

TOWNS, TENEMENTS, AND BUILDINGS

ASPECTS OF MEDIEVAL URBAN
ARCHAEOLOGY AND GEOGRAPHY



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ABSTRACT

This thesis will argue that the most effective way of understanding the physical development of medieval towns, particularly the larger, more complex, towns and those which lack extensive and detailed contemporary documentation, is by a structured integration of the data derived from the archaeological investigation of individual sites with detailed town-plan analyses following the methodology introduced and developed by Conzen. This will be demonstrated by two case-studies, designed to explore the interaction of the different sources of evidence at two different scales of investigation.

The first case-study is a detailed analysis of the plan and development of the whole of a large medieval town (Worcester), the second is a study of a single street (Pride Hill in Shrewsbury). The analysis of Worcester illuminates, in particular, the boundaries and internal layout of the late 9th-century *burh*, suggesting that it was an extension to the pre-existing Roman earthwork circuit and incorporated an area subject to regular town planning, possibly following Wessex models, and an area of irregular settlement that included the bishop of Worcester's *haga* recorded in 904. The defences were, it is argued, partly dismantled for the extension of urban settlement.

The Shrewsbury case-study examines an unusually-concentrated building pattern of halls behind the street frontage, and sets this in its contemporary context by an analysis of the contemporary plot-pattern, identified in part by its association with surveyed medieval undercrofts. The earlier history of the area is explored

through further analysis of the plot-pattern which pre-dates and is cut by the town wall. It is suggested that the area in question was, like other sectors of the early medieval urban fringe, possibly subject to some type of regular land-allotment for grazing and access to the riverbank.

Issues, illustrating the mutually-illuminating character of town plan analysis and urban archaeology, arising from the two case-studies, are discussed. These include the role of archaeology in reconstructing morphological change, the problems of the chronology of urban extensions, archaeology and the interpretation of cartographically-recorded features, and the role of plan-analysis in establishing a contemporary spatial context for individual and multiple archaeological investigations in early medieval towns.

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CHAPTER ONE: INTRODUCTION

1.1 Parallel threads: town plans and tenements in historical and archaeological studies.

In 1967, Dr Urry wrote of Canterbury: 'within the walls the modern ground-plan can be carried back into the twelfth century. A few modest alleys have disappeared and a new street (Guildhall Street) cut, but otherwise within the walls the layout is much the same as in the reign of King John' (Urry 1967, 185). He had arrived at this conclusion from his detailed research, first of all on a series of detailed Christchurch rentals dating from the mid 12th century to the early 13th, and on charters selected from more than five hundred that survived from the 13th century and earlier, and secondly, by comparing the information contained in these documents with the well-known mid- 12th-century plan of the cathedral waterworks, and with 17th-, 18th-century, and modern maps (1967, 3-4, 185). The level of detail contained, in particular, in the rentals, allowed Urry to assess with great precision the correspondence between the modern and 12th-century topography of particular areas: 'At the sale a few years ago of property north of St Peter's church, Canterbury, it was discovered that the vendors had no documentary title to a strip of ground about six feet wide running up the middle of the garden. It was quite easy to account for this lack of title for the strip of ground was none other than the old 'eastern lane' described on this axis in Rental D at the end of the twelfth century'. He continued: 'A remarkable fact emerging from the study of the rentals is that not only has the general twelfth-century plan of Canterbury survived largely unaltered to this day, but in many instances the ground-plot occupied by a citizen of 750 years ago has also survived, sometimes

in depth and sometimes in length, and occasionally both' (Urry 1967, 191). However, this static picture was by no means uniformly applicable throughout the town. Elsewhere Urry noted 'burgess-holding in Canterbury, and no doubt in all other ancient boroughs, is not a unity, unchanged and unchanging from the earliest times, but has an organic growth, can be broken up, added to, combined with adjacent ground, and cut up again with no reference to its one-time components, until all trace of any original arrangement is completely obliterated' (1967, 150). He went on to describe the development of the house of Jacob the Jew, where three plots were amalgamated to form a single large plot, later re-divided 'and part joined with vacant ground nearby' (Urry 1967, 150-2).

Canterbury was not alone in having a town plan which, when the modern landscape was compared with detailed medieval documentary evidence, showed a mixture of continuity and change in the extent of individual properties: the same picture is implicit in H.E. Salter's *Survey of Oxford* (1960, 1968) and in his earlier *Map of Medieval Oxford* (1934).

Continuity and change are equally evident in Winchester. According to Keene 'It was probably in the most densely occupied areas that physical boundaries were most stable, at least near the street frontages. The reason for this seems to have been primarily mechanical, for once the frontages were fully built-up the standing buildings, each in separate tenure, defined a framework which the holders of individual properties were obliged to respect when they rebuilt their houses. Only in areas of decline and decay, or as a result of royal intervention, or by the imposition of a twentieth-century redevelopment programme, has this ancient pattern been entirely swept away' (Keene 1985,

181). Once again, however, such stability cannot be assumed to be ubiquitous: 'The tenement histories ...demonstrate that many medieval boundaries have survived into modern times, although few of them can be traced with any certainty earlier than c.1300. The histories also show, however, that many property boundaries changed during the later Middle Ages as a result not only of the depopulation of the city but also of the continuous operation of the property market' (Keene 1985, 180). The author went on to note that the original properties laid out as part of the planned layout of the late 9th century were extremely large, becoming sub-divided into the more familiar type of medieval plot by the late 11th century: only a tiny proportion of any surviving boundaries would, therefore, be original. Further, the documents showed extremely complex changes in the ownership and layout of plots on street corners, and unpredictable changes in the boundaries of garden plots at the rear of tenements (Keene 1985, 181).

A similar story has recently been demonstrated in Wells, Somerset. Because of the relative frequency of the survival of property records there in institutional hands, Scrase (1989) was able to chart the evolution of a variety of plots within the medieval period and later. He identified a relatively small number of types of change: major developments comprising either the laying-out of new plots, the multiple sub-division of existing plots, or the amalgamation of existing plots; simple mediation (the longitudinal division of a plot into two or sometimes three); the transfer of small parcels of land between adjoining plots; and the expansion or creation of plots by encroachment onto public open spaces (Scrase 1989, 353). He went on to identify periods when particular processes

were prevalent, and further, to document the development of a few individual plots in the greatest detail. From these he established, as Keene had done before, that the behaviour of plots on corners or small street-blocks was utterly unpredictable without the fullest documentation. Overall, his conclusion was that 'The complexities can be mastered. But the evidence also cautions against too easy an optimism. Often the records show that modern boundaries are not medieval or only late medieval' (Scrase 1989, 363).

In the 1960s and 1970s, with the growth of urban rescue archaeology, continuity between medieval and modern landscapes began to be established by excavation. In Hull, for example, excavations on the High Street were able to demonstrate a striking correspondence between properties listed in 14th-century rentals, excavated tenements, and their modern successors (Kingston-upon-Hull Mus. Bull. 10, 1973, 4). In Gloucester, the medieval plot-pattern on the east side of Berkeley Street, evident from a lease of 1275 and excavated buildings a century older, survived with minor modifications until the late 1930s (Hurst 1972, 24-7). More than a decade before, Lawson and Smith's survey plans of the rows of Chester demonstrated that the modern property boundaries were at least as old as the late 13th century (Lawson and Smith 1958). Three modern properties excavated in Durham in 1974 (61-3 Saddler Street) proved to have been delineated in the late 11th century (Carver 1979). The most dramatic demonstration along these lines was, of course, the excavation of parts of four tenements on Coppergate in York in 1976. These proved to have been established simultaneously in the early 10th century, and their boundaries perpetuated with some precision down to

the present day- or at least until the arrival of a
Victorian chocolate factory (Hall 1984).

1:2 Town-Plan Analysis

What is implicit in the historical and archaeological case-studies referred to above is that the three major components of the townscape - plan, building form, and land-use - all respond at different rates to social and economic change: 'Town plan, and, to a less extent, building fabric are more conservative in this respect as they tend to reflect the pattern of past landownership and capital investment more tenaciously...Land utilisation responds more easily to changing functional impulses and therefore the historicity of its distribution pattern is often weak. From the townscape as a whole, then, the town plan emerges as the form category of greatest value to the historian' (Conzen 1968, 117). This three-fold division of the townscape, and the conclusion as to the relative conservatism of each component, were but two conclusions drawn by the geographer M. R. G. Conzen, from his analysis of Alnwick, first published in 1960. Conzen, who had come to Britain as a refugee from Nazi Germany in 1933, brought with him a tradition of morphological analysis developed by practitioners in Germany from the end of the 19th century on. In the later 30s and 40s he familiarised himself with British towns, through field visits and through his work as a professional town planner in the north-west, before re-entering the academic world (Whitehand 1987).

The analysis of Alnwick has long been regarded as a milestone in the development of the methodology of town plan analysis. In Conzen's words, it sought 'to establish some basic concepts applicable to recurrent phenomena in urban morphology and to lead to an explanation of the arrangement and diversity of an urban area in terms of

plan types and resulting geographical regions' (Conzen 1960, reprinted 1969, 4). A number of key components of Conzen's approach can be identified as having particular relevance to the understanding of pre-modern urban landscapes.

First, the recognition of the fundamental importance of the burgage plot as the 'basic cell', the smallest component of the town plan. This attention to detail instantly distinguishes the work of Conzen and his successors from their forbears (and, unfortunately, most archaeologists) whose analyses of town plans produce hypotheses generated from and solely reliant on the characteristics of street systems. This emphasis on the importance of individual plots has the corollary that large-scale cartography is an essential tool.

Secondly, the conceptualisation of processes and features in the urban landscape. For example, Conzen introduced (it had a German prototype) the idea of the burgage cycle: the recognition that plots in many towns undergo parallel evolutionary sequences, involving building repletion - the increasing coverage of their tails or backlands by buildings - reaching a climax phase (generally c.1850-1900) characterised by almost complete coverage, followed by a recessive phase as redundancy and clearance follow, completed by a period of 'urban fallow' as the plot itself is left unoccupied and without buildings. In the largest city centres, Conzen drew attention to the more extreme form of this process 'plot metamorphosis' whereby plot tails are developed, alienated, and amalgamated, roads widened and inserted, and large blocks redeveloped, leaving little if any trace of the original pre-modern boundaries (Conzen 1969, 123-131; 1981, 25-53).

Thirdly, and perhaps most important of all in the context of this thesis, was the recognition of the composite character of the majority of town plans. Growth-phase plans had long been a part of urban geography (Carter 1976, 145-148) but the identification of the extent of individual phases was generally imprecise, and based on map-sequences rather than the analysis of variations in the character of a given town plan and its component parts. Conzen identified phenomena which he termed 'plan-units': 'Examination of the town plan shows that the three element complexes of streets, plots and buildings enter into individualised combinations in different areas of the town. Each combination derives uniqueness from its site circumstances and establishes a measure of morphological homogeneity or unity in some or all respects over its area. It represents a *plan-unit*, distinct from its neighbours' (Conzen 1969, 5). The clearest illustration of this concept is the study of Ludlow, published in 1968, and familiar to urban archaeologists through the description of it in Platt's *The English Medieval Town* (1976). Conzen examined the town plan, identified at an early date by St John Hope (1909) as a 'planned town' on the *bastide* model, and noted the different character of the types of streets and their associated plots. He interpreted these variations as evidence of more than a single phase of growth and went on to propose a chronological sequence for the development of the town (Conzen 1968).

Conzen's work has been developed in a number of directions by other researchers. Of particular relevance here is the work by Slater, concerned as it is with medieval town plans. The plan-analyses published by Slater

suggest that there can be few medieval towns that, when examined in detail, will not be found to be of composite character. Just as Conzen demonstrated Ludlow's origins in several phases of planned, and unplanned settlement, so Slater has shown that Lichfield, another planned town, similarly has components of different dates within the medieval built-up area (Slater 1984-5). In these plan-analyses Slater has used only the more conservative townscape elements (streets and plots) in his plan-unit definitions for the medieval period. In addition to adding greatly to the list of towns examined with this approach and so forming a growing database with increasing scope for comparative studies, Slater has developed the metrological techniques far beyond those employed in the Alnwick study (Slater 1981, 1988), advocating direct field measurement as against measurement from maps, and has produced new insights into the practices of medieval town-planners and surveyors (Slater 1987).

1.3 The investigation of medieval towns: problems and solutions

Both urban archaeology and the Conzenian school of urban historical geography offer ways of studying the origins and physical growth of medieval towns, but each discipline faces specific problems, generally unique to each discipline and its sources of evidence.

Urban archaeology has, of course, first to face the problems inherent in the subject as a whole and not confined to its practice in urban surroundings, beginning with the small fraction of past activities that may leave recoverable, comprehensible, physical evidence below or above ground. The location of that physical evidence in an urban context may bring additional problems stemming from the likely intensity of the later use of a site and the consequent damage to earlier deposits and structures. But perhaps the greatest single problem facing urban archaeologists attempting to understand the physical development of a town is the scale at which investigations are conducted in relation to the size of the town as a whole — an inevitable consequence of the costs of deep excavation, the sources of funding, and national and local political priorities.

Urban rescue excavation has now (1990-1) been a familiar, even widespread, prelude to urban redevelopment for twenty years (Carver 1987, chapter VIII). Several hundred individual sites have been excavated on a large-enough scale for sequences of building construction and replacement to be readable (c.300 sites with comprehensible structural sequences and whole or partial building plans excavated by 1985), and artefact

collections may soon outgrow warehouses in some of the largest cities. And yet, even in the most intensively-explored towns, only minute fractions of medieval built-up areas have been sampled by excavation. By 1988, about 2% of the area of early medieval Ipswich, and only about 0.025% of early medieval York had been excavated (Wade 1988, 97; Hall 1988, 125).

These tiny samples are not likely to be significantly increased in the foreseeable future, if ever. In addition to the large proportions of historic urban areas already sterilised of pre-modern deposits by 19th- and 20th-century redevelopment, the adoption of conservation area policies (though welcome) has effectively rendered large parts of many towns and cities archaeologically unapproachable through the fossilisation of the existing building cover. To this can be added the current government policy of 'preservation (of archaeological deposits) *in situ*': excavation as the last resort. This seeks to encourage the construction of new buildings designed with foundations which will have the minimum impact on buried strata, reducing the need for the prior excavation of threatened deposits. In summary, samples of towns explored by excavation are very small and will remain so. The capacity of excavated evidence, on its own, to offer radical insights into the growth of the larger early medieval towns must therefore be regarded as extremely dubious.

Town-plan analysis, as developed by M. R. G. Conzen and his successors, offers a way of modelling the stages in the growth of a town by identifying the principal components of its plan. As described above (section 1.2), it has been successfully employed on a number of medieval case-

studies, all of market-town size, or smaller. As a technique, it too has problems, which increase in proportion to the size and complexity of the town being studied and the length of time over which it has been occupied. These problems can be summarised under three broad headings: chronology, superimposition, and land-use.

The first of these is perhaps the most immediately obvious. Components of a town plan may be identified, and may be interpreted as the result of distinct phases of urban growth, but their absolute and even their relative dates may not be immediately apparent. This is less of a problem in investigations of medieval new towns, where a foundation charter may disclose the date of a particular layout, or where the scale of planned development may be such that distinctive period characteristics are visible (comparisons have been made, for example, between the Broad Street/Mill Street plan-unit at Ludlow and *bastides* in 13th-century Gascony: Conzen 1988, 267). However, where components are smaller in scale and part of a town plan of mainly pre-Conquest origin, documentary evidence will in most cases be absent and even relative dating, from plan evidence alone, may be extremely difficult. Outward expansion from a single nucleus cannot be assumed, particularly in view of the abundant evidence for polyfocal development from towns like Norwich, and from many continental towns (see chapter 2:6).

Further problems arise in the case of morphological regions that have not arisen from 'planned' urban extensions taking place over a short period of time, but instead owe their origin to site constraints acting on settlement to produce a degree of morphological homogeneity over unknown periods — possibly months, possibly decades. In such circumstances, determining the

chronology of urban growth from plan evidence alone may well not be possible. Even 'planned' urban extensions, though laid-out over a short period of time, may actually contain a hidden chronology dependent on the rate of take-up and settlement of the plots within.

The problem of superimposition is also readily apparent. Redevelopment obscures earlier patterns, whether it is a 19th-century corn exchange or an 11th-century castle. Town-plan analysts are at the mercy of their cartographic source material: if it post-dates major landscape changes, then the earlier appearance of those areas will generally be beyond reconstruction.

Finally, town-plan analysis has arguably more to say about the development of the framework for settlement than about the settlement itself. For periods that pre-date the earliest surviving buildings, land-use will only rarely be apparent from town plan evidence alone, though it may have been of some significance in determining the morphology of town-plan elements and their evolution.

Aims and structure

The aim of this thesis is to demonstrate that the structured integration of the methods and approaches of the urban archaeologist with those of the historical geographer offers an effective way of investigating the physical development of the structural framework of towns in the period c.900-1300, particularly the larger, more complex towns and those - the majority in this period - that lack extensive contemporary documentation. More specifically, it will be argued that some of the problems inherent in each discipline can be solved, and much can be learnt, both from the combination of data derived from

the archaeological investigation of individual sites with town-plan analyses following the methodology developed by Conzen, and through the interpretation of archaeological data in terms of its local cadastral framework.

Two case-studies are presented. The first (Chapter 2) is a plan-analysis of the medieval city of Worcester. This employs Conzen's methodology for the definition of the major components of the town plan, but follows Slater's subsequent studies (see 1.2, above) in using only the more conservative plan elements (streets and plots) for the definition of medieval landscape regions. Archaeological evidence from recent excavations, the evidence of ecclesiastical boundaries, and the very limited documentary evidence for the period, are integrated with the plan analysis to reconstruct the principal stages in the development of the city between the late Roman period and c. 1200.

Worcester is a particularly suitable test-case for town-plan analysis. First, it is a county town, larger in size and possessing a more complex town plan than other places so far subjected to a plan analysis. Second, although subject to extensive (and notorious) redevelopment in the mid 1960s, Worcester escaped heavy redevelopment in the 19th century, and the large-scale Ordnance Survey plans of the 1880s reflect a town plan less disturbed by large-scale post-medieval change than many other towns of comparable size. Third, the site is relatively level and clearly defined by a gravel terrace, the river Severn, and a minor watercourse, but not tightly constrained by these features. As a result, the form of early town-plan elements (streets, plots, buildings) may reasonably be expected to reflect more than just the

natural constraints - there is potentially the space for 'ideal' planned layouts, if on a small scale. Yet the clear limits to the site demanded a response which can be measured (for example: the date and scale of the expansion of the built-up area off the gravel terrace). Fourth, the site was occupied in the Roman period. Previous work on parochial boundaries (Baker 1980a) demonstrated that elements of the Roman landscape had influenced the medieval plan, and therefore suggested that plan-analysis might provide an opportunity for observing the relationship between medieval components of the plan and surviving man-made morphological constraints. Finally, Worcester is historiographically attractive, in that some indication of the success of a plan-analysis in unravelling the development of the city might be gained from its ability to locate the well-known, documented pre-Conquest features: the defences of the late 9th-century *burh* and the bishops' *haga* of 904 within its north wall (Sawyer 1968, nos. 223 and 1280). These have so far escaped identification by a number of investigators working on archaeological evidence or street-patterns alone (see Carver 1980, 4-5).

The second case-study (Chapter 3) also seeks to integrate archaeological data with evidence that would normally be considered the preserve of the historical geographer, but at a different scale of investigation - below that of the town-plan analysis. It is an investigation of a single street, Pride Hill in Shrewsbury, examining the development of a number of sites in the context of the plot systems that contain them.

For this type of investigation, Shrewsbury is an ideal subject. While its principal streets have been subject to

a degree of 19th-century rebuilding and have, like Worcester, suffered from the depredations of national chain-stores in the mid-1960s, medieval plan-elements have survived to a remarkable degree, given Shrewsbury's status as a county town. This survival is apparent, first of all, in the street system: the core of the town is entirely unaffected by 18th- and 19th-century break-through streets and is virtually untouched by street widening. Furthermore, work on the surviving medieval and sub-medieval buildings by H.E. Forrest (1911) and notably J.T. Smith (1953) underlined the conservative character of the townscape as a whole, and suggested that as medieval buildings survived in quantity, so too might the framework of property boundaries containing them. To a large extent, this degree of survival appears to be due to the natural constraints of the town's site. Opportunities for large-scale commercial redevelopment have historically been limited by the restricted access to the town (on high ground within a loop of the Severn), which has led to a very dense plot-pattern and building cover in that part of the town lying between the access-points (fords to west and east, and the isthmus to the north: see fig. 27). The gradients within the site exert a further conservative influence, terracing being required for buildings of any size: this represents a considerable investment in any site, and acts as a disincentive to change.

Unlike Worcester, archaeological activity has, quite fortuitously, been concentrated in a single quarter of the town, centering on Pride Hill, the principal medieval and modern commercial street. Three sites in this area had been published by the early 1980s (Barker 1960, Carver 1983a) and further sites were investigated by the writer in 1986-8. While the earlier investigations had been

conducted on an individual basis, inspection of the 19th-century large-scale Ordnance Survey plans suggested that all the sites lay within related and very distinctive plot-series, and that comparisons between sites on the basis of parallels in their excavated sequences (as by Carver 1983a) could be immeasurably enhanced by a study of their relationship to the plot-pattern.

In this chapter, individual buildings are studied from architectural, archaeological, and antiquarian sources, and used to identify the medieval elements of the plot-pattern as it was recorded in the 19th century. The origins and development of the plots are explored in relation to the early medieval exploitation of the town's riverine margins, and the interrelationship of plots, buildings, and the pattern of building is discussed.

The concluding discussion (Chapter 4) explores further some of the methodological issues raised by the two case-studies: the use of archaeological sources for reconstructing pre-cartographic morphological change; sources of geographical and archaeological evidence for the evolution of burgage plots; the use of archaeological evidence as a tool for dating developments defined by plan-analysis; the use of archaeological evidence in interpreting and establishing the context of components of the town plan, and the use of plan analysis for investigating and illuminating the early medieval contexts of individual archaeological investigations.

CHAPTER TWO:
A PLAN-ANALYSIS OF WORCESTER

THE MEDIEVAL CITY IN CONTEXT.

1. The Site (Figs. 1, 2, and 6)

The medieval and modern city of Worcester lies on the east bank of the Severn, on a gravel terrace overlying the Keuper Marl, at a point where the river, meandering within the 500 metre-wide floodplain, cuts into the terrace giving direct access from it to the river. Another, broader, terrace lies beyond the alluvium on the west bank and is the site of the transpontine suburb of St John.

The site itself is a naturally-defensible south-facing promontory defined by the river on the west and the Frog Brook, draining the higher Keuper Marls, to the east. The brook, now canalised and culverted, entered the Severn at Diglis, about 500 metres south of the site of the Cathedral, and was flanked by its own narrow belt of alluvium. The medieval and earlier High Street and Foregate Street follow the north-south spine of the peninsula, rising gradually from about 78 feet above ordnance datum on the northern city boundary to a peak of about 85 feet AOD around St Helen's church (see fig. 23), falling gently towards the cathedral before dropping sharply on the edge of the alluvial Diglis area containing the Frog Brook.

The configuration of the promontory's western slope was crucial in determining the way in which the site was exploited. The width of the promontory was substantially reduced by indentations some 750 metres from the tip, followed in c.1200 by the northern city wall and ditch (compare figs. 2 and 5). A spring in the immediate vicinity of the Foregate fed a brook, draining westwards in this indentation, which was largely canalised by the

city ditch, though it appears to have turned northwards a short distance from the river, joining the latter in Pitchcroft (Richardson 1956, 52). The pre-modern configuration of the terrace-edge southwards from this defile is less certain. Carver maintained (1980, 19 and his fig.5) that there was a natural westward-projecting spit of gravel that formed a natural bridgehead. However, the results of an archaeological trial-trench in 1985 towards the end of Dolday (Mundy 1985; fig. 6) suggest that this was not the case, and that the terrace edge swept evenly south-west, the bridgehead being an artificial creation by Roman or later reclamation by dumping over the alluvium (see plan-analysis- plan-unit 8).

The steepness of the western slope increases from this point southwards. All Saint's church (compare figs. 2 and 23) stands on a bluff marking the point at which the terrace-edge resumes its southerly course, before reaching another defile - less substantial than that to the north but equally significant in terms of its effect on settlement. This defile is now followed by Copenhagen Street (fig.13). Richardson and Ewence (1963, 231) identified a former streamlet flowing in and eroding it, rising from a spring at the base of the gravel in the area just north of St Alban's church. The defile was made use of in the Roman period by the northern side of the earthwork defences (see below), and later by Copenhagen Street as the principal means of access in this area to the waterfront from the High Street.

The slope is at its steepest between this point and the west end of the cathedral. Further south, in the area of College Green and the site of the castle (see fig. 5), its original shape is disguised by substantial terracing, much

of it probably medieval in origin.

The bottom of the slope around the southern tip of the promontory was followed by the ditch of the Norman motte-and-bailey castle which, it will be suggested, also represents a re-use of the Roman ditch. In the later medieval period this contained a watercourse, branching off the Frog Brook at Sidbury, with sufficient flow to power a watermill, though whether this line also represents a natural channel is not known.

The site and its geology were powerful determinants of the form of early settlement. Occupation appears to have been largely confined to the gravel in the Roman and Anglo-Saxon periods, one suburb extending beyond it in the 12th-13th centuries (Lowesmoor, see 2.3 below, and fig. 6). Ground-water is retained in the gravel by the underlying marl, and wells for domestic use are widely-known from excavations in the Roman, medieval, and later periods. The river and minor watercourses were also doubtless exploited, though the Cathedral Priory must have found its needs inadequately met from local sources as it brought piped water across the bridge from a source in St John's (Worc. Cath. Library D&C B1653; Historical Manuscripts Commission, 14th Report, Part VIII p.193).

2. Communications (Fig.3)

As a number of writers have commented, Worcester's importance as a town must always have been closely linked to its river-crossing; in the medieval period the nearest alternative bridges were at Gloucester, 25 miles to the south, and Bridgnorth, 25 miles to the north. The only securely documented natural ford site at Worcester was

that known as the Newport ford, immediately adjacent to the site of the medieval bridge (Carver 1980, 19-20). However, the wide belt of alluvium on the west bank, still subject to flooding in winter, must have been at least as great an obstacle to traffic as the river itself. The only permanently dry route across this was the Causeway, leading from the ford and bridge to the west bank gravel terrace at St John's (see figs. 3, 4, and 20). So far no archaeological excavation has taken place in this area, and the origin of the causeway is unknown. It might conceivably have been a new feature of the Anglo-Saxon or medieval periods, constructed in association with the building or rebuilding of the bridge. Martin Carver, however, has suggested that the medieval bridge, first recorded when it was repaired in 1088, made use of the surviving piers of a Roman predecessor (also making use of the Causeway), given the probability of a bridge somewhere in the area in the Roman period and the complete absence of other means of crossing the alluvium (1).

Roman roads are known approaching the city from Gloucester to the south, from Droitwich to the north-east, and from Hereford/Kenchester to the west. The course of the Gloucester road is well-established until it reaches a point about a mile to the south of the cathedral. Its course northwards from there is unknown: it may have turned east to enter the Roman settlement via the later Sidbury area; it may have carried on in a straight line, crossing the Frog Brook further downstream. Similarly, the Droitwich road is known until it enters the medieval Lowesmoor suburb; its route thereafter is unknown, though (as Barker suggested) it may have continued in a straight line to the gate through the northern defences (see below) (Barker 1968-9). There is some evidence that the

High Street is, at least within the city, of Roman origin, suggested by sightings of appropriately-metalled surfaces at a consistent depth beneath its surface, and by its use of the same gate (Barker 1968-9, 50-51; Baker 1980a, 35). Two other Roman roads have been identified by excavation within the city boundaries, and in each case it is uncertain whether or how they continued for any distance beyond the contemporary settlement area. The first of these to be discovered was located by Barker in the Blackfriars area in 1966-8, heading NNE. The same road was excavated immediately to the north by Mundy (Mundy 1986a, 1989) and outside the city wall by Darlington (the Farrier Street site). Carver and Sawle's excavations on the north side of Sidbury (fig. 16; Carver 1980) discovered a further road running WNW, of which the road to Gloucester may have branched. The Kenchester road is far more easily identified at that end than in the Worcester area, though the present main road leaving St John's for the Hereford area is recorded as a *straete* in Anglo-Saxon charters (Hooke 1980, 45) and may be of Roman (or earlier?) origin.

The road network radiating from the city becomes apparent by degrees in the later Anglo-Saxon period as individual roads were mentioned as landmarks in defining estate boundaries in charters. From these it can be seen that most of the main roads in use in the modern period were extant before the Norman Conquest (Hooke 1980; fig.3). These roads are described individually in the appropriate sections of the plan-analysis (below). Worcester's role as a crossing-point of the Severn seems to have been most important at the intra-regional level; further afield, the 14th-century Gough map shows the city on the north-south route following the Severn valley between Bristol, Shrewsbury, and ultimately Chester, and

as the starting point on this route for roads to the north-east, notably to Lichfield and to Coventry. Whitehouse comments on the city's medieval and later role as the port where goods brought up the Severn from Bristol, and iron from the Forest of Dean, were transhipped for the road journey to Coventry: the city acting, in effect, as the midlands' outlet to the sea (Whitehouse 1976, 30).

3. The Roman Town (fig.2)

It would be inappropriate here to offer more than the briefest survey of the evidence for the Roman settlement at Worcester. Excavations by Hereford and Worcester County Council since 1985 have produced a vast quantity of new data, much of which is, at the time of writing, still being analysed; despite the pioneering work of Barker in the 1960s and Carver and Sawle in the 1970s, there is no doubt at all that existing views of the character of the settlement will require substantial revision when the new material is fully published.

That being said, Barker's 'The Origins of Worcester' (1968-9) is still the starting point for further discussion. The Roman roads in the area have already been described. From the general distribution of excavated and casually-found artefacts of Roman date it can be suggested that Roman activity extended over the whole of the area of the east bank gravel terrace occupied by the medieval and early modern city, with a further occupied area to the north, around the present Britannia Square, to the west of the further end of the medieval suburb of the Tything. The character of the finds in this area (circular masonry

foundations and quantities of coins) suggest that it may have been the site of a temple (Barker 1968-9, 15, n.36).

Barker's most striking contribution to the discussion was his definition of a circuit of earthwork fortifications enclosing the tip of the peninsula and the site of the later cathedral. This was based on work in the 1965-6 on the Lich Street Development Site (Barker 1968-9, 44-62) which located a ditch, 90 feet (c.27 metres) wide, with a rampart on the inside, seen to be the last in a sequence of fortifications in that area which, it was proposed, included an Iron Age and an early Roman military predecessor. It was suggested that an east-west ditch excavated some years before by Peter Gelling (1958) on Little Fish Street was part of the northern perimeter of the same circuit, interrupted by a gate on the line of the High Street by St Helen's church (see fig.13). The south side remains less clear. Barker proposed that it followed the southern boundary of the cathedral close, immediately outside which lay a probable cremation cemetery, represented by finds made when excavating beneath the demolished castle mound in the first half of the 19th century (Carver 1980, cat.12/1). This circuit, as proposed by Barker, has met with general acceptance by later writers, and work on the parish boundaries indicated that they appeared to reflect the line of the defences as proposed (Baker 1980a). However, the course of the southern defences is perhaps open to question, and because of its importance as a probable component of later defences, it is considered in a separate note below.

Barker was also able (the Blackfriars excavation, 1967-8; fig.9) to conduct the first scientific examination of the Roman iron-smelting industry, whose residues (slag) had been known over a wide area of the city for a very

long time, since at least the mid-17th century when Andrew Yarranton obtained a licence from the Corporation to dig for 'cinders' in Pitchcroft for re-smelting (Carver 1980, Cat.49/3; Barker 1968-9, 63-97). The Blackfriars excavation also led to the first description of a 'dark earth' deposit and a consideration of its implications. A ditch was excavated, containing iron slag in its lowest filling and the construction horizon for the 14th-century friary at the top, in between 'six feet of black earth containing one sherd of Roman pottery, represents almost a thousand years of the protohistory and history of this area of Worcester. The Dark Ages indeed' (Barker 1968-9, 76).

Excavation at Nos 23-29 Sidbury (fig. 16), commenced by Martin Carver in 1976, located a Roman road (referred to above) constructed with iron slag (as the Blackfriars road had been) and cut by trenches for wooden water-pipes. These features were buried by a deposit of 0.2-0.3 metres of grey soil containing only 4th-century and earlier pottery (Carver 1980, 154-219).

In 1985 excavations by Charles Mundy for Hereford and Worcester County Council began on a site a short distance to the north of Barker's Blackfriars excavation of 1967-8 (HWCM 378 T7: Mundy 1986 a and b and 1989) (fig.9). This site straddled the Roman road found previously by Barker and showed that it had been resurfaced on several occasions, latterly with slag. Post-holes belonging to timber buildings were found on the west side of the street. These were replaced by a clay-founded building whose disuse was probably contemporary with the disuse of the road itself, marked by the dumping of loose slag. Cut into these dumps were the remains of a small ephemeral building associated with late Saxon pottery. Sealing all

these features was a layer of 0.25-0.4 metres of dark soil (Mundy 1986b, 10-11), interpreted as having been dumped in the early medieval period for agricultural use. A trackway across this continued 'the line of that established at the back of the latest Roman building fronting the main road' (Mundy 1986b, 10-11; Mundy 1989, 35).

The largest-scale excavations that have so far taken place in Worcester were the four sites of the Deansway Excavations, completed in November 1989 (HWCM 3899: Mundy 1989; Dalwood, Mundy, and Taylor 1990)(fig.9). Like Barker's Blackfriars and Lich Street excavations, prehistoric activity was encountered, here in the form of an animal burial, curvilinear ditch, part of a palisade trench, and other features. Minor features of 1st-century date may have been of military origin. A 2nd-century enclosure, metalled surface, and a building, may represent agricultural activity. Perhaps the most important aspect for later periods of the Roman sequences uncovered was a series of three parallel east-west roads of 2nd-century date, the first evidence for formal planning in the Roman town. Site 4 produced evidence of iron smelting, and dumps of slag were found on the other three sites. On site 2, a spread of bone on the road surface appeared to represent a change in its use, and was followed by the deposition of a 'dark earth' similar to those on the other sites: the formation/deposition of this deposit is currently being analysed. On site 4 a late Roman cemetery was found, probably of 3rd-4th-century date, containing at least 15 inhumations, including three decapitated burials (Dalwood, Mundy and Taylor 1990).

A note on the south side of the Roman defences.

There is some evidence for the belief that the southern side of the sub-circular earthwork enclosure may have run some distance to the south of the line suggested by Barker: that it may have been coterminous with and re-used by the south ditch of the Norman castle. This is (tentatively) proposed on four grounds. First, that the southern boundary of the Close (a line established or re-established in 1217: see 2:3, below, and figs. 5 and 23) does not mark any noticeable break in slope, whereas the more southerly castle ditch marks a substantial south-facing terrace; furthermore, at its junction with the river the line as originally proposed runs along terraces stepping downwards to the north (the highest level being the castle site, the lowest the garden in front of the Dean's house. While this may be accounted for by massive earth-moving operations associated with the construction of the castle, it seems more plausible that the latter would have made use of rather than destroyed and reversed an existing arrangement of ditch and rampart. Secondly, a staggered frontage-line and property boundary at the junction of Sidbury and the south side of Edgar Street (see section 2:3, below and fig. 16) suggests a 'fault-line' in the built-up area more compatible with the more southerly course. Thirdly, there is some possibility that the earthwork defences were built late in the life of the Roman settlement, and may well have ignored earlier cemeteries if they had gone out of use, and if the natural topography dictated it. Finally, and at some risk of circular argument, it will be suggested later that the more southerly line was also followed (refurbished) by the Anglo-Saxon defences, and that the revised route as

suggested here is more compatible with a contemporary assessment of the length of the defended perimeter (see below, section 2:6).

4. The medieval and modern city (figs 4-6)

The physical evidence for the medieval city survives rather better below ground than above. Carver's assessment of 1980 showed deep archaeological deposits within much of the later medieval walled area, the deepest deposits concentrated mainly along the High Street (Carver 1980, 23-24). Since then further trial work has shown, for example, deep medieval deposits, waterlogged, and overlying an unknown depth of Roman material, on Fish Street near St Helen's church (Mundy 1987; fig.13), and the Deansway excavations have amply demonstrated the potential of the area to the west of the High Street. Despite these, the sample of the walled area (ignoring the extramural suburbs which have seen virtually no archaeological activity) for which excavated evidence is available is minute.

The visible remains of the medieval city are somewhat limited. The street-pattern (fig.6) is largely that established by c.1200, though significant changes have taken place. New streets were provided in the 18th century, to the new bridge (opened in 1781), and across the cathedral close (c.1794). The 20th century has seen the replacement of the medieval Birdport by Deansway, which cut a north-south swathe through the traditional street- and building-patterns; the clearance of large areas around Angel Lane and then Dolday for successive bus

stations; the notorious destruction of Lich Street and the street-block to the north for a hotel and shopping-centre in 1965-6; the destruction of the street-pattern between Birdport (and Deansway, its successor) and the river for the Technical College; and the dislocation of Sidbury for the City Walls Road in the late 1970s.

These changes, and the prosperity of the 18th- and 19th-century city have meant that very few buildings of medieval date remain standing. Of the ten medieval parish churches within the city, only two survive with substantially medieval fabric (St Helen's and St Alban's); four were almost totally rebuilt in the 18th century (St Nicholas, St Swithin's, All Saints', St Martin's); three were demolished and rebuilt in the 19th century (St Peter's, St Clement's, St Michael's); and one was demolished with the exception of its spire in the post-war period (St Andrew's) (see fig.23).

While many 16th- and 17th-century timber-framed buildings survive on Friar Street and New Street and occasionally throughout the rest of the city streets that have not been cleared, a survey in 1980 found evidence of only five medieval secular buildings within the walls (Hughes and Molyneux 1980), to which can be added a single building in St John's across the river.

2:2 PLAN-ANALYSIS METHODOLOGY

Figure 4 is a reconstruction of the medieval town plan of Worcester, based on 19th-century Ordnance Survey maps and a variety of earlier sources (see Appendix). Like most historic town plans, the plan of medieval Worcester is a palimpsest, containing evidence for the growth of the city over a period of time, in this case, from the Roman onwards. There is documentary evidence for the diverse dates of origin of some of its constituent features, the cathedral, castle, and city walls, for example. Archaeological evidence has also been able to demonstrate a Roman, post-Roman, or post-Conquest origin for specific features such as defences, streets, and property boundaries.

The town plan shows variations from one area to another in the character of the streets and of the properties lining them. For an immediate illustration, one need look no further than the principal north-south street (from north to south: the Tything, Foregate Street, Foregate, the Cross, the High Street) noting the relationship between changes in the direction of the street, its width, and changes in the shape and size of the properties either side. As outlined in the introductory chapter, there is now a large and growing body of evidence from other towns of medieval or earlier origin to suggest that plot-patterns, or at least substantial elements of plot-patterns, visible in the modern urban fabric, originated in the medieval period or before, at least in areas which have been continuously built up. In Worcester, documentary research has been able to trace the history of a great many individual tenements back into the early post-medieval period, and a smaller number into the

medieval period (for example, Hughes and Molyneux 1984; Hughes 1986). Excavation has also, in a few cases, been able to explore the medieval and earlier origins of properties mapped in the 19th century (for example, Deansway site 2, Mundy 1989; 23-29 Sidbury, Carver 1980). Given the probability of an ancient origin for at least some elements of the plot-pattern of the 19th- and 20th-century city, how is one to account for the localised variations visible within its fabric? It will be argued in the course of the plan-analysis below that many of these variations can be interpreted as the result of a number of episodes of urban growth, and the different circumstances attending the initial urbanisation of each: some representing 'planned' urban extensions with at least a framework for settlement laid out over a short period of time (even if actually occupation of the plots took longer); and some representing the result of 'unplanned' piecemeal settlement, with topographical or other constraints producing common morphological characteristics within a given area. It is arguable that the most appropriate methodology for analysing these phenomena is that developed by Conzen, based on the techniques and approaches pioneered earlier in Germany (Whitehand 1987). The local variations in the character of Worcester's town plan are precisely those described elsewhere by Conzen as 'plan-units', areas where 'streets, plots and buildings enter into individualised combinations in different areas of the town. Each combination derives uniqueness from its site circumstances and establishes a measure of morphological homogeneity or unity in some or all respects over its area. It represents a plan-unit, distinct from its neighbours' (Conzen 1969, 5).

The preparation of the base-maps (figs. 4 and 5)

The essential preliminary to the plan-analysis is the accurate mapping of the principal features of the medieval town plan, and any earlier features that may have influenced its development, against the background of the natural watercourses and relief. These features comprise the street pattern, ecclesiastical, political, and property boundaries, defences, and ecclesiastical buildings and precincts. In the absence of any pre-17th-century maps, later maps that depict features that can be shown on documentary, archaeological, or architectural grounds to have been present in the medieval period have been used.

The use of later, post-medieval, maps presents a basic dilemma of accuracy versus survival, with the use of 17th- and earlier 18th-century cartography of poor accuracy showing a street plan, buildings, and defences surviving in a condition closely resembling their late medieval state, to be weighed against the use of later 18th-century, and particularly the 19th-century Ordnance Survey plans, surveyed accurately but at a point in time by which more features of the medieval townscape had been removed. The methodology that has been adopted has been to use the first edition Ordnance Survey town plans, surveyed in 1883-1886 at 1:2500 and 1:500, as a base, with local details restored from Young's map of 1779 and a variety of other sources (listed as an appendix).

Copies of the 1:500 plans, reduced to 1:1000, were obtained from Worcester City Library, and streets, property and other boundaries, and historic features traced off. The larger scale was used, not only because its greater level of detail gives a more naturalistic,

less schematic, appearance to the redrawn maps, but also because the 1:500 plans contain useful information on boundary walls and access to plots, helpful occasionally in interpreting units of property in congested areas. The resulting composite plan was photographically reduced to 1:2500 and redrawn over outlines of the street blocks traced directly off original 1:2500 sheets to correct distortions arising from the two reduction processes.

The mapped streets within the city and suburbs are those that can be shown on documentary grounds to have been in existence by the end of the medieval period, and those that appear on the 17th-century maps. Minor lanes in the rural areas whose existence is not implied by the intramural street-system are less easy to document without intensive research, and have therefore been based on those shown, for some areas, on Young's map of 1779, and for other areas, on those shown on the tithe maps of the 1840s. Roads widened before the 1880s have been restored to the widths shown on Young's map.

Young's map also provides the first accurate cartographic representation of the contemporary extent of settlement. The maps do not show buildings or settlement directly, but plot boundary systems have been drawn only for those areas shown to be occupied in 1779. Within these limits, it is possible to identify areas covered by plots showing typical medieval characteristics, and imply from this a probable minimum extent for the medieval built-up area. Marginal areas that may have reverted fully from urban to agricultural use in periods of stagnation or decline prior to 1779, losing their internal boundary systems in the process, will, of course, be invisible.

While the surveyors of the 1880s were concerned with the accurate depiction of the built environment and not

legally-defined patterns of land ownership and tenancy, units of urban property can, to a certain extent, be interpreted from their plans. The evidence for the dating of these units of property is explored in the main body of the text in the discussion of individual plan units; the purpose now is to discuss their initial identification from the map evidence. In many cases, building block-plans on the frontage and free-standing boundary walls, or building-lines, at the rear form readily-identifiable plots or tenements, often showing recurrent internal features, like cottage infilling, ancillary buildings, yard and garden features. Isolated stretches of property boundary are also apparent from linear discontinuities in the building pattern. However, in the more densely built-up parts of the city centre, individual plots and the plot-pattern in general may not be nearly so clearly defined as in the marginal areas and suburbs, a result of the more intensive sub-division of plots, and the increased likelihood and unpredictability of the amalgamation, at different times, of different pieces of land. To provide a consistent approach to the fragmentary and confusing evidence of units of property in such areas, a number of guidelines have been adopted for the selective recovery of information from the 1:500 town plans.

All divisions between buildings on the frontage are taken to be property boundaries, or at least to have the potential to represent the position of former property boundaries marked by the fixation of building-lines. As a result all lines leaving the frontage are drawn for the distance that they run without significant interruption and without a dog-leg to either side of more than c. 1.5 metres (to allow for the changing ownership of adjoining stretches of a solid boundary wall). Some exceptions to

this rule have been made where building ranges extending from entries deep into plots have not been shown beyond the buildings on the frontage in order not to confuse the outline of the containing plot boundaries; some minor divisions between buildings on the frontages have been left off the smaller-scale plans in order to avoid loss of clarity after reduction. All free-standing boundary walls in the areas behind the frontages have been drawn where they are not clearly associated with minor ancillary, industrial or garden-type structures (e.g. fuel bins, animal pens, walls enclosing privies). Where there is good evidence on the map that the building occupying a frontage is a terrace or row building (e.g. through, in addition to common dimensions, the repetition of often symmetrically-arranged details like door-steps, rear wings and ancillary buildings) the internal divisions, and any associated subdivisions of the primary containing plot, have not been drawn. Similarly, individual buildings behind frontages, and internal lateral divisions within buildings on frontages, have not been drawn unless they appear to be associated with external boundary walls. As a result, breaks in the buildings (like the junction of front and rear wings) that do not represent property divisions, and minor lateral sub-divisions within plots (post-medieval cottage infilling in particular), have been excluded wherever possible. Sub-divisions of plots clearly associated with adjacent post-medieval streets have not been shown.

Plan-unit definition.

The following analysis is an attempt to dissect the town plan of Worcester into its constituent parts, areas showing 'a measure of morphological unity' - the plan-units (figs. 7 and 8). These have been defined on the basis of the extent of plots associated with a single street, part of a street, or more than one street, where the plots, or streets, have one or more characteristics (orientation, dimensions, shape, siting, and function) in common. A number of problems have been encountered, largely owing to the size and complexity of the settlement, and the length of time over which it has developed. It was found that, above the level of the individual plot, areas exhibiting a 'measure of morphological unity' could be defined at vastly different scales, from the suburb down to the level of small street-blocks and minor plot-series. Related to this is the question of the degree of morphological unity within a particular area. Although the localised variations are clearly visible, not all could be easily resolved into plan-units with clear-cut, objectively-defined boundaries. In some cases this was because features distinguishing an area from its neighbours were not uniformly present throughout that area: a core-area might exhibit the full range of characteristics, with marginal areas around it where only some were present - but which were still clearly distinguishable from neighbouring areas. The solution adopted to take account of these problems, with a consistent approach across the city, was to follow the method adopted by Slater in his analysis of Doncaster (Slater 1989), defining sub-units within larger plan-units. In the Worcester analysis plan-units have been

defined at the level of the street-block and above, sub-units from the level of minor plot-series up to the street-block.

Chronological change is a further complicating factor. The morphological regions within the city were, and are, subject to change through time, both in their internal structure and in their boundaries. The full story of developments after c.1500 lies beyond the scope of this thesis but, lacking complete and detailed documentary and cartographic records for much of the post-medieval period, a degree of reconstruction has been necessary in the definition of the medieval plan-units. For example, where there is good evidence (documentary and cartographic) for the post-medieval truncation of plot-series by new developments on the plot-tails, the plan-unit boundary has been reconstructed at the original rear boundary rather than the later boundary with the lateral sub-divisions (as between Broad Street and Powick Lane). Chronological changes within and between plan-units in the medieval period are discussed in the plan-analysis and afterwards (see chapter 4:1).

The medieval plan-units were, with a very few exceptions, defined on the basis of cartographically-recorded physical evidence. The most important exception is the cathedral close. It would very difficult to argue that this area displayed a significant degree of internal morphological unity- the reverse is nearer the truth. However, its boundaries were legally defined by the end of the 15th century and maintained well into the 19th (VCH Worcs. IV, 384-5), and it and its associated features provide a logical starting-point for description and discussion. Parochial boundaries, a legal rather than physical feature of the town-plan, also influenced the

definition of one of the proposed plan-units. It will be noted that the evidence of surviving buildings has not been used in the plan-analysis, mainly on account of the very low survival rate of medieval and early post-medieval buildings. The relationship between the surviving buildings and modern and ancient landscape regions is clearly a complex one, and was felt to be largely beyond the scope of the present enquiry.

2.3 PLAN-ANALYSIS

An introduction to the medieval city (figs. 4-6)

The later medieval walled city occupied an area of about 85 acres at the southern end of the gravel promontory formed by the Severn to the west and the Frog Brook to the east and south (see chapter 2:1). The promontory tip was occupied by the cathedral close, partly encroached-on by the Norman motte-and-bailey castle which sought the small remaining area of high ground immediately to the south. The later medieval city wall circuit (that made use of the castle defences) was probably established by the end of the 12th century, generally following a line dictated by the natural topography, with streams canalised along the ditches.

The built-up area to the north of the cathedral was dominated by the High Street, part of the north-south axial routeway following the spine of the gravel promontory, and the wealthiest part of the city throughout the period. To the west of the High Street a complicated road network took traffic to and from the twin foci of the bridge and the public quay. The medieval guildhall occupied a site on the corner of the central section of the High Street and the principal road to the quay. Beyond the walls, suburbs extended along all the approach roads: the Tything and Foregate Street suburb to the north, along the road to the upper Severn valley and Droitwich; the less extensive suburbs of Lowesmoor to the east and Sidbury to the south-east; and the St John's suburb on the gravel terrace on the west bank, connected to the bridge by a causeway, partly built-up, across the alluvium.

PLAN-UNITS (Figs. 7 and 8)

1. THE CATHEDRAL CLOSE AND CASTLE.

The integrity of this area as a plan-unit rests more on historical-legal grounds than it does on strictly morphological criteria: it represents a collection of morphologically-defined sub-units which, with minor variations, were considered to be outside the city and under the direct jurisdiction of the cathedral. The earliest surviving record of the boundaries of the close are contained in a perambulation of 1497 which, although somewhat schematic in its coverage of parts of the city, appears to define the same boundaries that appear in a more detailed description of 1640 (VCH Worcs.IV, 383-4); these boundaries remained in force well into the 19th century, and were recorded cartographically by Doharty (1741), Young (1779), and the Ordnance Survey (1883-6). Briefly, the boundary ran from the river eastwards along the inner edge of the castle ditch, northwards to Edgar Street, eastwards to Sidbury, and then followed Sidbury and Lich Street and finally, the east and south boundaries of the bishop's palace to the river again (fig.23). The 1640 survey was quite specific in excluding the palace from the close, but it is also clear that the palace was considered to be outside the city, part of the parish of St Michael in Bedwardine (see Doharty and Young's maps of 1741 and 1779).

The close, as defined by the end of the 15th century, was not the product of a single act of ecclesiastical planning but, like the rest of the city, was the outcome

of a process of growth and change. One such process was specifically documented, others are only hinted at by topographical clues, and these will be discussed later (2:4, below).

The Castle sub-unit.

The only documented change to the precinct concerns the southern boundary and its relationship with the Norman motte-and-bailey castle. By 1069, the ditch of Urse D'Abitot's bailey had 'enclosed a portion of the burial ground of the priory' (VCH Worcs.IV, 390). In 1217, at the end of its military usefulness the northern half of the castle was granted to the priory. It is probable that this grant represents a fairly accurate restoration of the pre-Norman status quo, an inquest having determined that the northern half of the castle was the king's, the southern half the hereditary county sheriff's (VCH Worcs.IV, 391). The boundary fixed in 1217 is apparent on the 18th- and 19th- century maps, and survives today, separating the buildings of King's School from those facing northwards into College Green. Fig. 23 shows the pre-18th-century situation, the curved southern boundary to the close separating the College Green buildings (see below) from the open ground of the surviving part of the castle to the south. The location and size of the motte in the south-west corner, removed in 1823, is known from a variety of 18th- and early 19th-century sources; the gaol built to the east of the motte in the 17th century was demolished shortly after the motte (Beardsmore 1980, 57). The castle ditch around the east and south sides of the bailey defined the line taken by Frog Lane, now Severn Street. The ditch itself was not built over until the 19th

century, and is now marked by a curving series of short properties backing onto a low terrace wall. Speed's map of 1610 shows the Frog Mill on the north side of Frog Lane about half-way between the motte and the east end of the bailey. The watercourse powering the mill must have flowed along the castle ditch, discharging into the river; it was fed from the main course of the Frog Brook via the city ditch around Sidbury and the church of St Peter the Great.

The College Green sub-unit.

The present arrangement of buildings facing the cathedral and its claustral ranges across the open green can be followed in the cartographic evidence back into the 17th century and Speed's map of 1610. This also shows a row of buildings lining the north side of the green, facing south; only one building in this position now survives, immediately west of the Edgar Tower, the great gatehouse built in the 14th century and possibly associated with the licence to crenellate the cathedral priory issued in 1369 (Beardsmore 1980, 60). The buildings on the south side of the green are divided into two ranges: a western range, backing directly onto the 1217 close boundary; and an eastern range set further forward towards the green. No explanation can be given at present for this arrangement, though should the architectural investigation of the precinct buildings be forthcoming, some light may be shed on it. A length of external stone wall certainly suggests the probability of surviving medieval structures. At the west end of College Green the ground slopes sharply down towards the river, beyond the 1378 watergate and the

riverside precinct wall. Just within and to the south of the watergate stands a large building built over very substantial masonry footings of medieval character, with a battered plinth. It has recently been suggested (by P.A.Barker) that these are the remains of the castle keep in a position, perhaps, analagous to that of the keep at Shrewsbury. The survival of castle buildings within the precinct has to be a possibility and again, architectural investigation is essential.

The Cathedral sub-unit.

This area contains the cathedral church and its claustral buildings, and the lay cemetery to the north. A complete architectural description of the buildings would not be appropriate here. However, in summary, the earliest visible fabric in the cathedral church is the Romanesque work in the crypt, transepts, presbytery and the west end of the nave, the earliest of which belongs to Wulfstan's building campaign of the 1080s. Most of the chancel belongs to a rebuilding begun in 1224, and much of the nave to a rebuilding commencing in 1317-1327. The cloister is basically Norman with much rebuilding in the 14th and 15th centuries. Parts of the east range belong to Wulfstan's work, the chapter house being slightly later. The refectory, occupying the south range, has a superstructure of 1372 over an early Norman undercroft. Beyond the cloister to the west, running down to the river, are the remains of the Norman dormitory and reredorter. To the east of the cloister are the remains of the 14th-century Guesten Hall and the site of the prior's lodgings (Gem 1978; VCH Worcs.IV, 402-6; Pevsner and

Metcalf 1985).

No physical evidence survives or is known for the form and arrangement of the pre-Conquest cathedral buildings, and the available documentary evidence is minimal. The cathedral was founded in the late 7th century. In 962 Oswald became bishop, and either built or rebuilt a church dedicated to St Mary, which he completed in 983, close to the earlier church of St Peter. St Oswald was buried in St Mary's and his relics enshrined there in 1002-3. In the reign of Edward the Confessor the presbytery of St Peter's was enlarged. Wulfstan's rebuilding campaign began in 1084, and the monks were able to begin using the new church in 1089 (Gem 1978). Despite the survival of more than one account of the work's progress, it is still not possible to define with certainty the position of the two Anglo-Saxon churches, either in relation to each other, or to the present cathedral.

Archaeological evidence of burials in the area to the south of the present cathedral begins with two inhumations found beneath the refectory undercroft floor, originally given Carbon 14 dates of 536 A.D. plus or minus 107, and 585 A.D., plus or minus 102: the date bracket is wide but seems to imply religious, probably christian activity in the area before the foundation of the cathedral in the late 7th century. However, later work on the calibration suggests that the date-range should now be extended to include the early years of the See (Bassett forthcoming, a) Later pre-Conquest inhumations have also been excavated from the eastern end of the refectory and the area outside (Barker et al 1974; Clarke 1980).

The area to the north of the cathedral was mainly occupied by the lay cemetery, known in the post-medieval period as College Yard; there is evidence that the limits

of this underwent considerable changes, but these will be reviewed under the adjacent sub-units (and in section 2:4, below). Within the cemetery stood a number of separate buildings, including the church of St Michael in Bedwardine, the medieval charnel chapel dedicated to St Thomas, and a free-standing octagonal belfry (Buchanan-Dunlop 1942; VCH Worcs.IV, 406). By the early 19th century the area around St Michael's and the adjacent site of the belfry (demolished in 1647) was occupied by a dense cluster of encroaching tenements, removed gradually in the course of the 19th century (Noake 1866, 385-396).

In 1271 the bishop was licensed to crenellate the cathedral close (Beardsmore 1980, 60), but just what this implied for the area north of the cathedral church is not entirely clear. It is likely that by this date the surrounding street frontages were already built-up (see below) and that the majority of the cemetery must have been left unenclosed. The three principal 18th-century maps show a wall, the southern section of which survives, running northwards from the Edgar Tower to St Michael's church and from there westwards to the north porch of the cathedral church, a line followed by the parish boundary between the close and St Michael's (see fig.23). From the porch, the close/parish boundary ran westwards, to the north of the site of the charnel chapel, a short distance to the south of and parallel to the south wall of the grounds of the bishop's palace, before joining the riverside wall. Although the 1651 map shows the eastern section of wall, between the Edgar Tower and St Michael's, neither it nor Speed show the wall to the north of the cathedral church, though Speed shows both gates to Lich Street (see below) and the 1651 map shows the main gate and that to the bishop's palace. Whether the wall and

parochial boundary separating the cathedral, St Michaels, the belfry and the charnel chapel, from the rest of the cemetery represents the course of a late 13th-century precinct wall is uncertain.

The Bishop's Palace sub-unit.

The bishop's palace stands in an enclosure of about two acres in the north-west corner of the precincts, on the edge of the slope (here at its steepest) down to the river. The building itself is a rambling group of medieval structures enclosed within the shell of a new building built by Bishop Hough in the first half of the 18th century. In the centre of the building is the medieval first-floor hall, orientated east-west with a porch at the south-east angle, dated to the occupancy of the see by Bishop Giffard (1268-1302). To the north are the remains of an undercroft to a contemporary north-south range with 15th-century additions reaching to the northern boundary of the site. To the south of the hall are the remains of an earlier chapel and two further buildings with undercrofts (VCH Worcs.IV, 406; see fig.13). The palace stood at the back of a large courtyard, with access through a gatehouse at the north-east corner of the enclosure on the Palace Yard frontage (Noake 1866, 403). Access in this location outlived the actual gatehouse until the reorganisation of the enclosure in the 19th century when new access was provided from the south only; it has since been re-established in its original position.

The layout of the palace enclosure strongly suggests that it was not created at the same date as other features in the close on the north side of the cathedral. The projection of the enclosure northwards from the otherwise

straight line of Lich Street is suspicious, and may be the result of encroachment northwards; the irregular route around the perimeter taken by Palace Yard contrasts with the apparent regularity of the layout of the area to the north (the Copenhagen Street plan-unit; see below and fig.13), and it is notable that all the surviving pre-13th century elements of the bishop's palace lie to the south of Bishop Giffard's hall (VCH Worcs.IV, 406-8) and south of the line of Lich Street. Similarly, the enclosure appears to represent a partitioning-off of one corner of the close. If this interpretation is correct, such a development may have taken place in the later 10th century, paralleling similar events in Winchester associated with the reform movement (Biddle 1976, 324). Unfortunately there is no documentary evidence to confirm either the northward encroachment of the palace compound or its earlier alienation from the rest of the close.

The Lich Street sub-unit.

The tenements on the north side of the street, integrated with the plot system between the High Street (south) and Friar Street will be discussed below as part of the High Street South plan-unit; the tenements on the south side presented a very clear contrast. The 18th-century sources pre-dating the insertion of College Street across the precinct in the 1790s show that these tenements were no more extensive than the buildings they contained. They represent a type frequently associated with market encroachments; in this case they were cemetery encroachments, and are clearly described in documents of the cathedral priory to whom they owed their rents (Holt, forthcoming). Access to the precinct from the High Street

and Lich Street was through two gates: College Gates, at the bottom of the High Street, and the Lich Gate further to the east.

The Sidbury (west) sub-unit.

Adjoining the south side of the Lich Street properties and lining the east side of the cemetery was (before the insertion of College Street) a block of ground c.170 feet (c.52 metres) deep, with tenements facing outwards to Sidbury and inwards to College Yard. The internal divisions of this block are not well recorded: the block plans of buildings shown on Young's map suggest deeper tenements facing Friar Street, shallower tenements facing the cemetery, with some longitudinal boundaries passing through from one frontage to the other. Property boundaries are shown rather schematically on the 1794 plan which, while agreeing with Young in showing some tenements on each frontage sharing common longitudinal boundaries passing through the block, departs from Young by showing a straight back fence line separating the tenements facing each frontage in the southern half of the block. The 1794 plan also shows an alleyway passing through the block in the area of the Talbot Inn (whose mutilated remains still survive); this feature is also seen on Broad's map of 1768 and, grossly enlarged, on Speed's map of 1610.

The tenements on this side of the close were clearly of a different type to those on the adjoining Lich Street frontage. Here, rather than buildings without plots encroaching on the cemetery, we seem to have a plot series of normal urban type with buildings on frontages and strip-like plots to the rear. It is not impossible that this block of properties was laid-out over part of the

cemetery, but if so it represents a much more significant and organised change in land-use than allowing, or even promoting, the construction of secular buildings along a vacant frontage. Moreover, the plot series here could be argued to be merely a continuation of the plots further north, along the west side of Friar Street. These were between 140 and 170 feet deep (c.42-52 metres), separated from the rear of the plots facing High Street by a continuous north-south fence line. Within the close the College Yard frontage was also about 170 feet from the Sidbury frontage, and it appears to represent a southwards continuation of the High Street-Friar Street back fence line. This evidence suggests that, on the east side, the cathedral close incorporated within its boundaries part of the purely secular plot-system on the west side of the Friar Street - Sidbury road, and that the tails of the Sidbury plots were subsequently developed as separate tenements facing into the close. This hypothesis raises a particularly interesting possibility: did this block within the close, like that to the north, also originally back-on to a plot-series facing a section of the High Street that was subsequently erased by the expansion of the cathedral? (see 2:4, below).

The Edgar Street sub-unit.

This is a short, wide street connecting the monastery's main gate with Sidbury. The width of the street strongly suggests a planned origin appropriate to the principal approach to the gate, though the characteristics of the plots on each side are different. The north side is occupied by plots without well-defined boundaries beyond

the frontage buildings, merging with the surviving College Yard and Sidbury tenements. On the south side is a wedge-shaped block sub-divided into five tenements, with an additional large rectilinear plot on the corner of Severn Street. These plots were (for the adjoining area is now a car-park) clearly separated from those lining the southern section of Sidbury. The corner with Sidbury is curiously staggered, a feature identifiable first on Doharty's map of 1741 and pre-dating the existing buildings. This may simply represent an encroachment by the Sidbury building; alternatively an explanation could be found in a discontinuity of alignment resulting from the breaking-through of a former barrier (see 2:4, below).

2. THE CROSS

The core of this plan-unit is a short section of wide street, a distinctive part of the principal north-south axial street, the southern end marking the site of the medieval Grass Cross. To the south, the street narrows to become the High Street. To the north of the Gaol Lane/Angel Lane junction the street is also substantially narrowed until its emergence from the medieval defences. The plots associated with this length of street on the west side are small and shallow, and except in one case do not exceed 80ft (c.24 metres) in depth. The plots on the east side are slightly larger, and mostly end on a back fence line about 160 feet (c.48 metres) from the frontage, a line which also marks the point at which buildings first oversail the lane known as the Trinity, and the end of the curious unnamed blind alley immediately to the north. The

much smaller and shorter plots lining the funnel-like southernmost section of the Cross as it narrowed at its junction with the High Street have been included here as a sub-unit.

Two points require discussion. First, there are indications from the earliest maps that the widest section of the street was originally wider still, perhaps forming a rectangular or wedge-shaped market place: this is the appearance given by Speed's plan of 1610, and by the 1651 map. However, Doharty (1741) and subsequent maps show The Cross at its present width, but St. Nicholas' churchyard is shown projecting well forward of the street line with buildings encroaching on the south-west corner, contrasting with the unencroached-upon Cross to the south, and giving the impression that the latter was a wide market street. Second, is the question of the relationship with the Foregate suburb beyond the defences. It will be argued below that Foregate Street and the Tything represent a planned linear suburb, with tenements laid-out off the wide extramural street, ending against a contemporary service lane to the west and against a continuous back fence line to the east. The southern half of this suburb lay within the parish of St. Nicholas. The width of the Cross contrasts with the remainder of the High Street route to the south, but mirrors the width of the street northwards beyond the defences. Further, the eastern back fence line of the Cross tenements appears to be a continuation of the suburban back fence line. The same may also have been true on the west side, though here the backs of all but one of the tenements may have changed hands and been incorporated in the adjoining Broad Street tenements. On this evidence, it is not unreasonable to suggest that the Cross represents the original south end

of the Foregate-Tything suburb, isolated by the construction of the defences, possibly in the later 12th century (Beardsmore 1980, 59). The narrowness of Foregate immediately north of the Cross is likely to be the result of encroachment of buildings onto the street inside the new medieval gate.

3. BROAD STREET (Figs. 9 and 10)

This plan unit encompasses the street and its associated plots, and two adjacent areas to the north: the precinct of the Dominican Friary founded in 1347, and Angel Street, formerly Angel Lane, with its own associated plots. As a whole it covers an area of approximately 10 acres. It can be argued that Angel Lane represents a secondary development at the rear of the Broad Street plots; the Blackfriars precinct and Little Angel Lane are more problematic but are most logically discussed in this context.

Broad Street is about 100 metres long, and connects the spinal High Street route, represented by the Cross, with All Hallows Square, the area in front of All Saints church used as a cattle market in the medieval period (Currie 1989a, 4). From there, the two streets of Newport and Dolday gave access to the river crossing.

Broad Street is fairly straight, wide, and forms a right-angle with the Cross and the northern section of the High Street, features which could suggest a planned origin. The plot boundaries, with some notable exceptions, are generally straight and perpendicular to the street, defining plots that are (or were) for the most part fairly

wide, strip-like, but subject to longitudinal (and some lateral) sub-division, generally near the frontages but in some cases running the full length of the plots.

Although the internal cohesiveness and distinctiveness of this plan unit are fairly clear, its boundaries on some sides are problematic. The relationship with the Cross plots to the east has already been discussed; there is no clear evidence for a chronological relationship here between the two plan-units. The tenements on the south side of Broad Street either run, or ran, through to Powick Lane (the eastern part of which is now Old Bank Street). Many of the longitudinal plot boundaries run through from one frontage to the other, and documentary research has shown that the colonisation of the Broad Street plot tails in this area to provide properties facing Powick Lane was a generally post-medieval process (Currie 1989b, 8-12). This has received further confirmation from the excavation of a stone or stone-founded building of probable 12th-century date on one of these plots, straddling the east-west property boundary between the Broad Street and Powick Lane tenements that was followed by the parish boundary between All Saints and St. Andrew's. This east-west demarcation was only represented in the excavated sequence after the demolition of the building in the 15th century (Mundy 1989 and pers. comm.). Powick Lane can therefore be proposed as the southern boundary to the medieval Broad Street plan-unit.

Powick Lane itself is of considerable topographical interest, and its irregular course requires explanation. It represents a significant fault line in the medieval town plan, marking the boundary between three adjacent plan-units: Broad Street, High Street North, and Birdport. The recent excavation campaign in this area comprised

four sites, two to the north of Powick Lane (Deansway sites 3 and 4), and two to the south (sites 1 and 2)- one of these (1) on the southern lane frontage. The latter revealed an east-west Roman road a few metres to the south of Powick Lane near its junction with Birdport, and a watching-brief conducted on contractors' excavations immediately north of the site showed a sequence of linear metalled surfaces representing a gradual shift in the line of the Roman road to that of the present-day Powick Lane (Dalwood, Mundy, and Taylor 1989, 3). The eastern part of Powick Lane bends northwards from this line, around the back and the north end of the plot series on the west side of the High Street. It will be argued later that the High Street, including the plots on the west side, represents a major planned urban expansion, precisely the sort of development to require the blocking of the eastern end of the Powick Lane route and its northward diversion around the new plots.

The relationship between Broad Street and Birdport will be discussed below (see Newport and Dolday plan-unit); for the present it is sufficient to note that the plots fronting the north end of Birdport (known as Merryvale in the post-medieval period) were clearly distinct from the Broad Street plots, unlike the neighbouring Powick Lane plots which were secondary developments on the tails of the Broad Street plots. The staggered junction between the two plot-series (Merryvale and Broad Street) does not illuminate their chronological relationship.

The north side of Broad Street was divided into two by Little Angel Lane, the east side of which was demolished in 1920 to form the Angel Place bus station. The plots to the west were of various depths, forming a staggered back

fence line marking the boundary with the Blackfriars precinct to the rear. The plots to the east back on to properties facing northwards onto Angel Lane.

The Angel Lane sub-unit.

Angel Lane was first recorded in 1496, when it was to be gravelled and gated at both ends to accommodate the cattle market, which was to be moved from All Saints Square (Molyneux 1980, 265); there is of course no evidence to determine how long the lane had been in existence prior to this. Speed's map of 1610 shows the northern side of the lane as open ground, and this is confirmed by the documented location of the friars' orchard here, reaching from the claustral buildings as far eastwards as the rear of the Foregate plots (Hughes 1986, 40). By 1610 the south side of the lane was built up, and the map evidence shows a number of short irregular properties here. One of the property boundaries of the Broad Street plots passes from one frontage through to the other. This, and a 16th-century conveyance describing the property immediately east of Little Angel Lane extending between both frontages (Molyneux 1980, 267) suggests that other Broad Street plots formerly ran through to the lane, and that the tenements facing Angel Lane, like those on Powick Lane, represent a secondary development. It is unknown whether Angel Lane was itself a secondary development to Broad Street or whether it was conceived as a rear service lane to some of the latter's plots. It should perhaps be said that it cannot have been (as is sometimes suggested) a relic of a through-route continuing the Lowesmoor-Gaol Lane line towards the river-crossing: this has been ruled-

out by Barker's extensive examination of the area immediately west of the friary.

The Blackfriars sub-unit.

The general later medieval topography of this area has been explored by Hughes et al (1986). The friary church and cloisters lay behind the properties on Broad Street, with access via Friars' Lane, a gated lane leading off the street near its junction with Dolday. The size and position of the church and cloisters are discernable from post-Dissolution deeds and leases (Hughes 1986, 37-9), and the north-west corner of the cloisters has been located by excavation (Mundy 1986a, 1986b, 1989). The layout of the other claustral and ancillary buildings is unknown, as is the use to which the land east of the cloisters, on the west side of Little Angel Lane, was put. On the north side, the friary grounds extended as far as the city wall.

The friary was founded in 1347, following the gift of a piece of land, described as 'Belassis', from William Beauchamp. This land was said to measure 100 perches long by 30 perches broad (Hughes 1986, 13). These dimensions present an unsolved problem: if the perch in question was the statute perch, the block of land in question would have measured 1650 by 495 feet, a length greater than the distance between the High Street and the river, and broader than the distance between Broad Street and the town wall. This is clearly improbable, particularly as it is known that the friary subsequently acquired further land to the west of the precinct, on the north side of Dolday. It is legitimate to question whether such an apparently large area with dimensions expressed in such

neatly rounded figures could have had much or any basis in reality in a part of the town that was already settled. Further, (to depart briefly from the morphology of this plan-unit) given the uncertain extent of the ownership of land by the friary, Martin Carver's use of the comparison of these dimensions with modern landmarks to propose the use of a fourteen-foot pole in medieval Worcester, without further supporting evidence, seems likely to be problematical (Carver 1980, 214).

The orientation of the friary church and cloisters suggested by topographical and historical research, and confirmed by excavation, was eccentric: unlike all the other ecclesiastical buildings in the city, the orientation reflected neither the local street pattern nor (directly) the local natural topography. The explanation for this was provided in 1985-6 by the first of a series of excavations by Hereford and Worcester County Council (the Blackfriars site: HWCN 378 T7). These demonstrated that the friary respected the alignment of the underlying Roman road first recorded in the area by Barker during redevelopment in the 1960s (Barker 1968-9; see 2:1, above), the west range of the cloisters following the eastern edge of the road. Before the construction of the friary in the mid-14th century, the area was a field, the soil for which was apparently deliberately dumped in the 12th-13th century. A path crossing this field perpetuated the line of a small metalled track following the back wall of a clay-founded rectangular building - the latest building constructed by the side of the Roman road while the latter was still in use (Mundy 1989, 35). The 'continuity in the organisation of land use' (Mundy 1986a) defined within the Blackfriars precinct may have applied over a wider area. The orientation of the friary was

shared by Little Angel Lane and the adjoining property to the east. It could be argued that this lane was a very late development respecting (and secondary to) the planning of the precinct. If this were the case it would also be reasonable to expect a feature of such a late date to be constrained by the orientation of Broad Street and its tenements, which it was not, except very close to the frontage. The simplest explanation for this is that the lane reflected surviving earlier boundaries or other features, just as the friary itself did.

It is appropriate here to return to the question of the origins of Broad Street as a whole. Was it a 'planned' street? As described above, the street itself shows some signs of deliberate planning: it is straight, wide, and perpendicular to the axial street line. However, a metrological survey was carried out in 1989 and no evidence was found of any regularity in the laying-out of the plots either side (see fig. 10 and footnote 2). A similar arrangement has been identified in the High Street in Bridgnorth, where the street itself would appear to have been laid out with some degree of regularity, but tenements were allotted either side of it with no further centralised control and no regularity in their measurements (Slater 1988).

The origins of the street were decisively revealed in the course of the final stages of the excavation of the Deansway site 4 (figs. 9 and 10) in 1990. A trench extending northwards from the main area excavation towards Broad Street located a levelled earth rampart, whose tail had appeared in the main excavated area, covering the remains of a limestone rubble wall and extending northwards to the southern edge of a substantial east-west

ditch. The wall and rampart were constructed on top of the northernmost Roman east-west street, and the rampart and ditch fill were cut by pits of medieval date. Although seen in a very limited area there is little doubt that these remains represent a post-Roman pre-medieval defensive feature (Baker, Dalwood, Holt, Mundy, and Taylor, forthcoming). It is possible to suggest, with some confidence, the line taken by these features beyond the confines of the site (see 2:4, below) and to further suggest that they represent the defences of the Anglo-Saxon *burh* referred to in the well-known charter of 884-901 from Aethelred to Bishop Waerferth, granting the latter judicial and fiscal rights within what appear to be new fortifications (Stenton in VCH Worcs.IV, 377; Clarke and Dyer 1968-9, 28-9).

With the knowledge that the *burh* ditch lies under the southern frontage of Broad Street, a sequence of developments can be proposed. Broad Street may well have originated as an extramural road following the edge of the ditch from the High Street towards a gate taking north-south traffic from the intramural Birdport to the extramural Newport and Dolday and thence to the river-crossing. However, the character of the Roman occupation sequences and the deposits north and south of Broad Street have been found to be substantially different, and Mundy has suggested that Broad Street's true origins may lie in a further east-west Roman road, the northernmost of the recently-discovered planned series (see 2:1, above): this also carries the implication that the northern side of the *burh* was itself determined by Roman landmarks (Charles Mundy pers. comm; Baker, Dalwood, Holt, Mundy, and Taylor, forthcoming). If, as is likely, Broad Street does follow the line of the defences, All Saints' church on the west

side of Birdport/Merryvale must undoubtedly have been a gate-church in origin (see 2:5, below) founded immediately behind or actually on top of the defences. Outside the gate, All Hallows' square, although its existence cannot be proven at this period, must have developed as an extramural market (see 2:6, below). The peculiar north-east south-west orientation of All Hallows' Square, so convenient when Bridge Street was created in the later 18th century, is most likely to have arisen from the defences turning southwards to meet the riverbank at an approximate right-angle.

The archaeological evidence (again, the limited scale must be emphasised) suggested that the defences were deliberately levelled and not allowed to decay naturally over a long period: they certainly had no impact on the formation of property boundaries in this area. The regularity of Broad Street itself is suggestive of a central authority at work, and it may be that the street was improved and widened when the defences were levelled. The metrological survey, although the sample-size was limited, suggests that the subsequent development of plots was on an individual basis.

Documentary evidence gives a *terminus ante quem* for Broad Street of 1196-1203 (Currie 1989a, 1), though the archaeological and topographical evidence given here suggests a considerably more ancient origin. The date of the dismantling of the defences is not yet known with precision (but see 2:6, below), and the actual rate and date of occupation of the Broad Street area is largely unknown. Excavations on the south side of the street shed no further light on this particular question, beyond the orientation of the probable 12th-century building with respect to the general plot pattern. The 1985-6

Blackfriars excavations did, however, reveal a corn-drying oven of late Saxon (possibly 10th- 11th-century) date as well as a 'small building/shack' of the same date built on the disused Roman road surface (Mundy 1989, 33,35). Parallels elsewhere (Stafford and Stamford for example) suggest that the oven would be likely to have been situated in open ground behind occupied tenements, but it must remain an open question as to whether the activity with which it was associated can be identified as the occupation of the known Broad Street tenements.

