910, or a military site occupied down to the 4th century? (James, T A, 1980). The remains of an amphitheatre east of the town were not recognised until 1944. Professor Barri Jones's work in the late 1960s and early 1970s showed that a defended Roman town indeed lay beneath the eastern end of modern Carmarthen and suggested that an earlier fort might have been located to the west. Both these hypotheses have been amplified and substantiated by a series of rescue excavations carried out by Dyfed Archaeological Trust between 1976 and 1989, to be published as a single volume (James, H, forthcoming).

The particular interest of *Moridunum* lies in its outlying position in a lightly Romanized region. The establishment, development and persistence of urban life in such an environment is a telling indication of the effectiveness of Roman provincial administration. The town may have been 'at the end of the line' in marketing terms. The study of pottery therefore, and other mass produced goods, from the town demonstrates the marketing range of different wares both early and late and their possible redistribution within Demetic territory. The region was largely aceramic in the late Iron Age and local products do not therefore blur the picture.

The site of the Roman town was known in the Middle Ages as Old Carmarthen, separately administered from the adjacent Norman plantation of New Carmarthen which overlies the site of the Roman fort. Both settlements were sited on a long, narrow, fluvio-glacially deposited gravel and boulder clay ridge between higher ground to the north and the flood plain of the River Towy to the south. The nearest outcrops of even moderate quality building stone are across the valley or downstream of the town. This undoubtedly restricted the construction of stone buildings and the production of inscriptions - only one is known from the town. Furthermore the Roman town defences of the town and the buildings within it were extensively robbed in the middle ages and later. The situation contrasts markedly with Caerwent.

The aerial photograph (Fig 1) shows the extent of the modern built up area. It will be seen that the modern street pattern has fossilized the line of the defended perimeter of the Roman town. Only the northern half of the town retains any large open spaces; the residential development in the southern half dates mainly from the late 19th century. But the continuous, built-up frontage along Priory Street through the central area of the Roman town has earlier origins. This long period of occupation over the centre of the Roman town has tended to lower and flatten off the ground level whilst a considerable rise in levels over the gardens to the rear of Priory Street has better sealed and preserved Roman levels. Not only therefore are opportunities, even on a modest scale, unlikely to occur to investigate central public buildings, but also their sites are likely to be poorly preserved.

As the plan in Figure 2 shows, excavations to date have been sited away from the centre. An estimated 5% of the total internal area of 13.2 ha has been investigated to date: a small sample, as in many other Romano-British towns. Nevertheless area excavations on the edges of the town have had certain advantages: they have allowed an assessment to be made of the changing density and character of occupation and an opportunity to recover parts of the street plan. In the absence of data from public buildings other than the ampbitheatre, or of epigraphic evidence, it is the existence of a planned, g-ridded street layout which will indicate the status of *Moridunum* as a *civitas* capital of the Demetae. This short paper will concentrate on the street plan and the large scale excavations between 1980 and 1984 in gardens to the rear of nos 105-111 Priory Street to assess the status and function of the town.

A range of buildings from 2nd to 4th century date in timber, timber and stone and wholly stone built are known from excavations to date. The earliest is a temple, partly exposed in the south-east corner of the large Priory Street site. It had, unfortunately, been extensively robbed out in the post-medieval period. In plan it was of normal Romano-Celtic type: a square enclosure with a inner *cella*, some 23m^2 overall. The building was of timber on dwarf stone walls. There was no satisfactory dating evidence for the construction of the temple, but it could be shown that it was out of use and being robbed for stone by the mid 2nd century.

Its stratigraphic relationship to the newly constructed streets of the Priory Street was tenuous but divergent alignments and indirect dating evidence suggest that the temple pre-dated the development of the area to the north-west. Peter Webster, in his report on samian from the Priory Street site, (in James, forthcoming) has postulated a flourishing Trajanic occupation in the vicinity, in view of the large quantities of such material residual in the

early to mid 2nd century occupation accompanying the newly constructed streets. The temple will have been set back somewhat from the main axial street of the town which is assumed to have been the earliest element of the grid.

The date, and more especially the location, of the temple raises interesting questions, at present unanswered, about the nature and siting of any *vicus* settlement. The *vici attached* to other forts in West Wales - Trawscoed, Llanio and Llandovery - were, as normal, sited close to the fort gates. But no such evidence has yet been recovered from the admittedly limited excavations to date on the heavily built over site of the fort at Carmarthen, sited west of the later town. A sequence of enclosures, overlain by a possible leat, of late 1st century/early 2nd century date were excavated on the 1978 Church Street site, in the south west comer of the later town. They seemed more characteristic of a fort annexe than a *vicus.* It is possible therefore, that far from the *civitas* capital developing from a well established *vicus* settlement, there was a virtual re-foundation in *c* 120 AD.

The plan (Fig 2) shows the known elements of the street grid to date; its further elucidation must remain a priority in archaeological work in the town. Field work and aerial photography continues to add detail to the course of the Roman road approaching *Moridunum* down the Towy valley from the east (James & James 1986). This originated as a military road from the fort at Llandovery to that at Carmarthen sited at the lowest bridging point of the Towy, accessible on the tide from the sea seven miles distant. The site was also at the junction of an approach road from the south-east from the fort at Loughor. Any grid of streets therefore in the town will have been laid off the main approach road to the fort, which seems partly to underlie the modern Priory Street, (the *via regalis* in the medieval Priory cartulary). Priory Street was undoubtedly deflected

Figure 1 Aerial view of Carmarthen from the west; the site of the Roman town is in the centre of the photograph (photo: T A James, Dyfed Archaeological Trust, 1985)

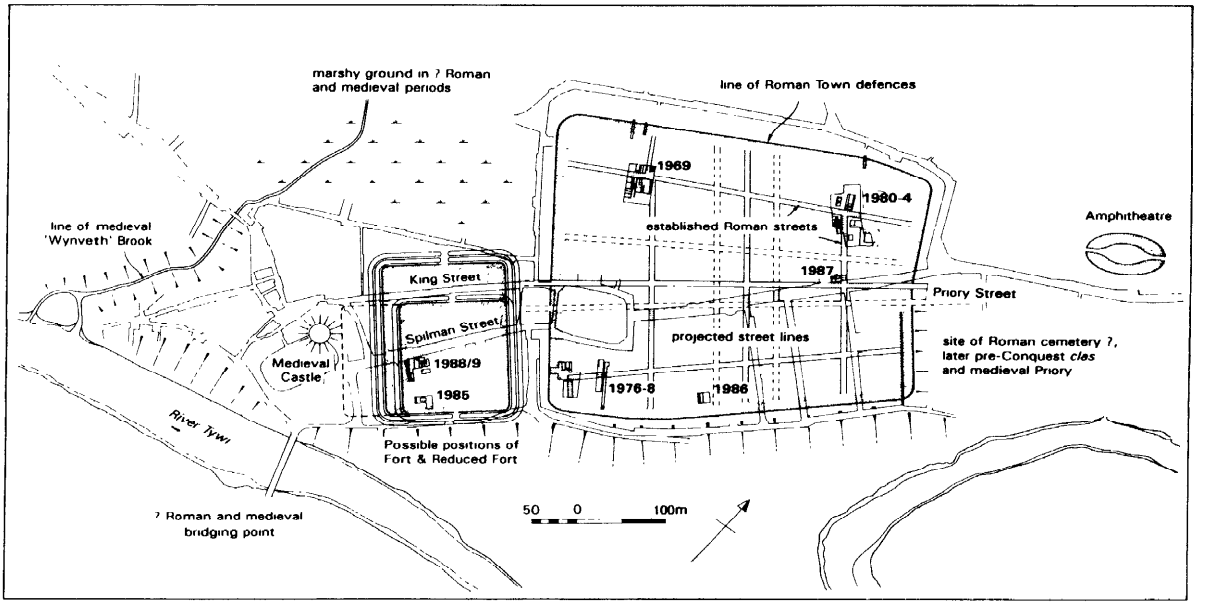

Figure 2 Plan of Carmarthen, showing the position of the Roman town (Old Carmarthen) and the medieval borough to the west (New Carmarthen), which overlies the site of the Roman Fort. Excavations sites indicated by date

from the line of the Roman road by the construction (pre-Norman?) of St Peter's Church near the westem boundary of the Roman town. Identification of earlier street surfaces below St Peter Street on the north side of the church probably indicates the Roman line which might thus continued westward below King Street.

Rescue excavations on the sites of nos 108-111 Priory Street in 1987, found, as expected, a side street leading off the main road. This street had previously been carefully excavated over a 50m length in area excavations in 1980-4 40m further north, where it had formed a 'T' junction with another east-west aligned street (Fig 3, Street 1). Careful stripping of both streets allowed all the different resurfacings and patchings to be recorded, which were not always recognizeable in section. It was possible to demonstrate that both streets were laid out at the same time, their primary surface being common to both. Although direct dating evidence was sparse, the street construction can be dated to the second quarter of the second century. Seven main phases of re-surfacing were identified, most of them common to both streets. It was also possible to isolate standard 'work lengths' along the streets by identifying junctions between horizontal layers which persisted in the same place throughout the resurfacings (Fig 3). It is clear that the streets continued to be resurfaced and maintained well into the fourth century when all but the most casual of occupation over the adjacent areas had ceased. The implication is that urban administration persisted well into the fourth century and occupation continued in other (central?) areas of the town.

Because a large area was excavated, the 1980-84 Priory Street site gives a complete picture of urban development and decline, relateable to the street sequences. Another interesting feature was the effect that street re-surfacing had on the mainly timber street frontage buildings. It would seem as though side drains were the responsibility of the individual property owner, and that one response to re-surfacing and the consequent rise in street levels, was to raise the surface levels in and around the buildings by constant dumping and re-building. One of the early 2nd century timber buildings on the Priory Street site was built at the same time as the streets were being surfaced. But over the remaining street frontage areas, although plots seem to have been marked out and fenced off, there were delays of varying lengths before the whole area 'filled up' in the second half of the second century. The whole site gives the impression of a planned layout and organized development after a slightly faltering start.

The east-west aligned street (Street 1) on the Priory Street site is undoubtedly the same as that bisecting Professor Barri Jones's 1969 site 200m to the north-west. A good parchmark of the street across a football field mid-way between the two excavation areas showed up in the dry summer of 1989. It is clear that street 1 does not lie exactly parallel to the central road through the town, and therefore street 2 joined it at an oblique angle. The reason for this is not yet known. On the southern side of the town a possible east-west street was recorded in the 1920s and cross streets noted in the sides of a gas mains trench cut down the length of Priory Street in 1988. The indications then are of

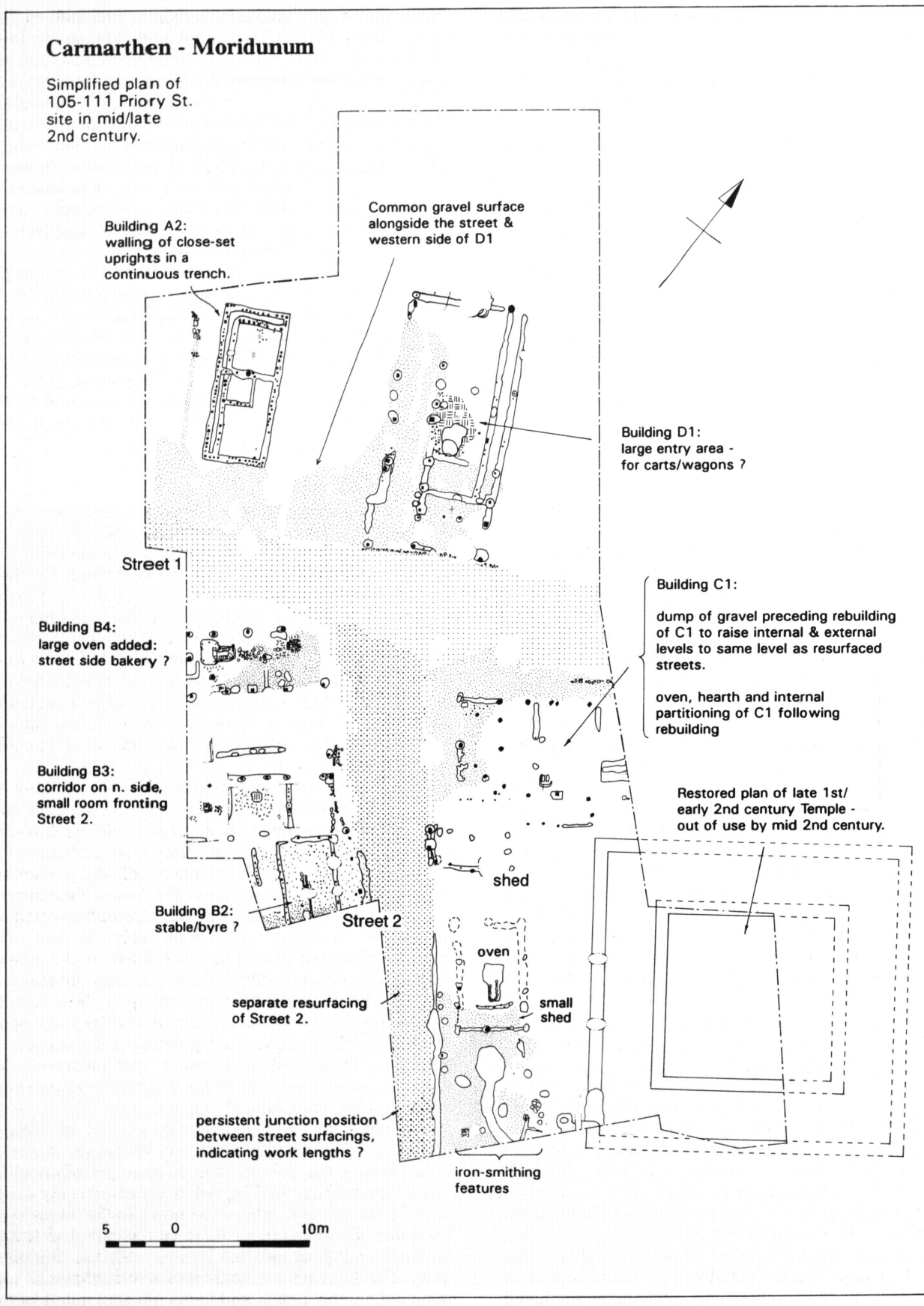

Figure 3 Simplified plan of 1980-84 excavations by Dyfed Archaeological Trust, to the rear of nos 105-11 Priory Street, showing the buildings of mid to late 2nd century date

the existence of a g-ridded street layout reminiscent of Caerwent.

Throughout the 2nd century there was a sequence of rectangular timber buildings, some short-lived, others persisting through the century fronting the two streets on the Priory street site. These were of varying size and plan, some of individual post-hole, others of post and trench construction. Increasing use was made of mass earth and clay (cob) walling, but there was no indication of the kind of linear development of such buildings by adding rooms and partitions, noted in London (Per-ring 1985). Some of the Carmarthen buildings seemed to be shops, with a room facing the street and a store behind, another, much larger, was more analogous to agricultural buildings having a large side entrance to take a cart or waggon. Three had, at different stages in their existence, large clay ovens built within them. On the north side of Street 1 the buildings seemed to be set within equally size narrow plots, whose boundaries persisted until the latest period of Roman occupation. To the south either side of Street 2, property units were of different sizes. On the eastern side of Street 1 the whole area contained within the excavation seemed to belong to the long-lived timber building, contemporary with the construction of the streets and set tightly in a street junction position.

South of this building was a small workshop which contained metal-working features. It was later reconstructed around a clay oven and then finally reverted to use as a smithy. Small-scale and short-lived iron-working activities characterized the Priory Street site throughout the Roman period. More often than not such activities - often evidenced by 'channel-hearths' - took place on vacant lots between building phases, with only the flimsiest of sheds as cover. Though unproveable the impression gained was that such iron working was more the activity of itinerants than resident craftsmen.

One of the most striking events in the archaeological record on the Priory Street site was a period of abandonment at the end of the 2nd century. All the timber buildings seem to have gone out of use at more or less the same time. They were not left derelict nor destroyed, but demolished and their sites cleared, and in some cases given over to cultivation. Early in the 3rd century a large part-stone building was constructed over the site of three of the timber buildings in an area west of Street 2 (Fig 4). This building - timber-framed on dwarf stone walls - had stone floors and hearths in the corner of its rooms and was much the most sophisticated Roman building on the whole Priory Street site. It was a long-lived structure, which underwent many changes. Initially it had a large nine-post granary on one side in a yard area fenced off from the street. Although integral with the construction of the main building, a wholly timber rectangular structure on its northern side seemed to have built for a separate purpose. The main house could not be entered from it, and it was sited at the street junction. If this had been intended as a shop or workshop, perhaps for separate lease, the venture failed for it soon went out of use. What had seemed earlier to have been a prime street corner position was never subsequently built upon.

Although other timber buildings were re-built in the 3rd and probably the early 4th centuries on the Priory Street site it was never as densely occupied as before. However, as noted above, the streets continued to be maintained and resurfaced throughout. A separate surfacing along its own frontage, incorporating a well-constructed drain provided a telling indication of the way in which the large third century house dominated the area.

Something of the same sequence of building types seems to have been present on Professor Barri Jones's site in St Peter's car park at the western end of Street 1. He recorded close-packed rectangular timber buildings on the northern side of the street some at least metal-working workshops. lb the south was a more imposing stone structure. The latest building there was a house of mid 4th century construction with hypocausted rooms and painted plaster decoration.

It is tempting to see the Priory Street sequence and probably that of the 1969 St Peter's site as a microcosm of changes in the character of the town as a whole: a move away from intensive artisan occupation to higher quality town residences. Such changes have been evidenced in many Roman towns in Britain. Can it be a coincidence that such changes at Carmarthen seem to date to the period of construction of the first phase earth and timber town defences? There is insufficient evidence to date to discern whether the construction of the defences preceded, or was a consequence of the hiatus in occupation and change in function of areas like Priory Street.

Excavations at Church Street in the south-west corner of the Roman town in 1978 certainly suggested the latter possibility. Here a timber building of late 2nd century construction was dismantled to make way for the clay bank of the defensive rampart. The newly enclosed area in the south-west corner of the Roman town was thereafter occupied intermittently and non-intensively A gravelled street which had extended from the east of the town across the Church Street sites turned southwards through 90 just short of the rampart line (though predating it) and was never remetalled. At some time in the 3rd or even early 4th century the former street corner served as the stance for a timber building, and another was built over the back of the second phase rampart.

The area of the defences excavated at Church Street in 1978 provided more information to add to that gained from Professor Jones's trenches along their northern line. The defences are closely comparable to those of other Roman towns in western Britain, of two phases, an initial earth and timber defence being remodelled by the addition of a stone face. The first phase bank was built wholly of clay, not of ditch spoil and wherever it has been exposed around the whole circuit of the defences has seemed homogenous. The clay was probably quarried from

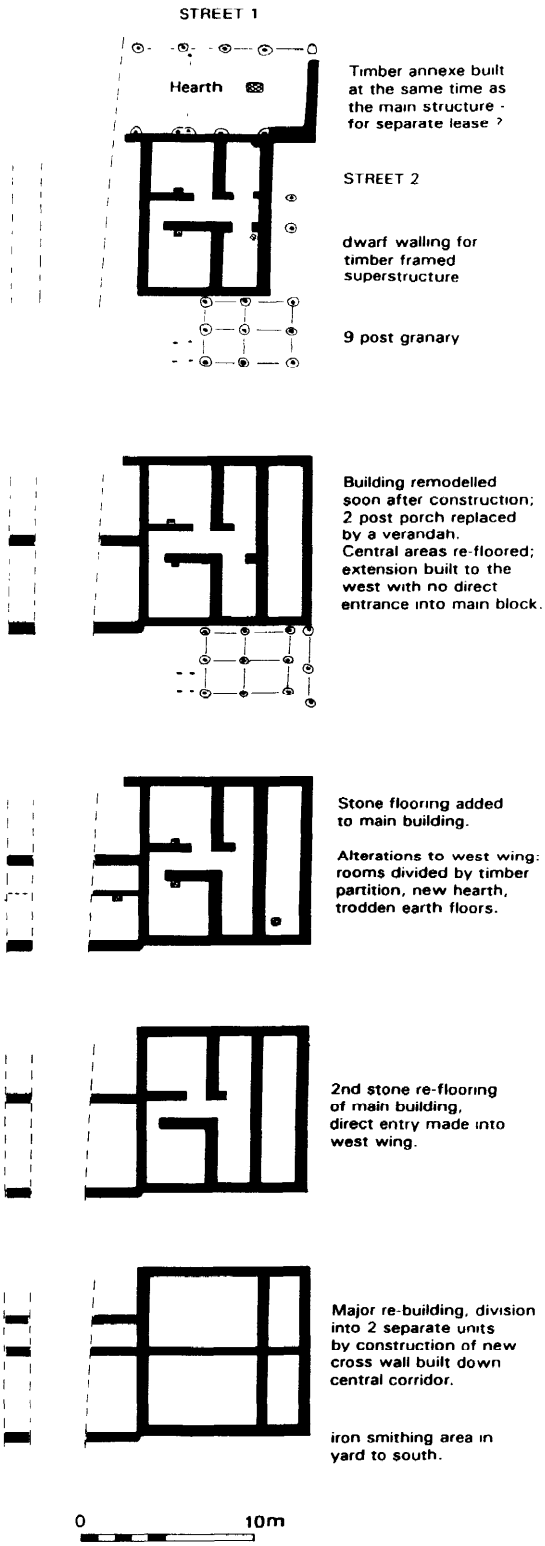

Figure 4 Block plans of 3rd/4th century building at Priory Street

the valley floor where clay pits below the town have been in use up until the early years of this century The construction, and even more the remodelling, of the defences cannot as yet be closely dated, even supposing they were built over a short period of time. The date rests on *termini post quos* of the late 2nd century. The front of the defences is almost totally built over so it is not known whether towers were added to the second phase wall. There is a 14th century reference to the walls and towers of Old Carmarthen. On the basis of the limited information at present available it seems as though the defences enclosed all the occupied areas, though clearly there were open spaces and gardens within the walls, certainly in the south-west corner of the town.

There is little evidence that *Moridunum* had much impact on surrounding areas in terms of trade, as imperfectly evidence by pottery and coins, or in changing lifestyles implicit in the adoption of Romanized building styles. The small group of Romanized settlements like Cwybrwyn and Trelissey in south-west Carmarthenshire may be a reflection of coastal trading which by-passed Carmarthen. However this does not mean that the town was not an effective administrative centre for the region. By analogy, the medieval Norman towns of lowland West Wales dominated their 'welshries' politically and economically without there being any great changes in settlement forms, or disruption of legal or inheritance systems or adoption of imported pottery implying changes in lifestyles. It has been suggested that late Iron Age/Romano-British west Wales was characterized by small-scale tenurial patterns, by a lack of centralized political control and by numerous small 'territories' (Williams 1989). *Moridunum* may have owed its success to being sited at the junction of a number of such territories. Taxation in such 'embedded' economies may have largely consisted of the collection, processing and redistribution of renders in kind.

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11 The 'small towns' of Roman Britain - the last fifty years

Barry C Burnham

In the context of excavation and research, the euphemistically called 'small towns' have lagged well behind their generally larger urban counterparts, which form the principal focus of this volume. Even as late as 1948, the CBA's *A Survey of Policy of* Field *Research* could record the lamentable state of our knowledge, first on p 64:

> The smaller towns which were not cantonal capitals are much less well understood . . (and) . . their explanation is one of the outstanding needs of the civil area.

And again on p 102:

> The investigation of the smaller townships is an . . . urgent requirement, for the very nature of these is not understood.

This is hardly surprising given the small-scale nature of most 19th and earlier 20th century excavations, while even the Wheelers, whose work at *Verulamium* did so much to influence later urban research, seem to have had little recognisable impact. It is the intention of this paper to explore how the position has changed over the last fifty years, and how this has contributed to our understanding of the small towns, by concentrating on three specific aspects:

(1) the history of exploration at the small towns
(2) a review of recent research in the field
(3) the most significant advances in our understanding

1 History of exploration

Figure 1 compiles the number of excavations at small towns recorded in the annual Roman Britain summaries, initially in the *Journal of Roman Stud*ies (from 1921-1969) and, since 1970, *in Britannia.* It demonstrates very clearly the changing pattern of exploration during the period with which we are

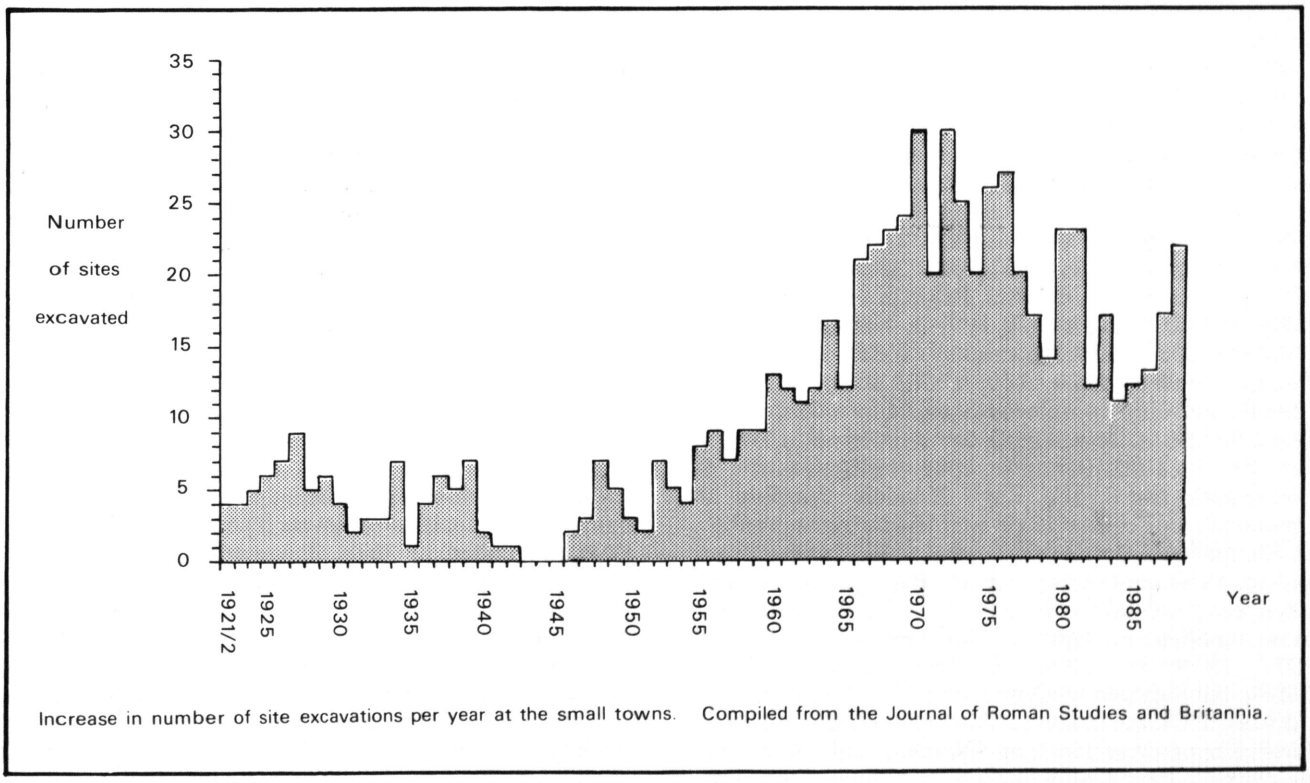

Figure 1

concerned. Before the 1940s only a handful of excavations are noted, all of them on a very small scale. Examples include the sections cut across the defences at Alchester (Hawkes 1927; Iliffe 1929; 1932) and Dorchester-on-Thames (Hogg & Stevens 1937), and the exploration of the internal buildings at Camerton (Wedlake 1958) and *Margidunum* (Oswald 1928; 1941).

Naturally such work was interrupted by the war, but even when activity was resumed in the later 1940s and 1950s, the emphasis remained essentially the same. Trenching continued to be the norm, as for example in the northern part of Great Chesterford (Brinson 1963), while defences continued to attract undue attention, as the excavations at Great Casterton (Corder 1951; 1954; 1961), Kenchester (Webster 1957; Heys & Thomas 1959; 1963) and Mildenhall (Thomas 1956; Annable 1960) make clear. This is the immediate context for the Ordnance Survey's attempt to classify Romano-British towns in 1956, which sought to distinguish the minor towns from lesser settlements by the presence/absence of defences. There were in addition several early attempts to investigate internal features, as for example at Heronbridge (Hartley 1952; 1954; Hartley & Kaine 1954), Holditch (Charlton 1961) and Springhead (Penn 1958; 1959; 1960), while important large-scale excavations were undertaken at Catterick in advance of road construction (Wacher 1971). These latter very much set the scene for what was to follow.

The 1960s saw a significant increase in the number of small towns being excavated, a trend which reached its peak in the early 1970s. This high level of activity has also been accompanied by an important shift away from small-scale trenching (especially on defences) to much larger open area excavations (principally on the internal features). It would be impossible here to mention all the sites in question, but some attempt to review the scope of recent work will help to highlight its variable character and intensity at individual small towns. At some sites, for instance, only limited rescue work has been undertaken, among them Alchester (Young 1975), Ancaster (Todd 1981), Braintree (Drury 1976; Eddy 1984), Irchester (eg Hall & Nickerson 1968; Windell 1984), *Margidunum* (Todd 1969) and Thorpe (Wilson 1964, 159; 1966, 203); at others specific building complexes have been examined in great detail, as for example the temple and bathing facilities at Bath (Cunliffe 1969; 1976; Cunliffe & Davenport 1985), the Bays Meadow complex at Droitwich (cf Freezer 1979) and the temples precinct at Springhead (Penn 1960; 1961; 1963; 1968); elsewhere, at an increasing number of sites, large areas have been examined in advance of redevelopment, most notably at Ashton (Hadman & Upex 1975; 1977; 1979; Dix 1983), Baldock (Stead & Rigby 1986), Hibaldstow (Smith 1987, 188-98), Neatham (Millett & Graham 1986), Towcester (Lambrick *et al* 1980; Brown *et al* 1983) and Wanborough (Anderson & Wacher 1980); and finally, at a variety of sites, longer term rescue work over several years has sampled a range of different locations in the plan, among them Alcester (Booth 1980; Frere 1986, 393-5), Braughing (eg Partridge 1978; 1980; 1981; Potter & Trow 1988), Carlisle (eg McCarthy 1984; McCarthy *et al* 1982), Godmanchester (Green, 1975; 1977), Ilchester (Leach 1982) and Staines (Crouch 1976; Crouch & Shanks 1984).

This increased scale of exploration has been further enhanced since the 1950s, by regular aerial reconnaissance, most notably by the Cambridge Committee for Aerial Photography (see for example St Joseph 1966; Wilson 1975; Frere & St Joseph 1983, 166-181). This has proved to be a vital source of information, forming a welcome bonus to excavation at some sites (eg Alchester, Corbridge and Mildenhall), while elsewhere it supplies virtually the only evidence (eg Brough-on-Fosse, Chesterton-on-Fosse and Dorn). Its potential is amply demonstrated by D Mackreth's work at Water Newton (Mackreth 1979; Frere, Rivet & Sitwell 1987, plan v).

The result of all this activity has been an immense increase in the quantity and the quality of the data at our disposal over the last twenty-five years or so. Not surprisingly, this had been responsible for stimulating several syntheses of the available evidence and for generating a wide range of approaches to the smaller towns.

2 Recent research in the field

Although the recognition of a broad class of 'small towns' or 'minor urban settlements' has a considerable pedigree in Romano-British studies, the earliest synthesis of any substance did not appear until 1970, right at the height of the intensified activity already described, in the form of an article by M Todd in *Britannia*. This set out 'to outline the state of our knowledge and to define some of the main problems' by summarising the available evidence under a number of headings - viz the sites themselves, size, planning and buildings, the relationship with the countryside, and industry. In one form or another, these headings were to set the agenda for much later research. The article also recognised the considerable level of diversity amongst the sites hitherto included within the umbrella term 'small towns', though it remained somewhat restrictive on the criteria for urban status by emphasising features which would be recognisable by a Roman from another province.

This preliminary synthesis was soon followed by a conference specifically devoted to the small towns, held at Oxford in 1975, the proceedings of which were subsequently published as an edited volume by W Rodwell & T Rowley (1975). This contained various general articles and a series of individual site summaries, which together attempted to address various issues of importance to the debate about the small towns. At the same time it included some new approaches which were to find echoes in the future. In it, A L F Rivet attempted to classify the minor towns and settlements by dividing them into nine

categories, based on a conflation of functional and locational criteria; G Webster drew our attention to the important class of small towns *without* defences, which had largely been neglected in the past at the expense of the defended sites along the main roads of the province; S Frere & I Hodder addressed the specific question of small town origins from very different standpoints; and W Rodwell attempted a regional case study which sought to examine the Trinovantian towns in their wider setting. Lurking behind all these individual contributions, however, lay an unresolved issue concerning the criteria for inclusion as a 'small town', which helps to explain the different stances taken by (for example) Rivet and Rodwell.

The publication of Rodwell & Rowley's volume coincided with that of two other significant books, one on the *Towns of Roman Britain* by J Wacher (1974), the other *Oppida* edited by B Cunliffe & T Rowley (1976). Together they were to provoke a semantic debate on what constituted a 'town', which was to linger on throughout the 1970s. In hindsight it is easy to see that this wasted a lot of time and energy, but it did at least help to focus our attention on the nature of the archaeological evidence at our disposal and the problems of analysing it in terms of recognisable urban indicators, such as settlement morphology and function. Another dimension of this debate which enjoyed a brief, if undistinguished, *floruit* in the 1970s, was the attempt by J Alexander (1975) & M Millett (1975) to identify imposed and indigenous forms of urbanism.

The 1970s also witnessed the popularity of various spatial and locational models in archaeology, especially that of geographical central place theory. It is hardly surprising, therefore, that several attempts were made, most notably by I Hodder (eg Hodder & Hassall 1971; Hodder 1972; 1975), to apply such models to explaining the origins and development of the small towns within the wider urban hierarchy. More sophisticated models were even used in an attempt to equate the distribution of Savernake Ware with the predicated market area around the small town of Mildenhall (Hodder 1974). In general, however, the results did not meet with any widespread acceptance.

This high level of interest in small towns has been maintained into the 1980s, stimulated not so much by continued excavations as by the publication of several important excavation volumes, among them works on Baldock (Stead & Rigby 1986), Bath (Cunliffe & Davenport 1985), Braughing (Partridge 1981; Potter & Trow 1988), Ilchester (Leach 1982), Kelvedon (Rodwell 1987), Little Chester (Dool, Wheeler, *et al* 1986) and Neatham (Millett & Graham 1986). These can be supplemented by various other shorter reports or re-assessments of earlier work published in local journals and elsewhere (eg Ellis 1987; Field & Hurst 1983; Frere 1985; Hingley 1985; Lucas 1981; Petch 1987; Wilmott 1980; and Wilson 1984). There have also been several general works of synthesis on urban issues, which have contributed much to the small town debate. These include: (i) the regional case study of *Urban Settlements in the West Midlands* by J Crickmore (1984), which concentrated on such themes as classification, origins and development and function; (ii) the gazeteer of *Roadside Settlements in Lowland Roman Britain* by R F Smith (1987), which addressed the issues of origins, growth and decline, land division and economy, and cemeteries; (iii) the survey of *Extra-mural areas of Romano-British towns* by S E Clear-y (1987). More specifically on the small towns, my own research has addressed such themes as origins, settlement morphology, and the range of internal buildings (Burnham 1986; 1988; 1989). This has now been supplemented by the publication of a volume specifically directed at *The Small Towns of Roman Britain* (Burnham & Wacher 1990).

