UNIVERSITY OF SOUTHAMPTON

URBANISM IN THE NORTH-EASTERN DANELAW c. 400 - 1066 WITH SPECIAL REFERENCE TO ANGLO-SCANDINAVIAN YORK

by Richard Andrew Hall

TABLE OF CONTENTS

List of illustrations		viii
Abstract		ix
Acknowledgements		x
1.	INTRODUCTION	1
2.	THE SOURCES	
2.1.	DOCUMENTARY SOURCES	7
2.2.	COINAGE	10
2.3.	TOWN PLANS AND TOPOGRAPHICAL ANALYSIS	13
2.4.	PARISH BOUNDARIES	14
2.5.	STREET NAMES	15
2.6.	ARCHAEOLOGICAL METHODOLOGY	16
3.	ANGLIAN YORK	
3.1.	PAGAN ANGLIAN	18
3.2.	CHRISTIAN ANGLIAN	
3.2.a.	The Roman Fortress Area	19
3.2.b.	The Fortress Environs	24
3.2.c.	East of the Foss	25
3.2.d.	South of the Ouse	25
3.3.	CONCLUSION	27
4.	ANGLO-SCANDINAVIAN YORK	
4.1.	INTRA-MURAL EXTENT AND THE DEFENCES	
4.1.a.	Introduction	29
4.1.b.	The North Sides of the Roman Fortress	34
4.1.c.	The South-West Side of the Roman Fortress	36
4.1.d.	Earlsburgh	41
4.1.e.	The Ouse Frontage - East End and Summary	42
4.1.f.	The South-East Side of the Roman Fortress	43
4.1.g.	Between the Fortress and the Foss	50
4.1.h.	East of the Foss	56
4.1.i.	South of the Ouse	56
4.1.j.	Summary	57

4.2.	SUBURBAN SETTLEMENT	57
4.3.	TOPOGRAPHY AND DEVELOPMENT	
4.3.a.	The 'shires'	60
4.3.b.	Churches and Parishes	62
4.3.c.	The Street Plan	67
4.4.	DISTRIBUTION AND DENSITY OF OCCUPATION	
4.4.a.	The Palaces	70
4.4.b.	The Roman Fortress Area	71
4.4.c.	Between the Roman Fortress and the River Foss	74
4.4.d.	East of the River Foss	80
4.4.e.	South of the River Ouse	82
4.5.	MANUFACTURING IN JORVIK	
4.5.a.	Introduction	83
4.5.b.	Iron Working	84
4.5.c.	Non-ferrous Metalworking: Gold, Silver, Copper and Lead Alloys	85
4.5.d.	Glass	87
4.5.e.	Pottery	89
4.5.f.	Bone and Antler and Horn Working	90
4.5.g.	Stone Working	91
4.5.h.	Amber and Jet Working	92
4.5.i.	Wood Working	92
4.5.j.	The Leather Industries	94
4.5.k.	Textile Production	95
4.5.l.	The Service Industries	95
4.5.m.	Summary	96
4.6.	TRADE	
4.6.a.	Introduction	96
4.6.b.	Local and Regional Trade	97
4.6.c.	International Trade	98

5. THE FIVE BOROUGHS

5.1. INTRODUCTION 100

5.2. DERBY

5.2.a. Origins 100

5.2.b. Early- and Mid-Saxon Activity 101

5.2.c. Anglo-Scandinavian Derby 103

5.3. LEICESTER

5.3.a. Prehistoric Activity 109

5.3.b. Roman Occupation 109

5.3.c. Early- and Mid-Saxon Activity 110

5.3.d. Anglo-Scandinavian Occupation 112

5.4. LINCOLN

5.4.a. Origins 113

5.4.b. The Early- and Mid-Saxon Periods 115

5.4.c. The Anglo-Scandinavian Period

5.4.c.i. Historical Introduction 118

5.4.c.ii. The Defences 118

5.4.c.iii. The later influences of Roman topography 119

5.4.c.iv. Anglo-Scandinavian occupation and activity 123

5.4.c.v. Crafts and industry 125

5.4.c.vi. Trade 126

5.5. NOTTINGHAM

5.5.a. Origins 128

5.5.b. Early- and Mid-Saxon Occupation 129

5.5.c. Anglo-Scandinavian Nottingham

5.5.c.i. Introduction 131

5.5.c.ii. Defences 131

5.5.c.iii. Topography 132

5.5.c.iv. Crafts, industry and economy 133

5.5.c.v. Conclusion 134

5.6. STAMFORD
5.6.a. Origins 134
5.6.b. Anglo-Scandinavian Occupation
5.6.b.i. Historical introduction 135
5.6.b.ii. Defences 136
5.6.b.iii. Topography 138
5.6.b.iv. Structures 139
5.6.b.v. Industry and economy 139
5.6.b.vi. Conclusion 141

5.7. SUMMARY 142

6. SMALLER FOCI IN THE NORTH-EAST DANELAW AND YORKSHIRE
6.1. INTRODUCTION 146
6.2. TORKSEY 146
6.3. HORNCASTLE 149
6.4. CAISTOR 150
6.5. LOUTH 152
6.6. GRANTHAM 153
6.7. NEWARK 154
6.8. OTHER SITES 156
6.9. SUMMARY 157

7. COMPARATIVE URBAN DEVELOPMENTS
7.1. INTRODUCTION 158

7.2. SOUTH-EAST MERCIA - THE SOUTHERN DANELAW
7.2.a. Introduction 158
7.2.b. Huntingdon and Tempsford 160
7.2.c. Cambridge 160
7.2.d. Bedford 160
7.2.e. Northampton 162
7.2.f. Summary 163

7.3. EAST ANGLIA
7.3.a. Ipswich 164
7.3.b. Norwich and Thetford 165
7.3.c. Colchester 165

7.4. MERCIA
7.4.a. Introduction 166
7.4.b. Hereford 166
7.4.c. Gloucester 167
7.4.d. Chester 168
7.4.e. London 168

7.5. WESSEX
7.5.a. Introduction 169
7.5.b. Hamwic 170
7.5.c. Winchester 171

7.6. DUBLIN
7.6.a. Introduction 172
7.6.b. The 9th-century longphort 173
7.6.c. 10th-century Refoundation 174
7.6.d. Dublin's Economic Role 177
7.6.e. Conclusion 180

7.7. NORMANDY 181

7.8. SCANDINAVIA
7.8.a. Introduction 184
7.8.b. Ribe 184
7.8.c. Kaupang 184
7.8.d. Helgö, Birka and Other Swedish Sites 185
7.8.e. Hedeby/Haithabu 186
7.8.f. Summary 187

8. CONCLUSION 188

ABBREVIATIONS 203

BIBLIOGRAPHY 204

ILLUSTRATIONS: FIGURES 1 - 9 following page 226

List of illustrations

Figure 1 Location of principal sites referred to.

Figure 2 Radley's section across the north-west fortress defences, York.

Figure 3 Richardson's section through the Hungate embankment, York.

Figure 4 Pre-conquest York: sites referred to in the text.

Figure 5 Pre-conquest Derby: sites referred to in the text.

Figure 6 Pre-conquest Leicester: sites referred to in the text.

Figure 7 Pre-conquest Lincoln: sites referred to in the text.

Figure 8 Pre-conquest Nottingham: sites referred to in the text.

Figure 9 Pre-conquest Stamford: sites referred to in the text.

NOTE

Site references in the text, consisting of a number contained within a bracket, may be located on the relevant town plan, Figures 4-9.

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF ARTS

ARCHAEOLOGY

Doctor of Philosophy

URBANISM IN THE NORTH-EASTERN DANELAW c. 400 - 1066
WITH SPECIAL REFERENCE TO ANGLO-SCANDINAVIAN YORK

by Richard Andrew Hall

Evidence for urban development during the post-Roman - pre-Norman period in Yorkshire and the East Midlands, 'the essential Danelaw' (Stenton 1927a, 213), is surveyed against a background of source criticism and comparanda from relevant areas of Britain and Europe. Emphasis is placed upon the correct dating and interpretation of archaeologically excavated data, which are calibrated against a chronological framework provided by contemporary documentation to allow the comparison of events in the early-Saxon, mid-Saxon, Viking and Anglo-Scandinavian periods. Availability of evidence focuses the study principally upon York and the 'Five Boroughs' of Derby, Leicester, Lincoln, Nottingham and Stamford, although evidence for other, mostly smaller, centres is also discussed.

Several of the six principal sites had been regional nuclei in the prehistoric or Roman eras; and all appear to have been locally or regionally significant in the mid-Saxon period, even if the nature of this prominence is not always clear. At both York and Lincoln, the two largest defended sites, there is sufficient evidence to show that there was regeneration in the period of Viking control, and an expansion of overseas links; elsewhere the impact of Viking settlement cannot be judged. Between recapture by the English and the Norman conquest York and Lincoln have yielded further evidence for redevelopment with concomitant manufacturing and trading growth, and York appears to have been in the forefront of contemporary English urban development. Tangible evidence for the historically attested developments at the other four sites remains elusive.

Acknowledgements

I am grateful to archaeologists working in the study area for discussing their excavations with me, although I take full responsibility for the interpretation I have placed on the information. They include Christopher Green (Little Chester), Jean Mellor and Terry Pearce (Leicester), Mick Jones and John Wacher (Lincoln), Charles Young and Victoria Nailor (Nottingham), Christine Mahany and David Roffe (Stamford), Naomi Field (Horncastle, Grantham and Louth) and John Magilton (Doncaster). John Williams and David Baker have kindly kept me abreast of work at Northampton and Bedford respectively. My thoughts on York have of course benefited from the stimulus provided consciously or unconsciously by colleagues past and present at York Archaeological Trust.

D. A. Hinton and Dr T. C. Champion, respectively my Supervisor and Adviser within the Archaeology Department, University of Southampton, have helped with perceptive comment throughout. Production has been aided by the skills of David Patrick (cartography) and Sue Parsons (typing). Above all, I am indebted to my wife for her support and encouragement.