4. GAOL LANE

Gaol Lane, now St Nicholas Street, was a narrow lane in the medieval period leading from the Cross to a postern gate in the town wall known as Trinity Gate, first recorded in 1540 (Beardsmore 1980, 62). The street was widened in the early 19th century when this part of the city wall was demolished. Although Gaol Lane was a minor thoroughfare in the later medieval period, the uncertain history of the roads approaching the town from the north-east suggests that caution may be needed before dismissing the lane's origins as of little significance (see 2:4, below). The north side of the lane was occupied by short rectilinear plots backing onto the city wall. The south side of the lane, by the late 19th century, was largely open ground. Speed's map of 1610 shows the south side of the lane continuously built up until just short of the corner of Queen Street; the latter is shown as unoccupied. Broad's map of 1768, and Young's of 1779, show a cluster of buildings immediately east of St Nicholas' church, and buildings on the corner of Gaol Lane and Queen Street, but the southern frontage between them appears to have been unoccupied. The north side of the Trinity, the east-west lane running parallel to Gaol Lane, is also shown fully built-up by Doharty and Broad, with some diminution of building cover by the time of Young's 1779 map which shows a reservoir for a waterworks here.

Both sides of Gaol Lane have been discussed as a single plan-unit for the sake of convenience, though, with the clearance of the south side before the 1880s there is virtually no evidence for the character of the plots there. The internal cohesiveness of this plan-unit cannot therefore be proven, and the boundaries, to some extent,

must be regarded as arbitrary, even though the neighbouring areas appear to be distinct and separate.

5. MEALCHEAPEN

This plan-unit contains two main components: Mealcheapen, a short east-west street dividing into two at St Swithin's church, and the Cornmarket at the east end of the street, inside the city wall. Mealcheapen represents one of the access routes of secondary importance leading into the city from the east, via St Martin's Gate outside the walls, from the area around Tibberton, Huddington and Himbleton. When the city wall was constructed, or perhaps earlier if the ditch found by Bennett nearby under the city wall was indeed of defensive character (see plan-unit 13, below), the street appears to have been diverted a short distance to the north via Clapgate to the new gate (St Martin's Gate). At least from this period (c.1200) on Mealcheapen also carried traffic to and from the High Street and the Droitwich area, via Lowesmoor and Silver Street.

The plot pattern, which survives, differs to the north and south of the street, and around St Swithin's. The plots on the north side have a slight curve, adapting the ruling north-south alignment of the Cross to the need to bring longitudinal boundaries more or less perpendicular to the north-west - south-east course of St Swithin's Street. Trinity Passage, a narrow north-south lane, and several of the plot boundaries ran from the Mealcheapen frontage through to the Trinity to the north, and although several of the plots appear to have been laterally sub-divided to provide properties facing northwards, the

Trinity would appear to represent the original rear boundary. There is no clear relationship with the plots associated with the Cross to the west, although it could be suggested that the southernmost two plots facing the Cross have lost ground at the rear to form short plots facing south onto St Swithin's Street.

The lateral partitioning of the plots on the north side of Mealcheapen is likely to have occurred, at least in one case, within the medieval period. One of the north-facing properties on Trinity, between the two buildings shown built over the lane, was occupied by the hall and other buildings of the Trinity Guild (Hughes 1980, 277-8).

The plots on the south side of Mealcheapen were much shorter. A group in the centre, deeper than the others, shared a common back fence line perpendicular to New Street, the side boundary of one of the latter's plots, to which the Mealcheapen plots may have been secondary in date. The smallest plots on the street were those around St Swithin's church, the most constricted church site in the city (see 2:4 for a discussion of the relationship of this area to the proposed *burh* defences, and 2:5, below).

The Cornmarket is dominated by the church of St Martin, which occupies a site in the centre of the west side. The triangular shape of the market that can be reconstructed from the cartographic evidence seems to have been determined entirely by the course of the later medieval city wall which formed its eastern boundary: it is very difficult to reconstruct the possible appearance of the Cornmarket before the construction of the city wall, and a case can be made for regarding the two as contemporary (see 2:4, below).

6. HIGH STREET NORTH (Fig. 11)

This plan-unit is dominated by two parallel streets, the northern half of the High Street and the Shambles, with side roads (Pump Street and Church Street) and plots at right-angles to them. The area can be divided into four sub-units:

The High Street (east) sub-unit.

This area consists of the block defined by the High Street, Pump Street, Church Street, and the rear of properties fronting the Shambles. The plot pattern within this area is very distinctive, with a small number of straight boundaries, perpendicular to the streets, running from one frontage through to the other without interruption or deflection. It seems likely that these represent primary boundaries (Slater 1981) to large, early plots of land that were subsequently intensively but irregularly sub-divided, longitudinally, and laterally by the creation of short plots of varying depth facing the Shambles. The primary boundaries seem to define four original plots in this area, all of equal size, measuring approximately 156-8 feet wide (c.46 metres) on the High Street frontage, the northernmost boundary following the north side of Church Street.

The Shambles sub-unit.

The west side of the Shambles, as described, is occupied by tenements created by the lateral partitioning of the primary plots and their sub-divisions. The east side of the street is, in contrast, occupied by short plots ending

against a strikingly long, straight, back fence line, approximately parallel to the street. This is interrupted at only two points, one of them the post-medieval Garden Market, and provides a clear eastern boundary to the plan-unit, with the differently-oriented New Street plots beyond it. It is possible that this line, and the parish boundary running parallel to it, represents the eastern *burh* defences (see 2:4, below). Although not a particularly wide street, the Shambles appears on the 1651 map (though not on Speed's or the later maps) to have stall encroachment along the middle of the southern half of the street.

The Pump Street sub-unit.

The properties on the north side of this street appear to be shallow sub-divisions of the southernmost west-east plot, with no enclosing back fence line. In contrast, most of the short plots on the south side of the street terminated at a back fence line, parallel to the street, that formed a clear boundary to the plan-unit, with differently-oriented plots of different character lying outside it to the south. It has also been observed that, on the 1886 Ordnance Survey map, only the tenements immediately south of this line, facing the High Street on one side and Friar Street on the other, preserved open spaces within them that would have allowed access across the street-block from one frontage to the other: this may represent the course of a much encroached-upon lane following the rear boundary of the Pump Street plots (3) or, alternatively, a return in the Anglo-Saxon defences at their junction with the Roman circuit (see 2:4, below).

The High Street (west) sub-unit.

The obvious difference between this area and that on the opposite side of the street is the absence here of a parallel secondary street to the rear. Instead, the plots on the west side of the High Street end against a staggered and irregular alleyway separating them from the rear of the plots facing Birdport to the west. The northern end of this alley (Pye Corner) appears for the first time in the cartographic record on Doharty's map of 1741. Broad's map of 1768 and Young's of 1779 record two further stages in the development of this area, as the lane extended southwards servicing new infilling and eventually joining up with Bull Entry. The latter was, by the 1880s, an alley linking High Street with Birdport; it does not appear on Doharty's map at all, but by 1779 it extended about two-thirds of the way westwards from the High Street towards Birdport (Young's map, where it is named as Crump's Buildings).

The staggered boundary between the High Street (west) and Birdport (east) plots suggests very fluid land ownership in this area, with the unpredictable exchange of ground between the two systems. The parish boundary here between St Andrew's and St Swithin's (see fig. 23) also follows a staggered north-south line, a short distance from that which was fixed by the late 18th century. This line is likely to represent an earlier junction between the plot systems, and excavation across it on one site has demonstrated that, at that point, it became established as a property boundary only in the 15th century. Before that, continuous spreads of industrial residue suggested that the boundary lay, as it did later, closer to the High Street (Deansway site 2: Mundy 1989 and pers. comm; see

also 2:5, below). The westwards extent of the High Street plots to the south is similarly confused, and there is no clear common boundary. In these circumstances, it is clearly not as easy to define primary boundaries, from map evidence alone, on this side of the street as it is on the other. Three closely-spaced property boundaries do run through from the High Street frontage to the rear alley (Chapel Walk) a short distance south of Powick Lane. One of these lies approximately equidistant along the frontage between the corner of Powick Lane and the south side of Bull Entry, and may represent a primary boundary between two blocks of land that, again, each appear to have frontage measurements in the region of 160 feet. Otherwise, the dense, irregular sub-divisions of the plot-pattern on this side of the street closely resemble those on the other side.

Bull Entry presents a problem. The south side of the 18th-century and later alleyway, and presumably that of the preceding private entry, is slightly off the alignment followed by the property boundaries either side. This could be explained if the alleyway was driven up the middle of a pre-existing plot, unconstrained by buildings and free to take any direction within the containing boundaries. If, though, as is equally likely, the entry/alleyway followed the southern boundary of a containing plot, then this divergence of orientation requires an explanation for which, at the moment, there is insufficient evidence. It appears to have formed the back fence line, perhaps originally followed by an alleyway, of the plots on the north side of Copenhagen Street, part of plan-unit 9, which will be argued to have been a planned area established at a later date than the High Street North plan-unit. It is possible that Bull Entry

therefore represents a partial re-alignment of the southern boundary of one of the two primary plots on this side of the High Street when the Copenhagen Street planned area was laid out (for the evidence for the relationship between these two plan-units see 2:5, St Andrew's parish).

The medieval guildhall, rebuilt in the 18th century, occupied the large southernmost plot on the west side of the High Street. The first reference to it is found in 1249, when a charter was witnessed by Richard de la Gyldhall (VCH Worcs.IV, 381). The medieval guildhall, like its successor was set back from the High Street frontage, behind shops facing the High Street and Copenhagen Street.

In conclusion, there is little doubt that this plan-unit represents a planned urban expansion. This is the immediate impression given by the rectilinear arrangement of the High Street, the Shambles, and the streets connecting them, and the impression is strengthened by the apparent regularity of the primary plots underlying the later, very irregular, subdivisions. With the exception of Bull Entry, the area is devoid of eccentrically-orientated features that might suggest that elements of the Roman landscape were allowed to persist: if Barker's hypothesis that the Roman road from the Droitwich area maintained a straight line from beyond Lowesmoor to the suspected gate at the junction of High Street and Pump Street is correct (Barker 1968-9, 50; 2:1, above), this plan-unit represents a major reorganisation of the local landscape. It was briefly suggested that the Shambles ran parallel to and just inside the probable course of the Anglo-Saxon defences. This idea will be explored further below (2:4), and it will be argued later that the creation of this planned area and the construction of the *burh* defences may have been contemporaneous events (2:6, below).

7. BIRDPORT (Figs. 9 and 12)

The definition of this plan-unit highlights the problem of scale outlined in the introduction. The area in question was characterised by a core of small irregular street-blocks, given a degree of morphological unity by their common size, irregularity, and in most cases, limited plot definition within them. Each might be considered a plan-unit in its own right, but their compact distribution in the central waterfront quarter of the city probably justifies their treatment as a single localised phenomenon. On the fringes of this area were a number of minor plot series of more conventional character, and detached to the south, another street-block whose morphological characteristics are felt to qualify it for inclusion within this plan-unit.

Birdport, or Britport, was the principal medieval thoroughfare in this area, carrying north-south traffic within the city along the top of the steep slope overlooking the river, and further north to the river crossing at the end of Dolday and Newport. Birdport is probably the successor to a north-south Roman street, a southward extension of the road identified in the Blackfriars area and outside the city (2:1, above), though definitive archaeological evidence is lacking (Mundy 1989, 12).

The All Saints' sub-unit.

This was (for its south side has been erased by 20th-century redevelopment) a small semi-circular street block occupying a bluff facing north and west, dominated by the church of All Saints' overlooking the lower ground

of All Saints' or All Hallows Square. The block was bounded by Quay Street to the west, Grope or Group Lane to the south, and Merryvale - the northern end of Birdport - to the east. It was sub-divided into a few small parcels of land: two rectangular plots side-on to Grope Lane, the eastern plot sub-divided between a few incompletely-defined tenements, the western plot divided between shallow properties facing Grope Lane and a large property occupied by a malthouse in 1886 facing Quay Street; a small triangular open space adjoining the south wall of the church; and two short plots at a lower level on Quay Street. This pattern is also clear on the 1779 map, with continuously built-up frontages to Quay Street and Grope Lane. In addition, the 18th-century maps show housing encroaching on the open space in front of the church.

The plan-analysis of the Broad Street area has already described the discovery of the Anglo-Saxon defences (plan-unit 3, above) and their relationship to the later topography in this area. It has been suggested that All Saints' was built on or immediately behind the defences, adjacent to a gate represented by Merryvale. With this information, it is possible to interpret Quay Street to the west of the church as a likely post-*burh* break-through street giving access to the waterfront from All Hallows' Square. The origin of Grope Lane is more uncertain: it may represent access to the waterfront from Birdport between the back of the defences and a curtilage around the church, and the block of land adjoining to the south.

The Birdport (east) and Quay Street sub-units.

These sub-units consist of three separate blocks of land all on the margins of the core-area of the plan-unit: a group of tenements on the east side of Merryvale, adjoining the rear of Broad Street properties; the tenements on the east side of Birdport, from Powick Lane to Bull Entry, and the tenements on the west side of Quay Street adjoining the rear of properties on Newport. The Merryvale tenements have been referred to briefly already, under the Broad Street plan-unit: they were of varying depths but all relatively short, with well-defined boundaries to the side and, for the most part, to the rear.

The Birdport plots were also fairly well defined. Excavation (Deansway site 2) here covered one tenement and parts of the two adjoining tenements. An east-west Roman road or trackway was found. The road went out of use - or its use changed - in the late Roman or early post-Roman period, when it was covered by stone and slag debris and quantities of unbroken animal bone. It was subsequently buried by a deposit of soil. In the late Saxon period industrial debris (lime, ash, charcoal) spread over the course of the road and appeared to be associated with a timber building, possibly related to the Birdport frontage which lay beyond the western edge of the excavation. In the 11th-13th centuries the medieval and later tenement boundaries were established, first represented by lines of pits, and one of these was found to follow exactly the line of the edge of the underlying Roman road (Mundy 1989, 10-14). Unless this was purely coincidental, it suggests either that the boundary was perpetuated by some archaeologically undetectable means, or that its

re-establishment resulted from its position relative to adjoining boundaries beyond the excavation (e.g. by plot amalgamation and redivision).

It has been suggested that a seven- or fourteen foot module was used in laying out these plots as part of a planned development (Currie 1989b). However, doubt has already been cast on the use of this module elsewhere (see the Broad Street plan-unit, above), and there seems insufficient evidence to accept its use on Birdport. The irregularities of the plots rather suggest piecemeal development, and on the basis of the excavated evidence and the plan-analysis of the surrounding areas, it is not unreasonable to see the plots here as early medieval infill, following late Saxon industrial use, between earlier developments west of Birdport (see below) and on the High Street to the east.

On the west side of Quay Street were short plots ending, on the 1779 and 1886 maps, on a narrow alleyway at the rear of the 18th-century Bridge Street buildings. The layout of this area before the creation of Bridge Street is largely unknown, though plot boundaries that were recorded at the west end of Newport (see Newport and Dolday plan-unit, below) suggest a series of north-south plots with longitudinal boundaries parallel to Quay Street. This might suggest that the Quay Street plots under discussion were, in fact, secondary developments on the tail of the last Newport plot, but this is speculative given the incomplete state of the information.

The St Andrew's sub-unit (Fig. 12)

This was an irregular squarish area, sub-divided into four quarters, with steep slopes to the west and south.

St Andrew's church, first recorded in the mid-11th-century (see 2:5, below), occupied the south-eastern quarter, bounded by Birdport, Hare Lane to the north, Copenhagen Street to the south, and a block of tenements on the corner of Copenhagen Street and Quay Street to the west. Speed's map of 1610 shows the church separated from the tenements to the west by a north-south road, continuing the line of Hounds Lane southwards to Copenhagen Street. The church stood in the centre of this block within a large churchyard. The east (Birdport) frontage was taken up by a rectangular plot, side-on to the street, occupied by dense housing separated from the east end of the church by a narrow alley. Young's map shows a single plot adjoining this alley within the churchyard north of the church. The 17th- and 18th-century maps show all of the Copenhagen Street frontage to the south of the church built-up, though by the 1880s housing was confined to a regularly sub-divided plot terraced into the slope in the south-west corner of the churchyard. A charter of 1214-47 refers to land and houses in Huckster Street (Copenhagen Street) in front of the church of St Andrew (Currie 1989b, 3).

The north-east quarter of this sub-unit was bounded by streets or lanes on all sides. The first edition Ordnance Survey shows dense cottage development behind the frontages, within plots which (with the exception of the two northern corner-plots) had ill-defined boundaries away from the frontage buildings. The north-west and south-west quarters were clearly separated from the areas to the east, but from one another only by a property boundary that appears to have continued the line of Hare Lane westwards. The 1886 1:500 map shows a number of short plots facing west onto Quay Street, presumably terraced

into the slope, ending at a back fence line parallel to the street. The corner of Quay Street and Copenhagen Street, and the west end of the latter, were occupied by short, irregular plots, shown by both Young and the Ordnance Survey. Behind the northern end of the Quay Street plots was an area which was, in 1779, mainly open ground with some buildings on the Hounds Lane frontage.

The Quay

The Lower Quay (so called to distinguish it from the Upper Quay, by St Clement's church to the north) is approached by two roads: Quay Street, from All Hallows Square to the north, and Copenhagen Street, carrying traffic from the south end of the High Street, occupying a substantial defile as it descends the escarpment to the west of Birdport. In the medieval period, the Quay was separated from the waterfront by the town wall; presumably there must have been access through one or more gates for the movement of goods, but no gates are recorded. Speed's map shows the wall in this area as discontinuous - three separate sections with gaps between them, but it is not clear whether these are meant to indicate access points or merely ruination. The 1651 map shows a single gap, at the bottom of Copenhagen Street, marking the point at which the wall is shown changing course westwards to enclose the Quay waterfront within a salient. These features are otherwise unrecorded and may be schematically drawn or represent temporary Civil War structures. Inside the wall, Speed's map shows a loose agglomeration of housing encroaching on the open space of the Quay. This is not shown on the 1651 map, but appears again on Doharty's map (1741) and subsequently, and still survives.

The below-ground structure of the Quay has never been explored. There is some evidence (see below) that, in this area, the waterfront formerly lay directly at the bottom of the slope beneath St Andrew's church and that the flat, wedge-shaped open area is a later medieval creation, possibly the product of gradual riverwards encroachment of the type familiar from a great many other towns. The present surface of the Quay is the lowest-lying area of the medieval intramural city (at about 13.7 metres AOD - 44 feet in the 1880s) and is particularly liable to winter floods.

How is this settlement-pattern to be interpreted? The core of the plan-unit is represented by the four small irregular street-blocks on the west side of Birdport, the peripheral areas by the minor plot-series to the north-west, north-east, and east, and a sub-unit to be described below. The appearance of the area does not suggest that its development was subject to any obvious form of centralised planning; rather, the landscape appears to consist of a number of discrete blocks of property, incompletely sub-divided internally, one of which contains a parish church of almost certain pre-Conquest date. It is very likely that these four small blocks of property were originally one. In 904 Bishop Werferth leased a *haga* to Aethelred and Aethelflaeda, for three lives, with associated property on the west bank and to the north of the city. The boundaries of the *haga* were recorded: '28 rods in length from the river itself along the north wall eastwards and thence southwards 24 rods in breadth and thence westwards to the Severn 19 rods in length' (Sawyer 1968, no.1280; Birch 1885-99, no.608). If, as has been suggested, the north wall of the *burh* lies under or near

All Saints' church, the 904 *haga* must have lain somewhere within this area. Assuming that the 'rods' used are equivalent to the statute perch of 16.5 feet the recorded dimensions were respectively 462, 396, and 313.5 feet. While there are inevitable uncertainties (were the measurements precise or schematic, measured along curving frontages or in straight lines?) it seems certain that this property can be equated with the larger street-block defined by Grope Lane, Birdport, and Copenhagen Street. The measurement along the north side, from a point westwards from the junction of Birdport, Powick Lane and Grope Lane extends about 90 feet into the Quay beyond the bottom of the slope. The north-south measurement from the north-east corner to Copenhagen Street appears precise. The length of the south side, from the present Birdport-Copenhagen Street junction is some 50 feet short of the bottom of the slope and is the only problematic dimension. However, were the early 10th-century Birdport to be following a slightly more westerly course at this end, towards the brushwood causeway across the Roman defences excavated by Gelling (1958), and if in this area the river ran at the bottom of the slope (as it does immediately to the south), this measurement too would be precise (fig. 12).

In conclusion, the core of this plan-unit developed from the *haga* recorded in 904. Its origins are unknown. As a substantial riverside property it no doubt had, in modern terms, considerable potential for commercial development; how this was effected is also unknown. Understanding of its internal geography is limited to the strongly-suspected presence from an early date of St Andrew's church in the south-east corner (see 2:5, below). At an unknown point in time it appears to have been sub-divided

into four smaller enclosures, and these partially further divided into more or less conventional plots. Archaeological evidence, as already described, has been able to chart the intensifying use of the land on the opposite side of Birdport from the 10th-11th centuries onwards.

The Warmstry House sub-unit.

This was the squarish block of land defined by Warmstry Slip, Palace Row, the bishop's palace, and the river. Large industrial premises including the porcelain manufactory had destroyed the plot-pattern within it by the 1880s, but Young's and Broad's maps show Warmstry House occupying a large plot adjoining Warmstry Slip running down to the river, with three further small plots adjoining to the south. Warmstry House appears to have originated as a substantial house in the later middle ages (Gents. Mag. 1836, 14-15).

Its inclusion within the Birdport plan-unit (from which it was separated by the course of the Roman defences and the plots between Warmstry Slip and Copenhagen Street that eventually colonised them) is clearly contentious, but is based on the dissimilarity between this block and its immediate surroundings (the Copenhagen Street plan-unit), and on documentary evidence and the parochial geography. Current research (Holt, forthcoming) has identified this area as containing the site of the church of St Margaret (also known as St Mary or St Marina), one of two churches recorded by the later medieval Evesham Abbey Chronicle as a gift to that abbey in 721 (see fig.23). 13th-century documentation makes it clear that the church formerly had

its own parish, which was amalgamated with that of St Alban's. The geography of the latter is such that it is virtually certain that St Margaret's parish must have been coterminous with this street-block, an area of only an acre, though possibly reduced in size by the northward encroachment of the bishop's palace (see plan-unit 9, below). The street-block itself appears as a discrete landscape feature, and if as suggested it also formed a separate parish, it is difficult to see it as anything other than, in origin, a single block of property - a riverside enclosure perhaps, resembling the *haga* to the north, and the secondary enclosures that appear to have been carved out of it.

8. NEWPORT AND DOLDAY

These two streets, although in some respects different in character to one another, have been included in the same plan-unit by virtue of their common function as approach-roads to the river crossing. Their probable existence within the lifetime of the *burh*, taking traffic between the proposed gate by All Saints' church and the river-crossing, has already been discussed (Broad Street plan-unit, above). Dolday, to the north, was a notably sinuous road, narrow at both ends and wider in the middle, leaving Broad Street just short of All Hallows Square and ending at the North or Upper Quay, opposite St Clement's church, about 150 feet (c.45 metres) north of the medieval bridge. The latter stood at the end of Newport, also known as Eport, which runs in a straight line from the west side of All Hallows Square opposite All Saints' church. Both roads took traffic off the edge of the gravel terrace

onto much lower ground around the waterfront: in the 19th century Dolday dropped by 21 feet (c.6.5 metres) from south to north, Newport by 13 feet (c.4 metres). Trial excavation on the north side of Dolday in 1985 revealed strata containing Roman material descending sharply to the west, buried by a mass of undated but probably post-Roman tipped material (Mundy 1985). It is very likely that both streets represent the result of local reclamation, at least near the river, the counterpart in function if not in date to the causeway leading to the bridge on the west bank (see the Causeway plan-unit, below, and 2:1, above).

The whole area has been subject to extensive clearance and redevelopment and, although Newport and the southern end of Dolday survive in recognisable form, the plot pattern has been almost totally obliterated by road widening, car-parks, and a bus station. The 1886 Ordnance Survey shows that in the block between the streets, except near the east end, many of the plots boundaries ran through from the south side of Dolday to the north side of Newport. The boundaries appear irregular, some straight, others slightly curved, and the plots of varying widths and subject to varying degrees and depths of sub-division. At the east end the arrangement was more complicated, with shorter sub-divided plots facing both streets and others facing the Square, with an area of back land behind. Doharty's map of 1741 suggests that the group of tenements on the corner of Newport and All Hallows Square had encroached forward onto the open space.

The plot pattern on the south side of Newport was very largely erased without record by the construction of Bridge Street in 1771-80. The fragmentary boundaries surviving in the 19th century at the west end of Newport curved strongly south-east, as if to bring the plot tails

parallel to the waterfront. An explanation for this is not immediately apparent, though it may represent the result of successive westward reclamation and terracing, tenement-by-tenement. It is more certain and perhaps equally interesting that it does not provide for waterfront access to the rear of individual plots, in which case the boundaries might be expected to have curved in the opposite direction (see fig.42); this underlines the significance of the two public quays in Worcester in the post-Conquest period.

The plots on the north side of Dolday were, in 1886, generally parcels of land of squarish proportions, intensively sub-divided on the frontage and occupied by densely-packed courts to the rear. The plots were of varying depths, those towards the east end of the street separated by back lands from the town wall, though a number of primary boundaries may be observed passing from the frontage through to the wall. Property in this area was acquired by the Dominicans in 1391 (Hughes 1986, 13).

The most obvious question regarding this part of the city is why there should be two streets giving access to the river crossing: what was the relationship between them? There seem to be three possible answers. The first is that the site of the crossing shifted. The bridge at the bottom of Newport was built in the early 14th century, following a pontage grant to the city in 1328 (VCH Worcs. IV, 382). It is not known for certain whether this bridge was, in reality, a rebuilding of the existing bridge first recorded in 1088, or a new structure on a different site. A rebuilding is perhaps more likely, given that the site of the bridgehead on the west bank must have been fixed by the Causeway. An alternative model might be that the bridge replaced or supplemented a diagonal ford,

but while there is some evidence for a ford in the Newport area there is none known further north (Carver 1980 19-20). Later medieval deeds show a great difference in character and status between Newport and Dolday, the former being a fully built-up commercial street, the latter a sparsely-occupied back lane. Another, and perhaps the most likely explanation for the duplication of bridgehead roads is that this later medieval situation also applied at a much earlier date- that Newport was the straight, planned, approach-road and Dolday a service lane at the rear of its northern plots, following a route dictated by the rearward extent of piecemeal plot-by-plot reclamation. The parallel between the course of Dolday in relation to Newport, and the erratic back fence line of the plots on the north side of the Causeway on the west bank may be more than coincidence; it should be said at this point that there is no evidence of a former lane at the rear of the Causeway plots. Inevitably, there is an argument against this interpretation too: the location, at the bottom of Dolday, of St Clement's church, a probable Saxo-Norman foundation. Which is likely to have been of greater significance in determining its location: its parochial link with the west bank suburb, which would favour a bridgehead site, or its maritime dedication, which would underline its association with the Upper Quay?

9. COPENHAGEN STREET (Figs. 13 and 14)

The plan-unit in its later medieval and post-medieval state covered an area of about six acres between the river and the High Street. As in the Birdport plan-unit, a clear core-area can be identified with strongly-marked characteristics which differentiated it from its neighbours; around the core were sub-units linked to the core by some characteristics and differentiated from it by others. A strong link between them is in this case provided by archaeological evidence.

The core-area of this plan-unit is represented by the central part of Copenhagen Street, the western and central part of Fish Street, and the area to the south of Fish Street backing onto Palace Yard. Much of this was destroyed in the 1920s by the construction of the Deansway road, but the street-plan and plot-pattern can be reconstructed from the usual sources. Copenhagen Street (formerly Huckster Street or Cooken Street) was the principal access to the Quay from the High Street and the central-southern part of the city. The modern ground surface and contour map (fig.2) show that, west of Birdport, it occupies a considerable defile, showing as an indentation in the contours and probably resulting from a hollow-way erosion effect accentuating a natural feature exploited by the builders of the Roman defences immediately to the south (see 2:1, above). Fish Street runs on a course not quite parallel to it, 50-60 metres to the south, bending northwards at its junction with the High Street opposite St Helen's. Whereas Copenhagen Street gave access directly to the waterfront, Fish Street stopped at Little Fish Street, the southern extension of Birdport, with access to the river down Warmstry Slip a

short distance to the north. The line of Little Fish Street continued southwards from the staggered junction at St Alban's church as Palace Row to the northern boundary of the bishop's palace and Palace Yard.

The Ordnance Survey and Young's map of 1779 show the plot-pattern in the core area to have been of a regular appearance, generally formed by properties perpendicular to Copenhagen Street and Fish Street with straight boundaries. The tails of the plots on the north side of Copenhagen Street were deflected slightly westwards, paralleling Birdport and the natural topography. By the late 18th century the western plots ended against narrow properties fronting the alley which became known as Bull Entry; those to the east ended against a wedge-shaped property in the angle of Bull Entry and the High Street. The boundary between this property and those on Copenhagen Street was followed by the parish boundary. No evidence survives of their earlier arrangement, though it is probable that the line of Bull Entry represents the original, more regular back fence line to the Copenhagen Street plots. By the late 19th century the finer details of these plots had been erased by a hair cloth manufactory.

The plots on the south side of Copenhagen Street had straight boundaries running north-south, several of which passed through to Fish Street. However, Young's map shows that the majority of plots stopped short, ending against a narrow band of housing on Fish Street without differentiated boundaries other than a straight back fence at the eastern end parallel to Copenhagen Street. The latter appears very clearly here as the primary street (in the economic, not necessarily the chronological sense), with frontage buildings facing northwards onto Copenhagen

Street, and ancillary buildings stretching down the plots nearly all the way to Fish Street. The plots on the south side of Fish Street, similarly, had straight north-south boundaries passing through the block to Palace Yard; the frontage buildings faced Fish Street, with very little development of the plot tails and southern frontage, even by the 1880s.

To the west of Little Fish Street, the eastern part of the street block between Copenhagen Street and Warmstry Slip may also be considered to have been part of the core area, consisting as it did of straight-sided north-south plots running between the two streets. Young's map shows that in this block too, Copenhagen Street was primary, with the frontage buildings mostly facing north, though with irregular development also on Warmstry Slip. By the 1880s most of the plots here had been amalgamated to form St Alban's Square. The reconstruction of the earlier boundaries in this area is problematic, and the plots should probably be regarded as being more regular than they appear in fig. 5. The plots further west by the river appear to have been far more irregular, probably contour-influenced on the steep gradient, and had much in common with the plots on the opposite side of Copenhagen Street. This area has therefore been regarded as a sub-unit within the overall plan-unit.

The High Street (south-west) sub-unit.

The north-south plots in the core area of the plan-unit abutted plots facing eastwards onto the High Street. The rear boundary of the Guildhall plot formed the east boundary of the easternmost plot on the north side of Copenhagen Street, and was perpendicular to the latter

rather than the High Street. Between Copenhagen Street and Fish Street is a series of High Street plots, most of which average about 145 feet (c.45 metres) deep, ending against a straight north-south back fence line that forms the side boundary of one of the Copenhagen Street plots. The northern end of this line also carried the parish boundary between St Helen's and St Alban's. St Helen's church itself occupies the southern-most plot in the series, with one small tenement cut-out between the church and the next primary boundary to the north. The Ordnance Survey shows the churchyard sharing the straight north-south back fence line with the adjoining tenements, as it does today. Young's map is ambiguous, implying deeper High Street plots and no clear boundary to the rear of the church. The northern three plots in the series, as shown by the Ordnance Survey, were only half as deep as those to the south, probably having lost their rear halves to short plots facing Copenhagen Street.

The junction between the Fish Street plots and those facing the High Street to the east is much more irregular. The regular north-south Fish Street plot series ended, in the 1880s, about about 120-130 feet (c.38-40 metres) west of the High Street. The eastern plots in the series appear to have lost ground to a garden behind a large house lying behind the High Street frontage.

This plan-unit appears to possess some characteristics from the cartographic evidence alone, that suggest that it was, in origin, a planned urban development, though the destruction of much of the core-area rules out the possibility of support from detailed metrological evidence. The area was dominated by two east-west streets, Copenhagen Street and Fish Street, which are nearly parallel to each other and perpendicular to the southern

half of the High Street, given a slight distortion to allow for the natural topography of the river bend and the gravel terrace. To these streets may be added a possible third and fourth: Palace Yard and Bull Entry. It was suggested earlier (the Cathedral Close plan-unit, above) that the bishop's palace is likely to represent a northward encroachment, possibly from a westwards continuation of the line of Lich Street. If this line was indeed followed by the predecessor of Palace Yard before it was diverted around the encroachment, it would have formed the southern boundary of a simple, regular, street grid, parallel to Copenhagen Street and Fish Street (fig. 14). Another possible east-west thoroughfare may be found in the line of Bull Entry, already proposed as the termination of the northernmost plots of this plan-unit, those on the north side of Copenhagen Street, and possibly marked by an alleyway later re-established as Bull Entry. The irregularities in the street system within this area were the staggered junction by St Alban's church, and the abrupt northward deflection of Fish Street by St Helen's, at its junction with the High Street. If it were assumed that this deflection could be a secondary feature and the line of Fish Street continued eastwards in a straight line, the resulting junction with the High Street would be precisely mid-way between Copenhagen Street, 74 metres (c.240 feet) to the north, and Palace Yard and Lich Street, the same distance to the south. The ability of Fish Street to deflect northwards at this point suggests the absence at some period of buildings lining its northern frontage at this point: a very likely situation if there was an open space - a churchyard - around St Helen's into which traffic could be diverted as buildings encroached northwards at the corner of the High Street. It

will also be noted that the narrow property adjoining the southern side of Bull Entry is also about 74 metres along the High Street frontage from the junction with Copenhagen Street. This suggests that it did indeed form the northern boundary to this proposed planned area, but whether as an original thoroughfare or merely as a boundary is impossible to say. As reconstructed, the planned area represented by the core of the plan unit was a grid of between two and four east-west streets adjoining the north side of the cathedral close, covering an area of about 6.5 acres. It was confined by the High Street on the east side, and possibly by the steep slope on the west.

Excavated evidence gives support to the hypothesis that the landscape in question took shape as the result of investment (in the broadest sense) over a limited period of time. The Roman defences, a wide ditch and a rampart, ran through the area immediately to the north of St Helen's, St Alban's, and Warmstry Slip (2:1, above). The defences almost certainly determined the location of the two churches, and the parochial boundary between them and St Andrew's to the north (2:5, below), and probably the line of Warmstry Slip. The interpretation of a 'brushwood causeway' found filling the ditch in Gelling's excavations west of St Alban's may be open to some question (Gelling 1958), but it is likely to represent a phase in the life of the Birdport- Palace Row route. The line of the defences is, however, completely unrepresented in the topography of the core-area of this plan-unit. If such a major obstacle had remained in place when the area was being built up, it would be odd if it did not exert some influence on the formation of the property boundaries. That it did not, suggests that the defences had been levelled by the time settlement took place. Although it

cannot be proved without further excavation, it seems most likely that the levelling of the defences would be a prelude to further activity - in modern terminology, the groundworks for an urban redevelopment. This idea finds support in the sequence of ditch fills excavated by Gelling, the primary slow silting and the causeway being covered by 'back-filling containing layers of marl, sand, loam and slag, with Roman pottery' (Gelling 1958; Carver 1980, 302). Modern property developers would also, no doubt, acknowledge the logic of the reclamation of an area of ground that could provide the principal access from the High Street to the waterfront below the bishop's *haga*.

Records of regular rent-charges from St Alban's parish in the post-Conquest period lend credence to the idea that this was, indeed, a planned area; they also suggest that the development was undertaken by the bishop (Holt, forthcoming). Finally, there is the question of the relationship of this settlement to the two churches of St Helen and St Alban. This will be discussed further below (2:5) but, in brief, it is not necessary to argue for the contemporaneity of the churches and the proposed planned urban landscape. The reverse seems to be true: the churches and some aspect of their territorial organisation later fossilised in the parish system were established while the Roman defences were extant; the planned landscape was established later after the defences had been removed.

10. THE HIGH STREET SOUTH PLAN UNIT (Fig. 13)

Morphologically, this area was entirely dissimilar from the previous plan-unit; historically and functionally there are close parallels. The plan-unit, at least in its later- and post-medieval state was defined by clear boundaries: the rear of the Pump Street plots, Friar Street, Lich Street and the High Street. Within the block was a distinctive plot-pattern, surviving until the mid-1960s and the Lich Street Development. This consisted of a north-south back fence line, parallel to Friar Street and slightly nearer to the latter than to the High Street, on either side of which were plots, roughly rectilinear in plan, but with irregular, slightly wavering boundaries. While many longitudinal boundaries were shown by the Ordnance Survey to reach to the back fence line from the frontages, none could be said to pass through it without deflection, suggesting the separate development of plots associated with each frontage once the dividing line had been established. The north-south dividing line, by the 1880s, stopped short of the rear of the Pump Street plots, though it continued southwards to the Lich Street frontage. Here, either side of it, were similar plots facing Lich Street, the deepest plots adjoining the central dividing line. At the southern end of the High Street frontage, the direction of the longitudinal property boundaries changed from the prevailing orientation to that of Lich Street, with a wedge-shaped tenement (Newdix Court) at the junction. By the 1880s all the plots in this block had been subjected to intensive irregular subdivision, with cottage developments in rear courts being a particular feature of the Friar Street plots.

Given the apparent irregularity of the plots in this area, an attempt to claim that this area was a planned urban development would seem perverse. Metrological evidence is largely absent, with the exception of the plots along the northern half of the Friar Street frontage. These were measured, and no evidence of regularity was found. But like the Copenhagen Street area, archaeological investigation during redevelopment showed that this system was superimposed over the Roman defences, here consisting of a ditch 90 feet (c.27 metres) wide with a large earth rampart curving diagonally across the street block and out under Friar Street (Barker 1968-9, 44-62; chapter 2:1, above, and figs. 2 and 13). If such an earthwork had been left to weather naturally, it would still be there, (at least were it not for the 1965 redevelopment), yet its only influence on the later topography was a slight eastward bulge in the line of Friar Street. This again suggests a deliberate levelling campaign, a major piece of work that only makes sense as reclamation prior to redevelopment. Of the surrounding streets, only the High Street is likely to pre-date the proposed reclamation and development, and may, within the defences, be of Roman origin: Barker (1968-9, 50-1) noted the narrowing of the ditch near the north-west corner of the street block, and suspected the presence of a gate; metalling with Roman characteristics was also found beneath the High Street at this point. The presence of St Helen's on one frontage again suggests an early date for this street. Friar Street is likely to have been of post-Roman origin, given its at least partial superimposition over the Roman ditch, and its apparent relationship with Sidbury and thus with the Roman road excavated there,

though it must have come into existence within the lifetime of the defences.

11. FRIAR STREET & NEW STREET (Fig. 15)

The probable post-Roman origins of the street have been briefly discussed (see above). New Street (formerly Glover Street), its northern extension, stands out from the other city streets in its easterly divergence from the others' prevailing north-south orientation. This may be a reflection of it and Friar Street's probable original function as a by-pass taking traffic from the south and south-east, via Sidbury, around the growing built-up area and the suggested *burh* defences directly to the approach road to Droitwich. Further discussion of this point is hindered by the difficulties in the interpretation of the street- and settlement pattern in the Cornmarket area (see 2:4, below). Further confusion is added by the excavation of a short stretch of ditch, of possible defensive character, underlying the city wall a short distance to the south of St Martin's Gate (Bennett 1980, 65-9)). This contained two 'early medieval' sherds, one now lost, in its upper fill. Excavations further south on the medieval circuit, in the Friar Street and Sidbury areas, found no trace of such a feature and its role in the evolution of the pre-13th-century city defences remains obscure.

The plot- pattern associated with the streets can be divided into three areas. The plots occupying the block between Lich Street and Pump Street have been dealt with

as a separate plan-unit (the High Street South plan-unit). Further north along the western frontage, between Pump Street and Mealcheapen, the first edition Ordnance Survey shows a number of short, wide plots ending against the back fence of the Shambles plot series. At some points tenements fronting the Shambles have broken through to the New Street frontage. The frontages of the wide, block-like New Streets plots were intensively sub-divided by the time cartographic evidence becomes available. The east sides of New Street and Friar Street are rather different, with tenements of various proportions, again with sub-divided frontages, and straight primary boundaries running from the frontage to the medieval city wall at the rear. Medieval deeds for properties in this area invariably use the city wall as one of the boundaries but it cannot be said with certainty that these properties therefore post-date the city wall. The ditch beyond made use of and canalised the natural watercourse known as the Frog Brook (2:1, above) and it is not impossible that the tenements originally took this line as their back boundary and suffered marginal truncation in the 13th-14th centuries.

With the exception of the area destroyed by the Lich Street Development, Friar Street and New Street have escaped large-scale redevelopment and the traditional plot-pattern remains largely intact, with a large number of surviving sub-medieval timber-framed buildings. The frontage widths of the plots were measured (fig. 15; see also footnote 2). Although some plots were laid out in perch-based units there was no evidence of regular planning throughout the street. Settlement would appear to have been on a piecemeal basis.

The Franciscan Friary.

In 1226 a Franciscan friary was founded on the east side of the street. In 1231 the friars received permission to make a postern gate through the city wall, enlarged in 1246 (Beardsmore 1980, 62). The friary site is now represented by the properties 11-15 Friar Street, a frontage of about 278 feet. Little is known of the internal arrangements other than that the frontage was occupied, in the 16th century, by a stone wall pierced by a gate giving access to a lane leading to the postern. At the northern end of the site was a large hall with an oriel window: this survived the Dissolution and was finally demolished in 1822 (Hughes and Molyneux 1984, 8-9).

12. SIDBURY (INTRAMURAL) (Figs. 16 and 17)

Sidbury was the only access to the city in the medieval period from the south and the south-east, and the first medieval crossing-point over the Frog Brook. Beyond the medieval gate lay the junction of major routes to London, Gloucester, and the lower Severn Valley.

Sidbury is likely to be another post-Roman development. Excavations at 23-29 Sidbury located a Roman road orientated north-west - south-east: this was presumably associated with an entrance through the Roman defences (Carver 1980, 161-3). The course of the road eastwards from the excavated area is unknown but it may well, over a short distance, have run roughly parallel to Sidbury and into the area occupied by St Wulstan's Hospital beyond the city wall. Beyond that, it would surely have avoided the

steepest gradients of Fort Royal Hill and been deflected to follow London Road, Sidbury's extramural extension, recorded as a *straete* in Anglo-Saxon charters (Hooke 1980).

The earliest post-Roman activity identified by the excavation took the form of a series of pits of late Saxon date, probably of 10th-11th-century date, though conceivably of the 9th 'aligned approximately along the later tenements'. The evidence was unfortunately insufficient to prove that the mapped and surviving property boundaries were in place at this time; it was not until the 14th century that the tenement divisions were unambiguously reflected by the excavated features (Carver 1980, 165).

The tenement pattern in this area was distinctive. Particularly on the north side of the street, the boundaries (before the construction of City Walls Road in the 1970s) exhibited a strong eastward curve. The same feature was apparent on the south side, but to a less marked extent. Two possible interpretations can be offered. The first is that the tenements were laid out in this way to give access to running water to the maximum number of plots, possibly for industrial purposes. The same pattern can be seen in bridgehead situations in a number of other towns (see fig.42 and chapter 3:3). The problem with this interpretation is that while there is little doubt that the Frog Brook occupied a natural channel, roughly on the line later followed by the town ditch to the east and north of Sidbury, there is nothing to suggest that the brook flowing along the ditch to the south, between the church of St Peter the Great and the castle, followed any natural line predating the construction of the defences in c.1200. The building of

the wall, or any pre-existing rampart would of course have made the watercourse inaccessible from within the city; this interpretation would also have to assume that King Street was inserted at a later date, and this is, on balance, not probable.

The second and more probable explanation is that the curving property boundaries reflect and fossilise the line of an earlier curving boundary acting as a local morphological frame. The curving line of one of these intramural plot boundaries was continued beyond the city wall by the northern boundary of St Wulstan's Hospital precinct: a curving boundary here - a hedge or ditch - is very clearly shown on Young's map of 1779.

How this feature is to be interpreted is far from clear. It appears to represent half of some sort of enclosure, straddling the Frog Brook in the valley bottom, and cut by the later medieval city wall. If it was an enclosure, it must have contained the sites of St Peter the Great, and the chapel of St Godwald or Gudwal, both established by or in the mid- 10th century. It also appears to have been bisected by Sidbury, but its relationship to the Roman road excavated by Carver is ambiguous. A definitive interpretation must await further work (4).

The King Street sub-unit.

The principal arm of this street runs parallel to and about 200 feet (c.60 metres) to the south of Sidbury; the street survives but the church of St Peter and the surrounding plot pattern have been destroyed. The north side of King Street was occupied by slightly curved plots created by the sub-division of the Sidbury plot tails. The plots on the south side of the street, a mixture of narrow

plots and much wider plots contained multiple cottages within courts and backed onto the city wall. If it is accepted that St Peter's was established by the mid-10th century (Baker 1980a) it is likely that one or both arms of the street were also in use by this time to give access to the church. This is given some support by the apparent relationship with the castle, whose outer ditch, represented by Severn Street (formerly Frog Lane), could be interpreted as cutting the line of King Street.

13. THE CITY WALL

A complete account of the documentary, architectural, and archaeological evidence available for the later medieval defences would be beyond the scope of this chapter, and much of this information has already been collected and synthesised by Beardsmore (1980); a chronological summary of the principal events and features may however be appropriate. Some uncertainty still remains over the pre-Conquest defences (see 2:4, below) and although the course of the later medieval city wall is known in some detail, archaeological investigation of it has been almost entirely restricted to the east side of the city; the question of undocumented predecessors following the same line elsewhere around the circuit remains open.

The three principal medieval gates (North, St Martin's, and Sidbury) were all recorded for the first time in the second half of the 12th century, and there is circumstantial evidence for an effective circuit by 1216. Murage grants suggest periods of intensive wall-building activity in 1224-1239, in 1252-1310, and 1364-1411

(Beardsmore 1980, 58-63). These periods of activity have yet to be correlated in detail with the known structural remains. Excavations in the Greyfriars area to the east of Friar Street located a 13th-century or later bank built on a cultivation soil, and cut by the foundations of the city wall of 14th-century or later date; results consistent with these also came from excavations further south, between the Greyfriars and Sidbury Gate (Carver 1980, 8). At only one site, a short distance south of St Martin's Gate, has a probably defensive feature thought to have been substantially earlier been found: this was the ditch, containing sherds of early medieval pottery, overlain by the city wall (Bennett 1980). Excavations in the Blackfriars area on the north side of the city located a bank and quarry-ditch of the Civil War period just within the wall-line (Mundy 1989, 34).

Beyond the city wall was a substantial ditch. This was sectioned at a point between the Greyfriars and St Martin's Gate, and found to have been flat-bottomed and over 30 feet (c.10 metres) wide, with no evidence of Civil War recuts, although the documentary evidence suggested that there should have been (Barker 1968-9, 102-3). Broad's map of 1768 shows the ditch generally free from encroachment, except for the north-east quarter between Foregate and St Martin's Gate. This area is known to have been subject to encroachments within the middle ages, particularly as the stretch between Foregate and Lowesmoor provided a valuable short-cut between those streets (Holt, forthcoming).

Although the definition of the city wall and its associated features as a plan-unit is perhaps questionable, it has been treated as one here, and the maps (figs. 7 and 8) outline the defences themselves, and

also non-defensive features associated with them, streets following the line of the defences and plots associated with them, and road diversions to gates, for example.

14. FOREGATE STREET AND THE TYTHING (Fig. 18)

This was the medieval city's most extensive suburb, a linear settlement along the north-south axial street line extending for a distance of about 600 metres from the north gate. The suburb can be subdivided into four main areas. The west side of the street is characterised by short rectilinear plots backing onto a rear access lane c.100-170 feet (c.30 to 50 metres) west of the street. Most longitudinal plot boundaries run straight through from the frontage to the rear lane, where secondary development has taken place on the plot tails. By 1741 the southernmost plots had almost doubled in depth, taking over land beyond the rear access lane and encroaching upon it.

The east side of the street is different, many of the plots ending at back fence lines c.115-150 feet (c.35-45 metres) from the frontage, with some longitudinal boundaries running through to Sansome Walk, presumably a

back-access lane or improved field path in origin, about 360 feet (c.110 metres) from the main frontage. Between Sansome Walk and the rear of the frontage plots were larger rectangular parcels of ground that can probably be interpreted as contemporary garden crofts. The larger plots available on the east side of the street have attracted institutional and larger commercial occupants (the 19th-century Shire Hall and Public Library for example), in contrast to the west side, where medium- and small-scale commercial premises still predominate. There is also some distinction to be made between the northern (the Tything) and the southern (Foregate Street) halves of the suburb. The former lay outside the city's jurisdiction until 1835, when it was annexed from the parish of Claines. The latter lay within the city from at least 1497 as part of the parish of St Nicholas, the boundary following Salt Lane, later Castle Street (VCH Worcs IV, 384). The plot pattern recorded in 1886 and still largely intact shows that the area outside the city was characterised by more intensively sub-divided plots, occupied by smaller buildings, than the area within. This is particularly obvious on the west side of the street, but to a lesser extent also applies to the east side.

A metrological survey was carried out, and established that where enough of the traditional plot pattern has survived for the plot-frontages to be measured, which in practice means the west side of the streets, there is some evidence of statute perch-based units, occurring in combinations that suggest the possibility – at least in some areas – of original plots with three perch frontages (see fig. 18). This lends tentative support to the very clear morphological evidence (the provision of back service-lanes) for the carefully-planned character of

this northern suburb.

At the far end of the suburb stood two medieval institutions: the hospital of St Oswald, of obscure origin; and a short distance beyond it, the nunnery of Whiteladies, founded in 1237-65.

15. SILVER STREET (Fig. 19)

Silver Street ran on a curving course northwards from St Martin's Gate to a right-angled junction with Lowesmoor, and before the demolition of the town wall was the principal entrance to the town from the Droitwich direction. The street itself survives as an insignificant loop off the City Walls Road; the tenement pattern also survives on the east side, in a highly metamorphosed state, but has been destroyed on the west side. The cartographic evidence shows on the west side a series of short plots with generally straight boundaries ending on Watercourse Alley, marking the site of the medieval city ditch. On the east side the plots were larger and of more irregular outline, with a slight southwards curve, probably accommodating the curve of the frontage to plot tails parallel to St Martin's Gate. On the 1886 Ordnance Survey, the majority of the plots were about 130-180 feet (c. 40-55 metres) deep, but there was no common back fence line to the whole series, blocks of two to four plots

sharing shorter common rear boundaries. Court developments within the tenements were a feature of the north end of the street and of the tenements on the west side. By 1886 the area to the rear of the eastern plots had largely been destroyed by the Worcester Vinegar Works, though several boundaries can be observed continuing eastwards into the industrialised areas beyond the boundaries at the rear of the housing. The explanation is provided by Young's map of 1789 which shows a number of garden crofts, behind the street plots, ending at a continuous north-south rear boundary running from the end of Lowesmoor to St Martin's Gate (the street), a line followed in part by the 19th-century St Martin's Street.

16. LOWESMOOR (Fig. 19)

This suburb, named from the badly-drained ground in the area, stretched for a distance of about 200 metres from the city defences. Young's map depicts it very clearly as a widened street, narrowing abruptly at the point where the rear boundary of the Silver Street garden crofts meets it, and although this feature is not as marked in the modern landscape or on the 19th-century maps (probably due to the widening of the road beyond the boundary), it offers a clue to the development of the settlement. The suburb clearly consisted of two separate components or sub-units, one each side of the street.

The north plot series.

These plots are shown by Young's map and by the 1886 Ordnance Survey as sub-divisions of fairly regular

appearance within a back fence line parallel to the street. This also carried the parish boundary between St Martin's and the extra-mural portion of St Nicholas'. A metrological survey undertaken in 1990 showed no signs of regularity in the frontage measurements. Young's 1779 map may provide a partial explanation in that the eastern half of the plot-series has 'carpet manufactory' written across it, suggesting that many plots were then in single ownership and consequently liable to re-division when the frontage was rebuilt in the 19th century. There may, of course, never have been any regularity in their layout in the first place, though the rectangular block of land containing the series could hint at a degree of planning.

The south plot series.

The cartographic evidence suggests that settlement on this side of the street was secondary to the establishment of the plots and garden crofts on Silver Street. The short Lowesmoor plots used one of the extended tenement-croft boundaries running at an angle to Lowesmoor as their back fence line, with the result that the plots to the west are much shorter than those to the east. The kink in the frontage about 190 feet (c.60 metres) from Silver Street, corresponding with one of the primary Lowesmoor plot boundaries, marks the former back fence line of the most northerly Silver Street plot, sub-divided into short north-facing plots.

While the development of the tenement pattern in this area appears fairly simple, the understanding of the development of the roads themselves is fraught with problems, and will be discussed further below (part 2:4, below).

17. SIDBURY (EXTRAMURAL) (Figs. 16 and 17)

Some possible aspects of the early development of this area have already been covered (intramural Sidbury, above). The suburb, as mapped in the 18th century, was of very limited extent, with plots facing Sidbury and London Road, its south-eastern extension, for a distance of about 350 metres from the site of the medieval gate. The plots were irregular and influenced by the steep gradients, and became smaller towards the top of Fort Royal Hill. Bath Road, leading south-west, was virtually undeveloped. The same extent of settlement is shown by Speed's map of 1610; how far this also reflects the medieval picture is unknown.

St Wulstan's Hospital, the Commandery, occupied a precinct of about two acres in the angle of Sidbury and Wyld's Lane. The medieval hospital buildings took the form of a double quadrangle set back behind shops on the frontage.

18. THE CAUSEWAY (Fig. 20)

As the name suggests, the core of this plan-unit, wholly within the floodplain on the west bank of the Severn, was the raised road approaching the medieval bridge. On Doharty's map it is labelled 'Causeway' along the western, undeveloped stretch, and 'Turkey' in the built-up area around the bridgehead. By the 1880s the whole street was known as Tybridge Street. The difference in level between the road surface and the surrounding land is clearly marked on some 18th-century views of the city from the west; today, the difference has disappeared as completely

as the plot pattern. The traditional character of the built environment here was inevitably doomed after the area was isolated by the removal of the river crossing further to the south: industrialisation was already a marked feature of the area by the 1880s, with tanneries on the north side of the road and a distillery to the south. While the tanning premises largely respected the existing plot boundaries, they were replaced in the 20th century by a power station which removed the last traces of the medieval landscape.

The plot-pattern, reconstructed from the 18th- and 19th-century sources, was irregular, and is likely to have been created by a piecemeal process of reclamation and enclosure within pre-existing boundaries belonging to the local drainage system of irregular parcels of land bounded by dykes. Whitehead (1979) drew attention to two 13th-century documents referring to the town ditch or the King's ditch in this area, a feature which seems to have left no trace in the cartographic record, though Whitehead suggested that it may have enclosed the bridgehead. While a defensive function for this feature is not improbable, given the parallels in Hereford and Bedford, for example (Haslam 1983), its complete invisibility is suspicious and may suggest that the references were to drainage-dykes not distinguishable from the map evidence alone from the others in this area. The 1651 map shows, in typically schematic form, a hexagonal defensive earthwork on the west bank of the river at the end of the bridge. Whether this has any relevance to the documented medieval feature is impossible to say: it too is otherwise unrecorded.

19. CRIPPLEGATE (Fig. 20)

Cripplegate was the name applied to the road from the medieval bridge where it climbed the edge of the gravel terrace on the west bank. The plan-unit is defined by the unusual plot pattern that was confined to the slope but which existed on both sides of the road: tenements with boundaries that exhibited a strong westwards curve. It is difficult to explain this phenomenon as a result of the same factors operating on both sides of the road. The plots on the south side would have been more or less parallel to the slope and presumably individually terraced into it; the plots on the north side were perpendicular to the slope. While it is probable that the curve of the plots on the south side of the road was a result of the accommodation of the change in direction of the frontage with the plot tails left parallel to the lane to the west, this explanation does not work for the plots to the north. The plots shown here on the 1886 Ordnance Survey appear to represent sub-divisions of three larger irregular plots (themselves sub-divisions of the triangular area between Cripplegate and Rosemary Lane) each given a lane- and a street frontage. Young's map introduces a complication. The central plots in the series, as shown by the 1886 Ordnance Survey, were laterally sub-divided about 45 metres (c.160 feet) back from the frontage, and the line of this sub-division was extended southwards to the frontage by the side boundary of one of the adjoining plots to the south. Young's map shows this line continuing further to the north-east to form what appears to be a semi-circular enclosure around the plots. Whether Young's boundaries in this area were rather schematically drawn, as appears to be the case, or whether this enclosure-like

boundary had some basis in reality, is now impossible to say. It is just, perhaps, conceivable that such a feature might be relevant to the documented ditch described earlier.

20. ST JOHN'S NORTH (Fig. 21)

The plot series to the west of Rosemary Lane was also strikingly irregular, with long, thin westwards-curving tenements, intensively and in some cases eccentrically sub-divided. The series occupies (it survives in part) the top of the slope, and some of the frontage buildings are somewhat above the level of the street which has cut into the gradient. The prevailing westward curve of the plot tails is undoubtedly a reflection of the formative course of Rosemary Lane. Its very narrow width in the built up area belies its significance as part of an early north-south routeway following the edge of the gravel terrace along the west side of the river valley; it appears in an Anglo-Saxon charter as the *folc hearpath* (Hooke 1980, 46). In view of this, its erratic course (followed by the parish and city boundary between St Clement's and St John's) through the built-up area both north and south of Cripplegate is all the more surprising. A remote possibility, but one which cannot be ruled out, is that its course was determined by or diverted around a large earthwork (c. 350 metres north to south) placed across the approach road to the river crossing at the top of the slope. There is no supporting evidence for this whatsoever, and no evidence of a west or north side. If

such a feature existed, it would have covered an area about as large as the hypothetical Roman defences on the opposite side of the river, and anything other than a prehistoric origin would, perhaps, be highly unlikely.

21. ST JOHN'S SOUTH (Fig. 21)

This plan-unit comprises two plot series to the south of the road: a long eastern series ending against a straight back fence line running north-east - south-west; and a western series of plots representing sub-divisions of a triangular block in the angle of St John's and the east-west lane known as Powell's Row. The plots of the long eastern series are of fairly regular appearance, but no metrological work has been done to determine whether there was any degree of overall planning in their layout.

The 17th-century maps treat the whole of the western suburb very schematically and are of little use in this area. In the 18th century, when cartographic evidence becomes available, the north side of St John's, to the south of the church, was not built up, apart from a single large house. There is no evidence available to indicate whether this also reflects the extent of medieval settlement.

The basic framework of roads through the township was established in or by the late Saxon period, most of the approach roads beyond the township being recorded in charters. Bromyard Road leading west from the north side of the churchyard appears as a *strete*, and Bransford road, also leading west, with the long St John's Green on its

south side, appears as *suth strete* (Hooke 1980, 43-6). Malvern Road, the southern continuation of St John's towards Lower Wick may be later, a replacement for the *folc hearpath* which rejoined it to the south as Bromwich Lane, now widened and once again the main approach to the crossing from the south.

2: 4 PLAN-ANALYSIS DISCUSSION

The purpose of this section is not yet to attempt a reconstruction of the development of the medieval city, but to explore briefly some of the topographical problems raised by the plan-analysis and some of the relationships between the individual areas discussed there.

1. The course of the *burh* defences (Figs. 10 and 22)

The discovery by excavation of a rampart, limestone rubble wall, and the lip of a large ditch lying to the south of and parallel to Broad Street, and their probable Anglo-Saxon date, was reported in the discussion of that area (plan-unit 3, above). It was also proposed there that, as has been suggested in the past by Mundy, Currie, Slater and others, a gate lay in the Merryvale area adjacent to All Saints' church, with Newport and Dolday issuing from it and giving access to the river-crossing. While the dangers of circular argument at this point are appreciated, the course of the north wall as defined is compatible with the identification of the larger street-block around St Andrew's church with the site of the bishop's *haga*, within the north wall, described in the lease of 904 (see Birdport plan-unit, above, and fig.12). If the latter document is taken literally, there was no riverside wall at that period- the *burh* was an enclosure open to the river. Such an arrangement appears almost universal in reconstructions of English and Anglo-Danish *burhs* (see fig. 25, and Haslam 1985 for towns as diverse as Thetford, Barnstaple, Cambridge and Huntingdon), implying perhaps a reliance on bridges as riverine

defences, though this picture may change with further excavation.

The excavated defences south of Broad Street, and the dramatic narrowing in the line of the north-south axial street south of the Cross, leaves little room for doubt that the north gate lay at the end of the High Street, between Broad Street and Powick Lane/Bank Street. The course of the defences east of the High Street is inevitably less certain. It has been proposed that the long back fence line to the short plots on the east side of the Shambles, with a parish boundary running parallel to it, is the most likely location of the east wall, a contention supported by the divergence of New Street away from the general north-south alignment of the street-system within the city. The junction with the Roman defences is perhaps the most intractable problem. The proposed eastern defences could have continued south in a straight line to join Barker's Lich Street ditch 'b' at a tangent, or could have turned inwards, under the back fence line of the Pump Street plots towards the former gate by St Helen's church. No such features were however recorded by Barker during his observation of the Lich Street Development (Barker 1968-9, 44-62), and his ditch 'd' (see fig.13) does not seem related to the suggested circuit.

The layout of the defences in the area of St Swithin's church is also uncertain. The curve of St Swithin's Street itself is an obviously attractive candidate for the line of the ditch, but observation of a commercial excavation to the south of the street recorded a 10 feet-deep (c.3 metre) deposit of dark soil over a Roman well, a depth of deposit compatible with what is known of the general below-ground composition of this part of the city (Russell 1963, 225; Carver 1980 cat.57/2) and not suggestive of the

presence of a ditch (at least not a large one) running parallel to the street under or just behind its southern frontage.

The plan-analysis of the High Street area suggested the presence on the east side of four large, regular, primary plots (see fig. 11). The metrological evidence cannot be taken to be conclusive as it is derived solely from measurements from maps (see Slater 1981), but it suggested that the northern boundary to the northern plot is marked by the north frontage of Church Street - in line with the south wall of St Swithin's. In other words Church Street lies within this northernmost property. This line (the Church Street north frontage) can however be seen to continue the line of the south side of Mealcheapen westwards towards the High Street, linking it with the end of Powick Lane/Bank Street on the other side. It appears that the northernmost of the High Street primary plots was originally laid out with one side on the continuation of Mealcheapen, and that St Swithin's church later blocked this route, Church Street presumably being created as a replacement (see figs. 22 and 24). It has already been suggested that the evidence is against the defences having lain parallel and to the south of St Swithin's Street, and this argument is reinforced if one accepts the possible contemporaneity of the burh defences and the planned High Street area: a defence-line south of St Swithin's Street would not leave room for the northernmost rectangular primary plot. The suggested solution is that the defences continued east of the High Street in a straight line from their located position on the south side of Broad Street, turning a right-angle corner to run southwards parallel with the Shambles, via a gate across Mealcheapen. The roads either side of St Swithin's church can be suggested

to be secondary creations, St Swithin's Street post-dating the levelling of the defences in this area, running diagonally across their former line to provide a short-cut to the end of Broad Street- perhaps contemporary with the latter's proposed redevelopment.

Finally, if these arguments appear occasionally tenuous, it can be shown that the circuit as suggested receives further support both from the parochial topography (2:5), and from the assessment of the perimeter in the Burghal Hideage (2:6).

11. The development of the cathedral area

There are some grounds for believing that the southern section of the High Street was formerly longer, extending into the area occupied since at least the 1080s by the cathedral church. This has been proposed on the basis of the apparent continuation of the back fence line separating the plots facing the High Street from those facing Friar Street, southwards beyond Lich Street where, within the close, it continues as what appears to be the back boundary to the plots facing eastwards onto Sidbury with development on their tails facing inwards into the cemetery (fig.5). The evidence is slender, though the suggestion that this encroachment took place in Worcester has been made before (Bassett forthcoming, a) and the closure of major roads by ecclesiastical precincts has frequently been suggested elsewhere: at, for example, Hereford, St Paul's Cathedral, and Bury St Edmunds. The history of Worcester Cathedral suggests two possible periods when such an event might have taken place. First, the construction of the new cathedral church, St Mary's, adjacent to the earlier church of St Peter, on or before

the arrival of St Oswald in 962. If, as Carver has suggested (1980, 6-7), the two churches were arranged end-to-end the need for more space would be readily apparent. It is possible that St Peter's originally occupied a much smaller riverside precinct, bounded by the High Street to the east but including the cemetery represented by the burials under the later refectory. St Mary's could have been added to the east on land acquired by the closure of the road and the clearance of tenements beyond it. Alternatively, such a development could have been part of Wulstan's rebuilding campaign of the 1080s (see the Cathedral Close plan-unit, above). If the High Street did indeed continue into the later medieval close, its route further south is completely obscure. It is unfortunate that the Norman motte-and-bailey castle effectively disguises the pre-11th-century topography of the southern tip of the peninsula, making any assessment of the possible relationship between the High Street and either Edgar Street or the Roman road from Gloucester (whose course within a mile of the city is unknown) completely impossible.

iii. The north-east quarter.

The problems of the topography of this area were first noted by Barker in 1968-9: 'The chief problem here is the line of the roads leading into the town from the north-east. If Trinity Gate was only a postern, the main road from this direction must have entered the city by St Martin's Gate. The Roman road from Droitwich does exactly this, but for some reason its line was diverted northward and then curved south again to enter St Martin's Gate.' Twenty years later, these problems remain unsolved.

Barker's hypothesis that the Roman road from Droitwich maintained its course from beyond Lowesmoor, through the site of St Martin's Gate to the postulated gate in the earthwork defences near St Helen's, remains untested. The only archaeological work to have had any bearing at all on the area was the identification of an isolated length of possible defensive ditch, of possible early medieval date, a short distance to the south of St Martin's Gate (Bennett 1980) though its interpretation is far from clear.

The plan-analysis can contribute some observations, though the overall sequence remains opaque. The identification of the High Street North plan-unit as a significant piece of town planning associated with the construction of the *burh* provides a context for the disappearance of the Droitwich road as it approached the Roman defences from the north-east (see fig.24). This development may also have led to the appearance of the New Street-Friar Street route, taking traffic from the now truncated Roman road at its junction with St Martin's Gate, southward around the new defences. The situation of St Martin's Gate (the gate) is interesting. It is difficult to avoid the conclusion implicit in Barker's account that it must have been sited on the functioning Roman road from Droitwich, presumably chosen as the most important of the roads approaching the north-east quarter. Clapgate represents the short northward diversion of St Martin's Gate - a secondary route - to it, and Silver Street a longer southward diversion to it off Lowesmoor. Whether the Roman road was still functioning in the 12th century, or whether the gate site was determined by a pre-existing road pattern associated with an earlier gate on the site (through the probable defensive feature

identified by Bennett), is unknown.

The development of the north-east quarter within the city walls is similarly obscure, though some comparative data may be relevant to the origins of the Cornmarket. It is extremely difficult to envisage the likely form of the Cornmarket prior to the construction of defences on the line of the city wall: both it and Queen Street leading northwards from its apex are most easily interpreted as developments that followed the construction of the wall, or a predecessor on the same line. Given the possibility of the earlier development of the built-up area along Mealcheapen, the Cornmarket is most likely to have been created by the amalgamation and clearance of existing plots, perhaps already truncated by the new defences. Such a development has a parallel in Shrewsbury, where the shape of the new corn market created in c.1261 suggests that it too was created by the clearance of (four) plots, in a previously-planned urban development (see fig.29). The latter is likely to have been under-developed at that date due to the need for extensive reclamation. If this hypothesis is correct it suggests that the medieval Cornmarket was the functional successor to Anglo-Saxon Mealcheapen, an extramural street-market that may well have been much too small for the needs of the late 12th- or 13th-century economy.

2:5 PAROCHIAL TOPOGRAPHY (Fig. 23)

ST HELEN'S.

St Helen's church, now the County Record Office, is a relatively (for Worcester) well-preserved medieval building consisting of a nave and chancel, their full length flanked by aisles, and a west tower. Most of the church is Perpendicular, though the north chancel aisle was built in 1288 to house a chantry and much of the south wall and the tower are 19th-century. During the rebuilding of the south wall in the 1870s Norman features were uncovered and recorded. No recording work or excavation took place when the church was converted to house the Record Office (Buchanan-Dunlop 1939; Baker 1980b, 115-16).

St Helen's was first recorded directly as a result of the 1092 synod called to settle a dispute between the priests of St Helen's and St Alban's. The synod arrived at the conclusion that 'the church of St Helen, in fact, had been a vicarage of this Mother Church from the days of King Ethelred, and Archbishop Theodore, who founded the See at that time and placed Bosel there as first bishop' (Atkins 1940, II, 204-7). Recent research has suggested that the witnesses at the synod may have underestimated the antiquity of St Helen's: there is some evidence for it pre-dating the foundation of the see in 680, and the possibility of a Roman origin has been seriously considered (Baker 1980a; Bassett forthcoming, a).

The church stands on the western side of the High Street, just within the course of the Roman earthwork defences identified by Barker in the mid 1960s (Barker 1968-9): the earliest church must have lain hard against

or actually been cut into the rampart (fig.13). Barker's work strongly suggested the presence of a gate through the defences at this point, and St Helen's was clearly sited in relation to it. The present eastern end of the church lies directly on the west frontage of the High Street; it is not certain that this section of the High Street is of Roman origin (it could replace an earlier road heading for the gate on a different alignment) but the probable early date of the church strengthens the possibility. The present churchyard is a small walled area beyond the west end. Although it is likely that the use (or resumption of use) of this area for burials is late in date, given the cathedral's monopoly on burial within the city, it has been suggested (2:3, above) that the church formerly lay in a larger rectangular open area, the southern part of which disappeared as Fish Street encroached northwards into it. The western boundary of the churchyard is also the back wall of the three High Street plots adjoining the church to the north. It is possible that these plots all represent encroachments on the early curtilage around the church (covering about half an acre), which was laid out, like the surrounding area, following the levelling of the Roman defences.

The church's extramural rights and possessions, their origins, and their implications, have been extensively discussed elsewhere (Baker 1980a, Bassett forthcoming), but the geography of the intramural parish has received less attention. The medieval and later parish covered an area of about 10 acres, centred around the southern two-thirds of the High Street, covering the eastern part of plan-unit 9 and the whole of plan-unit 10 (together representing the suggested two-stage reclamation of the former Roman northern defences) and the southern half of

the High Street North plan-unit, a separate planned urban extension beyond the former defences (see 2:3, above).

As recorded in the 18th century (fig.23), the parish of St Helen was irregular in plan. The southern boundary with the cathedral close followed Lich Street and Palace Yard. The western boundary with St Alban's followed one of the primary north-south tenement boundaries of plan-unit 9 between Palace Yard and Fish Street, and continued northwards from the latter on a line not marked as a property boundary in the 18th or 19th centuries. The northward course of the boundary was then, according to Young's map of 1779, interrupted by a westward-projecting salient of St Andrew's parish, discussed below. To the north of Copenhagen Street, the boundary passed diagonally across the rear of the Guildhall plot, on a course that appears to reflect standing buildings lining the rear in 1779. It then turned westwards to include a wedge-shaped block of land facing Bull Entry that probably represents the alienation of the rear of a number of the Copenhagen Street plots, following the transition of the Bull Entry line from a property boundary defining the rear of the plots into a thoroughfare (2:3, above). The northern boundary of the parish with St Swithin's followed the Bull Entry line before stepping slightly northwards to follow property boundaries of what are interpreted as secondary sub-divisions within the larger primary plots on both sides of the High Street (plan-unit 6). The eastern boundary of the parish followed the Shambles before turning eastwards to incorporate the junction of Pump Street and Friar Street. The latter was followed southwards to the cathedral close, excepting the inclusion of the Greyfriars precinct on the east side of the street.

The western boundary with St Alban's parish appears to

represent a straightforward partition of that part of the planned area represented by plan-unit 9 between the two churches, on a line roughly mid-way between the High Street and Palace Row-Little Fish Street. To the east, St Helen's was probably coextensive with the adjoining area (plan-unit 10) interpreted as planned urban growth over the flattened defences. The inclusion of the Greyfriars precinct within the parish is most likely to have been the product of changes immediately after the friary's dissolution.

The behaviour of the boundary with St Andrew's parish was the most complex: it seems to have reflected changes in the property boundaries between the plots facing Copenhagen Street (plan-unit 9), those facing the High Street (plan-unit 6), and Birdport to the west (plan-unit 7). It is probable that the projecting salient of St Andrew's at the junction of Copenhagen Street with the High Street was a later medieval feature (discussed further with St Andrew's parish, below). However, in general, it may be said that the northern half of St Helen's parish respected the western and eastern limits of the proposed planned area represented by plan-unit 6.

The boundary between St Helen's and St Swithin's, as recorded, followed secondary elements of the plot pattern. It is certainly possible that sub-division of the suggested primary plots in this area could have taken place by the time the parish boundaries were established: the demonstrably early sub-division (by 1066) of the large primary plots in Winchester could provide a parallel to support this argument (Biddle 1976, 341). It is perhaps equally likely that there has been a minor shift in the parish boundary, subsequent to the sub-division of the primary plots, from an original line following the

precursor of Bull Entry, across the High Street to the primary boundary dividing the two southern primary plots from the two northern plots (see fig.11). Just as that part of the proposed Copenhagen Street planned area that had lain within the Roman defences was divided in two between St Alban's and St Helen's, this planned area was divided between St Swithin's and St Helen's.

ST ALBAN'S AND ST MARGARET'S.

St Alban's church, due no doubt to the poverty of its parish over much of its recorded history (Holt, forthcoming) has survived relatively intact in its 12th-century state. It is a small single-aisled building of very irregular plan; the nave and chancel not separated architecturally. The nave arcade suggests that the north aisle was a later 12th-century addition to the structure; the prevalence of green Highley sandstone at the west end, in contrast to the red sandstone that is most frequently used in the rest of the building, suggests that the nave has also been extended. A number of writers have suggested that the church contains pre-Conquest features. During restoration in 1919 removal of rendering from the south wall revealed a narrow blocked door and window - both still visible - with flat monolithic lintels, and 'over the doorway several layers of the early tilework commonly called Roman bricks' (HWRO BA3762/32 899:31). The window and door lintels are probably Cotswold limestone, and may well be re-used Roman masonry, though that over the window does not pass through the thickness of the wall; these 'early' features are as likely to be of 11th- or 12th-century date as earlier. Later structural modifications to

the church, before restoration in the 19th century, appear to have been restricted to 15th-century windows and a piscina (Buchanan-Dunlop 1950, 1-2).

St Alban's was, like St Helen's, first reliably recorded as a result of the proceedings of the synod of 1092, though the Chronicle of Evesham Abbey relates that it, and St Margaret's were chapels given to the abbey in 721 by Aethelbald of Mercia (Buchanan-Dunlop 1950).

The siting of St Alban's church is to some extent similar to that of St Helen's. Gelling's excavations on the west side of Little Fish Street (Gelling 1958) located the ditch belonging to the defences explored later to the east by Barker, about 6 metres (c.20 feet) north of the church (fig.13). Like St Helen's, the earliest church may have been cut into the back of the rampart. Unlike St Helen's, this church does not fit easily into the surrounding street-pattern. Its orientation may well reflect the line of the defences: it was some degrees off the alignment of Fish Street to its south, the angle thus formed was used as a tiny triangular churchyard.

The location of the church was clearly determined by the early defences, but whether by another gate as well is not entirely clear. Gelling's excavations found a 'brushwood causeway' across the ditch about 10 metres (c.33 feet) west of Little Fish Street, held in place by stakes driven into the primary silts. This feature was secondary to the construction of the ditch, and though it was associated with Roman pottery, could have been either Roman or post-Roman in date. The west end of St Alban's projected well to the west of Little Fish Street, and it is possible that the church site was determined by a post-Roman breach in the defences represented by the causeway. However, if Mundy's contention that Anglo-Saxon and medieval Birdport

was the successor to a north-south Roman road following the terrace edge (2:3, Birdport plan-unit, above) is correct, there should then have been a primary gate through the defences in this area, either under (i.e. blocked by) the church, or immediately to its east.

Documentary evidence locates the former church of St Margaret within St Alban's parish, on or near the road known from the post-medieval period as Warmstry Slip (Holt, forthcoming). The precise course of the parish boundary between St Alban's and St Andrew's in this area is not entirely certain, Young's map of 1779 showing it following the road, the Ordnance Survey, to the north. The Roman ditch, which determined the line of the boundary seems likely from Gelling's excavations to have actually coincided with the curved western section of Warmstry Slip. The site of St Margaret's therefore almost certainly lay within the square street block on the south side of the road, probably within the northernmost of the plots - the Warmstry House tenement, later the porcelain manufactory.

The later medieval and post-medieval parish of St Alban was a roughly rectangular area covering two acres (fig.23), between St Andrew's to the north - beyond the former Roman defences - and the cathedral close to the south. The documentary evidence indicates that this area included the former parish belonging to St Margaret's, almost certainly represented by the square riverside street block to the west of Palace Row. In their earlier medieval form, St Alban's and St Margaret's can therefore be reconstructed as tiny, wholly intramural, areas of about one acre each. St Alban's parish lay entirely within the suggested planned area represented by plan-unit 9; the riverside street block that included St Margaret's and was

probably coextensive with its parish shows no evidence of having been part of this; it does however have strong affinities with the riverside enclosures of the Birdport area, and has therefore been interpreted as an outlier of that plan-unit (see 2:3, above).