It should be obvious that much of this research has been concerned with small towns or related urban issues in relative isolation, reflecting to some extent the traditional parcelling of Romano-British studies (Burnham & Johnson 1979, l-8). It is thus important to record that the last decade or so has also witnessed a shift in emphasis with an upsurge of interest in the ancient economy, amongst ancient historians and archaeologists alike (eg Finley 1973; Duncan-Jones 1974; Garnsey, Hopkins & Whittaker 1983; and Greene 1986). As far as towns are concerned, this has raised important issues about their economic role and about the nature of the relationship between town and country, topics which have been addressed by various writers including M Fulford (1982), M Millett (1982) and R F Smith (1987). Most discussion has been concerned with the problem of quantifying the relative importance of agriculture and craft-specialisation within the settlement hierarchy To this M Todd (1989, 17) has added another dimension, with his suggestion that some rural townships served as estate villages and thus enjoyed a close relationship with nearby villas. This discussion of towns, large and small, within much wider contexts, beyond the more parcelled approach of the 1970s, *is* one of the important trends of the 1980s, not least because it raises important questions about the nature and definition of 'small towns' as well as the regional distribution of such 'local centres' (cf Hingley 1989).

From this brief review it should be clear that a considerable amount of research has been done in recent years across a wide range of issues. It remains, therefore, to outline some of the most significant advances in our understanding and some of the associated problems.

3 Significant advances in small town research

Only a brief review of the most important is possible:

(a) The first significant point is that we continue to discover new sites, which underlines the major shortcomings in our understanding of the nature and distribution of small towns. Recent examples include Cowbridge, probably

identifiable with the *Bouium* of the Antonine Itinerary (Parkhouse 1981; 1982), and the new importance attached to Frilford, where a religious complex has long been known (Bradford & Goodchild 1939; Hingley 1985). Regional surveys also have an alarming tendency to 'discover' new sites based largely on a scatter of occupation debris, as for example in Essex (Rodwell 1975), Lincolnshire (May 1976) and Northamptonshire (RCHM 1979, Figs 11 and 12); and before we are tempted to dismiss these as large agricultural villages, we should recall the results of the excavations at Ashton, which have revealed a surprising level of specialised iron-working in connection with the strip buildings in their associated compounds or yards (Hadman & Upex 1975).

(b) Second, we now possess a better understanding of the class of small towns without defences (cf Webster 1975). In this sphere, significant advances have been made as a result of the excavations at such sites as Ashton (just discussed), Baldock (Stead & Rigby 1986; Burleigh 1982; Selkirk 1983), Hibaldstow (Smith 1987, 18898); Sapper-ton (Simmons 1976; 1985; Oetgen 1986; 1987) and Tiddington (Palmer 1981; 1983). These have helped to demonstrate the complexity of the settlement hierarchy, as well as the wide range of sites hitherto called 'small towns'. The picture remains far from perfect, however, because insufficient work has yet been done at the important class of sites which tend to be located away from the main roads of the province.

(c) Third, we have a greater awareness of the complexity of urban origins, especially among the small towns of south and east Britain, Particular importance inevitably attaches to those sites which have been shown to develop out of pre-existing later Iron-Age settlements, as was clearly the case at Baldock, where part of the internal street network pre-dated the conquest (Stead & Rigby 1986, 84-5) and at Braughing, with its extensive pre-Roman occupation and evidence for coin production (Partridge 1981). Equally interesting are those sites with evidence for a pre-existing religious function, as the recent excavations at Harlow (Bartlett 1988) and perhaps also Bath (Cunliffe 1988, 1) demonstrate.

(d) Fourth, we have acquired a much clearer understanding of internal morphology, upon which there is now quite a literature (for a brief review, see Bumham 1988). The following features stand out:

i) the relative importance of a developed internal street system in contrast to ribbon developments along the road frontages; compare Water Newton (Mackreth 1979, Fig 11) with Braintree (Drury 1976, Fig 49) and Hibaldstow (Smith 1987, Fig 2).

ii) the presence at some sites of a developed central core and some degree of zonation in the plan; eg official or public buildings (Water Newton); market places (Godmanchester - Green 1975, Fig 10); temple complexes (Frilford-Hingley 1985, Fig 3).

iii) the relative range of building at individual sites beyond the everyday domestic and workshop accommodation, especially the presence of one or more buildings of more sophisticated design and size, with/without mosaic flooring; compare the relative range at Braughing (Partridge 1975, Fig 4) and Cave's Inn (Lucas 1981).

iv) the growing evidence for land-division and property boundaries within the sites; eg Ilchester (Leach 1982, Figs 35 and 51) and Hibaldstow (Smith 1987, Figs 2 and 3). These often take the form of compounds with associated buildings (cf Hingley 1989, ch 4).

v) the relative importance of these enclosed compounds alongside the narrow-fronted strip buildings found elsewhere along the frontages; cf Dragonby (May 1970, Figs 4 and 6) and Corbridge (Bishop & Dore 1988, Fig 5).

vi) the nature of the defended circuit, especially the contrast between defences which enclose only a strategic strongpoint (cf Mancetter and Wall - Webster 1971, Figs 20-21), and those which seem to be designed to protect both the official dimension and a suitable urban core (cf Kenchester - Wilmott 1980, Fig 6).

vii) the importance of the extra-mural suburbs once defences were provided (Clear-y 1987).

viii) the relative importance of large organised cemeteries around a site (cf Clear-y 1985), in contrast to isolated burials.

(e) Fifth, we now possess an increasingly clear idea of the functional dimension. This has been an area of considerable debate in recent years, with much of the discussion revolving around the problem of quantifying the level of dependence on agriculture or more specialised activities (cf Fulford 1982). Even so, the increasing evidence has emphasised a number of points:

i) the importance of agriculture at most sites; this is emphasised by the presence of field systems/enclosures at sites like Braintree (Drury 1976, Fig 49) and Brampton (Edwards 1977, Fig 100), by the recognition of buildings within distinctive farm compounds/cultivation plots (cf Hingley 1989, ch 4) and by the widespread discovery of agricultural implements.

ii) the relative importance of economic activities, emphasised by the increasing number of identified shops/workshops, often in the form of characteristic strip buildings (cf Burnham 1989, 41-4), and by the wide range of specialists attested in the archaeological record (Smith 1987, ch 3). The presence of a market place has also been suggested by the discovery of characteristic open spaces at such sites as Alcester (Wilson 1973,288) and Godmanchester (Green 1975,204). Despite all this, however, we remain very unsure about the relative importance of these activities at individual sites and about the degree of economic interaction between town and country

iii) the significance of official/military functions at a growing number of sites; this is emphasised by the discovery of new *mansiones* at towns like Chelmsford (Drury 1988) and Wanborough (Phillips & Walters 1977) and by the identification of some small defended sites as probable *burgi* (for those along Watling Street, see Webster 1971).

iv) the recognition of an increasing number of sites where the primary function was either religious or industrial; eg the 140 pottery kilns at Brampton (Knowles 1977) and the temple precinct and amphitheatre at Frilford (Hingley 1985).

(f) Sixth, and finally, there has been a growing realisation that the term 'small town' has become a catch-all category, subsuming a very wide variety of nucleated sites between one person's town and another's village. This has led to the recognition of different categories within the small town continuum, usually based on the classification published by Rivet in 1975. An alternative threefold schema, based on a range of structural and functional indicators, is suggested here:

1) Upper Order Settlements, covering all the sites traditionally identified as newly elevated cities in the 3rd and 4th centuries or as minor towns with developed economic functions. They can all be shown to share in some or all of the following features:
   (i) an internal street network
   (ii) urban core defences
   (iii) distinctive zones in the plan
   (iv) a broad range of building types
   (v) a broad range of workshop industries and craft-specialists
   (vi) large organised cemeteries.

   Examples: Water Newton (Frere, Rivet & Sitwell 1987, plan v); Ilchester (Fig 2); Braughing (Partridge 1975, Fig 4); Alchester (Frere 1986, Fig 17).

2) Middle Order Settlements, embracing a range of sites which served specialist functions. They tend to be characterised by distinctive official or religious buildings, strongpoint defences or large-scale industrial activities. These are sometimes found in association with features already identified in the upper order (eg a street network), but lower down the scale they tend to be associated with ribbon developments, an increasing agricultural emphasis and the absence of any degree of zonation in the plan. These include:
   (i) Spas and religious centres, eg Springhead (Fig 3) and Frilford (Hingley 1985, Fig 3);
   (ii) Specialist extractive or manufacturing sites, eg Charterhouse -lead (Wilson 1971, Fig 12), Brampton - pottery and metalworking (Fig 4), and Middlewich - salt (Petch 1987, Fig 33);
   (iii) Roadside settlements with imposed official/ military functions, eg Mancetter and Wall (Webster 1971, Figs 20-21).

3) Lower Order Settlements, characterised by the absence of defences, specialised functions and buildings of any degree of sophistication. In other respects they share many of the features already outlined in the middle order sites, including ribbon developments and an increasing agricultural emphasis. Examples: Hibaldstow (Fig 5), Braintree (Drury 1976, Fig 49) and Dragonby (May 1970). Many merge imperceptably with the sites traditionally identified as villages, cf Chisenbury Warren, Fotheringhay (Taylor 1983, Figs 29 and 30) and Catsgore (Leech 1982). Such sites still remain very poorly known, though they are crucial to our wider understanding of the distribution of 'small towns' and 'local centres' as defined by Hingley 1989.

Summary

Much of what has been said above is inevitably a subjective assessment, but hopefully it has demonstrated the advances which have been made in the last few decades, Numerous problems remain including, firstly, the uneven quantity and quality of our sample; secondly, the problems of interpretation and quantification; and thirdly, the difficulty of establishing a detailed chronological picture. Even so, the achievements of the last fifty years should provide a useful foundation for the next fifty.

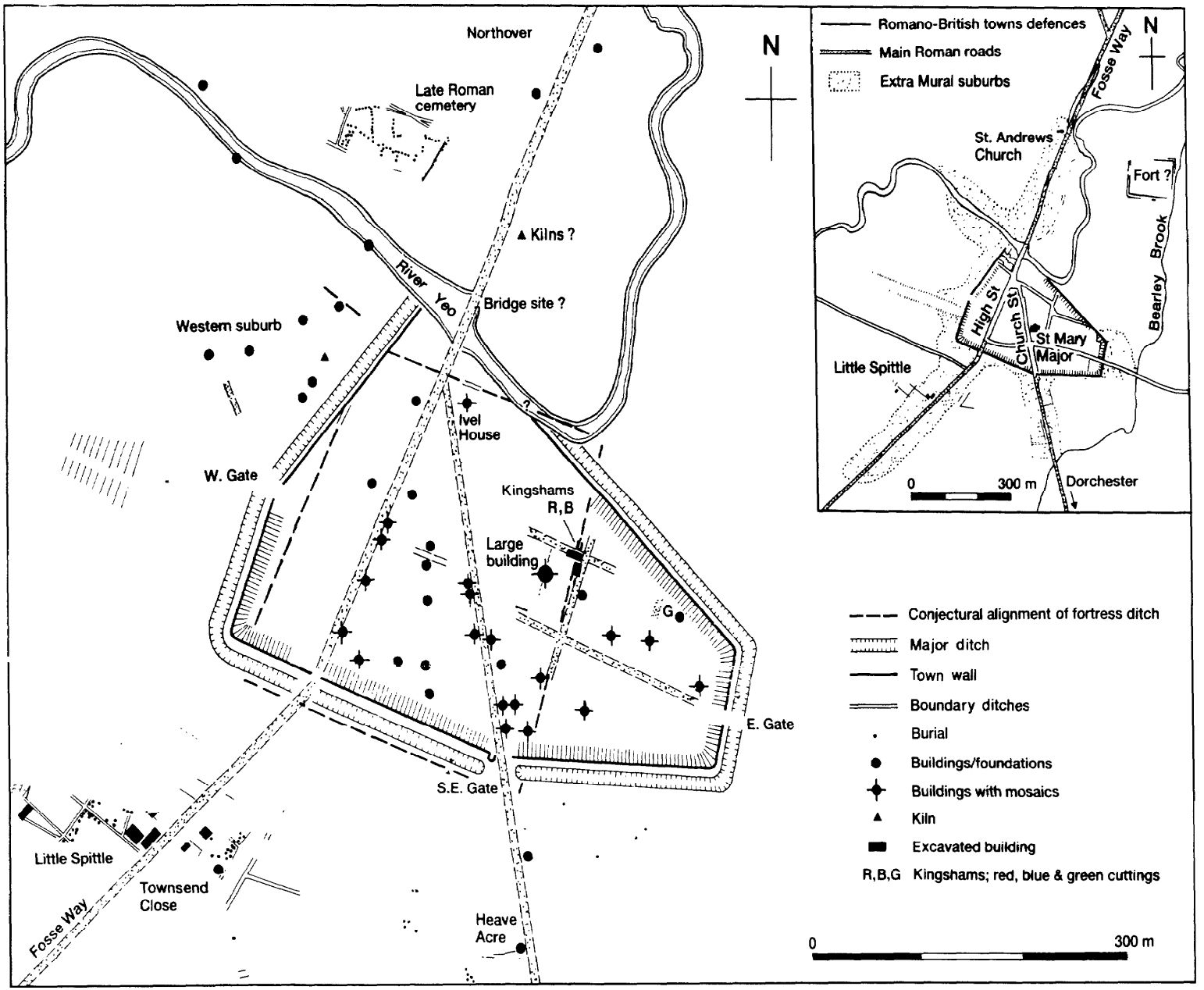

Figure 2 Ilchester (from details supplied by Mr P Leach)

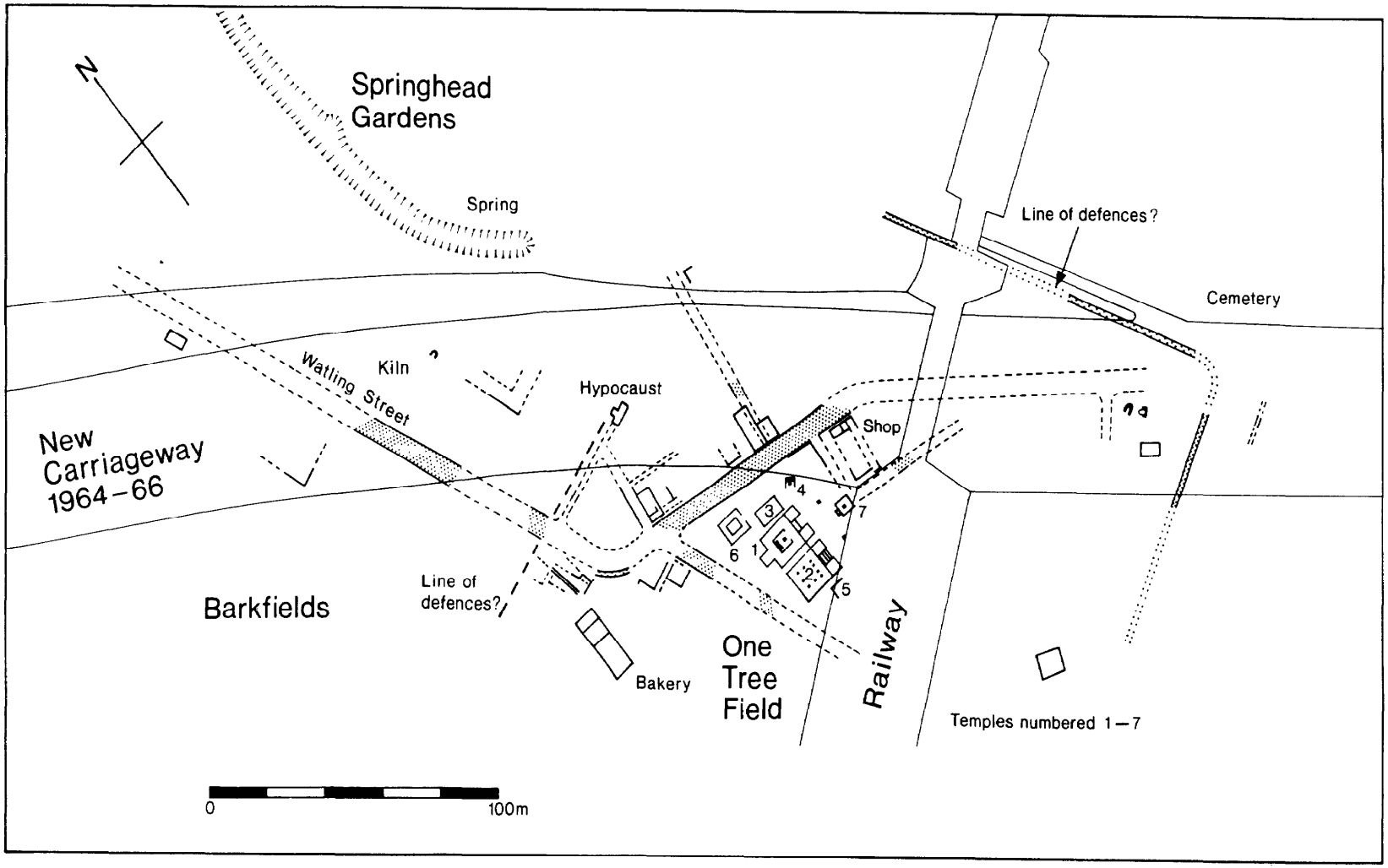

Figure 3 Springhead (after Penn and Harker)

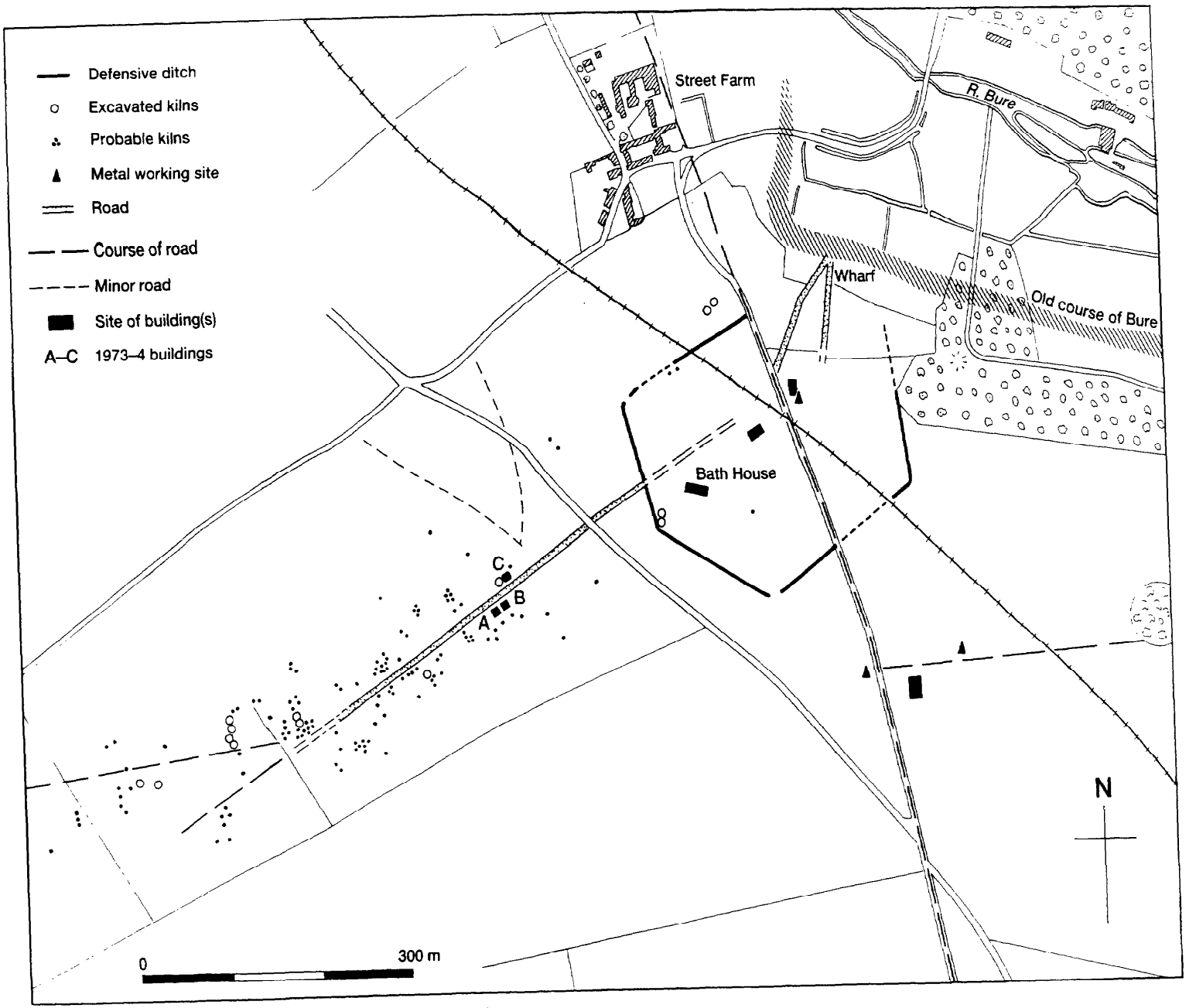

Figure 4 Brampton (after Edwards, Knowles and Rogerson)

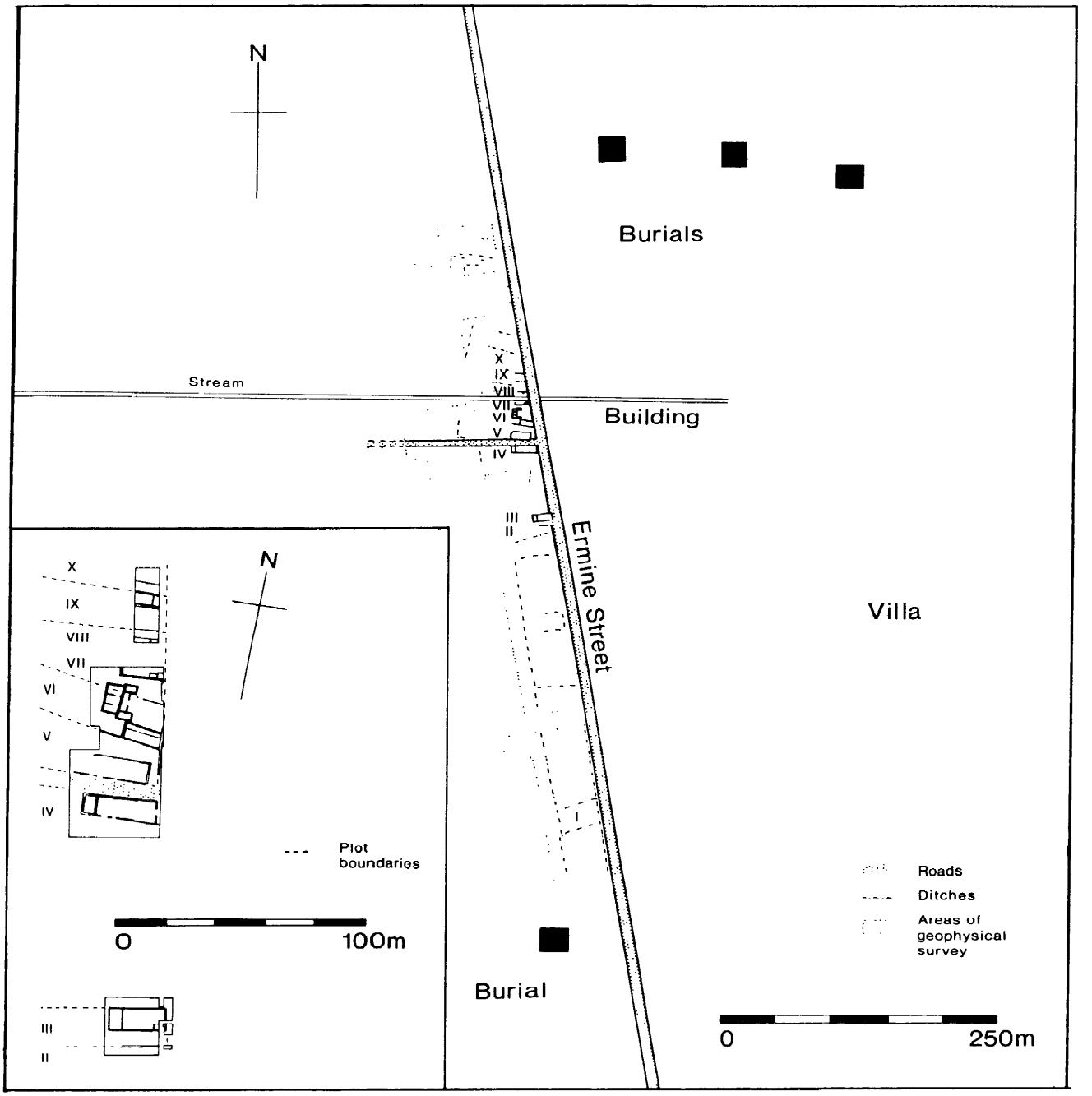

Figure 5 Hibaldstow (after Smith)

Acknowledgement

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12 Metrological analysis of Roman fortresses and towns in Britain

Philip Crummy

The analysis of sites, buildings and other structures in terms of ancient units of measurement is not new. To cite but a few examples of many, in the 18th century William Stukeley considered Stonehenge (and elsewhere) in relation to the Roman foot and John Ward did the same for the Roman fort at Gellygaer at the turn of this century (Ward 1903, 22). Much more recently C V Walthew has been looking at Roman houses (Walthew 1978) and David Zienkiewicz has carried out an interesting study of the baths at Caerleon (Zienkiewicz 1986, 96-114). However, despite the long pedigree, the technique is only now beginning to be more fully exploited.

Metrological analysis can help with interpretation, dating, classification and comparison of similar sites (and objects) one with another. Some recent studies have involved the tabulation of actual dimensions against likely intended ones. A more visual approach is employed here where a theoretical layout is overlaid on a plan of the actual site and positioned in such a way as to provide the closest fit. The theoretical plans are compiled independently according to the dimensions shown on them. This is a demanding test since it presupposes a high degree of accuracy across the entire plan with any localised discrepancies failing to affect the integrity of the whole. Even so, it does not provide incontrovertible proof - only something which it is hoped the reader will find intuitively believable. In the examples here, the unit of measurement used is the standard Roman foot *(pes Monetalis)* which has been taken to equal 0.296m (see below for a note on the *pes Drusianus).*

This method when applied to plans of Roman towns and fortresses in Britain produces results which it is hoped most archaeologists will find fairly convincing. The trick is to find dimensions which repeat or are arithmetically related in a simple way. Of course, this is not to say that the Romans only designed in this way - it is just that it is much easier to detect the intended designs when they incorporate elements such as these and to put forward convincing cases for their existence.

Polybius and Hyginus

Polybius and Hyginus both described how the Roman army set about laying out marching-camps. But unfortunately neither author was concerned with permanent fortresses and Polybius was writing 200 hundred years before the conquest of Britain. Nevertheless their descriptions are of interest in the present context because they illustrate the design process at work and the role played in it by whole multiples of round figures.

Polybius in effect explained how the whole of a camp was laid out in terms of 50 and 100 feet (Fig 1). The starting point was to fix a white flag in the ground to mark the spot for the *praetorium* (commander's tent) and then measure off around it a square such that the centres of the sides were 100 feet from the standard. One of the sides of the square was extended equally in both directions and a parallel line set out 50 feet distant to create space for the tribunes' tents which were to be strung out in a line. Another parallel line was set out 100 feet further off to mark the far side of the *via principalis.* A line was then set out at right-angles to the centre point of the last line to form a T-shape with the *via principalis.* Working outwards from both sides of this line, blocks with intervening streets were then marked out one by one for each of the various units which were to occupy the *praetentura.* The areas behind and to either side of the *praetorium* were similarly laid out in this incremental fashion. Polybius stated that it was simple and quick to mark out an encampment because the dimensions were 'regulated and familiar'. When an army arrived at the site of new camp, it was easy for everyone to see where they were to pitch their tents because the plan was kept the same from camp to camp and the plots were marked by colour-coded flags and spears (Bk vi, 27-31 & 41).

Hyginus *(Liber de Munitionibus Castrorum)* outlined the general principles of laying out a camp and as an example described how to set out a camp for three legions plus auxiliary troops.[1] His camp was a neatly integrated design where the dimensions of all the separate areas for the units to be accommodated within it were whole multiples of 30 feet apart from the street and the small gaps between the various allocations. Dimensions such as 90, 240, 420 and 600 feet occur because they are divisible by 30 and allow areas of equal and multiple size to be provided in a number of different shapes thus making it easier to plan compact camps, The spaces allotted to the legionary cohorts in Hyginus' camp illustrate this point well. Five different permutations are present for these units including two extra ones for the three First Cohorts which were to be double in size

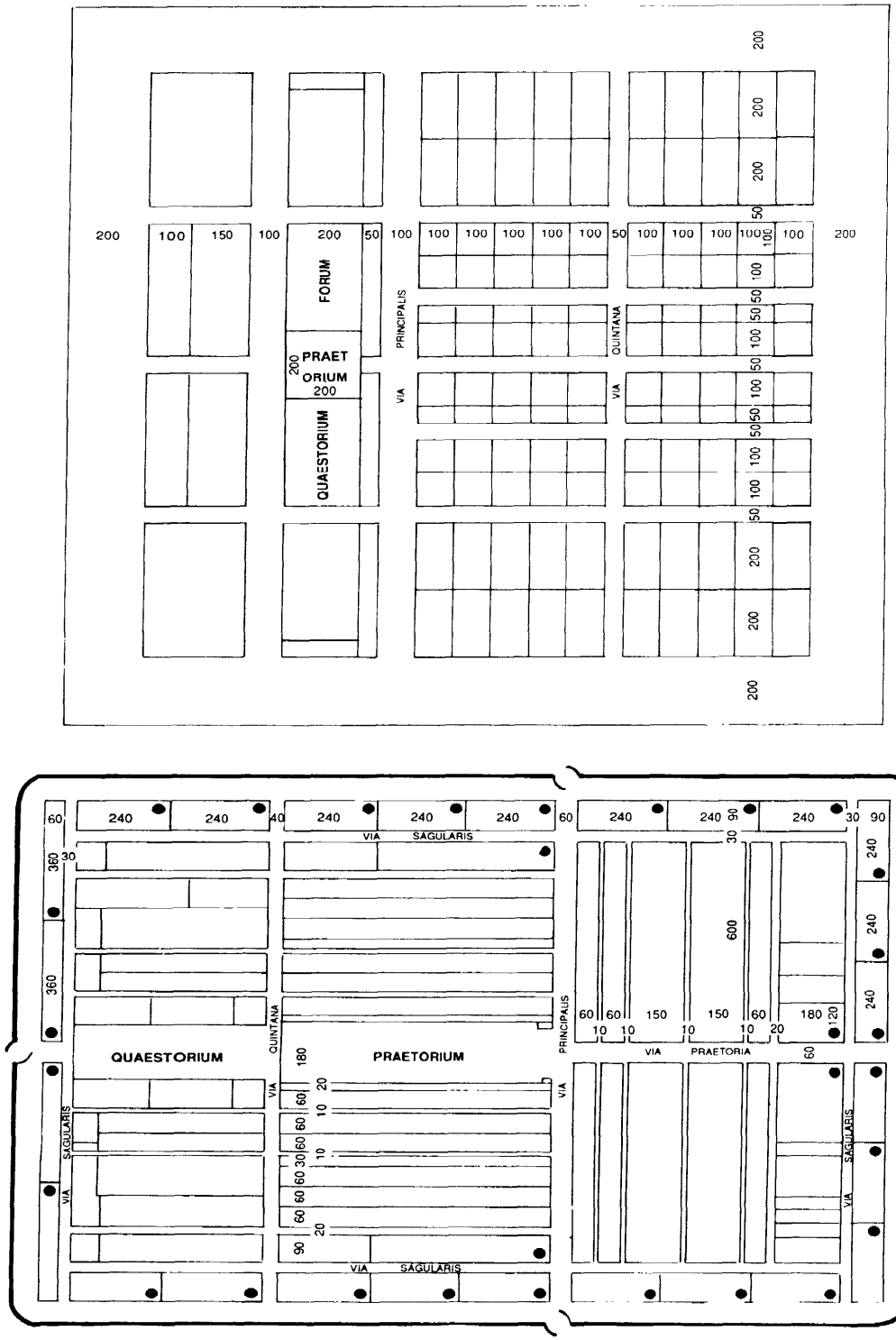

Figure 1 Above: a metrological analysis of the plan of the camp described by Polybius. Based on the reconstruction by E Fabricius (1932). (It is not certain if Polybius was describing a camp for two legions plus auxiliaries or half a camp for double this force.) Below: metrological analysis of the plan of a camp for three legions and auxiliaries according to Hyginus. Based on the reconstruction by M. Lenoir (1979). The sites for the legionary cohorts are indicated by black circles.

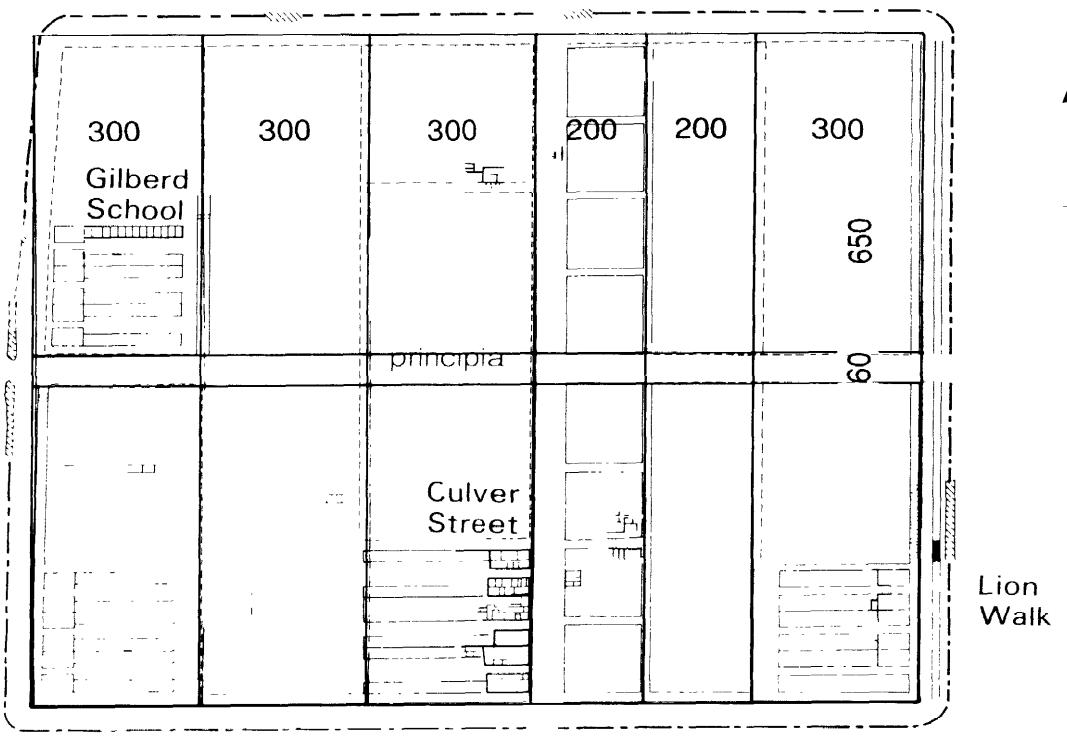

Figure 2 A grid superimposed on the plan of the fortress at Colchester

(ie 60 x 360, 90 x 240, 120 x 180, 120 x 360, 90 x 480) (Fig 1). The underlying 30 foot dimension was itself bound up with the area required to accommodate a century which Hyginus said was 120 feet long and 30 feet wide. The length of this area was divided into ten spaces of twelve feet, eight for *contubernia* and two for the centurion whilst the width comprised ten feet for the tents, five feet for the arms, nine feet for the beasts of burden, and six feet for half the width of the alleyway which would separate two facing centuries. Since a cohort was made up of six centuries, it would therefore require a space equal to 6 x 30 x 120 (21,600) square feet.