1. INTRODUCTION

Although the increase in urban archaeological work during the last ten or fifteen years has illuminated many facets of pre-Norman conquest life and demonstrated the development of individual sites to an extent hardly conceivable even a decade ago (compare Heighway (ed) 1972 with Schofield and Palliser (eds) 1981 for an index of the scale of recent work), there have been few attempts to synthesize and to generalise from the newly retrieved data. The only well-defined group of sites to have received concentrated attention has been the burhs of Wessex. Prompted by Biddle's work at Winchester and Hill's elucidation of the Burghal Hidage, the establishment of a network of fortified centres and its development into an urban hierarchy in which the component sites variously played commercial, industrial, administrative and ecclesiastical roles has been charted in some detail (e.g. Biddle and Hill 1971; Barlow et al 1976; Hill 1978). Beyond the frontiers of Wessex Rahtz (1977) has briefly presented the excavated evidence from the towns of the West Midlands, 'English Mercia', but such was the paucity of material available that he was not able to offer any generalised conclusion. There is no recent survey of the East Anglian towns.

To the north of the Humber York has a singular position; it is the only important Northumbrian urban centre mentioned in late Saxon historical sources, and seems to have achieved a sustained regional pre-eminence greater even than that of Winchester in Wessex. The historical sources present a relatively clear picture of the political events for which York was the epicentre and show that, with the exception of the period 927-39, the city was controlled by Scandinavian rulers from 866 until 954. Even after the expulsion of the last Viking king, it seems that there still remained a sizeable Scandinavian element in York's population whose political aspirations were carefully controlled by the English kings (Whitelock 1959, passim). In political terms at least, York epitomises the Scandinavian impact upon pre-conquest England, and offers a contrast with the situation in Wessex.

The archaeology of York in this Anglo-Scandinavian period has attracted considerable attention since the 19th century, when members of the Yorkshire Philosophical Society began to acquire for their museum

unstratified but recognizably pre-conquest items which were recovered by workmen employed in various road-works and building operations (Wellbeloved 1881, passim). Further similar opportunities arose in the early 20th century (Benson 1902; 1906), whereafter for a generation or more attention switched to sculptural (Collingwood 1909; 1927, passim), onomastic (Lindkvist 1927) and numismatic (Oman 1934) aspects. From 1949 onwards an unco-ordinated series of excavations, many focussed primarily on Roman targets, brought relevant material to light (Richardson 1959; Stead 1958b; 1968; Wenham 1962; 1968), and in 1959 a survey of these objects was published, providing a corpus of material and placing it within an international context (Waterman 1959). Aspects of this corpus were subsequently reviewed against a literary and historical background by Cramp (1967). Thereafter staff of the Royal Commission on Historical Monuments contributed to a definition of both the defended pre-conquest area and the extent of the commercial sector by reporting both watching briefs and excavations (Radley 1972a; 1972b); they also undertook the investigation of a recognizably pre-conquest church (Ramm 1976), and provided reviews of the Anglo-Scandinavian city (RCHMY 2, 7-9; 3, xl-xlii; 4, xxvi-xxxvi; Ramm 1972). Other reviews have included those by Hall (1976; 1978). All these general surveys have to varying extents been overtaken by the results of subsequent excavations, which have also prompted a re-assessment of the data and interpretations from previous excavations. It is therefore timely that a thorough re-appraisal of pre-conquest York be undertaken.

Equally in need of review is the question of pre-conquest urban development in the East Midlands. There has been an apparent reluctance to discuss this area, the heart of the Danelaw, and this is particularly surprising since there is contemporary historical evidence for the existence of a well-defined group of burhs here. This is the Five Boroughs, the modern towns of Derby, Leicester, Lincoln, Nottingham and Stamford, which all lie within the area settled by part of the Viking micel here in 877, and were regained for the English by Aethelflaeda's campaigns of 917 and 918. The Five Boroughs are collectively and individually referred to in the Anglo-Saxon Chronicle's entry for 942 which celebrates how King Edmund freed the Danes in the area from Norse tyranny, i.e. from the rule of York's Viking kings. The alliterative form of this entry makes it unlikely that it

was altered after the annals for this period were finalised c. 955 (Stenton 1971, 689). That this grouping was no mere whim of the poet who composed the passage is shown by its appearance in other, slightly later sources, of which the earliest is the third law code of Ethelred II issued at Wantage in the period 978-1008 (Whitelock (ed) 1955, 402. It appears again in the Anglo-Saxon Chronicle's entry for 1013, which was probably composed c. 1016-23 (Keynes 1978, 231); here, a distinction is drawn between the various regions of the Danelaw which include the Five Boroughs, Lindsey, Northumbria and other Danish settlers north of Watling Street (i.e. the south-east Danelaw and East Anglia). A phrase probably of related and inclusive meaning also occurs in the Chronicle's account of Ethelred II's reign, s.a. 1015, where the Seven Boroughs are uniquely mentioned in connection with the death of the two thegns Sigeferth and Morcar. Both Whitelock (1961 (ed), 94 note 1) and Stenton (1971, 388 note 2) believed that this group included the Five Boroughs, and suggested, with varying degrees of assurance, that the other two were Torksey and York. The issue is not clarified by the occurrence of the term Five Boroughs, also in connection with these two thegns, later in the same Chronicle entry, but the only likely alternative to the theory that the Seven Boroughs comprised the Five Boroughs and two others in the north-eastern Danelaw is that the Seven Boroughs was a name given to either a part or the whole of English Mercia (Fig. 1).

The pre-conquest development of some of the individual towns in the Five Boroughs group has occasionally been discussed (e.g. Hill 1948, 15-41) but despite an upsurge in excavation in each of them, most are without even a moderately up-to-date assessment of their pre-Norman origin and growth.

The desirability of a general survey of urban development in the Danelaw is made apparent by a gathering of the views and conclusions of commentators writing before the availability of new, archaeologically-generated data, and has also been implied in more recent discussion. The views of the earliest English urban historians, that the boroughs of Domesday Book were relics of a purely military system (Maitland 1896,13; 1897, 172-219), and that they were essentially military and administrative centres (Stephenson 1930, 177), were followed by Kendrick (1930, 236-41), who suggested that the Five Boroughs were specially fortified towns, established as Viking headquarters after the settlement of Mercia in 876, and that four southern

boroughs (Northampton, Cambridge, Bedford and Huntingdon) were similarly created for a defensive purpose after Guthrum's settlement in 879; he also suggested that Alfred's policy of burh-building was imitative of these Danish burghs. The use of the term 'Town' to translate the meaning of the Old English burh/burg was typical of his day, and would seem to imply that these settlements were more than military bases, but nevertheless it was their military aspect which continued to dominate discussion, although Stephenson (1933, 189, 193) retreated slightly from his earlier view to allow that a handful of the larger Danelaw towns, including York and Lincoln in the area under discussion, had such a large Scandinavian element in their population as to reflect the existence of Scandinavian trade.

While allowing that the siting of some burhs on good communication routes allowed trade to develop, Tait (1936, 25) stressed the military and administrative role of the Scandinavian burhs, 'the well-chosen centres which the Danes had fortified and made district capitals', and again the emphasis was purely military when Shetelig, in his Norwegian view of Viking settlement in England (1940, 84), stated that 'Mercia was allotted to other chieftains, as a confederation of five earls, each residing in his town, called "The Five Boroughs" '. There is no further mention of a role played as a group by these settlements in later pre-Norman England.

Leading figures among the next generation of English historians had nothing beyond historical precis to add on the subject of the Five Boroughs or, indeed, of York (Stenton 1971; Loyn 1962; 1977; Blair 1977; Sawyer 1971) and it is from this point that archaeologists have dominated the discussion of English urbanism in the pre-conquest period. Biddle and Hill's thesis about planned towns in Wessex included the comment that 'the urban development of eastern and northern England in late Saxon times seems to have followed different lines, conditioned by other factors, not least the Danish occupation, the lack of a centralized authority, and commercial contacts with the continent' (1971, 84). Yet the details of this Danelaw development remained enigmatic; Biddle (1976, 122-3) wrote

'Even less [than very little] is currently known of the fortified centres established by the Danes in the eastern midlands ..... in none of them can the character and topography of the ninth century Danish settlement be defined with any precision. In tracing the evolution of the pre-Conquest Town it clearly makes a great difference whether the Five Boroughs were urban foundations of the Danish period or whether their urban element was created by Edward the Elder in the early tenth century, in the aftermath of the construction of the Wessex burhs. Were the Danish fortifications fortresses or towns?'

This study will review the current state of knowledge of pre-conquest York, the Five Boroughs and will also discuss other sites in Northumbria and the north-east Midlands which have some claim to be considered urban before the Norman conquest. These two contiguous areas are those parts of the Danelaw characterized by a relatively dense distribution of place-names of Scandinavian form (Smith 1956, map) which, while open to various interpretations, suggest that urbanism in these areas developed against a broadly similar pattern of Scandinavian settlement, although York was under Scandinavian political control for a generation longer than the centres further south. Furthermore, in the degree of Scandinavian influence attested historically, onomastically and artistically, urban development in the study area may offer interesting comparisons and contrasts with the two other areas with lesser Scandinavian influence, the south-east Danelaw and East Anglia, and with English Mercia and Wessex.

Having outlined the geographical extent of this survey, and with its chronological limits explicit, there is a final requirement in this introduction, the need to define the classes of site which will be discussed. There has been considerable effort on the part of historians, economists, sociologists, geographers and archaeologists to define the characteristics which identify an urban community - the pattern of their thought has recently been summarized by Hodges (1982, 20-5). For some at least a definition is impossible - Clarke (1973, 11) describes the concept of urbanism as 'a metaphysical mirage'; others, such as Campbell (1979a, 43), have warned that modern

terminology may tend to inhibit and restrict an appreciation of what constituted an urban site in the minds of pre-conquest people. Biddle (1976, 100) urged a pragmatic approach to the study of pre-conquest towns. He adapted earlier discussion of criteria indicative of urban status to suggest that if a site fulfilled 'not less than three or four' of them, it merited serious consideration as a town, although he noted that the criteria 'are clearly of differing importance'. The criteria included:

defences; a planned street system; a market(s); a mint; legal autonomy; a role as a central place; a relatively large and dense population; a diversified economic base; plots and houses of 'urban' type; social differentiation; complex religious organisation; a judicial centre.

More recently, there have been indications that a consensus definition of urbanism may be forming, a simple definition which highlights the size and economic diversification of urban communities in comparison with the settlements of their hinterland, as well as the likely presence of institutions connected with, for example, marketing or administration. These are common elements in the definitions proposed recently by both a historian and an archaeologist (Reynolds 1977, ix-x; Hodges 1982, 23), and they are accepted as providing the basis for categorization here.