ST ANDREW'S

The medieval church, first recorded in c.1066 (Buchanan-Dunlop 1937, 18; VCH Worcs.IV, 411), is now demolished, apart from the west tower, but consisted of a nave flanked by aisles, and a chancel flanked by side chapels roofed continuously with the aisles. The nave and tower were both of 15th-century date, the chancel was 12th century, heavily restored in the 19th century (Buchanan-Dunlop 1937, 18-20; Baker 1980b, 117). The church occupied an imposing site right on the edge of the gravel terrace, overlooking Copenhagen Street in the defile to the south, and the Quay at the bottom of the slope to the west. The church's environment has already been described (2:3, above): a small squarish street-block of about one acre, not much larger than the churchyard itself, that may represent a sub-division of the 904 *haga*, of which the church appears to have been a part (fig.12). This landscape of small squarish street-blocks is characteristic of the core-area of plan-unit 7, an area of probably unplanned settlement around the quay and the riverside. The parish of St Andrew's corresponded roughly in extent with the plan-unit, though with some notable local variations.

The first was the inclusion within the parish of a large part of the planned area centred on Copenhagen Street

and Fish Street (plan-unit 9), in fact nearly all of that area that lay outside the line of the Roman defences, which, it has been noted, determined the line of the boundary between this parish and those to the south. Secondly, there was the eastwards-projecting salient incorporating the south frontage of Copenhagen Street as far as its junction with the High Street. This salient appears to have been the result of a desire to include within the parish a tenement known as the 'Earl's Post' (Green 1764 and 1796) This tenement was in the ownership of the Dean and Chapter at the end of the middle ages (Holt, forthcoming), and the circumstances of its association with the parish of St Andrew are not clear; within the property are the remains of undercrofts of a 15th-century terrace or row building (5). Further north along the east side of the parish, immediately north of Bull Entry, the line taken by the parish boundary investigated archaeologically (Deansway site 2). The boundary between St Andrew's and St Swithin's was not represented in the excavated sequence until the late 14th or 15th centuries, when its course first became apparent as the edge of a zone of pit digging. It is unlikely that this line was in use as a boundary before that date as the excavation revealed a sequence of deposits laid without interruption across the area, representing activities associated successively with the plots on Birdport to the west and the High Street to the east, the ground at the rear of the two systems swopped, piecemeal, between them (Mundy 1989 and pers. comm.). This fluidity at the junction of the two systems clearly led to the staggered course of the lane (Chapel Walk-Pye Corner) that separated them from the later 18th century onwards, which has been taken as the boundary between the two plan-units (6 and 7;

see 2:3). The parish boundary recorded in the 18th century had clearly been subject to the same local fluidity, responding to changes in the plot-pattern, and it seems highly probable that when it was first defined it followed the back fence line separating the High Street plots from settlement associated with Birdport.

The boundary between St Andrew's and All Saints' is generally explicable only in terms of the relation of the respective churches to the Anglo-Saxon defences identified by excavation to the south of Broad Street (Deansway site 4; see 2:3, Broad Street, above), and will be discussed below with All Saints'.

To conclude, the boundaries of this parish appear to be particularly informative about the development of the Anglo-Saxon and medieval town north of the cathedral. If it can be assumed that the boundaries of St Andrew's were initially defined simultaneously and thereafter subject to a limited and to some extent predictable degree of mobility, some aspects of a relative chronology can be discerned in the secular geography. When the boundaries were first defined, elements of the Roman landscape survived- the earthwork defences around the cathedral- and these were used to define the southern limit of the parish. The eastern limit was set by the extant planned High Street North area (plan-unit 6). The replacement of the Roman defences by plan-unit 9 had yet to take place and similarly, it will be argued, the Anglo-Saxon defences had yet to be replaced by the plots of plan-unit 3 (Broad Street): the northern limit of the parish was defined by either the defences or the linear Roman features that preceded them. In other words, plan-unit 6 was established before plan-unit 9 (Copenhagen Street) and plan-unit 3 (Broad Street).

ALL SAINTS'

This church was first recorded in 1149 (Holt, forthcoming). Most of the fabric of the present building dates from its rebuilding between 1738 and 1742 by Thomas White, a pupil of Wren; only the west tower and the south wall survive of the medieval building. The base of the tower may be earlier than its 15th-century superstructure, and from the tower projects part of an earlier north wall to the nave containing part of a blocked round-headed arch. J.T. Spackman is said to have 'found in the tower and (south) wall many traces of Norman work' (Buchanan-Dunlop 1936). Part of a 'Saxon' wall (almost certainly Norman) claimed to have been part of a defensive circuit was observed in the mid- 19th century and during restoration in 1913 but has not been seen since (Buchanan-Dunlop 1936, 15; Sheppard 1865-6, 593).

The church is orientated slightly north-east - south-west in conformity with the edge of the gravel terrace on which it is sited, the present building 'built with the east end pointing slightly south of the old foundations' (Buchanan-Dunlop 1936, 17). The church overlooks the lower ground to the north containing All Hallows' Square, the medieval cattle market, and the site of All Hallows Well. Until redevelopment in the 1960s All Saints' stood within a semi-circular street-block defined on the south side by Grope Lane, and to the north by housing encroaching onto the open space of the square.

The excavation of Deansway site 4, 100 metres to the east, has transformed our understanding of the church's early context. It is now clear that All Saints' was situated close to or actually on the Anglo-Saxon defences (figs. 10 and 12). Given the strong arguments advanced for

the early origin of Birdport and the approach-roads (Newport and Dolday) extending from it northwards to the river-crossing, there is little doubt that All Saints' was, in origin, a gate-church. This explains the parish's geography. In later medieval terms it was wholly intramural - the largest intramural parish; in late Saxon terms it appears to have been almost entirely extramural, lying outside the gate with which the church was associated and incorporating the roads that led from it. The only part of the parish which lay within the Anglo-Saxon wall was a small area enclosing the church itself.

The parish was a roughly rectangular area of about 15 acres in the north-west corner of the city (fig.23), covering the Newport and Dolday area (plan-unit 8) and the western half of Broad Street (plan-unit 3). The southern boundary with St Andrew's followed a north-easterly course from the river, excluded the large plot immediately south-west of the church (this is perhaps a post-medieval diversion) and then followed Grope Lane. The latter may mark the junction of the 904 haga represented by the larger street-block around St Andrew's (see 2:3, above and fig.12) with either the defences or a curtilage associated with All Saints' that colonised them. Further east, the parish boundary followed the backs of the Merryvale plots before adopting a straight eastward course between Powick Lane and Broad Street. Excavation across its line here (Deansway site 4: Mundy 1989) showed that the parish boundary lay c.3 metres (c.10 feet) to the south of, and parallel to, an east-west Roman road which was later buried beneath the Anglo-Saxon rampart. The line of the parish boundary may, in origin, have been associated with either of these features, though it was not physically represented as a boundary or as a

definable break in activities until the late medieval period (Mundy 1989, 21-3) when it was marked by the differential robbing of a stone building. This may represent the beginning of the lateral sub-division of some of the Broad Street plots to give derivative plots facing Powick Lane, the parish boundary being rationalised on this new line: as recorded in the 18th and 19th centuries, it followed the boundary separating the north- and south-facing plots. The eastern parish boundary with St Nicholas' followed plot boundaries northwards to the city wall: why it took this particular line is not at all clear, as the line is a short distance to the west of the suburban development that seems to be specifically associated with St Nicholas' parish and church (plan-units 2 and 14).

A greater problem is posed by the north boundary following the city wall. While archaeological evidence is not available for this part of the circuit, there is nothing to suggest that it pre-dates c.1200. The circuit here follows a natural break in slope and canalises a stream rising immediately west of Foregate (see 2:1, above), and it is at least possible that the parish boundary was determined by these natural features. However, it seems rather more likely that the boundaries were reorganised when the wall was built, as appears to have happened on the east side of the city. Beyond the wall lay the extramural part of the parish of St Nicholas, certainly a post-Conquest creation (see below). The possibility must be considered that All Saints' parish was originally more extensive and lost ground to St Nicholas in a post-Conquest, perhaps post-city wall, reorganisation.

ST CLEMENT'S

The association observable between the river crossing and All Saints' church is even more marked with St Clement's. This church lay at the riverside end of Dolday, by the North Quay, a short distance from the medieval bridge (see plan-analysis for further discussion of the siting of the church). The church itself, demolished in 1823 and replaced by a successor on the other side of the river, was a mainly Norman building consisting of a nave, chancel, and north aisle. A stone tower that had been bonded into the city wall was demolished during the Civil War and later replaced in wood: the 1651 map suggests that it was a small 14th- or 15th-century structure (VCH Worcs. IV, 409-11; Baker 1980b, 120-1).

St Clement's parish was divided into three parts (fig. 3). Within the city walls it was restricted to the area of the church itself and its (presumably late- or post-medieval) burial ground adjoining to the east. Beyond the wall, the parish consisted of an irregular area of meadowland of about 11 acres bounded by the city boundary to the north and the watercourse draining the city ditch to the east. However, the bulk of the parish lay across the river, including the Causeway suburb, and extending westwards to the north-south Rosemary Lane which followed the edge of the gravel terrace and also marked the city boundary. The southern city and parish boundary here was mapped by Doharty and Young as a straight line extending across the fields to Rosemary Lane, though it is clear from the 1497 perambulation that the medieval boundary followed field boundaries between distinct landmarks (Green 1796 II, lxxi). The parish also extended north of the Causeway and incorporated a long northward-projecting

spit of the floodplain extending beyond the return of the city boundary.

The dedication to St Clement can be paralleled in transpontine and waterfront contexts elsewhere, Cambridge, Norwich, Rochester, and York (Clementhorpe), for example (Haslam 1985; Dobson and Donaghey 1984). The occurrence of the dedication in Scandinavia in the 12th century (Oslo and Arhus, for example: Morris 1989, 175-6), the case of St Clement Danes in London, the distribution of the bulk of the English dedications in the Danelaw (Arnold Forster 1899, 284-287; Dobson and Donaghey 1984, 7), and the instances (above) where churches so dedicated are found in marginal locations in relation to individual towns, have been used to suggest that St Clement dedications may reflect the interest either of individuals or communities of Scandinavian (Danish) origin, or at least of people with trading interests in that part of the world. Doubtless these associations, and Worcester's location on the Severn, lie behind Haslam's suggestion (1985, pp.27-8) that the Worcester St Clement's may have served a Hiberno-Norse population on the west bank, a suggestion for which there is absolutely no archaeological or numismatic evidence. However, recent research by Dr R.A. Holt (forthcoming) suggests the possibility of a Scandinavian association with an individual rather than a community: the possibility of St Clement's foundation by one Spiritus or Spirtes, a cleric exiled, and his property confiscated, in the 1060s, for having too close connections with the sons of Cnut.

Both the position of St Clement's in relation to the church and parish of All Saints', and the likely 10th-12th century date-range of the dedication, suggest that the church may well have been a secondary development within

All Saints' parish, the east bank parish alienated from All Saints'.

ST SWITHIN'S

This church is, in its present form, substantially 18th-century, having been rebuilt in the 1730s by the Woodwards of Chipping Camden. They retained and refaced the medieval west tower, and were unable to rebuild the medieval north wall which then supported a number of buildings. The rebuilding was too early in date for illustrative evidence of any value to record the church's previous medieval appearance; the 1651 map shows it schematically but puts the tower at the wrong end (Baker 1980b, 117-118).

St Swithin's was first recorded in 1126 when Eudo the Dean granted the benefice to the monks; the register of Worcester Priory also records that the church was built on his own land (Hale 1865, 4); it is not, however, clear whether this is meant to imply that he built it himself.

Of all the Worcester parish churches St Swithin's is the most characteristically 'urban' in its setting. It occupies the eastern end of the small triangle of land defined by the Cross, St Swithin's Street and Church Street, and is still hemmed in by dense building. There is no churchyard, but a diagonal property boundary passing across the street-block from north-east to south-west may indicate the extent of a former small triangular curtilage, no doubt built up within the medieval period.

While there is no archaeological evidence from the immediate area of the church with which to reconstruct a detailed picture of its changing surroundings, the excavated evidence from Deansway Site 4, and other

topographical evidence suggest that St Swithin's was founded just within the Anglo-Saxon defences - or their former course. The church lies just outside the north boundary of the northernmost of the four large primary plots on the east side of the High Street, a boundary represented by the north frontage of Church Street (based on the metrological evidence; see 2:4, above, and fig. 11). The evidence is perhaps marginally in favour of the church being founded after the *burh* defences were abandoned, but this is far from certain. There is, however, little doubt that the layout of the parish of St Swithin was closely related to the layout of the *burh* and its subsequent fate. It comprised (with a minor deviation of the southern boundary to exclude two small derivative plots) the northern half of the planned High Street area (plan-unit 6) and the western half of Mealcheapen and St Swithin's street. The west and east boundaries of the parish were extensions of those already discussed between St Helen's and St Andrew's to the west and St Martin's to the east. The southward-projecting salient on the east side of the Shambles presumably represents the acquisition by the church of a block of property there. The northern boundary followed the back of the northern Mealcheapen plots or the boundaries with the secondary plots developed on their tails (facing northwards onto the Trinity); to the west of the High Street the boundary followed the *burh* ditch for a short distance.

In conclusion, St Swithin's parish occupied the north-east quarter of the area of the *burh*, and the planned High Street area (plan-unit 6) appears to have been divided in two equally between it and St Helen's. The dating of the church is not completely certain. It could have been a new 12th-century foundation, its parish alienated from a

formerly-larger St Helen's, and its boundaries corresponding closely to the layout of the *burh* only because that part of St Helen's did. It may however have been a rather older foundation, built within the *burh* while its defences were still in use, or at least while they remained as obstacles and property boundaries.

ST MARTIN'S

Like most of its neighbours, this church was rebuilt in the 18th century (1768-1772, by Anthony Keck) and its medieval form is known only superficially. It was illustrated by Valentine Green in 1764 as an aisled building roofed with separate gables over each aisle bay, and with a west tower and two-storey wooden porch. The church was first recorded by name in Hemming's cartulary, drawn up at the end of the 11th century (Hearne 1723) to record urban property held by the monks. It is also probable that St Martin's is the church mentioned in a charter of 1003-23 just beyond the boundary of the manor of Perry, which lay within the later parish (Sawyer 1968, no. 1385; Clarke and Dyer 1968-9, 30).

St Martin's, like All Saints' to the west appears to be associated with a market, the Cornmarket, lying outside the Anglo-Saxon *burh*, though the existence of the market cannot actually be demonstrated until later in the medieval period, and there is a substantial possibility that the Cornmarket was a new creation of the 12th or even 13th century (see 2:4, above). If this is the case, St Martin's situation would have more in common with that of St Peter the Great, lying amongst the plots set back from a main road. As the plan-analysis emphasised this is

perhaps the least understood part of the town and the layout of the area before the construction of the town wall is not at all clear.

In relation to the suggested course of the *burh* defences, St Martin's, an extramural church, had a wholly extramural parish. A small part of it - New Street, the Cornmarket and the eastern half of Mealcheapen - was enclosed by the later medieval walls. The large extramural area (fig.3) covered an area of undulating clayland stretching for about a mile and a half eastwards from the city, but included the Lowesmoor-Silver Street suburb. The parish was laid out as a roughly triangular area, its apex at the church, its north side following minor streams and, in part, the Tolladine Road which appears as a *port straete* in an Anglo-Saxon charter (Sawyer 1968, no.1327; Hooke 1980, 45). The southern boundary with St Peter's mostly ran along or closely parallel to the road running eastwards from Sidbury recorded as a *straete* in the late Saxon period (Sawyer 1968, no.1329; Hooke 1980, 45), though a short distance east of the city boundary it swung north to leave Sidbury and the fields east of the city wall in St Peter's. This area also included an extra-parochial area known as Blockhouse Fields, immediately outside the city wall: the area almost certainly represents land belonging to the Greyfriars, taken over by the cathedral at the Dissolution. The base of the triangle was formed by north-south field boundaries.

ST PETER THE GREAT

Although this church cannot be unambiguously identified from documentary sources until the first half of the 13th century when the advowson was granted to Pershore Abbey (VCH Worcs IV, 517), it is almost certainly the church outside the south wall of the *burh* conveyed with a *haga* to the priest Wulfgar in 969 (Sawyer 1968, no.1327; Hooke 1980, 40, 48). The medieval church, demolished in 1838, consisted of a nave flanked by separately-roofed aisles - the north aisle timber-framed, and a small tower attached to the north-west corner. Illustrations published in the 19th century show the west door and a blocked window to have been of Norman date (Baker 1980b, 119; Soc. of Antiq. Prattinton Collection V, 6, No.21).

The topography of the surrounding area has already been extensively discussed (see 2:3, above, and figs. 16 and 17). To recap briefly, the church lay off the main road (Sidbury) at the angle of King Street (which, if its origin was not simply that of providing access to the church from two directions, could have been a relic of an alternative approach-road and stream-crossing from the south-east). The area was dominated by a peculiar eastward-curving plot-pattern, possibly a series of industrial tenements with access to water at the rear (the Frog Brook), a pattern with parallels elsewhere (fig.42), but on balance seems marginally more likely to have resulted from the fossilisation of the boundaries of a large circular enclosure straddling the brook and containing both St Peter's and St Wulstan's hospital. Whether the *haga* conveyed with St Peter's to Wulfgar was this larger enclosure or merely a small curtilage around the church itself is unknown.

St Peter's lay outside the *burh* and, like St Martin's and possibly All Saint's, possessed a large extramural parish only part of which was enclosed by the later medieval city walls. Within the walls, the parish encompassed Sidbury and the lower part of Friar Street as far as the Greyfriars precinct, absorbed by St Helen's at the Dissolution (see above). If, before the foundation of the friary in the 13th century the parish had extended to the precinct's northern boundary, the length of the Sidbury-Friar Street-New Street 'by-pass' outside the postulated *burh* would have been divided equally between St Peter's and St Martin's. St Peter's parish also included Edgar Street and the properties on its southern frontage, an area which may originally have lain within the defences. This is perhaps likely to represent a post-*burh*, possibly even a post-Conquest reorganisation involving the disuse and reclamation of the defences in this area.

The rural parish was in many ways similar to St Martin's (fig.3). It occupied a similar area, triangular in shape, with the apex represented by the church site itself just outside the Anglo-Saxon town, its west side formed by the Severn, its east boundary with St Martin's and Whittington following the *Readan Weg* diverging to the south-west from the *straete* out of Sidbury (Hooke 1980, 43), and its base formed by east-west field boundaries. It contained the manor of Battenhall, represented in later medieval settlement by scattered moated farms.

ST NICHOLAS

This church was first recorded in 1256 (Cal. Pat. Rolls 1247-58, 492). The present building dates mainly to c. 1730

when the medieval church was rebuilt by Thomas White (Walker 1858, 333); its crypt (described as a 'vault for burial' by Valentine Green in 1764) is built of sandstone and contains two blocked doors possibly of late medieval-16th-century date. Otherwise nothing is known of the medieval church save the inadequate sketch in the 1651 map of Worcester.

Like All Saints' and St Martin's, this church is associated with a market area on the fringes of the Anglo-Saxon *burh*, situated on the east side of the Cross, some yards to the north of the site of the medieval Grass Cross. The plan-analysis suggested that the Cross is merely the end of the planned linear Foregate Street-Tything suburb, isolated by the construction of the Foregate and the line of the city wall in or by c.1200 (see above, 2:3, plan-units 2 and 14). The dedication, and parallels elsewhere suggest that the church is a post-mid-11th-century foundation (Brooke and Keir 1975, 138). The parish is obviously closely related to the northern suburb (fig.3): its eastern boundary runs parallel to and a short distance east of Sansome Place, the rear service lane behind the eastern Foregate Street plots and associated crofts; the western boundary includes the fields to the west of the suburb and the parish runs northwards as far as the city boundary. The Tything, the northern half of the suburb, lay within the rural parish of Claines though the inhabitants chose to worship ('being verie seldome god knowes') at the chapel in St Oswald's hospital rather than the distant parish church (Roy and Porter 1980, 206). It is always possible that St Nicholas was founded within a much earlier suburb, but rather more likely that church and suburb were contemporary creations of the late 11th- or 12th century. A nearby parallel can

be found at Gloucester, the parish of St Nicholas there covering the outer half of Westgate and the regularly-arranged plots further along the street on the Island beyond the Foreign Bridge; further away, St Nicholas' church and parish in Guildford were associated with a 13th-century transpontine suburb (O'Connell and Poulton 1984)

ST MICHAEL IN BEDWARDINE

The medieval church, first recorded in 1268 (Buchanan-Dunlop 1942, 22), stood outside the north-east corner of the cathedral. The architecture was 'of Early English character' with later windows, and a wooden tower to the north of the west end of the nave, probably a replacement for the cathedral bell-tower of 1320, demolished in 1648, which had been built against St Michael's west end (Buchanan-Dunlop 1942, 21-22). Both its position and its dedication show that St Michael's was used as the cemetery chapel, but it must also have served as the parish church for the increasing numbers of people resident in cemetery encroachments, perhaps particularly on the Lich Street frontage (see plan-analysis, above).

'The parish was the Sanctuary, with the addition of the Bishop's Palace and the Castle' (Buchanan-Dunlop 1942, 23) and its boundaries can be accurately followed from a series of perambulations as well as the 18th-century maps.

ST JOHN IN BEDWARDINE

The medieval church, which survives intact (minus an aisle), lies at the junction of two roads each recorded as a *straete* in charters (Hooke 1980, 45-6) on the edge of the west bank gravel terrace. It consists of a nave with a west tower and chancel, and the surviving (south) aisle is extended by a chapel adjoining the chancel. The earliest surviving fabric is the late 12th-century north nave arcade, which shows that the building was of some size long before it had parochial status. It acquired this in 1371, at the expense of St Cuthbert's in Lower Wick which by then was already 'half deserted and attended by very few' (VCH Worcs III, 501-10).

The parish was, by Worcester standards, very large, covering an area larger than all the east bank extramural parishes put together, extending from the river Teme on the south to erratic west and north boundaries defined by minor watercourses and field boundaries between the radiating *streates*.

Discussion: the stability of urban parish boundaries.

Before some of the general points arising from this survey of Worcester's medieval parishes and churches are discussed in the conclusions (below) it is necessary to consider further how far post- and late medieval evidence for the urban parish boundaries can be safely used to illuminate earlier situations. Throughout the topographical survey it has been suggested that parish boundaries were to some extent, and in some circumstances,

mobile. Nevertheless, it is only in one instance, the absorption by St Alban's of St Margaret's parish, that this is explicit in the medieval documentation. For other less radical, but in some cases still large-scale, change there is only circumstantial evidence or a strong suspicion based on topographical indications. Such changes appear to fall into two categories.

The first category arises in the case of probable or demonstrable Anglo-Saxon churches whose parish boundaries follow the line of the later medieval (c.1200 and later) city wall, as in the case of All Saints', and St Martin's. There can be little doubt that, in the latter case, its parish boundaries were reorganised when or after the house of the Greyfriars was established in 1226, after the construction of the town wall. The outline of the friary precinct itself was preserved in the form of a salient attached after the Dissolution to St Helen's parish. The city wall carried the boundary between St Martin's parish and the extramural, extra-parochial area known as Blockhouse Fields, which were friary property taken over by the cathedral at the Dissolution (fig.3). There is no doubt, on this side of the city, of the wall's late date, nor is there any doubt as to the foundation or the dissolution of the Greyfriars. Therefore if St Martin's - a very probable pre-Conquest church - had any territorially-defined parish in the 10th-12th centuries, its boundary must have been modified to reflect the new city wall in c.1200. The preservation of the friary precinct and its extramural fields by parochial boundaries suggest that further changes took place at the Dissolution.

There are indications that something similar may have happened on the north side of the city. Here the city wall

formed the boundary between All Saints' and St Nicholas' parishes; the latter was very probably a substantially later foundation than the former, and it seems likely that the city wall was chosen as the obvious position for a new boundary in c.1200 or later.

Thus it could be argued that the parochial system as a whole was generally fluid as late as the early 13th century. Such an extreme view would, if accepted, seriously challenge the orthodoxy that urban intramural parishes generally were fossilised by the 12th century or earlier and only liable to change thereafter through amalgamation (Rogers 1972, 47-49; Brooke and Keir, 129-130), but it must be weighed against substantial if circumstantial evidence from the core of the city that there was a marked general association between the known parochial geography and the pre-Conquest (even 9th-10th-century) secular geography, suggesting - by contrast - a strong element there of continuity and stability, though subject to small-scale, local, mobility.

The second category of boundary changes is smaller in scale. There are several instances where parish boundaries follow secular boundaries identified by the plan-analysis as significant and probably early fault-lines or 'seams' between plan-units, or other important early property boundaries. The parochial boundaries frequently depart locally from these lines to follow features that appear to be secondary developments. For example, one notes the erratic course of the boundary of St Andrew's parish immediately south of All Saints' church. There is little doubt that, in general terms, the boundary between these two parishes was determined by the course of the Anglo-Saxon defences. The defences themselves are likely to be reflected by either the continuous east-west property

boundary immediately south of All Saints' or the line of Grope Lane, but the dog-legs in the parish boundary along secondary property boundaries suggest that the parishes' outlines changed with changes in the parochial allegiance of small blocks of property on the boundaries. Similarly, the planned High Street area, plan-unit 6, was almost equally divided between St Swithin's and St Helen's. But the parish boundary dog-legged either side of the primary property boundary between the two central primary plots (fig.11), following property boundaries that are presumed to belong to secondary subdivisions. It seems probable that the parish boundary, having originally been determined by the primary plots, was subject to limited movement as they were subdivided.

Archaeological evidence here is decisive. Excavation across the rear of the High Street plots where they adjoin those facing Birdport (Deansway site 2) showed that the line taken by the parish boundary between St Andrew's and St Helen's was not established until the 14th or 15th century (Mundy 1989, 15), when a new property boundary was created. The ragged, staggered appearance of the junction between the two plot systems suggests that ground was exchanged piecemeal between them as individual plots were extended at different times at the expense of those adjoining to the rear. The parish boundary, as late as the 14th-15th centuries, did not remain anchored to a single original or early line but evidently moved with changes in the extent of individual properties, perhaps finally becoming fixed only by being mapped in the 18th century. Similarly, excavation across the boundary between St Andrew's and All Saints' (Deansway site 4: Mundy 1989, 24) showed that the origins of the boundary lay in the course taken by the Anglo-Saxon defences, or conceivably

the Roman road that underlay the rampart. Yet in its final form the parish boundary did not precisely follow either of these. It followed a close, parallel, course that was demonstrably only established as a property boundary in the late medieval period. It was detected archaeologically by the differential demolition of a 12th-century building, a result of the lateral sub-division of the Broad Street plots to form separate derivative plots facing south onto Powick Lane. Here again, it seems, an early boundary became deflected by minor changes in the plot-pattern as late as the 15th century. Comparable evidence for such a process may be cited from Shrewsbury, where archaeological evidence demonstrated that a parish boundary reflected minor 16th-17th-century modifications to an early property boundary (chapter 3:2, the Bennett's Hall site, below). Similarly, in Norwich, fluctuations in parish boundaries 'were a result not only of medieval and post-medieval parish amalgamations...but also of eighteenth- and nineteenth-century adjustments to 'fit' boundaries to newly constructed buildings' (Carter 1978, 194).

Elsewhere in Worcester, parish boundaries can be shown to have followed significant early features, remaining unaffected by large-scale changes in the secular geography. For instance, the boundary between St Andrew's and St Alban's respected the line of the Roman defences and paid no attention at all to the features of the planned redevelopment (plan-unit 9) that replaced them.

In conclusion, the parochial map of Worcester that can be drawn from sources such as George Young's map of 1779 (fig.23) appears to reflect a complicated mixture of change and stability - a mixture that here, as in other towns, needs to be understood (in principle if not in

detail) if the significance of the pattern of parochial boundaries is to be appreciated. Some elements are demonstrably early, others post-medieval, and analysis is not helped by the poor dating of the secular geography. However, the evidence suggests that the basic structure of the intramural parishes was heavily influenced by the layout of the late 9th-century *burh*, both in the outline of its defences, and in its internal structure – the division between the 'unplanned' western half (reflected by St Andrew's parish) and the planned eastern half (the High Street plan-unit, served by St Helen's and St Swithin's parishes). Parish boundaries also reflect relict Roman features surviving at that time. Later, this basic structure was modified by the creation of one or more new parishes and the amalgamation of two others. The construction of a new defensive circuit and the foundation of the first friary, and its eventual dissolution, brought about further changes, but these *large-scale* changes affected only the *margins* of the built-up area. *Small-scale* changes occurred throughout the city, over a period of time that stretched from at least the 15th century to the 18th century. These were associated with changes in the extent (whether by sub-division or enlargement), and the ownership, of individual plots located on parish boundaries.

2:6 CONCLUSIONS: THE DEVELOPMENT OF WORCESTER (Fig. 24)

The excavations that have taken place to the north and south of Broad Street over the last five years have produced insights into the Anglo-Saxon and medieval settlements out of all proportion to the minute sample of the historic built-up area that they represent, but in so doing they have also shown that our ability to understand the early growth of Worcester is subject to strict limits. The excavations have suggested that the development of the Anglo-Saxon and later city was influenced and constrained by surviving features of the Roman landscape. The Blackfriars excavation (HWCN 378: Mundy 1986a, 1989) showed that the layout of the 14th-century friary was determined by the orientation of an underlying Roman road. The excavation of the Deansway site 2 (HWCN 3899: Dalwood, Mundy, and Taylor 1990) revealed the apparent preservation of one edge of a minor Roman road as a property boundary into the 20th century, though there is some question as to the means by which this actually took place. A watching-brief between Deansway sites 1 and 4 showed that the medieval Powick Lane was the successor to another Roman road.

Despite these excavations, Carver's and Sawle's at Sidbury (Carver 1980) and Barker's excavations and observations of the 1960s (Barker 1968-9), the geography of the Roman town is still largely unknown, and so, inevitably, is the full extent of its influence on later settlement. However, a combination of the excavated evidence and the plan-analysis may be used to predict that areas of the medieval town whose morphology suggests that they grew as a result of piecemeal 'unplanned' development will be more likely to have been influenced by relict

Roman landscape features than areas that appear to have been subjected to centralised 'town planning'. The Birdport area, clearly not regularly planned, contrasts with, for example, the Copenhagen Street area (plan-unit 9) where the dislocation between Roman and medieval landscapes appears to be complete, even though the location of the Copenhagen Street planned area was itself initially determined by Roman features (the redundant defences and the line of the High Street). In other words, whilst the location of areas subject to higher-order decision making in the Anglo-Saxon and medieval periods might be determined by surviving elements of the Roman landscape, relict features may not be expected to survive within them; in contrast, within areas subject to lower-order decision making, and investment, ('unplanned' areas), lower-order relict features have a greater potential to survive.

Barker's work on the Lich Street development site in 1965-6 convincingly demonstrated the presence of a substantial defensive earthwork of probable Roman date on the end of the gravel terrace encircling the area containing the cathedral (Barker 1968-9). His suggestion that the ditch found earlier on the Technical College site to the west (Gelling 1958) was part of the same circuit has been generally accepted, and it was later argued that parish boundaries supported this (Baker 1980a). No further excavation has taken place around the proposed circuit, though it has been suggested here that the southern side is more likely to have been coterminous with the southern ditch of the Norman motte-and-bailey castle than with the 1217 south boundary of the cathedral close, as originally proposed.

The existence of these defences inevitably colours

interpretations of the post-Roman development of the area around the cathedral. It has previously been shown that two potentially very early churches (St Helen's pre-dating the See of 680; St Alban's, perhaps in existence by the early 8th century) lay just within the northern rampart (Baker 1980a; Bassett forthcoming); to these current research has now added a third: St Margaret's, apparently lying a short distance to the west of St Helen's, and also contemporary with St Alban's. How are these churches to be interpreted? Our understanding of them is inhibited by the almost complete lack of a contemporary context, the sole exception being Barker and Cubberley's discovery of two inhumations under the cathedral refectory, possibly pre-dating 680, but by no means certainly (Barker 1974; Bassett forthcoming, note 107). As for the three churches themselves, they display two separate but possibly related topographical peculiarities: their peripheral location within the enclosure, and their linear relationship to each other. The latter might simply be a product of the former, or, as Bassett speculates (Bassett forthcoming) for St Helen's and St Alban's, it might be indicative of a contemporary relationship: a family of churches, perhaps two chapels dependent on St Helen's. Their common peripheral location (unless it were argued to be ultimately dependent on understanding a possible Roman context for St Helen's) seems most likely to be due to the centre of the enclosure being put to some other use. In this context Bassett's suggestion that, to have attracted the See in 680 Worcester must have had a contemporary administrative-political function, probably based on a Hwiccan royal palace, seems particularly relevant. It could be argued that the churches represent a pre-See monastic community peripheral to a palace. Alternatively,

as Bassett points out, St Alban's and St Margaret's could have been Anglo-Saxon foundations of the period 680-721 (or later, if the Evesham Abbey Chronicle is not to be believed), their apparant linear relationship purely fortuitous, a product of their location on the periphery of the new cathedral and its precinct.

Before leaving the realms of speculation it might, finally, be unwise to dismiss irrevocably an alternative interpretation. It is possible that the line of the northern earthwork was determined by the churches and not, as is usually argued, *visa versa*. The archaeological dating of the ditches is far from secure. 2nd-3rd-century pottery was recovered from the primary silt of the Lich Street ditch (Barker 1968-9, 50), and a single sherd of 4th-century pottery from the middle fill of the Little Fish Street ditch (Gelling 1958); both ditches could however have been substantially later. The recent excavations (Sidbury, Blackfriars, Deansway) have produced no pre-9th-century post-Roman pottery: sub-Roman and middle Saxon Worcester appear at the moment to have been aceramic. This is entirely consistent with the evidence (or lack of it) from comparable settlements in the region. Gloucester has yet to yield the chaff-tempered ware found on middle Saxon rural sites in its region; locally-produced pottery does not appear in the city until the late 9th or early 10th century (TF41a), at which time the first pottery also appears in Hereford, earlier phases of activity there being aceramic (Vince 1989). Only Droitwich has produced middle Saxon pottery, a range of wares having been found that closely reflect its contacts, via the saltways, to the south-east (pers.comm. Derek Hurst). A post-See origin for the defences cannot, therefore, yet be dismissed even if it is less probable

than the Roman date that is usually given to them. Whatever their origin, the defences will almost certainly have been generally refurbished on one or more occasions; Haslam (1987) suggests by Offa, but of this there is no evidence.

With the creation of the *burh* in the last decade of the 10th century the overwhelming uncertainties of the earlier period are reduced by the availability of more complete archaeological evidence in combination with the establishment of a recognisable framework for secular settlement which survived beyond the medieval period and is susceptible to the techniques of town plan analysis. In 1990 excavation to the south of Broad Street (Deansway site 4: Baker, Dalwood, Holt, Mundy and Taylor forthcoming) identified a pre-medieval post-Roman ditch, rampart, and wall of re-used limestone rubble (fig.10). Although seen on only one site topographical evidence allows much of the remainder of its course to be reconstructed (fig.22). This, in turn, has allowed the excavated section to be identified as the north wall of the *burh*, used as a landmark in the charter of 904 to locate the *haga* leased to Aethelred and Aethelflaeda (Hooke 1980, 49). From this there can be no doubt that the excavated defences are also those described in the grant of 884-901 from Aethelred to Bishop Waerferth that marks the foundation of the *burh* (Sawyer 1968, no.223). The archaeological evidence cannot, however, confirm that the defences were newly-constructed at that time.

The late 9th-century *burh* can now be seen to have been a northward extension to the earlier enclosure around the cathedral, covering an additional area of about 17 acres - a very small area compared with the new, planned, Wessex *burhs* (between a quarter and a third of the area of

Wareham, Wallingford or Cricklade; a half to two-thirds if the Roman circuit is included – Biddle and Hill 1971; see fig. 25). It can also be seen to be very atypical of other English towns at this period, bearing a closer resemblance to settlements of polyfocal form found on the continent displaying variations on the theme of a separation between an ecclesiastical (and/or fortified) site and a trading settlement or *suburbium* (Hamburg, for example: Lobbedey 1977, 130-134; or the *burg* and *vorburg* elements of settlements like Mikulcice in Czechoslovakia: Hensel 1977, 379-381; or the division of early medieval Tours between the late Roman *castrum*, the 10th-century *castrum* of Saint-Martin, and the latter's *suburbium* Galinie 1988; or Rheims, split between the merchant quarter in the old *civitas*, the monastery of Saint-Remi and the Bourg Saint-Remi of the early 10th century: Carter 1983, 37-8). Worcester may also be legitimately regarded as an immediate precursor to the Anglo-Saxon or Anglo-Danish extensions to Roman fortifications known or suspected at Chester and York (Hall 1988, 130). Needless to say, however, the peculiarity of late Saxon Worcester owes much to the form of its Roman predecessor and its small earthwork *enceinte*, and cannot simply be taken as a reflection on conditions in the 9th and 10th centuries.

Uncertainties remain, for example, the way the junction of the old and new defences was contrived, but it is possible to calculate (very roughly) that the new 9th-century defences must have had a perimeter of 850-900 yards (taking the 904 *haga* boundaries literally and therefore not taking into account the possibility of riverside defences – see the Birdport plan-unit, chapter 2:3 and fig. 12); the suggested Roman circuit eastwards from St Helen's may have had a perimeter of around 725-800

yards, giving a total defended perimeter of around 1575-1700 yards (see fig.22). These figures accord well with the estimate of 1650 yards based on the statute perch and the assessment in the Burghal Hidage (Hill 1969, 90-92; Barker 1968-9, 39; Carver 1980, 5; Beardsmore 1980, 54-5).

Although proving their contemporaneity is difficult, to say the least, the plan-analysis suggests that the area within the new defences was divided into two halves of dissimilar character. The eastern half was a planned urban extension based on the High Street (plan-unit 6). This street may in origin have been a minor road within the Roman settlement, or a longer-distance road carrying north-south traffic along the east bank of the Severn. At some stage in its pre-medieval history, quite possibly at this time, its significance was increased by having traffic from Droitwich diverted onto it via the *port straete* (Hooke 1980) from a point $3\frac{1}{2}$ miles (c.5.5km) north-east of the *burh* (fig.3). It is equally possible that, within the area of what was to become the *burh*, the High Street was already developing market functions in the 8th-9th centuries outside the gate by St Helen's.

New streets were laid out parallel and perpendicular to the High Street, forming a single rectangular street-block. The parallel street (the Shambles) lay immediately within the projected course of the defences, and may have combined the functions of wall-street and rear-service lane. The street-block was divided into four large regular plots, each with a principal frontage of c.156-158 feet and an area of just under an acre. Similar though shorter plots were laid out on the west side of the High Street, bringing the total area of this planned layout to about 6 acres.

Obviously, the number of characteristic variables to

be found in a layout consisting of only one street block are somewhat limited, and the form of the Worcester High Street area is not intrinsically dateable. However, its probable origin as a primary feature of the *burh*, the probable function of the Shambles as a wall-street, and the division of the area into large rectilinear primary plots, does invite comparison with the planned interiors of the Wessex *burhs*: Winchester in particular, Wallingford and Wareham more generally (Biddle and Hill 1971; Biddle 1976, 340-343; see fig.25). Bishop Waerferth's known associations with Alfred does not lessen the suspicion that this area of Worcester may have benefited from experience of contemporary royal town-planning in Wessex, including Alfred's restoration of London (see, for example, Vince 1990, 124-129). More precise parallels cannot be cited because of the lack of comparative work in other towns - Winchester apart - on the elucidation of early properties. A further parallel within the west midlands may be mentioned, though one about which even less is known. This is the High Street in Shrewsbury, also an identifiable plan-unit, pre-dating the apparent clearance of some of its plots in c.1261 (see 2:4, above and fig.29). This too had large rectangular primary plots laid out on one side of a widened street: only excavation in both towns will reveal whether the resemblance is significant and not merely superficial.

The western half of the Worcester *burh*, in contrast to the High Street area, shows no evidence of regular planning. The area was dominated by the *haga* of 904, which was probably coextensive with the larger street-block defined by Grope Lane, Birdport, Copenhagen Street, and the Quay (fig.12). It contained the site of St Andrew's church, which cannot be proved to have been contemporary,

but almost certainly existed during the lifetime of the *burh*. This *haga* may have been bordered by a second, just within the Roman defences to the south, containing the chapel of St Margaret's, given to Evesham Abbey in 721 (see above, 2:5), and represented by the Warmstry House street-block, probably coterminous with the minute pre-13th-century St Margaret's parish covering an area of about one acre. As a discrete parcel of urban property sited on the waterfront (though not necessarily an improved and exploited one) the bishop's *haga* in Worcester inevitably invites comparison with the estate of Hwaetmunderstan in London, granted to Bishop Waerferth in 888-9 and in 898-9. This was a street block with one side on Queenhithe, about half the size of the Worcester *haga*, and differing from it in that it is thought to have been part of a contemporary planned townscape. The documentation makes it quite clear that the purpose of the estate was trade, and the later grant includes the right to moor ships (Dyson and Schofield 1984, 296-7; Vince 1990, 20-21). Comparable documentation is lacking in Worcester, but the *haga* leased by the bishop to Aethelred and Aethelflaeda was surely considered a piece of valuable commercial real-estate.

The utility of the 904 *haga* is not likely to have been diminished by its location just within the suspected gate by All Saints' church, revealed (in default of absolute archaeological proof of the early existence of Birdport) by the convergence of the roads to the river crossing and the Roman road under Blackfriars upon it. The position and nature of the river-crossing itself is an archaeological and topographical problem of long standing. However, the only ford site to have been conclusively identified is that of the Newport ford in the area of the medieval

bridge. Further, the most convincing hypothesis for the location and construction of a bridge is Martin Carver's, which suggested that the medieval bridge, first documented when it was repaired in 1088, re-used the surviving stone piers (with iron slag cores) of a Roman predecessor, as well as, in all probability, the Causeway leading to it across the alluvium on the west bank (Carver 1980, 19-21). If this is the case, the bridge is likely to have been in repair in the late 9th-10th centuries and an essential adjunct to the *burh*.

The occupation of half of the new *burh* at Worcester by streets and properties not subject to rectilinear planning deserves comment. It represents a variation on the 'classic' Wessex models of Winchester, Wareham, Wallingford, and Cricklade, where almost solely rectilinear layouts of streets (and properties in the case of Winchester) are apparent, occupying all or part of the defended area. Worcester appears analagous to Bath, where the rectilinear street/lane layout was confined to the northern sector of the town, and Gloucester, where it was confined to the east of the central cross-roads (Biddle and Hill 1971; Heighway 1984; fig.25).

The chronology of the Worcester parish churches, and the process by which they came to acquire parishes, is unevenly understood, but, though their contemporaneity cannot be proved, there is abundant circumstantial evidence that the provision of churches and parishes in and around the *burh* was orderly, logical, and reflected what is known of the secular geography. The 'unplanned' western half of the *burh* was reflected closely by the medieval parish of St Andrew's, the church within the bishop's *haga*. The eastern 'planned' half probably originally all fell within the parish of St Helen's, the

northern half being allocated later to St Swithin's. It is suggested that All Saints' was, in origin, a gate-church, presumably but not certainly founded within the lifetime of the defences, and given a parish that included the roads leading from the gate to the bridge.

Immediately outside All Saints' and the gate was All Hallows Square, one of perhaps two markets which may (there is no direct evidence) have come into existence within the lifetime of the *burh*. The other - Mealcheapen - differed in that it appears to have been a street-market perhaps only later replaced by a market place (the Cornmarket). Extramural markets are, of course, a widely-paralleled phenomenon both in the midlands (Bedford, Northampton, Hereford, Oxford for example) and beyond (Totnes and Barnstaple for example: Haslam 1984, 256, 279).

Sidbury, and its topographical peculiarities have been discussed at some length. In summary, two churches (or a church and a chapel) are known to have existed there in the 960s. One (St Gudwal's) may have been founded in that decade, the other's (St Peter-the-Great) origins are unknown. The area around the churches was marked by a distinctive eastward-curving plot pattern whose interpretation is ambiguous. It can be interpreted either as a familiar waterfront pattern of craftsmens' tenements needing access to water (fig.42), or marginally more likely in this case, as a pattern determined by a former circular or oval enclosure straddling the Frog Brook and containing the sites of the two 10th-century churches (fig.17). The street-name may be relevant here: does it refer to a street south of the *burh*, or to the south *burh*? The enclosure could have been of almost any date before c.1200 and the construction of the city wall in this area:

a prehistoric date is not impossible, though the valley-bottom location is difficult to parallel. The ownership of the area, and both churches, by the bishops of Worcester is perhaps reminiscent of the suggested ownership of the Roman or sub-Roman enclosure at Thornbury, outside Oxford, by St Frideswide's (Blair 1989), though the Sidbury enclosure was scarcely distant enough from the cathedral to have been a retreat, particularly as the main road passed through it. The questions of the existence of this enclosure, its date, and its function, must be left open - though limited excavation within the grounds of St Wulstan's Hospital would probably be informative.

Excavation further to the north in Sidbury was able to demonstrate late Saxon suburban occupation, dateable by the presence of Stafford-type ware possibly as early as the early 9th century, but more likely to be of the 10th- or 11th century. The extent and rate of suburban growth elsewhere outside the *burh* perimeter is unknown, though we may suspect development on Mealcheapen and particularly on Newport and Dolday, these streets being associated with extramural markets and/or the river-crossing, and leading towards churches known or suspected to have been established in or by the 11th century.

There is little doubt that the difficulty in predicting the course of the Anglo-Saxon defences in advance of the excavated evidence (see Carver 1980, 5 and his fig.2) has been due to the fact that they, and the earlier earthwork defences, were not given the opportunity to decay slowly over an extended period and become fossilised as fixation-lines in the built-up area. At least part of both circuits were levelled and redeveloped, the consequent settlement pattern obscuring their course. This can be suggested from comparing the results of the plan-analysis with

information derived from excavations and watching-briefs. The Roman defences between St Alban's and Friar Street were, it is suggested, levelled in two operations represented by the Copenhagen Street and High Street South plan-units (9 and 10), the former possibly a significant planned development of three street-blocks, perhaps covering a total original area of c.6 acres. Similarly, the northern *burh* defences were shown archaeologically to have been deliberately levelled (Baker, Dalwood, Holt, Mundy, and Taylor, forthcoming), to be replaced by long north-south plots individually developed (on the metrological evidence) off Broad Street. The latter can now be seen to have originated as a road following the outside edge of the *burh* ditch, possibly widened and improved as the ditch was filled in. Broad Street in Oxford and Broad Street in Stamford provide precise parallels.

Both the sequence of these events and their date are extremely difficult to estimate. The behaviour of the parish boundaries has been used to suggest that the northern side of the Roman circuit was levelled after the creation of the planned High Street area within the *burh*, but whether this occurred while the defences were still in use is not known. The *burh* defences south of Broad Street are likely to have been disused before the 12th century, the probable date of a stone building cut into the rampart (Mundy 1989, 23-4). One may speculate that these events had taken place by 1041, when the inhabitants of Worcester displayed a notable lack of confidence in their ability to defend the city against Harthacnut's army (VCH Worcs IV 378). Suburban development towards the bridge and St Clement's church, probably a foundation of this period, also seems very likely. At Hereford the

northern defences were disused and began to decay towards the end of the 10th century (Shoesmith 1982, 82).

In Worcester, away from the main roads and suburban development, parts of the defences are likely to have survived much longer. To the east of the Shambles, between the junctions with Mealcheapen and Pump Street, the long parallel back-fence line suggests a longer period of decay in a quiet area, with the line ultimately preserved because it was not particularly inconvenient. The same is probably true of the southern side of the Roman circuit, suggested to have been re-used by the Norman castle.

The early development of the cathedral close is almost entirely obscure. Debate over the location of the two Anglo-Saxon cathedrals has been inconclusive for lack of evidence (Gem 1978; Carver 1980, 7), though this may change following current proposals for a ground-sensing radar survey. The topographical evidence has been used to suggest that the High Street may have been closed-off and diverted having formerly run through the area now occupied by the cathedral crossing. Similar developments have been argued or demonstrated in other towns (London, Hereford, Bury St Edmund's, for example) but there is little to suggest when this might have taken place at Worcester. The foundation of the second cathedral by Oswald by 980 may have made it necessary, particularly if the two buildings were arranged end-to-end. It is equally likely to have taken place soon after the Conquest during the construction of Wulstan's church - perhaps as a response to the loss of the precinct south of the cathedral to the castle. It has also been suggested that the bishop's palace encroached northwards into the city, though this may have been a much later development. Whatever the details and chronology, there is no doubt that the

cathedral close known to us from late medieval perambulations and 18th-century maps represents only the final stage in a long, unexplored, process of morphological change.

The Norman presence in the town wrought changes in the military, ecclesiastical, and secular infrastructure of the city, though nearly all were confined to the expanding periphery of the built-up area. The arrival of the castle to the south of the cathedral(s) has already been commented on, as has its probable re-use of the old Roman defences (contra Barker 1968-9) - possibly the last in a long line of refurbishments.

It seems unlikely that the rapidity with which the Anglo-Saxon cathedrals were replaced was matched among the parish churches, though it would be suprising if all the churches extant in the 1060s were not rebuilt in the following century. Despite the poor survival and recording of medieval fabric, St Alban's survives as a largely-intact 12th-century building, and Norman work survives or is recorded at St Helen's, All Saints', and St Peter's. The parochial structure- even if in an embryonic state - may have survived from the pre-Conquest period far more completely than the fabric of individual churches. A pre-Conquest origin can be shown for St Helen's, St Alban's, St Margaret's, St Peter's and St Martin's, though it is virtually certain that St Andrew's, All Saints', and probably St Clement's and St Swithin's, can be added to the list. St Nicholas, St Michael-in-Bedwardine and St John-in-Bedwardine are the only definite post-Conquest additions, and each was associated with the extension of the built-up area, by suburban development or by infilling.

St Nicholas, on the east side of the Cross, dominated

the street-market outside the perimeter of the former *burh* at the end of a new, planned, suburb, half of which was included within St Nicholas' parish. This suburb, which extended for a distance of some 700 metres northwards from the Cross and the former *burh*, was laid out, probably before c.1200, with plots with regular three-perch frontages, rear service lanes, and (on the east side) garden crofts to the rear. This was the last in a series of medieval planned developments concentrated on the north-south axial route.

St John-in-Bedwardine, first recorded in the 1190s, began life as a chapel dependent on St Cuthbert's at Lower Wick, some distance to the south. St John's was accorded parochial status only in 1371, though the fabric suggests that it was catering for a growing population on the west bank gravel terrace two centuries earlier when it was first recorded. Like the probably earlier west bank settlement in the floodplain around the bridgehead, served by St Clement's, there is no obvious sign of a central authority at work providing a planned framework for occupation here.

St Michael-in-Bedwardine, though a cemetery chapel perhaps in origin and certainly in function, provided a place of worship for the growing secular community within the bounds of the cathedral close. This community makes its appearance in the documentary record in the course of the 13th century as rents from the cemetery, while the plot-less buildings cartographically recorded on the south side of Lich Street are classic encroachments on an open area, of the type usually associated with market-places but also seen in cemeteries.

Suburban growth continued elsewhere without additional ecclesiastical provision. The suburb of Lowesmoor, within

St Martin's parish, may have been an urban extension with a 'planned' element but, if so, the original metrology of the plot divisions did not survive 18th-century amalgamation and subsequent redivision. It was at least partly built-up in 1240, and, with the exception of the bridgehead suburbs on reclaimed ground, was the first substantial urban growth off the gravel terraces onto the unsuitably-damp Keuper Marl.

The earliest references to the later medieval line of the city walls come from the second half of the 12th century, when the North (Foregate), St Martin's, and Sidbury gates were all recorded for the first time. Only the south-eastern sector of the circuit has been thoroughly explored archaeologically and can be proved to have been newly-constructed in that period; the question of earlier predecessors for the remainder remains open (see Bennett 1980). At Foregate and perhaps in the Cornmarket area the new defences are likely to have cut through occupied areas around the major approach roads; the Frog Brook provided a natural route to follow across Sidbury. The north side of the defences ran well beyond the built-up area: the Dominican friary could be founded within the wall here as late as the mid-14th century, and the area north of Dolday and Broad Street, away from the frontages, was mainly open ground in 1779 - and may have been so continuously. While archaeological evidence can demonstrate late Saxon occupation on the north side of Sidbury, there is nothing to indicate how far and how early the east side of Friar Street and New Street, further to the north, were built up. Deeds reveal occupied plots here backing onto the city wall in the 13th century, but it is not known whether they were developed before the city wall and originally backed on to the Frog Brook (as

presumably those on Sidbury did). The establishment of the Franciscan friary here in 1226 does not suggest either dense settlement or high property values in this area.

With the foundation of the friaries, and St Wulstan's Hospital outside the Sidbury Gate in c.1200, the city's ecclesiastical geography was complete. The secular geography was also, in a sense, completed. The evidence suggests that the limits of outward expansion reached in the 13th century were not generally passed until after the end of the 18th. Within, however, growth proceeded by infilling and sub-division of plots and buildings, processes all directly or indirectly visible in the documentary, archaeological and cartographic records.

CHAPTER THREE:
THE DEVELOPMENT OF
PRIDE HILL, SHREWSBURY

3:1 PRIDE HILL IN CONTEXT: AN INTRODUCTION TO SHREWSBURY

The preceding chapter presented a case-study in town-plan analysis, designed to illustrate the ability of the approach to formulate a model for the development of a town, and the vital role played in it by archaeological evidence. This chapter is another case-study, at a smaller scale of investigation. It is an exploration of the physical evidence for the development of a single street, but again, is designed to illustrate the mutually-informative nature of source materials generally treated separately by archaeologists and architectural historians, and historical geographers. A summary plan-analysis of Shrewsbury is used to set Pride Hill in its local context. Following a general introduction to the street as a whole, a number of individual buildings or sites are discussed, and their containing medieval plots are identified. The origins, function, and development of the plots as members of a larger series are examined, and their inter-relationship with the buildings is discussed further.

Shrewsbury is a post-Roman town, first heard of in 901, in a charter of Wenlock Abbey, as *civitate Scrobbensis* (Birch 1885-99, no.587). Although the number of excavations there has not been large, the only evidence of Roman activity within the loop of the Severn occupied by the later town is the sort of sparse background noise of agricultural activity to be expected on the Severn gravels, particularly in an area that appears to have seen successive regional power-bases from the Iron Age onwards.

A shire town by 1006, sixty years later Shrewsbury had six churches- several of which had minster status, a market, mint, probably defences, and 252 houses, soon reduced by 51 following the construction of the castle (DB f.252). One of the churches lay within a suburb, with a hall and mill, on the east bank of the Severn.

Three of the churches, and (probably) the market, lay on the northern of the two main areas of high ground within the river loop. A single church, St Chad's, possibly the senior foundation in the area (Bassett, forthcoming, b), occupied part of the southern hill, separated from the churches to the north by a shallow valley with a stream issuing from a bog in the bottom. This valley provided the easiest access across the river loop between the ford on the west side (adjoining the medieval Welsh Bridge) and the ford on the east side (adjoining the medieval - and perhaps earlier - Stone Bridge, and the Monks' Bridge, its easterly continuation over a second broad river-channel.

Archaeological evidence can add little to this bald outline. A bronze pin or stylus found on the site of St Chad's a century ago remains the sole physical evidence of middle Saxon Shrewsbury (Nurse 1890). The 19th century also saw the revelation, during building work on the standing medieval church, of one of the pre-Conquest churches (St Mary's: Lloyd 1894). Stafford ware, the type-fossil of late Saxon towns in the west midlands, has been found in Shrewsbury in some quantity, but from a small number of small-scale excavations or watching-briefs on the northern high ground within the loop, together with a few sherds from excavations in the eastern suburb.

The Norman impact on the town was first marked by the construction of the castle at the neck of the peninsula, controlling access to the town from the north. A short

while after a planned suburb (Frankville) was created, lying across the existing approach-road on the west bank. Finally, in the 1080s, the Norman abbey was planted across existing roads in the eastern suburb, and the stranglehold on the (troublesome) Anglo-Saxon town was completed.

The form and location of the pre-Conquest defences, implied by the place-name (*Scrobbesbyrig* in 1016 – 'the fortified place of a district called The Scrub' – Gelling 1988, 28) and the existence of a mint, have never been established. A defensive earthwork across the neck of the peninsula is not unlikely (perhaps on the line of the later spur wall and ditch running westward from the castle). Attempts to demonstrate the existence of defences around the top of the high ground have not, so far, been accepted. A 19th-century theory which would have a 12th-century 'inner' town wall running along the southern edge of the northern high ground (Drinkwater 1883) is now largely discredited, but the possibility of an earlier defensive feature on the same line cannot be totally dismissed (see below, and chapter 4:3).

Murage grants for the first half of the 13th century have been used to date the fairly well known medieval town wall running along the edge of the high ground and descending to the river on the west and on the east sides to enclose extensions of the built-up area (Mardol to the west, Wyle Cop to the east) running down spurs towards the river-crossings.

The town plan of Shrewsbury is complex, and difficult to interpret. The constraints imposed by the fairly severe natural topography were undoubtedly important, but many of the complications evident in the plan are beyond any doubt the result of changes during the development of the built-

up area. The most immediate difficulties are those of trying to determine the process by which routes developed between the three entry-points to the town site: the northern neck, and the west and east fords or bridges.

The following account should not be regarded as a formal plan-analysis, but merely as short interim notes intended as an introduction to the intramural town-plan. Nevertheless, plan-divisions of the type identifiable in Worcester (chapter 2) are visible, and form a convenient basis for this description. The detailed justification and interpretation of the plan-units must, however, await full analysis and, this writer would argue, the integration of archaeological, architectural, documentary, and parochial-topographical sources. It should, however, be noted that in Shrewsbury (in contrast to Worcester) more plan-units seem ascribable to long-term developmental processes subject to particular constraints producing particular distinctive characteristics, than to discrete areas subject to 'planned' developments in the usual sense. The origins of the morphological frame in Shrewsbury may be much closer in time to that of the settlement pattern it contains, but it is even less well understood than that in Worcester.

PLAN-UNITS IN SHREWSBURY: AN INTERIM DEFINITION

(Plan-unit numbers refer to fig.28)

1. The Castle. The early Norman motte and inner bailey occupy the neck of the peninsula, and probably incorporate the site of an earlier church of St Michael (Bassett,

forthcoming, b). The outer bailey, plainly evident in the town plan through property boundaries fossilising the line of the ditch, the curve of School Gardens, and fossilized gate-encroachment on the main road (Castle Street), was a later addition, probably of the late 12th century (excavated evidence from its rampart: Baker 1983), paralleling contemporary developments in Ludlow.

2. St Mary's. This church is traditionally a foundation, or re-foundation (Bassett, forthcoming, b) of Edgar. The plan-unit contains morphologically diverse components, but there are some grounds for believing that the northern street-block was originally church property, part of it a possible cemetery, part of it occupied by conventual buildings (VCH Shrops.II). The southern block, again partly church property, may represent the blocking and diversion of a road (Dogpole) between the eastern crossing and the peninsula neck.

3. St Alkmund's and St Julian's. These two Anglo-Saxon churches occupy the same or adjoining churchyards, in which a market was regularly held until it was moved in c1261. (CCR 1259-61, 351). St Alkmund's had minster status and is traditionally said to have been an Aethelflaedan foundation. St Julian's had some of the characteristics of a gate-church, its parish within the loop serving the approach road to the eastern crossing, its geography (and that of the church's surroundings) bearing some resemblance to that of All Saints' in Worcester (chapter 2:5, above). The ovoid open space contains the two churches, and the annular rings of settlement around it (buildings on short plots facing in, buildings on longer plots, a terrace below, facing out to the surrounding

roads), resemble the settlement-patterns identified by Blair in early minster towns in the south-west (Blair 1988b, 48). There is some justification for regarding this plan-unit as an early nucleus within the town plan; whether or not it was separately defended is not known.

4. The High Street (fig. 29). Known until the 13th-14th centuries as Gumbestolestrete, it runs north-west to south-east on one side of the valley bottom between the two areas of high ground, giving access across the centre of the loop. It almost certainly represents a planned urban development, widened, with large rectilinear plots to the south. Two or four plots appear to have been cleared and amalgamated to create the irregularly-shaped area of the new market of c.1261 (see above), known as the Square (see fig.29 and chapter 2:4). The plots on the north side of the street are substantially different. There are extensive references to a pond or bog in this area, giving rise to the Gullet, a small stream draining north-west, and to sightings of great depths of waterlogged peat-like deposits in the area around the Square (Carver 1978). Documentary evidence for the plots on the south side showed that, in the 13th century, they still backed on to Princess Street at the rear, though tail-truncation for secondary developments facing south-west was occurring within the middle ages.

5. Milk Street. A series of plots facing north-west into the High Street development and St Chad's precinct, and possibly backing onto an early defensive line across the top of the Wyle Cop spur.

6. St Chad's. An early minster church with extensive extramural rights and possessions, and a large precinct area containing (to the west of the church) remains of the medieval collegiate buildings. In addition to the 8th-9th-century pin or stylus, the excavations of 1889-90 also revealed charcoal burials (Nurse 1890).

7. College Hill, extending westwards from St Chad's appears as a fairly distinct block of land roughly on the latter's liturgical axis. It may represent a planned area, encompassing the top of the southern hill and its northern slope. At least by the later middle ages the plots on the northern (slope) side all faced north towards Princess Street (the medieval Kiln Lane) and the new market place.

8. Barker Street. A potentially early place-name, Romaldesham (first recorded c.1160: Hobbs 1954, 90-1), applied to this area, around a chapel of St Romald which stood as late as 1350 though its site is uncertain. Barker Street (running north-west to south-east) appears to represent access from the fords or ford across the river to the west to the interior of the loop. It follows the bottom of the north-east facing slope below a ridge in this area carrying the town wall; the plots on that side are terraced into the slope. Plots on the north-east side were, in the post-medieval period at least, larger and more irregular.

9. Raven Meadows (figs.30 and 41). This plan-unit is characterised by main traffic streets ringing the alluvial area (a former river-loop) with long plots running down into the alluvium apparently cut by the 13th-century town wall, and much shorter plot series on the south-west and

south-east. This plan-unit, Pride Hill in particular, forms the main subject of this chapter.

10. Dogpole. This north-south street may be a truncated remnant of a longer predecessor running along the cliff-top on the east side of the town just as Pride Hill and Castle Street do on the west side. Like the latter, three plots on the east side of Dogpole run down the slope, into the alluvium, possibly originally to the river. Again, like those to the west, these plots appear to have been bisected by and thus pre-date the 13th-century town wall.

11. Wyle Cop. The eastward extension of the built-up area, very probably extramural in late Saxon terms, running down a natural spur to the eastern ford and bridge site. A narrow, irregular lane of uncertain origin served as a rear access lane to the long, terraced and contour-influenced plots on the south side. The northern plots were similarly irregular, and those at the eastern end may, like others in the town, have originally backed on to the river.

12. Belmont. The mapped plots are of uncertain age, the buildings they contain being solely of 18th-century and later date. They span a break in slope, strongly marked at the north-east end, petering out westwards, that may mark a pre-13th century defensive line continued eastwards as a terrace (in the Lion Hotel car-park) to Wyle Cop.

13. St John's. A quarter of the town containing a distinctive radial pattern of roads, the blocks between which are occupied by a variety of minor plot-series with diverse characteristics. The origin of St John's Hill

itself, the dominant south-west - north-east road within the plan-unit, is one of the most fundamental problems in Shrewsbury's town plan. Is it really a continuation south-westwards of Pride Hill and Castle Street, representing a primary axis that, to the south-west, led only to the least-crossable stretch of the Severn? Or is the appearance of a single axial road fortuitous- the result of the continuation of Pride Hill by one of a radial pattern of property boundaries later developed as thoroughfares? It is unlikely that even a detailed plan-analysis on its own will solve this question.

14. Behind-the-walls. A series of separate parcels of land lying between the radiating spokes of the street-system facing Town Walls, the wall-street, and possibly largely undeveloped within the middle ages.

15 and 16. Extramural areas within the river-loop. These areas received the three friaries established in the course of the 13th century, and the greater part of these areas are still open ground. The lane and field-pattern in the south-west quarter continues the intramural road-pattern to the river. The area between the Welsh Bridge and the Augustinian friary contained the site of the principal medieval quay, probably defended by a riverside wall, though the geography and archaeology of this area is little understood.

3:2 BUILDINGS AND PLOTS ON PRIDE HILL.

Introduction

Because of Shrewsbury's cramped site and tortuous natural topography Pride Hill (with Castle Street, its north-easterly continuation) was part of both the medieval town's commercial core and its urban fringe. The north-eastern end of the street, a widened street-market, was the site of the medieval High Cross, a focus for civic ceremony - processions and executions (Owen 1808, 446). The street has been lined with shops since at least the early 13th century. Yet the most valuable properties, those on the street's north-west side, run back from the frontage, through the line of the 13th-century town wall, down a steep slope, and into Raven Meadows, a low-lying alluvial area still largely undeveloped in the early 19th century (fig.27). In the 20th century, particularly in the last thirty years, the north-west side has been developed more intensively than any other area of the medieval town, a direct result of the high commercial value of the frontage and the availability of cheaper but accessible space at the rear. Older-established national chain businesses have now been joined by two large modern shopping centres.

This chapter has arisen from a number of quite separate archaeological investigations. In 1985-6 and 1987-8, the writer undertook an excavation and long-term watching briefs for Birmingham University Field Archaeology Unit on the sites of two new shopping centres: the Pride Hill Centre, and the Charles Darwin Centre (see fig.30). These sites lay a short distance either side of Pride Hill Chambers and the Beaconsfield Club, two properties

investigated by Martin Carver and his colleagues in 1972-4, and one of the sites (the Bennett's Hall site/the Pride Hill Centre) lay adjacent to the building of that name surveyed by J.T. Smith in his pioneering study of the early buildings of Shrewsbury (1953). It was clear from the pre-fieldwork research stage that such a concentration of individual projects should yield more than the sum of its parts if an appropriate methodology were adopted. The aim was, and is, to use the evidence of the plot-pattern to reconstruct the contemporary spatial context of the medieval buildings that survive in various forms; to use the evidence of the plot-pattern to illuminate the pre-13th century development of the area, particularly as archaeological deposits of that period rarely or never survive; and to examine, as far as possible, relationships between changes in the building-pattern and changes in the plot-pattern. This chapter is intended as a study of a single street, though it is admitted that the north-west side of the street has been studied almost to the exclusion of the other. This is in particular a response to the availability of the evidence, the south-west side having escaped large-scale redevelopment and consequent archaeological investigations, and having very few standing early buildings to be viewed in relation to an already uninformative plot-pattern.

Previous work in the area

'This is not the story of three men and a boat, but of three men and a candle (and sometimes only a box of matches), the said three men being a committee of a learned Society appointed to investigate the remains of the town wall and mark them on a map, and thus secure a

permanent record of them. The remains of our earliest wall are only to be found in the basements and cellars of modern houses, and on going into these lower regions they have discovered a wonderful series of cellars and vaults such as no other town can show. The most remarkable are on the north-west side of Castle Street and Pride Hill' (Shrewsbury Chronicle 21-1-1913).

Pride Hill has repeatedly attracted the attention of antiquarians and archaeologists over the course of almost two hundred years, due, no doubt, to the frequency of the survival of visible ancient stone structures there. The earliest recorded observation is Hugh Owen's (1808) description of the accessible and architecturally-rich remains of the building later identified as Bennett's Hall (see below). Sporadic sightings along the street were recorded thereafter until the 1920s, and are summarised below with the buildings that they appear to be describing. Most are the result of the observation of visible masonry, some record temporary exposures during building work; nearly all are marked by a confusion between domestic, military, and ecclesiastical structures. Not until 1911, and the publication of Forrest's *The Old Houses of Shrewsbury*, were some of the Pride Hill buildings (notably Bennett's Hall) described accurately within a broader architectural context. The first modern archaeological approach to both the town's topography and its buildings was provided by Smith's unpublished thesis *Topography and Domestic Architecture* (1953): this included the first detailed analysis of the Bennett's Hall remains, and the first systematic description of the town wall where it was visible at the rear of the properties on Castle Street and Pride Hill.

The streets bordering Raven Meadows were also the setting for the three published archaeological excavations that took place in the town between the late 1950s and 1985. The earliest of these was an excavation at the bottom of Roushill Bank in 1958-9 on the line of the medieval town wall, usually dated to the period c. 1220-1242 (Raleigh-Radford 1961). The Roushill excavation (Barker 1960), although on a small scale, established for the first time the presence of the wall parallel to Mardol, revealed its unweathered architectural features, and recovered a sequence of pottery from dumps outside which is still a basic source for pottery studies in the region.

In 1971-4 a series of excavations and a structural survey using archaeological methods took place at the rear of No.9 Pride Hill (the Beaconsfield Club) and Nos.10-12 (Pride Hill Chambers) (Carver [ed.] 1983a). The main focus of these investigations was an undercroft (S - structure - 2), dated to the late 14th or early 15th century, lying at the back of a courtyard behind the modern frontage, terraced into the hillside with its rear (north-west) wall resting on the levelled remains of the 13th-century town wall. On the adjoining property to the south-west another stone structure had been investigated (S1). It too lay well behind the modern frontage, terraced into the slope, and the editor of the final report saw it as a domestic structure similar in function and date to the undercroft next door (Carver 1983a, 41). However, the excavator interpreted it differently: as a 12th-century defensive tower, abutted by the 13th-century town wall (Jenks 1983, 26; see fig.40). Features beneath the floor of S2 were also variously interpreted as belonging to pre-town wall defensive systems, or phases in the construction and use

of S2 itself (Jenks 9-11; Carver 41). The earliest evidence of occupation on the site was provided by a cess-pit of late Saxon date containing Stafford-type ware (Toms 1983, 7).

In 1978, a sequence that in many ways resembled that of Pride Hill Chambers was revealed at Rigg's Hall, within the Library complex (once the Grammar School site), off Castle Gates (fig.41). Excavation found late Saxon occupation on the edge of the escarpment, in the form of pits containing Stafford-type ware, sealed by a rampart of probable late 12th-century date belonging to the castle's outer bailey. The 13th-century town wall that succeeded it was partly demolished in c.1400 for a stone and timber-framed hall, lying behind a courtyard and other buildings (Baker 1983, 66-7; Moran and Snell 1983, 67-8).

Documentary evidence.

This section makes no pretence to be a full account of all the available documentary sources, merely a brief survey of those published that are relevant to the medieval period.

Pride Hill is first mentioned by that name in the 1445-6 lay subsidy. The more frequently-used medieval names were Corvisors' Row, applied to the north-west side from the High Cross to Roushill, first recorded in 1246; and Butcher Row, or more properly Single Butcher Row, applied to the opposite side of the street, the trade in question spreading from the present Butcher Row (running south-east off Pride Hill towards St Alkmund's) around the corner into Pride Hill (Hobbs 1954, 17, 34-5, 85). The street was also occasionally referred to in the medieval period as

Altus Vicus, leading to a long-standing confusion with the present High Street.

A number of deeds survive from the early 13th century onwards. Only rarely can the properties they describe be located precisely, but they nevertheless give a valuable indication of who held property, what sort of property, and to an extent, the sort of buildings the properties contained. Many of the properties appear to have been held by the town's wealthiest families: the Stury family and in particular the Pride family occur regularly, and appear to have amassed concentrations of property, though how large is impossible to guess. For example, a deed of 1349 concerns Reginald Perle and 'all his tenements in the Corvisors' Row which he purchased of Richard Stury' (Blakeway 1905, 273-4); a *seld* was granted to Philip the Spicer of Gloucester 'between Richard Pride's tenement on each side' (Blakeway 1905, 274-5), and shops belonging to the Pride family occur either as part of the conveyed property or as adjacent property in a number of other deeds (Blakeway 1905, 273-275; 1906, 388).

The formula 'shops with solars over' occurs regularly, and several deeds record that more than a single shop occupied the frontage of a particular tenement. Tenements with two or four shops regularly appear. In some cases, the deeds reveal that there were houses behind the shops lining the frontage. For example, in the early 13th century rents from two shops were granted which 'reach in length from the High Street to the house which Richard Pride bought of Clement' (Blakeway 1905, 273); similar examples have yet to be published (pers. comm and forthcoming, J.B. Lawson)(6).

Of particular importance for this study are two deeds referring to the 'High Street' and to the *alto foro*. The

earlier dates to 1277, when Thomas son of Thomas Borrey granted to Hugh son of Ranulf de Stafford '*unam domum deam in alto foro Salop cum omnibus pertinentiis usque ad Sabrinam*' (Blakeway 1906, 394). Much later, in 1317, a rent was sold of a tenement in the High Street which 'extends in length from the King's way up to the bank of the Severn' (Blakeway 1906, 389). Blakeway was aware that at least some of the documents referring to the 'High Street' were, in fact, describing the modern Pride Hill, but these references were nevertheless a source of confusion to him, and to his editor. It will be argued below that the only conceivable location for these particular properties was on the north-west side of Pride Hill.

The Bennett's Hall Site. (plan, fig. 31)

Bennett's Hall is the name generally applied to the remains of a large and obviously wealthy stone building, lying gable-on to the street, a short distance behind the frontage of Nos. 2-3 Pride Hill. As already noted, the building had already attracted the attention of various artists and archaeologists or architectural historians before it was surveyed by J.T. Smith in the early 1950s. Smith identified it as a first floor hall, about 72 feet by 35 feet externally (c.22 by 10.6 metres), built in red Keele Beds sandstone with some white Grinshill sandstone detailing and modifications. It lay gable-on to the street, set back from the frontage. The building was divided into two unequal-sized rooms at undercroft and first floor level by a partition wall with paired arches on both levels. In the undercroft, cut into the slope, two

large arches were separated by a pier; above, two smaller arches flanked a hooded fireplace, heating the smaller front room, whose capitals suggested a date of c.1260. By the 1950s the building survived in a fragmentary condition, sub-divided into a number of properties. An alleyway, Leopard Shut (after a pub of that name on the frontage) passed from the street through the eastern arch of the undercroft to give access to cottages built within and beyond the back of the medieval building. The east wall had gone, except for fragments, the position of the front wall was indicated only by the survival of a small quantity of masonry in the cellar. The west wall was substantially intact, with a number of original window openings and, at undercroft level behind (i.e. to the north of) the partition wall, a damaged opening for a doorway. Immediately in front of the partition wall in the west wall at first floor level were traces of another doorway (Smith 1953, 148-60). Redevelopment of the building took place at the end of the decade, and was monitored by the R.C.H.M. The partition wall was preserved, intact but for a decorated tympanum over the eastern first floor arch, and incorporated in a new building. The west wall was demolished, but a remnant of the north (back) gable wall was left outside the new building (see plan, fig.31).

Medieval written sources relevant to the site appear to be restricted to two nevertheless helpful deeds. The first can be dated to the period 1186-1224: Gilbert Meverel sells to Sir Renier, Bishop of St Asaph, an annual rent of 5 shillings from his messuage in Shrewsbury lying between the land 'which was Warin's the son of Elfwife and Adam the baker's'. The location of this messuage would be unknown save for its appearance in a deed of 1378, when

the rent charge was held by Haughmond Abbey and Gilbert Meverel's tenement was owned by Sir John de Ludlow, and leased to two others. The property was very fully described: 'three shops nearest the corner near the lane called Rowshillis Lane, namely, in the tenement formerly called Benette's hall, exactly opposite to the Heystrete, which was formerly called Gombaldstolestrete'. The dimensions of the property were given as 32 feet by 32 feet (Blakeway 1905, 275, 277-8), and from the landmarks, there is no doubt that it can be identified as the modern No.1 Pride Hill (Lloyd's Bank) - actually a separate modern property to that (Nos. 2-3) containing the remains of the large sandstone building.

The redevelopment of Nos. 2-3 Pride Hill around the remains of Bennett's Hall in 1958, the redevelopment of No.1, the Lloyd's Bank site in the mid-60s, and the enlargement of the Boot's premises, Nos.7-9, in the early 1970s, were all significant stages in the gradual transformation of the traditional building pattern at this end of the street, a process begun by the building of Boot's in 1907, and brought near to completion with the opening of the Pride Hill Centre in 1988. The 1882 Ordnance Survey plans show a frontage that was intensively sub-divided into narrow properties, the boundaries between them becoming obscured away from the frontage amid a dense and chaotic pattern of small buildings to the rear within the line of the town wall, the latter clearly visible as a substantial terrace. Two alleys gave access to this back area. Leopard Shut, as described above, was inserted through the remains of Bennett's Hall to give access to the timber-framed cottages that colonised its interior, and to further

buildings beyond. Bythell's Passage, one narrow property to the north-east, led via steps built through the town wall terrace into Raven Meadows below.

The excavation (figs. 31 and 32)

At the beginning of 1986, for a period of two weeks before redevelopment work commenced, an area of just under 100 square metres was excavated immediately to the rear of the standing buildings of Nos. 1 and 2-3 Pride Hill. The area extended from the Roushill Bank frontage to the line of the former Leopard Shut, which, in 1986, was still marked by two surviving early 19th-century brick buildings. These were recorded and demolished. The mechanical removal of modern demolition rubble from the site immediately revealed patches of the natural clayey-silty sand bedrock showing between areas cut by negative features or covered by shallow stratified deposits. The excavated area was found to be divided between three shallow terraces, the lowest on the Roushill frontage, the highest to the north-east, each terrace stratigraphically isolated from its neighbours. No stratified deposits survived on the lowest terrace adjoining Roushill, where a large area of natural sand was seen to be cut by features of late post-medieval appearance, and was not excavated.