Hyginus stated that sometimes legionary cohorts were each allotted a nominal area 150 foot square but that such an arrangement did not allow the tents to be erected in the customary order. Nevertheless this indicates that in his day camps could and were sometimes laid out in terms of multiples based on 50 as opposed to 30 feet.

Despite being over 200 hundred years apart in date, the areas allocated by Polybius and Hyginus were fairly consistent, at least as far as the legionaries were concerned. The nominal 150 foot square described by Hyginus for a cohort was only a little larger than his 30 x 720 foot area (ie 22,500 as opposed to 21,600 square feet) and both were only a little less than the total of the equivalent spaces allowed according to Polybius (ie 25,000 square feet).[2]

Plans of fortresses in Britain

It is not clear how far the planning of marching-camps is directly relevant to the planning of permanent fortresses. However round figure multiples both in terms of 50 and 30 feet are discernible in the plans of permanent Roman fortresses.

The plans of British fortresses can be analysed with varying degrees of success at least so far as the knowledge of their plans allow. The street plan of the fortress at Colchester can be rationalised in terms of strips *(scamna)* 200 and 300 feet wide (Fig 2, CAR 3, 5-7). Essentially there were six strips, three 300 feet wide, next to two 200 feet wide, with a last strip 300 feet wide at the end. Out of these strips were cut the streets so that the main streets were 60 feet wide and the minor ones were perhaps 30 feet wide (the width of these is as yet uncertain).

Mr C G Henderson has suggested that the fortress at Exeter was laid out in terms of whole multiples of 30 feet (a quarter of an actus as he prefers to see it; Henderson forthcoming). Mr David Zienkiewicz has done the same for Caerleon where he has found multiples of 240 and 300 feet although he feels that the unit of measure may have been slightly oversize (pers comm).

Figure 3 expresses in terms of formulae sequences of detectible (or rather postulated) dimensions across the length and breadth of each fortress. The

scheme for Exeter is derived from the work of Mr C G Henderson whilst that for Caerleon is based on the standard *pes Monetalis* pending completion of Mr J D Zienkiewicz's analysis. The reliability of the analysis of the others is greatly affected by the scale of the plans and the degree of distortion present in many of them. The distortion in many cases is probably real and reflects genuine inaccuracies in the way some fortresses were laid out. Figure 3 includes a subjective judgement of how close the suggested formula might in reality reflect the intended plan after the various limitations and the quality of it are taken into account. No doubt future work will lead to a clearer understanding of the design processes involved in these places than is suggested here. The proposed scheme for Inchtuthil has been selected for illustration (Fig 4) as an example of one of the more convincing of the proposed interpretations apart from those for Caerleon, Colchester and Exeter. A scheme for Lake Farm has been proposed by C G Henderson based on an unpublished magnetometer survey and can be found in Henderson forthcoming.

Various generalisations can be made. No two fortresses were identical in layout although certain were very similar (for instance Colchester was very like Caerleon, whilst Wroxeter, Usk and Lincoln as a group were of fairly similar size). The 300-foot dimension was common and occurred in those parts of the fortresses which contained barracks, usually the central strips where the headquarters building of each fortress was to be found and the strip at each end. These 300-foot wide strips usually included the width of the *via sagularis* and (less certainly) the width of the street at the other end of the barrack block. The 300-foot wide strip which included the *principia* usually excluded the streets and is taken up entirely by the barrack blocks (which are longer than elsewhere). Multiples of 30 feet, especially the actus (120 pM), may occur widely *Praetenturae* took the form of two areas on either side of the *via praetoria* which were usually close to being squares. On the whole the widths of these squares (and hence the widths of the fortresses) do not seem expressible in terms of round figures very readily although they cluster around the 575 to 650 foot mark. This may simply be because the width of each fortress was determined by the sum of the various parts making up the strips.

Plans of legionary barracks can be analysed in terms of standard Roman feet although many are problematic because of apparent irregularities and inaccuracies in their layouts. At Colchester the planning scheme for the barracks is well established (Fig 2) with interesting variations noted for the enlarged barracks of the First Cohort at Culver Street (Crummy 1989; CAR 6). Rounded figures were used (15, 20, 30 and probably 60) although measurements across two or more barracks do not give results which are multiples of these figures because these dimensions relate to *spaces* and exclude the widths of the walls (which were 2 pM). The barracks at Exeter turn out to be similar in several respects (Henderson forthcoming).

A limited examination of barracks at Wroxeter (Fig 5), Exeter, Gloucester, Caerleon and Inchtuthil suggests that metrological analysis using large-scale site plans may prove fruitful in clarifying certain features especially those which were subject to chronological development. For example, the living areas and the spaces between barracks seem to

fortress	area	MODULAR ELEMENTS ← along the length, from back to front (↓ rear side of via principalis)	→← across the width →	degree of confidence in fit
Colchester	1600 x 1360	I: 300 I: 300 :I 300	I: 200 I: 200 I: 300 :I x I: 650 I 60 I 650 :I	high
Exeter	1550 x 1100	I: 750 :I 240	I 20 I 120 :I 180 I 240 :I x I: 300 I: 240 I 20 I 240 :I 300 :I	high
Wroxeter	1450 x 1250	I: 575 :I 325	I: 250 I: 300 :I x I: 600 I 50 I 600 :I	moderate
Usk	1450 x 1250	I: 800	I: 200 :I 150 I: 300 :I x I: 600 I 50 I 600 :I	moderate
Gloucester	1525 x 1230	I: 300 :I 250 :I 325	I: 350 I: 300 :I x I: 600 I ?30 I 600 :I	moderate
Lincoln	1450 x 1200	I: 300 :I 225 :I 250	I: 200 :I 175 I: 300 :I x I: 575 I 50 I 575 :I	moderate
York	?1575 x ?1280	I: 600 :I 325	I 650:I x I: ?625 I ?30 I ?625 :I	low
Caerleon	1600 x 1350	I: 300 :I 250 :I 300	I: 200 :I 250 I: 300 :I x I: 650 I 50 I 650 :I	moderate to high
Chester	?1900 x ?1300	I: 300 :I ?400 :I 300 :I 300	I: 300 :I 300 :I x I: 620 I 60 I 620 :I	moderate to high
Inchtuthil	1495 x 1440 *	I: 300 I: 250 :I 300	I 120&225 :I 300 :I x I: 300&300 I 250 I 300&300 :I	high

*may exclude the *via sagularis*

The streets are represented thus '|:' with '|' showing the side from which the measurement concerned was made

Figure 3 Classification of British fortresses based on metrological analysis

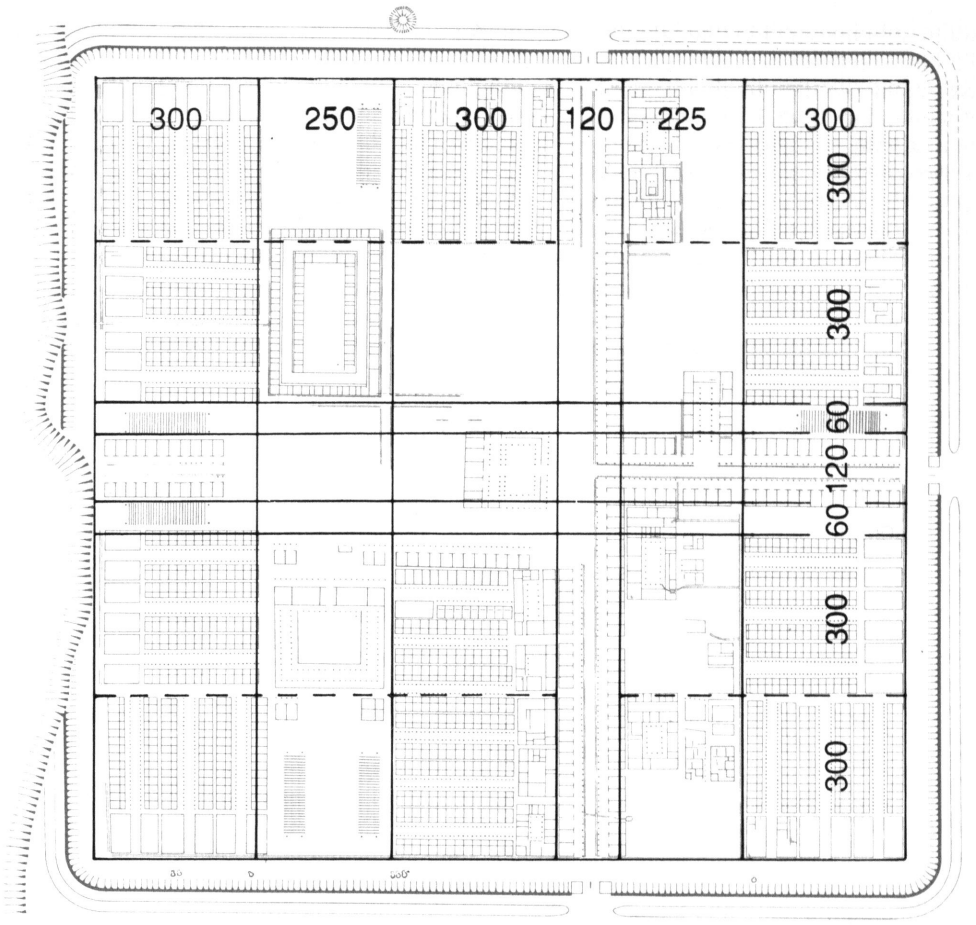

Figure 4 A grid superimposed on the plan of the Inchtuthil fortress. The fortress was unusually wide because of the enlarged strip along its longitudinal axis (indicated by the 60/120/60pM strip). This contained some of the granaries and thus might reflect the care taken by Agricola to ensure that the army in the Highlands of Scotland was well stocked with supplies. The plan of Inchtuthil fortress is reproduced with the kind permission of Professor S S Frere and the Society for the Promotion of Roman Studies

have been enlarged with time. The alleyways between the earliest barracks (Colchester, Lake Farm and Wroxeter) were 15 pM across whereas in later fortresses (Exeter, Gloucester, Caerleon and Inchtuthil) these were 20 pM. The width of the *contubernia* seems to have broadly increased with time. At first 12 or 12.5 pM seems to have been the norm (at Colchester, Exeter, Wroxeter and possibly Gloucester) whereas later 14 or 14.5 pM occurs (Caerleon and Inchtuthil). The depth of the *contubernia* and the centurions' quarters shows corresponding increases. The length of the centurions' quarters seems at first to have been around 60 pM (Colchester, Exeter and Wroxeter), and later was increased to at least 70 pM (at Inchtuthil). This dimension seems to have been set to be equal to the distance taken up by five *contubernia* although it is hard to say if this rule included one or both of the lateral walls.

Towns

The same analytical approach works quite well with some Romano-British towns including Silchester (Fig 6), Cirencester (Fig 7), Caerwent, *Verulamium* and Caistor-by-Norwich (Crummy 1982, Fig 6). On the whole the streets of these places tend to be more widely spaced than in fortresses. An important factor to note is that there seems to be only limited consistency in the sides of the streets to which the measurements relate.

The interpretation of the plan of Silchester has been published before in a slightly different format (Crummy 1982 and 1985, Figs 5 & 54 respectively), but here the intended layout is expressed in a different way to show the presence of the 300-foot dimension. The occurrence of the latter combined with the curious way the central insula straddles the east-west axis of the town raises the obvious question as

to whether Silchester originated as a reused legionary fortress. This scheme would have the merit of helping to explain the otherwise puzzling variety of sizes of the insulae. Unfortunately the spacing of the streets does not indicate a clear-cut site for a fortress and there is moreover the problem of how to fit in the early building which Professor Fulford has discovered under the central insula. If this had been part of a *principia*, then the plan of the building seems to indicate that the fortress faced south rather than east or west which the 300-foot strips suggest.

Verulamium is similar to Silchester in some respects. The streets of the town do not exist as a simple grid but contain curious variations. Most of the north-south streets fit a module of 450 feet (a size which occurs at Silchester) whereas the east-west ones seem to relate to a 500-foot module. Its com-

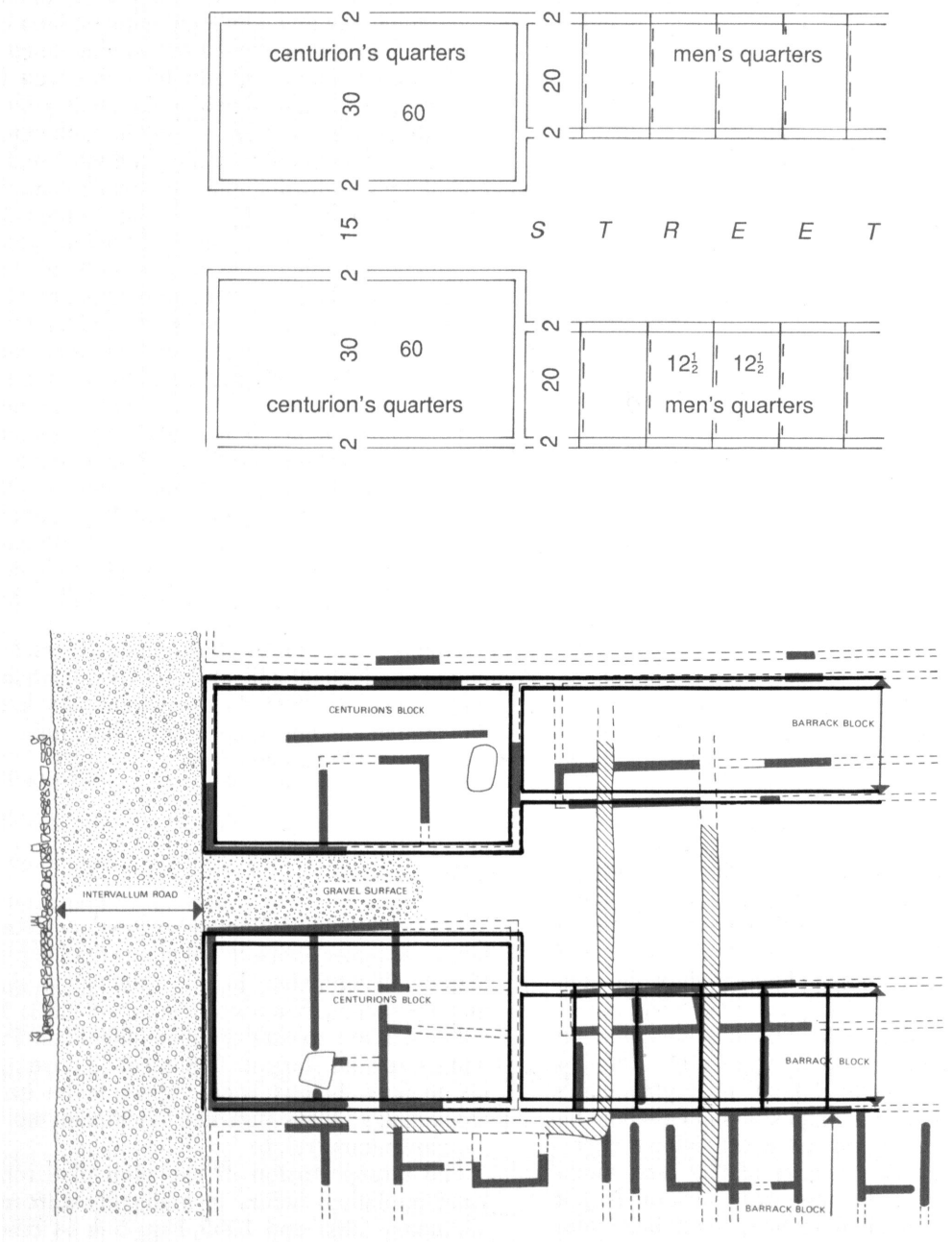

Figure 5 Above: Colchester barracks. Below: Wroxeter barracks overlaid by the plan of two typical Colchester barracks. (The width of the rooms in the men's quarters has been reduced in the superimposed plan to 12 pM to produce a closer fit). The Wroxeter plan is reproduced with the kind permission of Dr G Webster

plexity and the way in which the forum insula straddles the streets to either side hint at complications yet to be unravelled.

Cirencester (Fig 7) exhibits a mirror symmetry about the street which lies on the north-west side of the forum with strips 600, 500 and then 600 to either side of this axis. These strips were divided laterally by three 400-feet wide strips to form rectangles which were 600 x 400 and 500 x 400 feet.

Although poorly laid out, the street grid of Caerwent seems to have been based on 300 feet wide rectangles. These are small for a town and presumably reflect the modest nature of the settlement.

Conclusions

The metrological analysis of plans has the potential to lead to a clearer understanding of the design principles involved and thus to better and more meaningful methods of classification. For example, the practice of referring to forts and fortresses in terms of overall size is clearly only of limited value because there was no clear relationship between the size of the garrison and the size of its base. The latter has as much to do with such factors as the number and floor space of the *contubernia* in each barrack and the widths of the streets as it does with the number of men a base was intended to contain.

Another common practice is the giving of dimensions in reports. This is usually done in metric accompanied increasingly nowadays with the equivalent in pM. Whilst it is of course of value to know for example the length of a barrack block, the practical benefit provided by such a piece of information is hard to quantify except in the vaguest of terms and moreover to compare this with the lengths of other barrack blocks could in fact be misleading. Much better would be to describe the building in terms of a classification system based on key factors as the

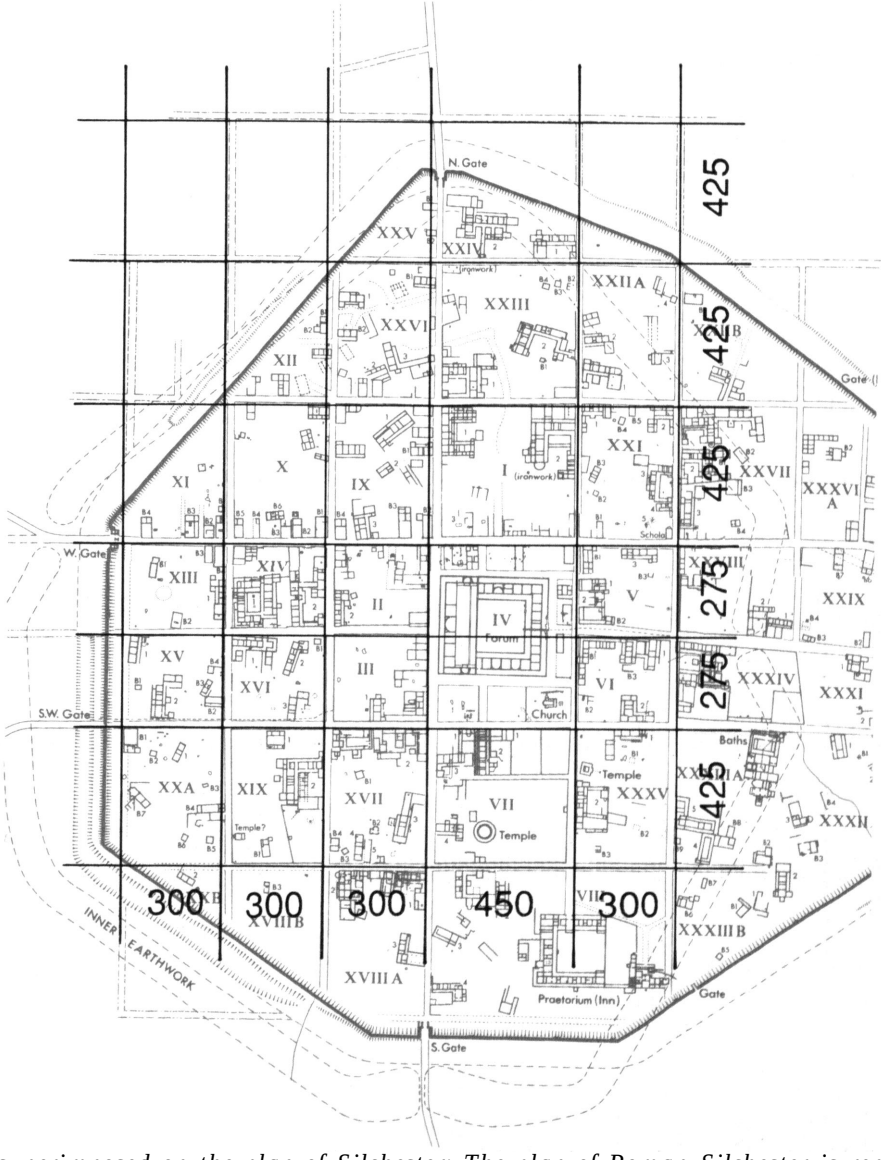

Figure 6 A grid superimposed on the plan of Silchester: The plan of Roman Silchester is reproduced with the kind permission of Mr G C Boon

number and floor space of the *contubernia* and the relationship of the length of the centurions' quarters to the width of the *contubernia.*

Metrological analysis could have a role to play in interpretation. Specifically, the analysis of the plans of towns and fortesses in this way may help to trace any fortresses which await discovery under our Roman towns. And in towns which were founded on the sites of redundant military bases, the analysis of building plans might in the long term help distinguish between buildings which were early civilian and those which were military and kept for reuse in the new towns.

All these lines of enquiry are of course best carried out by the excavators of the sites concerned because they have access to large-scale plans and can use them with the benefit of personal knowledge of the strengths and limitations of these plans. Apart for those relating to Colchester, the propositions set out here are thus subject to local review.

Addendum: the *pes Drusianus*

There has recently been a great deal of debate about the *pes Drusianus* (Duncan-Jones 1980, Walthew 1981, Millett 1982, Bridger 1984). This was the unit of measure which, according to Hyginus, was used 'in Germany among the 'Tungri' and was one and a half inches longer than a *pes Monetalis (monetalem pedem et sescunciam).* Archaeologists calculated that this foot must therefore equal 13.5/12 x 0.296m, ie 333mm, or 13.5/12 x 0.295m, ie 332mm depending on the value used for the *pes Monetalis.* Then followed much detailed analysis of plans based on this assumption.

But the *pes Drusianus* need not have been *exactly* equal to 13.5 inches. Different systems of measurement do not usually convert one to another in round figures (eg metres and English feet). Thus with the *pes Drusianus,* we are only entitled to assume that Hyginus meant to the nearest half inch and that therefore the size of the *pes Drusianus* lay somewhere between 13.25 and 13.75 inches. The situation is of course complicated by the fact that the exact size of the *pes Monetalis* is itself not exactly known. However if we take Hultsch's 295.7mm (Hultsch 1882), then the *pes Drusianus* should lie between 326.5 and 338.9mm. Why should we expect to find in Britain a unit of measurement which was used in Germany? Could the *pes Drusianus* have been the 'Northern Foot', so-named by Petrie as a unit of measure found north of the Mediterranean (Huggins *et al,* 1983, 23). Interestingly, if the 'Northem Foot' was the same as the Anglo-Saxon foot (which seems very likely), then it would have

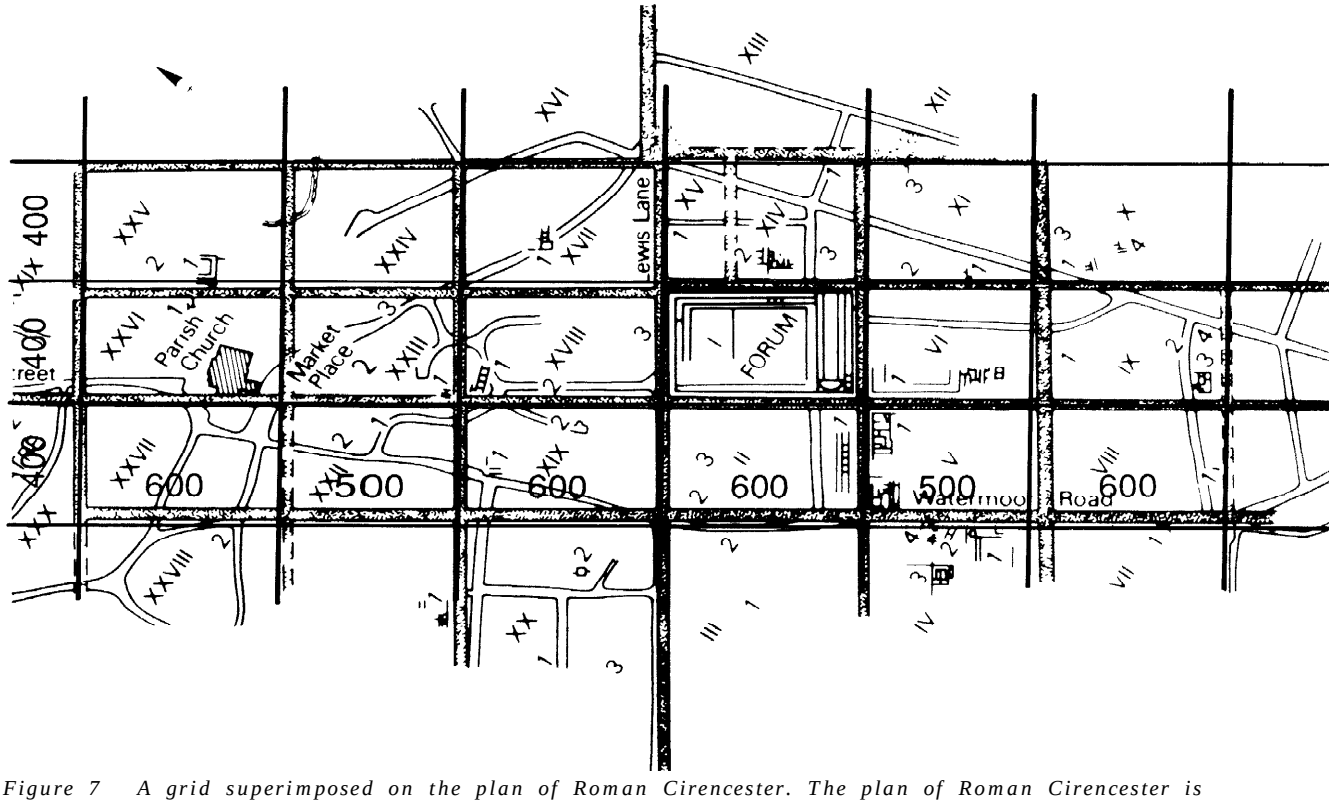

Figure 7 A grid superimposed on the plan of Roman Cirencester. The plan of Roman Cirencester is reproduced with the kind permission of Mr A D Mc Whirr

equalled 13.2 inches (which converts to 335.28mm correct to two decimal places) and thus falls within the range cited above for the *pes Drusianus*.

In summary, three points can be made:

1 If the use of *pes Drusianus* can be demonstrated in Britain, then it is more likely to indicate the use of a native system of measurement than an imported one
2 The *pes Drusianus* should be taken to equal between 326.5 and 338.9mm or 332.67mm ± 1.86 per cent and
3 If a specific figure is required, then 335.28mm seems as good a starting point as any.

Acknowledgements

I am grateful to David Zienkiewicz and Chris Henderson for discussing Caerleon and Exeter with me and to Professor Frere for his helpful comments on this paper and the one about Colchester (p 3244).

Notes

1 For plan and discussion in relation to Inchtuthil, see Pitts and St Joseph 1985, 232–9.
2 The legions were differently composed in Polybius's time so a direct comparison is not possible. This figure represents a tenth of the space needed by a legion with 4,200 infantry ie (100 × 100 for the *hastati* + (100 × 100 for the *principes*) + (100 × 50 for the *triarii*) with the *velities* assumed to be distributed among these three groups.

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Part II:
the material

13 The study of coin finds from Romano-British towns *John A Davies*

Introduction

The study of Roman coinage can be traced back over several centuries. During this century it has developed closely alongside the disciplines of history and archaeology. The boom in field archaeology in recent years has created a need for new analytical methods to be used in order to interpret the larger numbers of coin finds being recovered from Romano-British sites. A new sub-discipline, which has been termed 'applied numismatics', has accordingly grown up alongside more academic numismatics during the last thirty years. This paper will consider the development of coin studies in relation to Roman Britain and, in line with the theme of this volume, to towns in particular, during the last fifty years. Developments in the study of coinage from Roman Britain during those years will first be outlined and then the usefulness of some more recent approaches toward our understanding of Roman towns will be considered.

The development of the study of Roman coins

In contrast to that of some other classes of artefact, the study of Roman coinage and the imperial currency system is a very old one. Cabinets of Roman coins were being formed as early as the 16th and 17th centuries across Europe. The 19th century saw an increase in the study of the Sciences and the foundation of several distinguished Societies. The year 1936, which saw the publication of Wheeler's *Verulamium,* was coincidentally the centenary year of the Royal Numismatic Society (Wheeler & Wheeler 1936). By that date any traces of antiquarianism had vanished from the study and numismatics had achieved a respected standing as an independent discipline. Knowledge of the classical coin series was considerable and a wealth of literature was available. Cohen's great reference work *Monnaies frappees sous I'empire romain* (1880-92) had been partially superceded by five volumes of the series *Roman Imperial Coinage* (from the proposed series of ten) (Mattingly, Sydenham *et al* 1923-81). Mattingly and Sydenham's catalogue provided a coverage of the lst, 2nd, late 3rd and final years of the 4th centuries. Harold Mattingly's *Roman Coins* already provided a masterful general survey of Roman coinage (Mattingly 1928).

The considerable knowledge of classical coinage which existed had been constructed by detailed typological study of individual coins and ordering of issues, with much of the scholarship based on analyses of major hoards. By the 1930s a firm chronology and sequence among regular issues had been established for the earlier years of Roman Britain. Most studies still concentrated on hoard coins and more rarely considered collections of coins from sites.

Coin reports which accompanied excavation reports were variable in their coverage and thoroughness. For example, in Wheeler's major publication of excavations at Lydney Park, a short discussion of the coins recovered was accompanied by a much more thorough consideration of two hoards from the site (Wheeler & Wheeler 1932). In relation to site reports generally, some mention was made of specific rare or interesting coins but the masses of low denomination bronze issues were neglected. For example, Wheeler's report on excavations at *Verulamium,* published in 1936, included a coin report comprising just over one side of text, which accompanied a lengthy catalogue of 1,700 coins (O'Neil 1936). There was specific mentioned of the prolific irregular coins present, termed 'minute barbaric coins of Lydney type', referring to *Fel Temp Reparatie* minims and to barbarous radiates. The very late 4th and 5th century dates given to these irregular coinages at the time were a misleading influence on the dating of archaeological contexts. This is another area in which significant progress has been achieved.

In 1937 a most important, if still underrated, book was published. Sutherland's *Coinage and Currency in Roman Britain* broke new ground, being not the standard discussion of Roman coin types but a consideration of the economic history of Britain in relation to hoards and site finds. Harold Mattingly described this approach as by which, 'the coin is studied less as a coin, simply and solely, than as a piece of historical evidence'. This work has been a major influence in the development of our approach to archaeological coin studies.

The post-war period has seen a growth of interest in numismatics generally. This is reflected in the membership of the Royal Numismatic Society, which in 1944 stood at 206 and which today is at around 1,000. A proliferation of publications during the 1940s and 1950s again concentrated on specific issues and hoards. There were also the major studies of *Coinage in Roman Imperial Policy* by Sutherland and *Coinage in the Roman Republic* by Sydenham,

published in 1951 and 1952 respectively There was a steady refinement in the chronology of problematic issues, including irregular coinages. The study of the coinage of the Gallic Empire by George Elmer became available in post-war Britain and is still the standard reference work for that period, although regrettably is still not universally used.

The publication of Dr Kent's volume VIII of *Roman Imperial Coinage* in 1981 saw the entire span of Roman Britain covered by that series, although earlier editions are in some urgent need of revision in the light of more recent work. Crawford's *Roman Republican Coinage,* published in 1974, updated the knowledge of that series. In addition, the journal *Coin Hoards* and the British Museum's *Coin Hoards from Roman Britain* ensure that knowledge of new finds is being regularly updated and distributed.

One particular category which has benefitted from the intensification of research since the war is that of irregular coinages, the dating of which has been dramatically revised during this period. These are now tied-down to within quite tight date ranges and irregular types are now considered to have been contemporary, or near contemporary, with the issues that they copied. The major epidemics are also believed to coincide with periods when new coin was in short supply in Britain. The 'falling horseman' minims noted *in* the 1936 *Verulamium* report are no longer believed to belong to the 5th century but were produced between the years 354 and 364, prior to the profuse Valentinianic bronze issues flooding into this country Similarly, following decades of debate, by 1960 it was no longer tenable to argue a late 4th century or post-Roman date for the manufacture of irregular *antoniniani,* or barbarous radiates, which are now universally dated to the 270s and early 280s in Britain. The irregular Claudian *asses* and *dupondii* of the early post-conquest period, which Sutherland discussed at length in the 1947 *Camulodunum* report (Sutherland 1947), are similarly given a near contemporary date, of between AD 41 and 64.

Thus, there have been advances in the precision of dating and typology of Roman coinage since 1945. Knowledge has increased not through the discovery of spectacular new finds but by steady research and debate. The proliferation of reference books and journals has disseminated the knowledge to a wider readership and has ensured that new advances are quickly made available.