Pointers to the sites which deserve assessment against this definition come from two principal sources. Firstly, Domesday Book allows the listing of places which in 1086 could be considered as burhs, differentiated in some way from the countryside around; and secondly, the mint-signed pennies post-dating Edgar's reform of the currency provide another grouping of exceptional places which merit consideration. A few other sites of relevance have been detected on purely archaeological evidence, but in the main this study is launched from a historical base. The sources that may fuel its progress are discussed in the following chapter.

2. THE SOURCES

2.1. DOCUMENTARY SOURCES

In comparison with the Wessex area, contemporary written sources for urban origins and development in the north-east Danelaw and Northumbria are relatively few and uninformative. There is, for example, nothing like the foundation charter which survives for Worcester (Whitelock 1955, 498), no list of fortified centres comparable in detail to the Burghal Hidage's coverage of southern England in the late 9th or early 10th century (Hill 1969; Davis 1982, 809), no charters with incidental references to topography and development, such as survive for Winchester (Biddle & Hill 1971, 75-6), and no survey comparable to the Winton Domesday (Barlow et al 1976, passim). Only in Domesday Book itself is there an overview of burghal life, but the well-known limitations of Domesday - its inconsistent coverage and the problems of the terminology - apply as much to urban as to rural studies (Harvey 1979, 105-7). Domesday's value in the study of urban origins is in providing a list of places which in 1066 were differentiated, in the compilers' eyes, by more than just the existence in them of markets. This list, together with the group of places represented by mint-signed coins, forms the best indication of the sites which could be considered urban in the Anglo-Scandinavian period. Domesday Book also provides sporadic numerical information which allows a simple but incomplete ranking in terms of size to be drawn up, and it gives occasional insights into burghal organisation and economy. These passages are noted and commented on in the individual site surveys which follow.

Domesday Book refers to the very end of the period studied in this thesis; for earlier notices of sites which occur in either Domesday Book or in the group of minting places the most important single source is the Anglo-Saxon Chronicle. Other references include Bede's mention of York and Lincoln in connection with the mission of Paulinus in 627 and the following years (H.E. 2, 14; 16), and his reference to Stamford (H.E. 5, 19) in a passage relating to the reign of Aldfrith (685-705); there is the record of Leicester as a bishop's seat contained in the decrees of the council of Clofeshoh in 803 (B.C.S. 312) and Athelweard's retrospective note on

Northworthy/Derby in his Chronicle, s.a. 871. Asser's De rebus gestis regis Alfredi comments on the state of York's defences in the mid 9th-century and also mentions Nottingham; the Anonymous Life of St Oswald written c. 1000 contains a generalised description of York's appearance and commercial activities; and the Historia de Sancto Cuthberto, written at Durham c. 1050, also mentions York's mid 9th-century defences. This topic was also touched upon by the near-contemporary Latin verse panegyric on Athelstan, which is paraphrased and partially quoted in William of Malmesbury's early 12th-century De Gestis Regum Anglorum (Whitelock (ed) 1955, 121). These are only piecemeal references, however; it is the Anglo-Saxon Chronicle alone which provides a more comprehensive account of Viking encampments and bases, and which makes clear the Scandinavian interest in places which mint-signed coins or Domesday Book signal as exceptional and possibly urban.

Within the area under consideration the Viking micel here is recorded in the Anglo-Saxon Chronicle as being at York by 866, Nottingham in 867 and Torksey in 872; these are the only relevant sites referred to before the Scandinavian settlements of Northumbria and eastern Mercia in 876 and 877, and Alfred's treaty with Guthrum in 878. During the invasions of 885 and 892-96 it was the Wessex heartland that was principally at risk, and the Chronicle was not concerned with the development of settlement in the Danelaw area; it is only with the counter-offensive of Edward and Aethelflaeda in the second decade of the 10th century that the Danelaw bases of Viking armies feature in the chronicled events. In 913 Northampton and Leicester are mentioned for the first time in this context, in 914 Bedford, in 917 Derby, Huntingdon, Tempsford, Colchester and Cambridge, and in 918 Stamford, Nottingham and York. Thereafter it is the annal for 942 recording Edmund's recapture of Mercia which lists Leicester, Lincoln, Nottingham, Stamford and Derby as five boroughs over-run in the campaign.

The terminology employed by the Chronicle's compilers to describe fortified sites in the entries for the reigns of Alfred and Edward is of interest. When the place was already a centre of some importance, for example in reference to the Vikings' capture of York in 866, the site's proper name alone may be used. Such a name itself may contain elements which indicate its status and early history - the final element in Eoforwic ceastre points to

the Roman fortified origin of York, and the wic element suggests a commercial role in the pre-Viking era. On other occasions, a proper name is amplified by another noun in apposition; thus, when in 868 the micel here took Nottingham, the place is described as a geweorc, normally translated as 'a fortress'. The same term is also used of Chester, ceastre, in the annal for 894, showing that it could be applied to fortifications of Roman origin, but it was also employed for completely new defences, such as that at the Lympne estuary only half-built when captured by Vikings in 892. An alternative term for this site, employed in some versions of the Chronicle, was faestenne, and one or other of these two names is used of all the Viking fortifications (except those referred to simply by their proper name) which are mentioned in the account of Alfred's reign and the first decade and more of Edward's.

More variety is shown in the terminology of English fortifications in that period, for in addition to geweorc and faestenne there is, from 893 onwards, mention of burga, often translated 'boroughs'. From 910 onwards, as the Chronicle unfolds the progress of Edward and Aethelflaeda's reconquest of the Danelaw, burg is the normal term for the fortified bases which they established.

The occurrence of the same term, burg, in the so-called Burghal Hidage, where it is used of some sites which were of only temporary significance on a national scale and which had lapsed into obscurity by the later 10th and 11th centuries, shows that in the early decades of the 10th century the term did not necessarily denote a substantial settlement fulfilling the urban criteria adopted in this study. Furthermore, the use of burg in the Chronicle's descriptions of Scandinavian camps and nuclei during the period 910-20 shows ambiguity.

Bedford is the first Viking centre to be described as a burg, in the Chronicle entry for 915, and thereafter Derby is similarly described in the 917 entry. That latter entry also refers to a Viking army from Huntingdon abandoning the geweorc at Huntingdon and building another at Tempsford. This suggests that both Huntingdon and Tempsford were conceived as being of tactical rather than strategic importance, and yet later in the same annal the Viking camp at Tempsford is called a burg, which indicates that the terminology of the late 9th and early 10th century Anglo-Saxon Chronicle

does not allow any conclusions to be drawn about the physical properties of these settlements or of their purpose beyond their immediate role as fortified centres. It is therefore not possible to place much weight on the change by which the Nottingham Vikings' geweorc of 868 became known as a burg by 918, for in that case the terminological change might mirror an alteration in the status of the site during half a century of Scandinavian occupation.

2.2. COINAGE

York is the sole pre-Viking mint known in the Danelaw towns. Grierson (1962) allows the possibility that the York gold 'thrymsas' were minted in the city c. 670-80, but the main issues of Anglian York and Northumbria were the so-called sceatta and styca coinages (Lyon 1956). The Northumbrian sceatta coinage in silver appears to have commenced in the reign of Eadberht (737-58), and to have been discontinued c. 790, perhaps thirty years after their minting had ceased elsewhere in England; the production of copper-alloy stycas probably started c. 830 and finished c. 855. Neither series bears any mint signatures, but both are in the names of Northumbrian kings and Archbishops of York. It is the Archbishops' coins which form the clearest link with a putative minting place in York itself, but it may be that coins were produced outside York, perhaps on royal or archiepiscopal estates throughout Northumbria.

In the wake of the Viking take-over silver pennies of a standard acceptable throughout England were struck in York. There is no doubt about their attribution to York, for the mint name, in the form EBRAICE, appears on the earliest series, that of SIEFRED and CNUT, dated to just before AD. 900 (Dolley 1978, 26). This series is linked stylistically to the later St Peter issues (Stewart 1967a, 457), on which the mint signature becomes the unambiguous EBORACE CIV (Dolley 1978, 26). This latter series can in turn be linked with the coinage issued by Regnald I of York c. 920 which itself preceded the sword St Peter issues (Blunt and Stewart 1983, 151-4). Tangible evidence that the sword St Peters were associated with York has come with the discovery of a die for this series in excavations at 16-22 Coppergate, York, where a mint and/or die-cutting workshop has been found (Pirie 1985). Although it is now suggested that some coins bearing the names

of York kings were not struck in the city, for example the coins of Sihtric I (Stewart 1982a, 112-14), an apparently continuous pattern of minting in the city from c. 900 onwards can be detected (Dolley 1978, passim).

Lincoln too had its own output when in Viking hands. The earliest coins are presumably the small group imitating issues of Alfred (Dolley & Blunt 1961, 90), although their date of issue is not known; rather later are the rare 'St Martin' coins which, according to the most recent assessment, were most probably minted in the period from c. 925 (Stewart 1967b). More recently Stewart (1982a, 114) has suggested that coins of Sihtric I of York (921-27) were struck in Lincoln late in his reign.

Athelstan's law code issued at Grately (924-39) ordained in clauses 13.1 and 14 respectively that all buying of goods and all minting of coins were to be carried out exclusively in a burg. No Danelaw sites were mentioned in the list of named mints which had more than one moneyer - the list is confined to Wessex with the addition of London - but the erratic inclusion of mint signatures on coins during Athelstan's reign shows that production took place in at least some of the Danelaw burhs.

A series of Athelstan's coinage was probably issued at Lincoln (Blunt 1974, 88), and it is possible that a variety of Edmund's coinage was also struck there (North 1963, 97). Thereafter no coins can positively be ascribed to Lincoln until Edgar's Reform issue of c. 973, although the most recent survey suggests that coins were struck at or very near Lincoln more or less continuously (Blackburn et al 1983, 14). Derby, Leicester and Nottingham are all known to have issued coins under Athelstan. Derby was the pre-eminent mint with at least eight moneyers; Nottingham had at least three, and Leicester only one (Blunt 1974, 93-7). No coins are known from Stamford at this time, and after Athelstan, with the lapse of mint-signing, there is a hiatus in the evidence for minting in the Five Boroughs until the time of Edgar or, in the case of Nottingham, of Ethelred II.