The middle terrace was itself divided into two stratigraphically-separate areas by a modern brick wall at right-angles to the Roushill frontage, though the sequences either side were comparable. To the south-east (towards Pride Hill) an irregular shallow scoop (F24) was found cut into the natural sand, its silty clay fills containing a medieval stone mortar. This feature was sealed by an extensive spread of pink and brown clays

containing quantities of sandstone rubble. These were bounded to the south-west, at the junction of the south and middle terraces, by a row of irregular sandstone blocks (F33), their north faces set in a straight line parallel to the frontage. This feature could represent the foundation for the rear wall of a timber-framed building, 4.5 metres deep, (c.15 feet) on the Roushill frontage, with the clay spreads behind possibly representing the remains of floors to a further structure.

To the north-west, on the other side of the dividing wall, excavation could not be completed and a series of intercut features were left partly unresolved and unexcavated. The earliest (partly excavated) feature was an irregular hollow (F20), which had been backfilled and the surrounding area levelled-up; this material was cut in turn by a shallow bowl-shaped scoop (1040) itself subsequently backfilled and levelled-up. The levelled surface was cut by a barrel-lined cess-pit (F19). Within the cess-pit, green silty primary deposits in the base, encircled by traces of the decayed stave lining, were sealed by a mass of dumped clay containing large quantities of building materials, particularly limestone and ceramic roof tiles. The levelled surface was also cut by a linear trench-like feature running north-west south-east along the edge of the terrace (F15).

The north-east terrace was found to have been extensively disturbed by foundations and by a cellar to buildings facing north-east onto the former Leopard Shut; only a small area 5 metres square containing a sequence of intercut features was excavated. A green-brown silty soil (1048) overlying the natural sand was cut by a feature (F21) that was either part of an oblong pit or the butt-end of a north-south ditch. The latter was sealed by

a dump of clayey soil containing large quantities of broken Harnage limestone roof slates. This in turn was cut by a flat-bottomed north-south ditch (F18). From its position and alignment, F18, and possibly F21, may be interpreted as a ditch marking the boundary between two separate burgage plots (see below). The soil (1030) filling the ditch was sealed by a further deposit of soil (1026), into which was cut a sequence of post-medieval pits and 19th-century to modern features.

The watching-brief and the town wall (figs.31 and 33).

Before redevelopment began, the line of the town wall was represented by a large brick terrace- or retaining-wall standing 7 metres high, with patches of sandstone masonry, varying in extent from about 5 square metres to a few blocks, visible amongst the brickwork. While the masonry (Keele Beds sandstone blocks of squarish proportions) was obviously derived from the town wall, the jointing was fairly coarse and the characteristic stepped chamfered plinth was nowhere to be seen (for elevation, see excavation archive). The wall ended about 36 metres short of the suspected gate at the junction of Roushill and Roushill Bank, having been truncated in the late 1960s (Toms 1969).

The mechanical demolition of the surviving section of town wall began with the removal of a secondary terrace wall 3-4 metres high in front (to the north-west) of it, which retained a mass of soil containing 19th-century debris against the base of the main retaining (town) wall, acting as a support (section, fig.33). Further sandstone masonry was exposed in this process. The presence of a block from the chamfered plinth re-used upside-down

amongst the exposed masonry suggested that the general absence of the plinth *in situ* reflected the almost total refacing of the town wall in the post-medieval period. This suspicion was confirmed by the mechanical removal of a projecting section of the wall face to reveal - very briefly, before it collapsed - a short section of unweathered, finely-jointed masonry with the plinth intact. This was an exceptional survival of a short length of the original 13th-century face, covered by an applied skin of masonry rather than taken down and re-set.

As demolition proceeded it was possible to record two sections through the upper part of the town wall. Its core consisted of a mass of Keele Beds rubble, 1.7 metres thick, set in a distinctive greenish gritty mortar. The first section that was recorded lay at the north-east boundary of the development site, adjoining the side wall of Boot's premises (section, fig.33; location plan, fig.31). This revealed, under 1m of topsoil, a large pit or ditch (F32) 6-7 metres wide (north-south) cut close against the back of, and post-dating, the town wall core. It was filled by successive tips of gravel, sand and soil sloping downwards to the north, and its southern edge, cut against the natural sand, was obscured by a later pit. Neither the bottom of the feature nor the base of the town wall foundations were seen (see excavation archive for detailed section). F32 was at least 3-4 metres wide (east-west), observed between modern disturbance and the edge of the contractors' excavation, but did not continue further west, beyond the disturbance, into the area at the rear of Bennett's Hall. Here, the second (photographically) recorded section (location plan, fig.31 c-c) revealed a 45-degree cut in the natural clayey-silty sand behind the wall, backfilled by very slightly darker

material with charcoal flecks; this feature was interpreted as a construction cut.

A further large pit or ditch was recorded, again in section, within the town wall where it had been truncated in 1969, close to the Roushill frontage (F30; location plan, fig.31). It was of early post-medieval date, and its primary fill contained a large quantity of dumped medieval floor-tiles.

The identification of features exposed by machining outside the town wall was made particularly difficult by the waterlogged alluvial ground and the presence of substantial modern foundations. At the base of the town wall, sealed by the 19th-century terrace, was a linear zone containing particularly waterlogged deposits that may have represented silting within a defensive ditch. The contractors' machining proceeded parallel to the line of the wall and this hypothesis could not be confirmed (but see discussion, 3:3, below)

Bennett's Hall and its contemporary context

In the area outside the line of the town wall, to the north of Bennett's Hall, the first edition Ordnance Survey plans of the 1880s show two slightly curved north-south property boundaries running from the town wall (or from just inside it) into Raven Meadows; to the west, the parish boundary between St Alkmund's and St Chad's follows a parallel course, and is spaced equally with these other boundaries (figs. 31 and 40). Comparison with the rather clearer pattern of property boundaries further along the street leaves little doubt that these boundaries define the tails of three adjoining burgage plots, formerly

stretching from the Pride Hill frontage, across the line of the town wall, and down into Raven Meadows, the boundaries of the tails isolated by intensive sub-division and re-amalgamation occurring near the frontage. The line of the middle boundary outside the wall is continued within by F18, the excavated ditch, towards the north-west corner and side wall of Bennett's Hall, the boundary between the modern properties Nos. 1 and 2-3 Pride Hill, and, nearer the frontage, a property boundary documented in 1378 (see above). The line of the next extramural boundary to the north-east appears to be continued at the frontage by the boundary, mapped in the 19th century, between 5 and 6 Pride Hill (see figs. 31 and 40).

Further along the street to the north-east, it can be shown that the boundary between the former properties 8 and 9 Pride Hill was a boundary of medieval origin (by its association with S1 to the rear). The distance along the frontage from this boundary to the party wall between Nos 5 and 6 was approximately 66.5 feet (measured from the 1:500 plans), and the distance from there to the boundary between Nos. 1 and 2-3 was, again, about 66.5 feet. The measurements are close to the equivalent of 4 statute perches (66 feet). The cartographic, architectural, archaeological and metrological evidence is consistent with the interpretation that the frontage between Bennett's Hall and the S1 tenement was divided equally between two regularly-planned burgage plots with four-perch frontages and tails reaching into Raven Meadows. These frontage measurements could, quite rightly be regarded with caution, derived as they are, of necessity, from a map and not from direct measurement (Slater 1981), but confidence in their reliability was increased by the direct measurement of the frontage of the Pride Hill

Chambers property (Nos.10-12), where the distance between the demonstrably-medieval boundaries was found to be 65 feet 7 inches. While the width of the S1 tenement (c.36 feet) has to be regarded as an anomaly that is difficult to explain, there is further evidence of regularly-planned plot frontages beyond S2, and there seem reasonable grounds for believing that Bennett's Hall was built within, and adjoined the side boundary of, one of three planned burgage plots with a four-perch frontage.

The position of Bennett's Hall immediately raises a further problem. The only known access to the building, both at undercroft level and above, was through its west wall, outside which the line taken by the parish boundary appears to perpetuate the outline of a passage giving access to at least the first-floor door from the street frontage. It therefore follows that the hall's owners must have had rights of access through, or owned all or part of the plot adjoining the west wall. But if the construction of Bennett's Hall was preceeded by the acquisition of two adjoining plots, it is not immediately clear why the new building should have been located with its west wall on the now theoretically-redundant boundary. The only answer would seem to be that the position of the new building was determined by a constraint associated with the earlier plot layout. Pre-existing buildings seem the most likely mechanism, either directly or indirectly: directly if, for example, Bennett's Hall was built as an extension to or adjoining earlier buildings; indirectly if, for example, the position of the hall was determined by an existing entry following the old property boundary, and the entry's position was stabilised by buildings on the frontage that were immovable for economic or tenurial reasons. The entry would have overlooked the length of the

High Street, and may have been marked architecturally.

Bennett's Hall would, through the amalgamation of two conventional burgage plots, have been able to stand isolated from buildings in different ownership in a space resembling the private enclosures, created at perhaps a slightly later date, to the south of the new market place nearby. The evidence of access through the adjoining (amalgamated) plot also allows a tentative connection to be made between the structure known as 'Bennett's Hall' and the de Ludlow family, owners of the adjoining plot in 1378.

It is fairly certain that, for a time, the western boundary to the enlarged Bennett's Hall tenement was formed by Roushill Bank, or the buildings on its frontage. Further, it can be argued that this part of Roushill was an original feature of the planned layout of plots: the 1378 deed for the corner plot gives a frontage measurement of 32 feet (the frontage of the same property, Lloyd's Bank, now measures 33 feet), approximating to 2 statute perches, and consistent with the regular apportionment of the plot frontages in this area. There is, however, a complication. Outside the town wall, the tail of a further plot in the series can be recognised adjoining the west side of the western Bennett's Hall plot, separated by a property boundary coincident with the parish boundary, and with its west side defined by the lower, extramural length of Roushill (see figs. 40 and 41). This westernmost plot was substantial: its tail was still intact, though sub-divided, in 1725 (SRO 1048/4508 fol. 25v) and reached to the river bank. It seems most unlikely that this plot would have originally fronted onto a minor lane like Roushill Bank— rather more likely that it was also one of the Pride Hill series, or that it incorporated the corner

of Pride Hill and Mardol, and that Roushill Bank was a secondary feature cut through it. The documentary evidence is not inconsistent with this interpretation. The earlier of the Bennett's Hall deeds located the property between two adjoining properties; the 1378 deed located it with reference to the corner of Roushill. If Roushill had existed in c.1220 it seems strange that the earlier document did not use it as a landmark (this problem is discussed further below, 3:3).

There seems to be no evidence available to document the evolution of Bennett's Hall and its surroundings between the later 14th century and c.1600. The late 16th to early 17th century saw Bennett's Hall partially demolished and cottages built within its shell along Leopard Shut. It is perhaps worth noting that the line taken by the parish boundary between the hall and the town wall is that of the demonstrably post-medieval shut, a deflection from the original property boundary, and a warning against assuming the antiquity of the detailed courses of parish boundaries (see chapter 2:5, above). The frontage was also rebuilt at this time, as was that of No.1, next door. The latter survived, modified in 1876 for Lloyd's Bank, until the mid 1960s. A small area of timber-framing exposed in the side wall of No.4 (formerly sandwiched between Leopard Shut and Bythell's Passage) during redevelopment in 1986 suggested that this brick-encased building may also date from the same period; it is possible that Bythell's Passage may be contemporary, perhaps also associated with cottage infill behind the frontage.

13-16 Pride Hill

In 1883 the Rev. C. H. Drinkwater published a paper arguing that stone walls visible between the High Street and Fish Street, and along the north-west side of Pride Hill, represented the remains of a 12th-century town wall lying within the 13th-century circuit. At the back of Pride Hill he noted two walls 'running nearly parallel at a distance of about eight yards. The outer, and, as I infer, the more modern one, is of dressed freestone of excellent quality, and the inner one of softer, more friable, and more highly coloured sandstone, not regularly dressed nor so carefully put together' (Drinkwater 1883, 260). He illustrated his article with a map, and with a sketch showing a 'postern' in the outer wall and 'a very perfect embrasure, now converted into a window', the latter capped by a shouldered lintel, with a suggestion of the remains of another over the 'postern'. The idea of two parallel town walls was accepted for some years. Phillips, editing Blakeway's notes for his *Topographical History* in 1905, referred to it (Blakeway 1905, 254, n.2), as did Forrest in 1925-6 while commenting on discoveries at Nos. 25-26, (Forrest 1925-6, xxxvi). The first more realistic note was sounded by 'J. W. H.' (J. W. Heath) in 'The Under-World of Shrewsbury' article quoted in the introduction. 'At Nos. 15, 16, and 17 is a curious medley of stone walls; there has evidently been a large house here some time. In No. 16 is a window in the inner wall, with the drip-stone on the outside, while in 15 is a door-jamb which opens toward the outer wall, showing that both walls were used in this building' (Shrewsbury Chronicle 24-1-1913). The non-military origin of the walls observed by Drinkwater was finally made clear by Smith (1953, 109-113), who noted

the domestic character of the windows in the outer wall and suggested that they and Drinkwater's walls belonged to an early building.

Almost nothing is known of the medieval frontage of these particular properties. However, an undated but inter-war photograph in the Local Studies collection shows the final stages in the demolition of a shop on the frontage of No.18, a short distance to the north-east. Careful inspection reveals the clear outline of a crown-post roof truss and other timber-framing embedded in the party wall between Nos.17 and 18. This is of interest for two reasons. First, it indicates the former presence of a three-storey medieval building on this property, and may be taken as at least a guide to the character of the later medieval buildings to be found on this part of the frontage. Secondly, with the archaeological evidence for a medieval building on the present frontage of Nos. 22-23 (see below), it removes any possibility that there has, as previously suggested, been a shift in the frontage associated with wholesale encroachment onto a formerly much wider street (Carver 1983a, 3): the modern frontage line was also the medieval one.

In 1987 all the accessible basements from No.13 Pride Hill to No.17-18 were visited as part of a preliminary survey of cellars in this part of the town centre. The basements of Nos. 14, 15, and 16, proved to be identical in their general layout. Immediately below street- and shop floor level is an upper cellar, reaching from the street frontage to the back wall of the present buildings (externally, of early 19th- and 20th-century date). Beneath this, towards the rear of each property, is a lower cellar with back, front, and some side walls of sandstone (section, fig.35). Measured surveys confirmed

the initial impression that these walls were part of a larger structure or structures sub-divided between the modern properties (plan, fig.34).

The front (south-east/street-side) wall of the lower cellar is built of red-purple coursed Keele Beds rubble. Within the lower level it is a largely featureless terrace wall, though in No.16 an irregular opening to a small 18th- or 19th-century coal cellar has been inserted through it (elevation, fig. 36). Within No.16 this wall does not survive above the upper cellar floor. However, in No.15 it survives at two points to virtually the full height of the upper cellar (i.e. to outside ground level), and in No.14 it survives to a height of c.0.9 metres above the upper cellar floor. In the upper part of the wall in both of these properties are a number of original or at least early blocked openings (fig.36). In its north-west face within No. 15 are two such features: the bottom of a window, blocked with masonry, c.1.4 metres wide, with Grinshill stone jambs and sill (the latter displaced and projecting from the wall-face) treated with a shallow 45-degree chamfer; and immediately to the south-west, one unchamfered Grinshill jamb and part of the sill of another opening, blocked with brickwork and cut by a later, larger, brick-blocked opening. In the south corner of No.14, the stairs from the upper to the lower cellar descend against the wall face over a large block of masonry. The wall face above the steps is largely obscured and no features are visible; however, in the other side of the wall (the south-east face - towards the street), in a small room of the upper cellar, the top of blocked two-centred medieval door arch is visible. The stairs into the lower cellar must partly block this opening, but the masonry over which they descend may be

part of the original stairs descending into the lower cellar through the doorway. To one side of the stairs in the lower cellar is a small hole in the wall face, interpreted as a lamp niche.

While the party walls between Nos. 14, 15, and 16 are of brick, the side wall in the lower cellar of No. 16, separating it from No. 17, is also of Keele Beds rubble. It appeared to represent a return of the front wall, but the junction was inaccessible and the contemporaneity of the two could not be proved. The party wall between Nos. 14 and 13 is also of sandstone rubble, but where the fabric was visible it proved to be a mixture of Grinshill blocks with some Keele Beds. It was also found to butt up against and be later than the front wall, which appeared to continue south-west through into No. 13 next door.

The back wall, common to the three properties, is substantially medieval up to the upper cellar floor level. From the outside an area composed of large blocks of Grinshill stone is visible in the rear elevation of No. 15, surrounded by 19th-century and later brickwork. Within the stonework is a small rectangular window opening, blocked with brickwork. Inspection of the interior revealed the much larger outline of the splayed opening, capped by a shouldered lintel- as sketched by Drinkwater a century before. Next to the window is the feature described by Drinkwater as an 'embrasure'- a low, irregular opening, roughly inserted through the wall but now only visible from the interior, with a head resembling a two-centred arch formed by cutting through the masonry blocks of the wall. Both it and the window can be seen in their unblocked condition in an undated but pre-war photograph.

It is likely that the window was one of a series in the rear elevation. The present back doorway of No. 16 giving

access to the garden from the lower cellar is a splayed opening of similar width to the surviving window. One unrebuilt Grinshill jamb reveals it to have been an original feature, and the presence in this of a hole to seat an iron bar suggests that it was a window opening, later enlarged. The back doorway to the lower cellar of No. 15 is now completely modern in construction, though it is the same distance from the surviving window as No. 16's doorway, and it too is likely to be an enlarged window in origin.

The back doorway into No. 14 is, similarly, of brick construction but likely to be the successor to an original opening, if only because of the labour involved in creating new ones. This door, however, is not spaced equally with the surviving or suspected windows, but is placed opposite the blocked doorway in the front (south-east or 'inner') wall; it may well be the successor to an original doorway, quite possibly reflecting the presence of a cross-passage in the building above, used as the basis for the sub-division of this side of the property in the post-medieval period.

While some problems in its interpretation remain to be discussed, there seems no doubt that the space represented by the lower cellars of Nos. 14, 15, and 16 is the greater part of a cellar or undercroft of medieval date, and for brevity it will be described henceforward as Structure (S)3, extending the numerical series started by Carver working in the adjoining properties.

The wall junctions show that the undercroft, S3, formerly continued into No. 13. The cellars under this property were investigated but found to be of entirely 20th-century date, part of an enlargement and rearward extension of the premises in the 1920s or 30s, though a

change in floor level in the much more extensive upper cellar present here appears to reflect the position of the front wall of the undercroft. It is possible that the undercroft (S3) extended as far as the side wall of the Pride Hill Chambers building (S2) on the adjoining property.

There is some evidence that the fabric described is of more than one phase of construction. The use of Grinshill stone for the rear wall, and Keele Beds for the front wall could be explicable in a single-phase building simply in terms of relative quality, expense, and visibility, particularly as much of the front wall was a terrace wall, visible only from the interior. However, the inner face of the rear wall is not bonded with the Keele Beds-built north-east (end) wall, but butts against it and appeared to be secondary (see plan, fig.34). It is conceivable that the walls are contemporary and merely badly bonded, but the unlikely possibility that the back wall (and superstructure?) was rebuilt within the medieval period cannot be dismissed. Potential motives for this may be found in, perhaps, structural failure resulting from the known instability of buildings on this slope (Carver 1983, 44), or perhaps in the first exposure to public view and to daylight of the bottom of the rear elevation, following the reduction of the town wall a very short distance to the north-west (see below). It is also uncertain whether the Grinshill stone-lined openings in the front wall represent replacements of earlier features, paralleling developments next door (Clarke 1983, 18) or whether they merely represent the use of finer quality stone for architectural features in a single-phase wall.

Dating evidence for S3 scarcely exists. The blocked doorway in the front wall suggests only a wide, 13th-14th

century, date-bracket. The shouldered lintel is not much more closely dateable, a late 13th-century to late 14th-century date-range being perhaps the most likely in this context, and in association with Grinshill masonry used on a large scale in a secular building.

Further uncertainty surrounds the question of the floor levels within S3 and their relation to the contemporary ground-level between the undercroft and the street (section, fig.35), the openings in the upper part of the undercroft's front wall being, in modern terms, subterranean. Modern ground-level on the street frontage appears to have been very close to the medieval level: there is no question of a post-medieval build-up. Two solutions suggest themselves. First, that the medieval ground surface was level between the frontage and S3 at the rear, that the window in the undercroft's front wall was actually a light-well, and the door was at the bottom of a stepped passageway (similar to that beside the Pride Hill Chambers undercroft). Second, between S3 and the frontage lay a courtyard at a level below that of the street. Without excavation, there is insufficient evidence to assess each hypothesis, though the second finds some support in the observation by the investigators of Pride Hill Chambers that there appeared to be the beginning of an indentation in the natural slope immediately north of their site (Carver 1983a, 22, and his fig.2), the 200-foot contour swinging sharply eastwards towards the street. If the medieval tenement represented by Nos.13-16 had been laid out over a slight defile, the most efficient way of maximising the useable space within it would have been to create an extra terrace level - two tiers between the frontage and the town wall - i.e. a sunken courtyard in front of S3, probably reached via a stepped entry through

the frontage buildings (much like the upper end of Seventy Steps- see below).

This obviously has implications for the likely ground floor level of the building over S3, and the question as to whether the windows in the front and back walls lit the same space. If the courtyard was below street level, it seems unlikely that, given the need for access from it, the floor-level of the rooms (in all probability a hall and solar) over S3 would have been substantially above courtyard level, higher than the top of the window and other openings seen in the front wall. It seems more likely that the floor level of the superincumbent rooms would have been at or very close to courtyard level. If the courtyard was at the present street/shop-floor level, then the hall and solar may also have been, over a very high undercroft lit through the front and rear walls. If, as seems the more likely, the courtyard was below street level, so too was the hall, and the openings in the front wall of S3 must be features of the hall, not its undercroft (reconstructed section, fig.35-2). The evidence of the existing floors of the upper cellars over S3 is ambiguous. Those in Nos. 14 and 16 are post-medieval or modern. In No.15 the floor-frame is of substantial construction, supported partly by modern brickwork, partly by vertical posts, and partly by joist-ends embedded in the walls. Part of the floor frame has substantial flat-laid joists and could possibly be medieval, though whether *in situ* or merely re-using original components could not be determined.

These questions have yet further implications for the construction of the building: if, as suggested, the hall floor was level with a sunken courtyard, it is probable that the superstructure was built in stone up to eaves

level; if the hall floor was at street level, above the top of the surviving stonework, the superstructure above S3 could have been stone or timber-framed.

The adjoining basements to the north-east (17-18 Pride Hill) were also visited. No stonework was found in the cellars immediately below street level: a lower level apparently exists beneath these at the rear of the premises, but was inaccessible when the survey took place (1987). Sandstone re-used amongst the brickwork in the rear elevation suggests that a structure comparable to S3 awaits investigation here. While the possibility that S3 itself continues north-eastwards into these properties cannot be altogether discounted, there is strong evidence that these properties are part of a separate medieval tenement. To the south-west, the party-wall and property boundary between Nos. 12 and 13 Pride Hill is demonstrably medieval in origin- it is the boundary of the Pride Hill Chambers property, coincident with the end wall of the undercroft S2, and part of the boundary itself (a short length of sandstone wall) was excavated and proved to pre-date a 16th-century oven (Toms 1983, 8). The next property boundary north-eastwards along the street to respect rather than cut a medieval feature is the boundary between Nos. 16 and 17, coincident with the end wall of the undercroft S3. The distance along the frontage between these two boundaries is 83 feet 9 inches, which may represent five statute perches (82.5 feet) (see 3:3 below for further discussion of the problems of the metrological evidence). It will be argued further below that S3 occupies one of a series of regularly-planned plots, each with a frontage measurement of five perches, and that

Nos.17-18, with Nos.19 and 20, are part of the next plot in the series.

No direct evidence was found for the course or fabric of the town wall in these properties. However, its line can be reconstructed with some confidence by extrapolating between the rear elevation of the Pride Hill Chambers building, which incorporates it, and the rear of No.23 Pride Hill where it was encountered in underpinning work c.32.5 metres from the street frontage (see below). This suggests that the wall lies under the edge of the terrace at the rear of Nos. 14-18, a distance of about 6 metres from the back wall of S3.

The process and date by which the original medieval tenement and S3 within it came to be sub-divided is partly obscure. The present buildings on the frontage give the completion of the process a *terminus ante quem* of the early 19th century, but this is hardly suprising or useful. On structural grounds, solely from the evidence of the cellars, the earliest property to have been carved out of the larger plot is likely to have been No.13, probably alienating the former solar end from the remainder of S3. All of the derivative properties, with the sole exception of No.16, included a strip of the former plot tail running down the hillside to Raven Meadows; No.16 was provided only with a very short garden reaching to the edge of the first garden terrace. The derivative plot tails, recorded by the Ordnance Survey in 1879-80, survived largely intact until 1987-8.

The possibility that further evidence for the evolution of the medieval property and the buildings it contained may well lie concealed in the present structures above ground level cannot be discounted.

20-26 Pride Hill

Before redevelopment commenced in 1987 this part of the street - opposite the site of the medieval High Cross - was dominated by two premises, each of some significance in the history of the town's commercial architecture. Nos. 24-26 were, and still are, occupied by an Elizabethan-style building which began life in 1927 as Morris and Co.'s department store and cafe, with a food hall modelled on Harrod's and a ballroom with a sprung dance-floor. 20-22 Pride Hill was occupied by the town's first Woolworth's, a brick, steel, and concrete building with sales-floors on two levels and stock-rooms terraced into the hillside, also built in c.1927 (demolished in 1987). No.23, a surviving brick-faced timber-framed building lay between the two, separated from 20-22 by the alleyway known as Seventy Steps running down the slope to Raven Meadows.

Observations, recorded mainly in the 19th century, suggested that 20 and 22 Pride Hill were, or had been, the site of some potentially interesting structures. In about 1879 'the floor of a cellar next the street at No.20 Pride Hill fell in, and beneath was found a small vaulted crypt, cruciform in plan, but it had been so rudely repaired that all distinguishing features are destroyed' ('Bye-Gones' 8, 1903-4, 321). Next door at No.22, adjoining Seventy Steps, the historian J.B. Blakeway recorded 'an ancient edifice of Grinshill stone said traditionally to have been a chapel' standing opposite a public house a short distance behind the frontage (Blakeway 1905, 272). His editor added 'this structure still exists, and has more the character of a tower than a chapel, and stands on the line of the earlier wall of the town' (272, n.2). Blakeway's ecclesiastical

interpretation suggests that it might also have been the former 'chapel' 'now a warehouse adjoining a shop at the top of Pride Hill' listed by T.F. Dukes in 1844 (Dukes 1844, Appendix, xii). It did not escape the Rev. Drinkwater: 'down the seventy steps' passage', he noted, 'a doorway with a semicircular heading leads into a large vaulted room between the old and new wall, which is lighted by two very perfect embrasures' (1883, 264). This description allows us to equate the structure with that illustrated by Auden, misleadingly titled 'Town Wall (Pride Hill)', showing a semi-circular headed low doorway in a battered rubble wall, with timber-framing of 16th-17th century appearance over (Auden 1923, 31).

The solidity of the Woolworth's building and the extent of its basements suggested that neither these nor any other early structures could have survived. However, exploratory work in the basements by the site engineers led to the revelation of sandstone structures behind the modern brickwork, and the demolition of the superstructure allowed these to be recorded. Pre-Woolworth's cellarage survived immediately below street level for a distance of 16 metres back from the frontage, beyond which it had been truncated by the lower sales-floor (section, fig. 37). The cellarage reflected the earlier building pattern shown by the first edition 1:500 Ordnance Survey plan, with a long narrow cellar belonging to No. 20 separated by a narrow stepped alleyway from cellars under No. 22. The latter, with the alleyway, had been filled in and sealed off, while No. 20's cellar had been retained in use by Woolworth's (plan, fig. 38).

The cruciform 'vaulted crypt' under No. 20 was not seen. A patch of mixed sandstone ashlar re-used amongst the brickwork of the party wall between Nos. 19 and 20, near

the frontage, suggested the possibility of a source in the vicinity. More definitive evidence was provided by engineers' bore-holes which confirmed the presence of a backfilled space under the cellar floor. However, the area was unaffected by the 1987-9 building and awaits investigation in the future.

Two early structures were recorded within the property that had been No.22. The first to be encountered consisted of three sides of a sandstone-built cellar or undercroft (S5), about 11 metres from the frontage, adjoining Seventy Steps (plan, fig.38). The bulk of the wall fabric was Keele Beds sandstone rubble. Where the outside face was visible (as in the alleyway between it and No.20) it was coursed and roughly squared, where subterranean, uncoursed and unsquared. The interior of the major part of the surviving structure was lined with large blocks of very finely-jointed Grinshill ashlar (elevation, fig.39), though the north-west end- which was much reduced in height - was built with Keele Beds and mixed sandstone rubble, irregularly butt-jointed with the ashlar-lined masonry. The masonry observed at the north-west end is likely to have been secondary. It appeared to be contemporary with the springing of a brick barrel-vault which could be seen to have been roughly hacked into the Grinshill ashlar of the side walls and mortared to the end wall leaving a semi-circular scar (elevations, fig.39). The side wall adjoining Seventy Steps was traced as a foundation, cut into the natural sand for a distance of about three metres north-west from the point where the Woolworth's lower sales-floor truncated the structure. Whether S5 was part of a rectangular building end-on to the street or part of a more complicated plan is unknown. No original openings were recorded. An inserted doorway in

the front (south-east) wall was associated with a 19th- or 20th-century passageway linking S5 with the cellar on the frontage (see below).

S5 can be safely equated with the building observed by Blakeway, Drinkwater, and possibly Dukes, and illustrated by Auden. Auden's drawing introduces the problem of dating evidence. No architectural features or artefacts were found that would allow S5 to be dated with any precision. Its construction throughout in sandstone immediately suggests a pre- 18th-century date. The Grinshill ashlar blocks did not appear to have been re-used, though there were some irregularities in the coursing of the front wall; the use of this type of stone for a domestic structure, rather than for ecclesiastical use or detailing, suggests a 14th-century or later origin. Auden's illustration shows a superstructure built with what appears to be square-panelled timber-framing of possible late 16th- or early 17th-century character, but this may well not have been contemporary with the supporting stonework: it will shortly be argued that the original superstructure to a medieval cellar on the frontage of the same property was replaced at precisely this period. In conclusion, all that can be said with certainty is that S5 represents part of a well-constructed cellar or undercroft, of later medieval or early post-medieval date, and of unknown plan. However, its location, terraced into the hillside some distance behind the known medieval frontage, does begin to sound familiar, and it would seem unwise to dismiss the possibility that here we have another example of a relatively high-status later medieval building, stone or stone and timber-framed, set back behind the commercial frontage (7).

The frontage of No.22 proved to contain another stone

cellar (S4; plan, fig.38; section, fig.37; elevations, fig.39). Three original walls were revealed, each constructed of uncoursed Keele Beds rubble with very occasional blocks of Grinshill stone, all heavily rendered and whitewashed inside. The front wall and rear walls contained rectangular window-openings, though it was not possible to tell whether these features were primary. The opening in the front wall, substantially below street-level, can only have been a light well. The surface of the natural sand at the rear, between S4 and S5, lay about 1.5 metres (5 feet) below the street, roughly level with the sill of the opening in the back wall of S4. This could, therefore, have been a fully-exposed window, lighting the cellar from a rear yard somewhat below street-level. The back wall also contained a wide doorway, but whether original, enlarged or inserted is not known. The ground-level between S4 and S5 appeared to have been raised by dumping in the 19th century, possibly prior to the construction of the ?single-storey cottage visible in Auden's illustration between S5 and the rear of the frontage buildings. The doorway in the rear wall of S4 appears to have been retained as part of a subterranean passage giving access between the cellars.

The side wall of S4 adjacent to Seventy Steps was, alone, of recent brick construction. Both this wall and the ground under the paving of Seventy Steps were removed by the contractors to a point just short of the frontage. The back wall of S4 was found to continue beneath Seventy Steps, passing through the side wall of No.23 next door and under a principal post of the latter's timber frame. Where the alleyway passed over S4, the cellar had been backfilled with rubble around the remains of a pair of small brick barrel-vaults which had clearly carried the

paved surface over the cellar before the construction of the Woolworth's building. The side wall of No.23 continued below pavement level as a blocking wall across S4, built of roughly-coursed hand-made bricks (22 x 6 x 5.5-6cms). This brickwork had been built against, and was later than, the plaster on the inside face of S4's rear wall, but a vertical discontinuity in the plaster at this point suggested that the brickwork of the blocking wall replaced an earlier partition on the same line.

The cellars under No.23 were investigated. The room on the frontage proved to be the same width as S4 next door, and, while all the wall faces were rendered, a missing patch on the party wall with No.24 on the far side near the frontage showed this to be constructed of Keele Beds sandstone rubble, of similar character to the masonry of S4.

There seems little doubt that the cellar S4 encountered within the redevelopment site (No.22 Pride Hill) represents only half of the original structure, the other half lying under No.23. As reconstructed, S4 would have measured c.14.8 by 4 metres (c.48 by 13 feet) internally, proportions that suggest that it would have been the cellar to a terrace or row building rather than a single shop or dwelling. The timber-framed superstructure to No.23 is of late 16th- to early 17th-century date, a three-storey building with square-panelled timber-framing, short straight braces and a hewn jetty on the frontage (8). The side wall adjoining the alleyway is an original end/exterior wall.

A simple sequence of developments can be proposed. S4 represents the cellar of a terrace or row-building pre-dating c.1600; allowing a reasonable life-span for its primary superstructure, it can be argued that it was of

late medieval date. In c.1600 its superstructure was demolished (in whole or in part) and S4, and the containing property, were sub-divided following the line of a pre-existing partition, perhaps a boundary between tenancies. A new three-storey building was constructed on the north-eastern half (No.23), separated from the south-western half (No.22) by a new alleyway giving access to the rear of the plots. The superstructure of S5 at the rear may have been replaced at the same time (see above); there is no evidence for the form of the post-medieval, pre-19th century building on the frontage of No.22.

The evidence from Nos.20-23 is fragmentary enough; the evidence from the adjoining properties to the north-east (24-26) is far worse. In 1880 the Rev. W.A. Leighton claimed this area as the site of 'Pride's Mansion', the capital messuage of the mercantile family whose name became attached to the street (Leighton 1880, map opp. p.98). In and around 1912, the 'committee of the learned society' (the Caradoc and Severn Valley Field Club) referred to earlier in search of the town walls in underground Shrewsbury, visited these properties and found remains of what they took to be fragments of town walls (Davies 1912, 185), but the map they used to locate these structures appears to be lost. Before redevelopment in the 1920s the area consisted of very narrow properties, intensively developed at the rear. Nos.25 and 26 were separated by Budgett's Passage, which gave access to buildings around a rear courtyard. At least one of the frontage buildings is likely to have been of medieval origin: pre-1920s photographs in the Local Studies collection show No.24 to have been a tall, narrow building with a steeply-pitched roof behind a high parapet. This,

and the projection of the front wall well beyond the street-line betray an encased timber-framed structure with an underbuilt jetty.

In 1925-6 H.E. Forrest published some brief observations made during the redevelopment for Morris and Co. He recorded, firstly, 'a very thick wall of red sandstone blocks....about eight yards back from the street'. This he interpreted as the 'inner town wall', from which one can probably infer that it ran parallel to the street. He also mentioned 'a mass of masonry' - 'possibly a third town wall' mid-way between the other two (Forrest 1925-6, xxxvi). No other comprehensible source of information is available to shed more light on these observations. Forrest's red sandstone wall, if it was not defensive, is likely to represent either a terrace or part of a building, or both, given the parallels on the neighbouring properties. If it did indeed run parallel to the street and it was part of a building, it would have to have been an exceptionally large structure (of the size of Bennett's Hall) to have reached the street. It seems more likely that here, again, a substantial building lay behind the street frontage, though it would clearly be dangerous to speculate any further.

The majority of the 1927 Morris and Co. building was left untouched by the 1987-9 redevelopment; as a result watching-brief observations were confined to the rear of the site at the junction between the old and new structures. Two relevant observations were made.

First, the medieval town wall was located by monitoring underpinning work at the rear of the retained buildings. At the rear of No.23, c.32.5 metres from the frontage, a vertical shaft excavated by the contractors encountered a mass of Keele Beds sandstone rubble set in a

greenish gritty mortar, identical to the core of the town wall observed on the Bennett's Hall site. The location of this sighting at the rear of No.23 is consistent with the line of a substantial mapped terrace wall at the rear of the Castle Street properties to the north-east, and from there, with the next recorded observations of town wall fabric in the Castle Court area (Smith 1953, 108-9; features observed in Rodney House rear elevation in 1987). Any doubt that the town wall had been encountered was dispelled by further underpinning work in the same area: all excavations between the hypothetical town-wall line and the street encountered natural sand close to the surface; excavations to the rear of this line met depths in excess of 4.6 metres of post-medieval backfill deposits. This suggests that the town wall in this area retained a substantial terrace, which was extended outwards in the post-medieval period by the construction of a further supporting terrace, probably in an attempt to stabilise structures built on the hillside (see section, fig.37). One final, tantalising, observation was made in less than ideal circumstances (rapid inspection of the bottom of a c.8 metre deep, ill-lit, narrow shaft): the town wall fabric cut through by the underpinning shaft may well have incorporated some type of opening. The excavation appeared to encounter a flat mortar surface that ended against two faced sandstone blocks, in line, approximately at right-angles to the course of the wall. The re-use of earlier faced masonry in the town wall core is unlikely, and it seems possible that this feature could represent the base of the jamb of a postern, though whether primary or, as at Pride Hill Chambers, associated with the post-military use of the wall, is unknown.

The second observation of general interest in this area was of another sandstone-built structure (S6). This was encountered as a large sub-divided lower basement, terraced into the slope at the rear of Nos.25-6, with its north-west end on the line of the town wall. Its side walls both contained areas of Keele Beds sandstone rubble, large blocks of coursed, squared rubble set in a brown sandy mortar in the south-west wall, smaller more irregular rubble in pinkish mortar in the north-east wall. The masonry in neither wall resembled that of the town wall, distinctive in this area for its squarish proportions and fairly uniform dark purple colour. The foundation courses of both walls were largely of modern brick or concrete. While these foundations could well represent underpinning to an older structure, it is doubtful whether S6 itself contained any fabric of medieval date *in situ*, rather than re-used. There is, however, no doubt that S6 pre-dated the 1925-1926 redevelopment: it can be recognised on the first edition 1:500 Ordnance Survey plan (1882), on Budgett's Passage, with its south-west wall lying on the boundary of a truncated plot tail running down the hillside into Raven Meadows (general plan, fig.40).

As at Nos.13-16 Pride Hill, metrological evidence may be used to help determine the boundaries to the original plots that contained the recorded buildings. It has been argued that S3 (13-16 Pride Hill) lay within a plot or tenement possibly 5 statute perches in width. The distance along the street frontage from the north-east boundary of the S3 tenement to the end wall of S4, lying against the alleyway separating it from No.20, was approximately 83 feet, suggesting that the modern properties 17 to 20 Pride

Hill are sub-divisions (not on perch-based measurements) of another primary five perch (82.5 feet) plot. Proceeding further along the street to the north-east there is a lack of archaeologically dateable structures to signpost property boundaries of medieval date. From the cartographic evidence of the first edition Ordnance Survey plan alone, however, two potential primary boundaries stand out: furthest away, the boundary between Nos.3 and 4 Castle Street passes from the frontage, through the town wall and into Raven Meadows with a distinctive westward curve; about half-way between it and S4/S5 at No.22 lies a similar curving boundary followed within the town wall by one wall of S6 (see fig.40). The frontage length between No.22 and the boundary between 3 and 4 Castle Street was measured, and found to be 165 feet 3 inches, or almost exactly 10 statute perches (165 feet). The boundary marked by S6 could not be measured, but it must surely represent the boundary between two five-perch plots.

In conclusion, it can be argued with some confidence, that next door to the tenement containing S3 lay another (represented by Nos. 17 to 20 Pride Hill), which included the site of the enigmatic cruciform vaulted crypt. S4 and S5 occupied part of the next adjoining plot (represented by 22-24 and half of No.25), S5 at the rear, S4 occupying part (rather more than half) of the frontage, implying that at least the frontage of this plot was already subdivided within the medieval period. Adjoining was a further 5-perch plot (Nos.25-6 and 1-3 Castle Street) about which nothing is known, save that there is, in Forrest's observations, a hint of a similar building pattern, and that it contained an undateable structure (S6) incorporating probably re-used domestic stonework.

3:3 DISCUSSION

The Pride Hill plot-series and its context.

It has been argued that surviving and cartographically-recorded property boundaries may be used to place these buildings within a contemporary tenorial context. This is easiest to demonstrate in the case of S2 (Pride Hill Chambers: Carver 1983a). Here, an identifiably unitary structure spanned the entire width of a property whose boundaries can be followed from both maps and standing structures from the street frontage, across the line of the town wall and into Raven Meadows. This property also provided the first indication that the frontage-widths of the medieval properties were laid out in multiples of the statute perch. It is suggested that to the north-east of S2 was a series of at least four plots with five-perch frontages; S2 was contained within a property with a four-perch frontage, and two more four-perch plots lay to the south-west, one containing Bennett's Hall. The plot containing S1 had a frontage width of 36 feet- either a non-perch based measurement or a very inaccurate one -and has to be regarded as an anomaly. Some doubt also remains over the original layout of the plots to the west of Bennett's Hall and their relationship to Roushill and Mardol. Despite these uncertainties, the evidence suggests that the Pride Hill-Castle Street plots were laid out with a degree of centralised planning, but to understand this further it is necessary to look at the plots as part of a rather wider context.

The plots at the west end of the Pride Hill series were laid out with a noticeable distortion in their plan- a strong north-eastward curve. This was designed to

accommodate the series of plots running back from the Mardol frontage: either the Pride Hill plots post-date those on Mardol, or they were laid out simultaneously as part of the same system (fig.41). The plots on the north-east side of Mardol between the Welsh Bridge and the junction with Roushill were all contained within the extramural stretch of Roushill. Within the triangular block thus formed, the plots fall into two distinct groups, either side of the alley known as Phoenix Place. To the north, the plots curve strongly northwards and their tails must all have ended, before the construction of the 17th-century riverside wall, on the Severn. This arrangement can be paralleled in other bridgehead areas (fig.42), in, for example, Westgate Street in Gloucester, Eastover in Bridgewater, French Gate in Doncaster (Slater 1989), and Dam Street in Lichfield, and while in the latter case it was suggested that the layout might reflect an earlier defensive feature (Slater 1984-5, 22), it seems more likely that it, and all the others, arose as a way of allocating waterfronts to the maximum number of plots.

To the south of Phoenix Place, the plots bend slightly southwards, away from the river, but are otherwise unremarkable. Beyond and parallel to the extramural part of Roushill lay the tail of the plot which, it was suggested, may have been separated from its original frontage by the insertion of Roushill Bank. This plot marks the junction of the Pride Hill and Mardol series, and it cannot be without significance that one side formed the parish boundary between St Alkmund's, which incorporated the Pride Hill plot series, and St Chad's, which incorporated the Mardol series (see below and fig. 41).

The metrology of Mardol and Mardol Head is more uncertain than that of the north-west side of Pride Hill. Both sides of Mardol were measured (9), and no individual properties whose boundaries could be shown to be medieval by their association with standing buildings were found to have perch-based frontage measurements. It is nevertheless possible that much larger units of property were planned in statute perch multiples. The Mardol frontage of the block of land bounded by Roushill Lane, Roushill Bank, and Mardol Head was found to measure 329 feet 4 inches (inclusive of Roushill Lane; a-b on fig.41), almost exactly 20 perches (330 feet). Northwards from Roushill Lane to Phoenix Place (the junction between the two dissimilar plot series on this side of the street; b-c on fig.41) the measured distance was 200 feet 6 inches, possibly representing an original 12-perch measurement (198 feet) with the displacement of the northern boundary by the width of a narrow entry. Any comparable arrangement to the north has been obscured by the post 18th-century redevelopment of the bridgehead area. On the west side of Mardol the distance between the corner of Claremont Street and the north side of Hills Lane (d-e) was found to be 300 feet 7 inches, and northwards from there to Caernarvon Lane (first recorded in 1580: Hobbs 1954, 20) (e-f) a further 297 feet 9 inches. It is possible that at least the latter dimension reflects an original 18 perch unit (297 feet). Within the Mardol- Hills Lane - Carnarvon Lane block, the plots end about half-way between Mardol and Hills Lane at a discontinuous back fence line that suggests that the modern properties represent subdivisions of three squarish primary plots. Frontage measurements for these of 114 feet 10 inches (e-g), 65 feet 7 inches (g-h), and 117 feet 3 inches (h-f) may

represent original planned frontages of 7, 4, and 7 perches (115 feet 6 inches and 66 feet). To the south of Hills Lane two possible primary plots (north to south, 81 feet 4 inches and 83 feet 3 inches: 1-j and j-k) may have had 5-perch frontages (82 feet 6 inches).

The north-west side of Mardol Head was measured, but the only perch-based frontage measurement that was identified was a possible 4-perch plot (65 feet 7 inches measured, 66 feet ideal) on the Mardol corner. This could be seen as a continuation of the Pride Hill series, but measurement between this, Roushill Bank, and the Bennett's Hall plot, showed no evidence of perch-based multiples and it is certain that the suggested metrological planning of the Pride Hill series did not extend continuously to the junction with Mardol. The metrological survey did not shed any further light on the question of the contemporaneity or otherwise of Roushill Bank and the plot system, nor did it offer a solution to the possible original extent of the plot whose tail adjoined the east side of Roushill outside the walls (see footnote 2).

These observations are offered extremely tentatively. While there is little doubt that the landmarks along Mardol which were measured were of medieval origin, the check on the authenticity of the measurements of individual properties, provided on Pride Hill by the repetition of measurements between boundaries dateable by their association with dateable buildings, is absent here. As a result, the significance of the coincidence, or near-coincidence, of a measurement in feet with multiples of 16.5 — a statute perch expressed in feet — is extremely difficult to assess. In part this a local problem, in part a national problem. Locally, there has not yet been sufficient comparable work in other parts of the town to

be able to comment on the probability or otherwise of the use of the statute perch in the laying-out of large, early, units of property. Nationally, there may be a much greater problem in the application of metrological analysis to town-plan analysis. Most town-plan analyses have been directed at medieval 'new towns' that are now of market-town size (e.g. Slater 1984-5, 1988); here, the numerical sample available for analysis will be relatively large: a unit of measurement may have been applied over a relatively large area by the original surveyors, and much of their layout may have survived relatively intact, without substantial modification by intense 19th- and 20th-century redevelopment of the sort found in larger towns. In those larger towns, such as Worcester and Shrewsbury, sample-sizes may be much smaller: medieval planned layouts may be smaller in scale - additions to an existing town as opposed to new towns - and evidence for original measurements may be less easily recovered, or irrecoverable, as a result of modern property amalgamations, street-widening, and street-insertion. More work, including a statistical review of the methodology, will clearly be required as plan-analyses become more common.

With these reservations in mind, some cautious conclusions may begin to be drawn. On Mardol, two large primary plots extending into Raven Meadows, defined by a very clear difference in the character of the secondary plots each contains, may have been laid out with some degree of metrological regularity, but sub-divided within the medieval period into small individual plots with frontages ranging from c.26-38 feet in width. On the west side, similarly large primary plots were sub-divided initially into smaller blocks, possibly with regularly-

apportioned frontages, and thence into smaller individual strip-like plots.

In contrast, the north-west side of Pride Hill shows no immediate evidence of such a hierarchy: there is no obvious sign that the suggested four- and five perch series were carved out of larger primary plots. However, the anomalies in the system, the frontage measurement of S1 and the non-perch-based layout of the Mardol head area, remain to be explained. It is possible that the regular plot-series were indeed sub-divisions of a larger unit of property which was not itself metrologically planned, and that the irregularities resulted from trying to fit a planned series into an unplanned frame. The boundaries to this possible larger, primary, area cannot be determined with any confidence, but there is a possibility that such an area may be represented by the large triangular block of St Alkmund's parish (without the minor deviations) defined by most of (perhaps originally all of) the length of Pride Hill as its base, and its apex on the riverbank (fig. 41). Its western boundary, with St Chad's, has already been discussed; the eastern boundary, with St Mary's, follows a field boundary shown by Rocque (1746) which determined - with some regularisation - the boundary of the Smithfield cattle-market in the 19th century.

A general scheme for the evolving partition of the Raven Meadows area can be proposed. The earliest division of the Raven Meadows area may have been its partition into three pre-urban units (fields) represented by portions of the parishes of St Mary, St Alkmund, and St Chad. Subsequent stages saw the sub-division of the St Chad's/Mardol field into two primary plots (or more, given the uncertainties

of the junction with Pride Hill) both of which retained access to the river; these were then sub-divided into 'conventional' urban plots of which only the series in the northern primary plot were provided with river frontages. Meanwhile, on Pride Hill, the initial pre-urban field had been regularly sub-divided, as far as possible, into large urban plots (see fig. 41).

This scheme raises further problems. It is clear from the documentation that two of the Pride Hill plots extended as far as the river, one in 1277, the other in 1317, though neither is individually identifiable from the available cartography. It is also clear from the documentation that, within the medieval period, part of the Raven Meadows area was common-land: 'the common land of the town called Roushill' is recorded in 1503 as the back boundary to a tenement on High Pavement (Castle Street). A map of 1725 (St Chad's parish book: SRO 1048/4508 fol 25v) shows the 'Rousel Meadow' extending up to the boundary between St Alkmund's and St Chad's. It is difficult to see how this could have been the case in the medieval period if, in the late 13th and early 14th century, some of the Pride Hill plots extended down to the river. The answer may lie in the extension of the common land at the expense of the further end of the plot tails, which, as a result of their isolation by the town wall and more general economic changes, had become of decreased value to their Pride Hill owners.

A more general and serious problem is raised by these observations in relation to earlier interpretations of the development of this area. Previous work on Raven Meadows has suggested that it was, in the 10th to 12th centuries, 'unexploited alluvium...at best water-meadow but more likely marsh' (Carver 1983a, 41), which did not dry out

until the mid-14th century (Barker 1960, 204-5). Before that, it had been a part of the early town site's natural defences (Carver 1978, 246) but of little or no economic value. These interpretations were based on the the analysis of plant remains from waterlogged deposits outside the Roushill town wall (Sinker 1960, 207-210), but it is now questionable whether the results from this small sample can be applied to the Raven Meadows area generally. Barker himself raised the possibility that the excavated deposits were contained within a ditch and were not part of a more general build-up, but rejected it on the grounds that the scarp in front of the wall was too shallow for a ditch, and that the north-south gradient would not have allowed a ditch to have been permanently flooded, as the deposits suggested: 'the nature of the lowest silting is that of continuous and not intermittent flooding' (Barker 1960, 201-2). However, evidence for a ditch is accumulating. To the unsatisfactory and ambiguous observations on the Bennett's Hall site can be added documentary evidence for a ditch in other parts of the town (Wyle Cop, Town Walls, the Castle Gates area: Blakeway). In addition, flooding in January 1988 drew attention to two adjacent passages off the east side of Mardol (King's Head Passage and the passage to the rear of Nos. 49 and 50). In each of these was a flooded depression c. 30 metres from the frontage: the impression given was that of a waterlogged linear depression parallel to the street, just outside the projected course of the town wall. While this observation alone is hardly decisive, taken with the evidence of the plot system and its probable date-range (see below), it does suggest that the notion that Raven Meadows was unexploitable before the later Middle Ages is in need of revision.

How then were Raven Meadows and the plots carved out of it used, particularly given the documentary and topographical evidence for the importance of access to the river? While the later plots nearest the river on the north-east side of Mardol could reasonably be suggested to be craftsman's tenements catering for a need for access to running water, this explanation is hardly applicable to the much larger primary plots, or to those on Pride Hill. Given the lack of historical, archaeological and botanical data, any explanation is bound to be speculative, but might perhaps be found in a demand for pasture with access to water for livestock. The provision of these commodities by the plot system here may well have gone far beyond what would have been necessary for domestic consumption by the inhabitants on-site, and it seems at least possible that the organised allocation of pasture and river-access was directly related to the marketing function of the early town. There is some evidence that Raven Meadows was not the only sector of Shrewsbury's urban fringe to be organised in this way. On the east side of the town, three large surviving plots run from the east frontage of Dogpole, through the line of the 13th-century town wall, and into the alluvial area at the bottom of the slope, just short of the river (figs. 27 and 28). The plot frontages were measured. From north to south, the recorded widths were respectively 49 feet 7 inches; 65 feet 6 inches; and 81 feet: very close approximations to 3, 4, and 5 statute perches (49.5, 66, 82.5 feet). It seems not unreasonable to conclude that there is a direct parallel between this short (perhaps originally more extensive) plot series, and that on Pride Hill, and that possibly the two were contemporary.

To go still further, it may also be relevant to draw

attention to the south-west and southern sectors of the urban fringe, where the noticeably radial pattern of intramural roads is continued beyond the 13th-century walls by field boundaries and lanes reaching to the river. It is, again, at least possible that this pattern reflects an organised arrangement of very large early land-holdings, precursors perhaps of the suggested Raven Meadows pre-urban fields, providing an assortment of environments from riverside pasture to dry slopes, and access to the early urban core areas and markets.

The question that now arises is whether the Raven Meadows plot systems can be dated. The Pride Hill buildings, through their relationship to the property boundaries, give the plot series there a definite *terminus ante quem* of the late 13th to early 14th century. But what makes both the Pride Hill and Mardol (and Dogpole) series distinctive is their apparent relationship to the town wall. The latter, generally dated to the first half of the 13th century (10), appears to have cut through the plot series, but while the plot tails were isolated from the frontages, they seem to have been retained in the same ownership. This can be argued on two counts. First, plot heads and tails were usually in the same ownership in the 19th century and are to some extent today, the tails used as gardens for the frontage buildings, to which they were linked by paths and flights of steps. This could be accounted for by the re-acquisition of plot tails following the demise of the town wall as a military barrier, but if this were the case the degree of alienation and discontinuity between frontages and tails could be expected to be much greater (the main exceptions to this rule were the tails of some of the Pride Hill

plots that were subject to industrial development after the creation of the Raven Meadows road in the 18th century). The same arguments suggest that the Raven Meadows plot system did not arise through the post-medieval extension of intramural plots. The case is particularly strong for Mardol, where there are no observable discontinuities in the curving plot series near the bridge. The course of the wall, although established archaeologically, is almost cartographically invisible, surviving only as a discontinuous and fragmentary fixation line in buildings behind the frontage. It may be that the continuity in property ownership either side of the wall in this area was a contributory factor in the disappearance of its superstructure faster than in any other part of the town: it was colonised by domestic buildings on Pride Hill and Castle Street as early as c.1400, and totally erased in the Mardol area by the 1570s (it is absent on the Burghley Map).

A strong argument for the continuity of the properties either side of the town wall can be made from the documentary evidence. The town wall is not mentioned in the surviving deeds for Pride Hill and Mardol, which it surely would have been if it had been a significant property boundary, the properties backing onto it rather than, as suggested, passing through it. The documentary case is further strengthened by the two references to plots extending to the river.

The relationship between a property boundary and the town wall has been examined archaeologically at only one point, and here only under the most difficult conditions (11). Bonded into and contemporary with the north-west corner of S1 (plan, fig.40; see Carver 1983a, fig.26) was a sandstone wall (F2010) which ran north-west into Raven

Meadows as the property boundary between the tenement containing S1 and its neighbour. S1 was abutted on this side by a short length of sandstone masonry, on the line of the town wall, built with a chamfered plinth over a foundation of puddled clay. The clay abutted, was confined by, and was later than the property boundary. Only a very short section of the wall and its clay foundation was observed as it had been truncated close to S1 by the foundations of the 1907 Boot's building. The excavator was in no doubt that this wall represented part of the original 13th-century town wall, and if this interpretation is correct, it provides stratigraphic support for the arguments outlined above. However, set against the evidence of the presence of the chamfered plinth must be the warning from the Bennett's Hall site of the extent to which the face of the town wall could have been rebuilt in the later or post-medieval periods. The character of the core of the wall abutting S1 could not be recorded, and the question of the identification of this post-S1, post-property boundary wall should, perhaps, be left open for the present.

If the cartographic, documentary, and possibly the archaeological arguments outlined above are correct, the main components of the Raven Meadows plot systems must pre-date the early 13th century. By how much? A single excavated pit on the Pride Hill Chambers (S2) site containing sherds of Stafford-type ware demonstrates the exploitation of the Pride Hill frontage in that area within a period that is now potentially as wide as the early 9th century to the 12th century, though more likely to fall within the 10th or 11th (Carver 1983a, 42). Comparable finds were made at Rigg's Hall at the north-east end of the escarpment, but could represent evidence

for a separate nucleus of late Saxon or Saxo-Norman occupation in the castle area and need not necessarily imply settlement along the whole length of Castle Street. These finds were also unrelated to the plot boundaries, and while they indicate settlement at a certain date, they cannot be used to imply the existence of a particular framework for that settlement.

Perhaps the most critical factor in determining the date of the plot system is the date of Mardol. Recent work (12) has suggested that a natural ford crosses the river bed diagonally from Frankwell on the west bank to the area of Barker Street, which may have been developed early as an approach road to the river crossing. Mardol may have been directly associated with the construction of the Welsh Bridge upstream, and observation of a cellar extension on the north side of the street near the river (No.48, the King's Head) tentatively suggested that this end is raised on an artificial causeway consisting of a metre of redeposited natural gravels (see project archive). The bridge is first recorded in c.1160 (Hobbs 1954, 120); how long it or the street had been in existence before this date is entirely conjectural. The construction of the bridge may have been motivated by the development of Frankwell, the medieval Frankville, arguably a planned Norman suburb of c.1070-80. If this is the case and Mardol is indeed a late 11th-century feature, it follows that the plot systems must themselves, in origin, be of late 11th- or 12th-century date. However, as a recent writer has noted, it would be a serious mistake to underestimate the extent or the importance of the Anglo-Saxon town (Bassett, forthcoming, b), and the twin possibilities that Mardol and the bridge were part of the *burh*, and that the evidence of the features containing Stafford ware really does indicate

Anglo-Saxon exploitation and organisation of the Raven Meadows area, cannot be entirely dismissed.

The plots and their buildings in the later Middle Ages.

There is virtually no evidence for the further development of the plot system, or the building pattern and land uses it contained, before the construction of the town wall, with the possible exception of S1. The problems of its relationship to the town wall have already been described, but its function is also problematic. The excavator argued that it was a corner tower to a pre-13th-century defensive system (Jenks 1983, 9-11, 25-6), while the editor of the final report felt that the evidence supported a post-13th-century domestic function (Carver 1983a, 41). Given the limited extent of excavations on Pride Hill it would perhaps be rash to dismiss any possibility of a pre-town wall defensive system, while recognising that, so far, the case for one is a long way from proven. The association of S1 with the integral property boundary F2010 does lend support to the argument that S1 was a domestic, not a military structure. If this is indeed the case and, in addition, as the excavator argued, S1 was abutted by the 13th-century town wall, it would be a building of some significance: first, as an example of a domestic building incorporated in a town wall, it would be difficult to find a parallel for any closer than the well-known waterfront buildings in Blue Anchor Lane, Southampton (Platt and Coleman-Smith 1975, I, 83-5); secondly, it would be Shrewsbury's only known pre-13th-century secular building; and thirdly, it would be a precursor to the pattern of building otherwise

demonstrable on Pride Hill only from the late 13th century. These are all ambitious claims, and in view of the difficult conditions of the recovery process, should be regarded as no more than outside possibilities.

Only after the third quarter of the 13th century is it possible to discuss with any confidence the character, use, and organisation of the buildings within the Pride Hill plots. Even then there are distinct limits to the available evidence, the most unfortunate of which is undoubtedly the lack of information regarding the development of the street frontage.

If the formula can be taken literally, the repeated documentary references in the 13th century to shops and solars suggest that the frontages were then mainly occupied by two-storey buildings. At least on the other side of the street such structures were still being built in the 15th century (No. 40 Pride Hill) but, given the widespread occurrence of three-storey buildings at that date elsewhere in the town, it would not be surprising if, in a street of the importance of Pride Hill, three-storey buildings were replacing smaller earlier structures or, as at No. 40, two-storey buildings were being extended upwards. But for the properties under discussion, the evidence is confined to the ghost of the three-storey building in the party wall between Nos. 17 and 18. Documentary evidence for the Pride Hill-Roushill corner in 1378 suggests that at least some of the actual shops may have been minute: here, three, and an entry, were packed into a block 32 feet square.

Elsewhere in the town, prime frontages were the subject of speculative building in the form of rows of shops, the Abbot's House on Butcher Row being but the best-known example; it would again be surprising if Pride Hill did not

share in this type of development. The physical evidence for this on the north-west side of the street is confined to the cellar S4 under Nos.22 and 23, though the documented corporation-acquired butchers' seld further down on the opposite side of the street represents a related type of structure (Shrops. Notes & Queries, 1-1-37).

Behind the frontage the evidence is more promising, though still fragmentary. All the known medieval buildings can be argued to belong to the same, broad, category: the type of building generally known as the first-floor hall (Wood 1965, 16-34). Here they were adapted to, and a direct response to the local topography, the lower floor of each building cut into the slope and partly or completely subterranean with, in the case of S2 at least, the hall at street-level. Bennett's Hall, and possibly S3, were built in stone throughout; the undercrofts of S2 (Pride Hill Chambers), and possibly S5, supported timber-framed superstructures above street-level. In contrast, further along Castle Street to the north-east, where the ground was level between the street and the town wall, other combinations are found. Rigg's Hall (Moran and Snell 1983) was a wholly above-ground building of c.1400 with a ground-floor hall, possibly timber-framed, and an adjoining solar end built in Grinshill sandstone to first-floor level with timber-framing over. Similar masonry superimposed over the footings of the town wall in the rear elevation of Rodney House, adjoining Castle Court off Castle Street, suggests the presence there of a further stone or stone and timber-framed hall house. Nearby, at 8A Castle Street (demolished in the mid-60s), was a wholly timber-framed ground-floor hall of 14th-century date, behind and at right-angles to the frontage

(Smith 1953, 236) (fig.41).

The Pride Hill first-floor halls are of course paralleled, with variations, elsewhere in Shrewsbury as well as outside (fig.43). At the largest scale and highest social level in the town are the late 13th-century hall within the inner bailey of the castle (Radford 1961, 19-20), and one of the Charlton Hall buildings, a first-floor hall of possible early 14th-century date recorded (Owen 1807, 483) as measuring 100 feet by 31 feet. The latter was associated with a wool merchant of international standing who became, by marriage, a feudal magnate (Smith 1953, 161-166). The late 13th-century hall of Vaughan's Mansion (Smith 1953, 166-173), associated with a mercantile family that repeatedly provided town bailiffs in the 13th and 14th centuries, is perhaps the closest parallel in scale to Bennett's Hall, though given the latter's possible association with the de Ludlow family (above) and the quality of its architectural details, the Charlton Hall comparison may not be completely inappropriate. As Smith pointed out nearly forty years ago, as a group, these most closely resemble the wealthier rural manorial buildings in the area, and 'the town residences of the nobility and higher clergy rather than merchants' houses' (1953, 189). S2 was, and S3 may have been, slightly smaller and though the evidence is less complete, there is nothing to suggest a comparable degree of architectural sophistication; they must still, however, have been amongst the larger private secular buildings in the town. The original extent, arrangement and function of S1 and S5 are more uncertain. S1 resembled, in plan at least, the two-storey stone solar block of Bellstone House (demolished in 1934: Smith 1953, 173-5 & fig.14). The possibility that S1 was similarly

part of a larger, otherwise timber-framed, structure cannot be absolutely ruled out, though, it is equally or more likely to have been the undercroft to a small hall, or chamber, comparable in size to the smallest, timber-framed, first-floor halls in the town, over shops, where the hall and solar arrangement is found in its simplest, most elementary state (e.g. 19 Mardol, and on Fish Street: Smith 1953, 267, 273).

Apart from Bennett's Hall, there is little evidence for the internal arrangement of the buildings above the recorded undercrofts or cellars. At Pride Hill Chambers the positions of the 'shut', the garderobe tower, and an ogree-headed window suggested that the 'high' end of the building lay to the north-east, the 'low' end to the south-west, but no evidence survived to show where the original building was partitioned, either within the undercroft or above (Clarke 1983). The arrangement of doors and windows in S3 gives a faint hint of a cross-passage implying that, like the neighbouring S2, the high end lay to the north-east.

There is similarly little direct evidence for the function of the undercrofts or cellars themselves, though all of them with the exception of S1 can be shown to have been directly accessible from the outside. This suggests that their purpose was commercial, presumably the collection and bulk storage of goods for retail on the spot or export. As access was separate from the living accommodation, there was clearly scope for separate letting.

Bennett's Hall, probably the earliest of the Pride Hill buildings, lay at right-angles to the street. This arrangement is common enough elsewhere (the 'right-angle'-'broad' plan of Pantin's classification: 1962-3, 233-239)

though rare in Shrewsbury and at variance with the majority of the Pride Hill properties. It is paralleled on Pride Hill possibly by S5, if S5 as recorded reflected the major part of the original structure, and further to the north-east by the 14th-century timber-framed hall formerly behind 8A Castle Street (Smith 1953, 236). The specific reason for the orientation of Bennett's Hall cannot be known, but it has already been argued that the hall's location may have been determined by earlier buildings (above): it is probable that any constraints that determined the hall's location also determined its orientation. The natural topography of the area may also be relevant (see below).

Perhaps the most immediately striking aspect of a map of the Pride Hill tenements is the common pattern of building within the three neighbouring plots containing S1, S2, and S3. In each (and possibly at Nos. 17-18 and Nos. 25-6 as well), the building identified as the hall lay parallel to the street, set back behind a courtyard, with access via an entry between the frontage buildings. This arrangement can be paralleled, directly and with variations, both in Shrewsbury and beyond. In Pantin's scheme, it represents a hybrid plan-type between the 'double-range' buildings, where the hall adjoined the back wall of the frontage range (as exemplified by Tackley's Inn in Oxford), and the 'courtyard' arrangement, where the hall was separated from the frontage by a courtyard but accompanied by other ranges (Pantin 1962-3, 217-228). Related forms of tenement organisation have been identified by excavation and survey in, for example, Winchester and Colchester (Biddle 1976, 346-7; Crummy 1981) in 12th-century contexts, and by documentary research on Cheapside in London, (Keene 1985, 16). In Norwich nine similar sites have been

identified 'where freestanding blocks lie parallel to the street. These range upwards in size from a 13 metre long example at 20 Colegate and most appear to be of the high social status that is suggested by the lavish decoration towards the street of two late-medieval examples with jettied timber first-floors' (Smith and Carter 1983, 18). They occur at the highest urban social level, exemplified by the episcopal palaces on the Strand, with vast private mansions behind tenements on the street frontage, the largest being the bishop of Bath's Inn (Arundel House) with a frontage approaching 500 feet (Kingsford 1921-2 and 1922-3).

Both of Pantin's plan-types occur in Shrewsbury (fig.44). Smith identified buildings of or related to the 'double-range' type of small size on Wyle Cop (Compasses Passage) and on Fish Street (Nos. 1-1A and 2-4; Smith 1953, 290-297), and quoted from a deed of 1455 describing a tenement with an 'inner house' at the bottom of Wyle Cop (Phillips 1900, 197). The 'courtyard' plan is represented by, for example, Vaughan's Mansion, where the hall lay at the back of a walled private enclosure overlooking the new 13th-century market place (Baker et al 1989), and by the Council House buildings in the outer bailey (Moran 1982). The arrangement of the Pride Hill tenements is reflected most closely by the Nag's Head on Wyle Cop. Here, a late 14th-century timber-framed ground-floor hall spanned the width of the plot c.20 metres (66 feet) behind the frontage, on part of which a 15th-century jettied three storey building survives (Moran 1982).

Pantin's examples of 'double range' tenements were drawn from a variety of social levels, from Tackley's Inn, with its large stone-built hall and a plot frontage wide enough to accommodate five shops, to examples from Coventry where

pairs of shops and the halls behind were timber-framed, and it is these that the Shrewsbury examples most closely resemble. In Shrewsbury, it seems reasonable to regard the Pride Hill tenements as lying mid-way along a social scale with the Fish Street and Wyle Cop 'double range' tenements at one end, and the courtyard layouts of Vaughan's Mansion, Charlton Hall, and the Council House at the other. The Pride Hill tenements may not therefore represent the pinnacle of medieval secular building in the town, but they may not be far from it.

The factor common to both the 'double range' and 'courtyard' plan-types was the ability to acquire a wide plot frontage and, in at least some cases, to build speculatively upon it. The size of the Pride Hill buildings, their construction in stone, the terracing required to exploit the gradient fully, and the size of the plots and their location on a major thoroughfare, all imply a high level of investment. Was this also applied to the frontage ranges? Was the construction of a row of shops on the frontage an inevitable or frequent accompaniment to the construction or reconstruction of the hall at the rear? Where the structural integrity of the front and rear ranges of 'double-range' tenements can be demonstrated there is little doubt that the construction of the hall was associated with the speculative development of the frontage. This seems to have been the case, in Shrewsbury, in the Fish Street examples (Smith 1953, 290-297). It also applies to the much higher-status site recently recognised in Chester, 38-42 Watergate Street, where the undercrofts of three shops on the frontage extend under the large stone hall at the rear (see fig.44; Brown, Grenville and Turner 1987). How the frontages of the 'courtyard' tenements were exploited in

Shrewsbury, as elsewhere, is less certain. At Vaughan's Mansion the principal (market place) frontage was occupied within the later medieval period by a building with a vaulted undercroft, but whether this represents a speculative development by the owners of Vaughan's Mansion, or an alienation of part of the enclosure frontage, and at what date, are all unknown (Baker et al 1989). Charlton Hall, next door, lay within a crenellated enclosure. By 1445 the property included nine tenements and two cellars in addition to the hall buildings, but where these tenements lay in relation to the enclosure is uncertain, and how they were developed is unknown (Owen 1808, 480; Baker, Buteux and Hughes 1990).

On Pride Hill, the physical evidence has largely gone. S4, it was argued, represented the remains of a row building and demonstrates at least that this part of the street could be subject to such a development- though its dating is hardly precise. However, S4 appeared to extend over less than the full width of the primary plot, implying either the medieval sub-division of the plot or perhaps the partial alienation of the frontage. Within the plot containing S3 the terracing required to accommodate the hall would probably have affected the frontage (see fig. 35): the rebuilding of the frontage here, in association with the construction or reconstruction of the hall, seems particularly likely. Contrary to this, at Bennett's Hall there is a possibility that earlier frontage buildings were immovable and themselves dictated the position of the hall. Here also, the documentary evidence clearly shows that, by 1378, the former plot had become intensively sub-divided on two frontages. Elsewhere in the street, although the individual properties cannot now be identified, the surviving deeds

record the conveyance both of shops, or their rents, on their own, as well as numbers of shops (2, 4, and 5) conveyed as parts of larger messuages or tenements (13). The ambiguity and incompleteness of the evidence on these points is frustrating. It is not possible to make a definitive assessment of the extent to which the frontages of the Pride Hill tenements were developed by the occupants of the halls behind, neither is it possible to assess to what extent, or for how long, the halls received rents from the frontages. These questions also touch on larger issues: were urban rents of any significance to the mercantile families of medieval Shrewsbury, or was property ownership, as has been suggested elsewhere (Holt 1985, 155) a matter of prestige, and security for credit transactions? While documentary sources must inevitably have most to say on these matters, the physical evidence for the exploitation of the frontages could also make a contribution- though, it seems, a limited one on Pride Hill.

Leaving aside the question of tenurial relationships within plots, the concentration of this settlement pattern on Pride Hill deserves comment. As we have seen, in Shrewsbury and elsewhere tenements organised in this particular way occur sporadically. But here, three, possibly even five, plots with parallel rear halls, and two further plots with rear halls detached from but perpendicular to the frontage all occur in the space of 180 metres. A number of related factors may be invoked to try to explain this.

There appear to be two separate questions involved. First, why were high-status stone buildings concentrated on the street, and second, why were they so arranged within the plots? The first question is the more difficult

to answer, particularly as it is difficult to know to what extent the concentration is exceptional within the town. There is evidence of medieval stone secular buildings scattered throughout the commercial, civic and ecclesiastical core of the medieval town, particularly around the High Street and the Square, the new market place of c.1261, but none of these areas has been subjected to the prolonged series of investigations that Pride Hill has. It is quite possible that intensive survey of standing buildings and their cellars in, for example, the High Street, would show that the density of stone buildings on Pride Hill was not unique, but was a general feature of the core of the medieval town. Pride Hill was (and is) a main through-traffic street connecting two out of the three points of access to the town with routes into the pre-13th-century kernel around the Anglo-Saxon churches of St Alkmund, St Julian, and St Mary. As a main thoroughfare, on the high ground in the immediate periphery of this early core, it developed commercial and civic functions, demonstrated by the location of the High Cross at its northern end, and must have been among the most attractive streets for mercantile development. Although the south-east side of Pride Hill has not been investigated over as long a period as, or as thoroughly as the north-west side, the difference between the two is striking and must have some basis in reality. To date, there is no evidence for any medieval stone building on the south-east side of the street, with the possible sole exception of an unidentified mass of masonry seen during building work behind the frontage in 1960, near the High Street corner (Litherland and Ferris 1990). The plots on this side are short, generally in the region of 70 feet (c.20 metres), their tails terraced into the slope upwards

to the east. A metrological survey was carried out, but there was no sign of any regularity or perch-based measurements, but the sample was extremely small because of 19th-century amalgamations. The presence here of a butchers' seld may, with the evidence of the much smaller plots, be an indication that there was a social difference between one side of the street and the other. There seems little doubt that the builders of stone halls were specifically attracted to the much larger, longer plots available over the road. Once this demand had been established, the gradient is likely to have been the major factor in determining the internal organisation of the plots. Where the escarpment lay closest to the street (in the area of S3), the need for terracing would tend to force any buildings set back from the frontage to lie parallel to the slope, the street, and (from the 13th century) the town wall. Where the break in slope was further away from the street (as in the Bennett's Hall area and north of S5) the building pattern was less severely constrained. As already discussed, the gradient also determined that the principal dwellings on each plot would be of the first-floor hall type. Conversely, one can argue that these sites were seen to be particularly suitable for the construction of a type of building that was appropriate to the functional and social needs of their owners (14), and so the plots were, perhaps, particularly desirable to an expanding mercantile urban elite. One also returns here to Carver's provocative model of the 13th-century town transformed by terracing (Carver 1978, 252) and the need to understand the chronology and geography of this fundamental process in the intensified exploitation of the town site.

It has been argued that the plots pre-date the 13th

century and may be of late 11th - 12th-century, or even earlier origin. The earliest surviving or recorded buildings are, however, of the late 13th century and later. How were the plots used in the intervening period? There is, of course, virtually no evidence (with the possible exception of the problematic S1). The building pattern observable from the later 13th - 14th centuries could, from parallels elsewhere, have had a 12th-century predecessor, with the terrace cuts for the later halls completely obliterating earlier, slighter evidence for buildings behind the frontage. It is perhaps more likely that the large four- and five-perch plots were relatively lightly developed, with principal dwellings of varying status sited in a variety of locations relative to the frontage, and only with increased pressure for development, and perhaps the increased value of the frontage, following the inclusion of the street within the defences in the 13th century did the observable, dense, capital-intensive building pattern emerge. When it did so, little adjustment of the plot pattern may have been needed. Bennett's Hall, it is argued, was built on two amalgamated plots. An isolated length of clay-bonded wall (F1600; Carver 1983a) centrally placed in the S2 plot tail suggests at least the possibility that this tenement represents two amalgamated two-perch plots, but this suggestion finds no support in the excavated evidence from the courtyard, and the wall is equally likely to represent a later localised sub-division or minor structure. How the plot-tails were used after the construction of the town wall is no less mysterious than how they were used before. There is evidence for the provision of access between the intramural and extramural parts of a plot only at S2, and just possibly near S5 on

the line which later became Seventy Steps, but the lack of evidence reflects only the early disappearance of most of the town wall, and the undetectability of movable ladders where the town wall was also a terrace.

We are on slightly firmer ground with the proposition that the building pattern helped maintain the integrity of the large early plots. Where a rear hall remained in single ownership alienation and sub-division of the frontage could, and did, take place, but seems to have been confined to the frontage. The 'normal' process of longitudinal sub-division into derivative strip-plots does not seem to have taken place until after the halls themselves were sub-divided, beginning in the late 16th or early 17th centuries. So the plot tail behind S2 remains intact and has dictated the limit of the 1986-7 Pride Hill Centre, S2 itself having been sub-divided vertically but not horizontally, and possibly always retained in single ownership. In contrast, S3 next door, and its plot-tail, were sub-divided early on (?pre-18th century) on the line of the probable cross-passage, with further sub-divisions to both building and plot later.