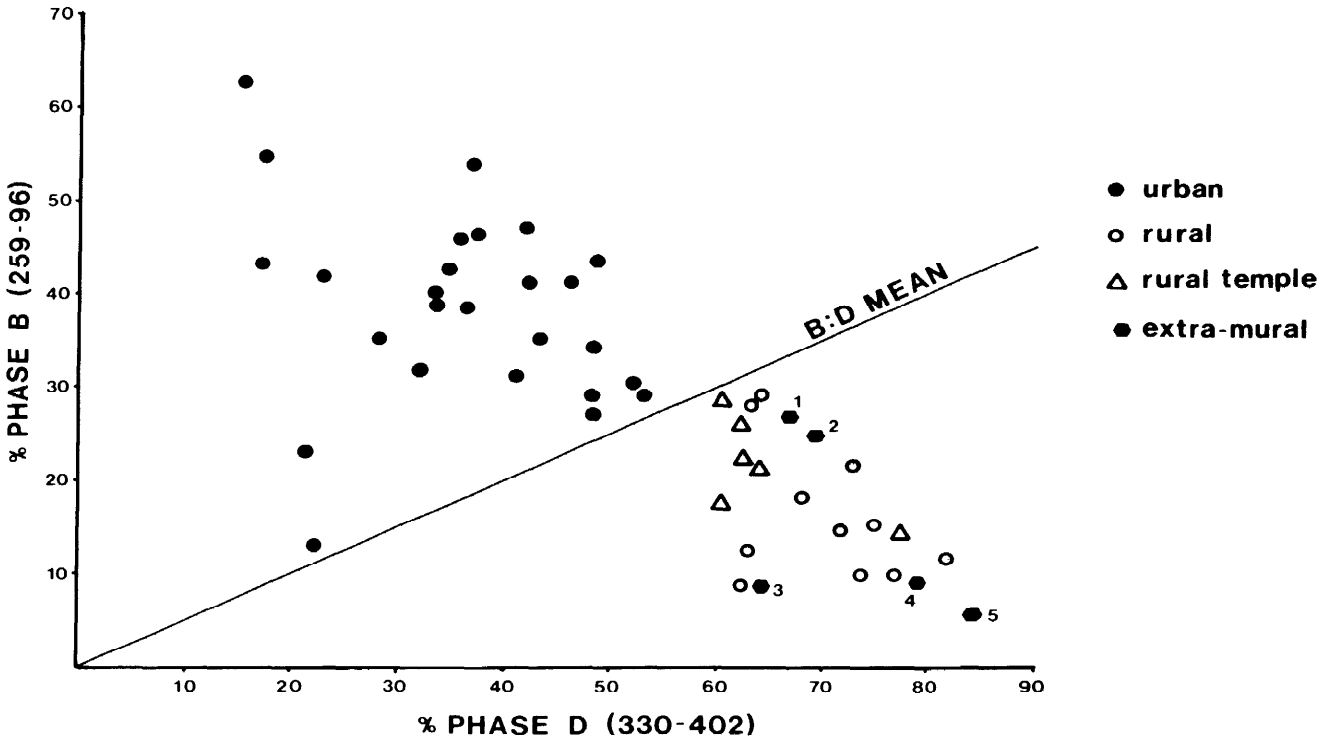
The years since 1960 have been particularly significant in the development of Roman numismatics in relation to the study of Roman Britain. It has been in the interpretation and comparison of coin lists and their application to the understanding of archaeological sites that developments have been made. The requirements of the archaeologist, allied with the accumulated knowledge of the academic numismatist, have produced a new sub-discipline which has been christened 'applied numismatics' (Casey 1974). Today, coin specialists working on assemblages from sites are expected to make use of all of the evidence at their disposal. They will apply increasingly mathematical methods to the data in order to deduce information about coin use and about everyday life on Romano-British sites, in addition to providing the dating information for individual contexts.

There are two major reasons underlying these developments and change of emphasis, Before 1960, a very large proportion of the coin which turned up on Romano-British sites lacked an adequate work of reference, which was then provided by Carson, Hill and Kent's *Late Roman Bronze Coinage* (Carson, Hill & Kent 1960). That, albeit slim, volume filled the remaining gap in the ability of numismatists to catalogue the full range of Roman coinage found in Britain, to an acceptable modern standard. With that final piece of the jigsaw in place, the way was cleared for the development of systematic comparative and analytical methods to be applied to the study of archaeological site finds. The 'applied numismatics' rapidly gained impetus over the following decade. The second significant reason for the development of 'applied numismatics' has been the boom in archaeology which occurred during the 1960s and 1970s in this country Many more sites were excavated and yielded large numbers of coins. In contrast to earlier years, the emphasis of research was no longer restricted to hoard studies but now regularly included site finds. A considerable body of new data became available for systematic, scientific, study and numismatists were to work in close liaison with archaeologists in an attempt to interpret site assemblages.

In 1964 a formula was established by Dr Ravetz for the breaking down of Roman coinage into Issue Periods, enabling the construction of site histograms (Ravetz 1965). This has since been modified by others, including Curnow, Reece and Casey (Curnow & Reece 1969; Casey 1974). The visual presentation of the distribution of finds by a histogram was a most useful and effective method of expressing the coinage history and status of individual sites and of comparing sites. The histogram not only enables the quicker analysis of a site coin list but also reflects that there was a marked pattern in the coinage of Roman Britain, peculiar to this province.

Coin finds from Roman-British towns

It has been convincingly shown that there is an overall pattern of coin loss common to British sites which differs from that of continental sites (Reece 1972, 1974, 1987b; Casey 1974). The coinage pool of Roman Britain can thus be seen as distinct and distinguishable from that of other Roman provinces. In his influential paper published in 1972, Reece presented a histogram which combined the coin loss values from fourteen British sites, including large and small towns, rural, religious and Saxon Shore fort sites. Despite having been compiled some eighteen years ,ago and that so many more sites have since been investigated, that histogram still goes



Key to numbered sites:

1 Catterick Bridge
2 Winchester, western surburbs
3 Chelmsford, outer sites
4 Caistor by Norwich, west
5 Colchester, Butt Road

Figure 1 Diagram showing late 3rd century coinage plotted against that of the later 4th century

some way to providing a British 'background', or average, against which new sites can be compared and contrasted. Once it had been established that there was a distinctive pattern of loss and having defined the overall pattern, it was subsequently possible to compare specific categories of sites with this.

In addition to the use of Issue Periods, Reece has employed four main blocks, which allow the broad comparison of 'early' (to 260), 'radiate' (260-96), earlier 4th century (296330) and later 4th century (330-402) coinage (Reece 1974). These blocks may also be termed Phases A-D, respectively. When the coinage of individual sites is plotted diagramatically on this basis, clustering occurs between sites which share specific tendencies and peculiarities. In Figure 1 the percentage of Phase B coinage (260-96) is plotted against that of Phase D (330-402), for a range of British site types. Town sites cluster upwards to the left, showing these sites to have a good number of radiate issues, together with a roughly equal number of later 4th century types. Non-town sites lie to the right, exhibiting stronger Phase D values. This method is not sensitive enough to separate *civitas capitals, coloniae* or small towns from the overall urban category. The busiest periods of coin use at towns is shown to have been between 260-96, while at rural locations, maximum coin use occurred between 330-402.

Having identified a distinctive pattern of coin loss in respect of towns, Reece observed that at Colchester the site of Butt Road, immediately outside the town wall, possessed a rural and not a town pattern, despite its proximity (Greece 1987). This same phenomenon is now being found at other towns. The known examples of extra-mural town groups which fall within the rural range are distinguished in Figure 1. For example at Caistor by Norwich (Norfolk), the field immediately outside the west gate has produced a contrasting rural group (Davies & Gregory 1991). At Winchester (Hampshire), the extra-mural excavation in the western suburbs contrasts with other intra-mural groups (Davies forthcoming a). At Catterick (North Yorkshire), at the site of Catterick Bridge in the northern suburb of the Roman town, a rural pattern has been recorded (Davies forthcoming b). In the case of Chelmsford (Essex), the town was not walled but a group from just outside the town provides a further example (Davies forthcoming c). This does seem to be a recurring feature of town coin groups.

Another feature of town groups is that they produce larger numbers of coins and have longer chronological ranges. For example, Wheeler's excavations at *Verulamium* produced 1,700 Roman coins. To date, we have in the region of 10,000 from the town. Colchester produced 3,200 between 1971 and 1979 (Crummy, (ed) 1987). Dorchester has produced 3,100, Catterick 1,018, Chelmsford 700, Wanborough 1,700 and Neatham in excess of 1,000. We have over 4,600 recorded from Caistor by Norwich which have very largely come from surface collection alone. In comparison, assemblages from other sites tend to be much smaller. Fishbourne produced 224, Lullingstone villa 327, Chedworth villa 310. Only a few sites, such as the recent excavations at Bancroft villa, with 900 coins, and Stanwick villa, currently approaching a massive 3,500, can compare with urban sites. Both of the latter examples have made good use of metal detectors, which have been partly responsible for the higher numbers recovered on these large scale excavations. However, it can be stated that in general, town sites turn up larger numbers of coins.

Different categories of civil site cannot generally be distinguished by the individual coin types found within them. The issues used were common among civil sites, although in the case of military sites, certain issues are found in greater numbers and in a particular combination. Many towns had a good supply of early coin. Colchester (Fig 2) and Lincoln (Mann & Reece 1983), both *coloniae,* possess high values, which are to be associated with the military occupation. Strong early loss is exhibited for *Verulamium,* from the 1955-61 excavations, reflecting the early thriving *civitas* (Reece 1972). The early importance of the small town of Chelmsford (Essex) is reflected in the coin loss and a military involvement can also be interpreted from the strong 1st century activity there, with finds typical of a military group of that period (Davies forthcoming c; Fig 2). Some sites exhibit a major early peak, reflecting a military origin, followed by a more normal urban pattern, such as Kingsholm (Gloucestershire) (Davies forthcoming d; Fig 2), Exeter (Devon) (Shiel & Reece 1979) and Sea Mills (Avon) (Reece 1972). Many other towns, which may have lacked an early military phase, are not as markedly strong in early coin. The early coin peaks in question include the presence of numerous irregular Claudian asses and *dupondii,* and also reflect the massive injection of coin from the *Lugdunum* mint issued during the reign of Vespasian.

Low coins loss during the years between the late 2nd century and mid 3rd century is universal on all categories of British site. It is after this period that the coinage of urban and rural sites is seen to quantitatively differ again. As discussed above, and as shown in Figure 1, the radiate coins of the years 260 to 296 were roughly equal in number to those of 330 to 402 in *civitas capitals* and other large towns. In the 'rural' category, sites exhibit approximately twice, or more, the number of 4th century coins to those of the 3rd.

With the greater data-base now available, it is possible to construct combined histograms for specific categories of site, similar to Reece's 'British background' version (Reece 1972). Sixty coin lists from British *civitas capitals, coloniae* and larger towns have been used to construct Figure 3A. As in Reece's original diagram, the bars represent the range of values encountered. A heavy presence of early 1st century coin dies down through the 2nd and earlier 3rd centuries. Heavy late 3rd century and still substantial 4th century values are recorded. For comparison, Figure 3B shows the pattern obtained from forty lists from rural settlements. The lower 1st century values are clearly shown and the stronger values after 330 also stand out. Figure 3C has been constructed from 25 lists from villas. The pattern is similar to that from rural settlements but with a slightly more restricted late 3rd century range and with more emphasis on Issue Period XI-IIb (330-48) during the 4th century.

The interpretation of site finds

It has been shown that coin assemblages from Romano-British urban sites do possess peculiar characteristics and that towns can be distinguished from other sites on the basis of their coin lists. The approaches briefly reviewed here are becoming especially important at a time when possibilities for research excavation and fieldwork are becoming more restricted. At the same time, a proliferating quantity of numismatic data has become available from the country as a whole, largely as a result of the use of metal detectors in controlled surveys and in excavation. The approach which has been developed over the last thirty years can be applied to such data and provide an insight into the archaeology of an area in advance of a full programme of excavation. Two case studies, which present new data from major sites in two counties within eastern England, can be related.

A recent survey has systematically recorded some 15,000 coin finds and compiled coin lists for sites from some excavation, fieldwork and metal detector surveys within the county of Norfolk (Davies & Gregory 1991). The objective was to contribute to our knowledge of Roman settlement in the tribal area of the Iceni and to throw light on the nature of a number of sites where excavation will not be possible. Although the Iceni extended beyond the boundaries of modern Norfolk westwards, towards the Nene Valley and Cambridgeshire, and south, into north-west Suffolk, the county does correspond to the core area of their territory Twenty-two individual site lists were compiled, all but two containing in excess of one hundred coins. The values for Phases B (269-96) and D (330402) have been plotted in Figure 4A.

The Norfolk sites which lie above the mean line, in keeping with Romano-British urban sites, are Brampton, Caistor by Norwich groups, Pentney, and the Saxon Shore forts of Brancaster and Caister-by-

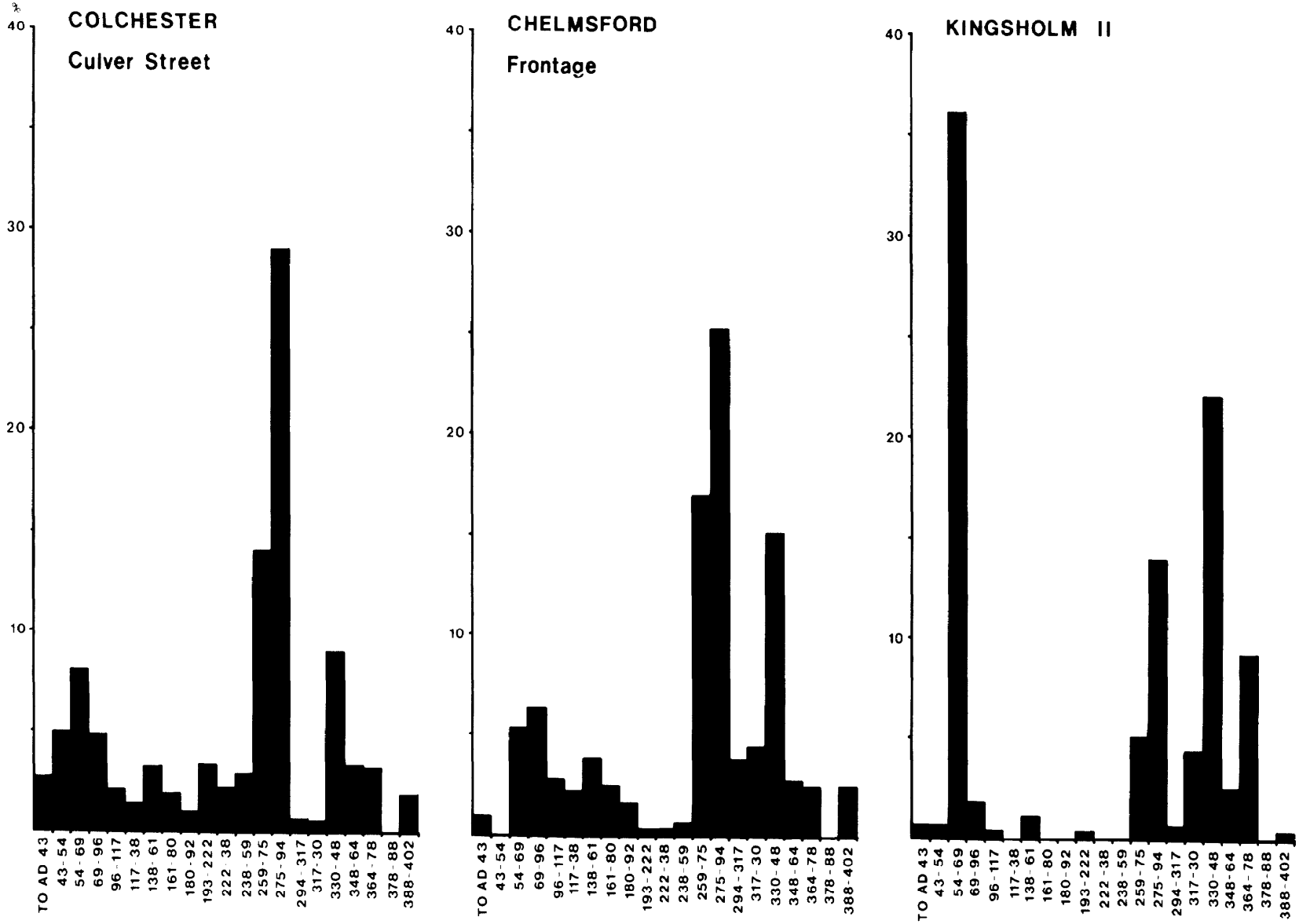


Figure 2 Histograms for Colchester, Chelmsford and Kingsholm, Gloucester sites

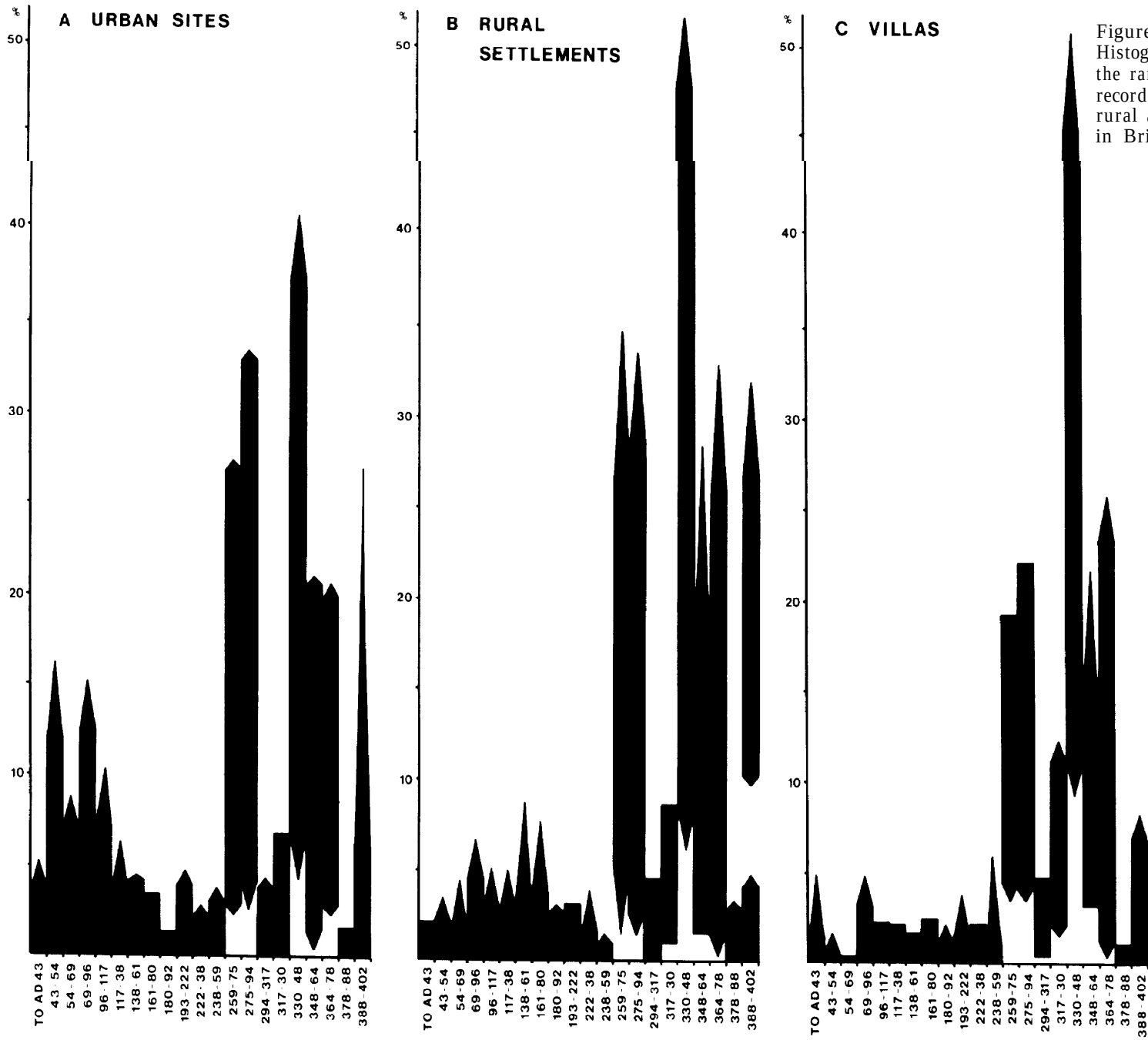
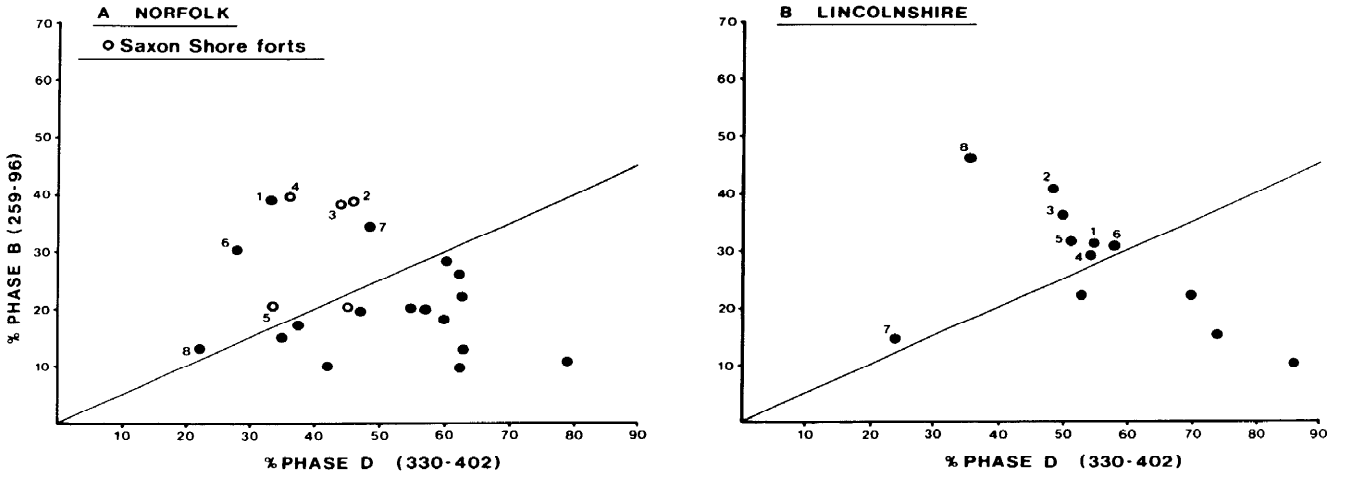


Figure 3
Histograms showing the range of values recorded from urban rural and villa sites in Britain



Key to numbered sites:

Norfolk
1 Brampton
2 Brancaster
3 Caister by Yarmouth
4 Caister by Yarmouth (casual finds)
5 Caister (extra-mural)
6 Pentney
7 Caistor by Norwich
8 Caistor, north east town

Lincoln&ire
1 Dexthorpe
2 Foston
3 Ludford
4 Saltersford
5 Sleaford (1984)
6 Sleaford (19604)
7 Lincoln: Museum
8 Lincoln: Flaxengate

Figure 4 Diagrams showing late 3rd century coinage plotted against later 4th century coinage for Norfolk and Lincolnshire sites

Yarmouth (Gurney & Darling, 1993). These Norfolk Shore forts can be contrasted with the later bastioned examples of Lympne, Burgh Castle and Richborough; exhibiting a higher late 3rd to later 4th century coin ratio, which makes them resemble the urban category among civil sites and serves to distinguish them from the later Shore forts. Otherwise, the great majority of Norfolk sites fall within the 'rural' range, outnumbering 'urban' sites at a ratio of approximately 3:1.

The overall rural character of Roman Norfolk is not surprising. The Ordnance Survey map of Roman Britain records just four settlement sites in this area (Ordnance Survey 1978). However, it is somewhat unexpected that some other larger non-temple, coin groups, including those from Billingford and Great Walsingham (both of which have produced lists of over one thousand coins) show as typical rural sites and not as small towns. This survey, which makes use of a suitably large data-base confirms that there was a very limited network of towns, although a number of rural settlements can now be added to the list of known sites. An additional feature to result from this survey has been that regional characteristics may be identified within coin lists. It was noted that in the second half of the 4th century, after 348, coinage from Norfolk sites tails off and is much lower for the final years of Roman Britain than in other areas. Figure 5 shows the range of values from urban coin lists in Norfolk. The late Roman decline in coin loss can be compared with the situation in Figure 3A for other British towns. This pattern was found in both Norfolk urban and rural sites and has been born out by a compilation and study of stray finds from across the county. This particular observation may be important in the understanding of late Roman Norfolk but it also serves to show that coin lists may be distinguished by regional characteristics, as well as by the function of the site.

An additional source of data that is available for analysis in this way can be found in county museums. In many provincial museums coin collections from local sites have been accumulated over many years and may have a vague provenance or origin other than the name of the site. This material has been carefully assembled but is subsequently often unstudied, Assemblages from nine Lincoln&ire sites, which were recorded from unpublished collections held in Lincoln City and County Museum, have been analysed and

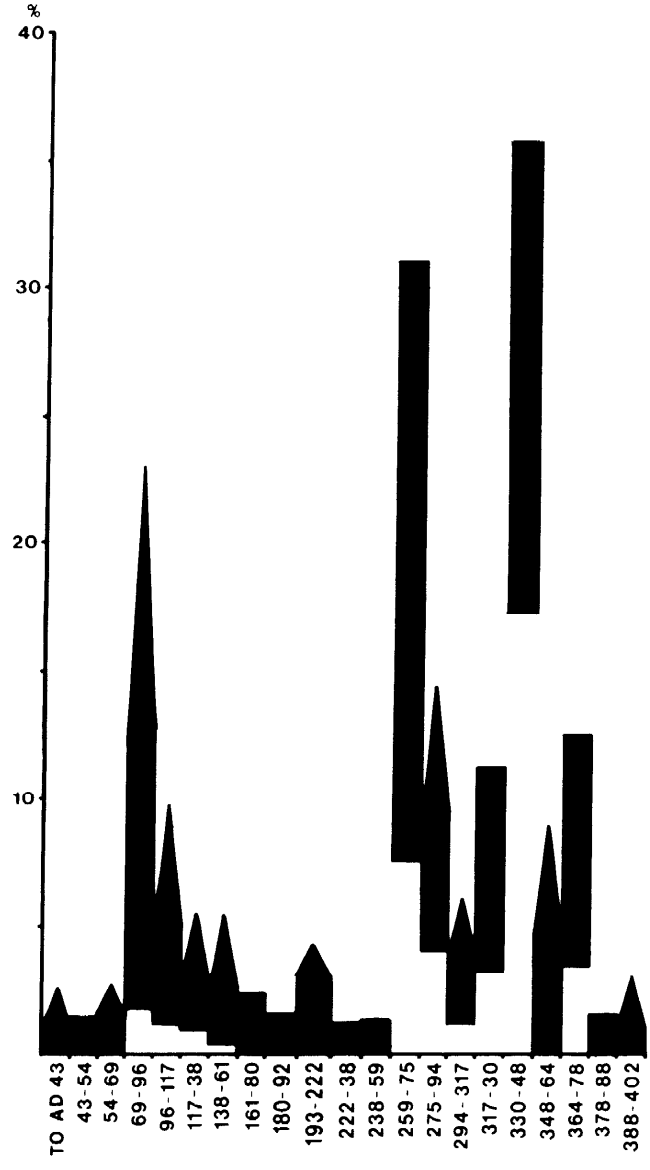


Figure 5 Histogram showing the range of values from Norfolk urban sites

are plotted in Figure 4B alongside others from Lincoln-Flaxengate (Mann & Reece, 1983) and from Sleaford (Davies forthcoming e).

The sites plotted in Figure 4B contrast to the Norfolk picture shown in 4A. Most of the sites are found above the mean ratio line, indicating that they are more similar to other Romano-British urban sites. There is a comparative absence of recorded rural settlements. Although this coverage can not be considered fully comprehensive of all available site data, as was the c&e with the Norfolk assemblages, it does make use of an appreciable number of site lists. As a result, it is possible to interpret more of an urban situationaround and to the south of Roman Lincoln than was found in the tribal area of the Iceni.

The large numbers of neglected but provenanced museum finds may also be used to interpret the development of settlement at a more detailed level. Again, the data presented here were recorded from Lincoln Museum. Hundreds of individual but provenanced finds have been accumulated from the *colonia* over many years. The use of coins as closely dateable artefacts allows a picture of the growth of settlement in and around the town to be built up, when plotted onto base maps. In Fig 6, provenanced stray coin finds have been mapped for three date ranges. The first shows the distribution of the earliest issues, dated before AD 69. These are tightly concentrated mainly within the legionary fortress and around its walls. In the next map, the radiate coinage, of the years 260 to 294, shows a contrasting picture. Coin loss is spread across the upper and lower city and also extends further afield beyond the walled area. There are also more extra-mural finds to the south, north and east. In the third example, the mid 4th century version (317-48), shows coins again spread across the lower city and outside the walled town, with fewer stray finds from the upper city. There is no concentration restricted to within the walls and coins come fairly evenly from within and beyond the walls.

Coin use and the role of towns

The picture of heavy coin loss in towns, with coin lists covering the entire period of Roman Britain, has been established. The role of the towns and the reasons underlying the observed patterns, will now be considered. It was in the towns that money-using markets developed after the conquest and where, to a large extent, monetary transactions were focused during much of the period of Roman Britain.

When the Romans invaded Britain in AD 43 there was no native monetary economy in place. Coinage was first used in quantity in Britain by the Roman invaders, in and around the army forts, fortresses and bases. It is within this context that the earliest Claudian copies were produced in order to provide soldiers with small change; some of which was produced locally, as at Colchester (Kenyon 1987). Barter continued among the native population while the use of coin subsequently became adopted in the larger civilian settlements (Burnett 1977). However, it has been shown that the early Romano-British economy 'remained part of social relations' away from these sites.

The higher values of early coin loss recorded at urban sites do understate the volume of coin circulation during those years. It has been shown that 1st and 2nd century *aes* could circulate for very long periods, into the mid 3rd century (Reece 1974), compensating for an insufficient quantity of small change in the economy. This discovery can be confirmed by the high degree of wear regularly found on post-Claudian *aes*. A better indication of

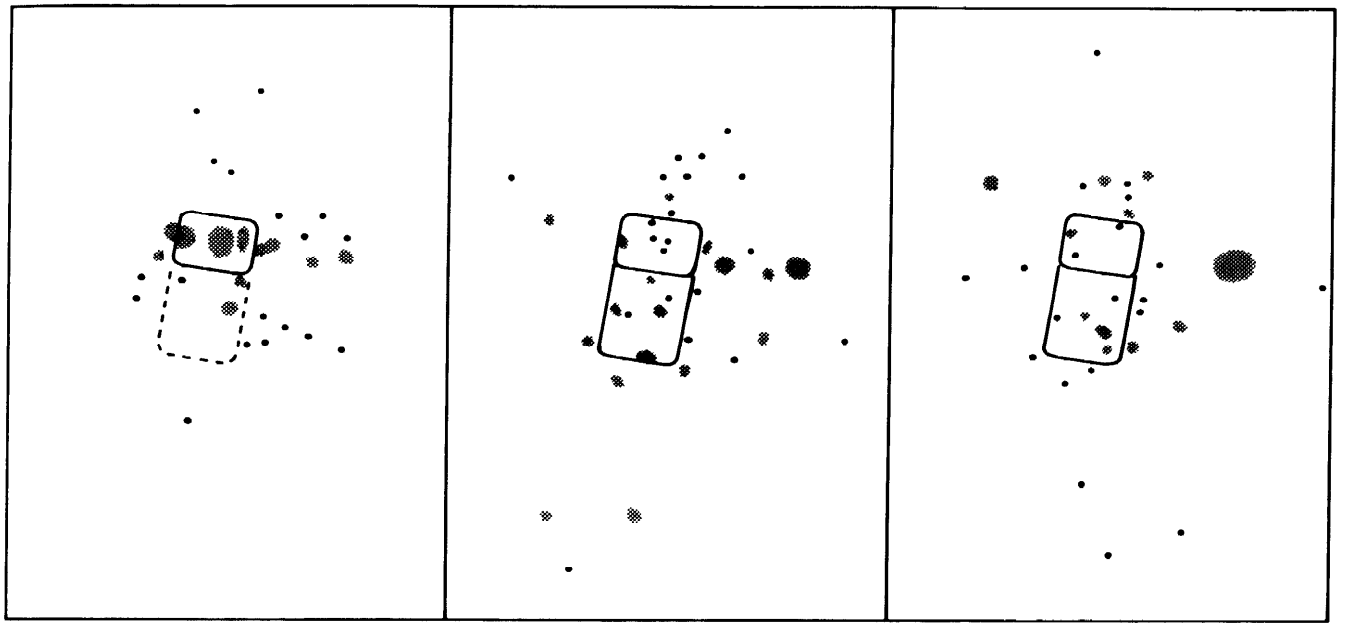


Figure 6 Maps of provenanced stray coin finds from Lincoln Museum, in relation to the town walls. Shading represents multiple finds. Single dots represent individual finds

the coinage circulating within the early towns is provided by the assemblage from the sacred spring at Bath (Walker 1988). This unusual archaeological deposit was not formed by the familiar factor of casual loss but by deliberate deposition, into a votive deposit. A histogram constructed from the coin list reflects the high availability of *aes* at a town site during the late 1st and 2nd centuries, exceeding the figures obtained from casual loss, as shown in Figure 7. Dr Walker has calculated from a die analysis of the Bath coins that there was a very low amount of coin per head of population within Britain as late as the reign of Antoninus Pius, when there was an average of just 2 *sestertii per capita* (Walker 1988). With the larger amounts of coin concentrated in towns, it is clear that much of the population beyond these centres was unfamiliar with coin use. Moreover, it is unlikely that a full monetary economy existed at all in Britain during the 1st and 2nd centuries AD. The lowest denominations of the Augustan system, the *semis* and the *quadrans* (which are found on sites in areas such as Italy, southern Gaul and Greece), are very rarely found in Britain, even at votive sites as at Bath.

The pattern of coin loss on British sites show that there was more coin in circulation and in general use in the late 3rd century, with an exceptionally large quantity related to towns (see Fig 1). It was after the late 260s that large numbers of low value coins are seen for the first time in Britain. A prolonged period of debasement had undoubtedly contributed to the state of the currency but a greater volume of coin production, from a greater number of mints, and more widespread and intense use of low denomination coin, can certainly be detected at this time. A number of developments can be seen to have dated from approximately the same period and it is likely that these factors together may have acted as a stimulus for a more widespread monetary economy. Could it be possible that this greater adoption of coin use across the province can be tied in with the huge building programme associated with towns at that time? A number of town walls have been dated to the period soon after 270 (Frere 1987,242). Although the construction of walls was not a sudden programme and had begun in some places much earlier, there was a detectable programme of construction from about 270.