By comparison, there is no evidence that any of the south-east Mercian town which had been occupied by Scandinavians issued coins before the second half of the 10th century, with the possible exception of Northampton which, it has been suggested, may have been the minting place for some of the St Edmund memorial issues in the first decade of the century (Archibald in Williams and Shaw 1981, 118).

The interpretation of these data has commonly followed the course outlined by Stenton who, reflecting on Athelstan's Grately decree, suggested that

> 'it would obviously be unwise to use the number of moneyers in a borough as a positive index to its size or urban population, but it must to some extent reflect the significance of the borough as a centre of exchange ..... the boroughs with six or more moneyers ..... probably approximate to a list of the market centres which were of most consequence' (Stenton 1971, 537-8).

This argument has been developed, for example, by Hill (1978) in relation to the reign of Ethelred II, but simultaneously it has been criticised by Metcalf (1978, 165) who contends that the argument is invalid because the assumption that minting activity broadly reflects economic activity is an incorrect one. Metcalf has indicated a variety of other, administrative, factors which may have affected the relative output of mints, and concludes that

> 'the role of the county towns as regional centres, both as markets and for administration, cannot be judged from the coinage' (ibid, 194).

He is, however, prepared to concede that there was a small group of

> 'larger than average towns, which have no obvious extra administrative function as regional centres of a higher order, and which may therefore have derived their prosperity largely from overseas trade' (ibid).

These places include York and Lincoln (ibid, 183). Hill had also singled out an upper tier of minting centres, including York, Lincoln and Stamford, which in his view were 'clearly trading with an area wider than simply the local catchment area' (1978, 217).

The chance survival of coins has probably left an insufficient sample for comparative numbers of moneyers or dies to be significant among the mints with moderate production, which form a second tier of importance; below these was a third group with minimal production. Evidence for previously unknown dies and moneyers is constantly coming to light, but for the later 10th and 11th centuries at least there is no prospect of this three-tiered ranking being disturbed, or of positions within the hierarchy being altered.

This study uses the mint-signed coins, and their placing within the three-tier hierarchy, as indicators of places which should be investigated - in this regard the coinage forms a useful complement to the terminology of Domesday Book. The varying dates at which different mints were instituted is also of interest, as a measure of the relative chronology of royal interest in each site, and other factors such as the establishment of die-cutting centres, the moneyers themselves, and the inspiration for particular coinages are also referred to where relevant.

2.3. TOWN PLANS AND TOPOGRAPHICAL ANALYSIS

A study of the morphology of the sites in question - their defended area, their street plan, the position of churches, the tenemental layout - is one of the basic approaches employed here. Their modern form is best seen on 25" Ordnance Survey maps, which are used as the basis for the town plans illustrated here, but the 19th-century 1st series Ordnance Survey maps are of equal importance in showing these places before the majority of sweeping modern changes took place. Other post-medieval and early modern alterations can be recognised with the aid of whatever 17th, 18th and early 19th century plans survive for each site. These plans must, however, be used with care for the detailed accuracy, particularly of the early maps, is variable, and the propensity of cartographers to base their work on that of their predecessors means that early inaccuracies may be repeated at a much later date, suggesting a spurious veracity (Carter 1976, 14).

Plan analysis must be related to topographical study, and in order to be of value must, of course, be linked to the topography of the area as it was

in the pre-conquest period. Carver's strictures on the dangers of facile acceptance of distribution maps of artefacts (1981, 74) are linked to the dangers of failing to understand the sometimes considerable alterations which urban occupation and its attendant problems of defence, disaster and land-hunger may have wrought on a settlement site. Thus it is imperative, wherever possible, to link plan and topographical analysis with as broad an understanding of overall urban stratigraphy as is possible.

2.4. PARISH BOUNDARIES

The use of parish boundaries as an aid to topographic analysis has been known in English urban studies since Cam 's pioneering work on Cambridge (1935). The theoretical basis for the study of these boundaries is that after legislation by Edmund (939-46) which made the payment of tithes obligatory, the parishes to which tithes were paid must soon have been defined, with their boundaries following property divisions which reflected units of landholding. From the pattern formed by these blocks it may be possible to infer inter-relationships and the sequence of their development; and from their relationship to, for example, the street pattern or a defensive circuit, it may be possible to suggest the relative ages of the boundary and these other features.

Rogers has discussed the subject in relation to two Danelaw towns, Nottingham and Stamford, and has pointed to the problems of such studies in the urban context. These include the problem of identification among what is frequently a multiplicity of medieval churches; the fact that urban parishes were particularly subject to migration and absorption; and the question of determining ancient parish boundaries, when often the earliest source is a 19th-century map (Rogers 1972, 49). To take an example of this latter problem, York first had its parishes marked accurately in 1846-51. Even at this date, however, it seemed possible to describe the boundaries of parishes long defunct and amalgamated in an ecclesiastical sense, since ostensibly identical units had been retained for civil rating purposes. This led one commentator to state that there is 'no reason to suppose that the boundaries ..... are not substantially those of the medieval parishes' (VCHY, 311).

This is a view which cannot be substantiated and there is therefore some doubt about the general value of detailed parish boundary studies in the urban context, although in some cases they can be of interest and value (e.g. at Gloucester - see Heighway 1980, 217-20).

The validity of the approach for the pre-Norman situation is further undermined by the general agreement that the developed parish system of the late middle ages, which supposedly is that recorded on modern maps, was formalised only in the 11th or 12th century. This is the case made by Brooke (1970, 68), Campbell (1979b, 126) and Rogers (1972, 49) who, nevertheless, argued that the parish boundaries might tell something of the situation in a town before the mid-12th century. Yet even Rogers readily admitted that such studies would always be inconclusive. More recently, work on documents of the period c. 1310-25 at Norwich has shown that even at this relatively late date there was a degree of fluidity or uncertainty over parish boundaries (Priestley (ed) 1983, 7). This emphasises the caution required when contemplating the use of these boundaries to reconstruct a townscape of the 9th-11th centuries. In this study boundaries are referred to wherever there is a possibility that they illuminate a specific point, but they are not discussed systematically since an exhaustive check on the pedigree of each is beyond the scope of this work.

2.5. STREET NAMES

Street names as indicators of early settlement areas must also be treated with care. Some scholars have been prepared to use names which include Old Norse derived elements such as the suffix - gate as guides to the Anglo-Scandinavian street-scape. Referring to York, Lindkvist, for example, considered it

> 'most likely that the vast majority of the street names that occur in medieval records down to the middle of the 14th century, existed already about 1100' (1927, 361).

Others such as Stephenson (1933, 90 note 2) have pointed to the weakness of this subjective assumption, and stressed that almost without exception the

street names of Danelaw towns occur first in post-conquest, often substantially post-conquest, sources. They cannot be used without corroboration as indicators either that a street existed in the pre-Norman period, or that a particular feature referred to in the name, such as a craft or industry, was practised thereabouts at that time.

2.6. ARCHAEOLOGICAL METHODOLOGY

Finally, the approach to plotting urban settlement and activity commonly employed by archaeologists, the distribution map, requires criticism. This method of recording the findspots of material of a given period has a considerable pedigree in this country, originating here with Cam's map of Cambridge (1935). More recently Biddle (1976, 102) has commented that

> 'The results can be used to discover the exact location, extent and setting of the earliest town as well as the course of its subsequent territorial development, the growth of suburbs and the incorporation of previously distinct settlements'.

Carter, with more caution, has pointed out that such distribution maps may commonly be faulted on three points - the biased collection of the evidence, their failure to show negative evidence, and the virtual impossibility of indicating in a significant way the quantity of finds from any site (1978a, 265; 1978b, 190-1).

More fundamental scepticism was voiced by an early practitioner of the method, Waterman, who in his primary survey of late Saxon York commented that

> 'the existing distribution of relevant finds may convey an entirely erroneous impression of the density of occupation, and a series of excavations over a wide area will be required to provide the necessary check' (Waterman 1959, 66).

His distrust of simple distribution maps has since been vindicated in York itself, where excavation has disproved one of the conclusions commonly drawn from the plot of casual discoveries (see Chapter 4.4.b.). The movement of soil and the artefacts it contains is now seen to have been a more frequent occurrence than has often been allowed, leaving areas virtually without evidence of an era in their occupation, and depositing this evidence elsewhere in a most misleading manner, while also affecting topography. The consequent dangers of accepting distribution maps of chance finds at face value have been well stressed in relation to Shrewsbury, Worcester and Durham by Carver (1981, 74). Beyond the problems mentioned so far is that of correctly identifying classes of object which may be confidently and exclusively assigned to a particular era. Thus, in this study, the concentration has been on the evidence from controlled excavations, infrequent as they may be, although unstratified material is referred to if it is thought helpful.

3. ANGLIAN YORK

3.1. PAGAN ANGLIAN

The framework for later developments provided by intra- and extra-mural Roman York is well known (RCHMY 1, figs. 3 and 37, passim) and does not require further comment here. It may be noted that the Anglian occupation of York in the post-Roman period was anticipated by the presence of an Alemannic king, Crocus, in the retinue of Constantius I at York c.306 (ibid, xxxiv); other, tangible evidence for continental Germanic contact at the end of the Roman period comes from the two barred combs of Frisian type found in York, which may be dated to the late 4th or 5th century (MacGregor 1975, 198).

The Anglian cremation cemeteries less than two kilometres south and north of York, at The Mount and Heworth, have been described by one authority as among the earliest Anglo-Saxon cemeteries in England, and dated to the 4th century in their inception (Myres 1977, 123); other opinion places them slightly later, for example dating the Heworth cemetery to the 5th - late 6th centuries (Eagles 1979, 107). These cemeteries may reflect the attraction of York in the 5th and 6th centuries, but some commentators have minimised this by suggesting that contemporary flooding in the Vale of York inundated extensive, low-lying areas of the old Roman town, and destroyed the Roman bridge, thus severing easy access between the two Roman defended areas (Radley and Simms 1971, 9: Ramm 1971, 181-3).