The break-up of the medieval building pattern is represented best at Bennett's Hall, which was partially demolished, colonised by timber-framed cottages and penetrated by a shut; and at Nos. 22-23, where possible tenancies within a row building had become freeholds, the building itself (S4) demolished, the plot sub-divided, and a shut (later Seventy Steps) established on the partition line. These developments are not accurately dated but, on architectural grounds, appear to belong to the later 16th or first half of the 17th centuries. As a phenomenon, they are difficult to discuss in the absence of comparative sequences from elsewhere in the town; they do, however,

fall within a period of known population growth in Shrewsbury, between c.1560 and c.1630 (Champion 1983). The statistical evidence for this, derived from a variety of contemporary sources, is fairly unambiguous, but stresses the growth of the marginal areas, largely by immigration into suburbs and cheaper intramural areas, and the relatively static population levels in the central areas. The Pride Hill sites hint that, while statistically almost invisible, population growth in the central areas, perhaps through inward movement from the margins, may yet be detectable through the physical evidence of subdivision and infilling, and the creation of some of the town's well-known shuts.

In conclusion, while this work sheds some light on the spatial and, to an extent, the social organisation, of the street in the 13th and 14th centuries, both internal and external problems remain. The internal problems are a function of the survival of the evidence, and are insoluble: the lack of early archaeological deposits through terracing and erosion; the continuing economic importance of the street and the consequent amalgamation and redevelopment of plots, and the implications this has for the survival of structures and the size of the sample that can be subjected to metrological investigation; the survival of documentation, and the difficulty of relating medieval conveyances to a modern property. The external problems are principally those of the lack of comparative data: the origins of Pride Hill as a route within the early town; and particularly, how typical or atypical this street was of the medieval town. The external problems are solvable. There is every indication that there are other Pride Hills in Shrewsbury - areas awaiting an integrated study of standing buildings,

cellars, plots, deposits, and documents, with the possibility of not only an increased understanding of the individual streets, but of the social and economic topography of the medieval town as a whole (15).

CHAPTER FOUR:

DISCUSSION AND CONCLUSIONS

In the preceding chapters two case-studies were presented which explored the physical development of particular urban areas, one on a large scale, the other small. The first, a plan-analysis of Worcester, applied the methodology developed by Conzen to distinguish individual phases in the growth of the city, and used excavated and other evidence to interpret these and help determine their possible chronology. The second explored the development of a single street in Shrewsbury by examining the relationship between the plot-pattern and a number of early buildings - not employing a Conzenian methodology as such (apart from a metrological analysis), but nevertheless adopting a cadastral perspective that reflects Conzen's stress on the plot-pattern as a container of land-uses and buildings, and his investigation of the behaviour of such patterns.

These studies have suggested a number of ways in which the conventional archaeological and geographical approaches may be found to be mutually illuminating and, in combination, provide a more effective tool for the understanding of the physical development of the framework of settlement in medieval towns than either would if employed in isolation, particularly when applied to larger, more complex settlements. Four general areas where such an interdisciplinary approach seems most useful - even essential - are considered in this chapter.

4:1. ARCHAEOLOGY AND MORPHOLOGICAL CHANGE

The source-material of geographical town-plan analysis could not unreasonably be described as historically superficial. A town plan (in the cartographic sense) records, after all, the state of an urban landscape at the time it was surveyed. But in this thesis, as in many strands of historical and geographical research, 17th-century and later cartographic sources and modern landscapes are used to reconstruct situations and interpret processes at work in much earlier periods. As outlined in the introductory chapter, there is abundant documentary and archaeological evidence to suggest that this is generally a legitimate procedure, modern historic town plans preserving many features of their medieval past. Nevertheless, by its ability to reveal buried landscapes archaeology clearly has much to offer town-plan analysis: in determining in particular cases the constraints that initially helped determine the form taken by a town plan; in being able to reconstruct early landscapes concealed by large-scale pre-cartographic replanning; and by accumulating case-studies to document the behaviour (and its predictability) of urban plots through time, and so test, refine, and extend Conzen's models based primarily on post-medieval cartography.

The Morphological Frame.

'Morphological Frame. An antecedent plan feature, topographical outline, or set of outlines exerting a morphological influence on subsequent more or less conformable plan development on the same site, and often

passing its features on as inherited outlines' (Conzen 1969, 127).

Pre-existing constraints influencing later settlement-patterns can be divided into two related categories: natural systems (geology and geomorphology), and relict landscapes - the remains of previous episodes in the exploitation of a site.

The detailed mapping and reconstruction of the natural pre-settlement surface of urban sites has steadily become an integral part of archaeological evaluation methods. A notable early attempt at this type of exercise was Helen Cam's 1935 article on Cambridge, which reconstructed the lines taken by early watercourses, and added artefact distribution, churches and their dedications, burials, and documentary evidence, to arrive at a model for the location and development of the pre-Conquest town (Cam 1935). The publication by Biddle and Hudson of *The Future of London's Past* (1973) was a landmark. This sought to reconstruct the natural land-surface under the city by comparing the present surface with known depths of archaeological deposit, culled from a variety of sources. The results had a dual predictive value: the archaeological potential of many areas could be assessed by comparing known deposits with known intrusions; and new light was shed on the early growth of the city as a result of the more detailed understanding of its natural topography. This approach has been developed and refined in particular by Martin Carver, with his urban assessments of Shrewsbury (1978), Worcester (1980), and a number of towns in southern and central France (1983b). Some of the advantages of this approach had been seen earlier in Worcester (Chapter 2:1) where Richardson's

work on the gravel terraces and minor watercourses proved fundamental in understanding the way in which the Roman and later settlements, and their defences, were adapted to the natural site (Richardson 1956; Richardson and Ewence 1963; chapter 2:1, above).

Carver's evaluation of Shrewsbury, in conjunction with the sequence excavated by him at Pride Hill Chambers (Carver 1978 and 1983a) allowed him to construct a general model of the way in which the medieval town adapted to, and adapted, its site. He proposed a process of widespread terracing, producing a flattening-out of gradients, particularly in association with the construction of stone buildings and the town walls in the 13th century, the severity of the natural topography being further reduced by the reclamation of alluvial areas within the core of the settlement.

In the course of the Shrewsbury evaluation, the author rightly emphasised the importance of understanding the extent of alluvial areas: 'The type of site itself has a peninsula character in common with Durham and Bristol, and the instances are multiplied when former streams and bogs are mapped'...'it is by mapping the marsh rather than by mapping defensive ramparts that the settlement may be defined (Carver 1978, 253). The evidence of the Pride Hill and Mardol plot-systems in Shrewsbury suggest, however, that the equation of alluvium with bog may not always be valid, not even perhaps within the pre-Conquest period (chapter 3.3, above). The Raven Meadows area, while liable to flood throughout the period and not used for habitation until the 18th century, appears to have had an economic value which was marked structurally (by plot boundaries): these may not be archaeologically recorded or recordable within the area itself, though here they were recorded

cartographically.

Particularly taxing problems for conventional plan analysis are posed by low-lying riverine areas, where the form of the settlement as mapped may have been determined by the manipulation of the watercourses over a brief, or extended, period of time. Shrewsbury provides an example of just such an area, in the vicinity of the abbey which today stands about 200 metres east of the river Severn and a slightly lesser distance north of the Rea Brook flowing into the Severn from the south-east. Maps, from Speed's of 1610 to Owen and Blakeway's (1825) plan of the abbey precincts, reveal a complex series of changes in the watercourses in the area - the essence of which is that the Rea Brook appears from them to have formerly entered the Severn by an additional, much wider, northern channel, running immediately to the west of the abbey precincts. On the very edge of the earliest map of Shrewsbury, the Burghley Map of c.1575, the watercourse west of the precincts is shown to be even more substantial: this is the situation shown in fig.45. The westernmost plots in the series lining the north side of Abbey Foregate and the end of the bridge extending westwards over the watercourses, were known collectively as Merevale in the later middle ages and were the subject of rival jurisdictional claims by the abbot and the burgesses. The cartographic evidence records these plots and their morphology, but archaeological evidence can account for their origin and their involvement in the boundary dispute. Excavations in the area immediately west of the precinct, and borehole records from the surrounding suburbs, revealed that what appeared cartographically as a channel of the Rea Brook was, in origin, a former second channel of the Severn (fig.45). This had silted up

gradually in the course of the medieval period, probably as a consequence of the construction of the bridge in the early 12th century. The Merevale tenements represent reclamation of part of this silted-up channel, and the boundary dispute can be seen as an inevitable consequence of the emergence of new dry land in the no-mans'-land between the abbot's and the burgesses' jurisdictions.

Similar processes have been investigated elsewhere, notably in Oxford where plots in the Thames floodplain, either side of the late-11th-century stone causeway known as the Grand Pont, originated or were extended by a series of reclamation episodes by ecclesiastical landlords (Durham 1984). Recent excavations in Gloucester have begun to show how large-scale changes in the course of the Severn underlie the topography of the western Westgate area (pers.comm. M. Atkin).

The potential contribution of archaeological sources and methods to the detection and elucidation of relict man-made landscapes is equally obvious. Where features are substantial and have survived above-ground long enough to be mapped (e.g. Roman defences) some aspects of their relationship with the succeeding settlement will be obvious: their role in the location of the settlement, as a fixation line and constraint on the growth of the built-up area, the maintenance of principal street-lines between gates, and so on. The subtler aspects of the relationship between earlier and later settlement are, however, only likely to be deduced with archaeological information, particularly when relict landscape features have disappeared by the early post-medieval period. Worcester - despite the relatively limited extent of archaeologically-explored areas - provides a useful illustration of this.

As already noted (chapter 2:3, 2:6), the Deansway and Blackfriars excavations revealed one example of a medieval lane (Powick Lane) starting life as an east-west Roman road, and several examples of the perpetuation of the line of other roads as boundaries into the medieval period and beyond, through a long period that was probably non-urban (or at rate witnessed the formation or deposition of extensive dark earth deposits). In one, possibly two, cases the edges of the roads determined later boundaries, in another, the backs of buildings fronting a road became fossilised as a trackway. The full extent to which the known medieval and later townscape reflects a Roman background will not be known without much further work, but comparison of the archaeological data currently available with the results of the plan-analysis already suggests that it can be predicted that (perhaps obviously) the influence of smaller-scale relict features will be found to have been least enduring in areas subject to early comprehensive redevelopment, and most enduring in areas developed slowly as a result of individual initiatives. As town-plan analyses become available more widely, and more instances are revealed of early medieval replanning, it will be seen if this model has any validity in other Roman and medieval towns, Chester for example.

Changing morphological regions.

Conzen's original plan-analysis of Alnwick resolved the town plan into its constituent plan-units and sought to interpret them, but not as static phenomena. As Harold Carter noted: 'Conzen's main contribution, the admirable

detail of analysis excluded, would seem to lie in the way in which the interaction between phases of extension is introduced, whereas often in previous studies bits of plan have been merely tacked on successively' (Carter 1976, 148). Specifically, Conzen noted the truncation of the tails of burgage series forming one of the medieval intramural plan-units by the development of secondary plots facing outwards towards the town wall: the development of the inner fringe belt (Conzen 1969, 108-9). In his analysis of the town plan of Doncaster, Slater identified comparable processes of change as one plan-unit, a new planned market-place (Plan-unit V) was formed partly at the expense of an earlier unit (the High Street, plan-unit III) as the tails of a series of plots were appropriated for the new development; elsewhere, another plan-unit grew at the expense of the castle as plots were individually extended over the redundant ditch (Slater 1989, 51, 53).

In Worcester, changes in the extent of some of the defined plan-units can be suggested both on topographical grounds alone and, in some cases, with supporting archaeological, parish boundary, or documentary evidence. At the junction between the Birdport and High Street North plan-units (7 and 6: chapter 2:3, above) ground seems to have been exchanged, piecemeal, between individual plots backing onto one another, so producing an irregular staggered outline marked by alleyways (after 18th-century infilling) of the type characterised by Conzen as 'pseudo street-systems' (Conzen 1969, 129). The parish boundary between St Helen's and St Andrew's followed a different but similar course, running inside the back boundary of some of the High Street plots before crossing over the alleyway and continuing southwards along or within the

back boundary of the Birdport plots. Excavation across it in this area showed it to be following a property boundary only established at the end of the medieval period. Clearly, as the rearward extent of individual plots changed as land was bought and sold between the owners of west- and east-facing properties, so the boundary between the two plan-units became blurred and ragged. An originally straight north-south line separating the planned High Street plots from the probable late Saxon infill represented by the Birdport plots can be suggested, but not located. The process hypothesised here is precisely that described by Keene in Winchester where 'In densely populated areas of the city the rear boundaries of properties were probably extremely fluid and there are numerous records of transactions made as holdings were enlarged, large tenements broken up, or adjustments of no more than a few feet were made between adjoining properties (Keene 1985, 181-2). A related process occurred on the south side of the Broad Street plan-unit, as the original extent of the Broad Street plots was reduced by the alienation of the plot-tails for secondary development on Powick Lane. This process, predictable from the cartographic evidence, is supported by archaeological and historical sources (Mundy 1989, 23; Currie 1989b, 8-12). In the north-east corner of the city it is suggested (chapter 2:3, 2:4) that a chronological relationship may be observed between two adjoining plan-units, Silver Street (15) and Lowesmoor (16). The northernmost plot of the Silver Street series, with one long side on Lowesmoor, appears to have been intensively sub-divided to provide a series of short new plots, within its tail, facing north onto Lowesmoor, a development likely to have been roughly contemporary with the perhaps more organised development

of the north side of the street.

These examples illustrate the potentially fluid character of established plan-units: merging into a contemporary neighbour on the one hand, losing ground to an adjoining newcomer on the other. Larger-scale morphological change within the established town-plan can also be suggested or demonstrated in Worcester, and extensively paralleled elsewhere. The construction of the castle in Worcester by 1089 is documented (see chapter 2:3) and parts of the castle are known cartographically. For the purposes of plan-analysis its presence is most inconvenient, as it effectively conceals the pre-11th-century landscape of the south side of the city. The expansion of the cathedral close and the consequent truncation of the High Street has also been (tentatively) suggested, though relict features within the bounds of the close and on its periphery do at least help in reconstructing elements of the earlier landscape (see chapter 2:4).

Such large-scale impositions are, of course, a widely-known phenomenon. Domesday Book records the destruction of urban property for castles in, for example, Shrewsbury, Lincoln, and Norwich (DB f.252a; 336c; 116b). In some cases the pre-castle landscape has been glimpsed through excavation, as for example, in Oxford (Jope 1952-3), Gloucester (Darvill 1988), and Winchester (Biddle 1976, 302-3). The imposition or expansion of ecclesiastical precincts over earlier urban landscapes is less well documented, less well known archaeologically, but nevertheless very frequently postulated. Such developments have been suggested from topographical evidence at, for example, Hereford (Blair 1987, 71), St Paul's in London (Tatton-Brown 1986), and Norwich (Carter 1978). Secular

landscapes underneath such impositions have been revealed at, for example, Bury St Edmund's, where a late Saxon road and pits were excavated (Carr and Caruth 1989)(16) and at Chester, where a late Saxon intramural road and industrial activity have been found (ex. inf. S. Ward) underlying St Werbergh's precinct.

Archaeology and burgage plots

Not the least of M.R.G. Conzen's contributions to the study of urban historical geography was his description of the characteristics and behaviour of the burgage plot, and his emphasis on its role as the 'basic cell', the smallest unit, in the town plan. From his cartographic and documentary evidence he established a limited number of processes likely to affect plots, principally those of mediation (longitudinal sub-division) and repletion (progressive coverage by buildings). His observations on the form of burgage plots and the range of processes that affect them are important in the present context for a number of reasons. First, as outlined in the introductory chapter, he was able to predict and observe the relative stability of plot-systems in relation to other townscape elements and support the historical and archaeological contention that questions about the medieval period can legitimately be asked of plot-patterns recorded in the 19th and 20th centuries. Secondly, the work drew attention to the existence, form, and fundamental importance of this 'townscape cell' which may, of course, be definable

archaeologically and so used to order excavated data in a realistic tenurial, social, or economic context. Thirdly, it drew attention to the common processes affecting plots, and thus to the social and economic pressures that underlie them.

With the exception of complete plot metamorphosis, all of the processes described by Conzen, and by Scrase (1989) can be illustrated with archaeologically-derived examples from the medieval period.

The initial creation of 'burgage plots' in the conventional sense of the strip-plot, took place at very different times in different places. In Winchester, the great primary plots had been split up into strip-plots by c.1066 (Biddle 1976, 343); elsewhere, one may point to the division of a parcel of land (Bretel's Tenement) into individual plots in the early 13th century at the Hamel in Oxford (Palmer 1980); on a site in Newbury such a pattern was only established in the 14th century (Med. Arch. 26, 1982, 171-2): clearly there is nothing to be gained by comparing dissimilar contexts in dissimilar towns. Amalgamation may be demonstrated in Worcester, as two of the excavated Sidbury tenements were amalgamated in the 14th century (Carver 1980, 178). Encroachment forwards on to streets or markets has been demonstrated, by structural survey, topographical analysis and documentary work, in Ludlow in the late 14th century (Lloyd and Moran, 1978), and by excavation in Rochford in a 15th- or 16th-century context (Parkin, Andrews, and Brown, n.d.). Rearwards extension of plots has been established on waterfront sites almost wherever they are excavated: in London, Norwich, King's Lynn, Hull, and Bristol (for an example, see Jones 1986; for a general survey, Milne 1987)

The mere recitation of these examples devoid of their

contemporary geographical and economic contexts is not in itself a particularly valuable exercise. It does, however, draw attention to the growing body of data which is already, and will be increasingly, susceptible to detailed analysis.

What is particularly interesting in the archaeological study of burgage plots, leaving aside the question of origins, is the possibility of relating developments in the form and arrangement of buildings to the evolution of the plots; this was a marked feature of the Pride Hill evidence. It seems probable that the form and extent of the plots was at least partly responsible for initially determining the type of building that dominated that particular area, it being suggested that the large (4- and 5-perch plots were particularly appropriate to, and thus attracted, first-floor halls generally lying parallel to the frontage, in more general terms, demand for a particular type of building generated a demand for a particular type of plot (large; gradient no object). It can also be suggested from the Pride Hill case-study that the form and internal arrangement of a building, and its arrangement within the plot, are powerful factors in determining the subsequent evolution or trajectory of the plot. For example, it was suggested that the presence of a hall parallel to the street towards the rear inhibited the break-up of the plot by successive mediation and confined this process to the frontage and its immediate area. When it finally took place, the earliest sub-division (at S3) appears to have been determined by the presence of a cross-passage within the hall or undercroft: the natural subdivision of rural houses on the line of the cross passage has been noted in the context of the segregation of servants and family, and provides an indirect parallel

(Carson, 1976). The subdivision in c.1400 of 28-32 Queen Street, King's Lynn, provides one direct urban parallel (Richmond, Taylor, and Wade-Martins, 1982), Tackley's Inn in Oxford another (Pantin 1962-3, 218). Elsewhere on Pride Hill (S4) it was suggested that the evolution of the plot was dependent on the form of the row building whose internal partitions became translated into external property boundaries and the line of an alleyway.

4:2. CHRONOLOGY

One of the more intractable problems encountered by town plan analyses, particularly those of complex or early (pre- 12th- or 13th-century) settlements is that of chronology. Plan-units may be identified, but the sequence in which they were established may rarely be clear. A recently-published illustration of the difficulties may be found in Slater's reassessment of Conzen's original sequence of developments in the growth of Ludlow (Slater 1990b, Conzen 1968; Conzen 1988). Worcester provides another case. Here it has rarely been possible to deduce relationships between plan-units on internal (plan) evidence alone: external sources (parochial topography, documentary evidence, archaeological evidence) have needed to be introduced. Absolute dating is equally difficult without, for example, the documentary evidence associated with late, planned new town foundations of the type seen at Stratford-upon-Avon where the origins of the town plan can be dated with precision to the foundation in 1196 by the Bishop of Worcester. In some cases documentary

evidence may be used to infer the likely date at which a street was built up, if references to tenements replace those to fields and gardens for instance (e.g. Urry 1967, 188), but this type of information is not common, and is only likely to be found at a relatively late date, if at all, in the majority of English towns. For earlier (pre-12th century) foundations, archaeological dating evidence may be all that is available.

Archaeological evidence may be able to provide what could be termed 'non morphologically-specific' dating evidence, by demonstrating occupation in a certain area at a certain date, but without reference to the spatial framework in which it took place. It might still be possible to argue that such evidence could be used to date a specific mapped pattern of roads and boundaries, but only with some caution. Both the Worcester and Shrewsbury case-studies contain examples of this problem. In Worcester, occupation on the north side of Sidbury can be archaeologically demonstrated from the late Saxon period (possibly 9th-, more probably 10th-century or afterwards), but the apparent orientation of features of this period in relation to the existing street is insufficient evidence to prove that the occupation was making use of the plot boundaries attested later in the medieval period (chapter 2:3). Similarly on Pride Hill in Shrewsbury, late Saxon occupation of a particular area could be demonstrated, but not the association of the plot boundaries, even though a case is made for their pre-13th-century date (chapter 3:3).

Individual features of a town plan may of course be both archaeologically detectable and dateable (morphologically-specific dating evidence). Biddle and Hill's (1971) use of coins stratified in sequences of road metalling to date

the planned street-grid at Winchester remains a classic and almost unparalleled case, though early road surfaces have been excavated and dated in, for example, Oxford (Hassall 1971), Lincoln (Perring 1981), Northampton (Williams 1979, 143), and London (Vince 1990 126-7).

The identification and dating of tenement boundaries, represented by fences, ditches, or walls, is relatively commonplace, though heavily dependent on the scale on which excavations take place. There are, naturally, problems, particularly where boundary features can only be dated on internal or structural grounds and not by their relationship to a well-dated stratified sequence (as at the Bennett's Hall site, Shrewsbury: chapter 3:2). Boundaries may not always be directly represented by structures. In Worcester, one property boundary first became apparent in excavation by a discontinuity in pit-digging, another by the differential robbing of a building (chapter 2:3, plan-unit 7). The same series of excavations (the Deansway excavations) also raised questions about the mechanisms by which boundaries could be perpetuated, or re-established, over or after a period of time when the stratigraphy showed that an original defining feature had become buried and invisible: the edge of a Roman road, masked by dark earth deposits, becoming an early medieval property boundary. The stratigraphic analysis now in progress may provide the answers, though they may equally well be irrecoverable: being marked structurally only outside the excavated area (a larger containing boundary later subject to redivision or a boundary marked only at, say, a principal frontage), or marked only by a feature not apparent in the excavated deposits (a line of trees, for instance). Much depends on the analysis of the dark earth deposits and the determination of the processes

(dumping for agriculture? trample on roads?) which led to their deposition (HWCM 1990).

It might be felt that the utility of dating property boundaries by their association with standing buildings was limited, as there could be few cases where even the oldest buildings would approach in date the likeliest periods for medieval urban extensions. The Pride Hill case-study may perhaps have made the point that, while the 13th - 14th-century *terminus post quem* provided for the plot-series was not helpful in dating its formation, the mere recognition of individual boundaries of medieval and, just as important, post-medieval date was essential as a prelude to further analysis, metrological analysis in particular (see also 4:1, above).

In some instances the simultaneous establishment of a number of boundaries (insofar as it is possible to prove this from excavated evidence) have allowed the excavators to postulate the laying-out of an area with a 'planned' plot-series. This was the case in, for example, St Alban's, where excavation found the ditches of a number of plots laid out on Chequer Street in the late 12th century (Medieval Archaeology 27, 1983, 181-2), at Saddler Street, Durham, where plots were re-organised in the later 11th century (Carver 1979), and most notably on Coppergate, York, where four tenements were laid out in the early 10th century (Hall 1984, 49). If, in cases such as these, the excavated plots could be seen to be part of a more extensive mapped, surviving, or excavated series, and that series was identifiable as a primary constituent of a plan-unit identified by plan-analysis and likely to represent an area subject to 'planned' settlement, then the archaeological evidence could reasonably be argued to date the plan-unit. Opportunities for error are, of

course, legion. A notable difficulty is at least partly illustrated by the analysis of the High Street area in Worcester (chapter 2:3) and the Raven Meadows area in Shrewsbury (chapter 3:3). The establishment of a distinct plan-unit may begin with an archaeologically-definable episode (the construction of a new street) and be followed by the creation of properties fronting it. However, there may be a considerable time-lag between, say, the laying out of boundaries of large parcels of land, and the regular, 'planned' sub-division of those parcels into multiple tenements. The problem lies with plan-units as cartographically-recognised phenomena. Even those which quite clearly represent 'planned' urban extensions may contain hidden internal chronologies, encompassing for example, gaps between the laying-out of streets, the creation of primary plots and their sub-division, the pegging-out of secondary plots and their actual occupation. It would be difficult to find more conclusive dating evidence for an area of townscape than to find a series of coins with restricted circulation-periods stratified on primary street-metallings in the area, but even this case establishes only a *terminus post quem* for a train of potentially separate events. A similar *terminus post quem* may be established if the relation between a plan-unit and another major landscape feature can be determined. Such a relationship was posited for the Roman defences and two superimposed plan-units in Worcester (chapter 2:3, plan-units 9 and 10), and more unusually, for the Raven Meadows plot system and the (earlier) 13th-century town wall in Shrewsbury (chapter 3:3).

Those plan-units that appear to represent the result of 'piecemeal' settlement can only be dated at all in the sense that prolonged archaeological (or other)

research may be able to provide a range of dates for the establishment of their component parts.

It may be felt, particularly by historians, that such arguments are to some extent pointless as archaeological dating in the medieval period tends to deal in whole centuries - at best - and that an absence of documentary evidence is an absence of a worthwhile chronological context. However, as Vince has recently pointed out (1990, 27), in London at least there is a growing prospect of very precise dating for the growth of the late Saxon city, through accumulated dendrochronological dates from waterlogged timbers. Such results may eventually, with the excavation of wells and more generally waterlogged deposits, be replicated elsewhere. The point is, however, to conclude this section, that the archaeological dating of individual features of the town plan is possible and even commonplace; but that the safe dating of areas - morphological regions - within the town plan, while possible, is ultimately dependent on the structured interpretation of a larger body of information than is likely to be derived from a single excavated site.

4:3 ESTABLISHING CONTEXTS

One of the clearest illustrations of the mutually-illuminating character of the archaeological and geographical approaches to the study of medieval towns may be found in the ways in which each discipline is capable of establishing a context for, and thus a more informed interpretation of, features or developments defined by the other.

The plan-analysis of Worcester revealed three cases

where plan-units exhibiting varying degrees of regularity or organisation in their landscapes were revealed by archaeological evidence to represent the end result of the reclamation of redundant defences, both of Roman and Anglo-Saxon date. Without archaeological evidence these plan-units would still have been defined, but their significance in terms of the overall development of the settlement and, in particular, the level of decision-making, organisation, and investment that each represents would not have been understood. The same may be said of Newport and Dolday, though further work in that area is obviously required. The plan-analysis, with the archaeological evidence for the location of the *burh* defences, can suggest that these roads provided access from the *burh* to the river-crossing and that any settlement along them can be considered suburban; however, our understanding of the significance of the streets is modified by the knowledge that they represent reclamation of the alluvial zone and not the exploitation of a natural spur of the gravel terrace. Our understanding will be further increased if and when archaeologists can show how that reclamation took place: whether by individual initiatives either side of a primary causeway (as the plan-evidence tentatively suggests) or by a much larger-scale institutional undertaking.

Parallel examples of the discovery that the settlement of particular areas was dependent on prior reclamation are not hard to find. Cases of wetland reclamation in Shrewsbury and Oxford have already been discussed. Bristol provides a good example of the varying scales at which such activities might be conducted: from the diversion of the River Frome and the construction of a new quay by the burgesses acting in concert (Lobel 1975, 7) to the metre-

by-metre extension into the river of plots held by individual burgesses in the Redcliffe suburb (Jones 1986).

Another type of reclamation can be illustrated from Lower Rushall Street in Walsall. Documentary evidence indicated that it was built-up within the medieval period, and plan-analysis (Baker 1989) showed that the street had formerly been characterised by a distinctive plot-pattern that distinguished it from neighbouring areas (fig.46). Few boundaries survived to be measured, but some at least of the plots recorded on the 1886 Ordnance Survey appear to have been of regular width; this, and the provision of rear access on one side, suggested that the settlement of the street may have been a 'planned' town extension. Excavation of a small site on the west side of the street (Wrathmell and Wrathmell 1981-2) showed that the earliest feature on the site was a large pit, close to the street frontage, interpreted as a limestone quarry pit. This had been backfilled and the ground levelled-up for domestic occupation 'probably in the 13th or early 14th century'. The excavators were of the opinion that 'The amount of filling required to create a level frontage must have been considerable, and points to a concerted effort of expansion, rather than the piecemeal extension of housing (Wrathmell and Wrathmell 1981-2, 105). Such a connection must, with this level of evidence, be speculative, but it is possible that the same process was not only applied to that property but to the rest of the street, as required. Further excavation would be able to show whether this was an isolated example or part of a more widespread scheme - a prelude to redevelopment (Baker 1989, 37).

Conventional geographical/historical definitions of a 'planned' urban landscape that are based solely on the presence of a geometrically-regular layout can in some

circumstances be argued to be inadequate. In addition to the essentially two-dimensional attributes of the geometry and metrology of streets and property boundaries, the third dimension, what a modern contractor would call 'groundworks' should also be taken into account.

A related and neglected process is terracing. This is particularly applicable in Shrewsbury where the fairly severe natural gradients have been transformed to the extent that slopes are entirely confined to street-spaces and open-spaces, the interiors of street-blocks presenting an extremely complex pattern of steps cut into and built out from the natural clayey-sand bedrock. Terracing in Shrewsbury has obviously been a fundamental process in the intensification of the building-cover within the river loop, but the exploration of the phenomenon has scarcely even begun. Carver's 1978 evaluation is a landmark in this respect, highlighting the 13th century as a formative period - but this is a model that requires testing. The Pride Hill case-study explored the question briefly, looking at the major terracing episode represented by the 13th-century town wall (and later, outside it, by attempts to prop it up), and the relatively minor terracing operations required for the intense exploitation of the available ground within individual plots.

Terracing in Shrewsbury is likely to be a difficult subject to investigate, buildings standing on terraces offering only a *terminus ante quem*, and the general absence of stratified deposits within the higher ground makes the identification of features actually cut by terraces highly unlikely. The Pride Hill survey suggests at least a partial way forward, through the analysis of the relationship between the plot-pattern and terraces. Of particular interest will be terraces that cut across a

number of plot boundaries: these are likely to represent either institutional/corporate developments cutting across established properties, or early features that pre-date the establishment of a local plot-pattern. The obvious candidate for this approach is the line of the Rev. Drinkwater's (1883) hypothesised town wall.

While this thesis is concerned with the elucidation of the physical framework of settlement, the land-uses contained by that framework cannot be ignored as they are likely to have influenced its development and may have been one of the factors determining its initial form. As the introduction (1:3) noted, land-uses pre-dating the earliest surviving building cover will rarely be comprehended from plan-analysis alone. The problem is particularly acute in the case of large pre-Conquest plots of the type seen, for example, in the Worcester or Shrewsbury High Streets (figs. 11 and 29). A process of increasing urbanisation associated with their sub-division can be safely assumed, but their primary use remains unknown. Shrewsbury (chapter 3:3) provided a partial exception to this rule. Large, early, parcels of land extending from the high ground of the town site down to the river were defined: their siting suggested that access to the river was important, and it was speculated that this may have been associated with the pasturing of livestock for the urban market. In two areas, Pride Hill and Mardol, large early plots of this probable semi-agricultural character were succeeded by much smaller plots of more conventional urban character — but which still retained access to the river (fig.41). The small size and pronounced curve of the Mardol plots, clearly arranged to provide street- and river-frontages, leave no room for doubt that these plots were created for or by

urban trades needing access to running water. This type of plot is exactly and extensively paralleled elsewhere (fig.42), and documentary evidence in Shrewsbury or these other towns may yet identify the occupations they contained, if only later in the medieval period. In these cases at least, the morphology of the plots was directly determined by the land-uses they contained.

In Worcester, excavation of the Deansway sites on the east side of Birdport (sites 1 and 2: fig.9) revealed some aspects of the relationship between the plot-pattern mapped in the 19th century and primary and later land-uses in the medieval period. Excavation on site 2 showed that at least one element of the recorded pattern of short irregular plots on the east side of Birdport was established when a long period of industrial activity (lime-burning, smithing) came to an end and housing began to occupy the frontage (Mundy 1989, 13-14). Excavation of site 1 to the north (fig.9) showed that a large rectangular plot on the south side of Powicke Lane, known as the site of a post-Reformation almshouse, was assembled when a large-scale brass foundry was established in the 14th or 15th century (Mundy 1989, 7). It is also worth noting that brass- or bronze working defined by excavation on the Sidbury site (Carver 1980, 174-5) appeared to spread across three separate properties taken into single ownership.

In summary, both the Shrewsbury and Worcester case-studies contain examples of the interaction of land-use and plot-morphology, defined by excavation.

Just as excavation can enhance or transform the interpretation of a particular feature of the town plan, so plan-analysis can provide the means by which an

excavated area can be seen within an appropriate spatial context. In Worcester, for example, the late Saxon industrial activity on Deansway site 2 (fig. 9) could reasonably be interpreted as the beginning of a process of infill between two earlier nuclei of activity, represented by the planned High Street area to the east, and the *haga* to the west, though understanding of the contemporary contents of either of these two areas is admittedly minimal.

Other cases can be suggested where plan-analysis might usefully be employed, it might even be suggested, as an urgent necessity. These are the multi-tenement sites that were excavated in the 1970s and have since been published either finally or widely, and have quite rightly become an important focus for synthetic studies mining the rescue database. Three in particular stand out: Coppergate in York, St Peter's Street in Northampton, and Flaxengate in Lincoln. Coppergate, for example, has yet to reach final publication. The interim and popular publications that have appeared (e.g. Hall 1984) may on occasion, no doubt inadvertently, give the impression that the excavated tenements were somehow typical of the Anglo-Scandinavian city as a whole ('Everyday Life in Jorvik'). It hardly need be said that this is a risky proposition. The tenements were not on the main north-south route to the bridge over the Ouse: is there likely to be any social or economic difference between them and the tenements that were? Further, the evidence from the excavation for early town planning (the simultaneous creation of several tenements) needs urgently to be elaborated: if the excavated site does represent a sample of a redevelopment area, how large was it, and following on from the section above, to what extent did it modify the local environment?

It would seem important to know whether a small field was merely partitioned, or whether (for example) several acres of wetland reclaimed, a bridge built, a street laid, and tenements measured out. It is very much to be hoped that final publication of this site will see an attempt to define the scale of the events hypothesised from the excavated tenements, and an attempt to place them within a local spatial hierarchy of town-plan elements.

The St Peter's Street site in Northampton has been in print for over a decade (Williams 1979). In that time its results have been used in synthetic articles (e.g. Astill 1983) and a variety of popular works. As a large, well-excavated site it will doubtless continue to be widely used as a case-study. In these circumstances it seems particularly desirable that its context be as fully explored as possible. The post-medieval maps published in the report show clearly that the medieval plot-pattern survived scarcely, if at all. However, the proximity of St Peter's Street to Mare Fair (a street of primary importance) and the fragments of the plot-pattern recorded in the 18th century do at least suggest the possibility that the excavated tenements on St Peter's Street represent secondary developments on the tails of Mare Fair plots. This question was not addressed directly by Hunter in the 1979 report (pp.134-5), though his discussion of the documents suggests that there is little or no documentary evidence with which to pursue this question further. Clearly, establishing the relationship of at least the post-Conquest structures, sequences, and finds-assemblages from St Peter's Street with any that may yet be derived from the Mare Fair frontage will be of some importance.

Similar questions are raised by Flaxengate in Lincoln

(fig.47). Like Coppergate, developments observed within the excavated area appear to have been part of larger-scale changes in the area, namely two streets (Flaxengate and Grantham Street) laid out in the late 9th century or very early 10th (Perring 1981, Vince 1989). It is noticeable that, while Flaxengate (if it is of the same date over all its length) is a not inconsiderable piece of town-planning, extending north to south over a distance of c.160 metres, it is also clearly secondary in importance to the High Street-Straight line, representing the axial Ermine Street line. Consideration of the plot-pattern in the immediate area raises some interesting problems. The site appears to lie at the junction of two morphologically-differentiated areas. The east side of the Strait is occupied by long curving plots, at least some of which run through to Flaxengate. It is possible that the excavated area in fact comprises the tail of one of these large, presumably pre-10th-century plots. However, the northern side of Grantham Street also appears to mark the northern boundary to a very different area - marked by long straight plots commencing at the point where the wide, straight, High Street comes to an end: surely a planned development of part of the axial route, and a parallel for what has been proposed for Worcester's High Street. Detailed plan-analysis would undoubtedly shed more light on the boundary between these two areas and the Flaxengate excavation's immediate context. Until this further work is done, one can only note the site's marginal position in relation to the axial route (High Street-The Strait) and the social, economic, and chronological implications that this will have for the excavated sequence and assemblages within the wider context of the city's development.

It must be stressed that these observations, and those on York and Northampton, should be regarded as potential further lines of enquiry, and not as dogmatic statements arising from detailed analyses of the town plans in the relevant areas. However, all three sites are inevitably linked by the weight of hypothesis that each has to, and will have to, bear. This will naturally lessen as the archaeological database increases in time, but, in the interim, it does not seem unreasonable to argue that, in such cases, the context of each site should be subject to the closest scrutiny, and that one effective means of doing this would be by the detailed analysis of each town plan.

4.4 CONCLUSIONS

As methods of exploring and quantifying the physical development of towns, both urban archaeology and plan-analysis have inherent problems. In addition to the ubiquitous archaeological problems of survival and recovery, archaeology in towns is additionally handicapped by the very small scale on which it can operate, in comparison with the scale of its subject matter. Town-plan analysis, while adopting a much broader approach, suffers from the superficial character of its source material: determining the chronology of stages of growth in a complex plan may be difficult or impossible, particularly in periods and places where documentary support is unavailable; the use of post-medieval, generally 18th- and 19th-century, sources to interpret medieval landscapes presupposes an inevitable loss of information through destruction by earlier redevelopment; and early medieval land-uses will rarely be apparent from plan evidence alone.

Many of these problems can be overcome, and a substantial contribution can be made to the study of the physical development of medieval towns, by an interdisciplinary approach that combines the methods and sources of the geographer with those of the archaeologist.

Two case studies have been presented that illustrate this. A plan-analysis of Worcester (Chapter 2) was able to define, for the first time, a number of stages in the growth of the city between the end of the Roman period and the 13th century, drawing on excavated evidence to do so. The documented Anglo-Saxon *burh* of the late 9th century was shown to have been a northward defended extension to

an earlier Roman enclosure containing the site of the cathedral. The *burh* was internally divided into two zones, one dominated by a commercially-exploited riverside enclosure, the other occupied by a planned urban layout. The outline of the *burh* was gradually obscured as its defences were progressively levelled and the occupied area enlarged. Extensive suburban development, including a very large planned linear suburb, took place after the Conquest.

Though excavation has, so far, embraced only a very small proportion of the medieval walled city and has left the suburbs almost untouched, its impact on the plan analysis and the model it has produced has nevertheless been profound. First, it has contributed to an understanding of the morphological frame that determined the shape of the developing Anglo-Saxon and medieval settlement: observations from the 1950s contribute to an understanding of the natural site and its minor watercourses, but the area excavations of 1985-90 have demonstrated that surviving features of the Roman town acted powerfully on later occupation and were influential in shaping the outline and internal arrangement of the 9th-century *burh*. The discovery by excavation of a very short stretch of the latter's northern defences is perhaps the most immediately obvious contribution of the archaeology to the plan-analysis; topographical evidence allows the course of the rest of its circuit to be predicted with some confidence. Excavated evidence was also able to contribute, to a limited extent, to the establishment of a fixed chronology for the developments defined by the plan analysis, though the coarse date-ranges of pre-Conquest pottery types in the town are a problem. In addition to providing elements of a

chronology, excavated evidence was also able to contribute to an understanding of the contemporary context of particular plan-units, specifically those that were directly associated with the reclamation of former defences for the extension of settlement. Excavation was also able to provide evidence for changes in the extent of plots at the junction of two plan-units, and thus help document the changes in their outline and explain the behaviour of an associated parish boundary. Conversely, the plan-analysis has helped illuminate the context in which developments recorded by excavation took place. Specifically, the early medieval industrial, then domestic, occupation of one of the Deansway sites can now be seen to represent infilling between two earlier focii – the planned High Street development, and the bishops' riverside *haga*.

A detailed analysis of Pride Hill in Shrewsbury provided the second case-study (Chapter 3). This, again, sought to explore the interrelationship of evidence derived from archaeological methods (here, building and cellar surveys, excavation, and antiquarians' records) with that derived from 'historical geographical' methods – cartographically recorded plot-boundaries and their metrology. Evidence was presented for the existence of a distinctive building pattern on a number of adjoining sites in the 13th-14th centuries: stone halls raised on undercrofts, parallel to the street behind courtyards and shops on the frontage. The physical relationship between the dateable buildings and the property boundaries (in the form of party walls) was studied, and medieval and post-medieval boundaries distinguished. Beyond the buildings, cartographically recorded boundaries were used to reconstruct the form of

the plots, and thus the immediate spatial context of the individual buildings established. Metrological evidence tentatively suggested that a number of the medieval plots had been laid-out with frontages of regular widths. The plots themselves pre-dated the early 13th century and the town wall that bisected them. They may represent subdivisions of earlier parcels of land reaching from the high, built-up, ground to the riverbank, and some plots still reached the river in the later middle ages; they are seen as part of a wider pattern of the exploitation of the early town's riverine fringes. The large plots, in combination with the street's commercial primacy, or potential, and the natural gradient, attracted high-status structures of first-floor hall type arranged parallel to, but behind, the rent-yielding frontage. Once in place these buildings discouraged longitudinal sub-divisions of the plots away from the frontages. However, sub-division did eventually occur, particularly with the expansion in the urban population in the late 16th-17th centuries, when private entries began a process of transition into public thoroughfares, and cross-passages provided natural breaks on which to sub-divide buildings, and the plots behind them.

The two case-studies highlighted those areas where an integrated approach that combines archaeological and geographical perspectives seems particularly profitable – arguably essential. Further discussion of these has occupied the bulk of this chapter, and four main areas of contact between the two disciplines have been explored.

First, the archaeology of morphological change. Excavation can investigate the constraints, natural and man-made (morphological frames) shaping later settlement

patterns; excavation can also sample landscapes buried, and thus cartographically invisible, beneath later redevelopment; and excavation has also generated evidence for changes in the extent of individual plots, affecting the definition of cartographically-recognised plan regions, and contributing to the growing corpus of information on the behaviour of burgage plots as recurrent phenomena.

Secondly, archaeological sources may be used in the dating of developments identified by cartographic analysis: through the dating, by excavation or survey, of specific mapped features; by the establishment of a chronology for occupation in an area, not specifically related to features of the town plan; and by the establishment of the date of major landscape features, or the relationships between major features, that may have dating implications over a wider area.

Thirdly, the contemporary context, and the significance, of an extension of urban settlement may not be apparent from the cartographic evidence, but may be revealed by excavation. This applies to the archaeological determination of early land-use, and to the revelation of the background to an area's initial development, where for example, settlement followed a process of reclamation: of wetland, of former quarrying, and of redundant defences. The latter appears to be a particular feature of early medieval Worcester.

Fourthly and finally, by defining spatial structures in historic town plans inherited from the outward growth of urbanised areas, town-plan analysis offers a way of providing a contemporary context for individually-excavated early medieval deposits and sequences, and the land-uses that can be interpreted from them. At a more

local level too, late- as well as early medieval structures and deposits are likely to have been contained within a plot or property whose boundaries, though perhaps outside the excavated area, may still be reconstructable from cartographic sources. The immediate intra-plot context of the structure or excavated area may then be determined, and so may the relationship between the containing plot and its neighbours.

In short, plan-analysis on the lines pioneered by Conzen, reveals a clear spatial hierarchy within town plans. The significance of archaeologically-investigated sites cannot be fully appreciated if their place within that hierarchy is not understood.

It is this last area that arguably has the most urgency in terms of the direction of further work. The definition of such spatial structures has a direct relevance to the management of archaeological resources. It would be difficult to argue that defined plan-units should form the basis for a sampling strategy - in a restrictive sense - if only because it would be difficult to argue that any coherently-stratified historic urban deposits are not worthy of preservation *in situ* or by record following excavation, given the very small size of the current sample. However, it might be appropriate in some circumstances for plan-units or other geographically-defined structures to be given an additional level of protection by the responsible agencies. For example, if it were determined that only a limited area of deposit remained intact within the area of the planned High Street area in Worcester, should not that deposit be granted an additional level of protection, given the historical and archaeological significance of that particular piece of

town planning?

Finally, as post-excavation is succeeded by publication, and the data from the urban rescue excavation boom of the 1980s enters the archaeological literature, the process of synthesis and absorption will also begin. This will, in turn, influence future strategies for urban archaeology. Unless the spatial structures that undoubtedly lie hidden in the plans of cities like York, Lincoln, Canterbury, Ipswich, or Norwich, are investigated, then the significance of the many excavated sites within them cannot be fully appreciated.



FOOTNOTES

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SOURCE NOTES FOR THE TOWN PLAN OF WORCESTER (Numbers refer to fig.26).

1. College Street and the Cathedral Close. Properties lining the north and east sides of the Close, and the position and plan of St. Michael in Bedwardine, based on Young's map of 1779 and on the 'Plan of the intended road at Worcester' (College Street) surveyed in 1794, in the 1824 Corporation Plan Book (HWRO BA 5268 f926.11). All Corporation plans appear schematically drawn and accuracy would appear to be limited to frontage measurements.
2. Bridge Street. Built in 1771-80 as the approach to the new bridge (see note 19), has been excluded from the map and the earlier street pattern reconstructed from Doharty's map of 1741 and Broad's map of 1768. Both sources are of questionable accuracy and unscaled, and reconstruction in this area must be regarded as schematic.
3. St.Clement's Lane. Based on Young 1779 and Worcester Corporation 1824 Plan Book, 43.
- 4,5. Cripplegate-Rosemary Lane. St. John's Road (the new western approach to the bridge of 1771-80) excluded. Earlier road configuration from Doharty 1746 and ms.plan published by Whitehead (1982).
6. Foregate Street. Pre-railway property boundaries taken from Worcester & Hereford Railway map (HWRO BA 438 f209 161/166.1) of 1845.
7. The lower Frog Brook. Watercourses based on Young 1779 and must be regarded as schematic.
8. Fields and lanes from Young 1779.
9. The Alcester road/Shrub Hill. Course to Lowesmoor junction from Young 1779.
10. Blackfriars (The Dominican Friary, Broad Street). Outline of the friary based on Hughes et al 1986 and Mundy 1986 and 1989. The extent of housing on the Little Angel Lane frontage on the east side of the precinct, in the medieval period, is uncertain and the tenements visible from the 18th century here have been excluded (see also note 22).
- 11 Watercourses in Pitchcroft draining into river from Young 1779, with general confirmation from Doharty 1746 and St Clement's- St.Nicholas' parish boundary shown on O.S. 1st edition.
12. Pitchcroft and fields to west of the Tything based on undated (probably 18th-century) ms. map of holdings of St Oswald's Hospital (copy in files of Worcester City Museum).
13. St. Martin's, Silver Street and the Cornmarket. Pre- 19th-century street frontages and Trinity Gate area restored from Young 1779, and Worcester Corporation 1824 plan book, 4.
14. Tenements between Copenhagen Street and Warmstry Slip on the St Alban's Square site, restored from Worcester Corporation 1824 Plan Book, 52.

Accuracy uncertain, and the regular layout of these properties shown in the plan book cannot be maintained when the recorded measurements are plotted within the site mapped by the O.S..

15. The Bishop's Palace. Medieval ground plan from VCH Worcs. IV, 407.

16. St Wulstan's Hospital (The Commandery). Plan from O.S 1st edition, with additional information from Latta 1977.

17. Greyfriars. Building outlines required from Young 1779, and unidentified MS. plan in Hughes and Molineux 1984, 9.

18. The City Wall. The course of the wall is based largely on the O.S. 1st edition, with additional information from Broad 1769, Young 1779, Doharty 1741, and the chapters by Beardsmore and Bennett in Carver 1980. Bastions between St Martin's and Sidbury Gates to be added from Bennett 1980. Gates are shown conventionally, though based on the circular structure of Sidbury Gate observed in 1907 (Carver 1980, cat. 16/68).

19. Severn Bridge. Based on Doharty 1746, Broad 1768, and Beardsmore 1980, 62.

20. The Quay. River frontage (approximate) from Doharty 1746 and Broad 1768.

21. Gaol Lane. Unwidened street frontages and Trinity Gate area based on Young 1779.

22. Angel Lane area. Based on Young 1779.

23. St. Clement's church outline. From Worcester Corporation 1824 Plan Book, 43.

24. The Castle. Motte from Samuel Mainley's Plan of Worcester Castle 1822, reproduced in Carver 1980 (Plate 1).

25. St John's. Field and road pattern based on Young 1779 and Young's earlier map of the Dean & Chapter properties in St John's and St Clement's, 1777 (copy at HWRO 971.2 BA 1691/43).

26. Bull Entry. Shown here in its late 18th-century form from Young 1779.

FOOTNOTES.

1. Barker (1968-9) proposed that Swan Pool Walk, the footpath approaching the priory ferry from St John's, represents the line of a Roman road. Excavation has not taken place, and while a deep post-medieval build-up of silt is probable (as on the west bank of the Severn opposite Wroxeter), the path is level with the surrounding floodplain and consequently liable to flood.
2. Metrological evidence from measured plot-frontage surveys is presented throughout this thesis solely in cartographic form. Work by Slater (e.g. 1981) and that by the writer in Shrewsbury and Worcester suggests that, given the possible intensity of frontage subdivisions, the significance of measurements cannot be assessed unless their relationship to the plot boundaries is understood; graphic or tabular presentation of largely post-medieval frontage widths would be meaningless. In Slater's words 'Initial analysis of the field measurements involves the summation of measures between... *primary plot boundaries* and the consideration of these measures as some multiple of the statute perch of 16½ feet (5.03m)' (1981, 213).
3. With thanks to Dr Terry Slater for this observation on the Pump Street rear plot boundary.
4. These alternative models for the development of Sidbury are capable of being tested archaeologically, should excavation become necessary on the south side of Sidbury, or if it was decided to investigate the line of the north boundary of the Commandery, as shown by Young, by limited excavation within the present garden.
5. Correspondance (Worcester City Museums archive) regarding a survey carried out by John Smith (RCHM).
6. With thanks to J.B. Lawson for extensive discussion of these documents.
7. The writer is grateful to Mr J.T. Smith for his comments on this building.
8. The writer is grateful to Madge Moran for her identification of the hewn jetty.
9. Plot frontage measurements survey carried out in 1990 with the assistance of Ms. Helen Wright (School of Geography, Birmingham University).
10. While there is clear documentary evidence for town wall building in progress in c.1220-1242/50 (see Radford 1961), there is no evidence to link this work with particular stretches of masonry. The architectural character of the wall is constant in the Raven Meadows area, but substantial variations are visible elsewhere (e.g. the Telephone Exchange, Beeches Lane) and some caution, and further work, is required.
11. The writer is grateful to Mr W.E. Jenks for a very full and valuable discussion of this sequence.

12. By David Pannett. With thanks to him for extended discussion of this, and many other issues.

13. Alienation of the Pride Hill Chambers courtyard with the frontage shops may have been the context for the construction in it of the excavated 16th-century oven (see fig.40).

14. A rural parallel can be found at Madeley Court, Telford, Shropshire. The 13th-century first-floor hall (similar in date and size to Vaughan's Mansion) was built on the only gradient on the site, displaying a single-storey elevation within the complex, and a two-storey elevation to the outside world. Cameron Moffett, forthcoming.

15. Other streets in Shrewsbury where this approach would seem to be particularly appropriate are Frankwell, the High Street, and Wyle Cop.

16. With thanks to Joan Baker for this reference.

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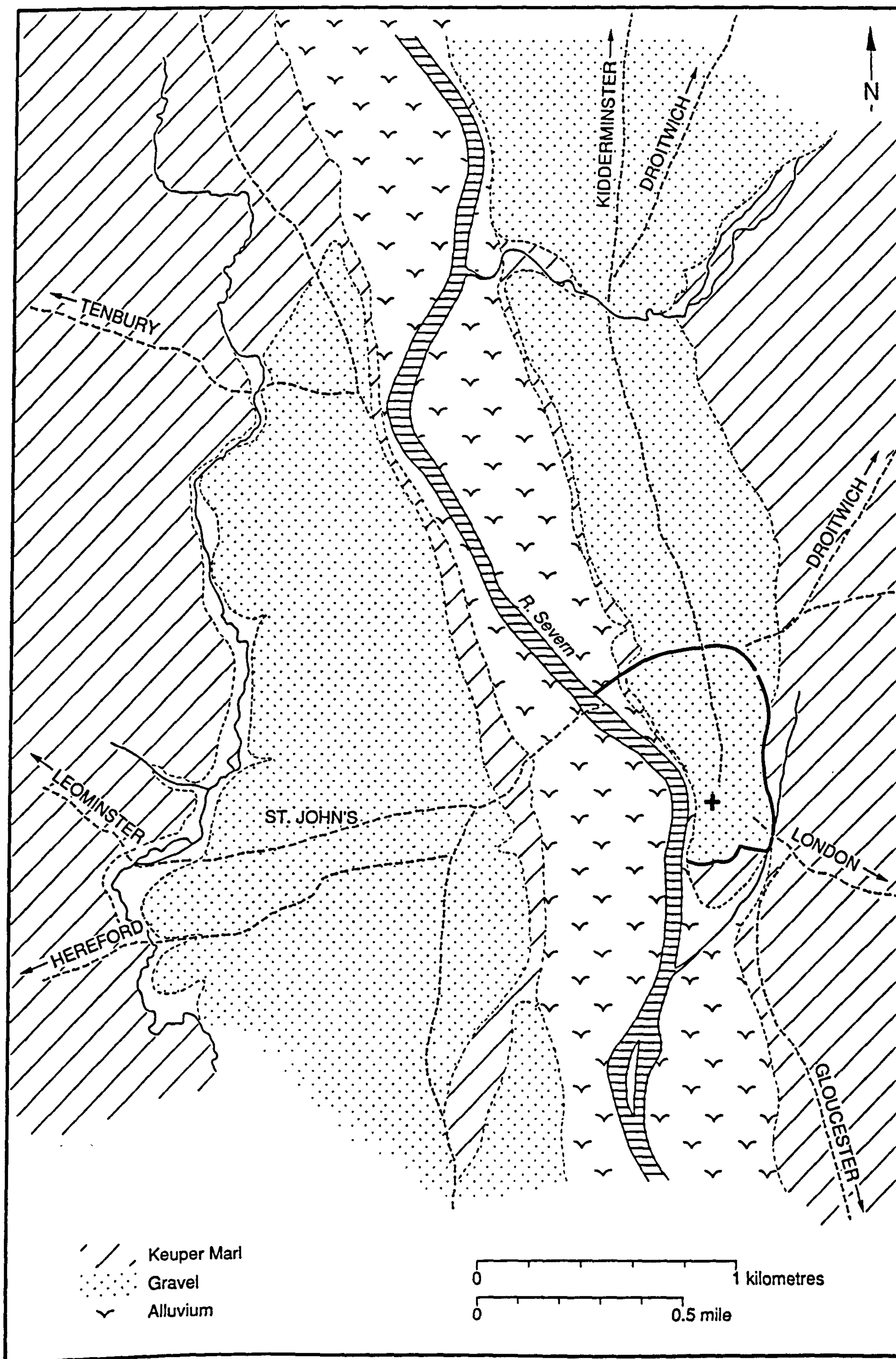
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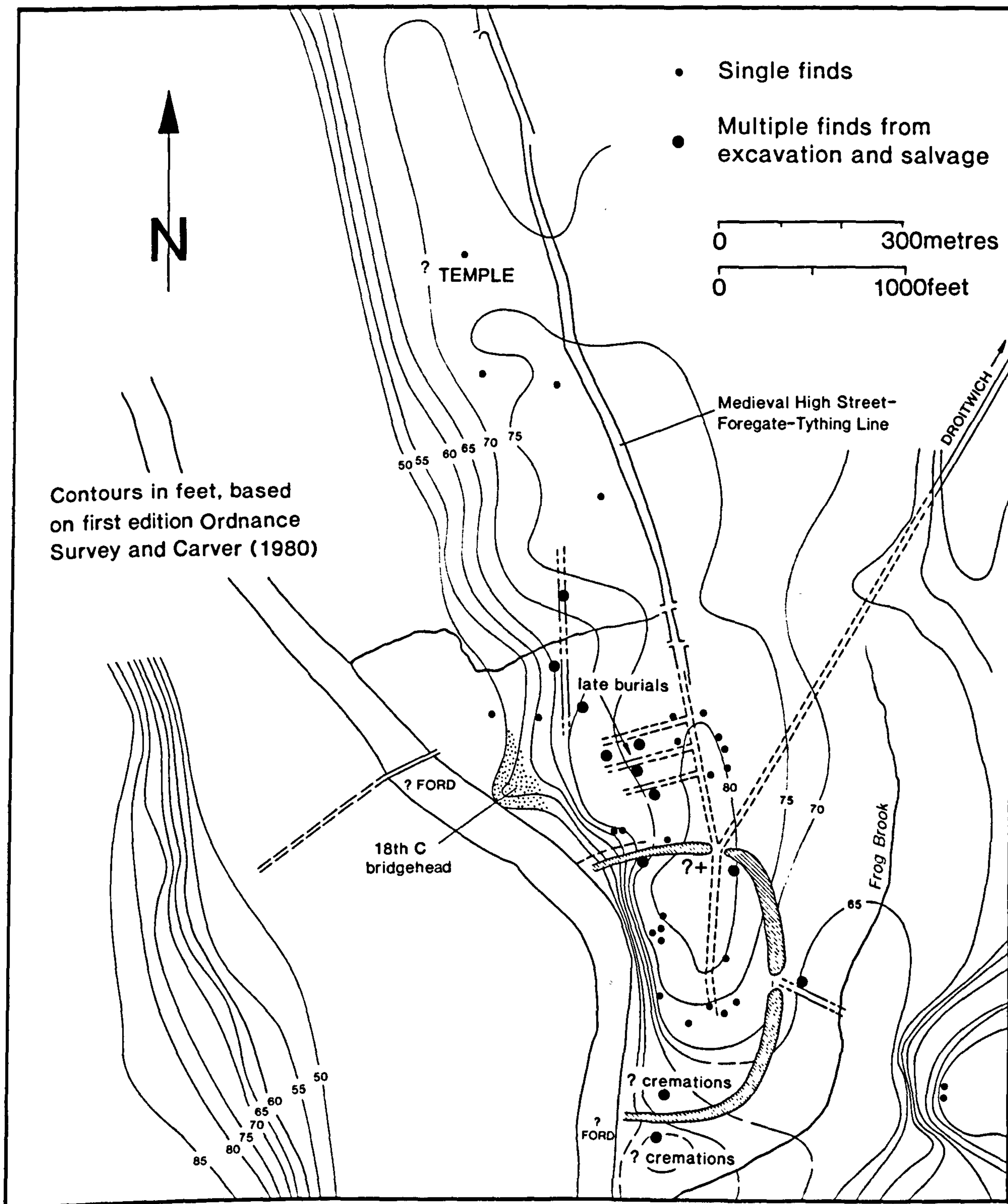
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Abbreviations

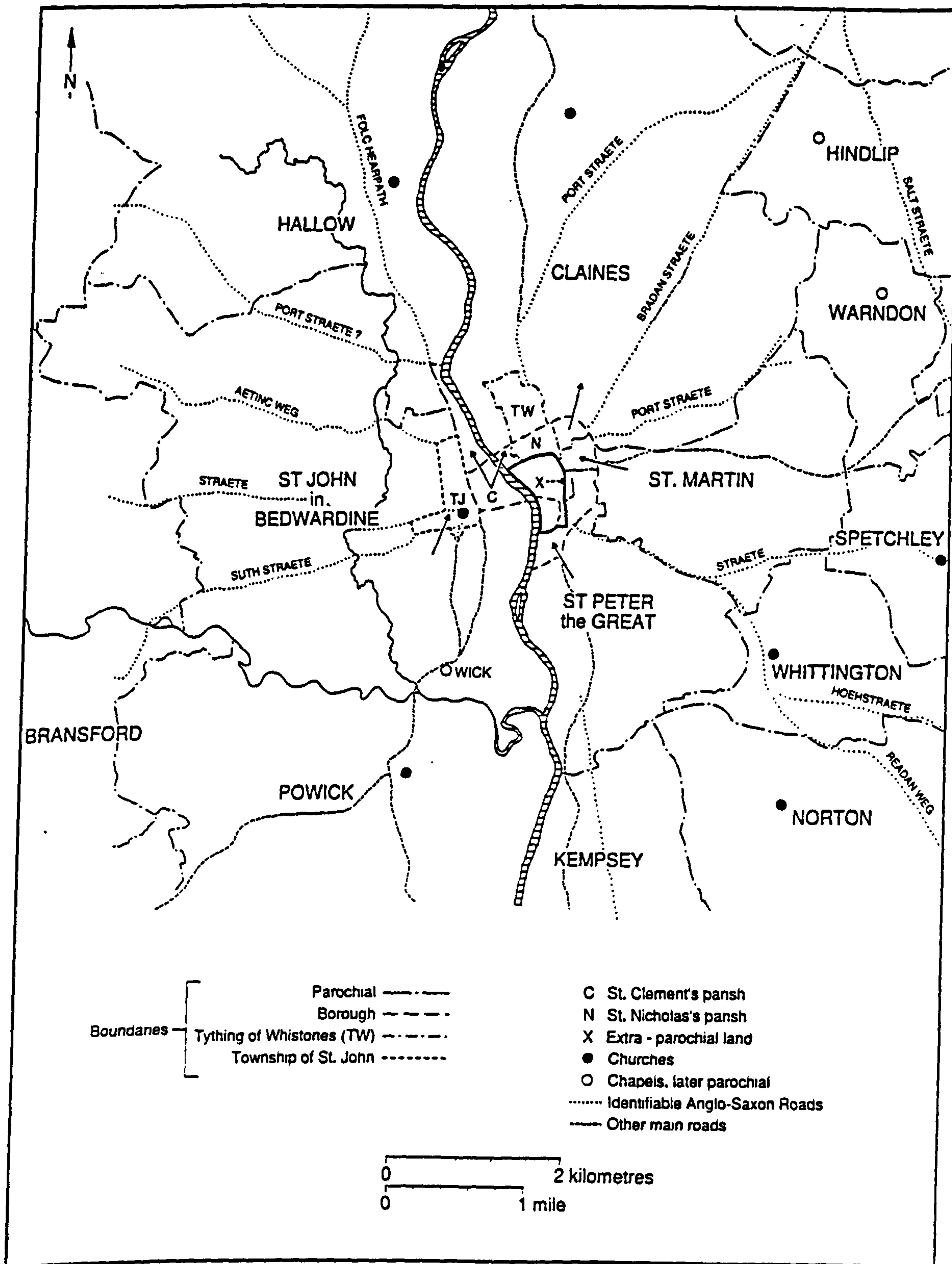
BAR - British Archaeological Reports
CBA RR - Council for British Archaeology Research Reports
JBAA - Journal of the British Archaeological Association
PSIA and H - Proceedings of the Suffolk Institute of Archaeology
and History
TSA and HS - Transactions of the Shropshire Archaeological and
Historical Society
TSA and NHS - Transactions of the Shropshire Archaeological and
Natural History Society
TSAS - Transactions of the Shropshire Archaeological Society
TWAS - Transactions of the Worcestershire Archaeological Society



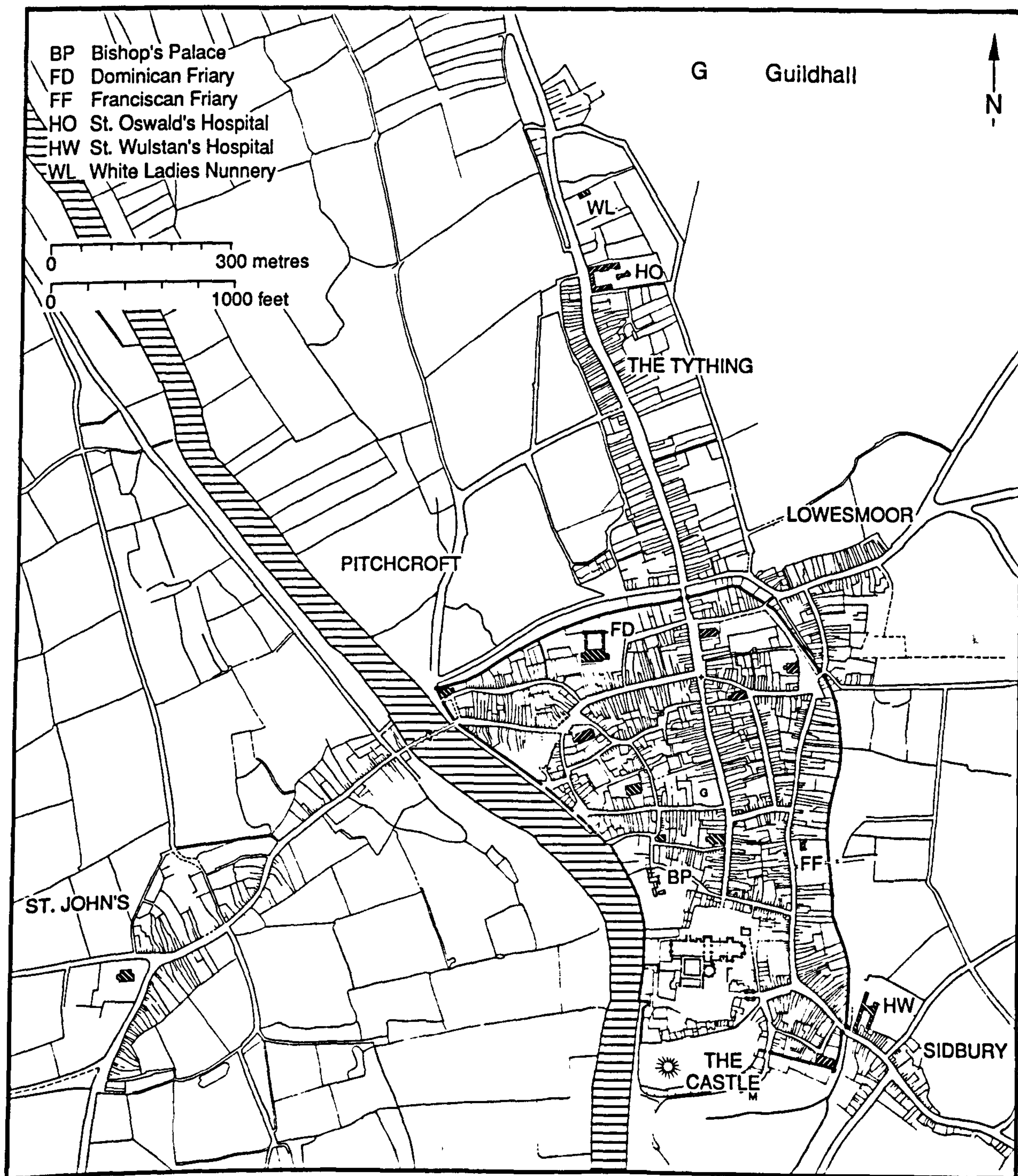
1. Worcester: The medieval city and its geological background (after Barker 1968-9, fig. 1)



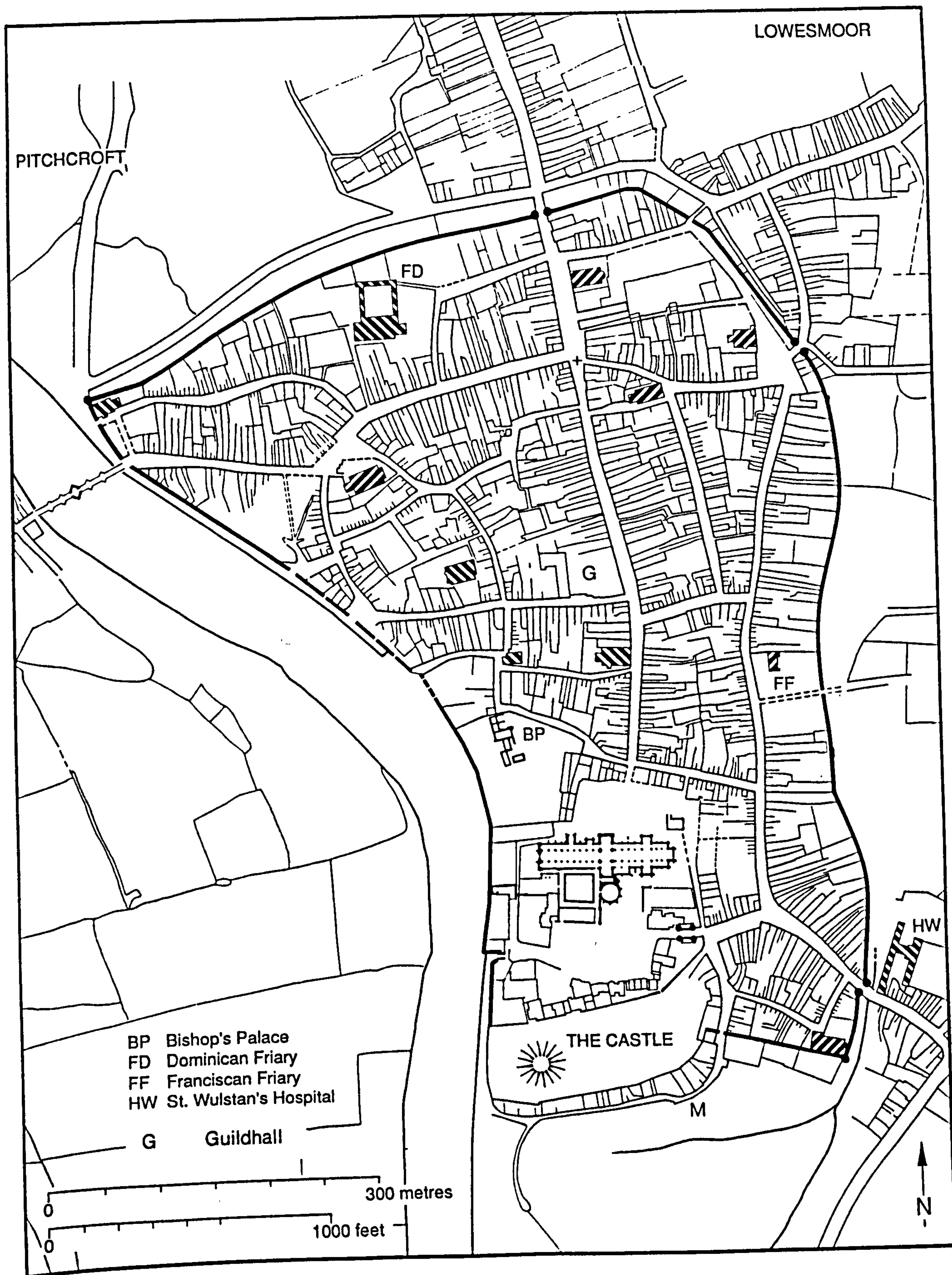
2. Worcester: Modern contours and Roman features.