The administration of the province during this period is not well understood. Is it possible that the large quantities of low denomination coinage which began to be used at that time represent payments to civilian workers involved in the building programme? A very large labour force must have been employed across southern Britain, which could also have been employed in the construction of the Saxon Shore defensive system, which can most probably be dated from the 270s as at Richborough (Cunliffe 1975, 421). Payment in kind to the work forces would have been a huge undertaking, involving a high level of organisation, but payment in coin would have overcome the problem, leaving the workers to fend for themselves and to purchase their own food and provisions - thus providing a further impetus to the economy which does seem to be in evidence at that time. For instance, the take-

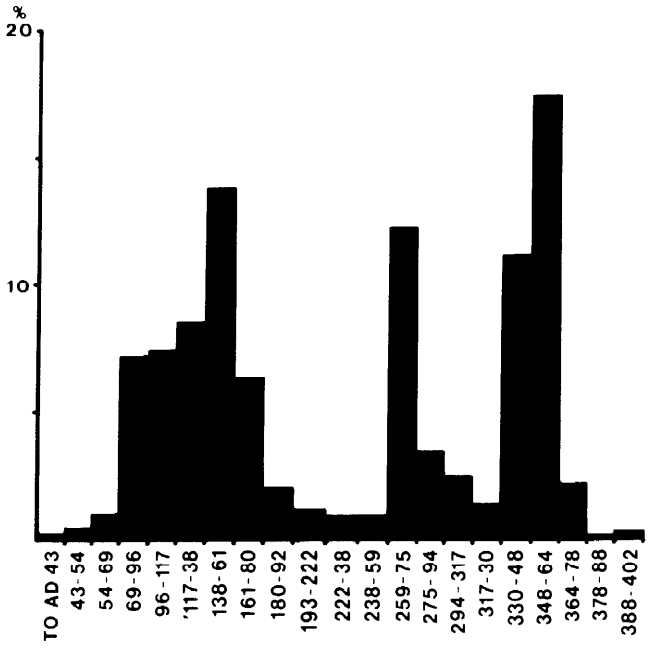


Figure 7 Histogram of coins from Bath, Sacred Spring

off period of the large New Forest and Oxfordshire pottery industries is thought to have been from about 270 (Fulford 1975; Young 1977). This system would provide an ideal context for the introduction of the widespread and widely struck irregular *antoniniani* at that time. The sanctioning and integration of this coinage otherwise provides difficulties as to its universal acceptance and use. The proliferation of coin use, albeit slightly less, in rural contexts at the same time ties in with the observed period of villa improvement and construction (Salway 1981, 280). This is a unique set of circumstances which occured during the late 3rd century and together they provide an ideal context for a situation of more widespread monetary use. During the 4th century the emphasis of coin loss switches to rural sites, although it still remains high on town sites.

Although Romano-British coin studies have a long history, the scope for fresh studies is becoming greater all the time, as large quantities of coin are recovered, especially with the application of metal detector recovery on sites. Despite the advances made towards a recognition of patterns in the coinage of Roman Britain our statistical methods of interpretation still lack precision and some methods used are not universally accepted. Literally hundreds of site coin lists are now available for analysis and comparison but the lack of an agreed standard presentation of data hinders such work. The years ahead must see a greater standardisation which will enable the application of more refined methods of analysis and ensure a fuller application of the available information to the understanding of life in Roman Britain.

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14 Roman Towns and Roman Inscriptions of Britain, 1939-89

R S O Tomlin

Sir Mortimer Wheeler, fortified by the mayor's unadventurous Graves (p 2), was not the first excavator of *Verulamium*. He quotes Matthew Paris' *Lives of the Abbots of St Albans,* which describes the sinister Roman ruins being used as a quarry for the Saxon abbey church. Idolatrous altars were found; they were broken up by order of the Abbot. Latin and Celtic manuscripts were also found in one of the buildings, book-rolls that no one could read, until they were deciphered by a very old priest. The Latin texts related to the cults of Apollo and Mercury, but a particularly beautiful roll in the ancient British language gave the history of the protomartyr St Alban. It was translated into Latin before falling miraculously into dust. The other documents, described as books in which the inventions of the devil were contained, were thrown away and burnt (Wheeler & Wheeler 1936, 35-7).

Stone inscriptions are rare from *Verulamium (RIB* 222-9; Wright 1956, 146, No 3) - fragments of nine or ten, not a single complete word amongst them - but this is not the reason. The same can be said of other towns in south-east Britain: an altar and two fragments from Winchester *(RIB* 88; Wright 1958, 150, No 1 and 1968, 206, No l), for example, a fragment from Caistor-by-Norwich *(RIB* 214), two fragments from Leicester *(RIB* 244 and 245). See further, Mann 1985, 204--6. Part of the true explanation is implied by Matthew Paris. For geological reasons good building stone is not locally available in much of south-east Britain: a major medieval building would incorporate salvaged Roman brick and stone. The Romans had to import suitable stone for inscriptions, making them luxury items: Purbeck marble at *Verulamium,* for example, and at Sil-Chester and London; Bath stone at Colchester. Squared stone would be gratefully re-used as soon as possible: think of the tombstone of Classicianus *(RIB* 12), broken up and built into the Roman city wall of London. But this is not the whole story. Even at Exeter, Ilchester and Dorchester, three *civitas* capitals where good building stone was available, the totals of inscriptions are 0, 0 and 3 respectively. We have to conclude that the towns of Roman Britain were not afflicted with what Ramsay MacMullen calls the 'epigraphic habit' (1982, 2X3-46). A single town in north Africa can yield as many inscriptions as the whole civil zone in Britain. The distribution maps in Biro's (1975) useful survey illustrate the points that John Mann has made so well: inscribed stones in Britain are found overwhelmingly in the military zone, at the legionary fortresses, at auxiliary forts, and on the two Walls; and here they are erected by army units, by soldiers, by immigrants from provinces with a stronger epigraphic habit. Even in the south a military bias is apparent: inscriptions often reflect a military presence, at Bath and London for example, or belong to military foundations like Colchester and Cirencester (Biro 1975; Mann 1985).

It must be admitted at the outset, therefore, that inscriptions, unlike archaeology, will be sparing in their information about the towns of Roman Britain. Nonetheless, where other written records are so scarce, they can be very important. They are contemporary documents of place-names, public buildings, local government, religious cults, for example; they tell us things about people that archaeology cannot, like their names, where they came from, their family connections, what they did for a living. But we must never forget John Mann's statement of the obvious, obvious when it has been stated: 'Stone inscriptions do not give us information about the total population of an area. They merely tell us something about the people in that area who used stone inscriptions' (Mann, 1985).

Systematic collection begins with Camden in the 16th century, but the most important single advance belongs to our own time, with the publication in 1965 of the first volume of *RIB, The Roman Inscriptions of Britain,* inscribed stones found before 1955 (the text was delivered to the press in 1960, but took five years to print). It was conceived by Francis Haverfield, who compiled the first supplements to the 1873 Britain volume (VII) of the *Corpus Inscriptionum Latinarum.* He co-opted as his draughtsman another Oxford don, R G Collingwood (Fig l), who taught philosophy but retained his early interest in archaeology: 'I grew up in a gradually thickening archaeological atmosphere', he wrote in his *Autobiography* (1939), an atmosphere which dated from his first visit to a modern excavation. 'It was my father's dig at the north tower of the Roman fort called Hardknot Castle; I was three weeks old, and they took me in a carpenter's bag'. When Haverfield died, broken-hearted by the death of his favourite pupil and colleague G L Cheesman at the Dardanelles, who would otherwise have been the editor of

RIB, Collingwood assumed the editorship. 'From 1920 onwards I spent much time every year travelling about the country and drawing Roman inscriptions.'

Havefield insisted that *RIB* should be illustrated by line drawings. 'He had no illusions about the value of photographic illustrations in a work of this kind'. By this Collingwood meant that a photograph is objective, but entirely stupid: it tells too much, and too little; it cannot distinguish between stone and cement, between deliberate strokes and casual damage; above all, it is difficult if not impossible to light a worn inscription so as to reveal the whole of each letter. A drawing by contrast is selective and interpretative, subjective too of course. It taxes the honesty and experience of the draughtsman. Collingwood came from a family of artists, and his drawings in *RIB* can be recognized by their grace and precision, just as his handwriting in the card index is unmistakable. His method, which he transmitted to his successors, was to stretch paper over the stone and to rub it selectively with crayon or pencil, catching the cut edges of the letters; the rubbing was then fair-copied in reverse, black letters on white, and reduced for printing, when small irregularities would disappear. Eric Birley has praised the quality of the drawings in *RIB* which made his own improved readings possible (1966). They can certainly be objective. However, Collingwood's method has its drawbacks: it requires sensitive fingers, and risks overlooking unexpected details and thickening the letters. Ideally one should make two 'squeezes' (papier-mâché impressions), mark the outline of the letters on one by reference to the stone, and then fair-copy it in reverse, with the second 'squeeze' as a control. But in Britain, where 'squeezes' are often made in damp and difficult conditions, and may take many hours to dry, this is a counsel of perfection.

In 1938 Collingwood's own health was failing, and he co-opted a junior editor, Richard Wright (Fig 2), who had recently become a lecturer in Classics at Durham. He soon succeeded Collingwood, and, for all his exemplary modesty in the Preface, his is much the greatest contribution to *RIB*. The endless checking and obsessive concern for accuracy and completeness amount to a kind of greatness; and in reading and recording what is actually inscribed on the hundreds of extant stones, in the pure epigraphy entailed, he is unsurpassed. In the interpretation and restoration of texts, however, criticism can be made of *RIB*, even if it is over-stated in Eric Birley's (1966) 'necessarily critical' but important review[2] (see also Alföldy 1966 and Deman 1967); Birley's own writings, notably the papers collected in *Roman Britain and the Roman Army* (1961), are

Figure 1 R G Collingwood, first editor of Roman Inscriptions of Britain. A watercolour by his sister (Photo by courtesy of Mavis Guzelian)

models of applied epigraphy. A major omission was made good in 1983 with the publication of Roger Goodburn's *Epigraphic Indexes* to *RIB*. Here too is a work whose excellence is unfairly taken for granted: the attentive (and grateful) user will find the compiler has faced up to many difficult decisions of definition and organization on his behalf. Its information is lucid and accurate.

Wright continued the tradition set by Collingwood, of publishing newly discovered inscriptions each year in the Roman Britain survey *in Journal of Roman Studies* and (from 1970) in *Britannia*. Britain's annual crop of Roman inscriptions and graffiti, between fifty and a hundred, is small enough for this to be feasible; but although the practice has been continuous since the *Journal* for 1921, it has not been widely followed abroad. In 1971 Wright

Figure 2 RP Wright, second editor of Roman Inscriptions of Britain, during the excavation of RIB 733. From left to right: T Wake (Bowes Museum), I A Richmond, F G Simpson, R P Wright (Photo: Bowes Museum)

was joined by Mark Hassall, and in 1975 by the present writer; they have now succeeded him as joint editors. Wright was also drafting *RIB* II, inscribed objects not of stone, the so-called *Instrumentum Domesticum*, ranging from ingots and metalwork to graffiti on samian and coarseware. Ill health has forced him to relinquish this endless task; his drafts are now being edited by Sheppard Frere and the present writer, inevitably with less accuracy, but at least in the hope of making them available in the not too distant future. *RIB* II is now appearing in fascicules.

Goodburn's *Indexes* are the skeletons of historical papers in themselves, but two books should be singled out *honoris causa* for making history out of epigraphy Robin Burn's *The Romans in Britain* (1969) shows how it is done. It is an anthology of inscriptions linked by running commentary which, like Birley's writings for a more professional readership, squeezes information from a single item and sets it in a larger context. It is written, as Mark Hassall has said, with humanity; here is the author's comment on the evacuation of Inchtuthil: '. . . from the way in which they dealt with surplus samian crockery - pulverising it with hammers and using the results to block the drains which they had lately dug - it would appear they were very angry indeed'. A new edition would be welcome, to take account of another twenty years' discoveries. However, there is another splendid book, Tony Birley's *The People of Roman Britain* (2nd edn, 1988), which synthesises hundreds of inscriptions rather than discussing them one by one. It is a tour de force of what in other hands can be the dismal science of prosopography: here is a fluent and attractive social history assembled from a mosaic of small details.

The formal geography of Roman Britain has been revolutionised by Leo Rivet and Cohn Smith's publication in 1979 of *The Place-names of Roman Britain.* Mark Hassall's elegant and convincing emendation of the *Notitia's* list of the Wall garrisons - *Banna* for Birdoswald, *Camboglanna* for Castlesteads - is a warning that the literary sources can still yield new evidence. It has the merit of making sense of *RIB* 1905, the altar dedicated at Birdoswald by the *venatores Banniess(es)* (Goodburn & Bartholomew (eds) 1976, 113). Hassall has also extracted unsuspected information from *RIB* 899 (Old Carlisle), where *VIK MAG* must be understood, not as the local authorities *(RIB's vik(anorum) mag(istri)*), but as the villagers collectively, the *vik(ani) Mag(...).* Old Carlisle is thus either the *Muglona* or the *Magis* of the *Notitia* (Goodburn & Bartholomew (eds) 1976, 111). In default of such inspiration, however, new evidence will be a matter of luck: the discovery of inscriptions. Another northern *vicus* was identified in 1956, when an altar was ploughed up outside the fort of Carriden at the east end of the Antonine Wall. It was dedicated by the *vikani consi[s]tentes castel[lo] Veluniate,* the villagers attached to the fort of *Veluniate.* The item ought to have bonus value, since *Velunia* is the first of ten 'civitates' listed by the Ravenna Cosmography 'in a straight line one after another, where Britain is at its narrowest from sea to sea', but in fact the others remain uncertain (Wright 1957, 229-30, No 18; Rivet & Smith 1979, 211). Still in the north of Britain, a milestone of AD 258-68 was ploughed up near Brougham Castle in 1964. It was dedicated to Postumus by the *r(es) p(ublica) c(ivitatis) Car(vetiorum).* The tribe of the Carvetii is not mentioned by Ptolemy, but it can now be seen that it is named *in RIB* 933, the tombstone (now lost) of a *sen(ator) in c(ivitate) Carvetior(um).* Before the discovery of the Brougham milestone it was not clear whether *C* in *RIB* 933 should be expanded as *c(ohors)* or *c(ivitas),* whereas it now appears that the Brigantes who lived in the Eden valley were later organised as a separate *civitas* (Wright 1965, 224, No 11). The capital must have been Carlisle, whose well-attested name *Luguvalium* is now confirmed by two wooden stilus writing tablets (Fig 3) found there, and in the *Vindolanda* tablets (Wright 1957, 229-30, No 18; Bowman & Thomas 1983, 107).[3] More about these in a moment, but first *Verulamium* again.

Perhaps the most important inscription from a Roman town in Britain these fifty years is the group of fragments (Fig 4) found in the *forum* of *Verulamium* in 1955. Enough survives of the emperors' names to prove it belongs to the sole reign of Titus, to be precise, to the period from July to December AD 79. The letters *GRIC,* therefore, below the erased name and titles of Domitian Caesar, must be part of the name of the best-known governor of Britain, Gnaeus Iulius Agricola. In the line below are the letters *VE* followed by an upright stroke, presumably for Verulamium' or the *civitas* of the Catuvellauni, there is no knowing which. Nor do we know whether Verulamium now received the status of *municipium* like the romanised towns of Spain at this time. It is only a reasonable guess.[4] The evidence is limited, therefore, but what there is accords almost too neatly with Tacitus' conventional praise of his father-in-law's encouragement of urbanisation, the building of temples, *fora* and private houses. But the inscription is too fragmentary for us to know what was actually being built and dedicated.[5]

There is another interesting place-name problem in a fragment of inscribed tile (Fig 5) found in 1965 at *Tripontium,* Caves Inn (Warwick&ire), 15 miles south of *Ratae* (Leicester), the *civitas* capital of the 'Coritani'. The first line of the graffito was originally read as *[ci]vitatis Corielsoliliorom,* a tribe unknown. However, the middle *O* is a triangle of three strokes unlike the other three Os, but perfectly acceptable as a 4th century cursive *A;* and the double *LI* is equally acceptable as a 4th century cursive *VV.* A better reading is therefore *[ci]vitatis Corieltauvorom,* a tribe likewise unknown, the 'Corieltauvi'. In view of where the tile was found, one might have expected 'Coritani', but in fact this familiar name is only attested as a manuscript variant in Ptolemy (the other variant is 'Coritavi'). The Ravenna Cosmography, however, identifies Leicester as *Rat(a)e CORDON,* the next place-name being the unidentified *ELTAVORI.* By analogy with his practice

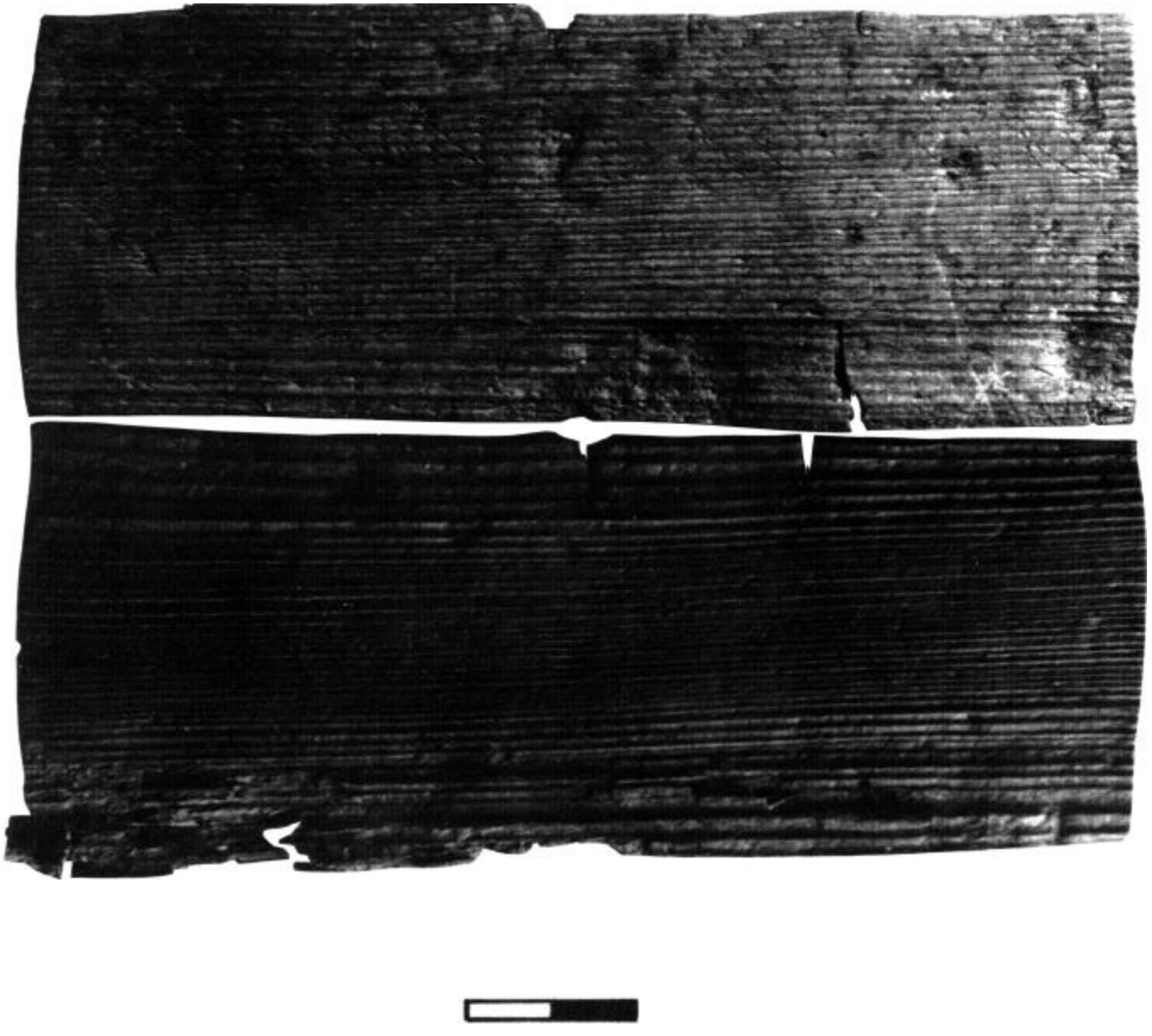
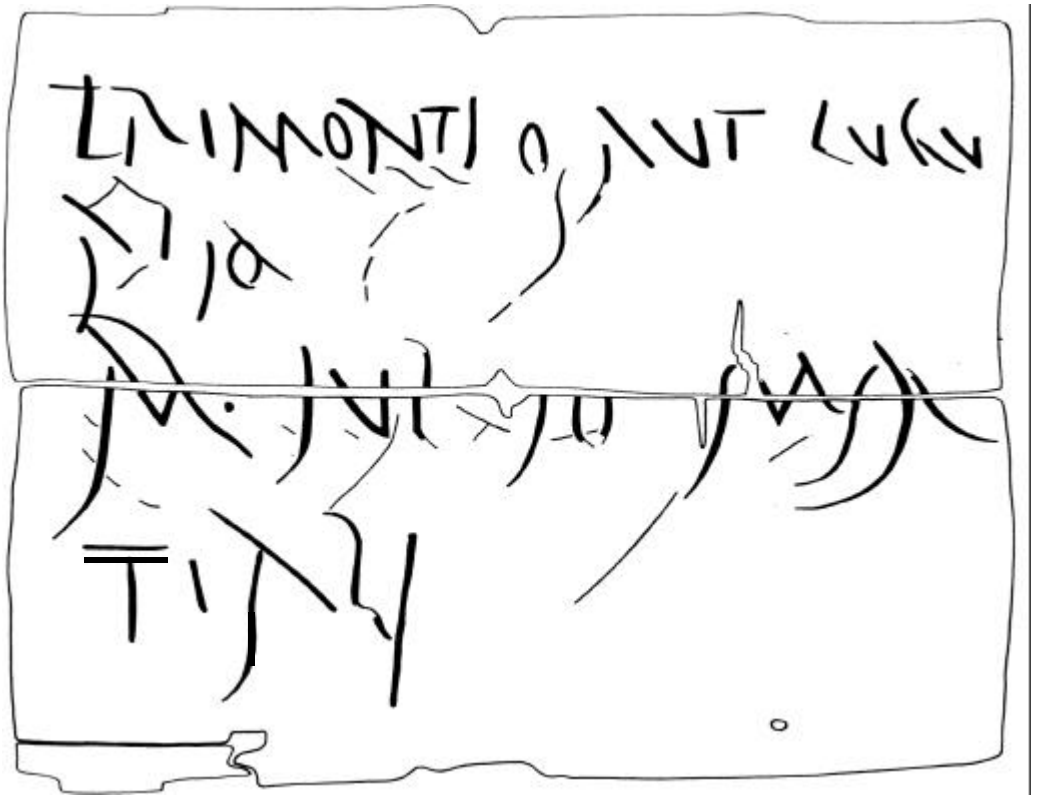


Figure 3 (a) The 'address' on a broken stilus writing tablet from a late-Flavian context at Carlisle (Hassall and Tomlin 1988, 496, No 31) (Photo: Carlisle Archaeological Unit)

b) (Opposite page, top) The visible text drawn by RSO Tomlin It reads: TRIMONTIO AVT LVGVIALZO/M. IVLIO MAR/TIALI, 'To Marcus Iulius Martialis at Trimontium (Newstead) or Lugu(v)alium (Carlisle)'Zt was probably written with a pen, but there is no trace now of ink



elsewhere, it can be argued that the Cosmographer mis-read something like *Rat(a)e Cori-eltavoron;* and that he thus confirms the form 'Corieltauvi'. It is eloquent of our sources for the toponymy of Roman Britain that we should use a tile-maker's graffito, dashed off in seconds some time in the 4th century, in conjunction with the slipshod map-reading of an 8th century Italian cleric, to correct the 2nd century *Geography* of an Egyptian Greek (Tomlin 1983, summarised in Hassall & Tomlin 1983, 349-50).[6]

Two documents from London confirm place-names already known. A tombstone, probably of the 1st or early 2nd century, found at High Holborn in 1961, names a legionary whose origin is *Victricensis.* He was thus born *in* the *colonia Victricensis quae est in Brittannia Camaloduni,* as the *colonia* of *Camulodunum* (Colchester) is described in an Italian inscription (Wright 1962, 190-1, No 1; *CIL XIV, 39*-55 = *ILS* 2740). He is one of the earliest instances of local recruitment by the Roman army in Britain, probably a legionary veteran's son. The other document is more unusual, the first leaf of a stilus writing tablet found in 1986 in a waterlogged deposit in the Walbrook. The wax has gone, but the stilus cut

Figure 4 Inscribed fragments from the forum at Verulamium *(Wright 1956, 146-7, No 3), July-December 79, naming the emperor Titus and Agricola, governor of Britain (Photo: Verulamium Museum)*

into the wood, leaving legible traces. The text is dated 14 March 118 and relates to the disputed ownership of a piece of property located *in civitate Cantiacorum*, which confirms that 'Cantiaci' and not 'Cantii' is the correct form. The property is more precisely located in a *pagus*, a village in Kent whose name is likely to remain illegible, and by the usual reference to the neighbouring property and a minor road. The property is claimed by one Lucius Iulius Betucus, who cites the vendor and the purchase price. The next paragraph begins: 'Lucius Iulius Betucus has testified that he . . .' and there the page ends (Tomlin 1988a).

This important fragment, which splendidly ignores the contemporary military crisis in Britain, is the longest stilus-tablet text yet found there. It is a tantalising hint of the manuscripts that may yet be found in Britain, now there are no abbots to burn them. In retrospect the most significant date in the last fifty years may prove to be March 1973, when Robin Birley noticed in a waterlogged excavation outside the stone fort at Vindolanda 'two small thin fragments of wood which looked rather like oily plane shavings'. When he prised them apart, he saw writing; it was part of a letter, with the mystic words: ' . . . I have sent you . . . pairs of socks from Sattua two pairs of sandals and two pairs of underpants, two pairs of sandals . . .' (Bowman & Thomas 1983, 19 and 133). He had found the first surviving Roman ink-written wooden leaf tablet, the first of more than a thousand at Vindolanda. They are only indirectly relevant to the towns of Roman Britain – recording some place-names, for example 'Carlisle', 'Corbridge', 'Catterick' – but they suggest further possibilities. Similar tablets have since been found at Carlisle, in the 1st century fort, one of them with a reference to 'London' *(Londini)*, and in the civilian south, in gravel-workings near Lechlade (Bowman & Thomas 1983, 35).[7] These wooden leaves were the northern substitute for Egyptian papyrus, and may be expected to survive in anaerobic conditions wherever there was literacy. Why not in the towns as well as the forts of Britain? Such discoveries might redress the epigraphic imbalance.[8]

In the last ten years or so, in south-east Britain, growing numbers of another type of manuscript have been found, 'curse tablets' written on durable sheets of lead. In 1978 only ten were known from Britain; they now number some 250, most of them in two major collections, 130 from the sacred spring of Sulis at Bath (Tomlin 1988, especially 60–1), a fraction of a much larger total, and more than 80

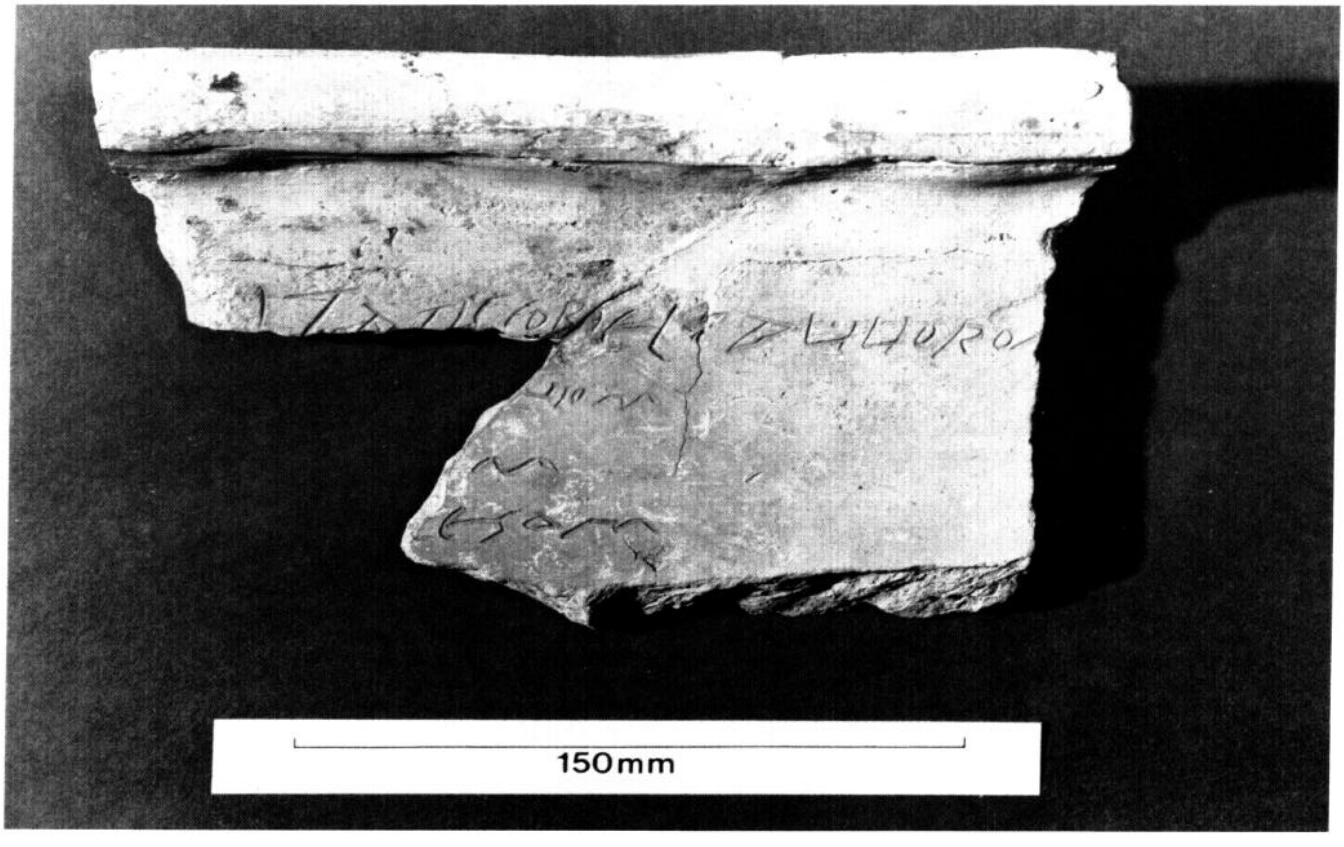


Figure 5 Fragment of an inscribed tile from Caves Inn (Tomlin 1983, 349–50). The first Line reads:[CI]VITATISCORIELTAVVOROM[], for [ci]vitatis Corieltauvorum (Photo by courtesy of Graham Webster)

from the temple of Mercury at Uley, twenty miles to the north along the Cotswold escarpment (Woodward & Leach 1993, 113–30). Characteristically they are petitions to a god for the recovery of stolen property. Like the *Vindolanda* tablets, but from a civilian milieu, they are a rich source of knowledge about the language, literacy and handwriting of Roman Britain; they are also informal witnesses to the religious ideas, the economy and society, of Roman towns and countryside. Here is an eloquent text from Bath (Fig 6):

> Basilia gives to the temple of Mars her silver ring, that if anyone, whether slave or free, is privy to the theft or knows anything about it, he may be accursed in his blood and eyes and every limb, or even have all his intestines quite eaten away, if he has stolen the ring or been privy to the theft.
>
> (Tomlin 1988, 230–1, No 97)

Other tablets mention jewellery, small sums of money, and especially articles of clothing. At Uley there are similar losses, including two pewter plates, and mention also of farm animals.