This argument is based firstly on observations relating to sea-level changes in the Humber estuary, and secondly upon supposed records of flood deposits in York. While there can be no doubt that changes in alluviation have taken place in parts of the Humber Basin (Samuels and Buckland, 1978, 73-4), the small group of mainly later 19th and early 20th century records that is adduced to bolster the claim for flood deposits in York will not stand up to critical scrutiny. The fluvial 'warp' deposit described by Benson (1902, 65) as forming a thick layer below 25-27 High Ousegate (1) is now recognised as an accumulation of waterlogged pre-conquest occupation deposits typical of this part of York, and has no connection with flooding. There are several possible alternative explanations, of which flooding is only one,

for the 'lacustrine marl' of variable thickness reported by Benson and Platnauer (1902, 71) on a low-lying site at Clifford's Tower (2), for the layer might equally well represent the margins of an earlier course of the Foss, or, indeed, a prehistoric flood plain.

The flood silts discovered by Richardson at Hungate (3), another riverside site (Richardson 1959, 56) do seem to represent encroachments by the river over an area of earlier Roman activity, but they can be dated only to a much wider period than proponents of the flood theory suggest and may represent only a strictly localised phenomenon. Although an uppermost level for flooding of 10.5m OD has been suggested on the basis of these unsatisfactory records, excavations well within this height at 16-22 Coppergate (4) beside the River Foss, and at 58-59 Skeldergate (5) and 5 Rougier Street (6) on the Ouse have failed to find evidence of the massive inundation which has been proposed, and there is no proof that floods disrupted 5th-6th century York and caused the abandonment of the Roman bridge.

3.2. CHRISTIAN ANGLIAN

3.2.a. The Roman Fortress Area

A little more is known of York after the conversion to Christianity of the Northumbrian king Edwin and his baptism in 627 in a church dedicated to St Peter (Bede, HE II, 14). There is general agreement that this was the forerunner of the present Minster, and that it was also the cathedral church of the bishopric created in 627 and then, from 735, of the archbishopric, although Palliser (1984, 104) has suggested that the cathedral was sited in the colonia area south of the Ouse. Edwin's baptistery has not been located during the excavations conducted by York Minster Archaeology Office in and around the extant medieval building (Phillips 1975, 24) although a 10th/11th-century cemetery which is to be associated with its subsequent development has been discovered underneath the south transept (Pattison 1973, 211 ff). This presumably indicates that the contemporary and earlier building cannot be far away, and the orientation of its graves, which respect the Roman layout rather than being aligned by compass East-West, suggests that the pre-conquest Minster similarly followed the Roman alignment. Eighteen fragments of sculpture dating from pre-900 were also recovered in the

Minster excavations (Morris, forthcoming), further suggesting the proximity of a pre-Viking church.

The choice of a site for the first, royal, church beside the Roman principia, which was to remain intact into the 9th century (Phillips 1975, 24) suggests that the Northumbrian kings had property rights over it, and indeed for a combination of reasons, both pragmatic and prestigious, it may well have formed part of a palace complex. It has been suggested by Biddle (1975c, 132-3) that a similar close combination of 7th/8th-century 'royal' church and palace is reflected in the relationship between the Old Minster and the later Saxon palace site at Winchester, although more recently Yorke (1980, passim) has questioned the extent of such early royal interest in the Old Minster. It is conceivable that the evidence for Anglian occupation discovered within and around the principia may represent activities connected either with the royal court or with the church itself, but judgement must be reserved until the final publication of Phillips's excavations.

Certainly it was the kings and archbishops whose names appeared on the 8th and 9th-century coinage which may have served as a medium for commercial exchange. As the Roman fortress area is tentatively linked with the site of an Anglian royal palace, and because of the legally attested desire of Anglo-Saxon kings generally to regulate trade to their own advantage, it may be suggested that foreign merchants, and particularly the Frisians referred to incidentally in Altfrid's Life of St Liudgar, conducted their business within the fortress or its immediate environs.

Evidence for an ecclesiastical presence in or near the western part of the fortress consists of fragments of cross-shafts, one bearing an inscription '..... ad memoriam sanctorum...', which have been found in and around St Leonard's Place (Collingwood 1909, 154-61). This inscription has been compared with formulae on shafts from northern monastic sites such as Hackness, Whitby and Ripon (Cramp 1967, 10). If these pieces were not originally associated with the baptistery/cathedral, then it is possible that they indicate the whereabouts of the monastery and school founded by Archbishop Egberht (732-66).

In addition to evidence for activity at the centre and west of the Roman fortress, there are also indications that at least one stretch of the north-

west fortress defences may have been refurbished in the Anglian period. The data to support this suggestion have come from adjacent excavations by Radley and Davison. 57m from the western corner tower (the Multangular Tower) Radley investigated a stone tower, apparently built to plug a breach in the fortress wall (Radley 1972b, Now known as the 'Anglian Tower' (7) it is a structure which cannot be dated precisely, but on architectural and relative stratigraphic grounds Radley suggested that it was erected in the post-Roman period, and that it was pre- rather than post-Viking (ibid, 54-5). He considered that the unreliability and insufficiency of the foundations and the thinness and poor finish of the walls indicate a post-Roman date, and drew parallels with Northumbrian church towers, especially the one surviving at Monkwearmouth, where the lower part is presumably late 7th or early 8th century in date.

Stylistic arguments such as these are best viewed with caution and Buckland (1984) has proposed a late Roman date for the tower, basing his argument largely upon an assessment of the stonework. The combined stratigraphic and artifactual evidence for the tower's date requires further discussion, but before turning to them Radley's claim (1972b,43) that the almost exact alignment of the front of the 'Anglian Tower' with the Roman fortress wall is proof that the tower preceded any post-Roman earth rampart should be noted. This claim cannot be upheld, since there is no evidence from either his own excavation or the later work by Davison that the outer face of the fortress wall was encased in a rampart until the time when grey clay (Radley's layer 4a) was deposited in an attempt to halt the collapse of the tower (Fig. 2).

The tower preceded what Radley termed the 'Danish' defences - these consisted of a low gritstone wall revetting a dark loam which contained late Roman pottery (Radley's layer 4b). All of this had been capped by a layer of grey clay (4a). On the basis of 'slight internal evidence', stratigraphic position, and comparative knowledge of the city's defences elsewhere, Radley claimed that together these layers represented a Danish re-fortification. The internal evidence is indeed slight - it consists of four classes of object including a bone gaming piece, an antler tine with vestigial working, eleven iron nails and a plain iron strap fastener, none of which is closely datable, and all of which could be residual. The stratigraphy implies a late- or

post-Roman date for the layers in question but no more. By comparative knowledge of the city's defences, Radley was presumably referring to the stone features recorded in a comparable (but undated) stratigraphic position by Miller, in 1927, in his trench across the north-west defences in Dean's Park (8) and in a trench across the north-east defences near the north corner tower (9) (Miller 1928, 84-6). Miller, however, wrote only an outline description of the post-Roman evidence he encountered which does not allow any precise chronological attribution for his various phases.

Of much greater relevance is an excavation adjacent to the 'Anglian Tower' undertaken in 1971 and as yet published only in summary form (10) (Webster & Cherry 1972, 156-7). Here Davison found the Roman wall rebuilt with limestone rubble and re-used gritstone blocks, associated with an earth bank piled over the Roman rampart to form a raised sentry path with a cobbled surface, revetted in its rear upper face with a drystone wall. The new bank contained three hand-made sherds which are probably of the Anglian period, as well as Roman material. This assemblage suggests that this phase of refortification dates to the post-Roman and pre-Viking period, or slightly later.

Subsequently, after further collapse of the defences, a second earth bank was raised, covering the sentry path. From this bank three more hand-made sherds and two wheel-made sherds were recovered, the latter indicating that the rebuilding took place after the re-introduction of wheel-made wares which probably occurred in the Anglo-Scandinavian period. The 'Anglian Tower' was certainly in use by this phase, but may have been associated with the first phase of repair.

The evidence from these two excavations is that there was a repair of the Roman defences in this area, which probably took place in the pre-Viking period. It involved the construction of an earth bank revetted at its front in stone, and with a cobbled sentry path behind, revetted at its rear. The 'Anglian Tower' may be associated with this phase, although this is not certain; the tower cannot be dated to a particular century with any confidence.

The discovery of this first phase of post-Roman earth bank all along the 30m of fortification investigated by Davison is important in suggesting a large-scale and perhaps uniform rebuilding within that period, and not

merely sporadic, small-scale repair work. Such an initiative can have come from one of only two sources, the king or the church. The evidence for royal interest in St Peters and its implications have been assessed already, and the possibility that Egberht's monastery stood hereabouts has also been referred to, but there are also grounds to suggest that from the late 7th century the community of St Cuthbert may have owned a block of land bounded by the stretch of refurbished wall. If the 11th-century Symeon of Durham's Historia de Sancto Cuthberto 2, 5 is to be believed, King Ecgfrid and Archbishop Theodore granted to St Cuthbert in 685 land

> a muro ecclesiae Sancti Petri, usque ad magnam portam versus occidentem, et a muro ecclesiae sancti Petri, usque ad murum civitatem versus austrum (Rolls Series 75, 1, 199).

This has generally been equated with the south-west quadrant of the fortress (RCHMY4, xxviii), although Palliser (1984, 104) has proposed that a location in the colonia is possible. This latter idea seems unconvincing, and the traditional interpretation is accepted here. Thus, either a royal or an ecclesiastical hand may have been behind the Anglian refortification.

A stone-built defence of the pre-Viking period is so unusual in Anglo-Saxon England as to raise hopes of there being considerable evidence for the nature of occupation and activity within it, but just as in late 9th/early 10th-century Winchester there is evidence for refurbishment of defences but little sign of activity within, so in York two hundred years earlier the fortress area shares the paucity of archaeological evidence for the Anglian period which characterises the remainder of the city. Taking Cramp's (1967, pl. IV) finds distribution map as a basis, only a few additional discoveries have been made since, despite over a decade of vigilant observation by York Archaeological Trust. Three small sherds of pottery from the site of interval tower SW5 on the Roman defences (11) which may perhaps be assigned to the period (Holdsworth 1978, 3-4), a fragment of decorated metalwork and a 9th century coin associated with a group of post-holes at 9 Blake Street (12) (Tweddle 1984a), and one wall of what is interpreted as a dry-stone building at Bedern (13) (Addyman 1975a, 34) represent the sum total of new finds.