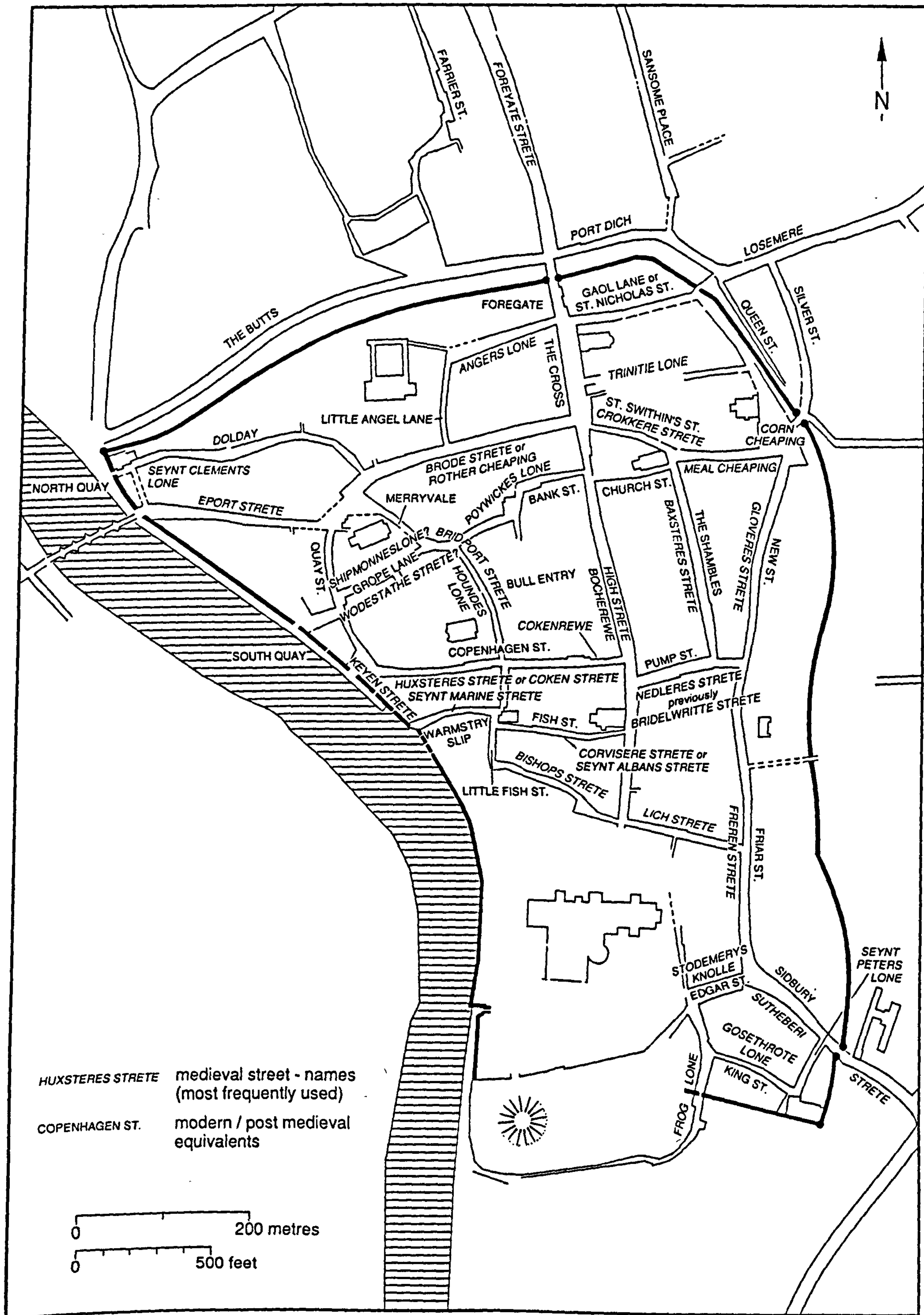
3. Worcester: the environs of the medieval city:
roads and parishes



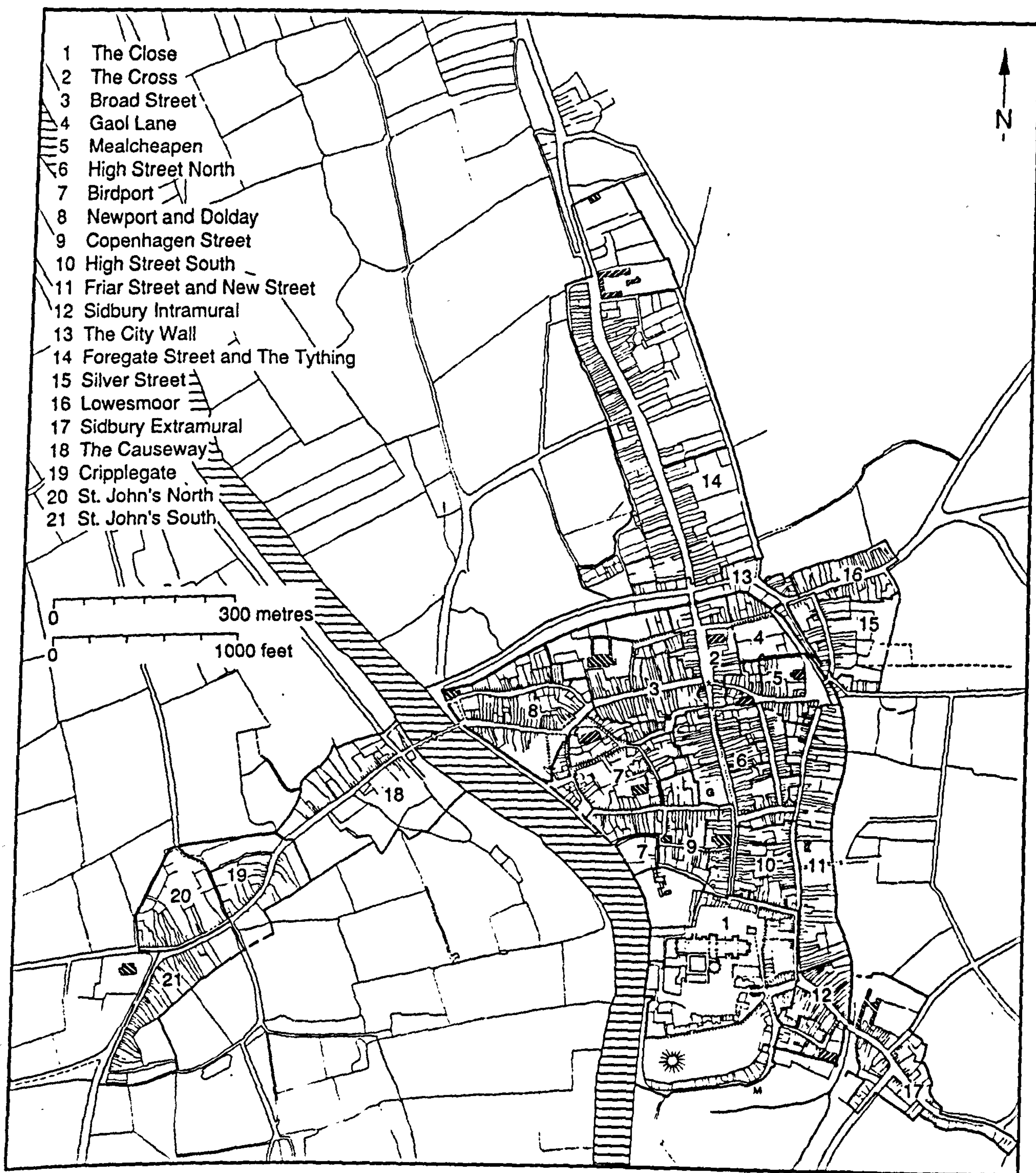
4. Worcester: The medieval city and its suburbs



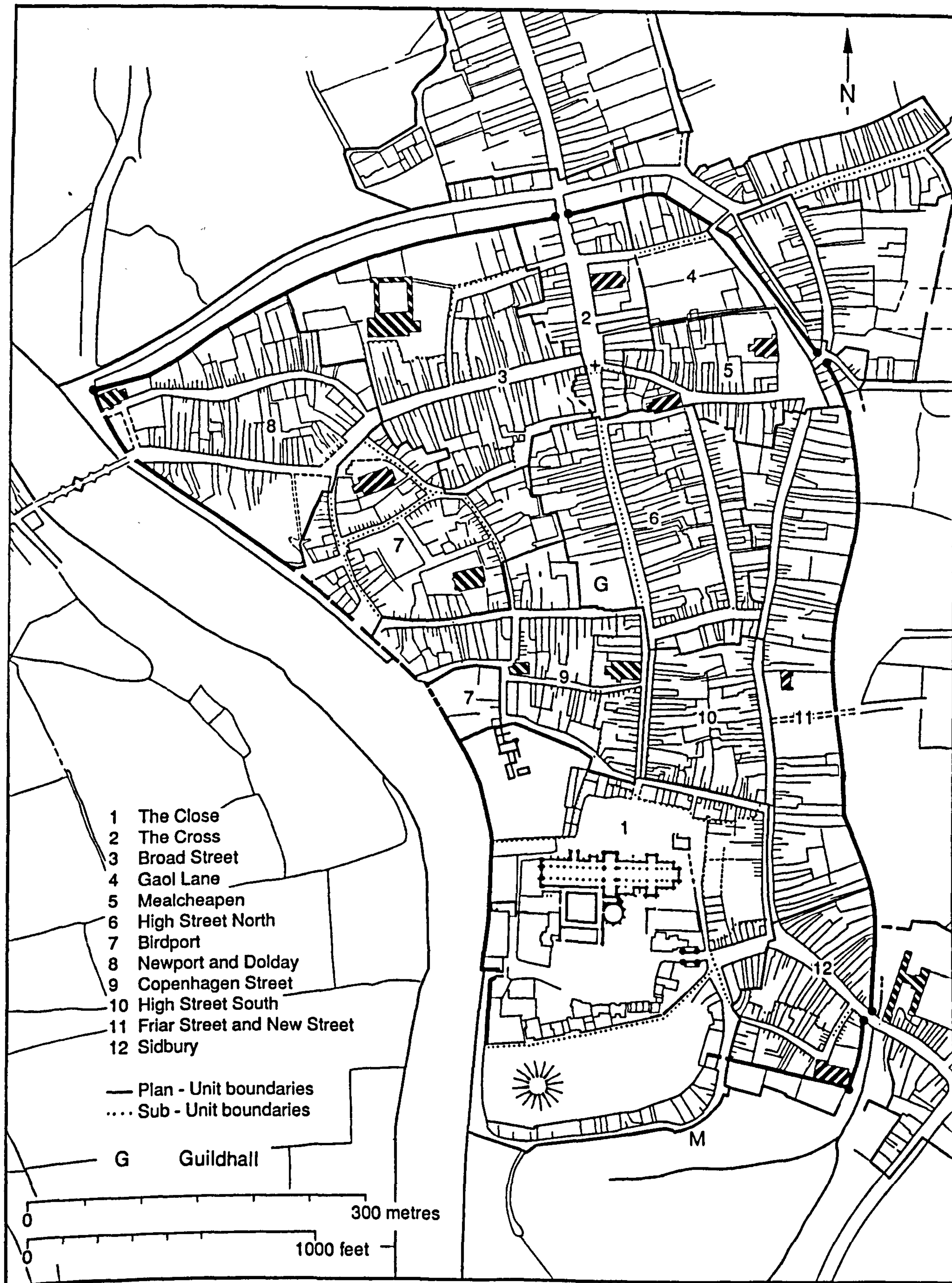
5. Worcester: the medieval intramural city



6. Worcester: medieval and modern intramural streets



7. Worcester: medieval plan-units in the city and suburbs



8. Worcester: medieval intramural plan-units



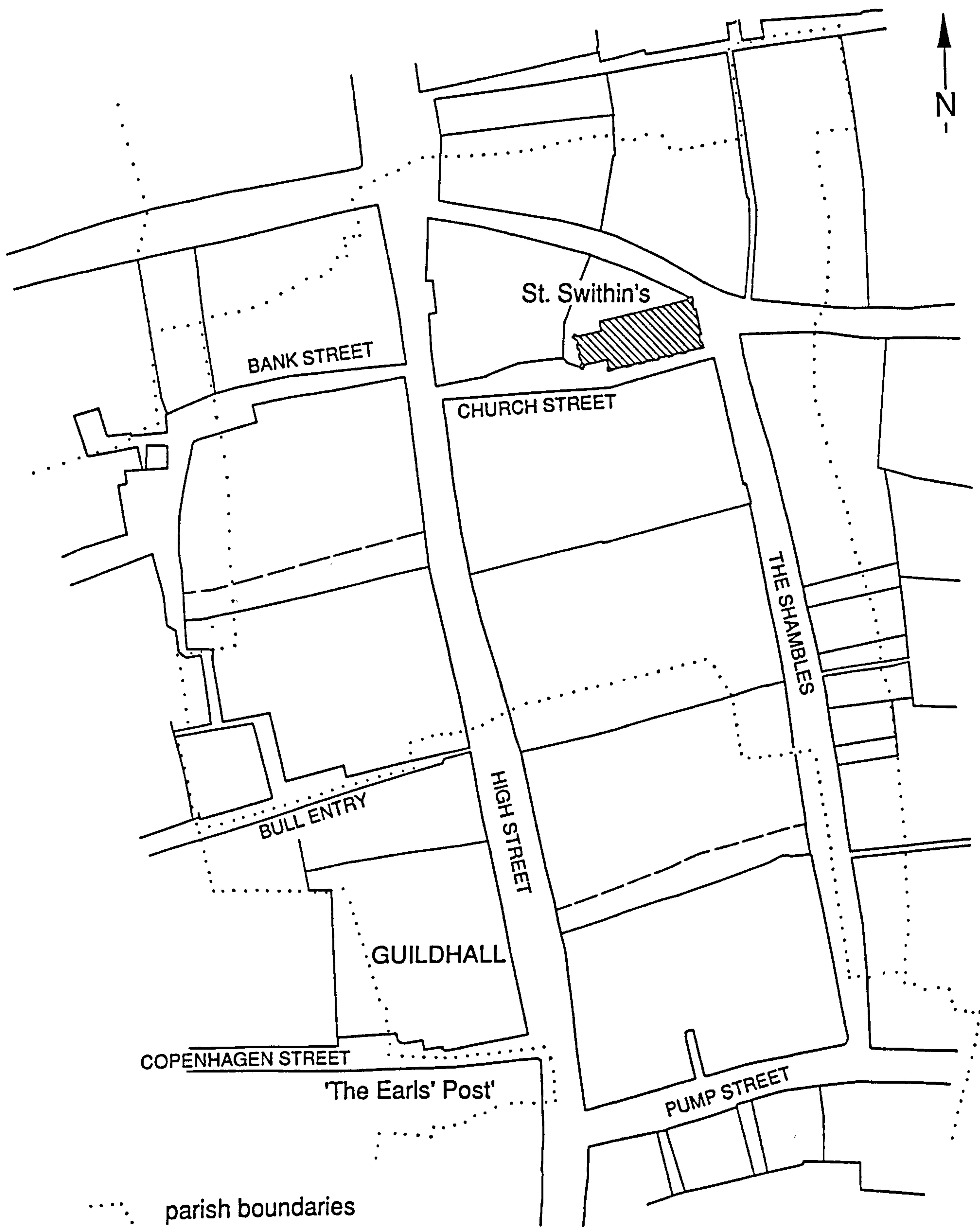
9. Worcester: The Broad Street - Birdport area,
with excavated areas, 1985-1990

FIGURE 10: METROLOGICAL DATA for BROAD STREET

NORTH SIDE		SOUTH SIDE	
1-2	33' 1	1-2	33' 10
2-3	19' 0	2-3	21' 10
3-4	27' 0	3-4	16' 6
4-5	34' 4	4-5	20' 7
5-6	72' 11	5-6	37' 10
6-7	36' 9	6-7	31' 11
7-8	22' 9	7-8	07' 10
8-9	32' 2	8-9	16' 1
9-10	15' 3	9-10	12' 1
10-11	57' 1	10-11	39' 8
11-12	64' 0	11-12	11' 9
12-13	25' 6	12-13	31' 11
13-14	24' 8	13-14	17' 1
		14-15	45' 3
		15-16	43' 0
		16-17	20' 10
		17-18	24' 0
		18-19	21' 3
		19-20	21' 3
		20-21	24' 7
		21-22	31' 0
		22-23	18' 10
		23-24	16' 7
		24-25	23' 6
		25-26	28' 10
		26-27	28' 0



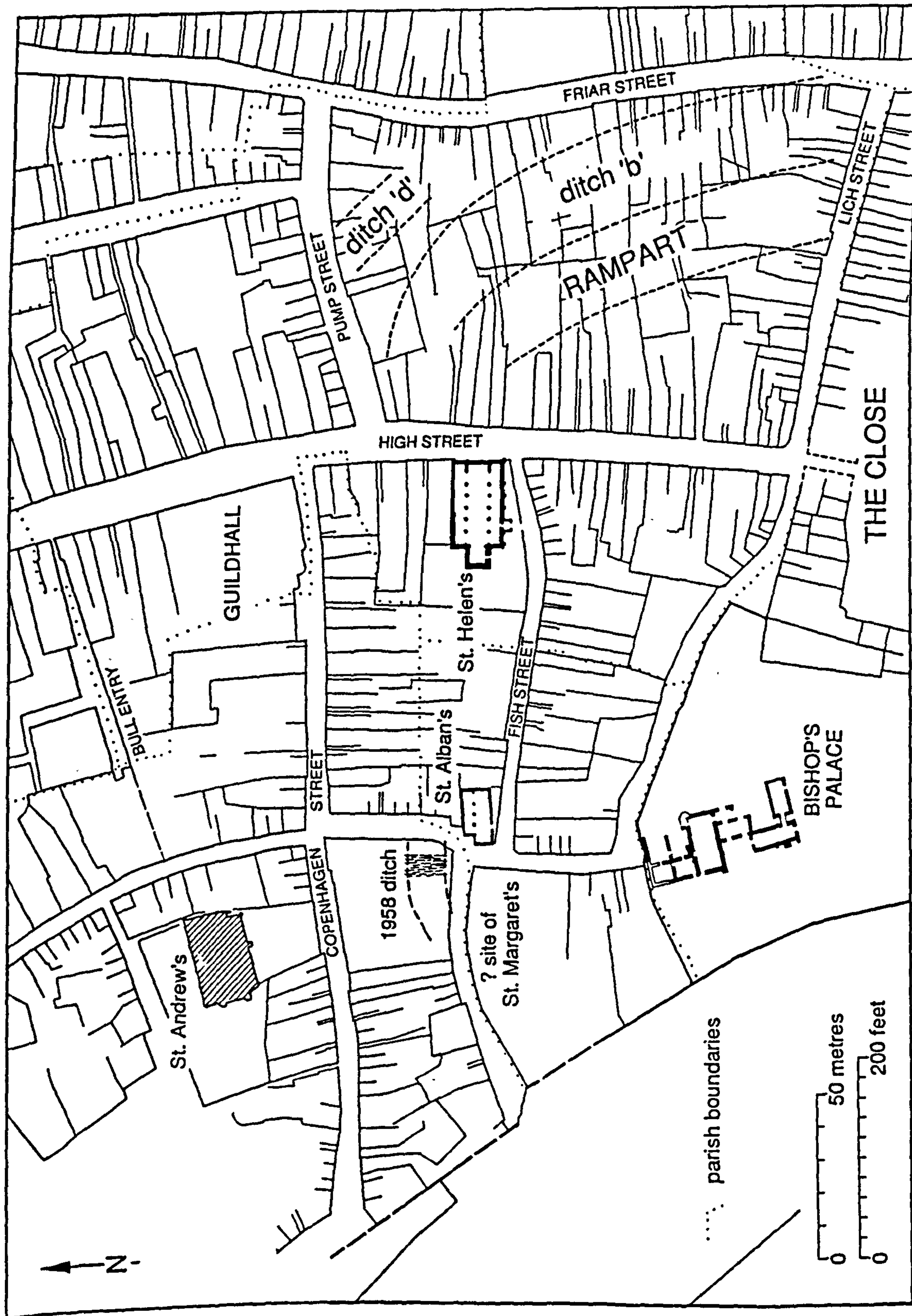
10. Worcester: Broad Street and the Anglo-Saxon defences



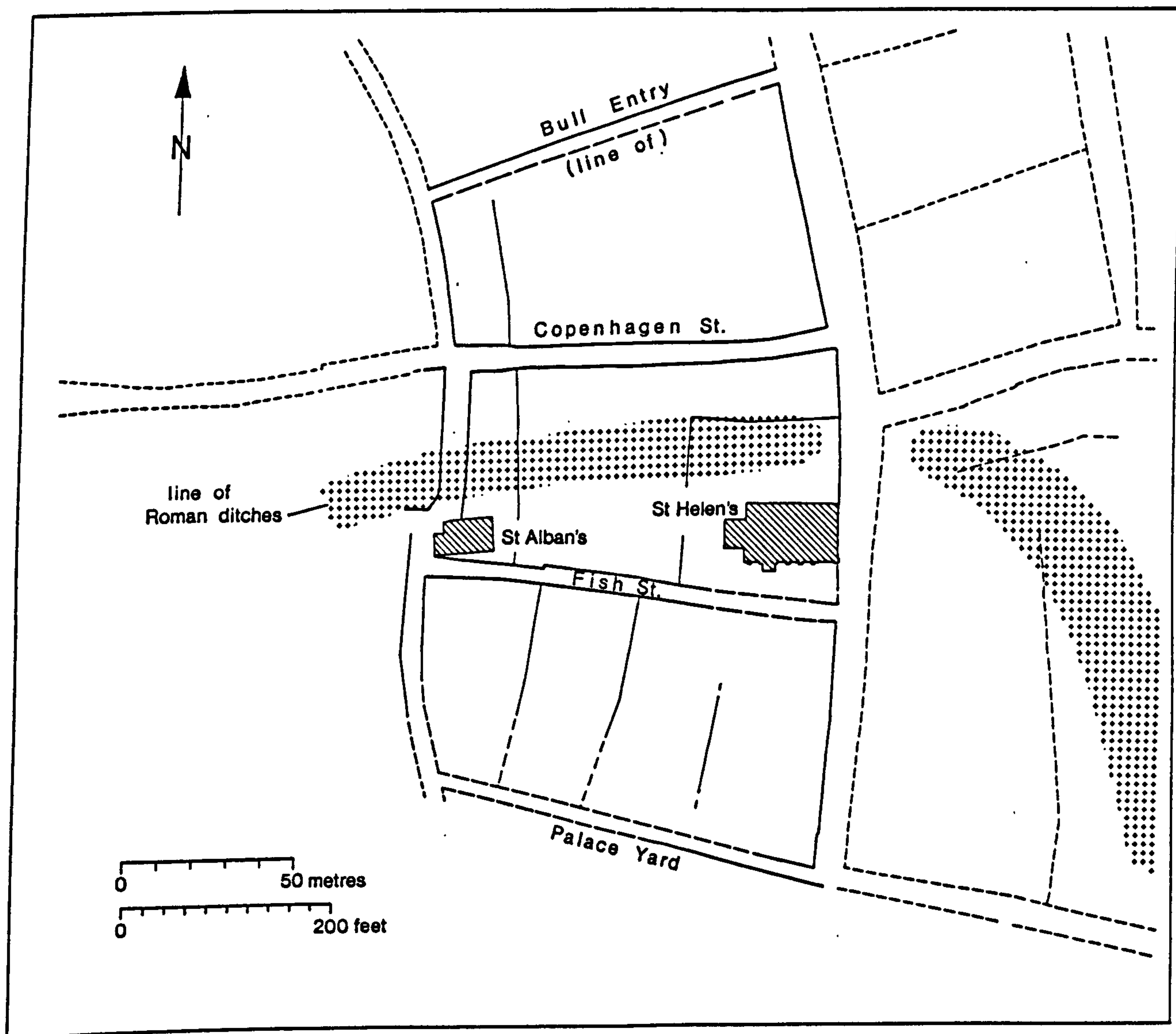
11. Worcester: the High Street North plan-unit (6)
with primary plot boundaries



12. Worcester: the Birdport area and the 904 Haga: interpretative plan. A: the haga as described in the lease of 904; B: the Birdport area in the 18th-19th centuries; C: the haga reconstructed D: the suspected primary partitioning of the haga; 1-4: Deansway excavation areas.



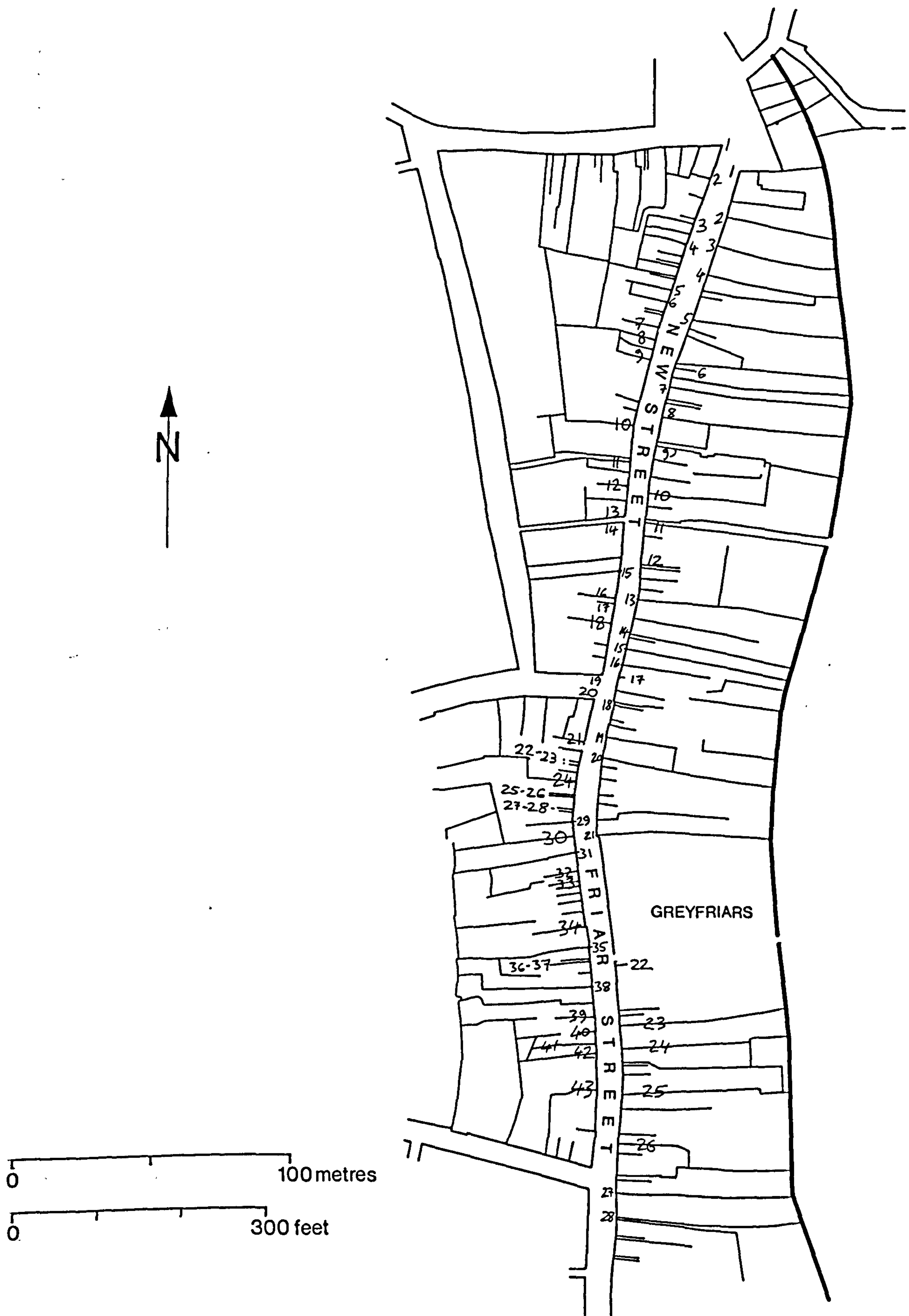
13. Worcester: the area north of the cathedral close,
with the excavated Roman defences



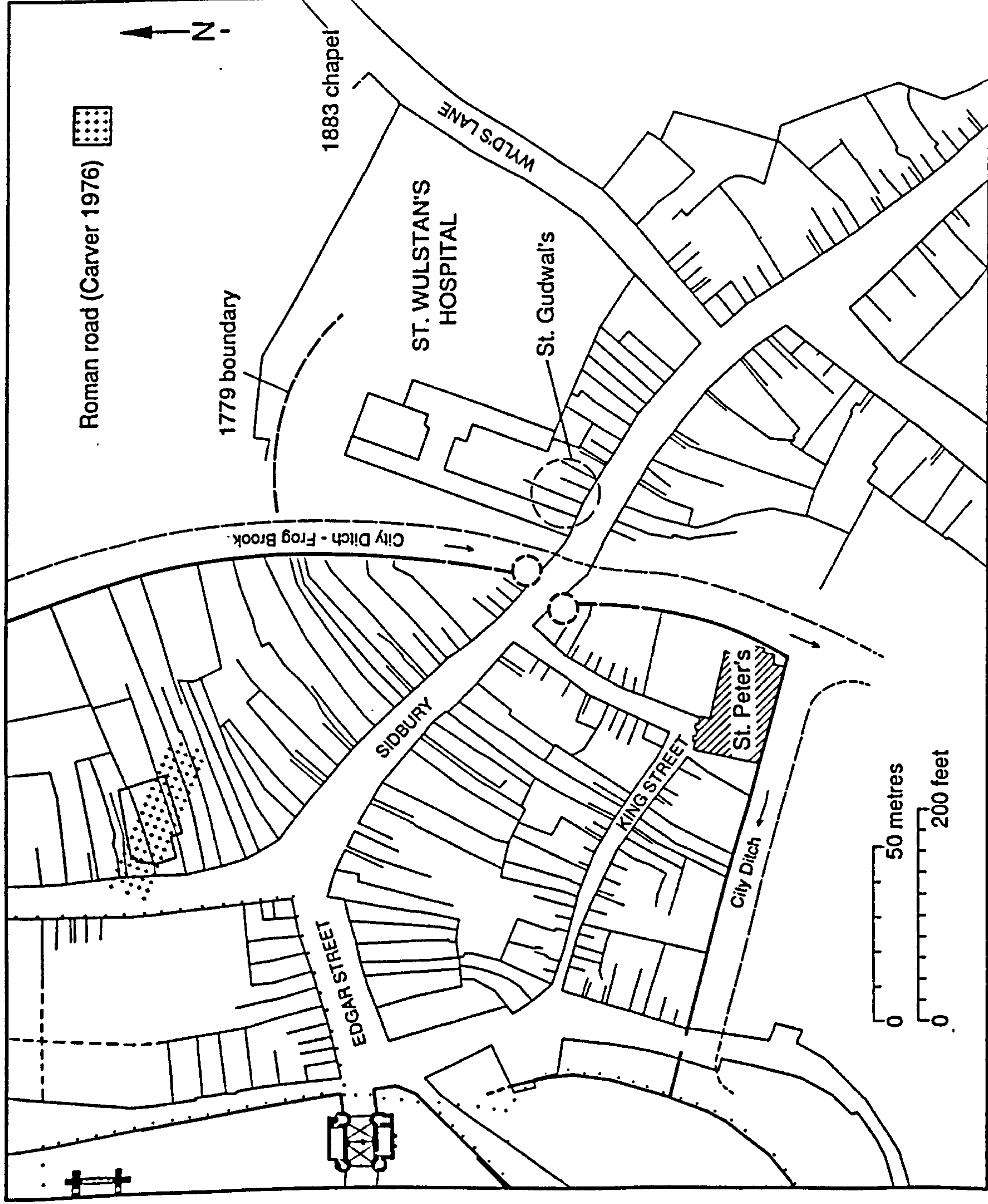
14. Worcester: the Copenhagen Street plan-unit:
interpretative reconstruction of planned area

FIGURE 15: METROLOGICAL DATA FOR FRIAR STREET AND NEW STREET

WEST SIDE		EAST SIDE		
1-2	44' 9	1-2	58' 8	
2-3	58' 4	2-3	36' 0	
3-4	34' 2	3-4	35' 0	
4-5	54' 11	4-5	56' 3	
5-6	16' 2	5-6	57' 3	
6-7	32' 0	6-7	26' 3	
7-8	14' 10	7-8	35' 6	
8-9	24' 0	8-9	32' 3	
9-10	78' 0	9-10	57' 2	
10-11	43' 0	10-11	35' 4	
11-12	26' 3	11-12	33' 9	Numbers 1-43 (west side) and 1-31 (east side) refer to identified surviving property boundaries as shown in the accompanying figure. All measurements are in feet and inches. Combinations that may possibly reflect original statute-perch based property measurements are:
12-13	37' 7	12-13	41' 10	
13-14	04' 11	13-14	40' 8	
14-15	61' 3	14-15	18' 7	
15-16	30' 8	15-16	18' 7	
16-17	05' 11	16-17	15' 11	
17-18	24' 2	17-18	32' 7	
18-19	61' 6	18-19	38' 10	
19-20	29' 0	19-20	23' 3	
20-21	52' 9	20-21	93' 6	
21-22	24' 0	21-22	161' 5	WEST SIDE: (error)
22-23	03' 8	22-23	65' 7	20-30 10 perches (-7")
23-24	19' 10	23-24	28' 6	35-39 5 perches (-3")
24-25	14' 6	24-25	51' 9	EAST SIDE:
25-26	03' 8	25-26	57' 2	13-19 10 perches (+3")
26-27	14' 5	26-27	57' 4	
27-28	03' 3	27-28	32' 2	
28-29	10' 9	28-29	21' 3	
29-30	17' 7	29-30	18' 10	
30-31	20' 5	30-31	24' 2	
31-32	20' 11			
32-33	13' 1			
33-34	53' 6			
34-35	25' 3			
35-36	12' 6			
36-37	03' 9			
37-38	34' 3			
38-39	31' 9			
39-40	17' 9			
40-41	15' 1			
41-42	11' 0			
42-43	45' 11			

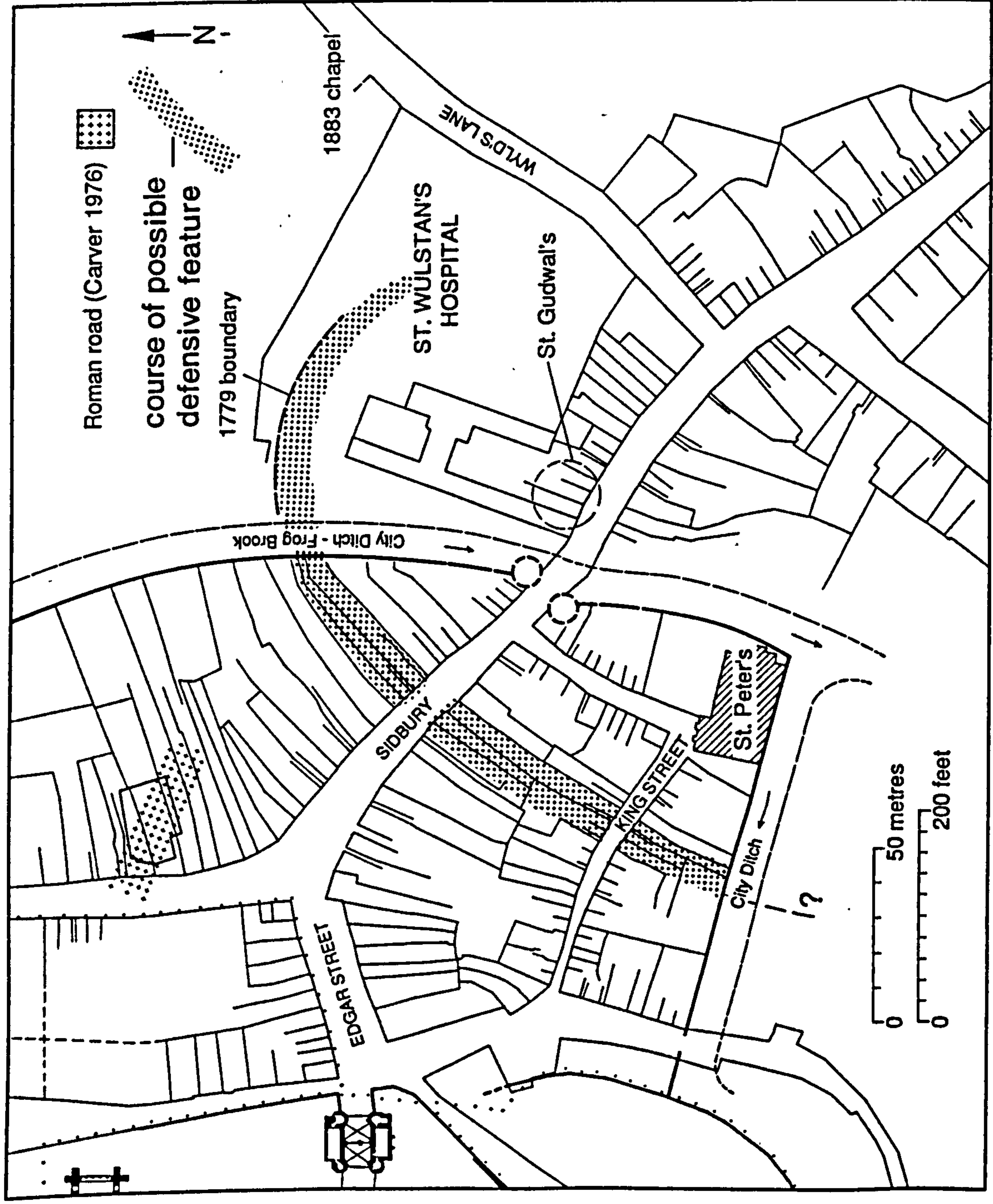


15. Worcester: Friar Street and New Street: plots and their metrology



16. Worcester: the Sidbury area, with excavated area

1976-1977



17. Worcester: the Sidbury area: interpretative plan

FIGURE 18: METROLOGICAL DATA for THE TYTHING AND FOREGATE STREET

WEST SIDE

EAST SIDE

1-2 39' 11
 2-3 45' 3
 3-4 51' 1
 4-5 24' 0
 5-6 31' 6
 6-7 18' 8
 7-8 56' 0
 8-9 17' 3
 9-10 15' 3
 10-11 19' 10
 11-12 24' 7
 12-13 14' 2
 13-14 23' 7
 14-15 39' 3
 15-16 17' 8
 16-17 15' 2
 17-18 16' 3
 18-19 13' 5
 19-20 55' 7
 20-21 22' 10
 21-22 29' 7
 22-23 21' 3
 23-24 03' 6
 24-25 14' 3
 25-26 14' 10
 26-27 28' 6
 27-28 32' 2
 28-29 30' 2
 29-30 20' 0
 30-31 ----
 31-32 23' 7
 32-33 23' 10
 33-34 21' 6
 34-35 30' 9
 35-36 30' 2
 36-37 31' 6
 37-38 23' 7
 38-39 21' 1
 39-40 16' 7
 40-41 54' 8
 41-42 34' 7
 42-43 24' 2
 43-44 34' 5
 44-45 48' 7
 45-46 38' 2
 46-47 19' 0
 47-48 16' 1
 48-49 81' 4
 49-50 86' 9
 50-51 82' 3

1-2 84' 2
 2-3 38' 10
 3-4 45' 1
 4-5 25' 10
 5-6 19' 2
 6-7 36' 10
 7-8 35' 0
 8-9 16' 2
 9-10 16' 10
 10-11 16' 6
 11-12 104' 11
 12-13 10' 11
 13-14 18' 10
 14-15 36' 3
 15-16 26' 3
 16-17 37' 7
 17-18 67' 3
 18-19 87' 4
 19-20 22' 8
 20-21 163' 3
 21-22 82' 10
 22-23 20' 3
 23-24 31' 5
 24-25 32' 11
 25-26 19' 4
 26-27 105' 9
 27-28 21' 6
 28-29 58' 3
 29-30 25' 11
 30-31 33' 8
 31-32 35' 10
 32-33 99' 10
 33-34 64' 3
 34-35 20' 10
 35-36 24' 3
 36-37 30' 6
 37-38 22' 1
 38-39 22' 4
 39-40 23' 4
 40-41 16' 8

(west side continued)

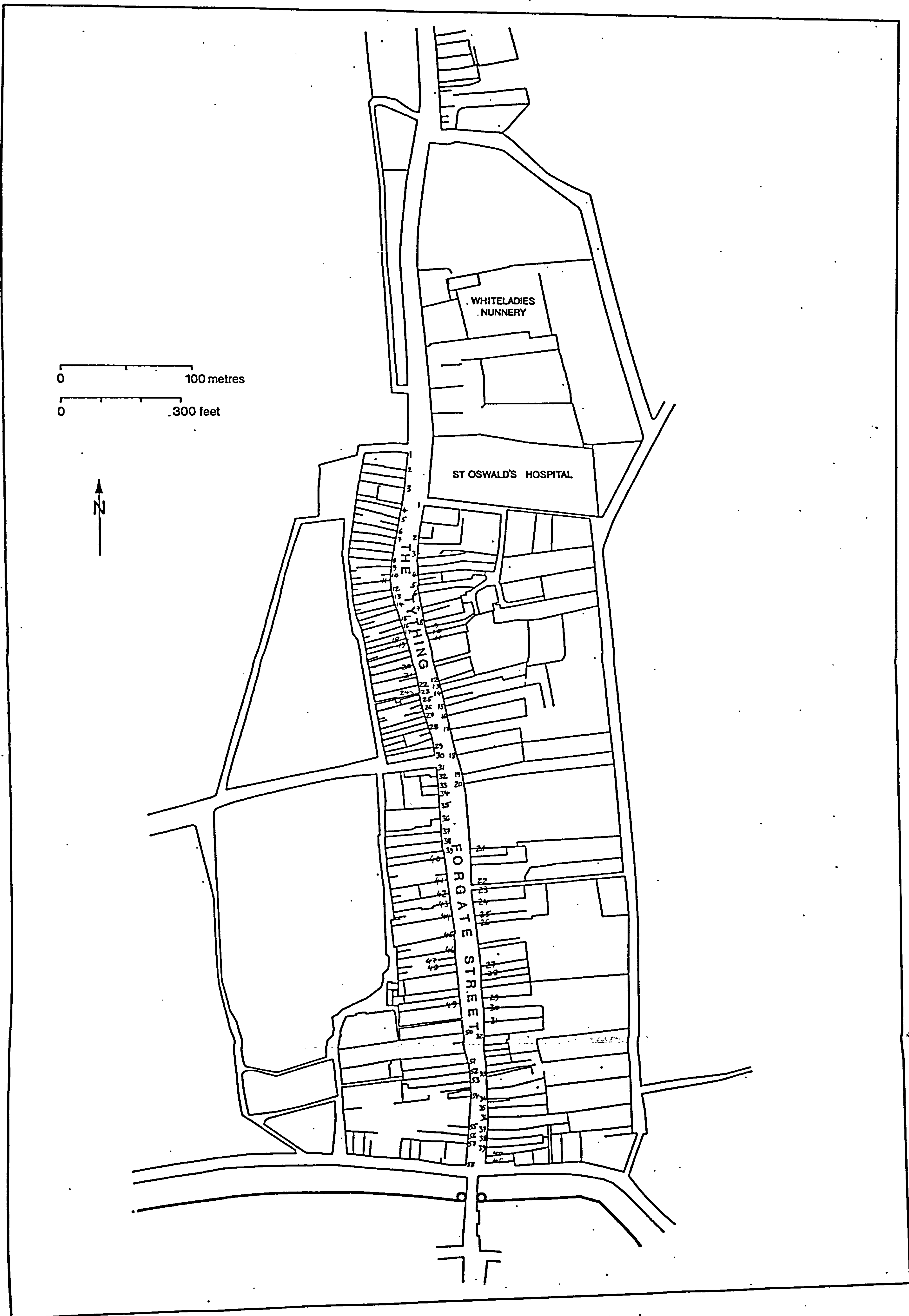
51-52 23' 2
 52-53 24' 2
 53-54 34' 6
 54-55 77' 11
 55-56 21' 1
 56-57 74' 10

Numbers 1-57 (west side) and 1-41 (east side) refer to identified surviving property boundaries as shown in the accompanying figure. All measurements are in feet and inches.

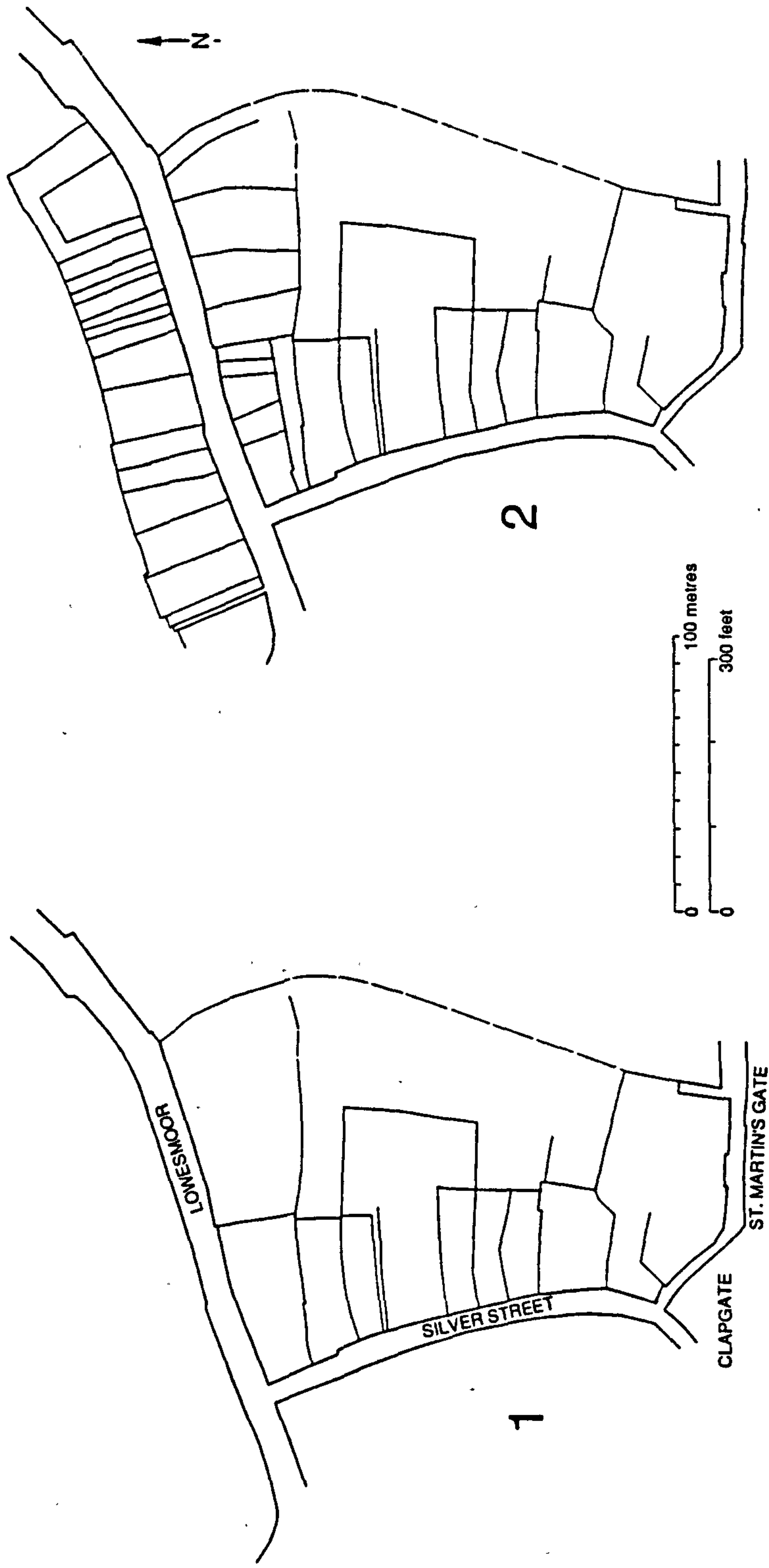
Combinations that may possibly reflect original statute-perch based property measurements are:

WEST SIDE: (error)
 15-17 2 perches (-2")
 17-18 1 perch (-3")
 15-18 3 perches (-5")
 22-27 5 perches (-2")
 27-30 5 perches (-2")
 31-35 6 perches (+8")
 39-40 1 perch (+1")
 40-44 9 perches (-8")
 50-51 5 perches (-4")
 51-54 5 perches (-8")
 54-56 6 perches -

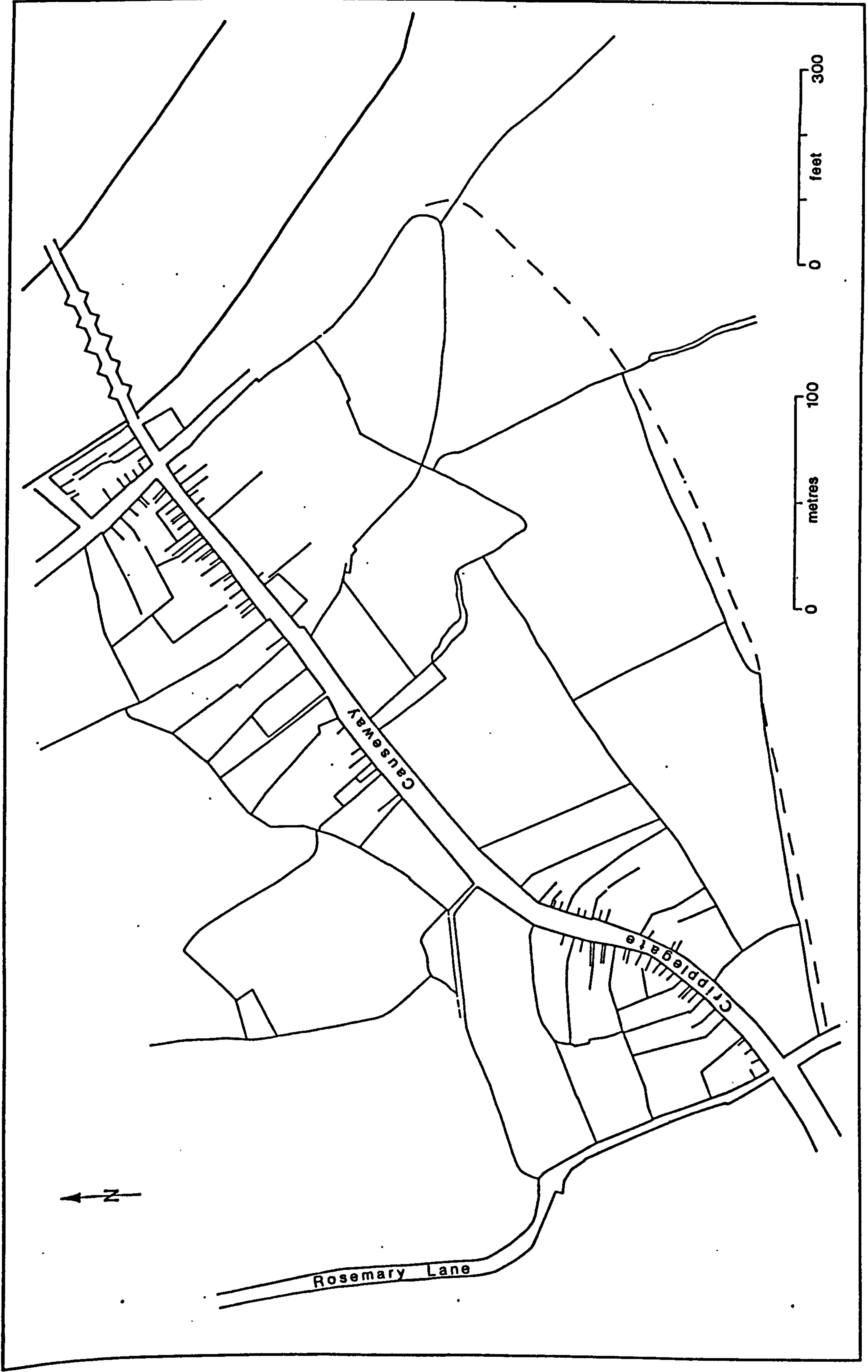
EAST SIDE:
 8-10 2 perches -
 10-11 1 perch -
 8-11 3 perches -
 11-13 7 perches (+3")
 21-22 5 perches (+4")
 24-25 2 perches (-1")
 32-33 6 perches (+10")



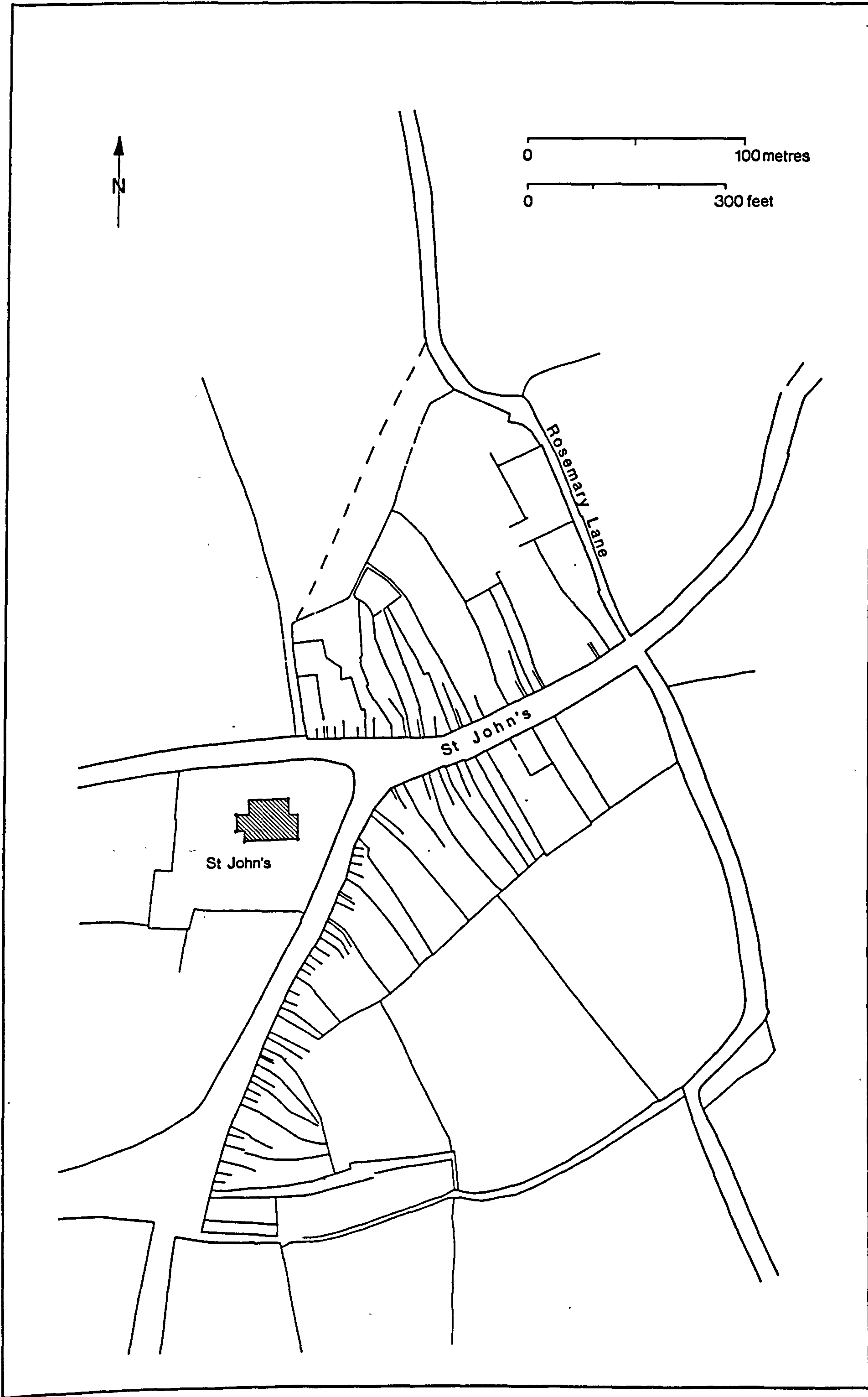
18. Worcester: the Foregate/Tything suburb: plots and metrology



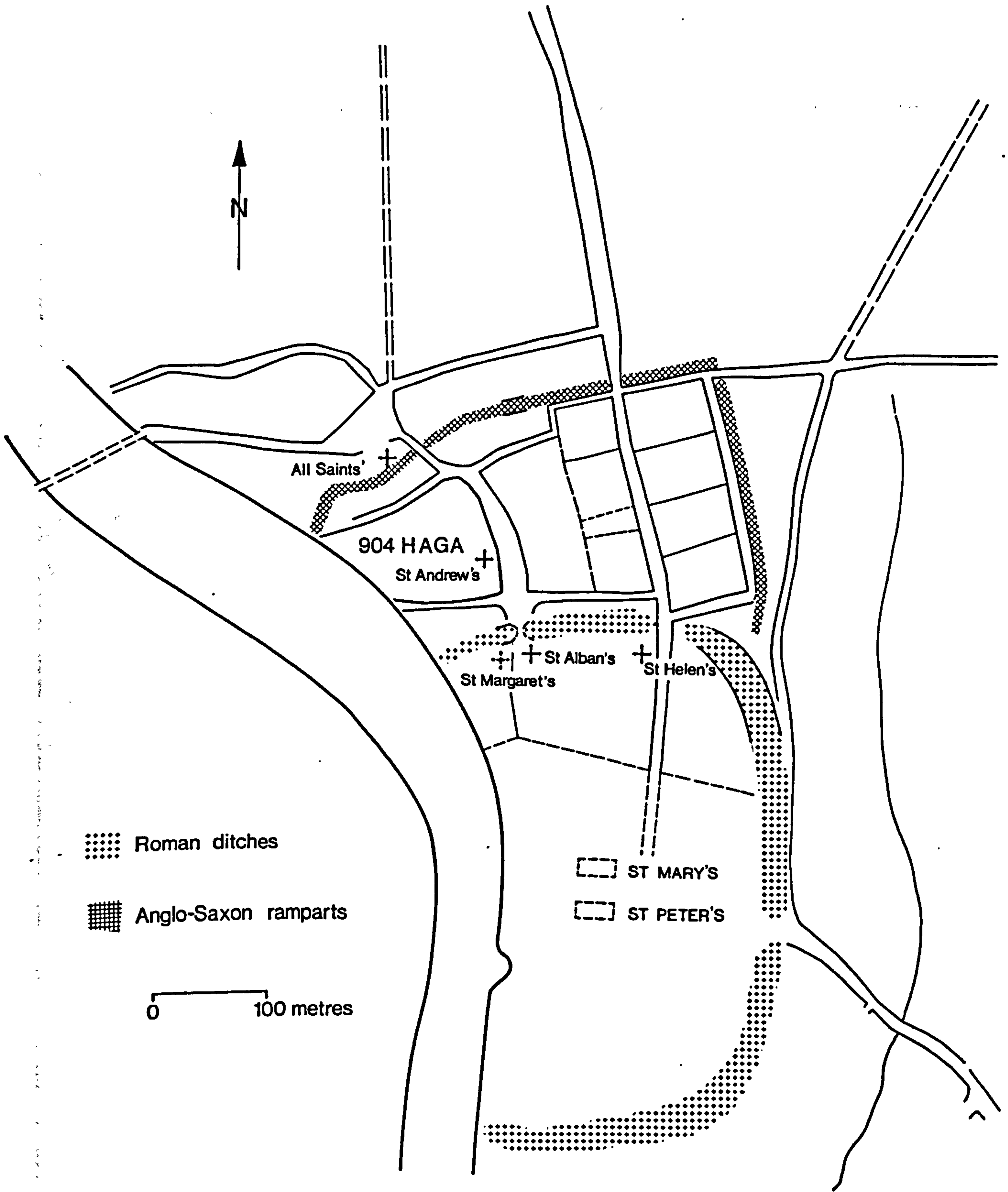
19. Worcester: Silver Street and Lowesmoor



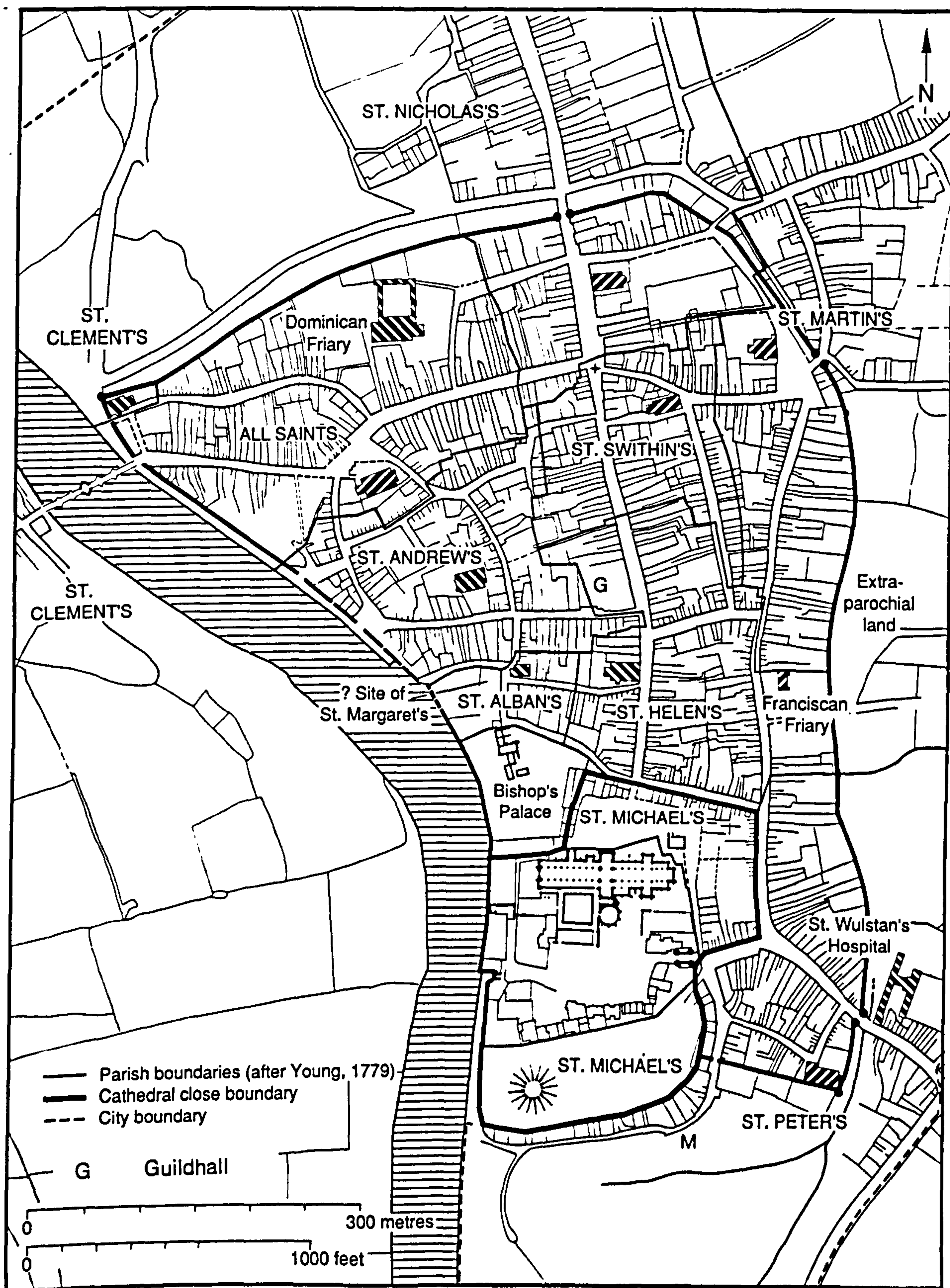
20. Worcester: the Causeway and Cripplegate plan-units



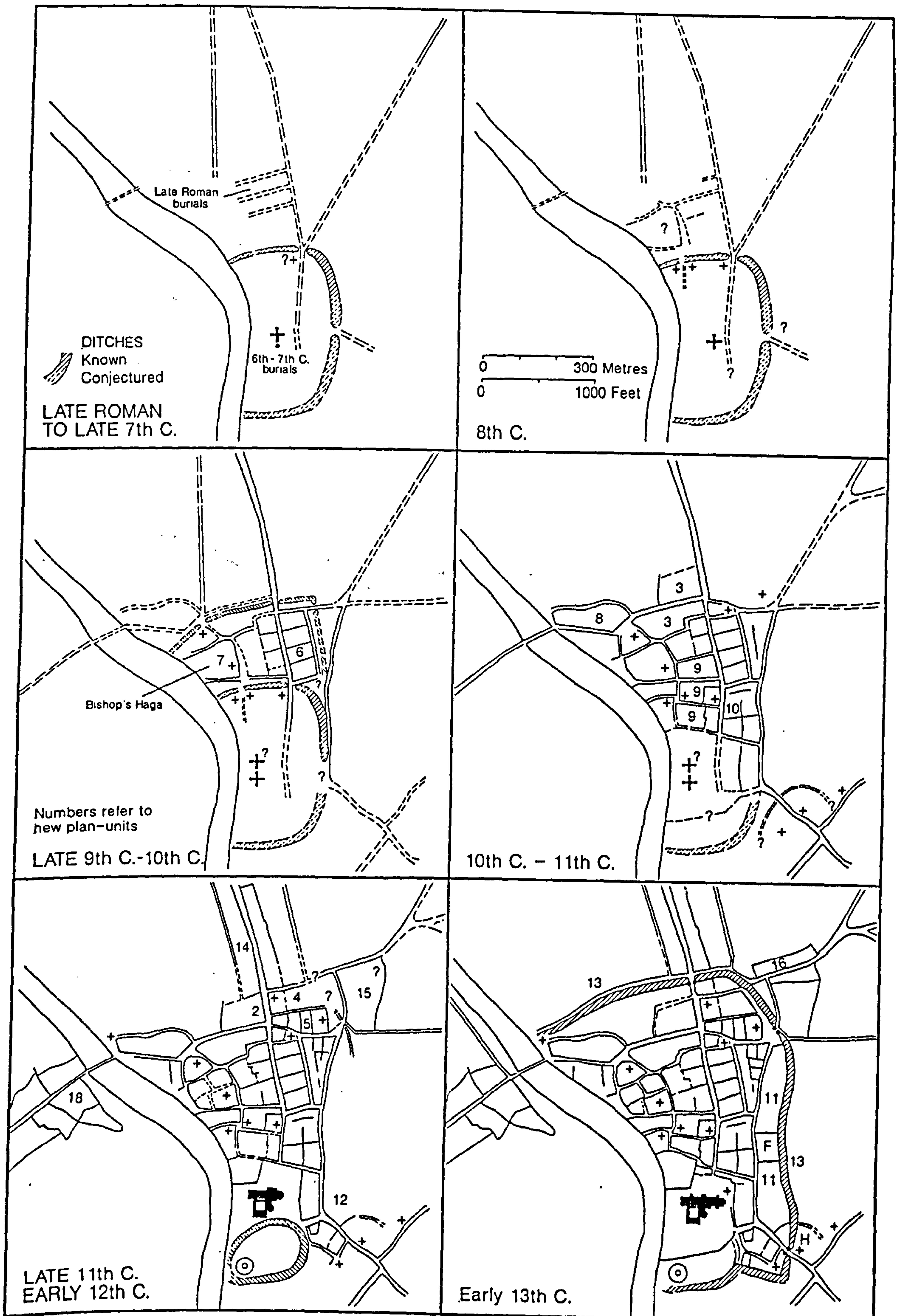
21. Worcester: the St John's plan-units



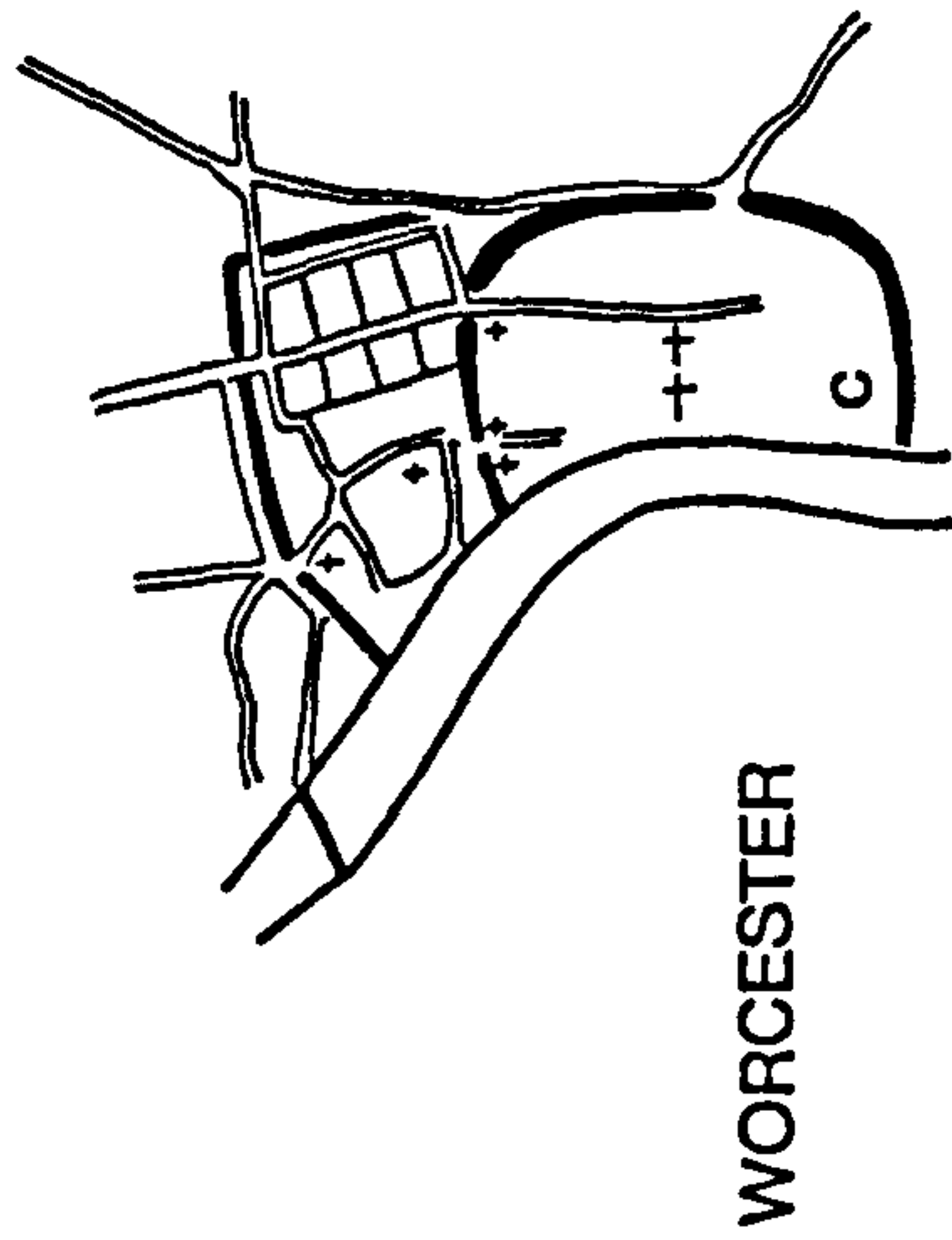
22. Worcester: a reconstruction of the burh



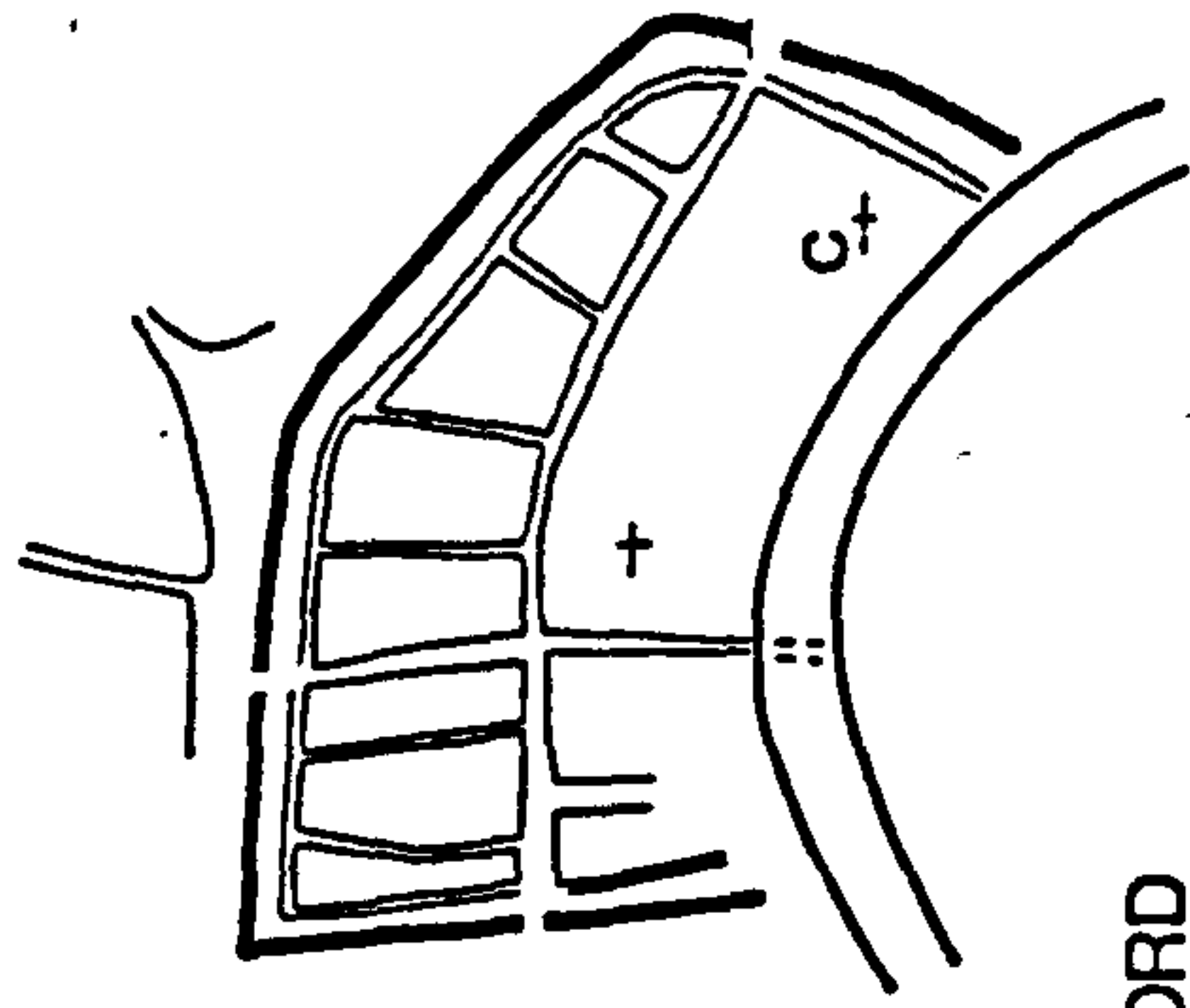
23. Worcester: parishes and property boundaries in the medieval intramural city



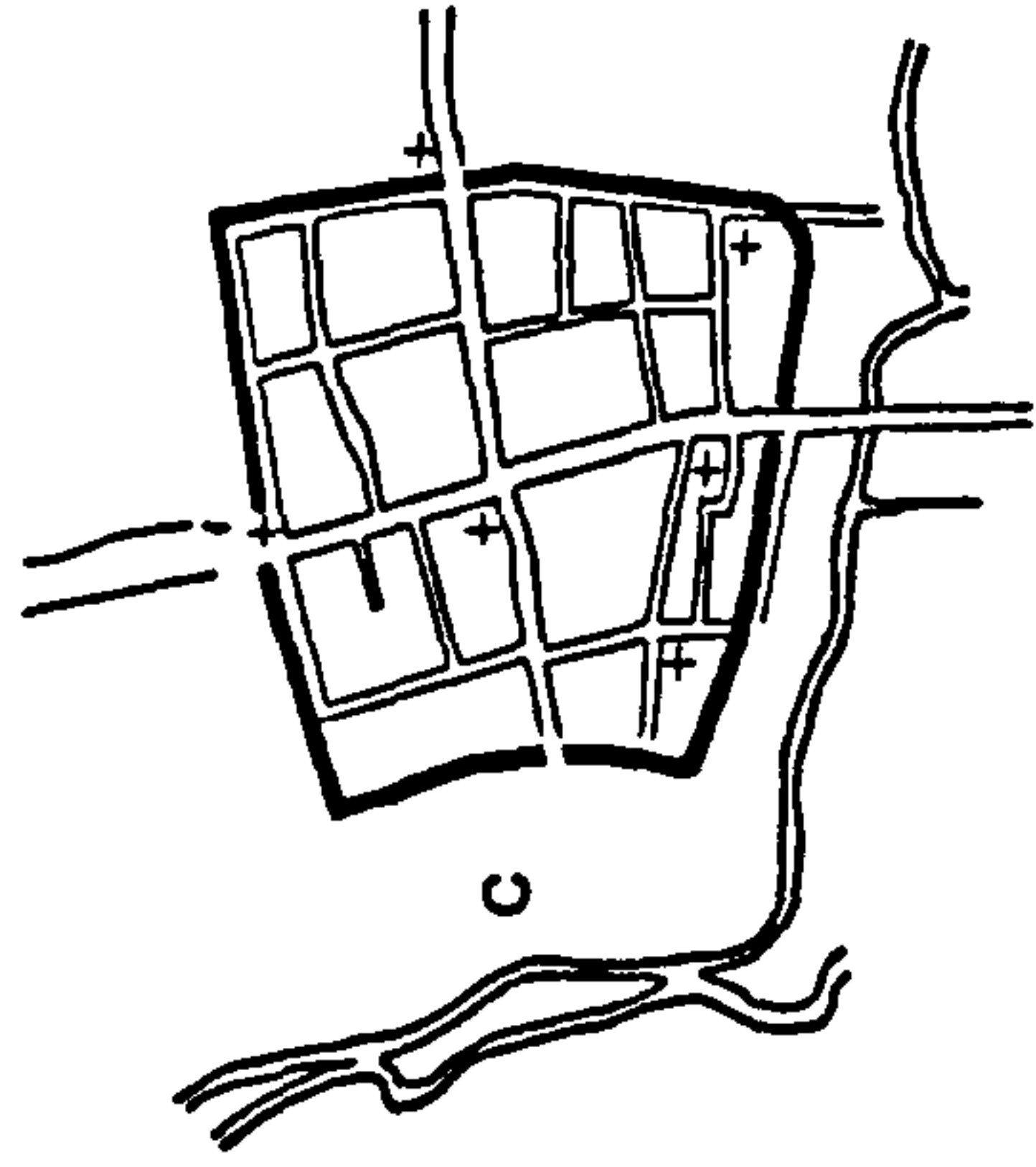
24. Worcester: hypothetical development of the medieval