One of the Bath tablets, instead of using the standard formula 'whether slave or free', curses the thief of six silver coins, 'whether pagan or Christian' *(seu gen(tili)s seu Ch(r)istianus;* 'Tomlin 1988, 232–4, No 98). Two major hoards of inscribed silverware, Water Newton (Painter 1977) and Thetford (Johns

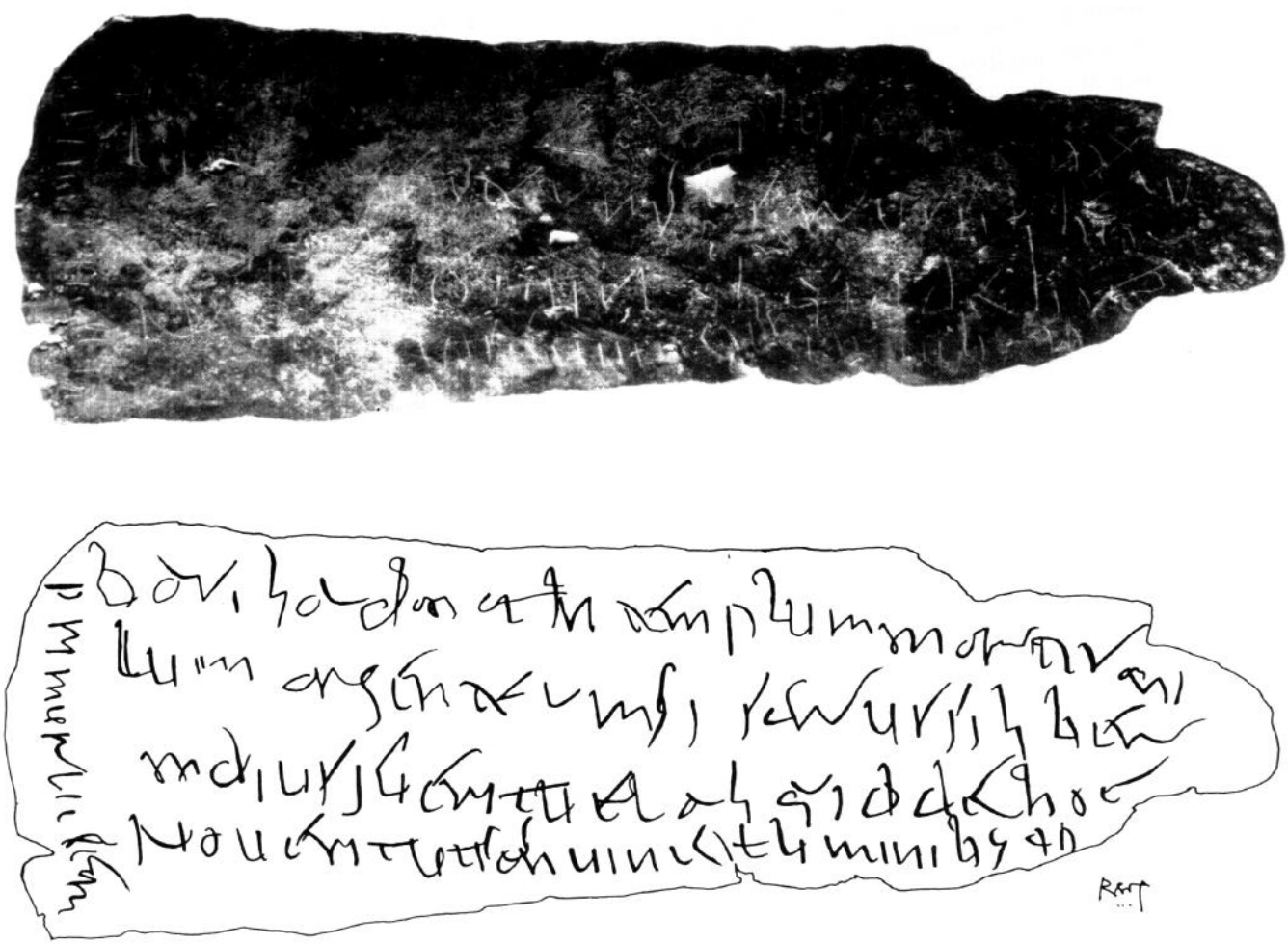


Figure 6 (above) Inscribed lead tablet from the sacred spring, Bath (Tomlin 1988, No 97) (Photo: R L Wilkins)

(below) The visible text drawn by RSO Tomlin. It reads:
Basilia donat in templum Martis ani/lum argenteum si ser(v)us si liber / m(e)dius fuerit / vel aliquid de hoc / noverit ut sanguine et liminibus et
(For translation, see above)

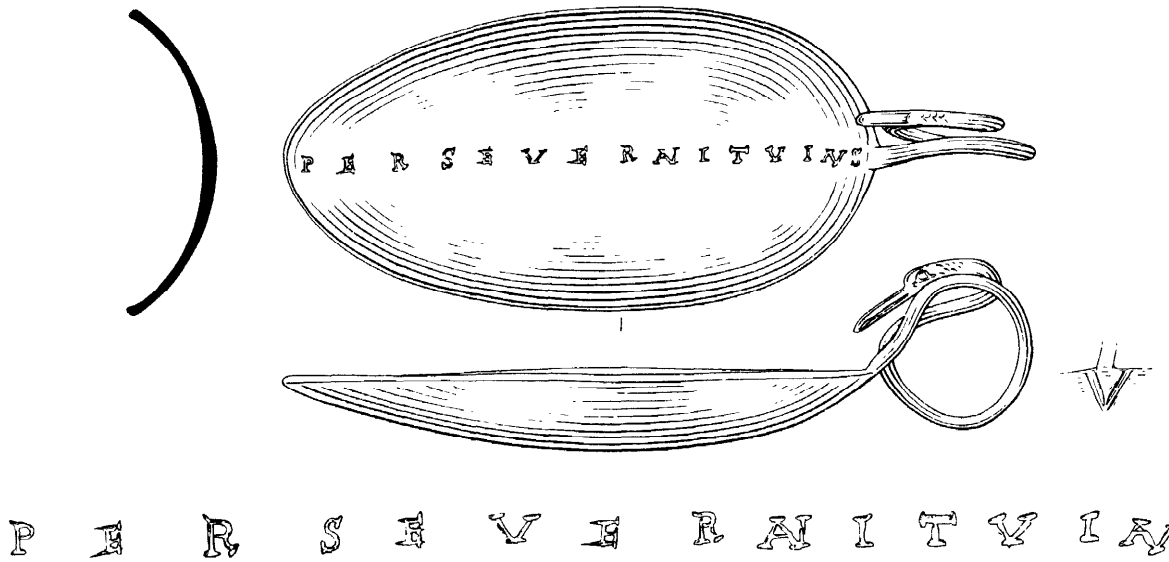


Figure 7 Inscribed silver spoon (Johns and Potter 1983, 116, No 61) drawn by Robert Pengelley. It reads: PERSEVERANITVIAVS, *for Perseveranti, vivas 'Long life to you, Perseverantius' (For this revised reading see below, fn 10)*

& Potter 1983), echo this religious contrast in 4th century Britain. The inscriptions on the Water Newton treasure identify it as Christian, the earliest yet discovered. There are 17 votive 'feathers' obviously derived from pagan votives, one of them explicitly inscribed in completion of a vow *(votum),* but nine of them bearing a large Chi-Rho. Four of the nine accompanying vessels also carry a Chi-Rho, two of them inscribed as if for a church. One of these chalices, as it is tempting to see them, was presented by two women with typically late' names, Innocentia and Viventia. The other bears the name 'Publianus' and the hexameter verse *sanctum altare tuum domine subnixus honoro.* 'I honour your holy sanctuary, Lord, my support' (Painter 1977).[9] The Thetford treasure, by contrast, includes a set of 33 spoons with uniform inscriptions implying that they belonged to an association of pagan worshippers. Twenty spoons bear the name of the god Faunus, an obscure Italian pastoral deity hitherto unknown in Britain, with a variety of Celtic cult-titles of uncertain meaning. Eleven other spoons bear personal names in the vocative with the addition of *vivas* ('long life to you'), the names being of Latin etymology; they are neither 'Celtic' nor 'pagan', indeed *Virbonus, Restitutus* and *Perseverantius* embody Christian ideals (Fig 7). The discovery and subsequent concealment of the hoard make a shabby story. However, it has been magnificently published by the British Museum, with beautifully precise drawings of the inscriptions by Robert Pengelley (Johns & Potter 1983).[10]

These two hoards, like the two curse tablets that have been quoted, date from the 4th century, when monumental inscriptions are rare in Britain. Three 3rd century inscriptions, however, are worth mentioning. A worn limestone altar, broken in half, was found in 1975 in the Roman river revetment at London (Hassall & Tomlin 1976, 378–9, no 2; Birley 1981, 176–8). It recorded the restoration of the temple of Isis – already attested by the famous inscription *Londini ad fanum Isidis* scratched on a tavern jug from Southwark (Wheeler 1946, 25, Pl V) – by order of a previously unknown governor of Britain, Marcus Martiannius Pulcher. The temple has not yet been found, but excavation of a monumental Roman building at Southwark in 1983–4 produced 27 fragments (Fig 8) of a large marble inscription possibly of AD 212–7, listing legionaries by cohort. Were they a fighting unit in transit, a garrison, or members of the governor's staff? (Hassall & Tomlin 1985, 317–22; Yule 1989, 3l–9 and especially 35 and Fig 7).[11] In 1976 half an inscribed gritstone slab (Fig 9) was found at York. It was dated by consuls to AD 221, and records the dedication of an arch and vaulted passage *(arcum et ianum)* by a merchant *(negotiator)* from Rouen called Lucius Viducius Placidus. The structure must have been the monumental entrance to the precinct of the deity whose name has been lost. By happy coincidence, an altar previously dedicated to the goddess Nehalennia by the same man had only just been published by the distinguished Dutch scholar Jules Bogaers. It was one of many altars dredged up from the site of her temple in the Scheldt estuary; on it Placidus, who

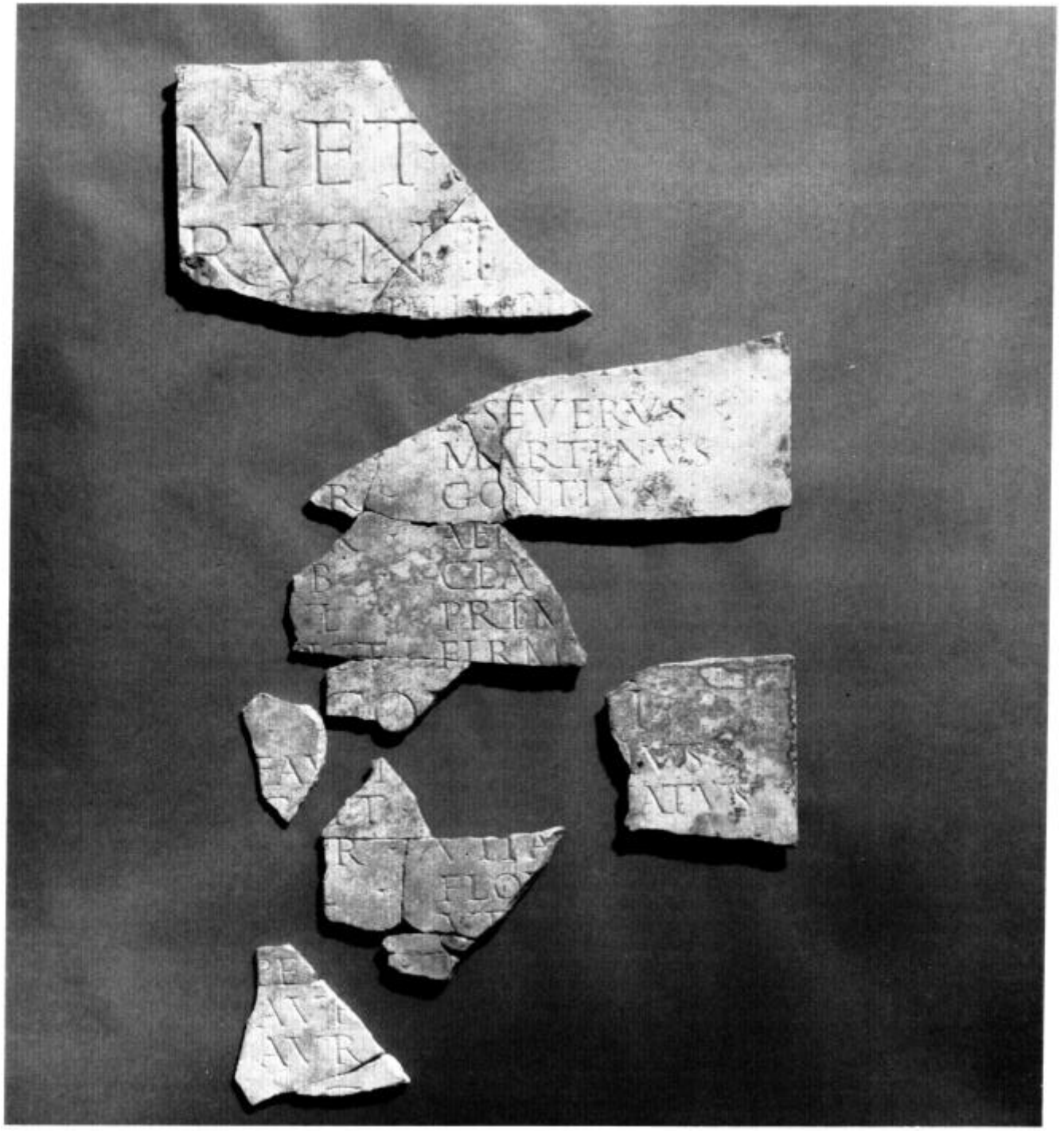


Figure 8 Fragments of a large marble inscription from Southwark (Hassall and Tomlin 1985, 317-22, No 1), Listing legionaries by cohort under a two-line heading in Larger letters (Photo: Museum of London)

Figure 9 Half an inscribed slab from York (Hassall and Tomlin 1977, 430–1, No 18), recording the dedication of an arcum et ianum *to a god (name now lost), the* genius loci *and the imperial* numina, *by the merchant Lucius Viducius Placidus of Rouen in AD 221 (Photo: York Archaeological Trust)*

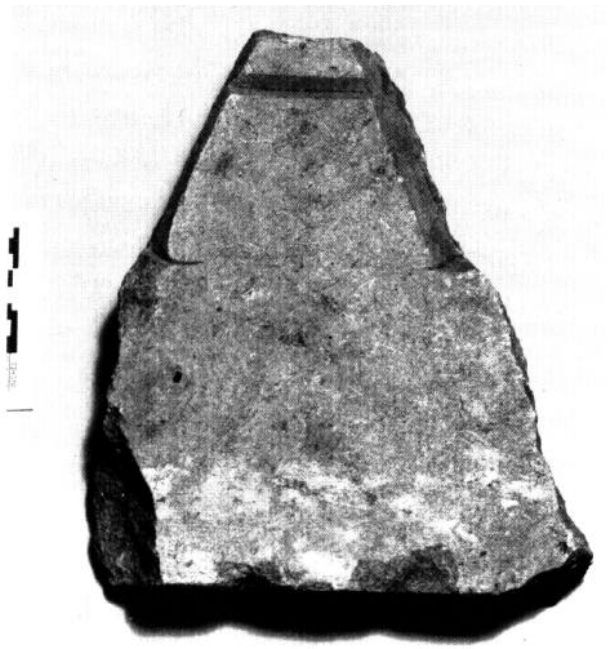


Figure 10 Half the letter A from a major inscription at Colchester (Hassall and Tomlin 1980, 403, No 1), probably that of the temple of Claudius (Photo: Colchester and Essex Museum)

had not then become a Roman citizen, describes himself as *negotiator Britannicianus* from Rouen, merchant in the British trade. It was clearly a profitable connection (Hassall & Tomlin 1977, 430 1, No 18 and 1978, 484, corrigendum (c); Hassall 1978, 41-8; Bogaers 1983).

The ubiquitous Bogaers has also done something for British scholars that they should have done themselves: he has taken a new look at one of the earliest and most famous of British inscriptions, *RIB* 91 at Chichester, which records the erection of a temple by authority of King Cogidubnus. The stone, like so many stones, is damaged at the crucial point. *RIB* follows Gale and Stukeley, who examined the stone in September 1723 soon after its discovery, in restoring Cogidubnus title as *rex et legatus Augusti in Britannia;* and much has been written about his anomalous role as client king and imperial legate, incidentally the only British-born senator yet known. Bogaers, however, went back to the earliest reading of all, by Edward Bayly in May 1723, and by removing the glass which has protected the inscription since 1907, proved that Cogidubnus was *rex magnus in Britannia.* The title *rex magnus* is barely attested, but is used of client kings who ruled several kingdoms: Tacitus speaks of *civitates* (plural) being allotted to King Cogidumnus (Bogaers 1979).

This is not the place for an exhaustive catalogue of new inscriptions, and here to conclude is a small limestone fragment (Fig 10) bearing a single letter of great significance. The letter is the lower half of a monumental A once 25.5 cm high, and it was found in 1964 in Colchester on the line of the precinct wall of the temple of Claudius (Hassall & Tomlin 1980, 403, No 1). It is surpassed in height only by the letters *-NTO-* on a limestone fragment found in 1957 at Winchester; they are 12 (Roman) inches (29.5 cm) high, and are surely part of the imperial name Antoninus (Wright 1958, 150, No 1; Wacher 1974, 282, P1 52). The wretched Colchester fragment is probably all that survives of the main inscription of the *templum divo Claudio constitutum quasi arx aeternae dominationis,* the temple which was the focal point of Roman imperialism in Britain. And where is the rest of this key text? It must have been built into that other monument of successful imperialism, Colchester Castle, which stands upon the temple plinth. No more fragments of the inscription were found by the Museum in its eight-year programme of repair from 1983 (inf M Davies). Since this cost half a million, and included a stone by stone record of the visible Roman material, it would be churlish to advocate the demolition of the Castle in the interests of epigraphy.

Notes

1 Sheppard Frere tells me that a careful watch was kept for manuscripts during his excavations, but without success.

2 Addenda and Corrigenda have been published in the annual Roman Britain survey, but other points of details have been made by reviewers and by scholars like Lawrence Keppie and the late Roy Davies. A consolidated Addenda and Corrigenda to *RIB* is in preparation.

3 The restoration of *[Lugu]vali* by Rivet and Smith (1983, 402) in *RIB* 2015 is almost certain.

4 A 'late' building inscription from Hadrian's Wall (*RIB* 1962) still refers to *civitate Catuuellaunorum* (compare *RIB* 1065, *natione Catuallauna*).

5 Tacitus, *Agricola*, 21,1 with Ogilvie and Richmond's commentary *ad loc*. Only the letters *-NATA-* in fragment (d) refer to the structure being dedicated; and it is not entirely certain that this fragment belongs to the same inscription as the others. The name *Verulamium* abbreviated to *VER* should probably be read on an inscribed beaker from Dunstable 12 miles away (Hassall and Tomlin 1980, 406–7, No 7).

6 There are two books called *The Coritani* whose authors may echo Sir John Colville on Boadicea: 'now called Boudicca, with the same pedantry that turns Jehovah into Yahweh, thus demonstrating an academic ambition to be thought clever by dethroning names that have been in general use for centuries' (Colville 1985, 376, n 1).

7 The Lechlade and Carlisle fragments have not yet been published, and are very slight in comparison with those from *Vindolanda*.

8 The distribution of pottery with graffiti is much less 'military' than that of the stone inscriptions (Evans 1987). Analysis of *RIB* II also ought to reveal a similar pattern.

9 The inscribed bowls are Nos 8 and 9. The name *Viventia* is found for example, on a pewter plate from a 4th century votive(?) deposit in the river bed at *Verulamium* (Wright 1957, 232, No 23).

10 No 61 (p117) has been read as PERSEVERAVITVIVAS, *Persevera uti vivas* or *(qui) perseveravit vivas*, a text of unique form. However, it can be seen from Fig 31, p116, that the first ligatured 'VI' is ligatured *AN* (note the third stroke is vertical, not diagonal like that of *VA* in *VIVAS*), and that the true reading is PERSEVERANITVIVAS. This is for *Perseveranti vivas* ('long life to you, Perseverantius'), the letters *TI* being reversed by mistake; the same mistake can be seen in *VIVAS*, where *VA* was in fact written as *AV*. The name *Perseverantius*, found here in the vocative, is apparently unattested, but it is a typical 'late' formation from a present participle ('persevering'). *Innocentia* is another.

11 The presence of at least four, perhaps eight, *Aurelii* suggests a 3rd century date. A more precise date is possible if the surviving letters of the first line, [...]M ET S[...], refer to Iulia Domna, *mater castrorum et senatus* in the reign of Caracalla, as Mark Hassall has suggested.

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15 Town mosaics and urban *officinae*

Peter Johnson

Over the last 50 years or so many more examples of Roman mosaic art have been recovered from Britain, mostly from towns, and almost all of them in advance of development. These investigations were conducted in the main by local excavation committees in the 1950s and 60s and by the new urban archaeological units in the 70s and 80s. This paper aims to briefly outline the chronological and stylistic development of mosaic art in Roman Britain, with particular emphasis on town mosaics of the 2nd century and the mosaic revival of the 4th century when a number of distinctly provincial urban-based *oficinae* flourished, catering largely to the villa owners. I will, whenever possible, refer to the architectural contexts and room functions of mosaics. Some of the more recent and significant discoveries of Romano-British town mosaics will be presented, and, finally, some questions will be posed.

Any study of this type inevitably draws heavily on the work of others, excavators and recorders of mosaics and other researchers, and it would have been impossible not to refer to the work of Dr David Smith who has pioneered the art-historical analysis of Romano-British mosaics and who first demonstrated that mosaic schools or *oficinae* operated and prospered throughout lowland Roman Britain. I am also indebted to David Neal for the stimulus of his own research and for setting the standard for mosaic recording over the last 30 years, some of his mosaic drawings and paintings will be seen here.

Just over 50% of Romano-British mosaics are urban, and of these the vast majority are from the private sector ie houses rather than public buildings. Mosaics are probably the most tangible remains of these structures and certainly the most quintessentially 'Roman'. The earliest dated mosaic work in Britain is not 'urban' however, being found in 1972 in the fortress of Exeter and dated archaeologically to *c* AD 60 (Bidwell 1979, 134, Pl XVI). The recovered fragments were of a mosaic from the *frigidarium* of the fortress baths, probably laid by craftsmen attached to the occupying *Leg II Augusta.* This is remarkable both for its early date and its polychromy. The Exeter mosaic must, for the time being however, be treated as an isolated example. The earliest extant series of mosaics from Britain decorated the Flavian palace at Fishbourne, excavated during the 1960s (Cunliffe 1971). The geometric mosaics mostly belong to the Italian black and white tradition, obviously conservative and restrained, and appear to have been designed and executed by Italian mosaicists, between AD 75 and 80, imported for the purpose as their work is seen nowhere else in Britain. The Fishbourne mosaics, important as they are, are stylistically largely irrelevant to the subsequent development of Romano-British mosaics which throughout showed an increasingly provincial character. This was derived initially from the Italian polychrome tradition but with later influences from the Gallic provinces and later, but to a lesser extent, North Africa.

With some interesting exceptions, the mosaic craft did not properly establish itself until the middle of the 2nd century and reached its peak, in the towns, before the end of that century, possibly lasting into the early 3rd. Between AD 150 and 200 many mosaics were laid in the town houses of the emerging curial class, displayed as luxury items in ground floor reception rooms and living rooms. There is little evidence of mosaics laid on upper floors and wall mosaic seems to have been very rare. In terms of the art history of mosaics, two major stylistic traditions can be detected during the 2nd century, the eastern and the western (Smith 1984a, map p358; Smith 1984b) but operating within these traditions were localised workshops or *oficinae.* Different *ofjcicinae,* less localised, operated during the mosaic revival of the 4th century and when first identified by Smith were referred to as 'schools'. Some mosaics were also being laid in the new villas in the early period, mostly in the south-east, but the vast majority belong in urban contexts (see map in Johnson 1982, Fig l), a situation that was to be reversed dramatically in the 4th century with the expansion of the villas.

We start with the 2nd century eastern tradition, appropriately by looking at *Verulamium,* a *municipium* from the 1st century onwards. In 1930 Dr Wheeler excavated his first mosaic, a superb apsidal specimen in the form of a shell (Wheeler & Wheeler 1936, Pls XXXIX and XCVIIa), a marine interpretation being supported by the wave-crest pattern. Wheeler dated the pavement archaeologically between AD 130-150, although examination of chips of samian vessels from the mortar backing now indicates a date no earlier than 150 (D Neal, pers comm). The use of brick and tile for the broad and coarse outer tesselation is common to Romano-British mosaics, for economic reasons and for the disposition of furniture, arid this material is also used to good effect to outline the crenellations of the conch. Such outer borders also served to absorb any errors in the setting out of the decorated part, assuming that mosaics were laid from the middle outwards.

The marine theme is continued on the magnificent polychrome mosaic from Insula IV (Fig 1), also excavated by Wheeler who dated it to AD 160-190 (Wheeler & Wheeler 1936, Pls XLI and XLVa and XXXII (plan)). The central panel contains a heavily-muscled bust of either Oceanus or Neptune with lobster claws on his head. A marine god is very suitable here for the mosaic paved the *apodyterium* of a private bath-house, indeed bathrooms were a traditional focus for the mosaicist's craft, where decorated floors could be admired at leisure. This mosaic was a variant of the eastern tradition's nine-panel

Figure 1 Verulamium, *Oceanus mosaic from Insula* IV *(1934).* Dated *to AD 160-90. Photo courtesy of* Verulamium *Museum*

design with a large central panel surrounded by eight others, the smallest being in the corners. The outer design of running *maeander* enclosing spaced panels is typically 2nd century and the corner panels with the 'squared rosettes' are a feature of the eastern tradition. The Antonine *Verulamium* mosaics are all well-executed and well-bedded, in sharp contrast to floors of later periods in *Verulamium* and elsewhere.

One of the best known floors from *Verulamium* was found during Professor Frere's excavations of 1955-61. The Lion and Stag mosaic (Fig 2) was discovered in 1959 in Insula XXI in a large courtyard house of c AD 175-80. (Frere 1983, 163, Pl XVIII) and is another fine example of Antonine polychrome work. The extremely naturalistic lion successfully conveys feline power and stealth although the use of too many colours renders the head rather indistinguishable and blurs the head of the stag in its jaws. The lion's tail appears to be truncated within its frame, possibly as a result of prefabrication. The overall scheme, however, is a masterpiece of design with a remarkably tightly-executed chain guilloche pattern. This saltire scheme is compass-drawn and was bordered on all sides by typically broad, coarse tessellation, particularly common in *Verulamium*. The decorated area had been laid to face the broad entrance doorway into the room, nearer to the door-

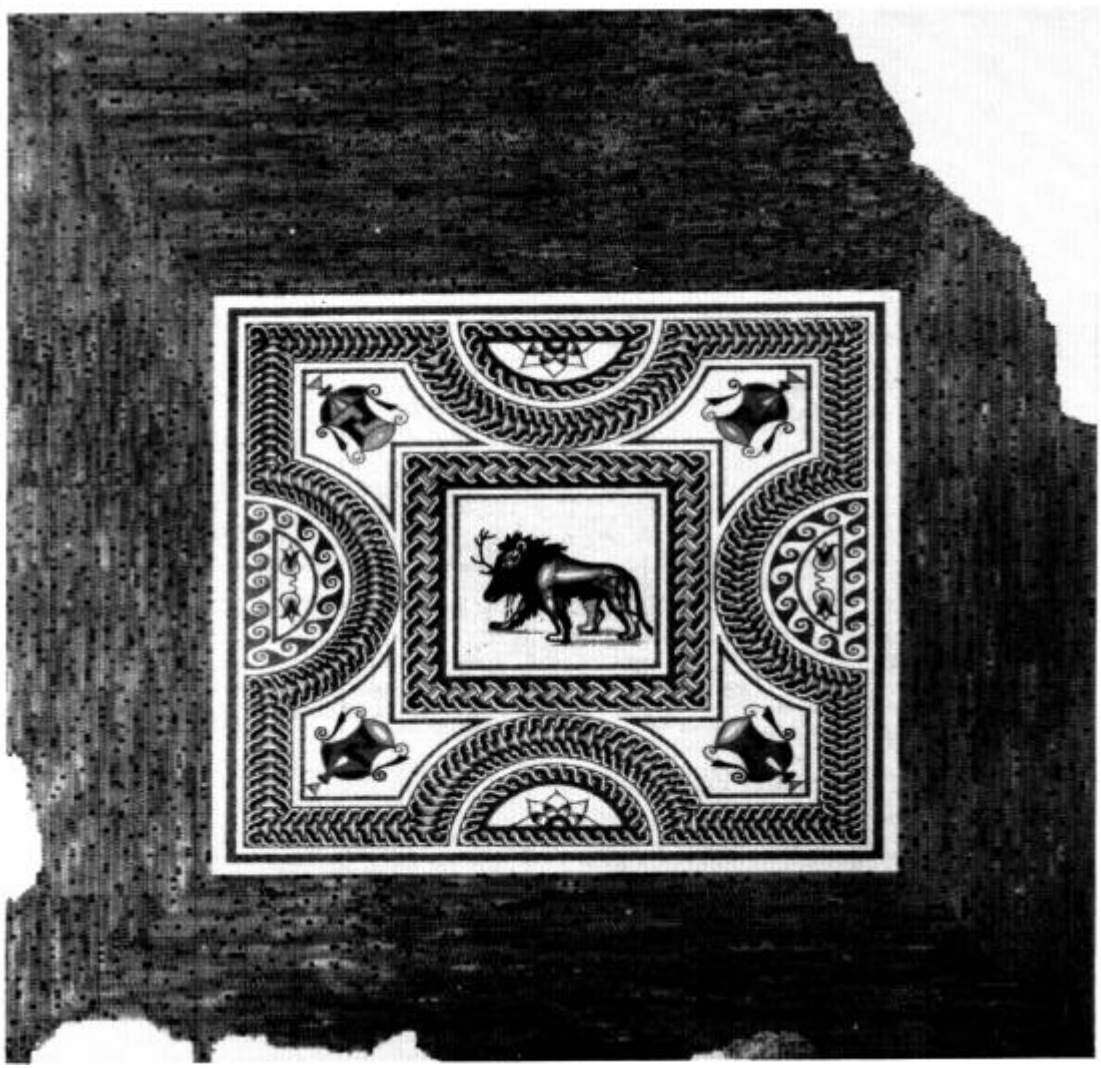

Figure 2 Verulamium, *Lion and Stag mosaic from Insula XXI (1959). Dated to AD 175-80. Painting and copyright by David Neal*

way than to the far wall, which rather precludes an interpretation as a traditional *triclinium* where the main design should face the diners. The design is immediately comparable to a mosaic excavated in Colchester in 1978 (Crummy 1984, 168-74, Figs 158-9) from an extramural house of the Antonine period. The compass-drawn design of the Middleborough mosaic is virtually identical to the Lion and Stag mosaic, though here there are more elaborate borders, notably the 'inhabited scroll' containing a variety of birds. The central panel is truly figured, the remains of two wrestling cupids lending their name to the mosaic. *As* at *Verulamium* the design has been executed with great care and in multiples of 2.5 Roman feet, though not with 100% precision as the excavator has demonstrated (Crummy 1984, 172-4, Figs 160-2).

Also in Colchester, work at North Hill in 1965 in advance of a car park revealed two very distinctive polychrome mosaics, of purely geometric design. Pavements B and C (Dunnett 1967, 41-2, Pl VII and 42-3, P1 VIII; Smith 1975, Pls CXVII and CXVI) share the same hybrid design, a nine-panel scheme 'overlying a concentric circular scheme with multiple borders. There would have been 'squared rosettes' in the corners as already seen on the Sea-God mosaic from *Verulamium*. The North Hill mosaics were dated AD 150-250 on stratigraphy and c AD 150 on style, probably much nearer the latter. Wheeler's Mosaic 7 from *Verulamium* (Wheeler & Wheeler 1936, Pl XLlVb and XXI (plan); Smith 1975, Pl CXVII) has the same design as the North Hill mosaics and the now-familiar 'squared rosettes' in the corner panels. The many-petalled flower in the central panel is almost identical with that in the same position at North Hill, indeed this has now been dubbed the '*Verulamium* dahlia' (Smith 1975, 276).

Thus the eastern tradition is demonstrated by some key mosaics from *Verulamium* and Colchester, leading Smith to postulate a 'school' (or joint *officina)* operating between the two towns (Smith 1975, 288), possibly originating in Colchester although I would prefer not to distinguish which has the finer, and hence earlier(?) mosaics. The tradition is also characterised by lozenge patterns, such as on another mosaic from North Hill, excavated in 1906 (Hull 1958, Pl XVI).

The western tradition in 2nd century mosaics is demonstrated by mosaics from towns along, and villas close to, the Fosse Way. Leicester, like most other *civitas* capitals, has produced a number of 2nd century mosaics. One found in 1898 in St Nicholas Street (VCH Leics Pl I; Smith 1975, PI CXXIII,2) is an octagonal-panel design typical of the western tradition with borders and filling motifs of 2nd century British type. The central panel has a frontal representation of a peacock with green glass *tesserae* in its spread tail. The Blackfriars mosaic, found in Jewry Wall Street in 1830 (VCH Leics Pl III; Johnson 1982, P1 12), is obviously from the same Leicester *oficina* (Smith 1975, 283; Johnson 1981, 2). Overlapping-shield patterns and miniature scroll-work are indicative of the expertise available in *Ratae* around the middle of the 2nd century. Such a dating was confirmed some years ago when an examination was made of *tesserae* from the Peacock mosaic made from samian vessels of central Gaulish manufacture, giving a *terminus post quem* of AD 140-145 (Hartley 1979, 5). The border of the Blackfriars mosaic has a cornice or 'egg and dart' pattern exclusive to Romano-British mosaics in general and to the 2nd century western tradition in particular. The small, well-cut *tesserae* and strong mortar bedding are features of other 2nd century mosaics, an era of considerable technical expertise. Recently much research has been carried out on the origination and draughtmanship of geometric mosaic designs, most of which can be produced, either on cartoons or *in situ,* by the use of simple grids or nets of guide-lines, gradually elaborated (Tebby 1980a and 1980b; Neal 1981, 21-30).

Dorchester (Dorset), *civitas* capital of the Durotriges, was prosperous enough from the 2nd century onwards for some of its houses to have been decorated with mosaics. Relatively few Dorchester mosaics have been dated archaeologically, however, and none at all to the 2nd century, The mosaic found in 1927 in Fordington High Street (RCHM Dorset 1952, frontispiece; Smith 1975, P1 CXXVI,l) recalls the octagonal-panel schemes from Leicester but this room has an apse with figured work, a head of Neptune flanked by dolphins and fish, suggesting a somewhat later date. The cornice pattern, a 2nd century innovation, is present but the marine theme and multiplicity of borders had led to speculation (Smith 1969a, 112) that the floor is much later, possibly a product of 4th century Durnovarian mosaicists. The Fordington mosaic, however, appears to contain samian *tesserae,* implying a pre 4th century date and this is backed up by the discovery in 1977 of a Dorchester mosaic securely dated to the early 3rd century, from Wollaston House (Neal 1981, 123). This highly competent though fragmentary pavement belongs to the circular *laconicurn* of the public baths and is not only one of the very few mosaics in Britain firmly dated to the 3rd century but, so far, is the only truly circular mosaic, fitting a circular chamber, known from Britain. It is also one of the few 'public sector' mosaics, financed for the local populace but probably out of a rich private pocket. It is thus doubly unfortunate that all we have left are the outer borders. Nevertheless the expertise was available in *Durnouaria* in the early 3rd century and the Fordington mosaic probably belongs to this period.

Continuing with the western tradition, the Seasons mosaic from Cirencester poses similar problems of dating. This octagonal-panel design was found in Dyer Street in 1849 (Buchman & Newmarch 1850, P1 II) over a hypocaust and alongside one other which is discussed below. Here (Fig 3) the octagons are all figured, a rare profusion for any town mosaic, the corner panels containing busts of the Seasons and the middle panels Bacchic scenes. The best preserved and most accomplished of the

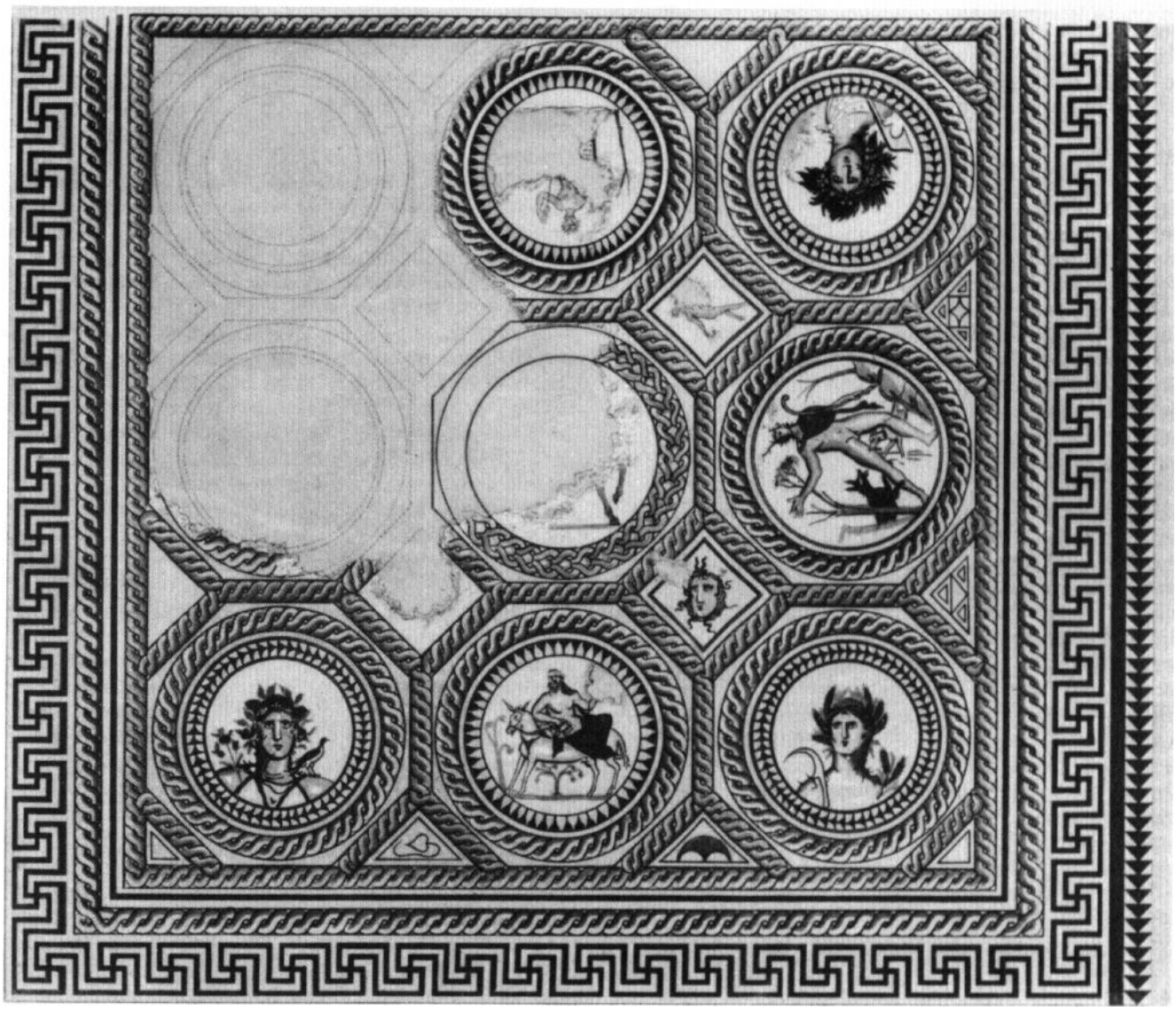

Figure 3 Cirencester, Dyer Street (1849) Seasons mosaic, probably late 2nd/early 3rd century. Ex Buckman and Newmarch (1850)

Seasons (Fig 3 top right; Johnson 1982, Pl 13) is Autumn, previously identified as Pomona but it has been suggested (Bryn Walters, pers comm) that the figure is in fact masculine, indeed the garlands of fruit and nuts and the leopard skin suggest Bacchus himself. This would complement the other scenes from the mosaic, for example one showing Silenus.