It is obvious, moreover, that there was a time when parts of the Roman fortress layout were totally abandoned and a new morphology could crystallize. This is demonstrated most clearly by the direct path which Goodramgate takes from the site of the porta principalis sinistra towards that of the porta decumana, cutting diagonally across insulae (Ramm 1968, 134); its deflection to Monk Bar reflects the abandonment of the porta decumana entrance in the 14th century. The course of Blake Street, which runs from close to the porta praetoria towards the porta principalis dextra, also reflects the abandonment of the Roman grid, this time in the praetentura. The circumstances which permitted a new plan to emerge are most likely to have arisen during the Anglian period, after a period when Roman land units were no longer of significance, but before intensive occupation resumed, probably in the Anglo-Scandinavian period. The paucity of Anglian finds is disappointing, but recent excavations within the fortress have indicated why evidence of Anglian York is so elusive here, for it is now clear that in widely separated areas of the fortress little or no stratigraphy belonging to the post-Roman - Norman period survives. This may in part reflect the rate of accumulation of post-Roman stratigraphy, but medieval activity is also an important factor. The evidence for this activity is discussed below (Chapter 4. 4. b), but its result is that the apparently almost complete Anglian lacuna in the fortress's occupation sequence may well be a fallacy instituted and perpetuated to the present by inadequate stratigraphic records and few recent opportunities to excavate.

3.2.b. The Fortress Environs

Certainly, there was Anglian activity to the east of the fortress on the neck of land between the Rivers Foss and Ouse, and Anglian artefacts have been found by chance on several occasions. They include two bronze bowls of 6th/7th-century type found in Castle Yard and Clifford Street, a contemporary girdle-hanger from Clifford Street and a mid 9th-century lead weight, dated by an impression of a coin of Osberht (849-66), also found there (Waterman 1959, 61). A handful of 8th/9th-century stycas and a glass and silver mounting were all that was found of this period in five years' excavation at 16-22 Coppergate (4); all seem to have been in residual contexts. The only evidence for activity or occupation on the site between c. 400 and

c. 850 was a bole-lined well in one corner of the excavation, and it was just a few metres beyond there that a mid 8th-century helmet with associated spear and churn-dash were retrieved during construction work (Tweddle 1984b). All lay at the base of a 1.2m square wood-lined shaft, cut into the natural soil; the upper parts of the feature and all contemporary surrounding stratigraphy had been destroyed and the find was thus isolated. The surviving basal fills indicate that the shaft was not a cess-pit, and its small size rules out interpretation as an inhumation chamber, but otherwise the shaft's function is unknown. The magnificence of the helmet, coupled with the slightly earlier bowls from nearby Castle Yard and Clifford Street, perhaps suggests that the area around the present St Mary's Church in Castlegate may have been a focus for aristocratic Anglian activity, but this can only be speculation.

3.2.c. East of the Foss

This survey of Anglian York north of the Ouse is completed by consideration of the area east of the Foss. Here by c. 1155 at the latest a loop of the river was enclosed by a rampart (RCHMY 2, 10). No evidence for Anglian activity has been found here with the possible exception of a small area of broken limestone, opus signinum fragments and abraded Roman pottery sandwiched between natural soil and 9th/10th-century levels at 118-126 Walmgate (14) (Addyman 1979, 33). Immediately outside the later defences, at Paragon Street (15), 8th and 9th-century coins and contemporary metalwork, including a cross-brooch, were found in association with a pit, virtually all contemporary levels having been destroyed by modern intrusions (Addyman 1976b, 12). Approximately 2km further beyond the defences to the east, excavation adjacent to Lamel Hill has revealed part of an inhumation cemetery, including execution victims, provisionally dated to the 7th and 8th centuries (Addyman 1983, 40-41). It is not clear, however, whether the cemetery was related to York or to another, smaller focus of occupation nearby.

3.2.d. South of the Ouse

With the abandonment of the Roman bridge at an unknown date, the Ouse may have acted as a barrier to co-ordinated development. As Palliser has pointed out (Hutchinson and Palliser 1980, 15) the street names

Micklegate ('Great Street'), Littlegate and particularly North Street, all on the south side of the Ouse, suggest that this area was at one time thought of as a distinct, self-contained entity. Unfortunately, none of these names are recorded in the pre-Norman period (Palliser 1978, passim), and their date of origin is a matter for speculation. It has been suggested, however, that these and adjacent streets formed part of a simple gridded pattern laid down in the 9th century but perhaps incorporating earlier, pre-Viking elements (Palliser 1984, 103, 105). Archaeological evidence is too sparse to help in this discussion.

To the few dots on Cramp's distribution map (1967, pl. IV) there can now be added from controlled excavations only a handful of 8th/9th-century finds from excavations in 1981 at 5 Rougier Street (6), adjacent to the Roman bridge-head (Addyman 1981, 45), what are most probably 9th-century finds, including Tating ware sherds, at 58-59 Skeldergate (5), further east along the Ouse frontage (Addyman 1976b, 14), and three hand-made sherds from 37 Bishophill Senior (16) (ibid, 12).

A word of caution may be entered here concerning the attribution to the later Anglian or Viking period of the 'fish-processing building' discovered by Wenham immediately to the north of the church of St Mary Bishophill Junior (17) in 1961 (Wilson & Hurst 1963, 312). A detailed examination of the excavation records reveals that there is no reliable evidence for the absolute date of the sequence of stratification which includes the remains of 1000-2000 herrings or sprats, apart from a terminus ante quem provided by a later burial containing a coin struck c. 905-15. This burial is separated stratigraphically from the fish debris by at the least a layer of building debris, presumably representing the partial destruction of the Roman building within which the fish were found. There is a possibility that the grave may have been dug from a higher level, after a further layer of soil had accumulated over the building debris, but this is only a speculative suggestion which, in the absence of a full record of the stratification, cannot be substantiated.

The fish remains sealed a series of post and stake holes which form no recognisable pattern, and which were themselves cut into the seating for an opus signinum floor whose surface had been worn or cut away. The holes might be interpreted as the remains of racks or shelf-supports for the sun-drying of the fish (Cramp 1967, 18) but alternatively they may have no direct

connection whatsoever with the fish, which lie above them. While it is possible to interpret the entire sequence of stake holes - fish remains - building debris - burial as representing a compressed chronology, which might place the deposition of the fish remains in the Anglian period or as late as c. AD 900, it is equally possible that the sequence might represent a much longer time-span, with the fish remains deposited in the late Roman or immediately post-Roman period.

St Mary Bishophill Junior is the only site south of the Ouse to have produced pre-Viking sculpture, which includes an inscribed stone (Okasha 1971, 132, no. 148) of 8th/9th-century date. Morris (forthcoming) suggests that in addition to confirming a pre-Viking date for St Mary's itself, the formula on this stone reflects the nearby presence of the historically attested 8th century monasterium, with a church dedicated to Alma Sophia; he further links that dedication to Christ Church, later to become Holy Trinity Priory, which is mentioned in Domesday Book (18). This speculation therefore suggests that perhaps a substantial block in the east part of the colonia was occupied by a major ecclesiastical foundation from the 8th century.

3.3. CONCLUSION

In sum, the evidence from the Anglian period in York, although greater than that surviving from any other Danelaw town, emphasises how little rather than how much is known of pre-Viking occupation and activity. Just as it is the principal institutions, both regal and ecclesiastical, which are referred to in the historical sources, so also the majority of the archaeological material is linked to the various churches and, perhaps, to the kings and their works. International commercial contact is suggested only by the Tating ware from Skeldergate and by a mid 9th-century coin hoard from an unidentified location in Coney Street, containing Carolingian coins struck at Dorestad (Dolley 1966b, passim), and there is as yet no evidence for large-scale crafts or industries in Anglian York.

It is impossible to judge the settlement pattern, if any, in York in the 5th-7th centuries, and even in the 8th-9th centuries there is little that can be said. For reasons explained above (3.2.a) there are a very few artefacts distributed throughout the fortress, parts of which may have been

royal or ecclesiastical enclaves. There is rather more evidence for activity concentrated on the spur of land between the Foss and Ouse; some evidence for possible activity east of the Foss, including at Paragon Street a site outside the later medieval walls; and from south of the Ouse in the Roman colonia there are scattered finds from near both extremities of the river frontage as well as further above the river at St Mary Bishophill Junior. At present it cannot be determined whether there was an even spread of settlement throughout the decaying Roman city or a series of disparate foci of settlement within and around it, perhaps largely dependent on cultivation. It is clear that in some places, such as 16-22 Coppergate, there was a hiatus in occupation at this time.

Within and around the Roman fortress a permanent population of a few hundred would have been sufficient to fulfil the various roles which are historically attested, and at present, although the historical sources testify to royalty, the church, and international trade, the scale of Anglian York seems to have been minimal in comparison with its Roman predecessor and Viking Age successor.

4. ANGLO-SCANDINAVIAN YORK

Henceforth, the adjectives Anglo-Scandinavian or Viking-age are used interchangeably to refer to York in the period 866-1067; the noun Jorvik, an anglicized version of the Old Scandinavian Jórvík recorded c. 1040 in Knútsdrápa (Smith 1937, 277), also refers to the city at that time.

4.1. INTRA-MURAL EXTENT AND THE DEFENCES

4.1.a. Introduction

The historical sources for Jorvik provide a starting-point for a discussion of the settlement's limits. Alfred's biographer, Asser, writing c. 893 of the Northumbrian counter-attack of 866 on the Viking invaders who had earlier captured York, relates that:

> Christiani..... etiam intra urbis moenia eos persequi, et murum frangere instituunt quod et fecerent; non enim tunc illa civitas firmos et stabilitos muros illis temporibus habebat

[the Northumbrians pursued their enemies inside the city defences, and began to break down the wall: for in those days that city did not possess strong and well-built walls] (Asser, De Rebus Gestis Regis Alfredi 27).

Referring to the decision of part of the Viking army to settle permanently in Yorkshire in 876, the anonymous author of Historia Translationum Sancti Cuthberti wrote at some date after 1122 (Battiscombe (ed.) 1956, 3)

> Nam Eboracae civitatis moenia una ex his restauravit, regionemque in circuitu incolens, ibidem pausavit

[for one of these (sections of the army) restored the defences of York, and settling in the area, stayed there] (Surtees Soc. LI (1867), 158). In this he was clearly following the anonymous Historia de Sancto Cuthberto a Durham production of c. 1050 (Whitelock (ed.) 1955, 119) which recorded

una Eboracam civitatem re-aedificavit, terram in circuitu coluit, et ibi remansit

[one rebuilt the city of York, cultivated the land around, and remained there] (Surtees Soc. LI (1867), 144).