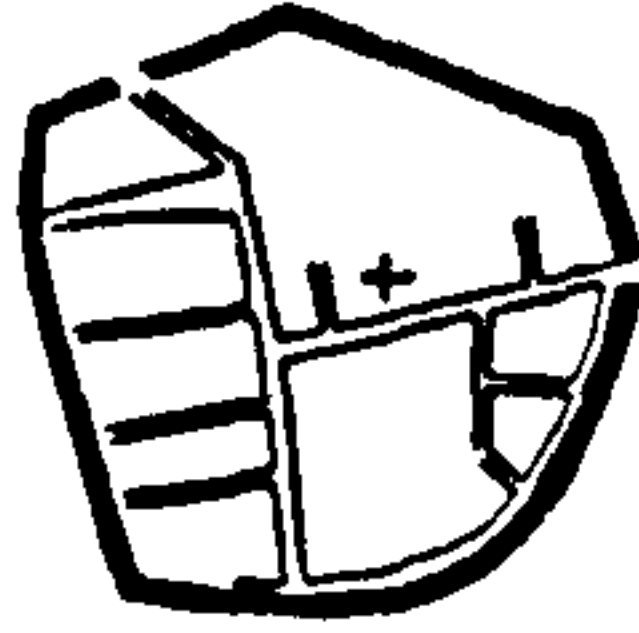
WORCESTER



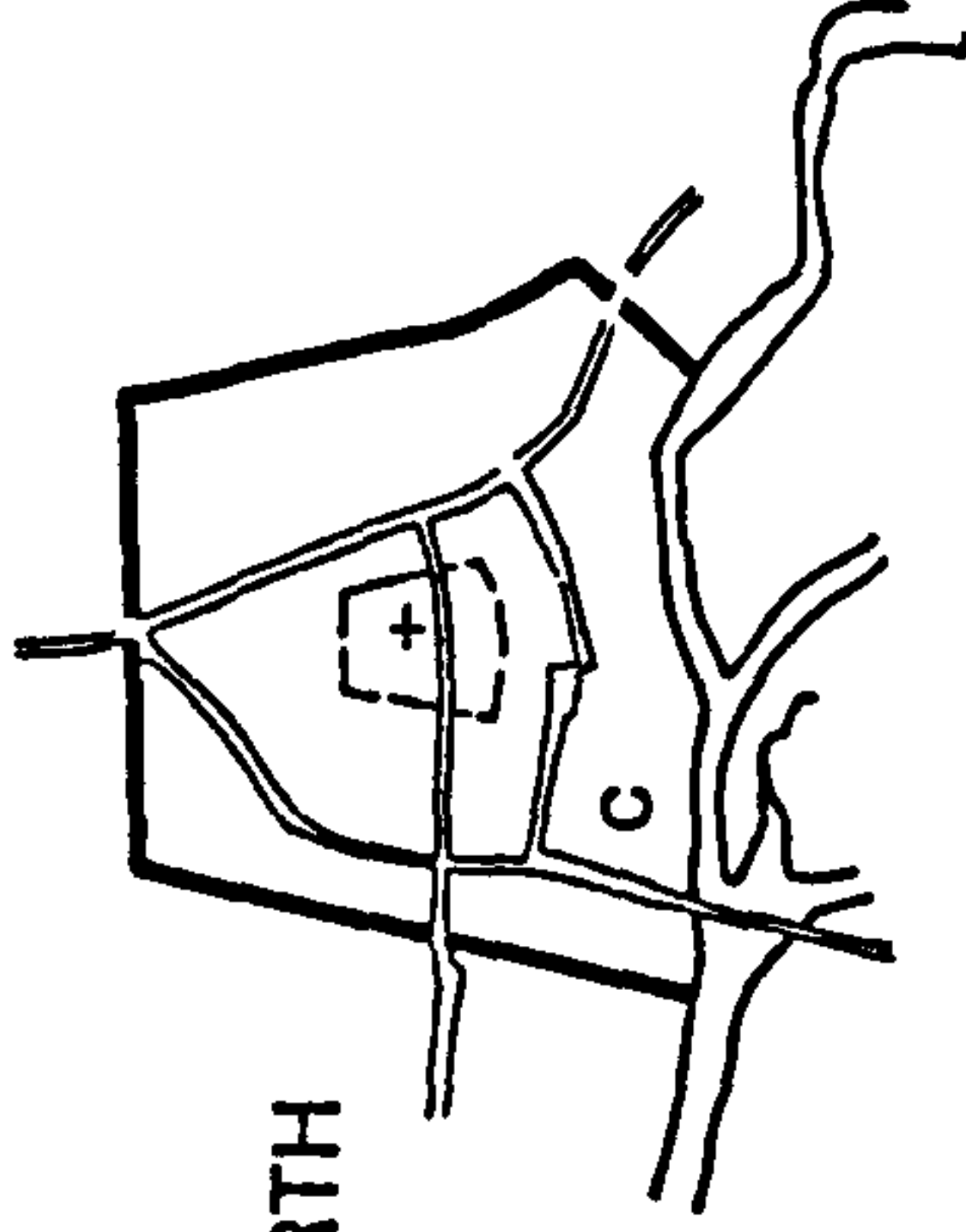
HEREFORD



OXFORD

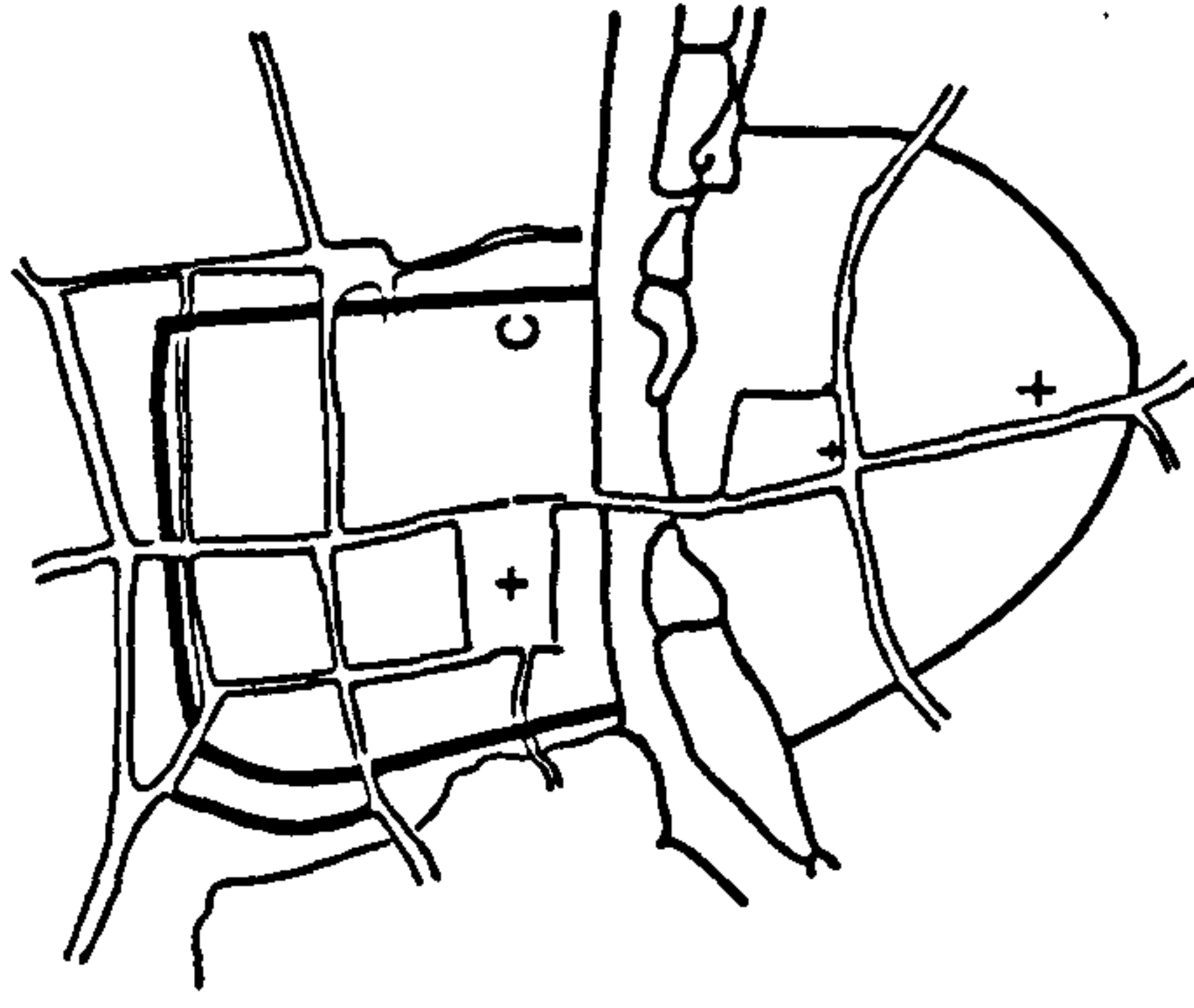


BATH

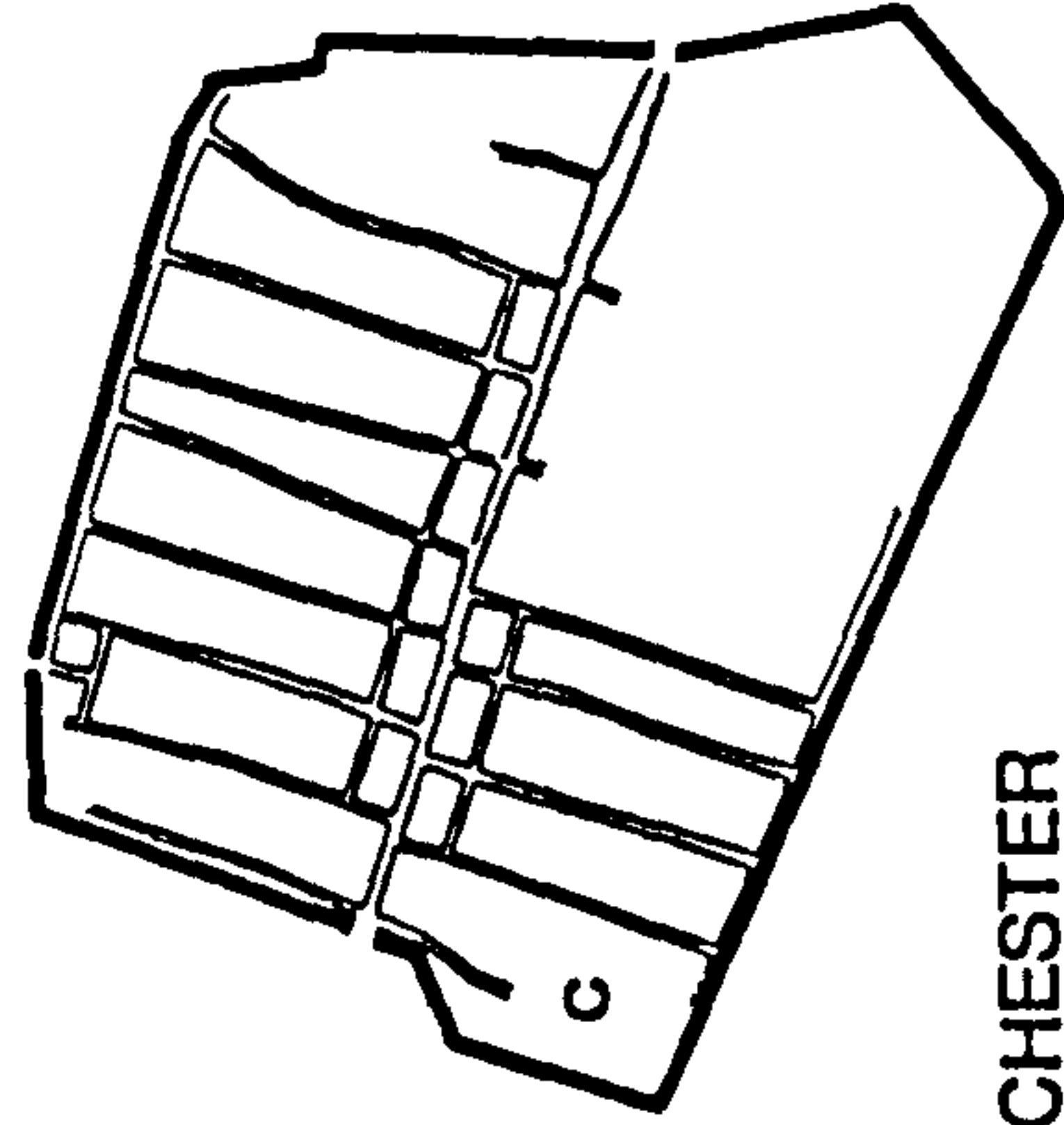


TAMWORTH

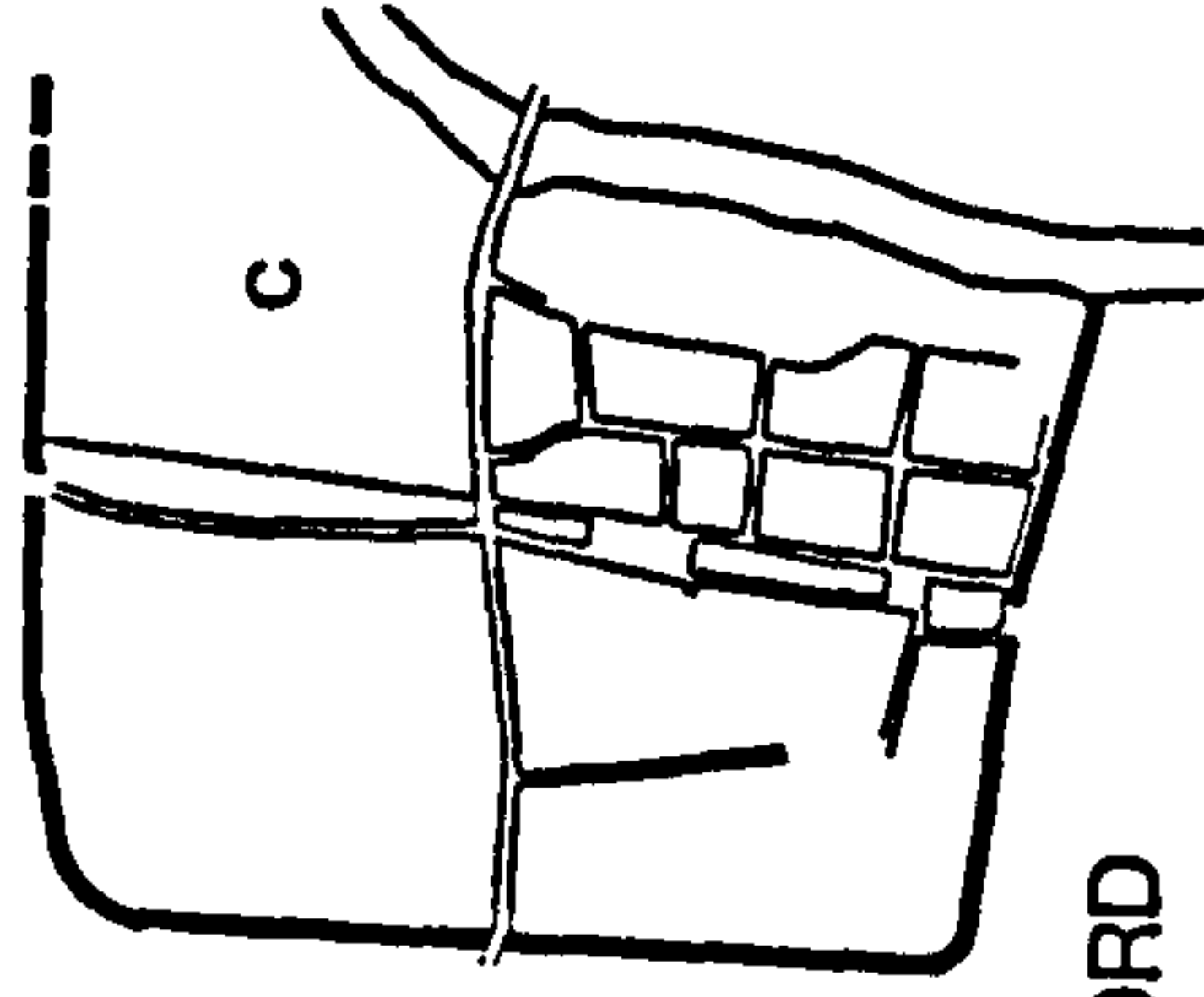
BEDFORD



C castle

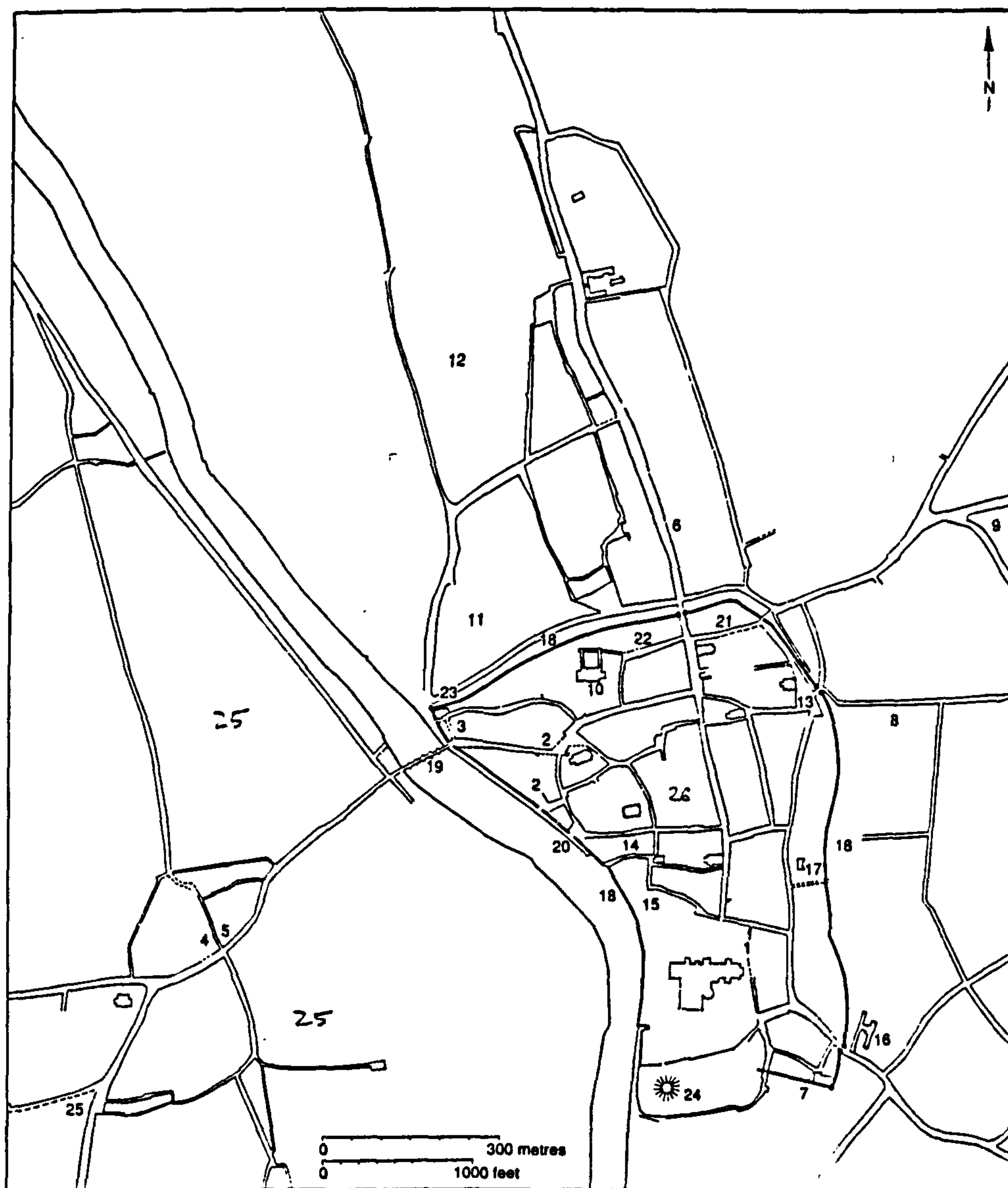


WINCHESTER

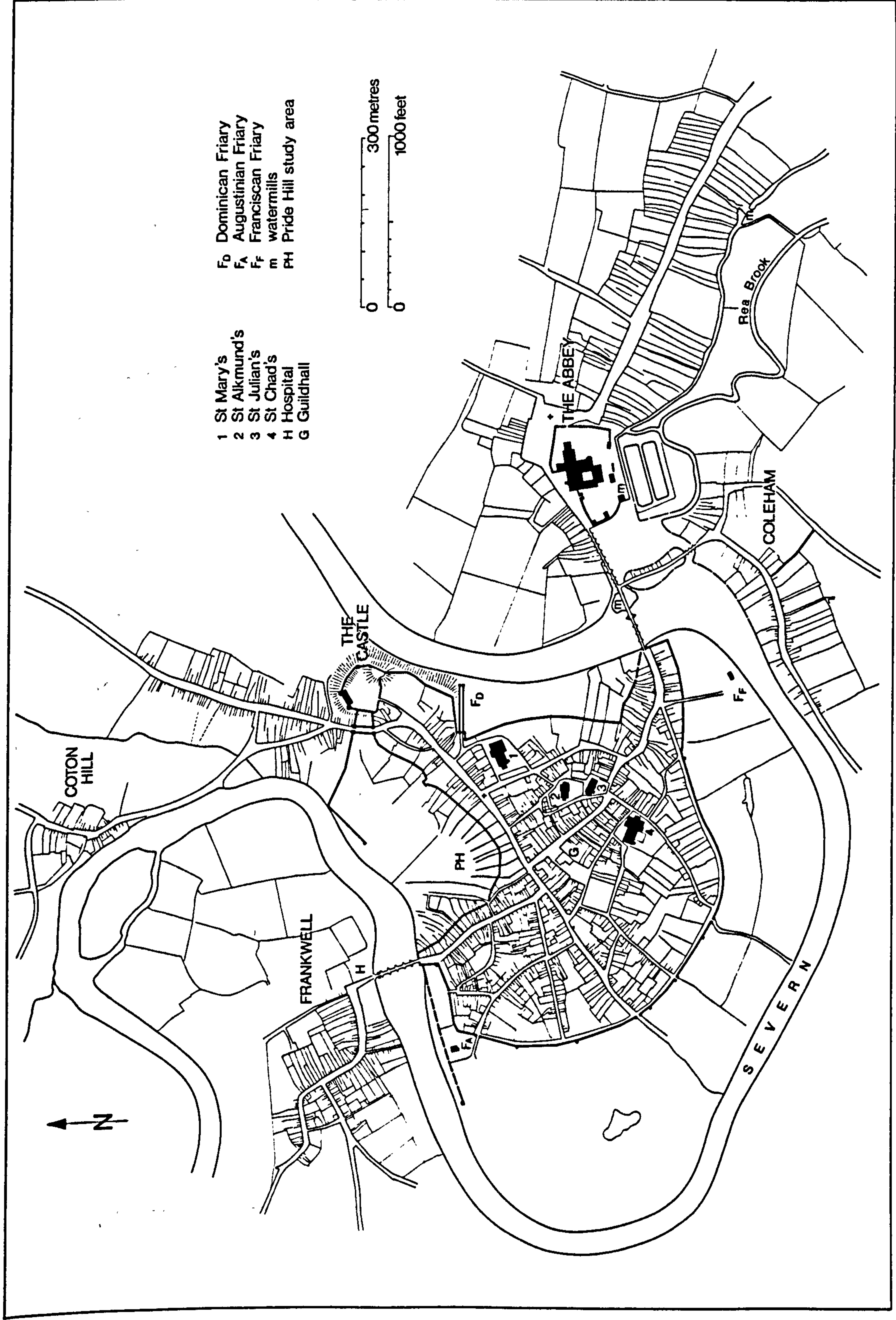


WALLINGFORD

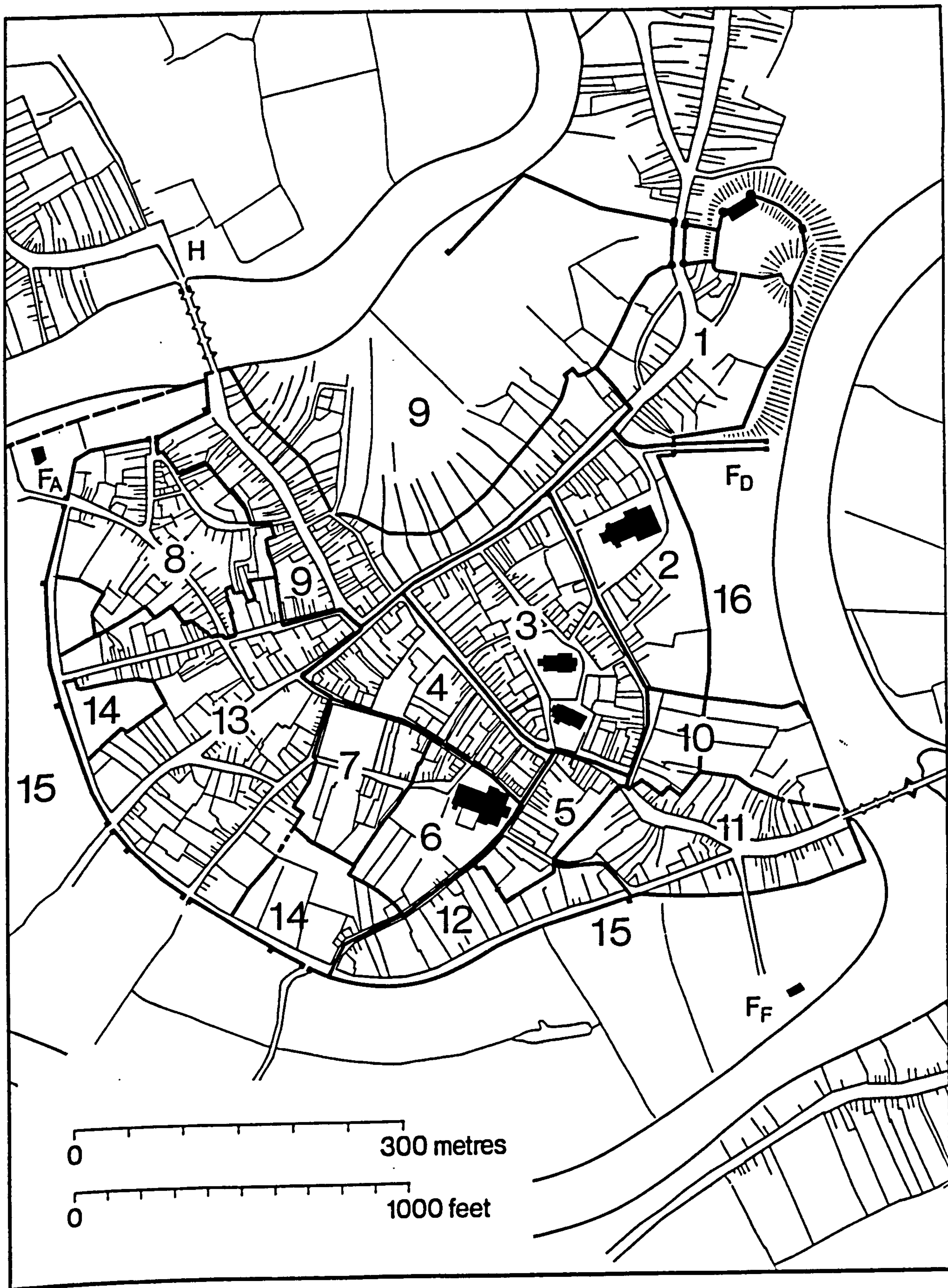




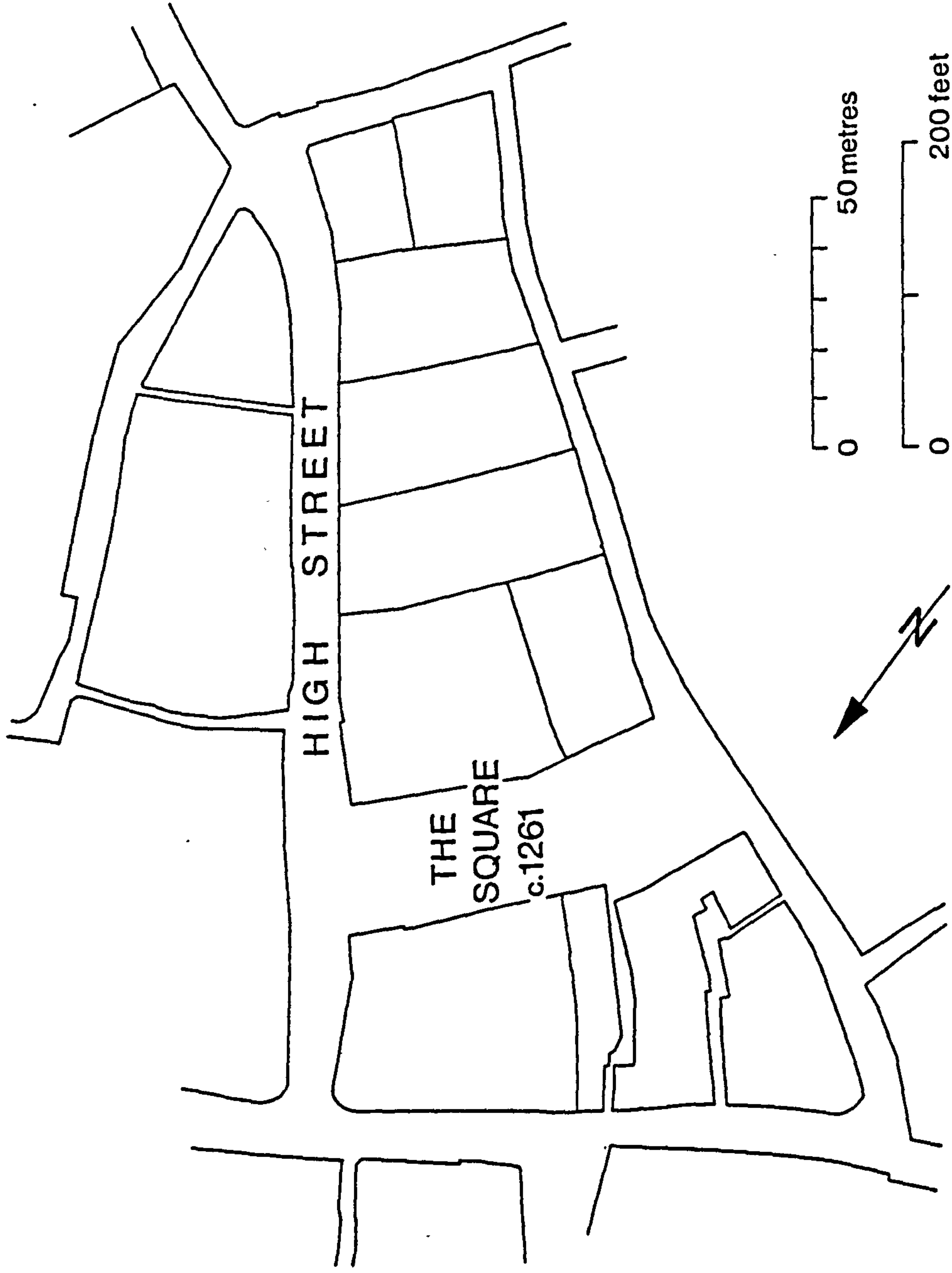
26. Worcester: cartographic sources plan



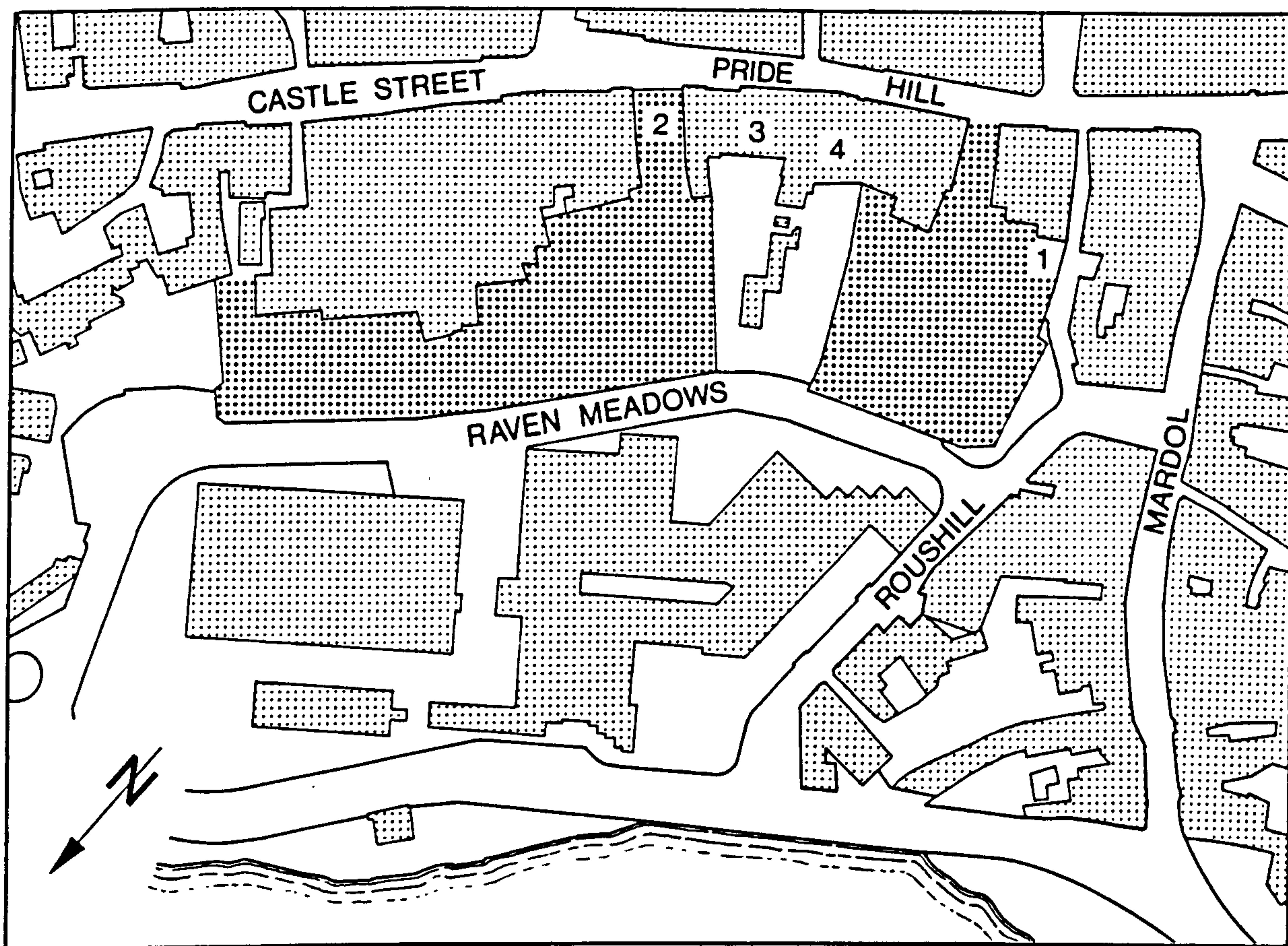
27. Shrewsbury: the medieval town and its suburbs



28. Shrewsbury: medieval intramural plan-units (interim)
(plan-unit numbers refer to text)

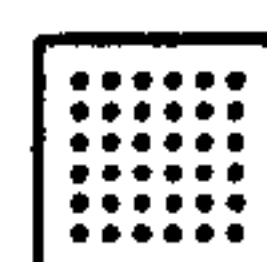


29. Shrewsbury: the High Street area with primary plot boundaries



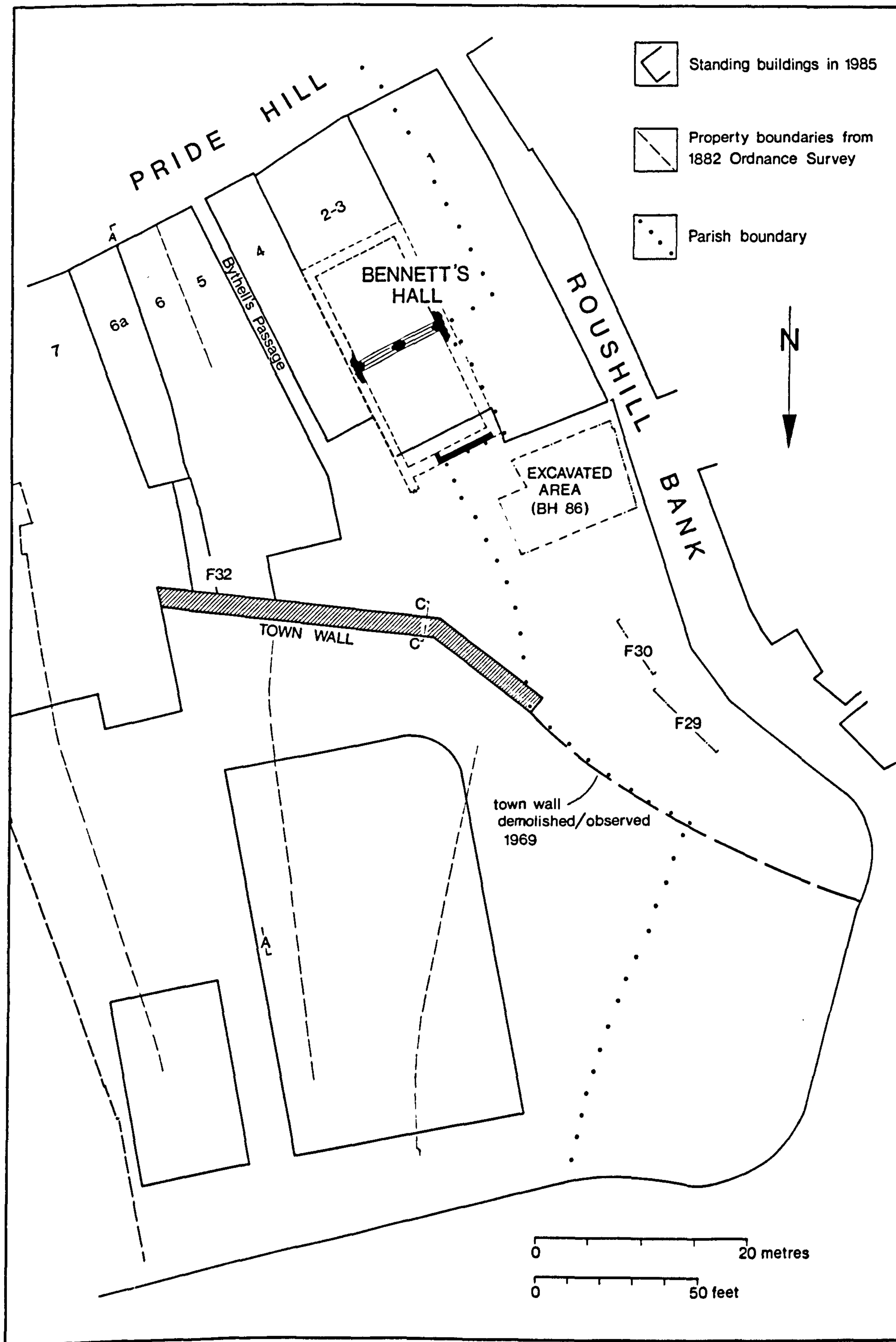
- 1 The Bennett's Hall site (the Pride Hill Centre)
- 2 20 - 22 Pride Hill (the Charles Darwin Centre)
- 3 13 - 16 Pride Hill
- 4 Pride Hill Chambers (MacDonald's)

0 100 metres

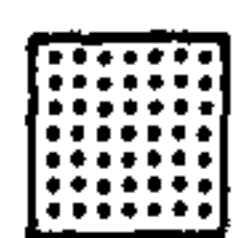
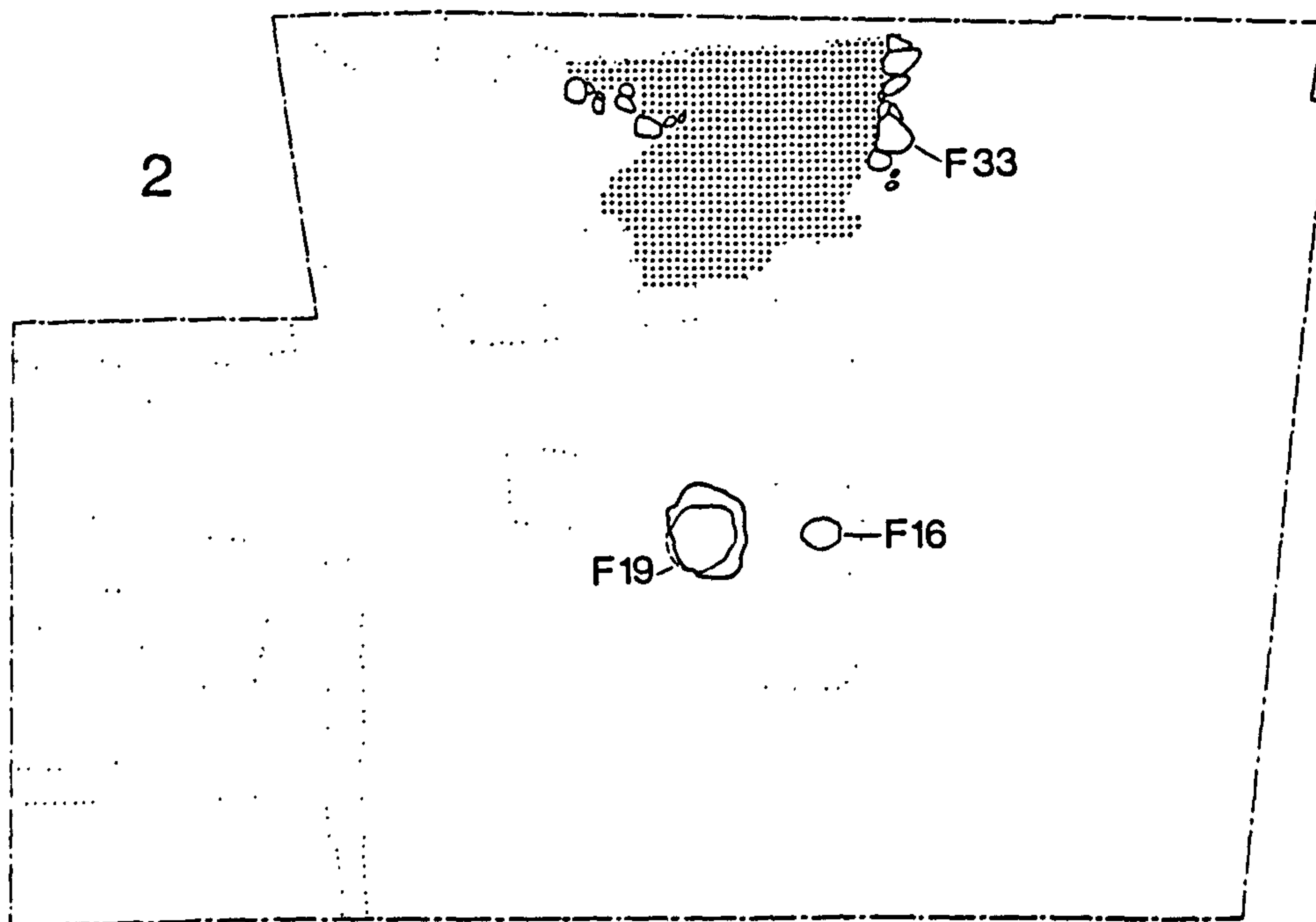
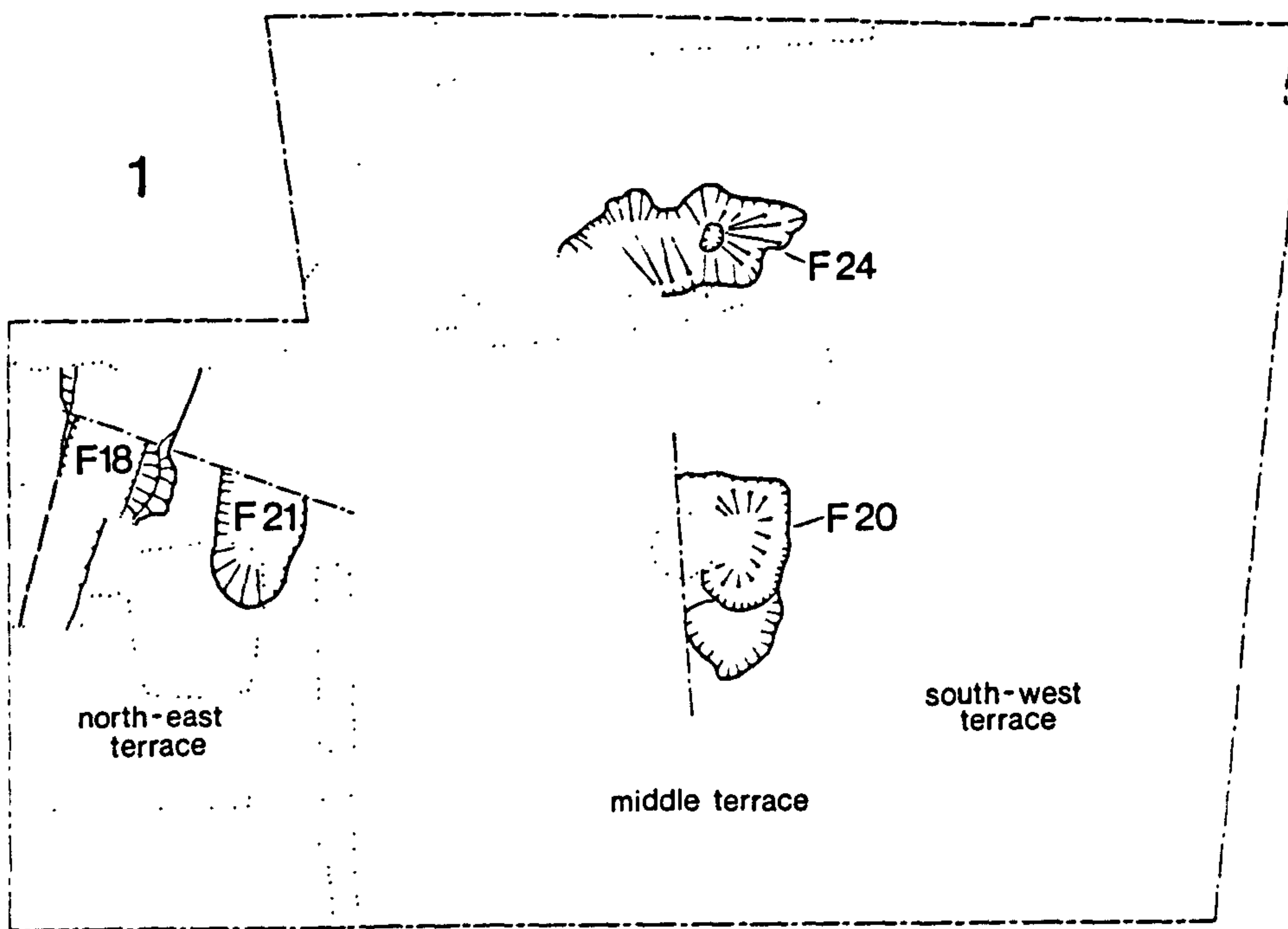


New buildings 1986 - 8

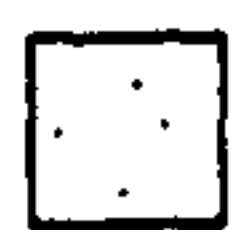
30. Shrewsbury: the Raven Meadows area (modern), showing location of principal sites



31. Shrewsbury: the Bennett's Hall site, with location of excavated area and principal watching-brief features



Clay spreads



Later intrusive features

0

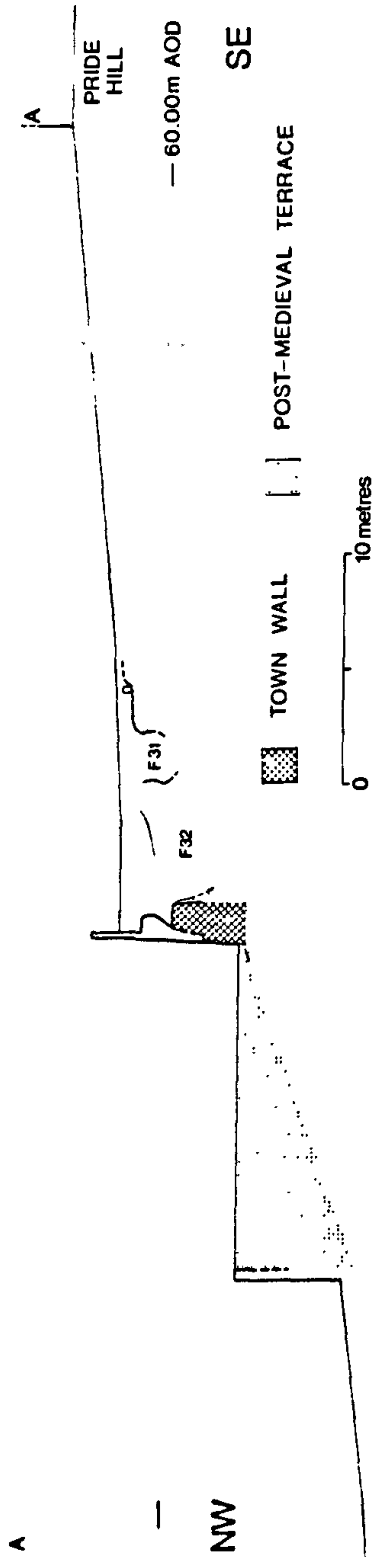
5 metres

0

20 feet

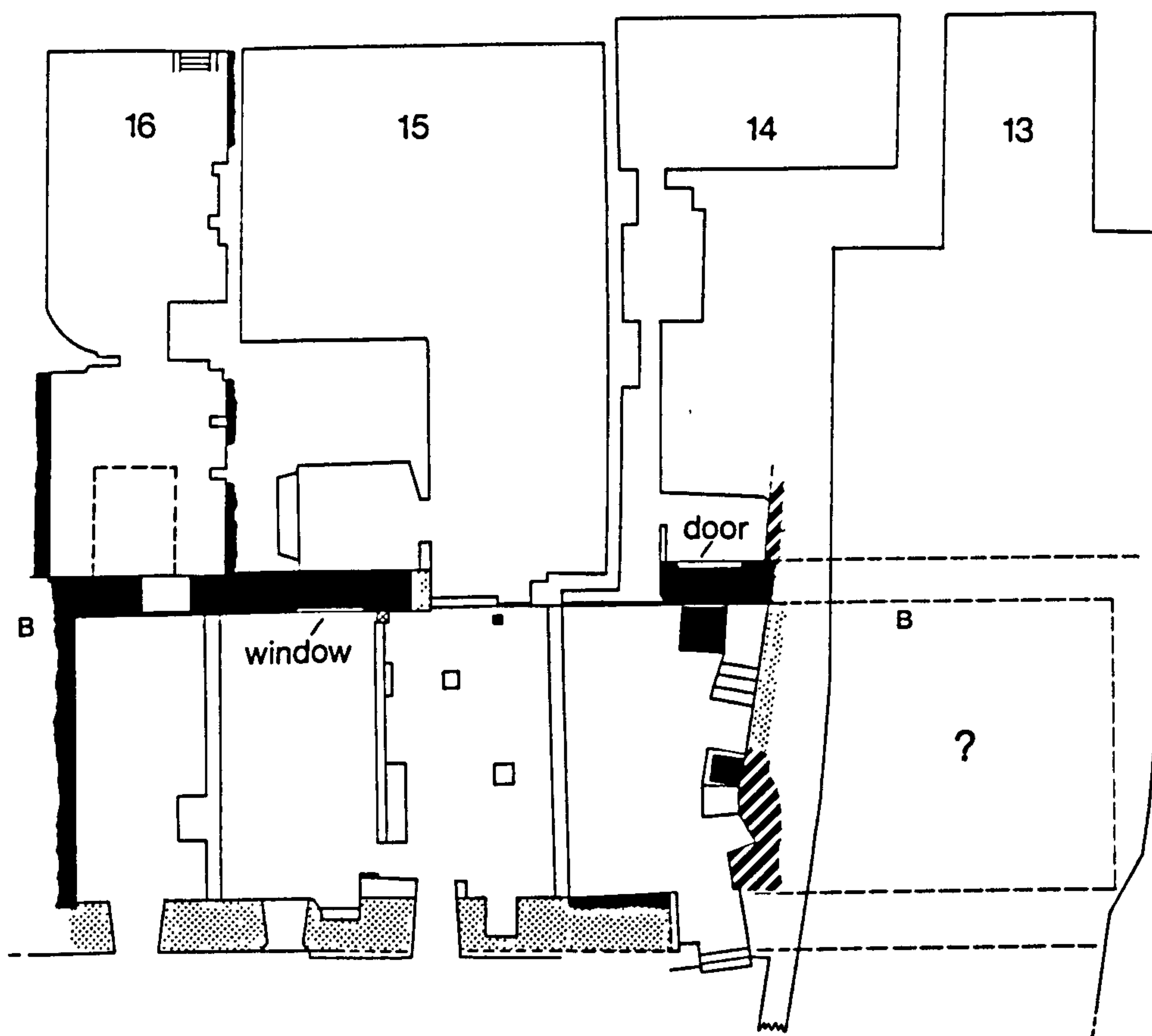
32. Shrewsbury: the Bennett's Hall site: excavation plans

1 - medieval 2 - early post-medieval



33. Shrewsbury: the Bennett's Hall site -
 schematic section (see fig. 31 for location)

PRIDE HILL



0 10 metres

0 30 feet

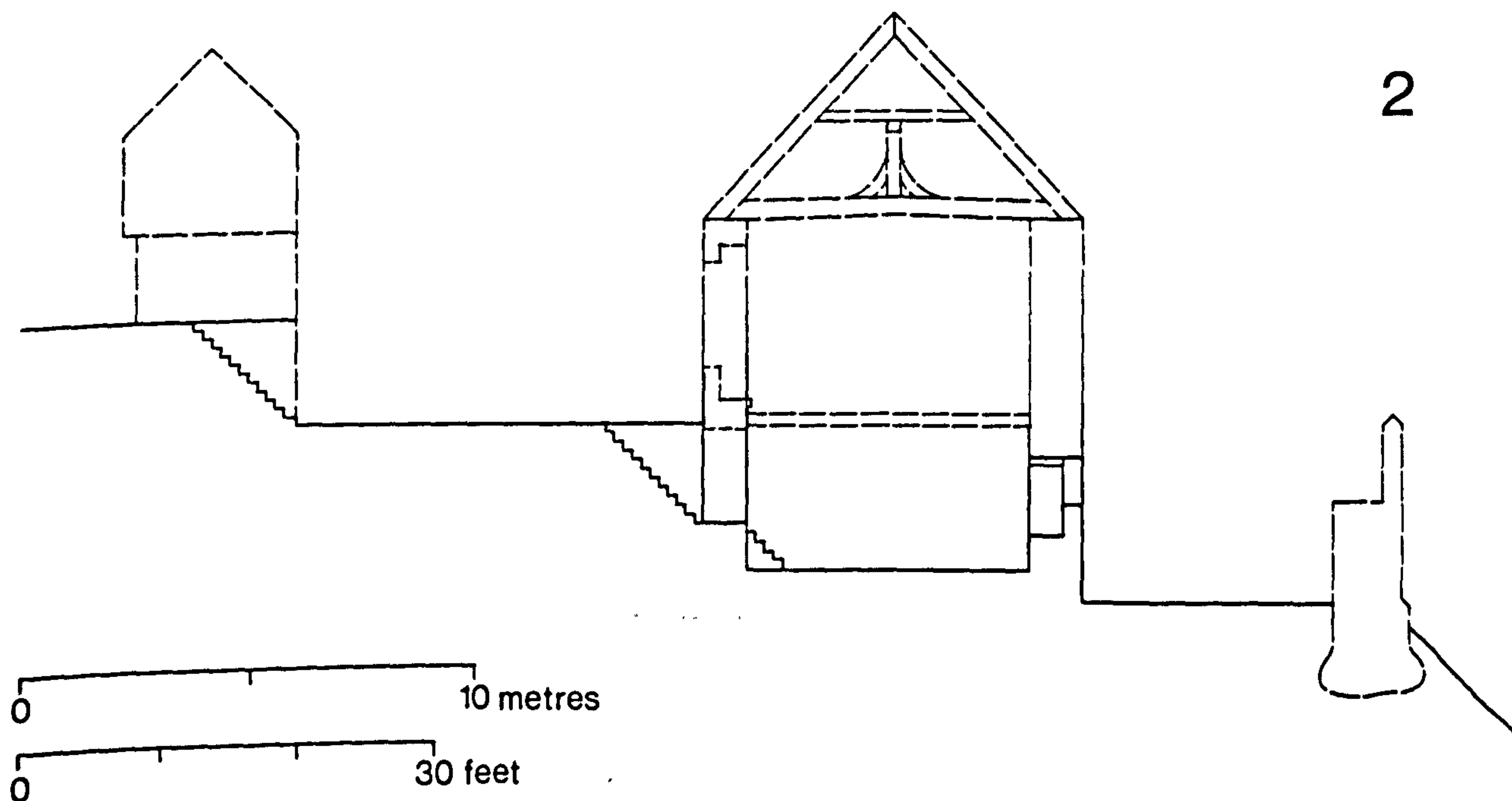
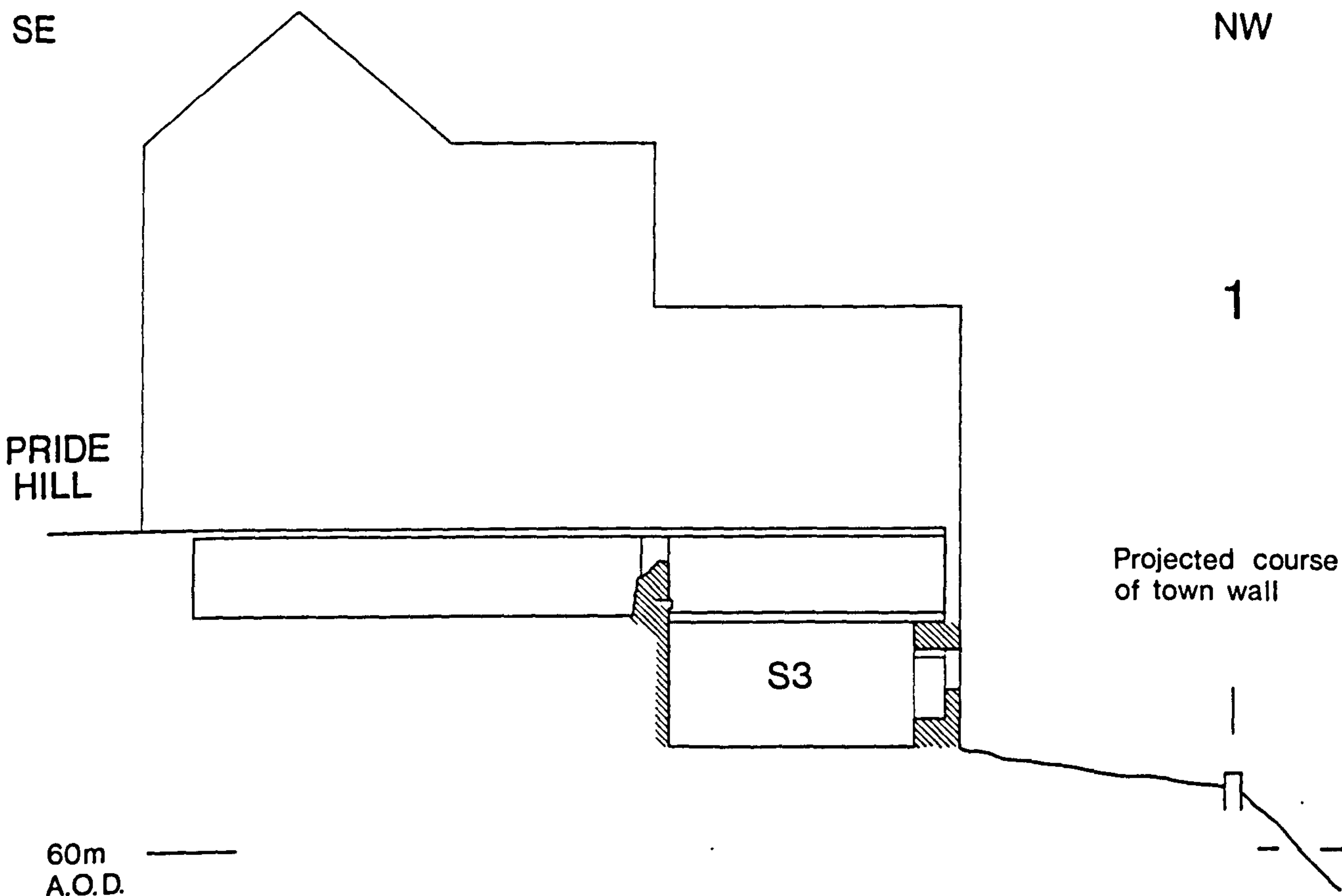
■ Keele Beds sandstone

▨ Grinshill sandstone

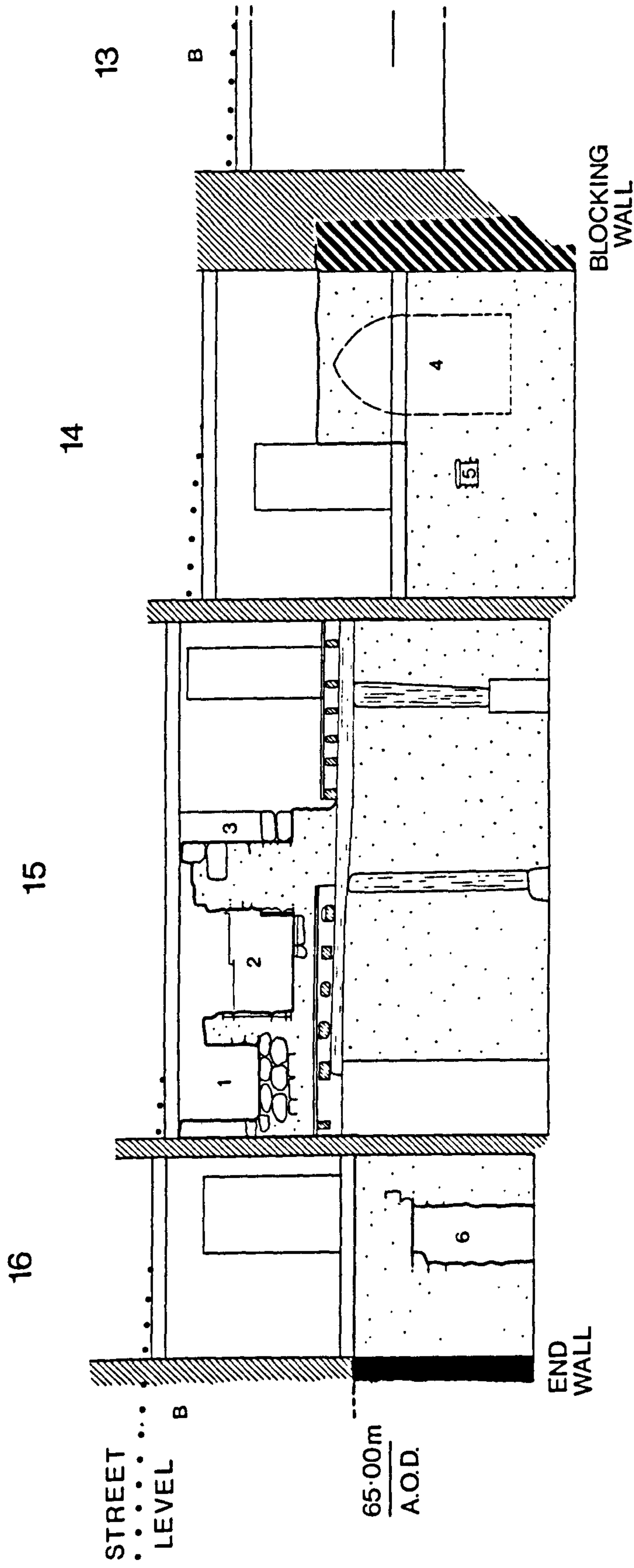
▨ Mixed sandstone



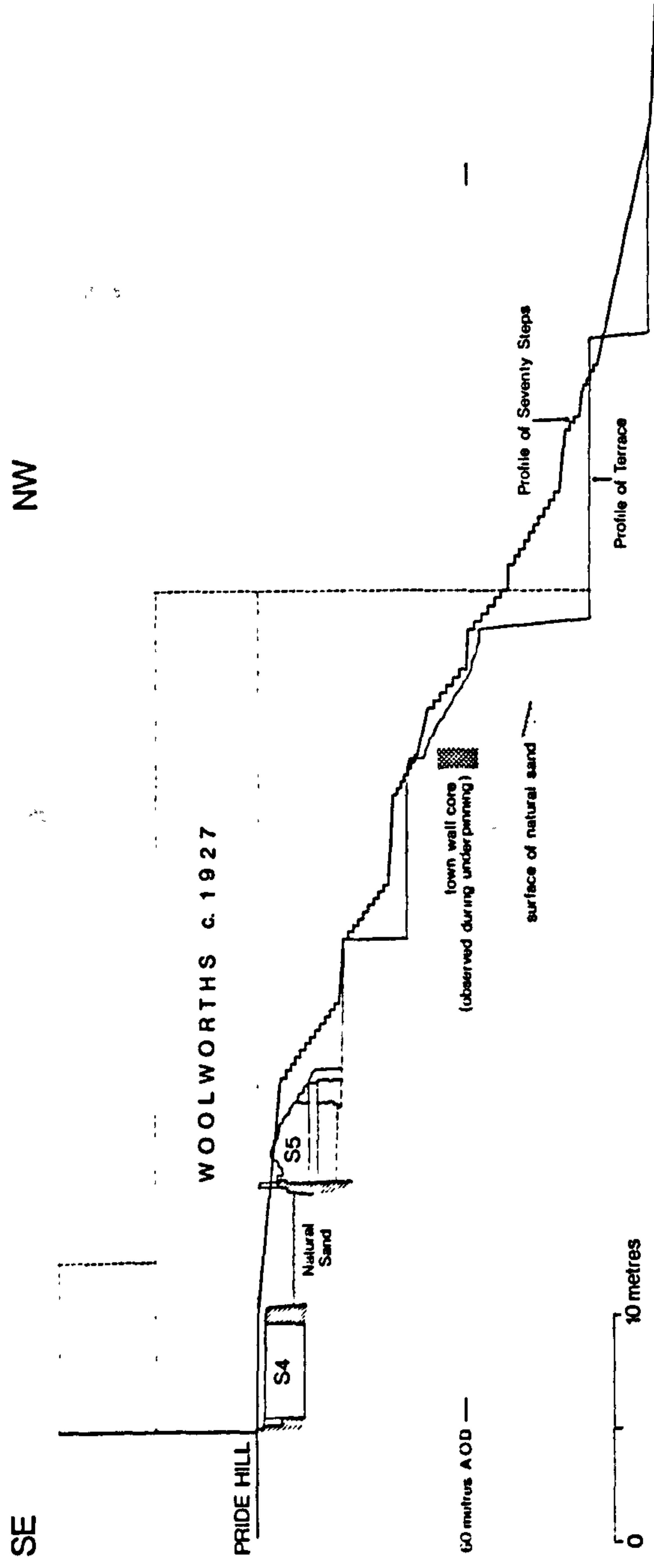
34. Shrewsbury: S3, 13-16 Pride Hill - composite plan
(some modern walls omitted)



35. Shrewsbury: S3, 13-16 Pride Hill - schematic cross-sections. 1 - extant 2 - a reconstruction

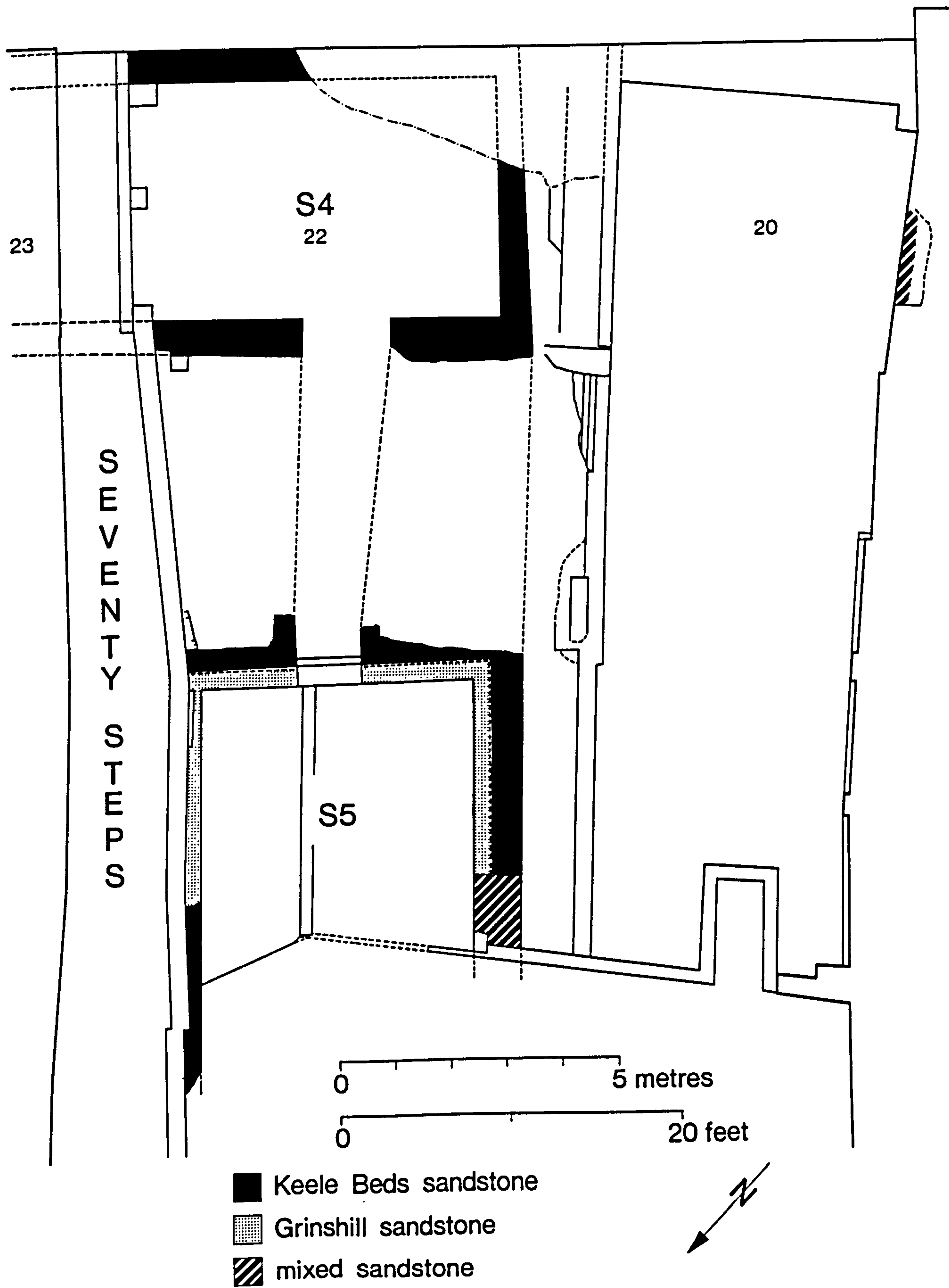


36. Shrewsbury: S3, 13-16 Pride Hill - internal elevation
of south-east wall (facing street)



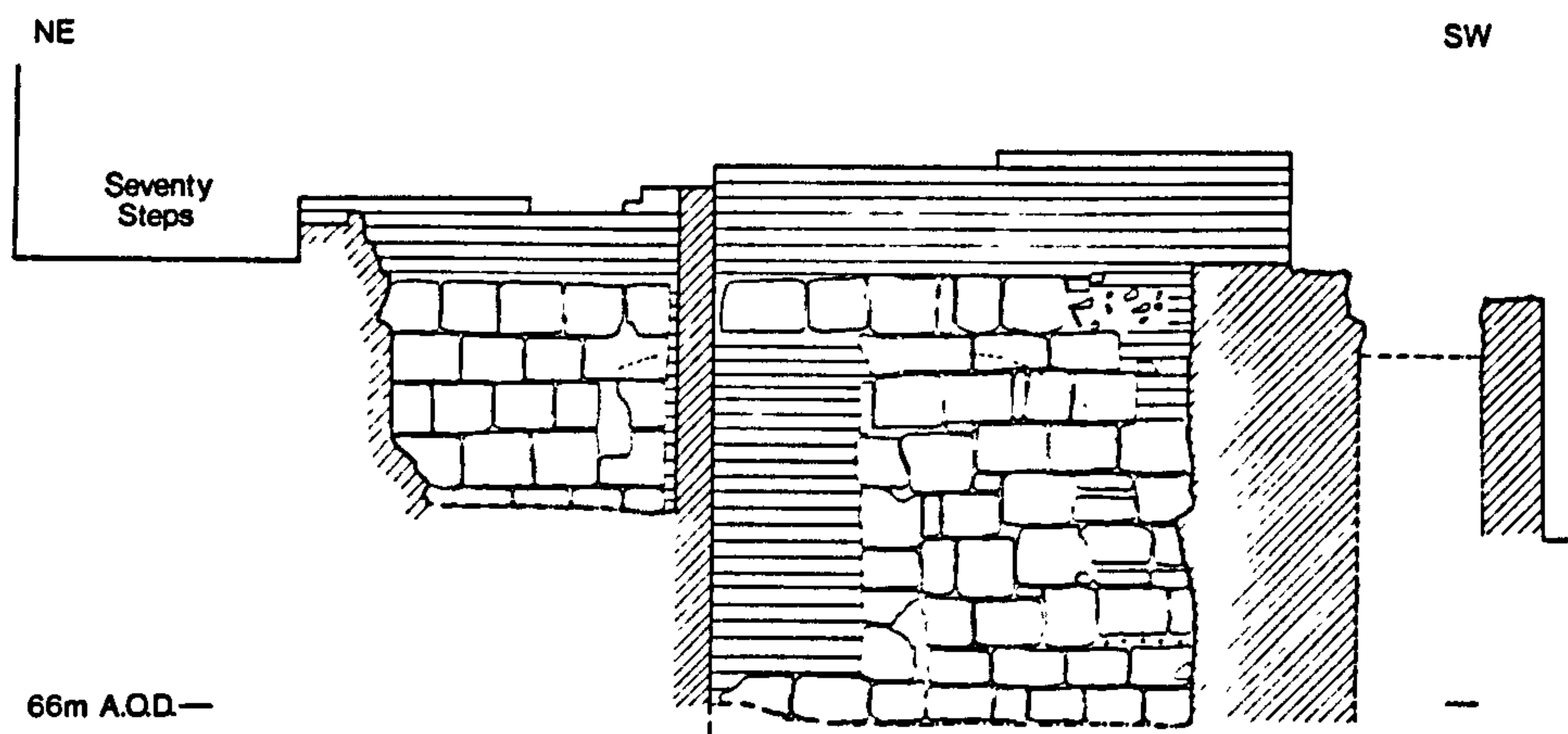
37. Shrewsbury: S4 and S5. Schematic section of No. 22
Pride Hill and Seventy Steps.