The other mosaic found in Dyer Street in 1849, also over a hypocaust, was the Hunting Dogs mosaic (Buchman & Newmarch 1850, Pl IV; Johnson 1982, Pl 15). This compass-drawn scheme s central roundel, apparently patched in antiquity, had three hunting dogs leaping at, indeed attacking, a figure now destroyed but which probably was Actaeon, the same scene on the Seasons mosaic. Sea-beasts occupy two of the lunette panels while the concave-sided spandrels have an intriguing arrangement; two along the same long side feature extravagant and identical masks of Neptune, whereas the other two spandrels, instead of matching, feature well-executed though nondescript motifs. This is possibly a case of prefabrication as the masks of Neptune may have been already made up and lying around the workshop on a canvas or linen backing before being hastily incorporated into the Hunting Dogs mosaic. It is also worth noting the shaded and banded (beribboned?) border surrounding the lunette at the bottom is closely paralleled on the Fordington mosaic, with which the Hunting Dogs mosaic is possibly contemporary,

Yet another outstanding mosaic has been found in Dyer Street and almost certainly from the same town house (Zeepvat 1979, 76). The marine mosaic, now mostly lost, was found in 1783, recorded by Samuel Lysons and considered by Professor Toynbee to be one of the finest and most classical of Romano-British mosaics (Toynbee 1962, Pl 213). This surely represents a marine *thiasos*, a cupid holding the wheel of what may have been Neptune's chariot. This is a rare example in Britain of a free-flowing figured design as, invariably, British mosaicists divided their works into compartments and panels, more so than in any other province. This mosaic, however, would not be out of place in Africa or the east. The border of *maeander* with spaced squares is closely paralleled on the Oceanus mosaic from *Verulamium* which might argue for an Antonine date. The Dyer Street mosaics however do seem to be, stylistically, contemporary with one another, not surprising if they are from the same house, indeed yet another mosaic was found in the same street in 1972 (Neal 1981, 69, No 37). This mosaic from the Congregational Hall was an octagonal-panel design without any figured elements so it could belong to the 2nd rather than to the 3rd century. This might be a primary floor in the Dyer Street building which was probably erected in the Antonine period. The figured and partly-figured mosaics may have been inserted later and, as the Fordington High Street mosaic, date to the early 3rd century.

The western and eastern traditions of the 2nd century were not mutually exclusive as the numerous examples from Silchester, *Calleva,* demonstrates. One of the two houses from Insula XIV, excavated in 1895, revealed five mosaics, all geometric as was typical of the 2nd century Callevan *officina. This* was the only true courtyard house in the town, of 'Pompeian' type, even as far as to having what appear to be two shops on the southern street frontage (Fig 4). The eastern wing, with mosaics in four of its rooms, was obviously the most important and these seem to have been reception rooms used by the owner of this, the largest and grandest house in *Calleva.* The unusual and elegant nine-panel design of room 27 (St John Hope & Fox 1896, Pl XIV; Johnson 1982, Pl l0), with rhomboid hexagons, has a familiar cornice pattern of the western tradition (here miniaturised to border an individual panel) but also 'squared rosettes' of the eastern tradition. The mosaic from room 22 (St John Hope and Fox 1896, Pl XII) is clearly also 2nd century in date, with more in the way of eastern characteristics as shown by its design of lozenges containing small dark triangles, closely echoing the Colchester North Hill mosaic of 1906. The mosaics of rooms 23 (Fig 5) and 27 had threshold panels on the eastern side, indicating doorways connecting with the external corridor. Indeed the profusion of doorways, long corridors and a cross-corridor meant for considerable privacy in this wing. The decorated areas, as was common, were placed asymmetrically in the rooms and it is also noticeable how the mosaics in unheated rooms have survived better than those in heated chambers, e.g. room 22 which was over a channelled hypocaust and robbed extensively The mosaic from the unheated room 23 (Fig 5) was a well-executed spaced *maeander* design in the, by-then, slightly archaic black and white tradition. This floor had been patched twice in antiquity, once quite expertly in tessellation, than (later?) with stone slabs, presumably as a result of damage by the use of a brazier.

Calleva as a *civitas* capital, widely 'excavated' in the 19th and early 20th centuries, has revealed a great number of mosaics, some 44 in all, mostly from its opulent houses with some, including the so-called church (Fox & St John Hope 1893, Pl XL) dateable on style to the 4th century. The later of the two houses in Insula XIV had very plain and inferior mosaics which must be 4th century in date (St John Hope & Fox 1896, Pl XV). The floor in room 20 was decorated in alternating bands of brick and buff tessellation, arranged so as to indicate where couches and a dining table should be positioned; thus this is one of the very few traditional *triclinia* from Britain, although it had no hypocaust and may have been mainly for summer use. Elaborate mosaics are thus not always firm indicators of dining rooms.

During the 1960s and 70s, rescue excavations in Gloucester revealed a large number of fragmentary mosaics, mostly geometric, one of which was the product of the Corinian saltire *officina* (Bacchus & Leopard mosaic from the New Market Hall, Neal 1981, No 52). The others, however, indicate that an *officina* operated in *Glevum* during the 2nd century, specialising in ashlar patterns in black and white (Neal 1981,82),

The Antenine mosaic boom reached the north, as demonstrated by mosaics from Aldborough *(Isurium),* civitas capital of the Brigantes. These mosaics have all been found during 19th century excavations and are therefore undated. Stylistically, the Aldborough Arms mosaic, uncovered in 1848 (Smith 1852, P1 XVII), should be of 2nd century date; its well-cut reticulated *maeander* encloses a central panel with a multi-pointed star and is similar to another from the same house, both decorating heated rooms and still preserved *in situ.* Here the questions of eastern or western traditions does not apply as none of the Aldborough mosaics, most of which appear to be late anyway, exhibit traits of either of these essentially southern traditions.

After the boom period of AD 150-200 the craft of mosaic entered a steep decline in the 3rd century. The elaborate mosaics of Cirencester (Dyer Street) and Dorchester (Fordington High Street) appear to be notable exceptions against this trend along with some from London which are discussed below. The craft, however, does seem to have collapsed altogether between c AD 230-270 and this British *hiatus* is paralleled by gaps in the mosaic record in other provinces; in *Pannonia* between c AD 240-300 and in the Gallic provinces from c AD 260-300. Urban decline in Britain around this time, however, may not have been so obvious and may instead be a case

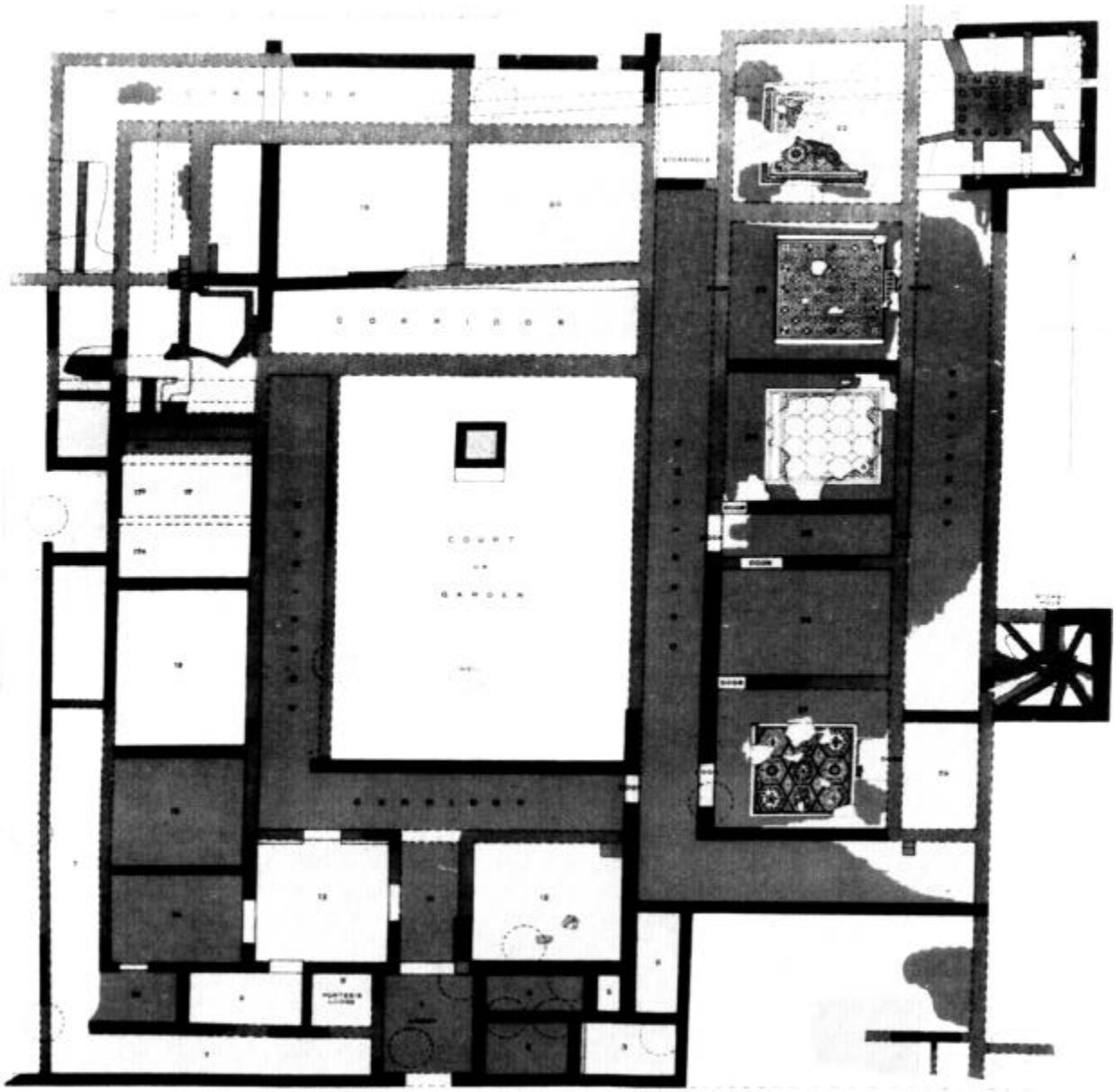

Figure 4 Silchester; Hants (1825) Plan of 2nd century house XIV, I, room 23. Painting by George Fox, ex Archaeologia LV

of stagnation, in some areas more than others (Wacher 1989, 94). Whatever the cause, in many areas of the empire mosaic production never restarted, but it did in Britain with an astonishing renaissance beginning late in the 3rd century and continuing almost unabated throughout the first half of the 4th. This new mosaic expertise must have been reimported afresh, probably from the north-west provinces, indeed the fine figured mosaics at Big-nor villa, West Sussex (Lysons 1817, Vol III), may have been laid as early as AD 300 by mosaicists from *Gallia Belgica* (Johnson 1984) who subsequently set up *an officina* in Winchester or Chichester (Central Southern Group, see below).

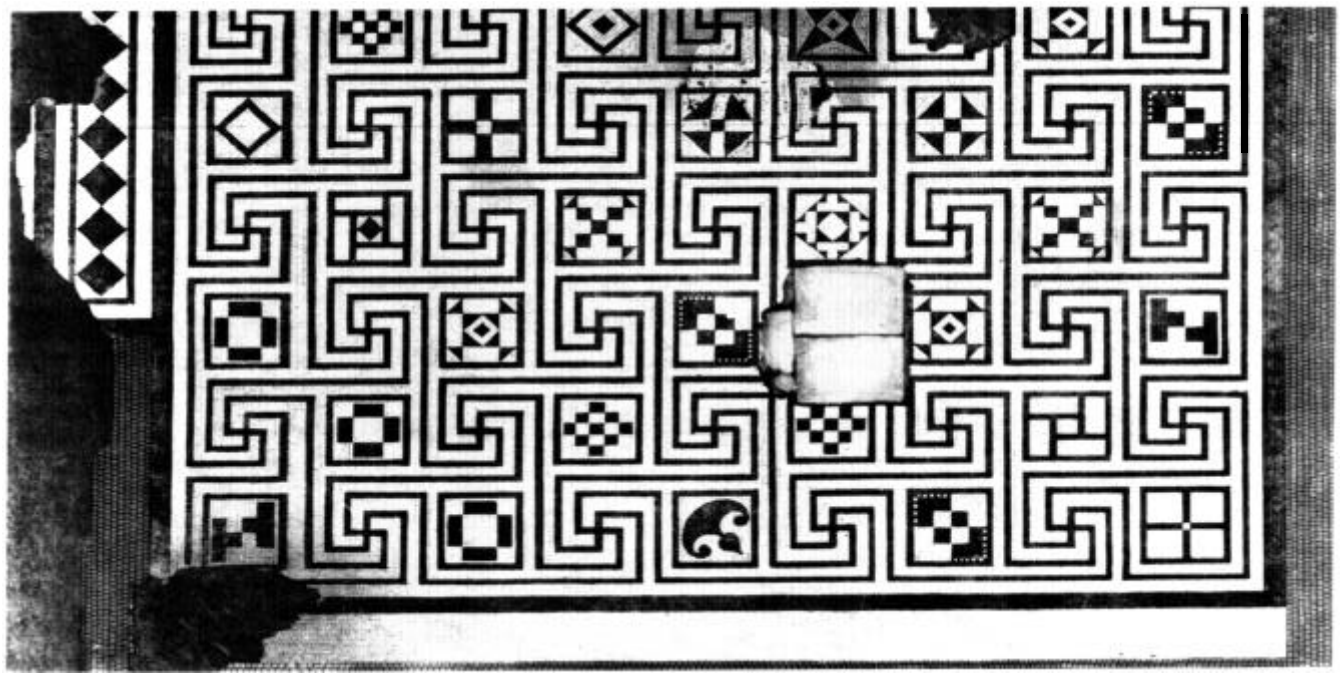

Figure 5 Silchester, Hants (1895) 2nd century mosaic from house XIV, I, room 23. Painting by George Fox, ex Archaeologia LV

Most of the new mosaics were laid for the newly expanding villas and relatively few were laid in towns, quite the reverse from the 2nd century situation as evidence increasingly points to a late decline in the towns. The *oficinae* which developed, apparently from scratch, would seem to have been urban-based, however, as indicated by the distribution of mosaics attributable to the late *oficinae (see* maps in Johnson 1982, facing pages 35 and 37). The main centres were Cirencester (the base for two overlapping *officinae),* Dorchester, *Durobrivae* (Water Newton) in the east midlands and either Winchester or Chichester for the Central Southern group (Johnston 1977) of mosaics. Other important 4th century *officinae* may have been established in IIchester (Smith 1965, 122; Johnson 1983) and, in what is now Yorkshire, at Aldborough (Johnson 1982, 35) and/or Brough on Humber (Smith 1965, 96-9). Mosaics were being laid again *in Verulamium* around AD 300 such as the example displayed in *Verulamium* Museum from *Insula* IV, building VIII (Wheeler & Wheeler 1936, P1 XLVIb) with swastika *-peltae.* This, like others from the town of this period, is a competent piece but rather uninspired, moreover the foundations and underbeddings of such late floors were usually inferior to the well-bedded floors of the 2nd century.

Without going into detail, the 4th century *officinae* having been thoroughly discussed elsewhere (Smith 1965; Smith 1969a; Smith 1984a, 366-76), the two most vigorous *officinae,* in *Corinium* and *Durnovaria,* should be commented on. The first Corinian *officina* invented and specialised in a distinctive Orpheus mosaic of concentric circular design. Its most famous product is also probably its earliest, the Great Pavement from the palatial villa at Woodchester, Gloucestershire (Lysons 1797, PI X; Neal 1981, No 87; Johnson 1982, Pl 27). Many of the animals of the circular procession around Orpheus are very closely paralleled on another concentric Orpheus design from a building (villa ?) at Barton Farm (Fig 6), just outside the wall of *Corinium,* which is dated to after AD 300 (Thornton 1967, 14-5, 16). The same master mosaicist was active here, the Corinian Orpheus *oficina* probably operating between c AD 300-320. None of its products were laid in towns (save for the Barton Farm building, which is only just extramural), catering instead for the 4th century villa expansion in the south-west Cotswolds, for example Chedworth (RCHM Glos P14).

The Durnovarian *officina* was also put forward by Smith (using the term 'school') following the discovery in 1963 of the Hinton St Mary mosaic in Dorset (Smith 1969a, Pl 3.29; Neal 1981, No 61; Johnson 1982, Pl 32). This must rank as the single most important mosaic discovery from Britain, a watershed for Romano-British mosaic studies, featuring as it does the earliest known representation of Christ on mosaic. This mosaic shows so many close parallels with mosaics from the Frampton rural (temple?) complex (Lysons 1813, Pls IV-VI) and others in Dorset that the centre of operations was postulated as

Figure 6 *Barton Farm, Cirencester (1825) Mosaic of the Corinian Orpheus* officina, *early 4th century. Photograph courtesy of the National Monuments Record*

Dorchester, although only two Durnovarian mosaics have been found in that town (Durngate Street, RCHM Dorset 1970, Pl 223); Olga Road, from the late 'Durno-Corinian' phase, see below). The Hinton mosaic is not dated archaeologically but Dr Richard Reece has suggested that the Constantinian hair-style of Christ offers a date of c AD 335-355 (Reece 1980), indeed the Dur-novarian *officina* appears to have operated between c AD 330-370. It specialised in marine compositions, mythological scenes (juxta-posed with Christian symbolism) and hunting scenes for the villas of the south-west; Venus was a favourite deity for depiction by Durnovarian design-ers.

Eventually the Dumovarian *officina* appears to have taken over former Corinian territory by the time that both the Corinian *officinae* had ceased to trade. The most striking example of this comes from Withington villa in Gloucestershire (Lysons 1817, Vol II, Pl XlX; Johnson 1982, PI 29) where a series of marine and hunting panels of obviously Durno-varian origin was laid next to an earlier Orpheus pavement of Corinian manufacture, at a time when the chamber was enlarged around the middle of the 4th century, Another example comes from Dorches-ter itself, a mosaic found in Olga Road in 1899 (March 1900, Pl facing 162). Here three contiguous rooms from an extrarnural house were decorated with a suite of five panels of mosaic; such contigu-ous, mosaic-floored rooms are a Durnovarian fea-ture, such as at Hinton and Frampton, but here the designs were for a suite of secular reception rooms and derive from the second Corninian *officina* which specialised in saltire designs and their derivatives. This 'Durno-Corinian' phase is suggested by Smith as a late development of the Corinian 'school' (Wal-ters and Phillips 1981, 12) but it could equally be a straightforward merger of the two *officinae. The* most extravagant product of this collaboration be-tween the two most influential groups of mosaicists was the extraordinary mosaic at Littlecote Park in Wiltshire; an Orpheus scheme but with radial divi-sions and Durnovarian-style marine and figured panels. The mosaic, with an alarmingly flimsy underbedding, paved what appears to have been a chamber associated with the cult of Bacchus and is dated to *c* AD 360 (Walters 1984, 433 PI p 434), a product of a period when the Constantinian *officina* system appears to have been breaking down and be-coming more fluid with mosaicists venturing further afield in search of fresh commissions in an ever-dwindling, though still discerning, market. It has been shown that more than one *officina* could oper-ate in the same town at the same time (Smith 1984a, 374). It might even be that what we refer to as *officinae,* ie permanent workshops based in towns but catering for town and country, should be re-garded merely as groups or federations of mosaicists ie individual craftsmen, or 'cells' of craftsmen, col-laborating with one another to greater or lesser de-grees. Physical, ie permanent, *officinae,* would only really be necessary for the preparation and stockpil-ing of materials, or for the pre-fabrication of panels. Temporary workshops would have been established quite casually in the rooms of houses where mosaics were being laid, indeed a room with piles of finished *tesserae* and knapping debris has been identified at Rudston villa, Yorkshire (Stead 1980, 137, Fig 6). Mosaic pavements were often designed as part of an integral interior design, including wall-paintings (Ling 1982) and invariably were laid first, with the wall-plaster and paintings being added later, the junction being sealed by a quarter-round fillet of plaster. Pattern books, though none survive, would almost certainly have been used for the transmis-sion of ideas between mosaicists and to show their clients (Toynbee 1983).

Rescue excavations in Cirencester during the 60s and 70s revealed a large number of mosaics from town-houses, of sufficient quantity and style for a second Corinian *officina* to be postulated (Smith 1969b), which eventually supplanted the Orpheus *officina* by the end of the first half of the 4th cen-tury *This officina* had an almost purely geometric repertory, specializing in saltire designs and their derivative schemes. The fragmentary pavement found in the Avenue in 1968 (Fig 7) (Brown, McWhirr & Smith 1969, Pl XXXVIIIa; Neal 1981, No 22) is an archetypal saltire scheme with very characteristic filling of motifs. By studying such mo-tifs it was possible for Smith to place a number of other Cirencester mosaics in this Corinian Saltire *officina,* such as the well-known Hare mosaic found at Beeches Road in 1971 (Smith 1973, Pls XXXI and XXXIIIA; Neal 1981, No 25a), datable to the middle of the 4th century. This was actually obscured by a secondary hypocaust inserted late in the century. The saltire *officina* was so successful that it was commissioned to do work at a number of villa sites in the Cotswolds and ventured as far north as Kenchester (Jack & Hayter 1916, Pl 23; Smith 1969b, 242) and even produced the fine example from London, Old Broad Street found in 1854 (RCHM London 1928, Pls 39 and 48; Smith 1969b, 242) by far the most accomplished of the series. The central panel features what could be a Bacchante or Europa riding upon a leopard. The Old Broad Street mosaic may be one of the last in the series, laid at a time when local expertise was no longer available in *Londinium.*

The two other 4th century schools or *officinae* were apparently based on Water Newton *(Durobri-vae)* (Smith 1984a, 372-3) and Brough-on-Humber *(Petuaria)* (Smith 1984a, 372-4). The Durobrivan mosaicists specialised in geometric designs, remark-able for their almost total absence of figured work. *Petuaria,* however, is rather troublesome as a pro-posed base for an *officina,* being a *vicus* of only 13 acres and without any mosaics. Perhaps the mosaics of this *officina,* radial designs for the villas of Hork-stow, Brantingham and Winter-ton (Smith, 1984a, 372) were part of an overall group of mosaicists working from Aldborough and *Petuaria* (Johnson 1982,34-5).

Not surprisingly, London has revealed the largest number of patterned mosaics, over 100 of them have

been recorded and their standard of design and execution varies considerably Good dating evidence, however, is only available for some of the more recent discoveries. The earliest dated mosaics belong to around AD 100, one of the more attractive examples would have been the dolphin mosaic from Watling Court (Fig 8) found in 1978 as part of a timber domestic building (Schofield & Dyson, 1980, 13-14). This is an early use of polychromy, in contrast to others from this house in black and white such as a remarkable *opus signinum* floor with inset roundels of mosaic work, apparently some sort of game (Perring 1981, 106, Fig 4). Another floor from a nearby building, of the same date, had a representation of a city gateway in black and white (Perring 1981, 106, Fig 5). Dendrochronology indicates a late Flavian date for the construction of this building, and hence for the dolphin mosaic. The Watling Court buildings were all private residences, destroyed by the Hadrianic fire of the 120s.

A number of London mosaics are firmly dated to the 2nd century, such as the Milk Street *cantharus* mosaic (Schofield & Dyson 1980, 13) found in 1977. This decorated a timber building with wattle and daub walling, constructed soon after the Hadrianic fire and abandoned c AD 170, thus the mosaic is dated archaeologically to the middle of the 2nd century The heart-shaped leaf, found in 1933, with

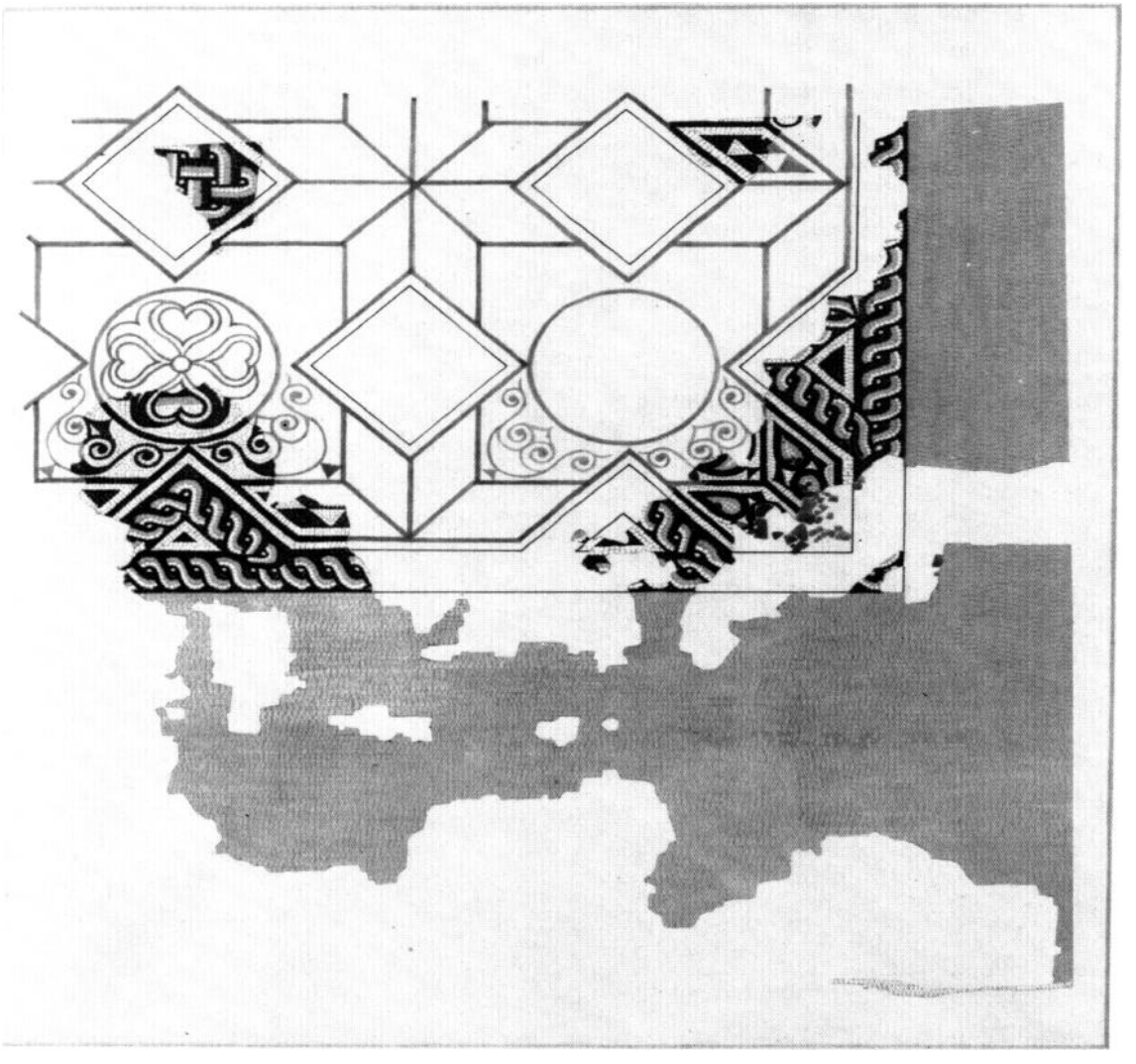

Figure 7 Cirencester, the Avenue (1968) Mosaic of the Corinian saltire officina, *4th century. Painting by David Neal*

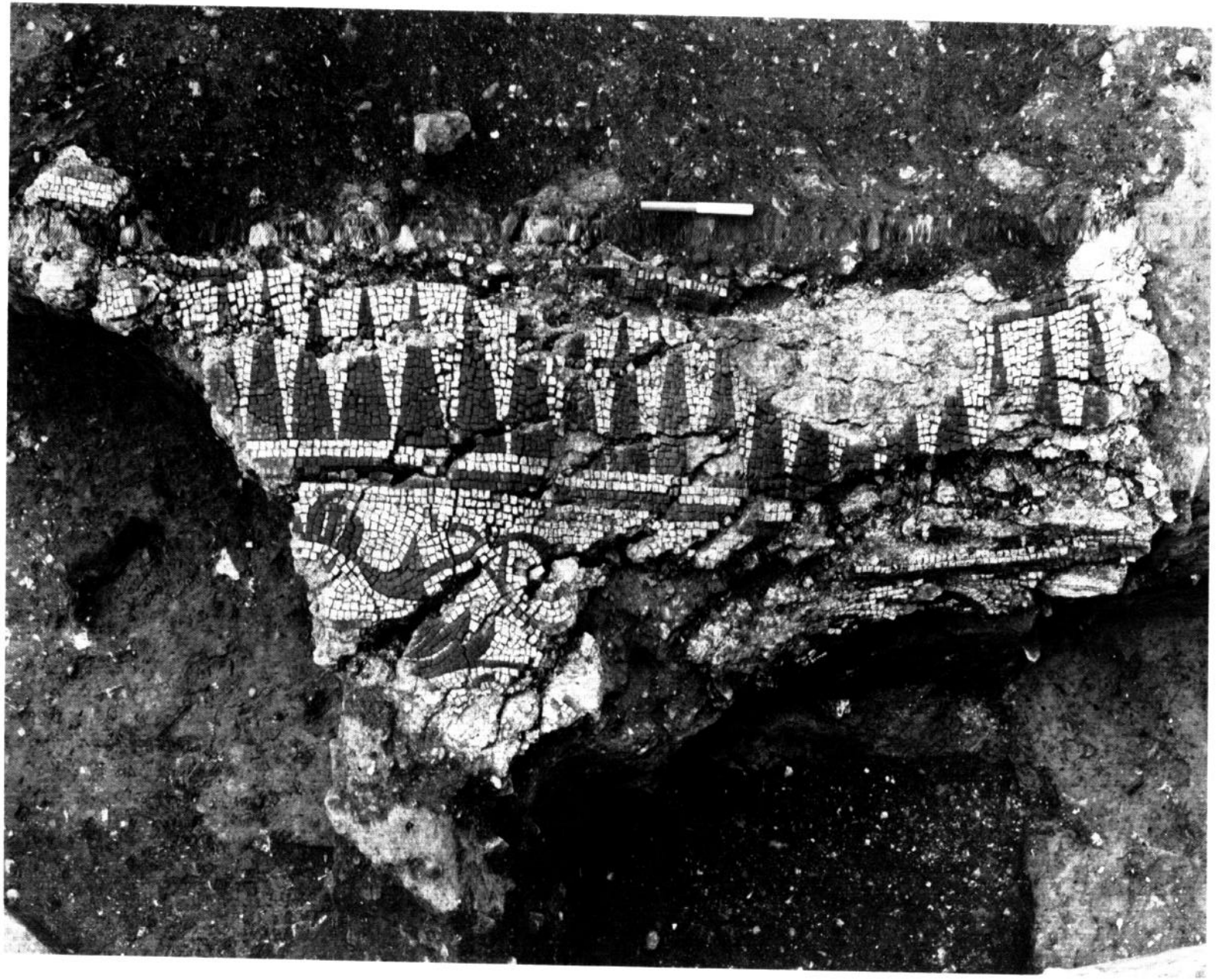

Figure 8 *London, Watling Court (1978) Dolphin mosaic dated to c AD 100. Photo copyright the Museum of London*

twin stalks is exactly paralleled on the mosaic from the Bank of England (Merrifield, 1965, 239-40, Pl 69), dated independently to the 2nd century and suggesting an Antonine Londinian *officina*. *The* Milk Street mosaic has been badly damaged by mediaeval and later disturbance, so often the case with urban mosaics.

One group of 19th century discoveries does stand out from among those from London, a number of accomplished polychrome mosaics, largely geometric, from buildings close to the Walbrook. The mosaic found in Leadenhall Street in 1803 (RCHM London 1928, P1 49; Johnson 1982, P1 17) is one of the finest from *Londinium*. Multiple borders surround a central roundel featuring Bacchus, reclining upon a tiger, and wreathed in vine leaves composed of glass *tesserae.* The muscular yet sensitive figure of the god is artfully done, the naturalistic tiger less successfully so, yet the scene is almost as classical as the Dyer Street marine mosaic from Cirencester, attributed to the early 3rd century. Bacchus's *thyrsus* is outlined in green glass and his cloak is composed of indigo glass. This is one of the few figured panels from London and apparently graced a private residence to the north-east of the *basilica* and *forum*.

The other notable mosaic from this area is at least as fine and usually regarded as the finest and most complete from London, possibly from any Romano-British town, the Bucklersbury mosaic (Fig 9). This was found in 1869 near the Mansion House (RCHM London 1928, Pls 41-2), decorating a channel-hypocausted room with an apse. The scheme is purely geometric; interlaced squares of guilloche, identified as a late 3rd to 4th century development (Neal 1980), surround a central roundel with a conventionalised flower. The frieze between the responds comprises an elegant acanthus scroll issuing from a shallow *pelta* sprouting a thistle-like plant but which is probably intended as an acanthus plant. The apse contains a polychrome bifurcated-scale pattern which is a tour-de-force by the master mosaicist. It is often the minor filling motifs that are important when studying mosaics and those in the comers of the main design, issuing from single *peltae,* deserve attention, being very similar to the acanthus motifs in two opposite corners on the Bucklersbury mosaic. The shaded stepped triangles forming the inner border around the central panel are also identical to triangles bordering the Bacchus panel; in short these mosaics are from the same Londinian workshop. Wheeler considered the Bucklersbury mosaic to be Hadrianic (RCHM London 1928, 109) but equally a 3rd to 4th century date might be supported by the interlaced squares of guilloche (but see below).