The early 12th-century writer, William of Malmesbury, describing Athelstan's recapture of the city for the English in 927, says

Ethelstanus interea castrum, quod olim Dani in Eboraco defirmaverunt, ad solum diruit, ne esset quo se tutari perfidia posset: praeda quae in castro reperta fuerat, et ea quidem amplissima, magnifice et viritim divisa .

[Meanwhile Athelstan razed to the ground the fortress which the Danes had formerly fortified in York, so that it should not be a place where treachery could shelter: the large amount of booty which had been found in the fortress was generously divided up amongst everyone] (De Gestis Regum Anglorum, c 134).

No more is heard of the city's defences throughout the political upheavals of the second quarter of the 10th century, and the next mention of fortification is in the Anonymous Life of St Oswald written c. 1000, where York is described

quae quondam erat nobiliter aedificata et firmiter muris constructa; quae nunc est dismissa vetustati .

[Once nobly built and strongly walled but now decayed through age] (Rolls Series 71, 1(1879) 454).

Finally Domesday Book records that

Hamelin ht. 1 mans in fossato urb.

[Hamelin has one dwelling in the city ditch], but it is not clear if the ditch referred to is of pre- or post-Norman date, and there is no indication of

which particular part of the city is concerned.

Ostensibly these references provide a coherent picture of a city which was in poor defensive repair in 866, which was restored by the Vikings and then destroyed by Athelstan, and which by the 11th century was again in disrepair. But there must be some doubt about the reliability of Asser, the anonymous historians of St Cuthbert, and William of Malmesbury at least, since all in varying degrees were separated by time or space from what they describe. How much Asser, in the south of England, knew about the state of York twenty-five years earlier, to what extent the Cuthbert community was glossing the bare historical framework of the Viking army's actions in 876, or indeed what, if any, reliable sources William of Malmesbury was drawing upon, are all unanswerable questions. It is equally uncertain whether the anonymous monk of Ramsey who wrote St Oswald's biography was referring to the Roman defences of the city or to more recent works in his description of the walls' decay. In sum, these various historical sources are of dubious value, and should be treated with caution; the archaeologist rather than the historian holds the key to an understanding of Jorvik's defences. Before undertaking a critical review of the archaeological evidence, the conclusions of the last generation of scholars will be outlined.

The first carefully documented attempt to reconstruct the extent of Anglo-Scandinavian York was written by Waterman in the year 1947-48, and updated for publication a decade later. He did not recognise any archaeological evidence for a Viking-age town boundary and commented on the ambiguous nature of the documentary evidence (Waterman 1959, 67). Shortly after his article appeared, Richardson's and Anstee's discoveries of 1950-51 in Hungate (3), near the River Foss, were published (Richardson 1959, 61), and these introduced the results of excavation into the discussion for the first time. The discovery in question was a soil feature, consolidated with stakes and brushwood, which formed what Richardson described as 'The Anglo-Danish Embankment', fronting on to the River Foss. Richardson related her embankment in both spatial and chronological terms to a 'wickerwork stockade' which had been recorded by the local architect and antiquary George Benson in 1902-3, during building works in Ousegate/Coppergate (1). Cellars were dug there to a depth of 3.2m below the current ground level, and apart from what were perhaps vestigial traces of a Roman stone building, the earliest

feature which Benson noted was an alignment of birch posts interwoven with hazel twigs. This was seen only at the Coppergate end of the site, where a 9.75m length was exposed. It comprised two rows of posts, .15m apart, one row upright and the other sloping towards it from the east. In both rows the posts were spaced about .1m apart, and averaged 75mm in diameter. Benson described the feature as a stockade, perhaps implying that it had a primarily defensive purpose, although this was not explicitly stated and, indeed, the feature is labelled 'wickerwork hedge' on his plan (Benson 1902, passim).

The precise nature of the supposed relationship between the Coppergate and Hungate features was not spelled out by Richardson, and perhaps it was this very vagueness which reduced some later commentators into accepting the Coppergate-Hungate connection without questioning the considerable differences between the archaeological remains on the two sites.

One of the most influential views of the defences of Anglo-Scandinavian York has been that of Radley (1972a). He drew attention for the first time to the post-Roman but pre-Norman stratigraphy recorded by Miller in sections cut through the upstanding north-west and north-east defences of the fortress in the 1920s (8, 9), and went on to suggest that 'the Danish bank extended from the River Foss to the River Ouse, encompassing the Roman fortress and the area between it and the rivers'. He further dismissed suggestions by Ramm that the south-west defences of the fortress were refortified at this date, countering that three excavations down the outer face of the wall there had failed to locate any bank, and described Richardson's Hungate embankment as a likely anchorage for Danish commercial shipping. The boundaries of the city to the north of the Ouse were summarised as a 'defensive rampart and open river fronts', and the city south of the Ouse described as 'almost certainly defended in Danish times (ibid, 39). No mention was made of Benson's 'stockade'. However, the accompanying sketch-plan of Anglo-Danish York shows, to the north of the Ouse, the south-west, north-west and north-east walls of the Roman fortress defining the defended area in those directions, and a 'Danish enclave' extending from the south and east corners of the fortress across its south-east wall to the River Foss, with its limits curving in such a way as to take account of both Richardson's embankment and Benson's 'stockade'. The reason for this

contradiction between text and illustration may be that the paper was prepared for the press after Radley's death; the plan seems to mirror a different viewpoint from that which Radley's text proposes.

Two other contributions to the understanding of the city's pre-Norman defences were published in 1972. RCHMY 2 essentially proposed the viewpoint illustrated in Radley (1972a) with three sides of the fortress refortified, and indeed illustrated a defensive circuit north of the Ouse c. 950 identical to Radley's plan except that the greater part of the fortress's south-west defences and the line of Benson's stockade are drawn in a dashed line, probably to take account of the statement in the text that the 'stockade' had been abandoned by the 10th century, when tan-pits (also recorded by Benson in 1902-3) had been constructed over its line. An extension of the north-eastern Roman defences to the Hungate embankment was, however, demarcated as certain, on the basis that this line is perpetuated (a) in stone by the medieval extension to the fortress as far as Tower 32 (New Tower) marking the re-entrant angle in the walls opposite Jewbury, and (b) from Tower 32 via parish and property boundaries to the embankment (RCHMY 2, 8 and 58).

RCHMY 2 also reintroduced a further element into the discussion. This is the probable site of the defended Anglo-Scandinavian earl's palace in Earlsborough, an area immediately beyond the fortress to the west, adjacent to the present Marygate and its church of St Olave (Olaf) which Earl Siward (1035-55) had founded and in which he was buried (Anglo-Saxon Chronicle s.a. 1055). Lindkvist (1927, 354) had noted the 18th-century York historian Drake's record that this area had formerly been known as Earlsburgh, and suggested that the name embodied an ancient local tradition concerning the proximity of the earl's palace to the earl's church. This suggestion has been followed by most subsequent commentators.

In the third of the studies published that year, Ramm (1972, 248ff) echoed the views of RCHMY 2 with occasional additions, suggesting that the extension of the fortress on the south-east formed a separate 'Danish enclave' corresponding to the castrum which William of Malmesbury reports that Athelstan razed. Ramm equated this destruction by Athelstan with the disappearance of Benson's 'stockade' at 5-7 Coppergate, its early obliteration emphasised by the absence of relict features such as parish or property

boundaries along its line. Broadly the same conclusions were also presented in RCHMY 4 (1975), which had gone to press too early to take account of the two contiguous excavations at the western end of the north-west defences, undertaken in 1969-70 by Radley and in 1971 by Davison (7, 10). Both uncovered successive refurbishments of the Roman fortress, extending from the Anglian period to the 13th century. Radley's posthumous excavation report included an attempt to correlate his discoveries with those made by Miller in 1925-7 (1972b, 57-59); Davison's interim report on his discoveries (Webster & Cherry 1972, 165-67) noted clearer dating and stratigraphical evidence for the pre-conquest sequence at this point on the circuit.

These summaries share a belief that the north-west and north-east sides of the Roman fortress continued to define the boundaries of the Anglo-Scandinavian town, and also concur in noting the loss of the south-eastern fortress wall as part of the enceinte. In other details and even in major points of interpretation, however, there is much disagreement, and a thorough review of the primary evidence therefore follows in an attempt to establish a more soundly based understanding of the problem.

4.1.b. The North Sides of the Roman Fortress

It is the excavations by Radley and Davison which give the clearest indications of possible Viking-age modifications here (7, 10). Davison's sequence of refurbishments extended beyond the Anglian period stone walling (Chapter 3:2) to include a second earth bank, covering the Anglian sentry path, in which he found three hand-made sherds and two hard, wheel-made sherds of unspecified type, but apparently late Saxon in date. Slots at 1m intervals, running across the rampart's main axis, presumably held the lower components in a timber stockade. Above this feature a grey clay deposit occurred in a strictly localised area around the 'Anglian Tower', and appeared to represent an attempt to stablize its masonry following some disintegration of the fabric. This clay is probably identical with that found by Radley at the Tower (his layer 4a), which he thought was part of a Danish defensive work (Fig. 2).

Above the clay Davison distinguished a layer of soil piled against the outer face of the fortress wall to form a rampart with a timber breastwork - one sherd of York ware was associated with a palisade slot at this phase. Above were four further refurbishments, dated to between the Norman

conquest and the mid-13th century when the stone defences were initiated. These four refurbishments may equate with the layers 5a-c and 6a-b recorded by Radley above this grey clay.

Davison's results (Webster and Cherry 1972, 165-67), and the less detailed comparanda of Radley, provide the clearest archaeological statement yet available of the nature of York's Viking-age defences. Davison's work also emphasised the fact that the Roman fortress wall could itself survive, encapsulated within later accretions, to almost the level of the wall-walk in places, and elsewhere to the top of the earth rampart behind - heights of approximately 5.20m and 3.35m respectively. This survival to a high level is mirrored in the majority of other sections cut through the north-west and north-east fortress walls, where in seven of eleven places the wall rises to rampart level or above (RCHMY 1, 28ff). At the 'Anglian Tower' 2.70m remained, and at only two places was there 1.4 m or less remaining.