PRIDE HILL

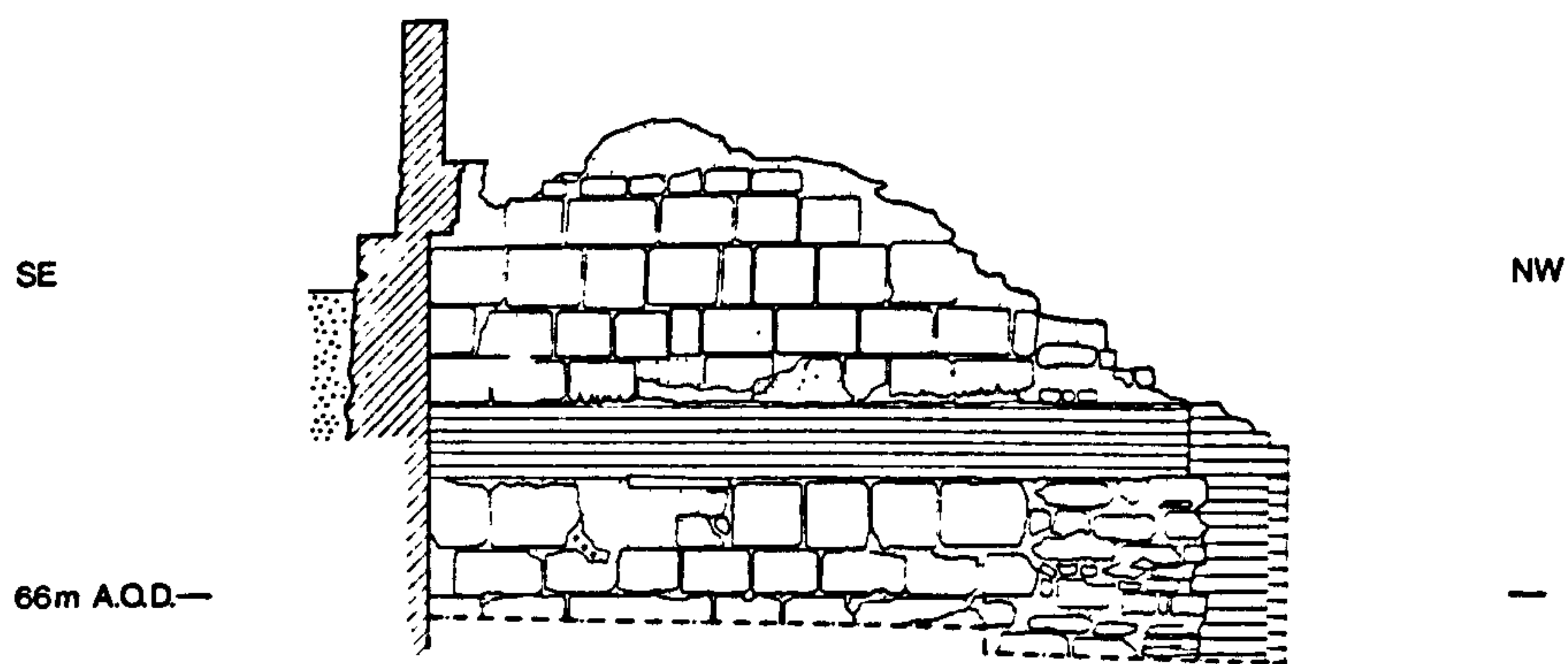


38. Shrewsbury: the frontage area of Nos. 20 and 22 Pride Hill - recorded cellarage

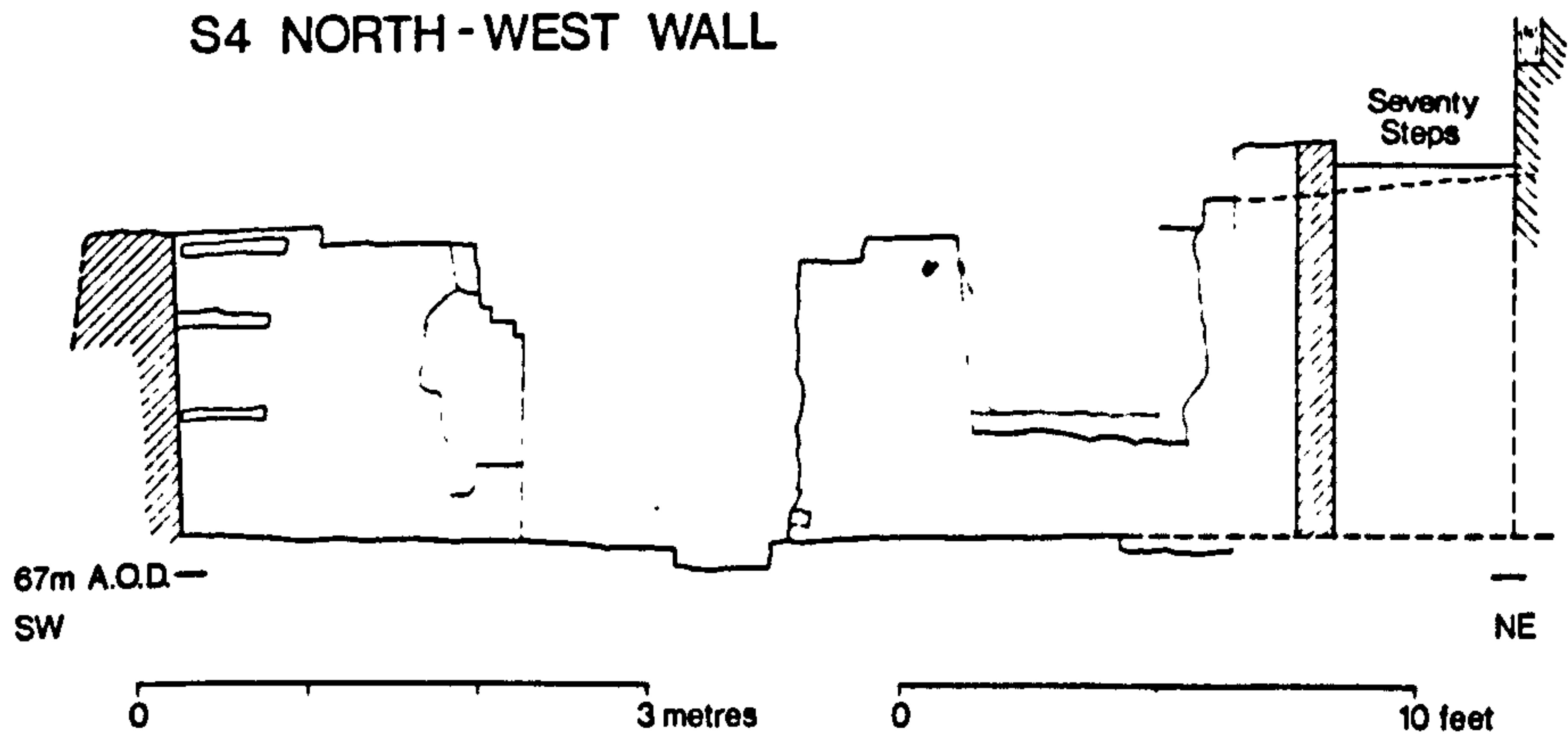
S5 SOUTH - EAST WALL



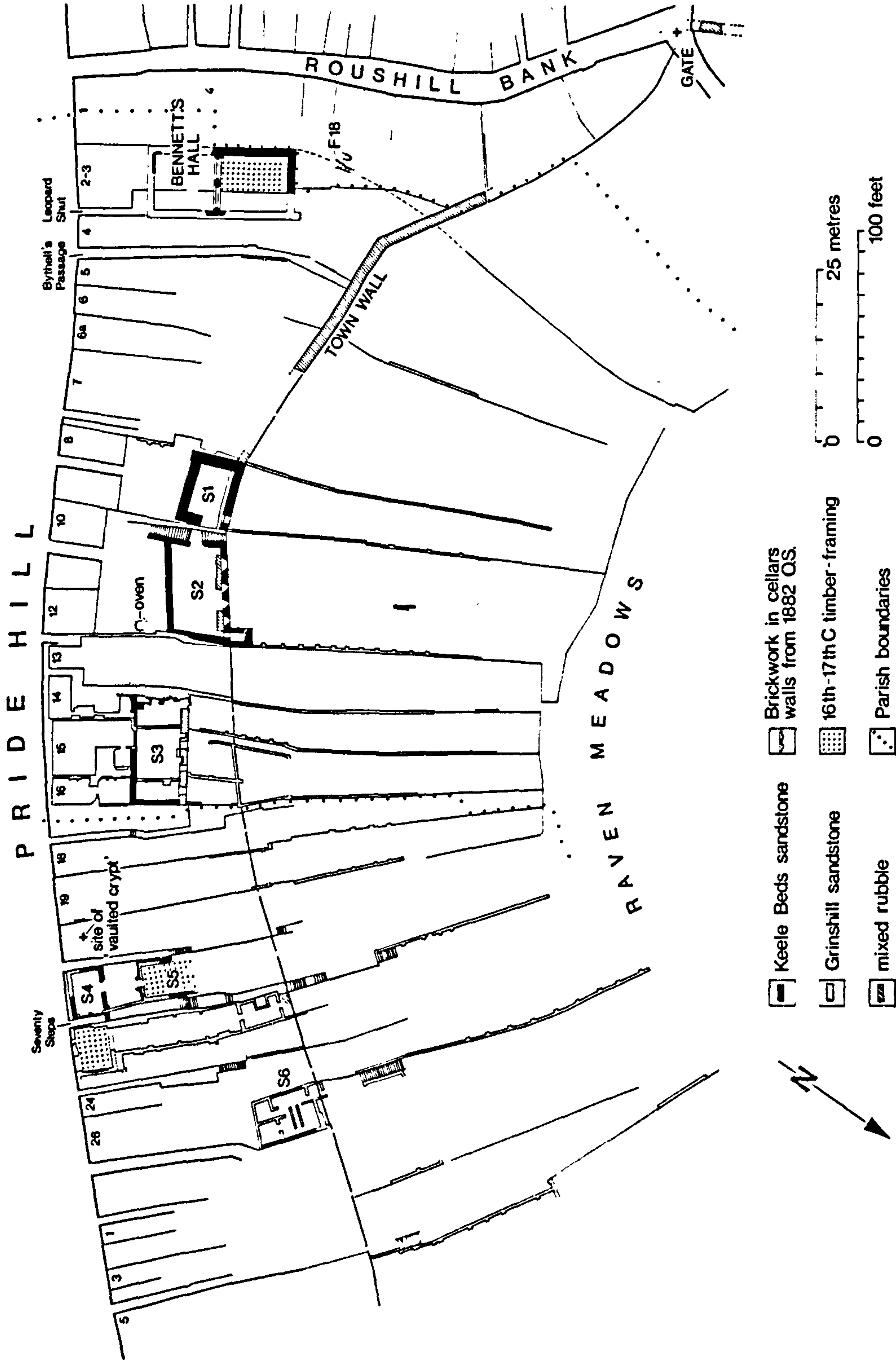
S5 SOUTH - WEST WALL



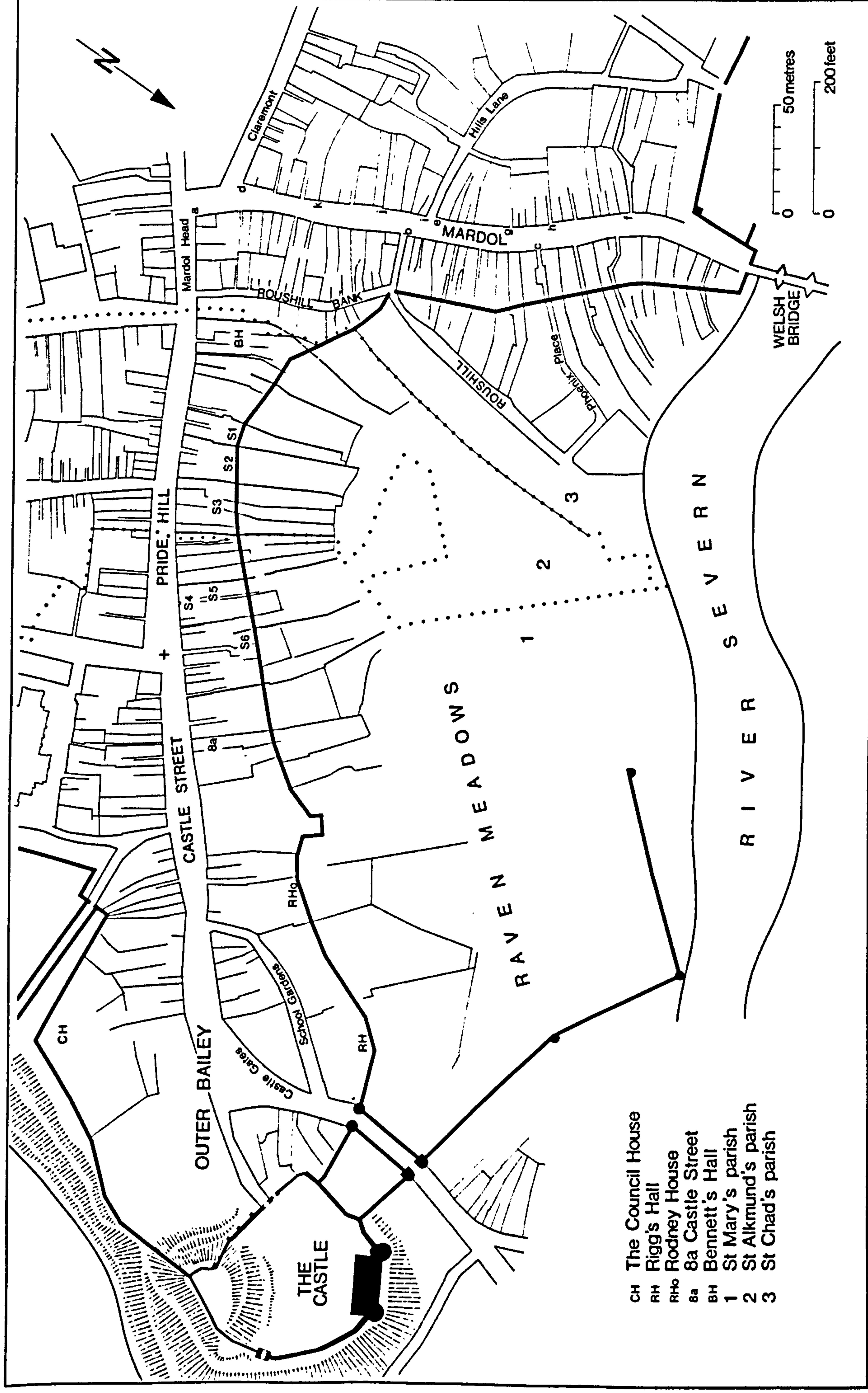
S4 NORTH - WEST WALL



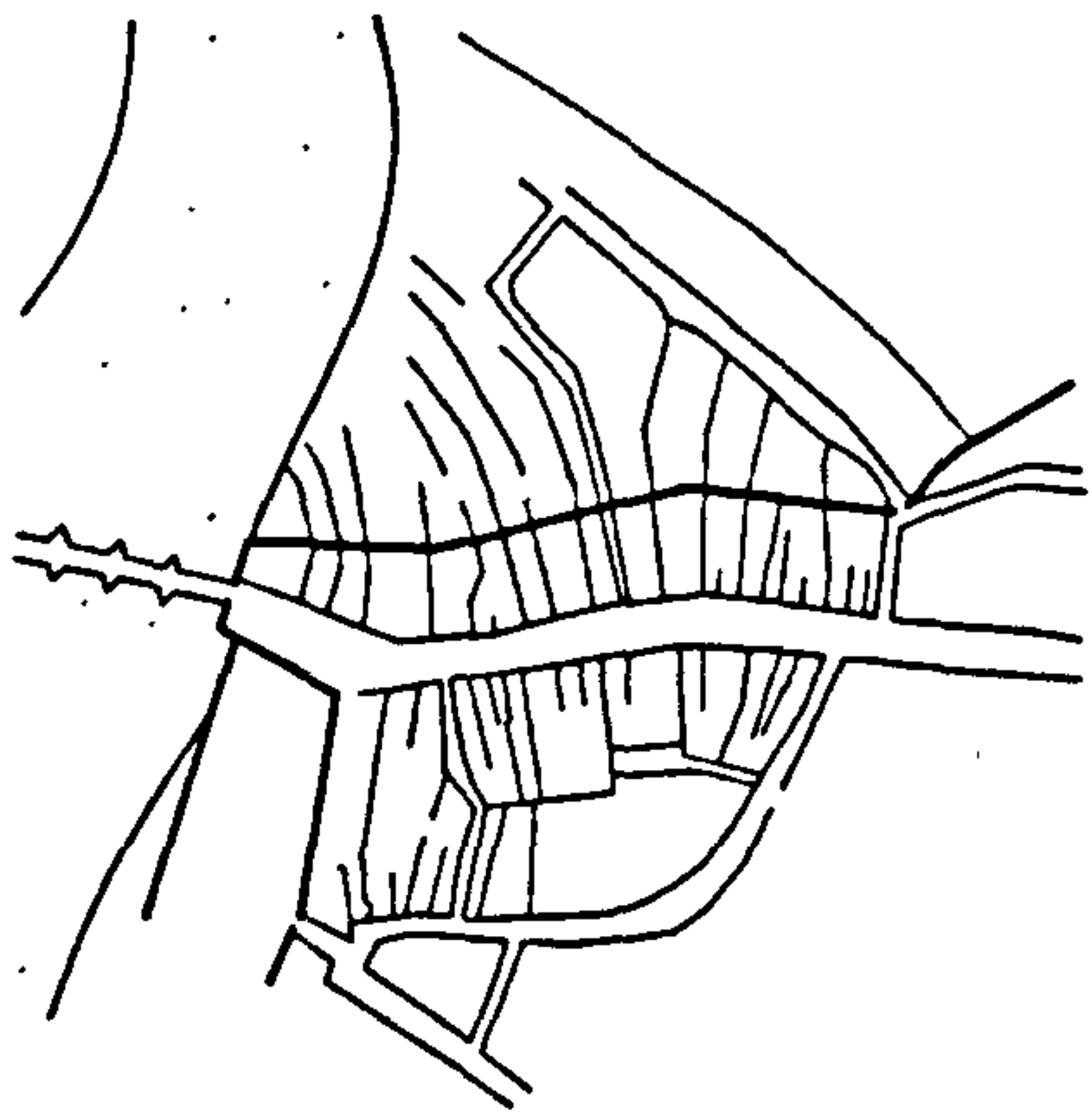
39. Shrewsbury: 22 Pride Hill, internal elevations of cellars S4 and S5



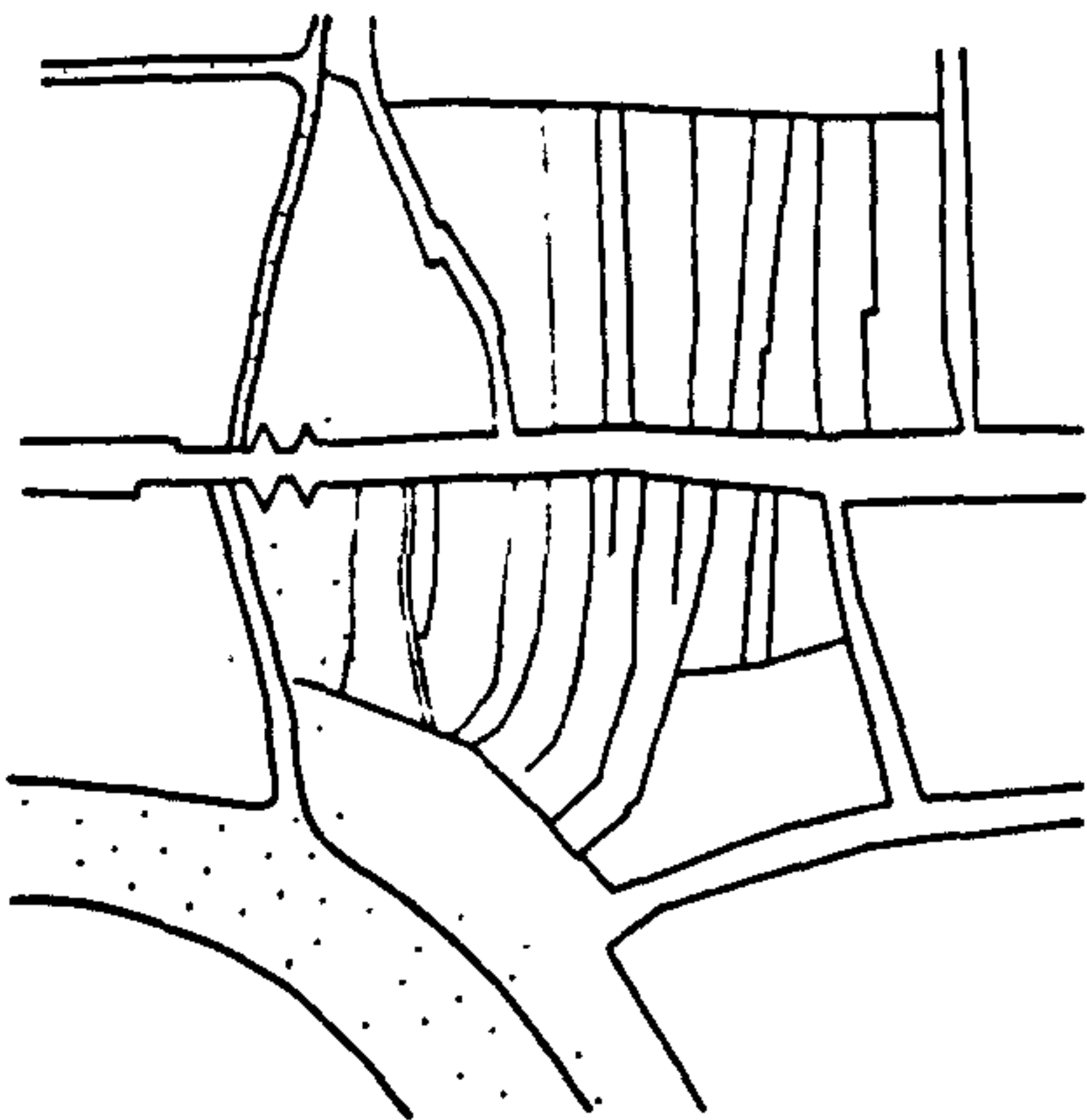
40. Shrewsbury: the north-west side of Pride Hill -
plot boundaries and early buildings



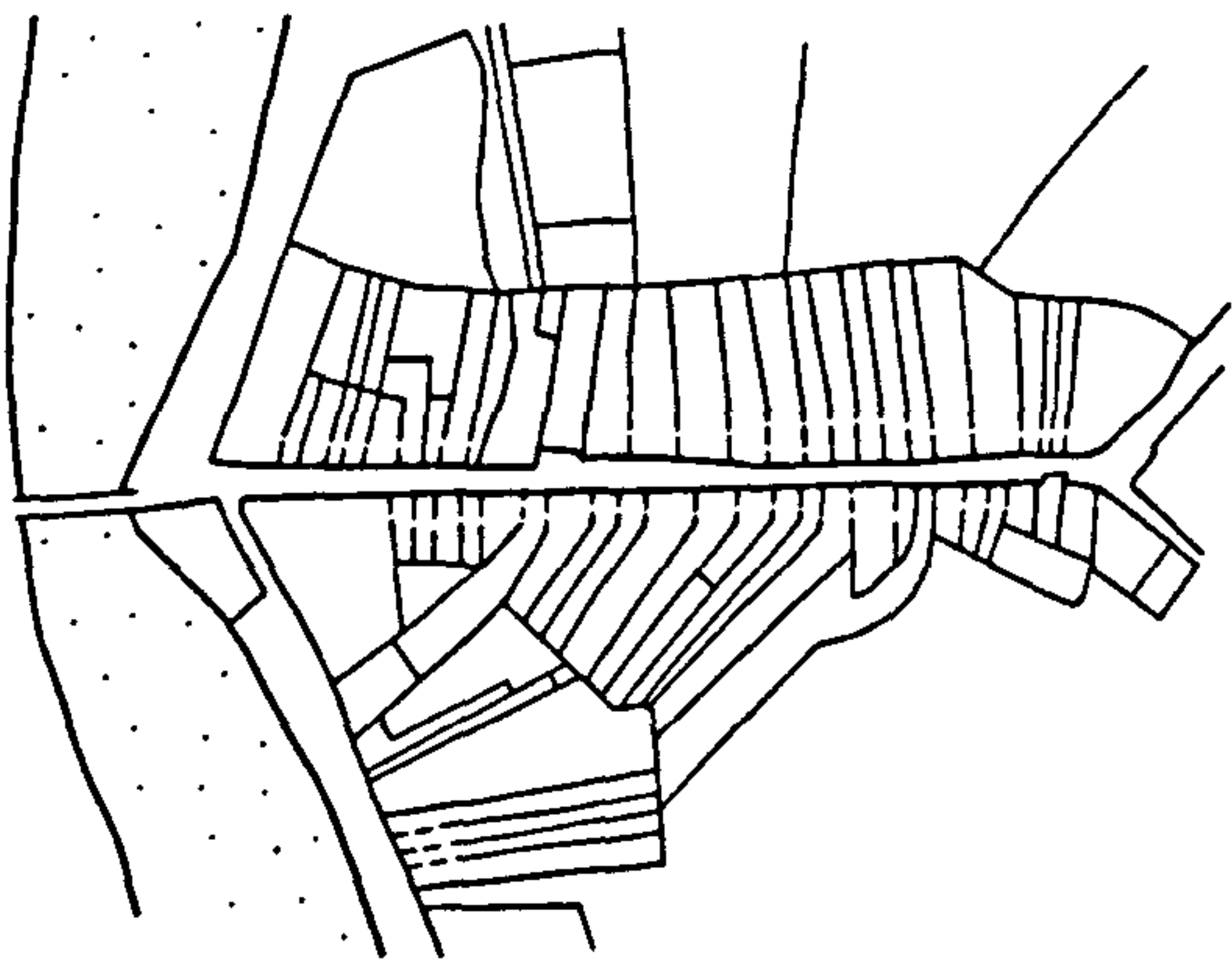
41. Shrewsbury: plot-systems in the Raven Meadows area



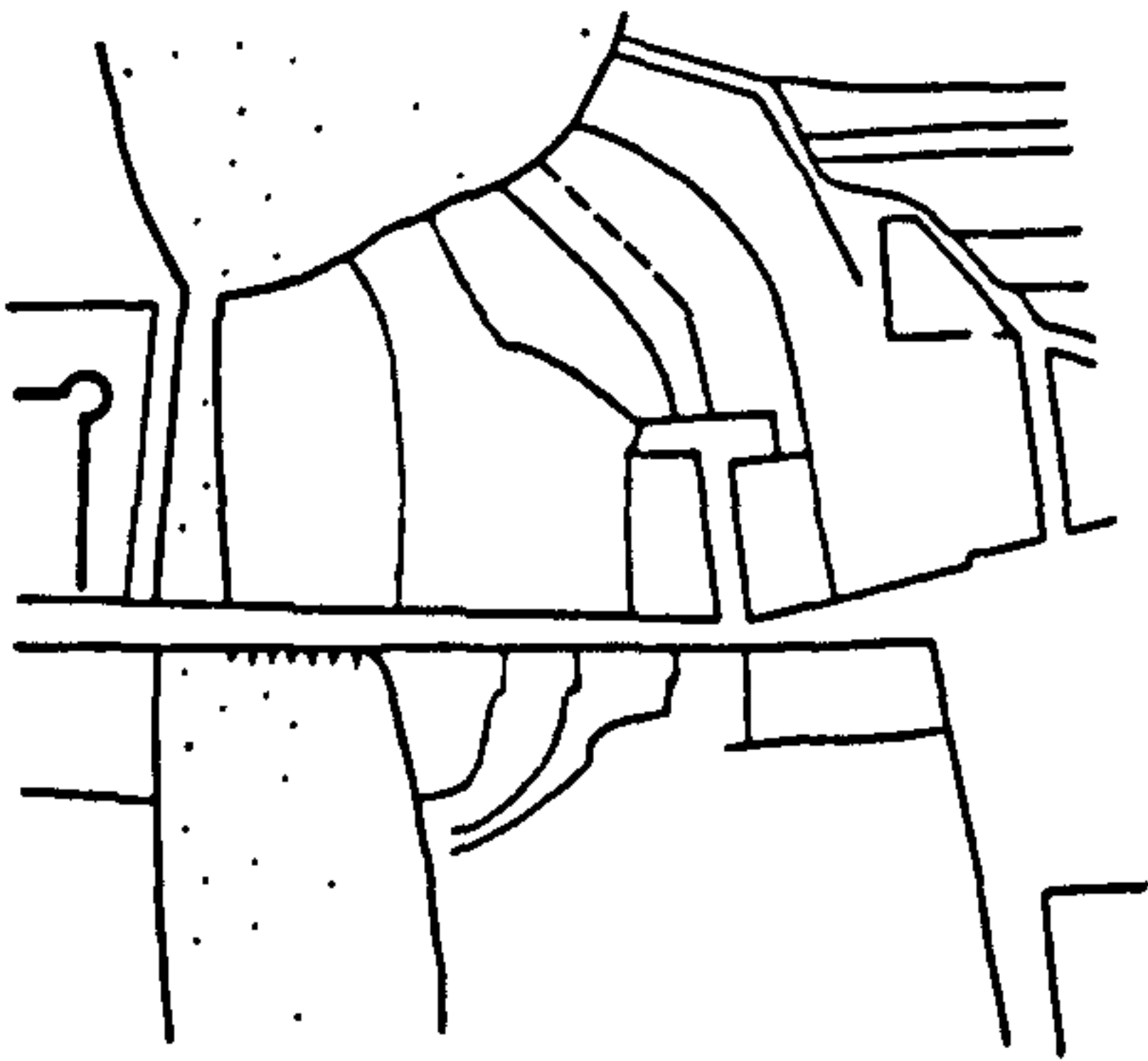
Mardol , Shrewsbury



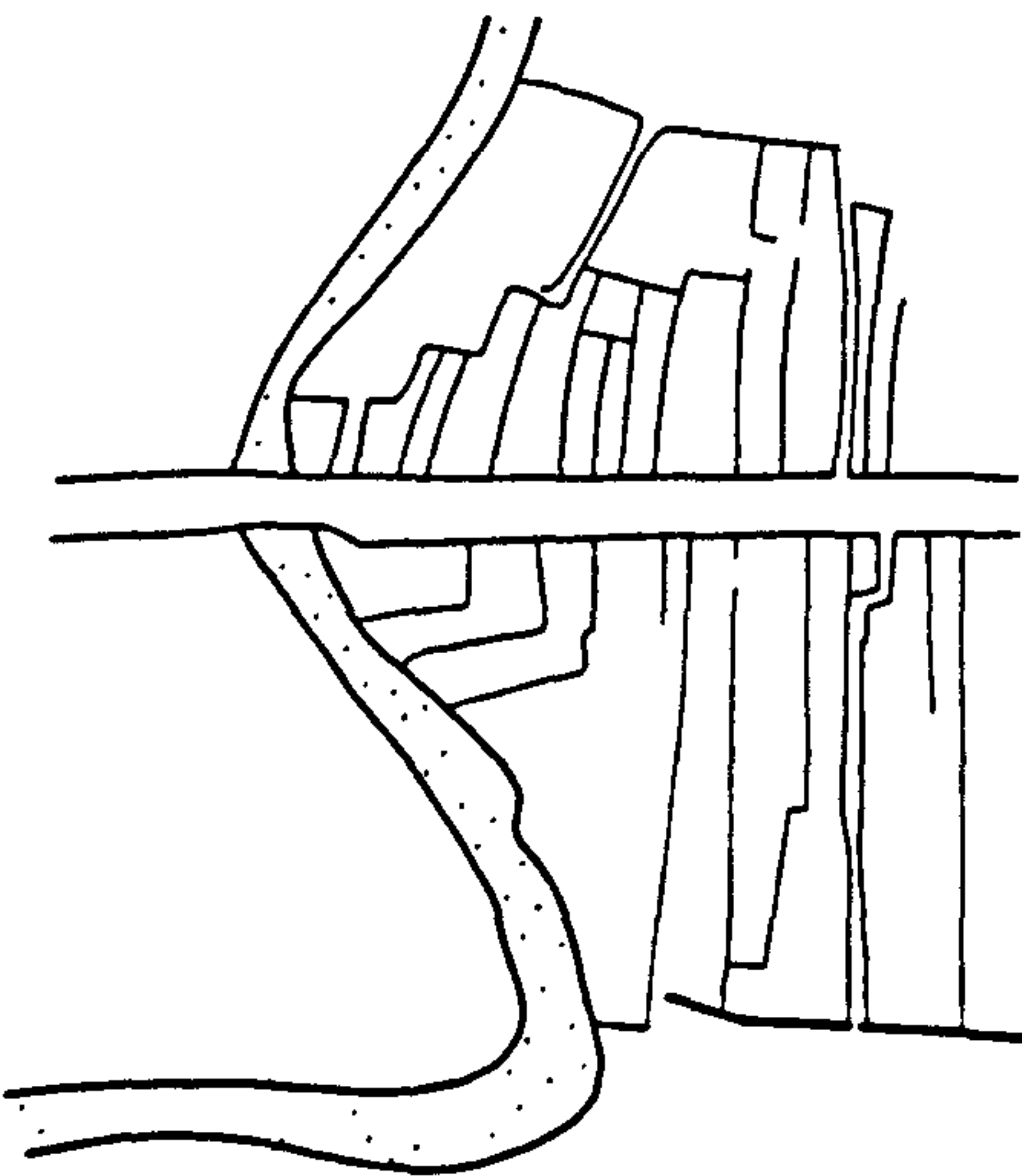
Westgate , Gloucester



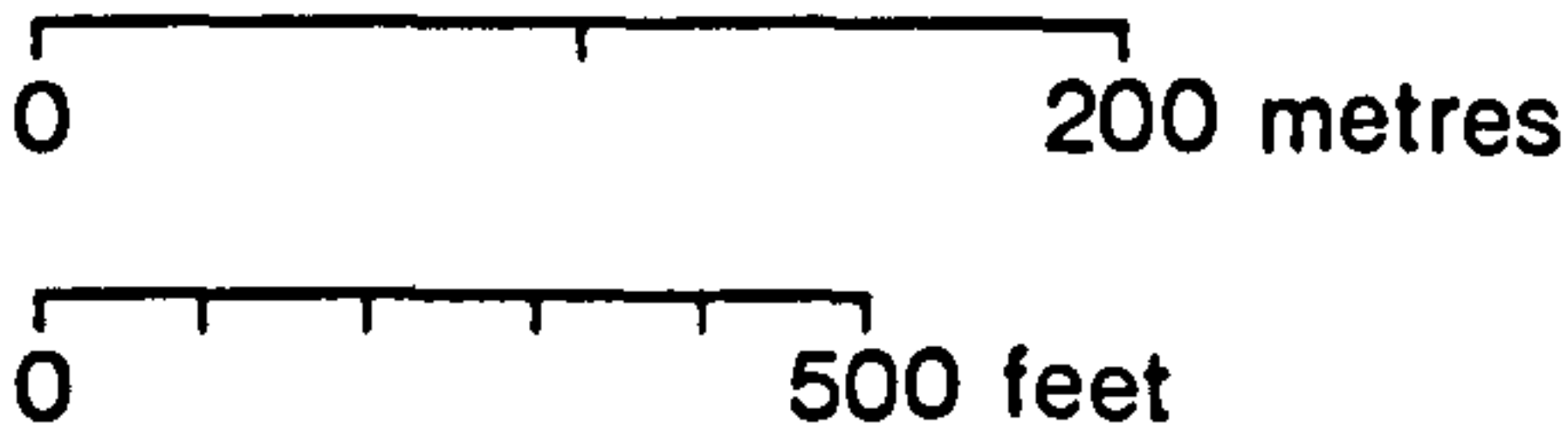
Eastover , Bridgwater

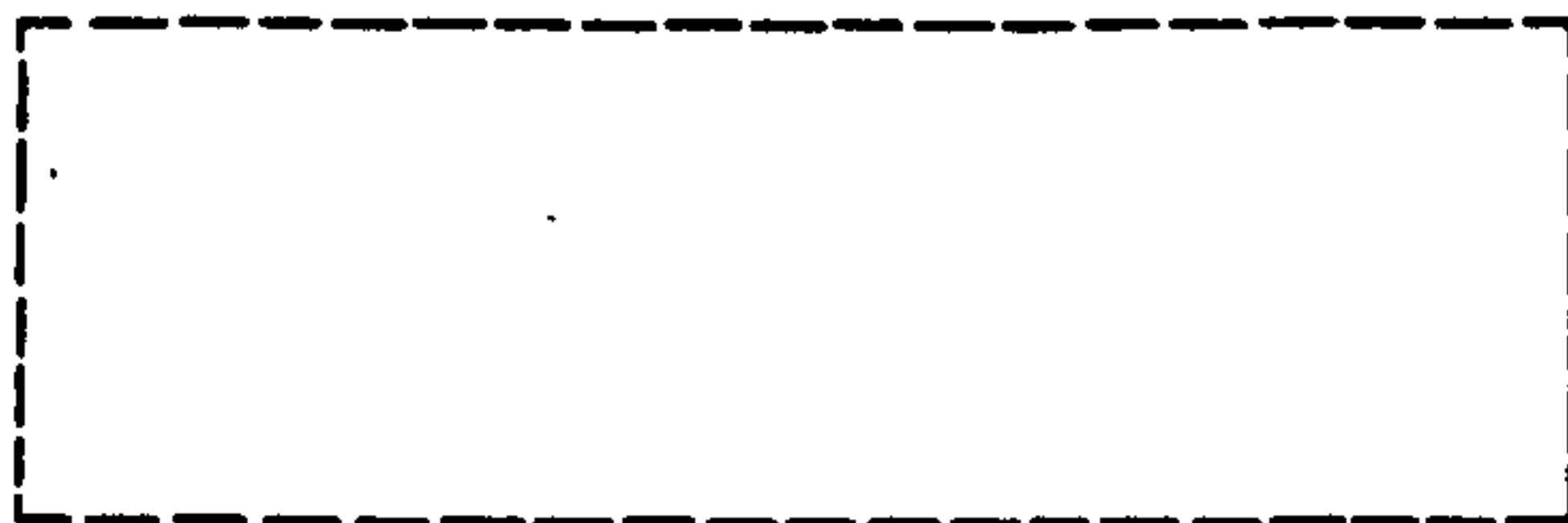


Dam Street , Lichfield

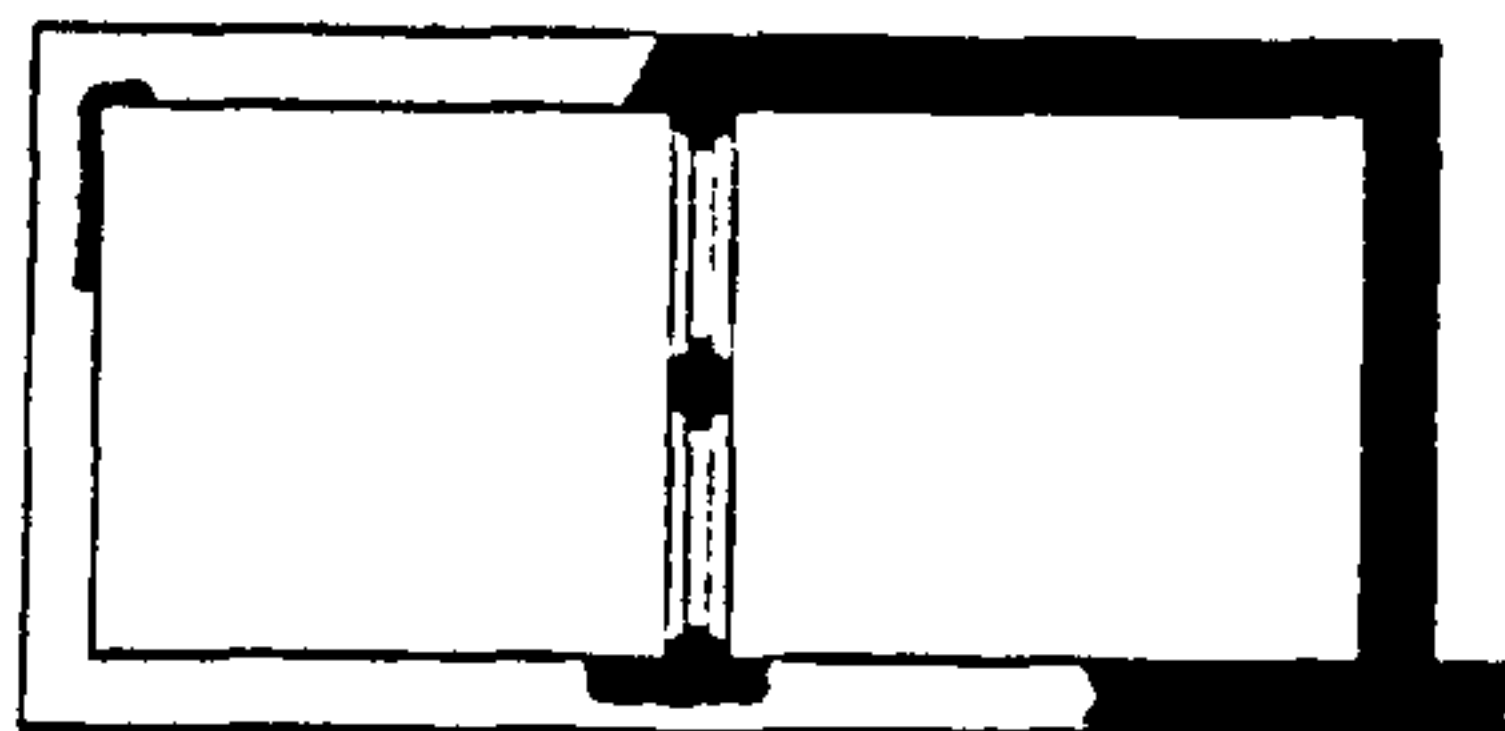


French Gate , Doncaster

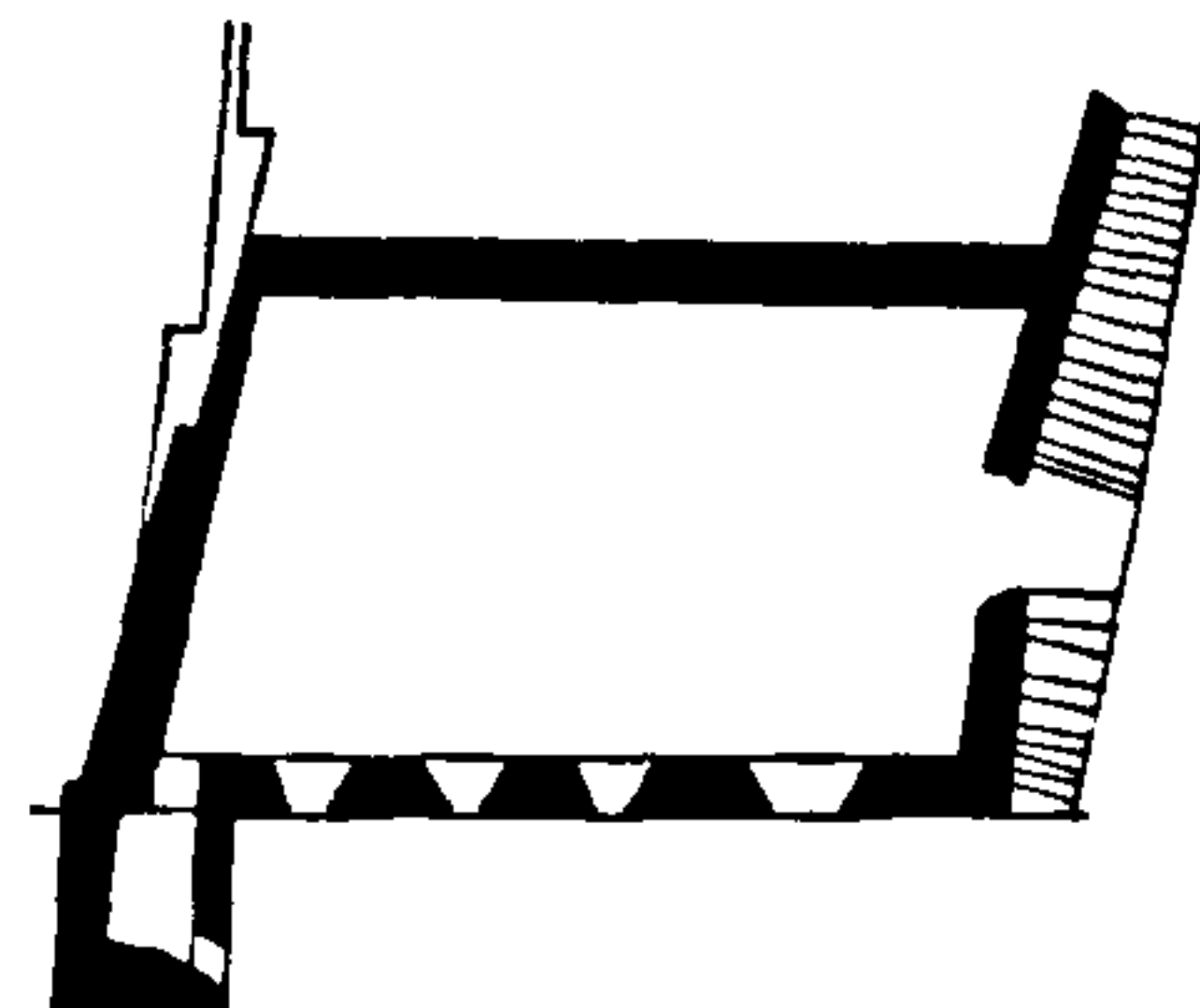




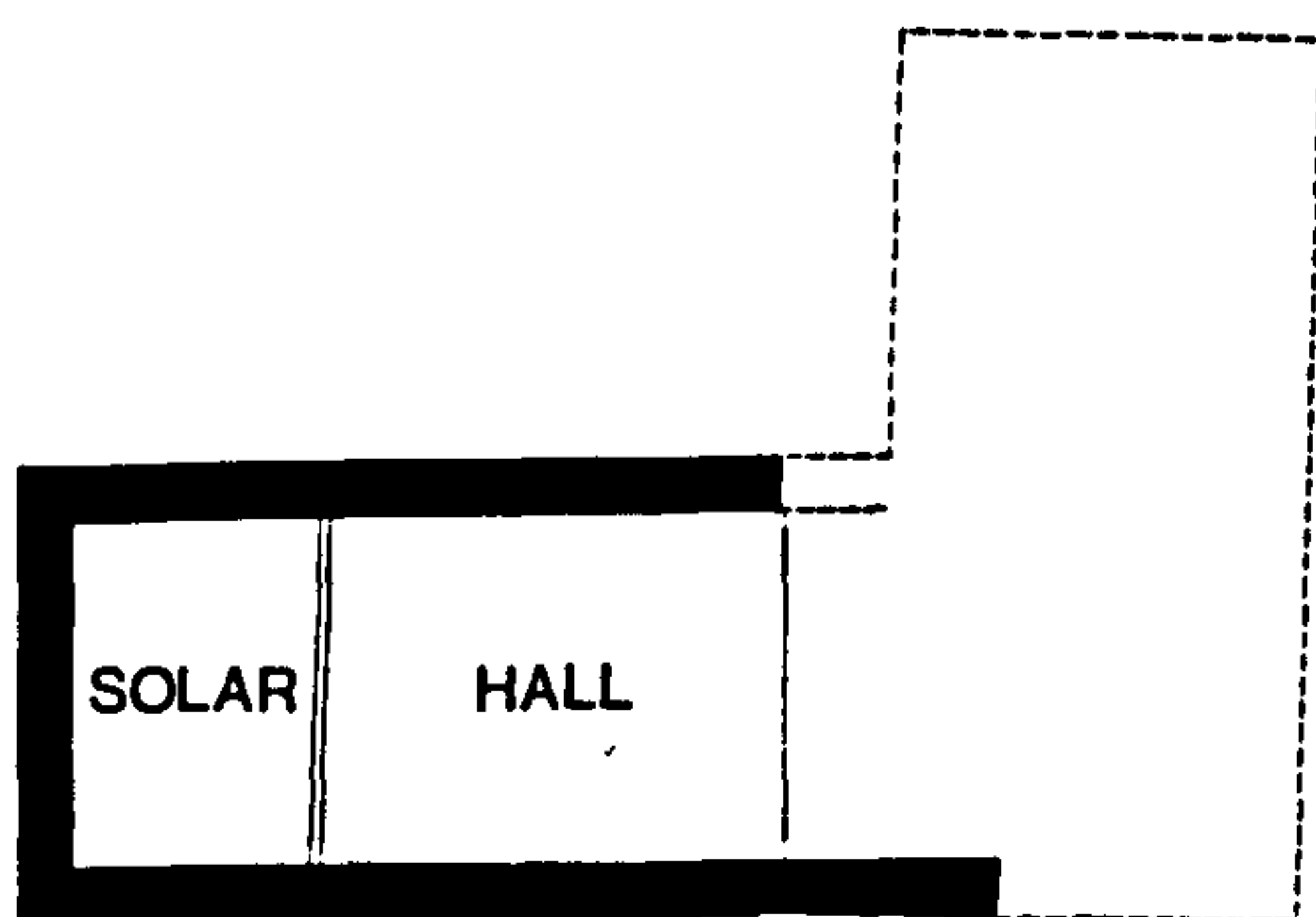
Charlton Hall
? early 14 th C
(demolished c. 1833)



Bennett's Hall c. 1260



Pride Hill Chambers (S2). c. 1400



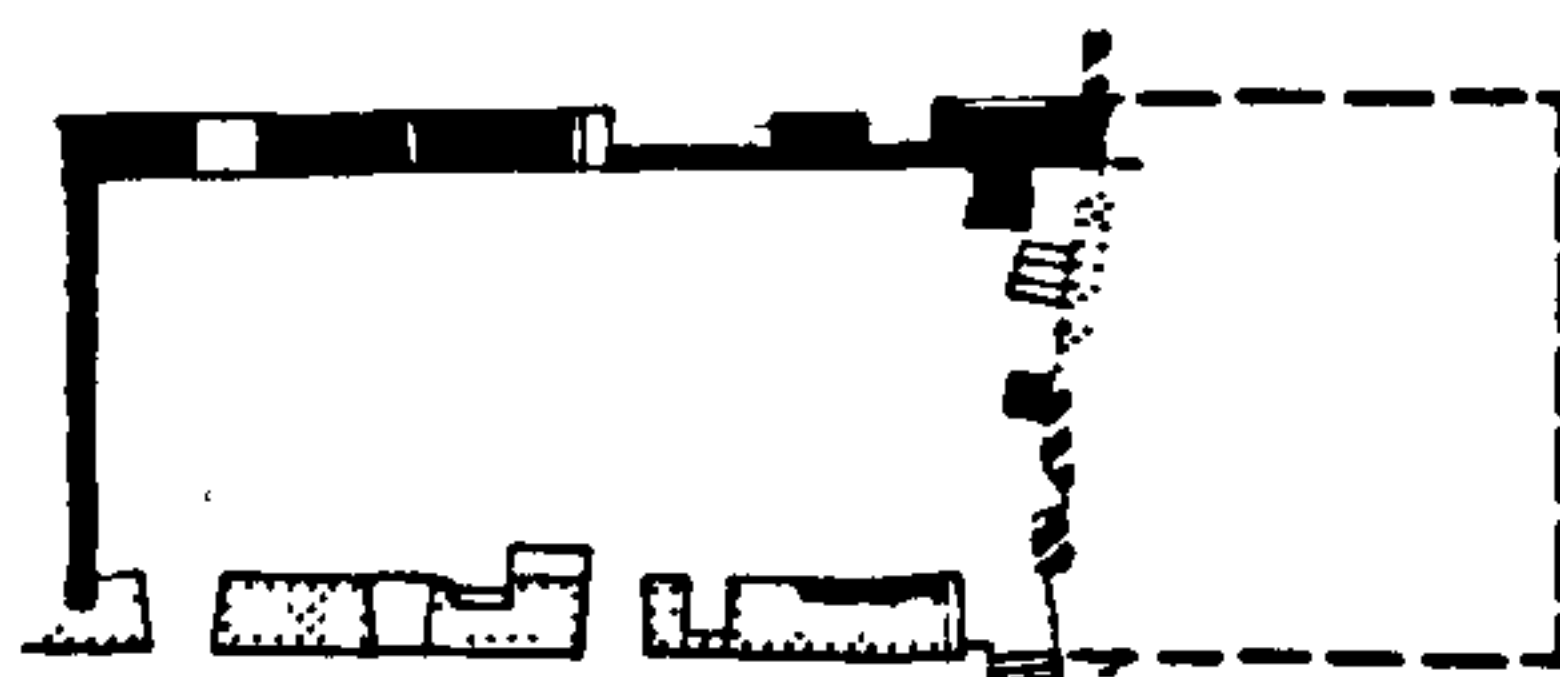
Vaughan's Mansion. Late 13 th C



The Beaconsfield Club (S1)
Date uncertain
(demolished 1972)



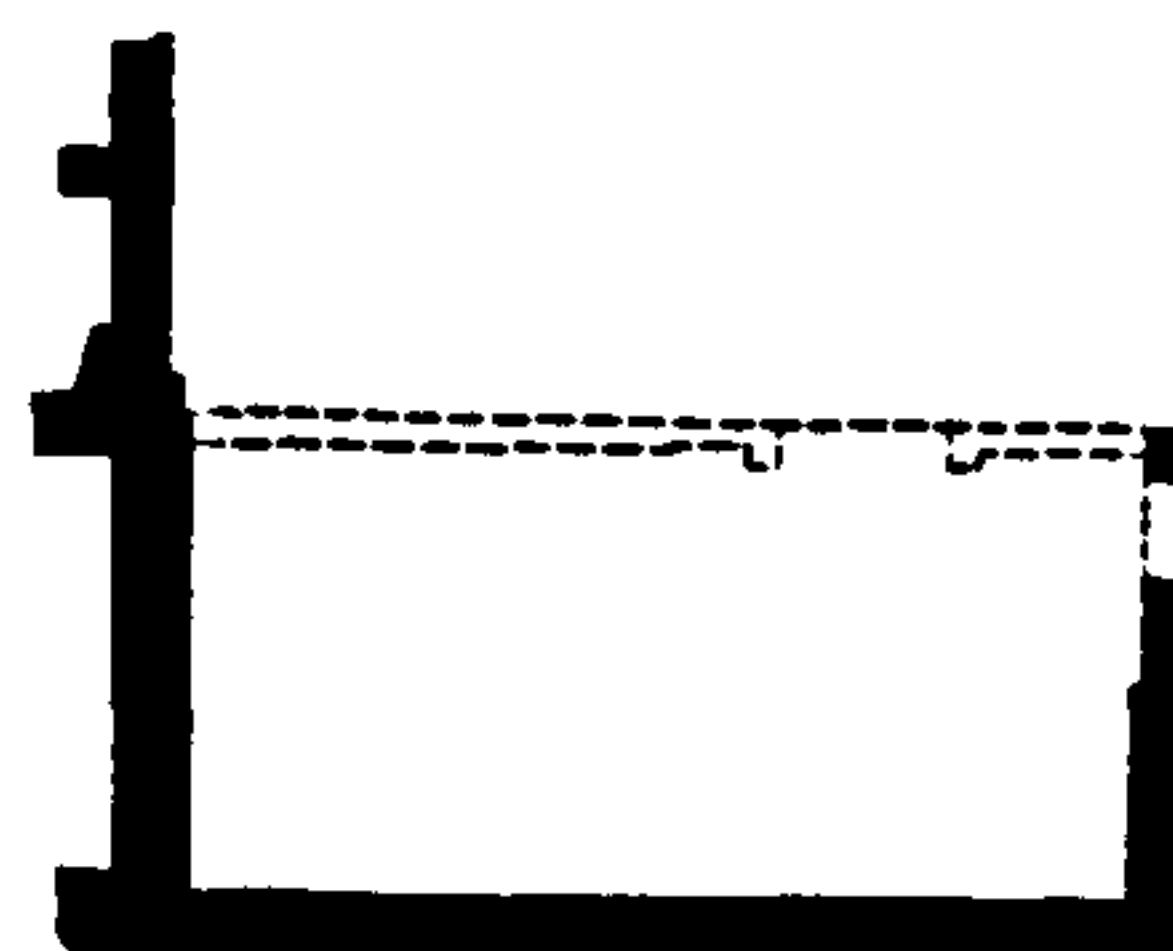
Bellstone House. ? solar wing
(demolished 1934)



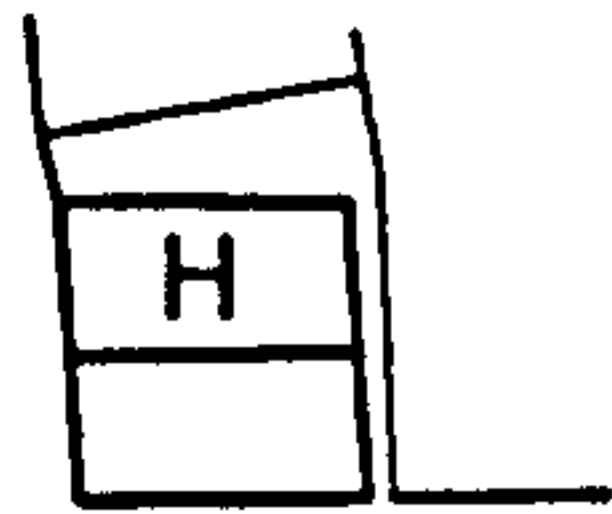
13-16 Pride Hill (S3). 13th-14 th C

0 20 metres

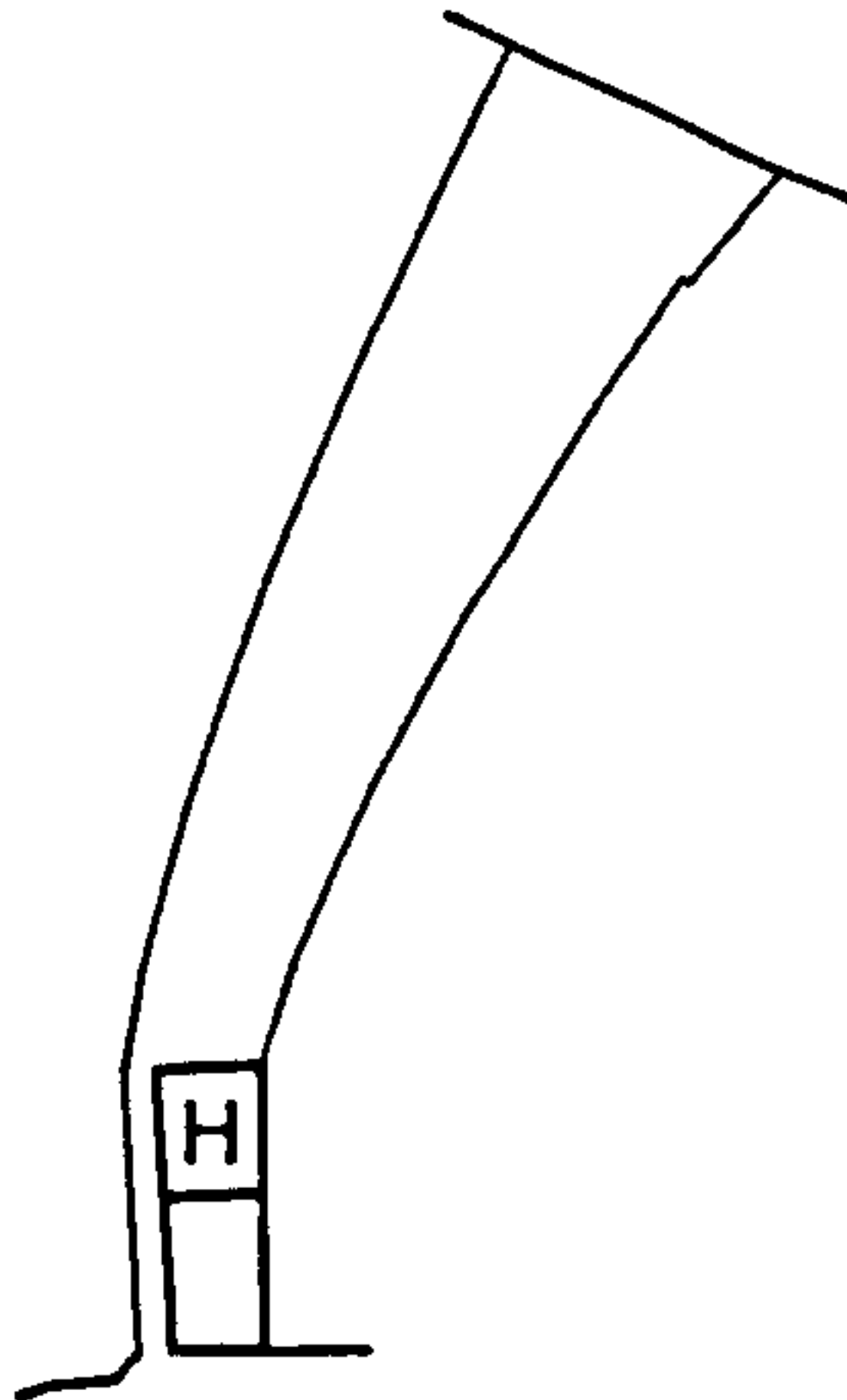
0 50 feet



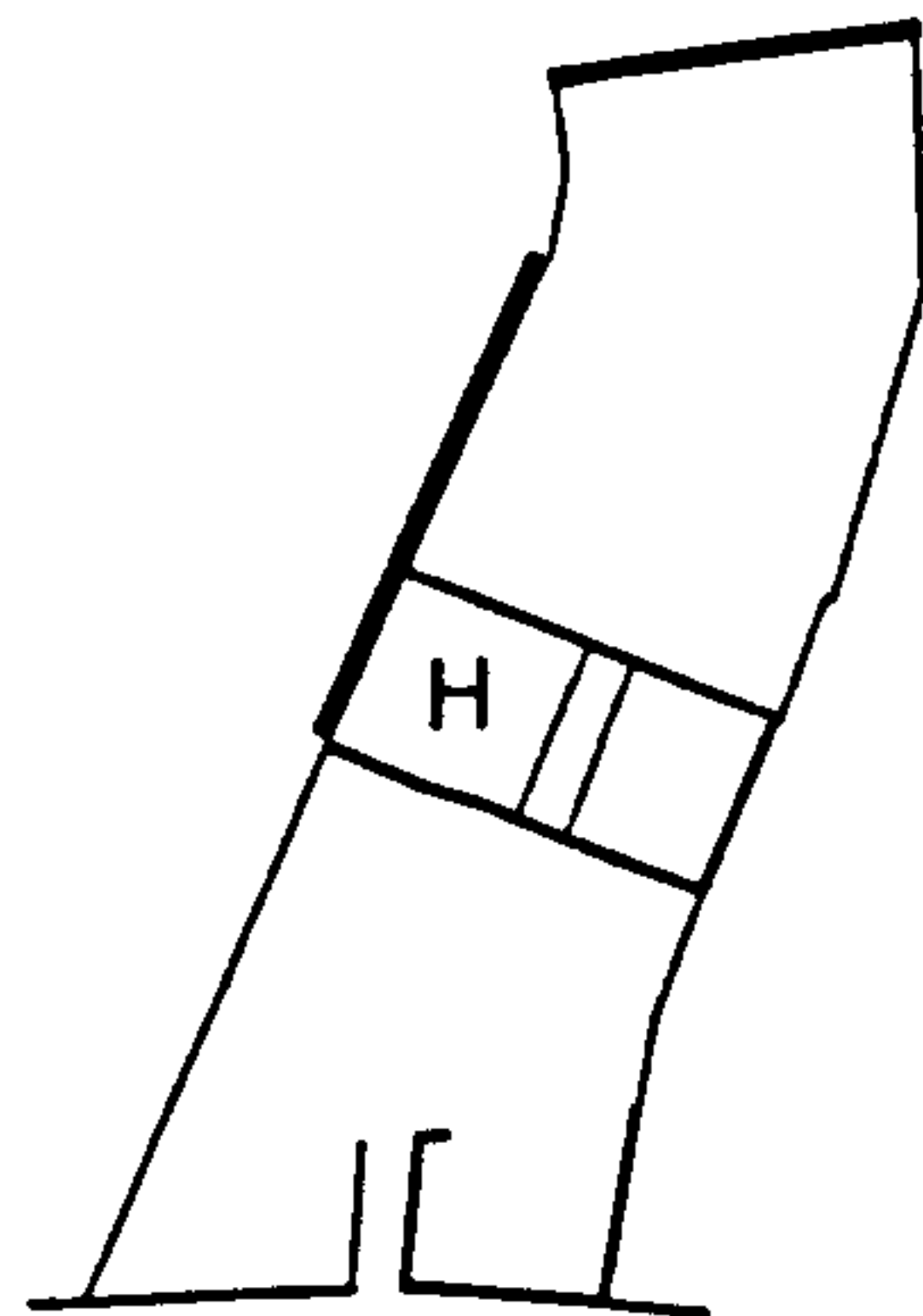
The 'Old Infirmary' south range,
Shrewsbury Abbey c. 1300



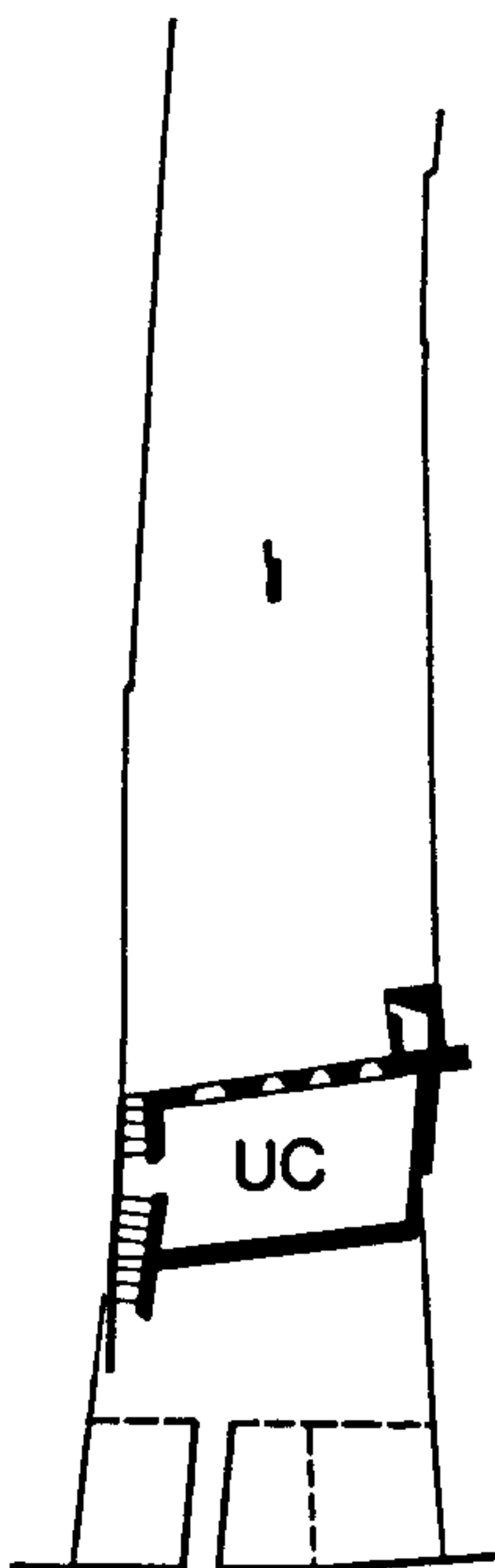
1 - 2 Fish Street



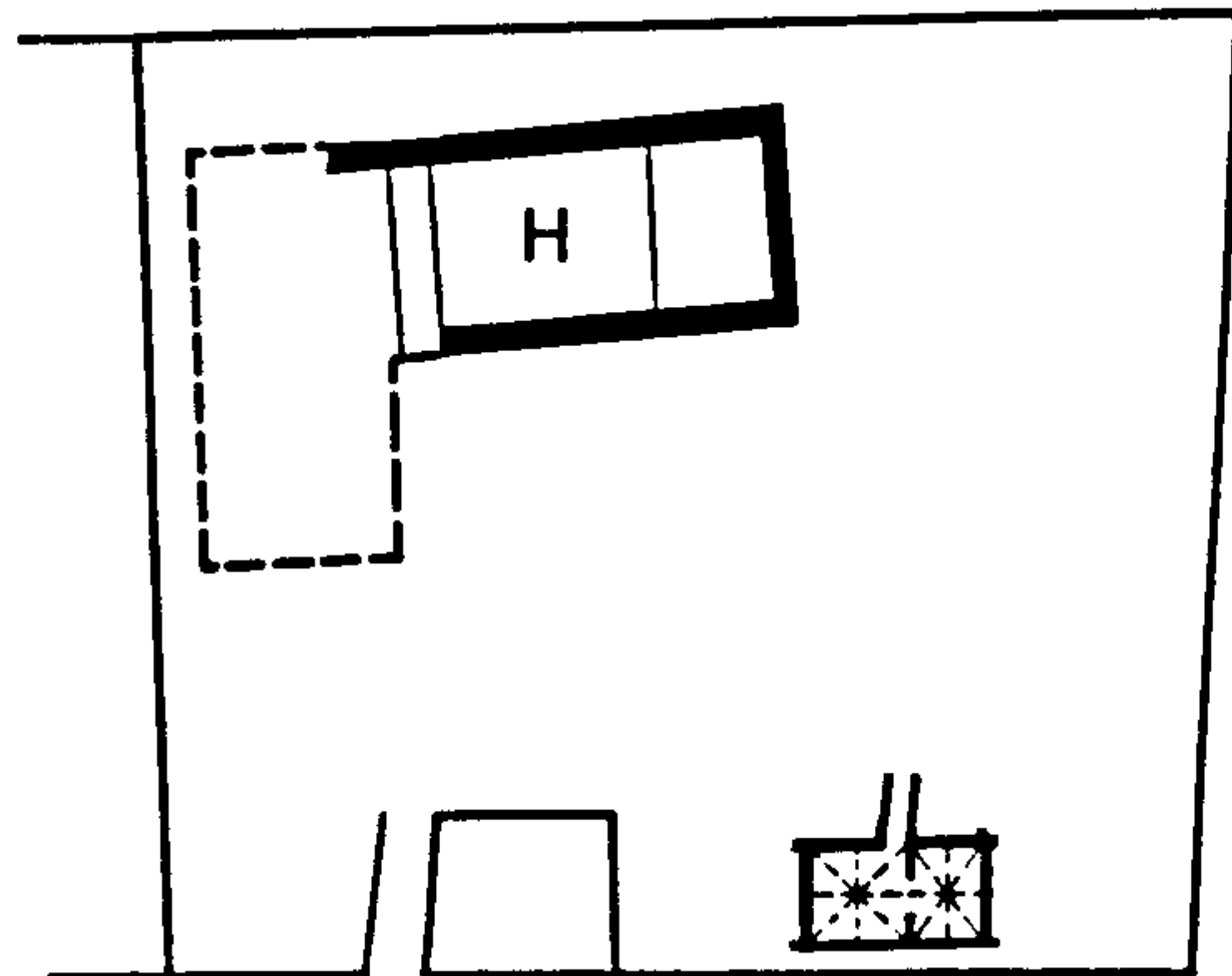
Compasses Passage
Wyle Cop



The Nag's Head
Wyle Cop



Pride Hill Chambers (S2)

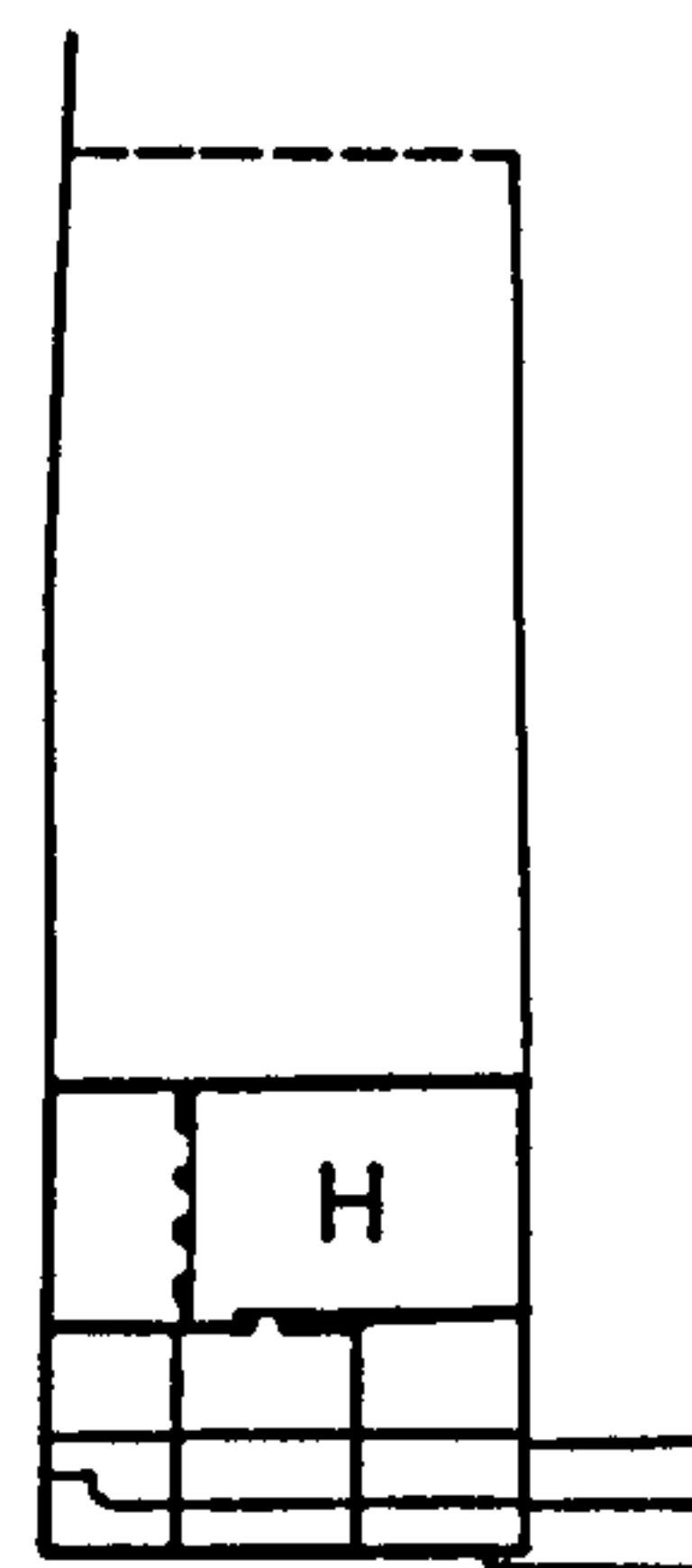


Vaughan's Mansion

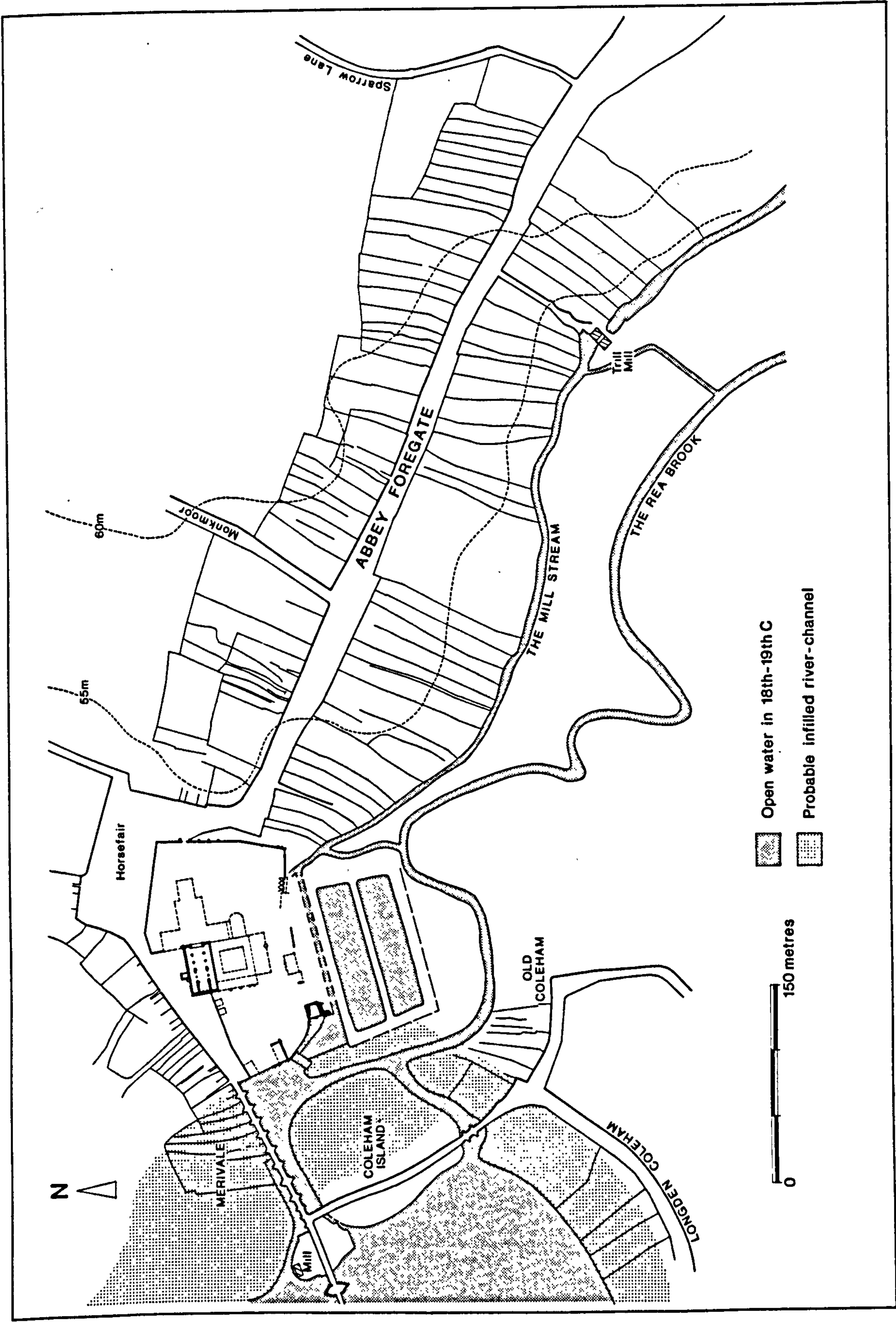
H - Hall
UC - Undercroft

0 50 metres

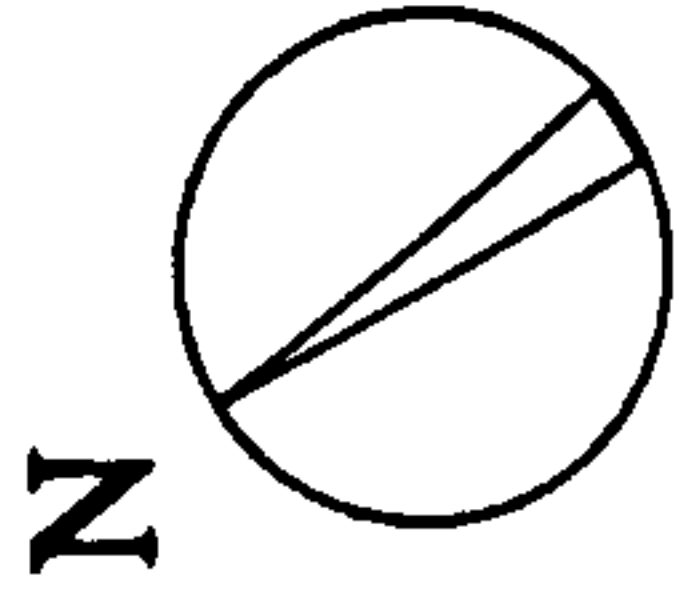
0 200 feet



38 - 42 Watergate Street
Chester

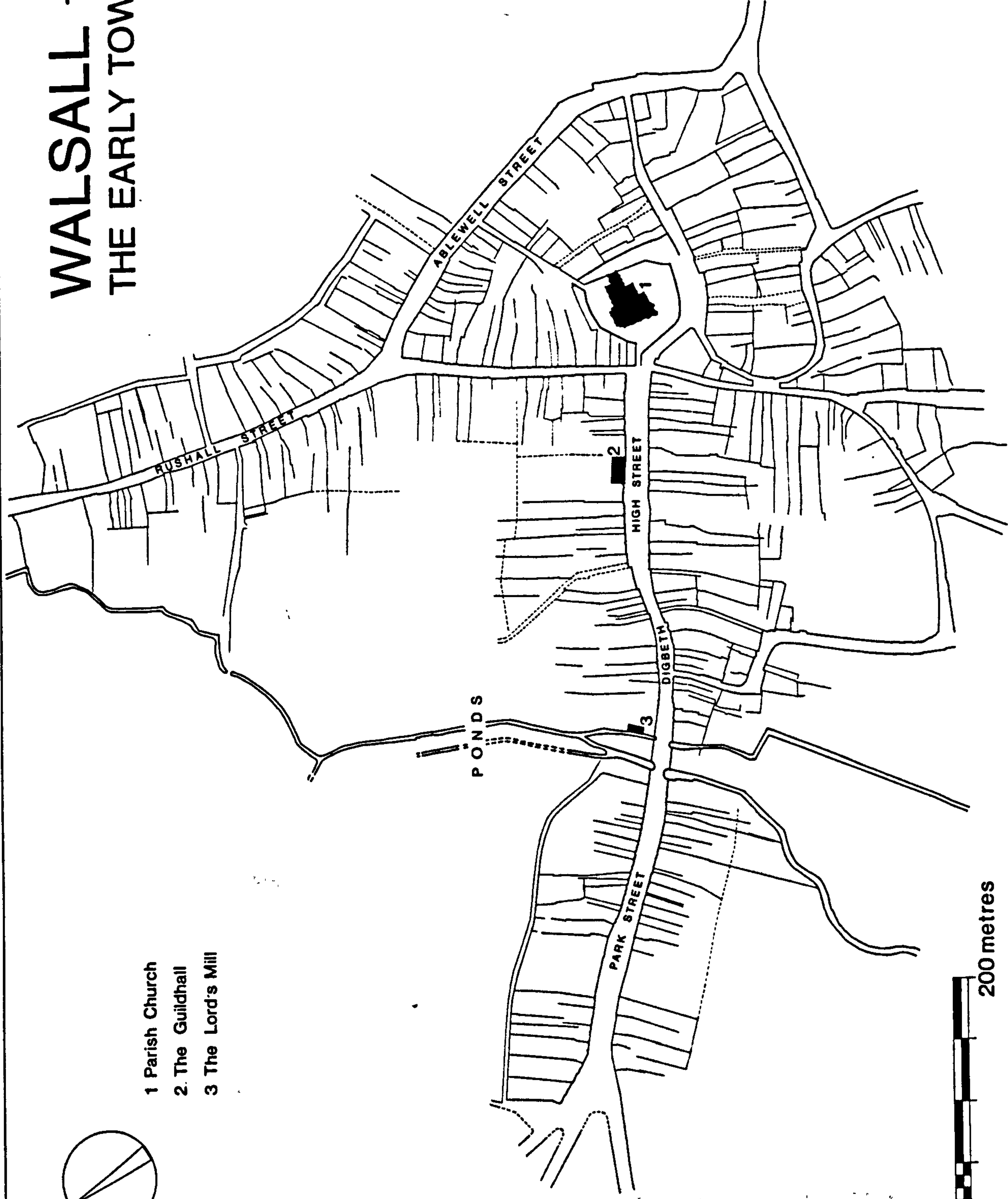


45. Shrewsbury: the abbey and its surroundings



WALSALL — THE EARLY TOWN.

- 1 Parish Church
- 2 The Guildhall
- 3 The Lord's Mill





47. A recent multi-tenement excavation and its immediate context - Flaxengate, Lincoln.