Similar interlaced squares occur on another mosaic from Leadenhall Street (RCHM London 1928, Fig 45), found in 1864. This has been repaired, apparently in the 19th century, but interlaced squares were apparently intended (Jesnick 1985, 12, Fig 3). More importantly, the acanthus motif is used again, this time in a foursome as a central device. It occurs yet again on a mosaic from Threadneedle Street found in 1805 (RCHM London 1928, Fig 47), both pavements are possibly the work of less accomplished members of the company Smith first suggested a Londinian *officina* some years ago (Smith 1984a, 364) but more recently I have described what I call the Londinian acanthus *officina* in more detail (ASPROM Symposium, Museum of London, Dec 1987). A Severan dating is supported by what we know archaeologically about the area, when the Walbrook was being drained to provide space for opulent new residences during the early years of the 3rd century (Merrifield 1983, 1834). A 4th century date would seem to be precluded by the expansion into London of the Corinian saltire *officina* during this period (Old Broad Street mosaic, 1854), difficult to explain (though not impossible) if an accomplished Londinian *officina* was still flourishing. London was apparently in decline throughout the 4th century and a *local officina* is hard to imagine at this time. Equally, the London mosaics which are dated to the 2nd century share few similarities with the Walbrook group. In short, the style and accomplishment of these mosaics, echoing the Cirencester (Dyer Street) and Dorchester (Fordington) mosaics, suggests an earlier date, probably Severan.

I now wish to discuss some of the more recent and significant discoveries of Romano-British town mosaics. Ilchester, as *Lindinis*, was made the second *civitas* capital of the Durotriges when this was divided in two before the 4th century. In the 1940s and 1950s a large number, particularly in relation to the town's size, of mediocre geometric pavements were excavated in the town but remain unpublished. In 1982, however, the remains of a splendid geometric pavement were uncovered in the town at 17 Lymington Road (Neal 1983). This is a remarkably original design of eight curvilinear lengths of simple guilloche, forming a swirling repeating pattern. David Neal's reconstruction (Neal 1983, Fig 5) is both plausible and exciting, offering a unique design for Roman Britain, unparalleled anywhere in the empire. The nearest we have to a parallel in Britain however is a curvilinear scheme from an exotic chamber at Keynsham villa, Somerset (Bulleid & Home 1926, Pl XIII, Figs 2 and 4), also formed from lengths of simple guiilloche. The central panel at Lymington Road, now lost, would have been a concave-sided octagon and the threshold contained foliage with pointed leaves issuing from a heart-shaped leaf or bowl at the central point. Some of the patterns and motifs do occur elsewhere in Britain, however, in particular the overlapping scale pattern is also known from a mosaic from Hurcot (VCH Somerset 1906, 322), a villa in the same county. The pattern is also known from a mosaic from Kingscote, Gloucestershire, discovered in 1975 (Swain 1980, 26-7). This mosaic (Fig 10) uses overlapping petals as a corner filling motif and, like the Ilchester example, is undated archaeologically but appears to be of late type, certainly no earlier than the late 3rd century This is one of the finest discoveries of the 1970s, especially intriguing as the building it comes from is part of a larger, previously known and un-

Figure 9 London, Bucklersbury mosaic (1869). Assignable to early 3rd centrury. Chromolithograph ex RCHM LONDON (1958)

Figure 10 Kingscote, Glos (1975) Venus mosaic of late 3rd to 4th century. Photo courtesy of National Monuments Record

named, settlement. This hypocausted room had a threshold with dolphins and mythical marine beasts flanking a central scheme of interlaced squares of guilloche surrounding a central panel with what would have contained one of the finest portraits in Romano-British mosaic but now badly damaged. The diadem, necklace and looking glass, however, all indicate Venus, her tumbling hair confirming the identification. As already mentioned, this goddess, as well as marine scenes, was very popular with mosaicists of the south-west, namely the Durnovarian *officina.* This does not appear to be a straight- forward attribution, however, in fact the overlapping petal motif shows a link with IIchester. I have already postulated *an officina* based in the town (Johnson 1983) as an off-shoot from the Durnovarian mosaicists, when *Lindinis* became the second *civitas* capital of the Durotriges, and responsible for a number of curvilinear and figured designs in Somerset, ie the mosaics from Lymington Road, Keynsham, Hurcot, Low Ham and also the outlier at Kingscote.

Two 4th century mosaics from Britain demonstrate the remarkable familiarity of at least some landowners and house-owners with the classics of the late period. One is the Low Ham villa mosaic, Somerset, found in 1945 (Smith 1969a, P1 3.5) with scenes from Vergil's *Aeneid,* the other is a more recent discovery, the pavement excavated at Col-Chester, Lion Walk, in 1972 (Crummy 1984, 57, Figs 46-7). This fragmentary mosaic is from a large courtyard house inside the *colonia,* dated to the 4th century, and was a radial design of great quality and importance. This comprised sixteen panels containing floral or vegetable decoration alternating with figured panels. At the top of each figured panel was a tessellated inscription relating to the scene below but unfortunately the enomous damage to the floor prohibits any reconstruction of the narrative. The best preserved panel contains a pair of robed figures, possibly female, and an inscription which begins AD VIA.. . . . . This has exceptionally fine workmanship and may demonstrate some Corinian influence (Neal 1981, No 41, 73-4).

Winchester, as the *civitas* capital, *Venta,* has for long been grossly under-represented in the mosaic record although this situation has been remedied to a large degree by the recent excavations at the Brooks site. In 1987 an unpretentious courtyard house was revealed, without a bath suite but with the remains of three geometric mosaics (Qualmann 1988, plan p5). David Johnston's reconstruction (Qualmann 1988, 6) of the lozenge mosaic shows that it would have incorporated spaced squares, one of which contained a square of simple guilloche. Much terracotta was used in this floor which appears to be of 2nd century date. The building itself occupied a prime location in the city, although this house was at the 'budget end' of the market with its residents having to use the public baths. Another building, this time of strip type with a continuous veranda, was excavated at the Brooks in 1988 and revealed one of the finest floors yet known from the town. The 'floral mosaic' (unpublished) has a circular scheme surrounded by lozenges containing rhomboid swastikas, very similar to the lozenge scheme from Colchester North Hill (A) of 1965. The filling motifs are noteworthy, the concentric arcs in the scroll and the double lotus motif being as yet unparalleled. This Winchester mosaic is closer to the eastern tradition with its echoes of Colchester and is surely of Antonine date.

As we have seen, Exeter has revealed the earliest known example of mosaic, from its legionary fortress, later it became one of the most far-flung *civitas* capitals, at the southerly limit of the Fosse Way. This geographical isolation might explain the lack of mosaics from the town and, until recently, the indifferent quality of those that have been recovered. The finest series first began to be discovered by Lady Fox in 1943 at, the St Catherine's Almshouses site after bomb damage (Fox 1952, P1 VII, a, c, and plan P1 XX), and recorded in her fine watercolours. In 1988 the site was re-examined by the Exeter Museums Archaeological Field Unit who discovered further areas of mosaic from this Roman building. The most notable was a very impressive corridor mosaic (Holbrook, Johnson & Thompson 1989, 46-51, P1 1) with a St Andrew's cross of simple guillothe, flanked by poised squares comprising a large guilloche mat and Z-shapes bordering a budded knot. Most corridors in Britain, if tessellated at all, were usually plain or had simple geometric decoration, thus the Exeter corridor is one of the finest known. Archaeological evidence indicates that the corridor was at least 11.25 metres long and 2.5 metres wide. The nearest parallel for the St Andrews cross are at Frampton, Dorset (mosaic A, Lysons 1817, Pl IV, RCHM Dorset 1952 Pl 127.11, and at Cirencester in a mosaic from Admiral's Walk (Mcwhirr 1978, Pls XXIV, XXXV; Neal 1981, No 34), possibly of 3rd century date. Lady Fox dated the initial discovery to after AD 200 but, the Frampton mosaic, offering the closest parallel for the St Andrew's cross in guilloche, is most unlikely to predate the 4th century. On this basis then a 4th century date is offered for the St Catherine's mosaics which squares well with the archaeological evidence. The mosaics, with the usual broad borders, indicate a well-endowed town house in *Isca.*

Wroxeter, Canterbury and Chichester, all *civitas* capitals, have revealed very few mosaics (see appendix). York is also relatively poor in mosaics and, as the provincial capital of *Britannia Inferior* and *Britannia Secunda* successively, I would like to ask why? Despite a considerable amount of excavation, over the last two decades in particular, only two new mosaics have been uncovered there this century! One of these was in fact first found in 1851 at Clementhorpe (RCHM York 1962, P1 23b) and re-excavated in 1976 (Interim 1976, 14-5, P1 p23). This mosaic came from a town-house just outside the *colonia* walls and is clearly of very late type as the rich borders of guilloche and running *peltae* show, but where are all the others of this date? *Eburacum* has only produced 11 mosaics yet its *colonia* had

received its charter before AD 237 and it had been the seat of the Imperial Court under Severus and Caracalla. We still await the discovery of his *Domus Palatina (Scriptores Historiae Augustae, Severus,* 22, 7), possibly still being used by (and refurbished for?) the court of Constantius I and, later, Constans, and where elaborate mosaics must have been laid.

It is appropriate to end with *Verulamium* as this *municipium* has produced one of the latest dated mosaics from Britain, certainly the latest from any Roman town in Britain. This was also the very first mosaic recorded by David Neal, after its discovery in 1959 (Frere 1983, 220, Pls XXVII and XXXIVa). This overall *maeander* scheme, from a channel-hypocausted room of secondary insertion, contains spaced boxes, the central one of which features a male bust, possibly Bacchus. The mosaic is dated by Frere to after AD 380, possibly as late as 400, and it is remarkable that at this late date the demand was there for such a well-appointed house and mosaics and that the expertise was still available to meet the demand so competently (although some doubt still exists over the late dating, D Neal, pers comm).

Thus, over the last 50 years we have seen a great many mosaics added to the archaeological record, mostly from urban excavations (although, overall, there are equal numbers of villa mosaics and town mosaics). Stylistic analysis of Romano-British mosaics, particularly from 4th century villas, has resulted in a number of schools or *officinae* being put forward, at least two of which, the Corinian, together exceeded the output from any other identified *officina* from the western Roman empire. Figured designs of late mosaics can tell us much about the degree of Romanisation and education of the patrons, and all indicate considerable disposable wealth, used predominantly for private display. Despite their usually provincial character and a penchant for compartmentalisation, many of the 2nd century mosaics display lively use of polychromy, often with an extremely high finish and an impressive command of geometric principles of design. This technical virtuosity was never again equalled, even during the 4th century when quite sophisticated mosaic pavements were laid on the shoddiest of foundations. The disposition of mosaics can often indicate room hierarchy and the placing of threshold panels can reveal doorways, and visitor flow, where other evidence no longer exists. There are extremely few rooms in Britain which appear to be classical *triclinia,* mosaic elaboration alone should never be taken as such an indicator, indeed one or two of the more interesting such identifications have exceedingly plain floors, scarcely to be regarded as mosaic. Possibly most Romano-British families ate in a *tablinium* rather than the relatively archaic *triclinium,* the latter being reserved or even improvised for special celebrations, along with the use of the *toga*

There remain considerable gaps in our knowledge; how did the Antonine boom in the craft come about and where did the skills come from? how complete was the 3rd century *hiatus?* what caused the remarkable revival of mosaic at the start of the 4th century and where did the new skills come from the second time around? how exactly were mosaics laid? if prefabrication was practised, how widespread was it? Most mosaics, whatever the period, cannot yet be attributed to a particular *officina* so should we instead be thinking of groups of mosaicists, sharing and developing their repertoires and working together only for so long as was expedient? In the absence of firm archaeological evidence for a permanent *officina* in an urban or rural context, the distribution of attributed mosaics would indicate that towns were still the base, if no longer the focus, for such activities in the late period. The more analysis that is done on mosaic attribution, the more fragmented the picture becomes (for example Cosh 1989), but probably closer to reality, and inevitably we have moved on from a rather simplistic view of discrete schools of mosaic, fairly well defined in style and time.

Finally, many towns are still curiously underrepresented in mosaics for their size. Perhaps this situation may improve over the coming years, hopefully in the form of more examples dated by external evidence.

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Appendix 1 Romano-British towns and numbers of mosaics recorded

London	85-100	status uncertain, 330 acres
Gloucester	53	colonia of 53 acres
Dorchester	52	civitas capital of 74 acres
Colchester	50	colonia of 108 acres
Cirencester	50	civitas/provincial capital of 240 acres
Silchester	44	civitas capital of 107 acres
Caerwent	35	civitas capital of 44 acres
Verulamium	31	municipium (?) of 200 acres
Leicester	28	civitas capital of c 100 acres
IIchester	23	civitas capital of 22 acres
Bath	20	status uncertain, 23 acres
Lincoln	20	colonia (upper and lower) of 97 acres
Aldborough	13	civitas capital of 74 acres
Chichester	12	civitas capital of 99 acres
York	11	colonia provincial capital of *c* 80 acres
Canterbury	11	civitas capital of 130 acres
Exeter	11	civitas capital of 93 acres
Winchester	10	civitas capital of 143 acres
Wroxeter	7	civitas capital of 170 acres
Durobrivae	6	civitas capital of 44 acres
Kenchester	6	major town of 33 acres
Petuaria	2	vicus of 13 acres
Total	590	Out of a total of *c* 1200 recorded mosaics

Appendix 2 Identifiable mosaic officinae (* = joint)

a **2nd century**

Callevan (Silchester)
Ratan (Leicester)
Isurian (Aldborough)
Glevan (Gloucester)
Camulodunan (Colchester)*
Verulamian (St Albans)*

b **Late 2nd/Early 3rd century**

Londinian (acanthus)

c **4th century**

Central Southern (Winchester or Chichester)
Corinian Orpheus (Cirencester)
Corinian Saltire (Cirencester)
Corinian Saltire ('IIchester;Lindinis branch')
Durnovarian (Dorchester)
Durobrivan (Water Newton)
Isurian-Petuarian (Aldborough, Brough on Humber)

16 Wall-painting since Wheeler

Roger Ling

When Mortimer and Tessa Wheeler were excavating *Verulamium* in the 1930s, almost nothing was known about wall-painting in Roman Britain. A few isolated examples had been found in position in buildings whose walls were deeply buried, notably in a villa at Comb End, Gloucestershire, excavated by Samuel Lysons in the 1790s (Davey & Ling 1982, 215, P1 CVI), in a small rural building at Iwerne Minster, Dorset, excavated by General Pitt-Rivers in 1897 (Davey & Ling 1982, 217, P1 CVIII), and in a couple of town-houses at Caerwent, excavated in the early years of the present century (Davey & Ling 1982, 211-13, Figs 57-9). These were recorded by drawings or photographs, but none of them could be preserved, and they were too few and far between to shed much light on the history of painting in the province. Normally wall-paintings in Britain are discovered in fragments and, like similar discoveries in France and elsewhere, pose serious problems of reconstruction and interpretation - especially where the fragments are in disarray or have been removed from their original context. The sheer difficulty of lifting and reconstructing such fragments has always deterred excavators from initiating any systematic programme of study. Only one early attempt at reconstruction is known: a pattern of squares and roundels containing rosettes and ears of barley on a maroon ground assembled by George Fox from fragments found at Silchester in 1895 (Davey & Ling 1982, 153-5, Fig 35, Pl LXVIII; Ling 1984a).

The Wheelers found wall-plaster at *Verulamium*, but mostly simple panel-schemes which they did not consider sufficiently noteworthy to justify the expense of conservation or reconstruction. Their main contribution to the study of wall-painting was the discovery of Norman Davey. An engineer by training, Dr Davey was employed at the government's Building Research Station at Garston, near Watford, where he achieved distinction, *inter alia*, for designing the acoustic reflector inside the dome of the Albert Hall in London, His work at *Verulanium* in the 1930s was very much a spare-time interest; its most notable product was at least one of the fine colour illustrations of mosaics used in the Wheelers' publication *Verulamium, a Belgic and two Roman Cities* (Wheeler & Wheeler 1936, Pl XLII). It was not till twenty years later, and in the context of a new programme of excavations at *Verulamium*, that Davey emerged as a restorer of Roman wall-plaster and carried out the work for which he is now best known.

Lullingstone: the first reconstructions

Before we look at this work we must go to another site which is not a town, and thus not strictly germane to the theme of this volume. But the Roman villa at Lullingstone (Kent) can hardly be disregarded in any account of the study of Romano-British wall-paintings. Here, in 1949, a sunken room was found to contain a mass of burnt, collapsed material from an upper storey, including thousands of fragments of painted plaster; the excavator, Lt-Col G W Meates, quickly appreciated the importance of trying to reconstruct the fragments, and thus resulted a massive jigsaw puzzle which continued for 30 years (Davey & Ling 1982, 138-45, Fig 30, Pls LVI-LIX; Liversidge *et al* 1987, 11-41). The pioneer in the work was Mr C D P Nicholson (affectionately known as 'Old Nick') who, working in cramped and difficult conditions, pieced together a series of figures with arms raised in the ancient attitude of prayer *(orantes)*. The figures were wearing long beaded robes with broad sashes at the waist, and their faces were beardless - features which tallied with the evidence of coins and pottery from the deposit to indicate a 4th century date. Between them were the elaborately decorated columns of a portico which was surmounted by a tiled roof or coffered ceiling painted in bright tones of red, purple, yellow and blue; and beneath them ran a continuous dado with a pattern of conventionalised marbling in purple, red and pink. The inference that the worshippers were Christians was dramatically confirmed after a year of further sorting when Nicholson put together the fragments of a large Christian monogram (Chi-Rho) set within a wreath. The wreath was fastened at the bottom with an orange ribbon on whose ends perched birds. The whole motif is reminiscent of reliefs on early-Christian sarcophagi where pairs of doves peck the fruit of a wreath containing a similar monogram; the birds symbolise Christian souls enjoying the fruits of the afterlife.

The discoveries at Lullingstone illustrated the value of collecting and piecing together fragments of wall-plaster not only for the sake of recovering the decorative scheme but also for the sociological information which that scheme could yield. The reconstruction enabled the excavators to identify the upstairs room from which it came as a house-chapel and thus to establish that the Lullingstone villa was owned in the 4th century by a Christian family. Further details of the murals have been restored by

David Neal, Norman Davey and Frances Weatherhead, and we now know that there were at least two other Chi-Rho monograms, as well as smaller figures, fruit and foliage. At least one of the praying figures was set in front of a curtain, a motif which on sarcophagi often indicates a dead person; so it is tempting to argue that the figures were intended to represent real people, perhaps members of the family, some living and some dead.

Also in the Lullingstone villa, from an earlier date, is a painting preserved in its original position. Set on the back wall of a niche in the sunken room beneath the Christian chapel, it shows remains of three female figures draped respectively in blue-green, yellow, and reddish-brown dresses (Davey & Ling 1982, 136-8, Pls LIV, LV; Liversidge *et al* 1987, 8-9, Pls IV-VI). Their heads were swathed in foliage; beneath the right hand of the one at the left was an overturned jug; and from the breasts of the central one emerged two spurts of water. The likelihood is that they represented water-nymphs: the motif of the water-pouring breasts is attributed to nymphs in a painting described by the 3rd century Greek writer Philostratus, What their role was at Lullingstone is uncertain, but their position in a niche within a room which was otherwise simply decorated implies that they were the focus of some form of domestic cult. They may indeed have been the deities or spirits of the water-source which supplied a well in the same room. If so, they provide, in conjunction with the Christian frescoes of the room above, an interesting comment on the change from pagan to Christian beliefs on the part of the residents of the house over a couple of centuries.

Verulamium: the next phase

In 1955 excavations were begun in advance of a road-building scheme which threatened part of the Roman city of *Verulamium*. They immediately revealed well preserved remains of houses with timber-framed clay walls which had collapsed along with the painted plaster which decorated them on both faces. Sheets of wall-plaster thus lay ready to be lifted and reassembled. By a remarkable stroke of fortune this plaster was provided both with an energetic and skilful excavator, Professor S S Frere, and with a gifted and painstaking restorer, Dr Davey: together they effected the recovery of a number of more or less complete decorative schemes which revolutionised our understanding of wall-painting in Roman Britain (Liversidge 1984). Already in 1955 a red and yellow decoration was lifted from Building XXII.1 (Davey & Ling 1982, 181-3, Fig 45, Pl XC). Then in 1956 came the spectacular discoveries in a large courtyard house, Building XXI.2.

From the courtyard itself were retrieved the fragments of a yellow frieze which is thought to have decorated the inner wall of a wooden verandah: it showed a continuous undulating plant-scroll with tendrils spiralling alternately above and below the main stem, each occupied by either a panther's head or a long-tailed bird (Davey & Ling 1982, 171-3, Fig 41, Pls LXXXII-LXXXIV). The so-called 'peopled scroll' was a favourite motif of Mediterranean art, going back to the 2nd century BC or earlier; and the discovery of such a classical theme, so skilfully rendered, in late 2nd century Britain shed new light on the quality of painting in the province. At the same time the triple-tongued cornet motif set in the forks of the scroll is apparently without parallel and may perhaps have been a local variation, inspired by a superficially similar device in mosaic pavements.

Still more exciting were the discoveries in a corridor of this same house. Two sheets of plaster lying face down on the floor, one above the other, were initially thought to have fallen from opposite walls; but reconstruction revealed that the lower one came from the ceiling. On a purple-red background it showed a pattern of intersecting octagons formed by yellow corn-stalks; in the interstices were blue and yellow floral ornaments and further birds and panther's heads, variously oriented to take account of the changing viewpoint of the spectator looking up from below (Davey & Ling 1982, 175-8, Fig 43, Pl LXXXVIII). Above it lay the decoration of the south-west wall, an ornate scheme of large red fields alternating with black intervals carrying candelabra, all above a dado of black and purple panels (Davey & Ling 1982, 173-5, Fig 42, Pls LXXXV-LXXXVII). The red fields each contained a central bird on a short green perch, surrounded by a framework of delicate but stylised yellow candelabra and garlands. The whole scheme was surmounted by a frieze containing a scroll rather like that of the verandah, but this was too fragmentary to be reconstructed.

Among the other wall-paintings found at *Verulamium* in the 1950s a particularly interesting example comes from a mid 2nd century house which was destroyed by fire soon after its erection (Building XXVIII.3). Here a corridor was decorated with panels painted in imitation of exotic types of breccia and alabaster carried out in various colours - eg brown and purple; green, white and black; pink, red and brown (Davey & Ling 1982, 184-6, Fig 47, Pl XCII). Between the panels, which were obviously inspired by the *de luxe* veneers of public baths and aristocratic villas, came a series of pink columns, illusionistically shaded but apparently 'floating' in the field with no architectural function. This curious combination of two-dimensionality and plasticity is again unparalleled in Roman painting.

Norman Davey: restoration in the 1960s and l970s

His work on the plaster at *Verulamium* brought Norman Davey to the fore as a restorer of Roman wall-paintings. After his archaeological debut in the 1930s he had acted as a consultant on Roman building materials (for example on the excavation of the villa at Park Street in 1943-45) and it was partly in this capacity that he was called upon to undertake

the conservation of the plaster from Frere's work in the 1950s. The restoration of the *Verulamium* material was carried out in his spare time at the Building Research Station; but when he retired in 1960 he became a full-time restorer of wall-plaster and was provided with a special laboratory for the purpose by the Inspectorate of Ancient Monuments.

The period of Davey's second career coincided with a major expansion in British archaeology. The redevelopment of Britain's inner cities and the building of a network of motorways led to a great deal of rescue excavation, much of it State-financed; and almost all of the Roman wall-plaster recovered from this programme passed through Dr Davey's hands. The result was a long series of reconstructions and a massive enlargement of our knowledge of Romano-British wall-painting.

Among the material restored by Dr Davey pride of place must go to the excerpts from a decoration from a courtyard house in Leicester (Davey & Ling 1982, 123-31, Figs 25-7, Pls XXII, XLIX-LI, CXXI). The scheme, which ran round the inner wall of the colonnade in the courtyard, was a more elaborate version of the red and black *décor* from the corridor of *Verulamium* Building XXI.2, with which it was roughly contemporary. The main difference is that the black intervals were not simply treated as fasciae with candelabra or arabesques but were opened up by means of tall, slender columnar structures shown in perspectival recession; these structures were further enriched with birds and flowering tendrils, while the dominant red fields between them, adorned as at *Verulamium* with delicate yellow and white candelabra and garlands, contained not birds but human figures. Above ran a series of rectangular panels with black grounds containing theatrical masks and various ornamental motifs. Another striking variant on the *Verulamium* scheme was the replacement of a panelled dado with an illusionistic podium painted as if in strong projection. The result is another curious compromise - here between solid architectural forms reminiscent of the Pompeian Second Style and the flimsier, fantastic forms characteristic of the Fourth Style and of 2nd century paintings at Ostia.

Simpler versions of the red and black style, dated to an earlier period, were found at several sites, notably Cirencester (in 1961) (Davey & Ling 1982, 97, Pl CXXII), Boxmoor (Herts.) (1966) (Davey & Ling 1982, 82-4, Fig 5) and the legionary fortress at Chester (1974) (Davey & Ling 1982, 96-7, P1 XXXIV). At Cirencester and Boxmoor the dado was pink with tiny splashes of black, white, red etc. designed to give the effect of marble veneer, and the red fields were provided with green or yellow borders and with inner framing lines of yellow. At Cirencester the black intervals were apparently undecorated, but those at Boxmoor were bisected by simple candelabra with a white and purple stem interrupted by horizontal discs. The general formula recalls a series of late 1st and early 2nd century decorations in France, Holland and Germany; and the example at Chester contains another Continental device, clumps of reeds growing in the dado. But the British decorations are simpler than their Continental counterparts: none contains the favourite Continental predella with plants, birds and animals.

None of the plaster handled by Dr Davey in the 1960s and 1970s had fallen in sheets with the neat precision of the material at *Verulamium*. Almost invariably the fragments were found in confusion and posed serious difficulties of reconstruction. Unfortunately, despite his great patience and technical expertise, Dr Davey lacked a familiarity with the canons of Roman painting and many of his restorations contain problematical details. More especially he insisted upon filling the spaces between genuine fragments with modern plaster and upon painting in missing elements to match the ancient ones, a practice which has the danger of enshrining mistakes and giving the untrained observer a false sense of security. In the red and black decorations from Leicester, for example, it is by no means certain that the arrangement of the ornamental motifs and of the architectural forms is correctly restored; while the style of the figures in the red fields is sadly falsified.

Recent discoveries

Since 1977 Dr Davey has done comparatively little major restoration and there has been a slackening in the pace of discovery. Ironically, however, two sites have yielded more or less complete sheets of wall-plaster rather like those at *Verulamium* which started Davey on his career as a restorer. At Leicester, in a suburban villa outside the north gate, a mud-brick wall which had collapsed from an upper storey into a cellar was found to carry painted decorations on both faces (Davey & Ling 1982, 133-4; Selkirk & Mellor 1980-2, 314-17; Mellor 1982; Sturge 1982; Ling 1985, 27, 31, Fig 9, Pl 12; Sturge 1986). The plaster was carefully lifted and meticulously reconstructed by Mr J T Sturge of Leicestershire Museums over the course of five years (1979-84). He steadfastly refused to 'float' any fragments which did not actually join on to others; and the missing parts of the scheme, as in the restorations carried out by Madame Alix Barbet and her team in France, have been left in a neutral buff-coloured mortar. In the better preserved decoration of the lower face an elaborate dado with imitation marbling supports a scheme of alternating red and green fields articulated by columns rendered in *trompe l'oeil*. The red fields are decorated with leafy garlands, the green ones with small picture-panels; above runs a continuous frieze containing a horizontal garland. On the other face of the wall the decoration is simpler: a series of panels on a white ground, framed alternately in yellow, red and green. Once again a continuous frieze with a garland, here punctuated with clusters of three round fruits (apples?), occupies the upper part of the scheme. An interesting detail to emerge from the reconstructions were the seams between areas of plaster laid for each

session of painting or 'day's work' *(giornata di lavoro).* On the red and green wall they ran horizontally along the top of the dado and the upper edge of the main fields and vertically along the edge of at least one of the columns; on the white wall, where the dado is much shallower, the only discernible seam ran horizontally above the main panels.

More recently (in 1983) a fallen sheet of wall-plaster has been retrieved from a building, probably a bath-house, at Southwark in London (Frere 1984, 310, Fig 20). Cleaned and restored by Mr S A MacKenna of the Department of Greater London Archaeology (Lambeth and Southwark), it has turned out to derive from the lunette of a vaulted chamber and to show a symmetrical arrangement of spindly columnar structures with garlands slung from the ceilings and with a Cupid standing in the central position. The general formula is a familiar one in wall-decorations of the late Hadrianic or Antonine periods, to which this painting belongs; there are fragments of similar schemes at Winchester (Hants), Tarrant Hinton, and elsewhere. But the Southwark example is a particularly fine one, richly coloured in green, red and yellow; the pigment used for red is not the conventional red ochre but the more expensive cinnabar, positively identified so far on only seventeen British sites; and another fragment of plaster from the same room carries traces of gold leaf, an even rarer refinement. The cleaning and reconstruction of the Southwark plaster is now complete, and marks another important milestone in the history of the study of Romano-British wall-painting.

In addition to areas of plaster which can be extensively reconstructed, the 1980s have yielded a number of complexes which are less complete. In the villa at Bancroft (Bucks) fragments of a frieze of fish, dolphins and bivalves on a white ground have been studied by Ros Tyrrell (1983-86: unpublished); there are too few joining pieces to permit a reconstruction 'in the flesh', so Miss Tyrell's reconstruction is on paper and hypothetical. In a town-house in Fenchurch Street, London, Mike Rhodes and Richenda Goffin (1983-86) have assembled fragments of perspectival architecture with an interesting colour-scherne of blues, red and browns, dated before a Hadrianic fire (Rhodes 1987). Other pieces show a theatrical mask and a standing female figure, perhaps one of a series in fields between the architecture. Once again the restorers wisely refused to fill in gaps or otherwise take liberties with the surviving material.

Conclusions

The work of excavators and restorers over the last forty years has shown that wall-painting was as widespread an amenity in the towns of Roman Britain as it was in the remaining towns of the Empire. All houses with any pretensions had one or two, or more, rooms decorated with frescoed walls. Moreover the techniques and styles, for all the local variations which can be identified, are based on the fashions of the Mediterranean and other provinces. Many paintings, especially if we include the fine figure-paintings from villas and other rural sites, such as Kingscote, Southwell and Tarrant Hinton (Davey & Ling 1982, 119-23,155-8,165--8; Swain & Ling 1981; Gray 1982; Ling 1984b, 58-60; Ling 1985, 39-44), can hardly be separated from the mainstream Greco-Roman art tradition. Britain, in short, is now seen to occupy its proper place, in the field of wall-painting as in many other aspects of the artistic environment, in the broader spectrum of Roman material culture.

What problems still remain for the student of Romano-British wall-painting? The chief problem (it goes without saying) is that, despite the discoveries and restorations of the past forty years, the material is still less abundant and less well dated than one would like. Even in the case of the better preserved decorations it has rarely proved possible to reconstruct more than small areas, generally from the lower parts of walls; in very few examples do we know how the upper part of the wall was treated. More important, the number of sites where wall-plaster has been preserved in any quantity and has been properly excavated remains depressingly small in comparison with the vast numbers of buildings whose walls must once have been plastered and painted.

A second problem is the lack of expertise and resources to deal with wall-paintings when they do turn up. There is nothing in Britain to compare with the specialist unit run by Madame Alix Barbet in France, the Centre d'Etude des Peintures Murales Romaines, which provides both advice and practical help to excavators confronted with finds of plaster. Ideally Britain needs a unit like this; but the kind of central funding available to archaeology in France is a thing of the past in Britain. We can only hope for the emergence of enthusiasts who will form an independently financed group like the British mosaics group ASPROM (Association for the Study and Preservation of Roman Mosaics). Perhaps the newly established Association Internationale pour la Peinture Murale Antique, whose constitution was formally adopted in Cologne in September 1989, will ultimately spawn a British branch. Till that happens we have to remain dependent on excavators to take their own measures for the conservation and study of wall-plaster, drawing upon whatever available expertise and manpower they can recruit. If they are fortunate enough to find conservators as skilled as Messrs. Sturge and MacKenna, then their finds are in safe hands. Otherwise the next best thing would be to produce a booklet with advice to excavators and conservators on how to deal with wall-plaster. Such a booklet has been mooted on various occasions, but nothing has so far come of it.

A final problem is the backlog of material from past excavations. It is good at last to see a publication of the Painted House at Dover, which was discovered in 1971 and contained paintings with architectural schemes surviving *in situ* to a height

of 2m (Philp 1989); but the material found in many excavations during the boom period of the 1960s and 1970s remains unpublished. In several towns, for example Gloucester and Colchester, there are large deposits of wall-plaster, often from clearly defined archaeological contexts, which lie mouldering in museum stores because there is no one with the time or space to deal with them. Even the finds of the last century or the early part of the present century may be expected to yield further information if re-examined in the light of our present knowledge; thus recent studies of the Silchester fragments discovered by Fox (Ling 1984a) and of a number of fragments from Malton in Yorkshire excavated between 1927 and 1930 (Davey & Ling 1982, 145; Ling 1985, 23, Fig 6) have produced new insights into the decorative schemes from which they derive. Any strategy for dealing with finds in the future should also contain provision for dealing with the finds of the past.

A concomitant of our increasing knowledge of Romano-British wall-painting is the opportunity which it gives us to explore workshop organisation and social context. Preliminary forays in these directions have been made in the introduction of the corpus published by Davey and myself in 1982 (Davey & Ling 1982, 45--51; cf Ling 1985, 45-9); but the material is still too sparse for many meaningful results to emerge. It remains for future researchers to isolate those elements of colour-schemes and ornamental repertory which enable us to distinguish regional styles in the way that Dr David Smith and others have done for mosaic paving, and to look at the paintings in relation to the overall plans of the buildings which they decorated. We need to know what parts of a house and what types of room were endowed with wall-paintings, and how elaborate and richly coloured these paintings were in each case. There can be little doubt that, as on the Continent, the best-quality decorations were in the most important rooms, and that there was a sliding-scale of quality corresponding to the position of rooms in the functional hierarchy, all the way down from the best dining-rooms or saloons to the humbler slave-bedrooms - a sliding-scale which would no doubt be reflected in the costs charged by the firm of decorators to the client. Further discoveries and further research will lend increasing definition to our picture of such sociological relationships.

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Addendum

Since this was written, two detailed studies have been published on the paintings from Southwark referred to on p 169:

MacKenna, S A, & Ling, R, 1991a 'Wall-paintings from the Winchester Palace site, Southwark', *Britannia* 22, 159-71

——, 1991b 'Roman wall-paintings from the Winchester Palace site, Southwark (London), in 4. Internationales Kolloquium zur Römischen Wandmalerei Köln, 20-23. September Cologne 1989 (Kölner Jahrbuch für Vor-und Frühgeschichte 24), 233-7

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compiled by Susan Vaughan

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