Part at least of the reason for these variations in the level of survival seems to be the original standard of the Roman construction, which was apparently not constant. Radley noted this variability on either side of the 'Anglian Tower', where to the north-east the ashlar facing stones were firmly mortared and stood approximately 4m tall, while to the south-west the ashlar was poor and had fallen away from the wall core, leaving one fragment standing 3.20 m and the remainder being considerably lower. There was some indication in the uncompleted excavation of 1970 that the dilapidation of the wall was due to natural causes rather than the result of deliberate stone-robbing, for a pile of ashlar was found lying at the wall's base (Radley 1972b, 40;59).

Of the two locations where the Roman wall is poorly preserved, it should be noted that the point on the north-east circuit where Miller (1928, 84) found only the bottom two courses surviving is immediately east of the site of the Roman porta decumana. Ramm (1968, 134-5) has demonstrated the likelihood of the Roman gateway, or the immediately adjacent area to the east where Miller excavated, remaining in use as the entrance to the city from the north until the 13th century when the present Monk Bar was initiated. If, as Ramm suggests, the original Roman gateway was blocked by collapse and the entrance had to be moved slightly to an adjacent breach, this would explain the minimal presence of Roman walling in Miller's section, and would

leave only the section immediately adjacent to the porta principalis dextra on its south-west side as a sector where the wall is poorly preserved. Here too it is possible to speculate that it was the need to maintain an entrance at this point in the post-Roman period which led to the wall's diminution, although against this it might be argued that the later Norman entrance of Bootham Bar is aligned approximately on the Roman passageway rather than on a diversion to the south. Nonetheless, the immediate proximity of the two Roman gateways to the only two sites in the fortress's northern defences where severe degradation of the Roman wall has been found is perhaps more than a mere coincidence, and may suggest that normally the wall was a formidable nucleus for later accretions. In its southern parts, however, the Roman wall does not survive above ground except adjacent to the west corner tower. An assessment of its fate in the pre-Norman period is therefore crucial to understanding the evolution of the city's boundaries.

4.1.c. The South-West Side of the Roman Fortress

The evidence for the development of York's defences along the north bank of the River Ouse in the pre-Norman period has never been analysed or discussed, despite the importance of the Ouse frontage in both commercial and military terms. The principal questions concern the possibility that the Roman fortress's south-western facade remained defensible, or the alternatives that either there was no attempt to defend the river frontage, or there was a modification to the Roman layout. Although the absence of concrete evidence might suggest that there were no pre-conquest defences here, this is unlikely in view of the political importance and commercial value of the city. Moreover, the evidence now coming from other contemporary settlements of similar importance on both sides of the North Sea, where waterside defences are now known at, for example, London (Hobley & Schofield 1977, 37) and Haithabu (Schietzel 1981, 94 note 21) emphasises that such places were sometimes fortified, and suggests that a similar care might have been taken at York.

The south-west wall of the fortress, facing the River Ouse, does not survive above ground except at its western end where, after the Norman conquest, it formed part of the medieval defences. Elsewhere along its line, however, modern features reflect the Roman layout. The course of a Roman

extra-mural road is approximated to by Coney Street and Lendal, and the principal modern north-south street across the defences is on the line of the porta praetoria and via praetoria at St Helen's Square.

Of the only two other streets which now cross the defensive line, New Street was a creation of 1746 (Hutchinson and Palliser 1980, 181); Museum Street was a Victorian response to the arrival of the railways in York and the need for improved access from the station, although it perpetuates the lines of the much narrower Finkle Street, first recorded in the 14th century, and Footless Lane, first recorded 1218 x 1220 (Palliser 1978, 9). These medieval streets ran down to the River Ouse at St Leonard's Landing, immediately inside the short length of medieval city wall which now runs from the Landing only as far as the entrance to Museum Gardens, but which originally extended a further 30m northwards to St Leonard's Hospital where it joined the Roman fortress wall.

As well as the street plan, parish boundaries also suggest that the Roman defensive line exerted some influence, albeit not a total one, on the layout of the parcels of land which made up ecclesiastical parishes; since the parishes are probably creations of the Norman period, this suggests that the wall-line remained visible at that time. The correspondence between the wall-line and parish boundary is most clearly seen along the divide between St Helen's Stonegate and St Martin Coney Street. Nearer the western end of the wall, however, at the point where even today its foundations are only just below the surface, and where it is most likely to have been most visible in the post-Roman period, the parish of St Wilfrid ignores the Roman line, running from well inside the fortress down to the banks of the Ouse.

To gain a clearer picture of the stages by which the south-west Roman defences lost their importance, it is necessary to review each of the excavations and observations carried out along its length. From St Leonard's Hospital to the west corner of the fortress at the Multangular Tower, the Roman fortress wall survives to heights of 4.90m and, with patchings, acted as the medieval city wall. The earthen rampart does not exist here, thanks to the historically attested removal of 1316 (RCHMY 2, 110), and so it cannot be proved whether or not there may have been pre-conquest additions to the Roman nucleus. It is equally impossible to verify the report (ibid) that excavations by Willmot in 1957-64 at Roman interval tower SW6,

abutting this section of wall, yielded traces of a post-Roman ditch outside the tower, since at present Willmot's notes cannot be located. There is only one other report of a possible pre-conquest ditch on the defensive circuit, and it is equally enigmatic. Immediately before Radley's death at the 'Anglian Tower' excavation on the north-west defences he discovered a ditch 2.85m below the present ground surface and 1.35m below the presumed Roman ground surface. Its position did not seem to correspond to any known ditch, but it is not clear whether it was pre-conquest or later medieval in date (Radley 1972b, 59).

From Tower SW6 eastwards to the south angle tower no trace of the Roman fortress wall survives above modern ground level, and the defences are known only from excavations. A section across the defensive ditches outside interval tower SW5 (11) (Sumpter and Coll 1977, 62ff) demonstrated that after the latest Roman ditch had completely silted, a deposit of soil and rubble had sealed the whole area, levelling it and concealing all traces of the ditches. Subsequently a series of trenches was dug from either just below or through the top of the levelling layer running parallel to the north-east side of the Roman ditch. One trench contained a sherd identified as St Neots type ware, a late 9th/late 11th-century pottery, and these features have been tentatively interpreted as seatings for palisades, representing a strengthening of surviving Roman defences in the Anglo-Scandinavian or Anglo-Norman period (Addyman 1975b, 207).

There is, however, no confirmatory evidence that either the adjacent interval tower SW5 or the adjacent fortress wall itself, some 6.5m north of the trenches, was still standing above its lowest few courses at this time. Excavation in 1974-5 showed that the 19th-century cellars of the Museum Chambers building had removed all but a trace of immediately post-Roman stratigraphy here, with only a single grass-tempered sherd of perhaps 4th/6th-century date and a lone mid-Saxon type rim found in a modern trench to suggest that sporadic activity may have continued in the area of the tower at that time (Sumpter and Coll 1977, 79; Holdsworth 1978, 18). Neither the stratigraphic evidence nor the single sherd of pottery inspire confidence in the dating of this supposed palisade and on the available evidence there is little reason to consider these features as part of the Anglo-Scandinavian defences; if they are of Anglo-Scandinavian date, they are more likely to

represent property divisions than defences.

Immediately east of the site of the porta praetoria at 2 St Helen's Square (19), the wall was exposed during building work in 1929, and found to stand to a height of approximately 1.50m (J. Roman Stud. 19, 1929, 186). An immediately adjacent stretch of wall on the same property was found standing 2.1m high during building works in 1965; it was truncated at this level by modern disturbance (Radley 1966). Only the front of the wall was exposed then, but work in 1969 allowed the examination of the rampart (Radley 1970, 401-2), which was cut into by a pit and an earlier post-hole, undated in absolute terms. [This post-hole is probably the evidence upon which Radley based a (conjectural) reconstruction of post-Roman defences in Coney Street which was published without explanatory note in his report on the 'Anglian Tower' excavation (Radley 1972b, 57, fig. 14)]. No other features later than the Roman rampart survived.

Nearby at 8 Coney Street (20) (not 50/51 as stated in the report) investigations in 1955 showed that the wall stood 2.75m above its foundations with the rampart preserved up to 2.60m, but all layers above the Roman rampart contained modern contamination and so were useless for evaluating pre-conquest works there (Ramm 1956, 78-81). The front of the wall was not exposed.

Nearby again, within the fortress at 6-14 Davygate (21), Wenham's investigations of 1955-8 touched only the rampart area of the Roman defences, and brought to light nothing which is definitely post-Roman; only in his trench 2 was there a possibility of the latest (Wenham's Phase VI) rampart being post-Roman. This layer yielded a coin of Delmatius (335-7) and one hundred and seventy sherds of Roman pottery, of which only a few were 4th-century. Wenham argued that if this were a post-Roman dump, a quantity of late 4th-century pottery could reasonably be expected to occur, and he therefore inferred that the rampart is genuinely Roman in date, probably of the mid-4th century (Wenham 1962, 525-9). Although rampart material often contains a peculiar cross-section of pottery or other artefacts, depending upon its source, the large quantity of pottery considered by Wenham in this case seems to add strength to his argument.

At 11 New Street (22), building works in 1965 briefly revealed the uppermost surviving 2.75m of the fortress wall. Its top was only .30m below

modern ground surface, and 25m further east, at 3 St Sampson's Square (23), the surviving wall-top was again only .30m below the present surface (Radley 1970, 399-401). These two sightings suggest that the wall could have remained a topographic determinant until a relatively late date, and indeed the rear boundaries of 12-42 Coney Street all approximate to the line of the wall here.

Further east, near the south corner tower, in what was for the most part a watching brief during building works at 13 Feasegate (24), Wenham recorded the fortress wall surviving up to a maximum of 4.25m above foundations, with the clay rampart standing 2.60m (Wenham 1961 passim). The wall here proved to be stoutly constructed - it took two men using compressors two months to cut a short section through it. In a small area excavated outside the wall, nearly all stratigraphy had been removed by a medieval cellar, leaving only .75m of undisturbed black, smelly soil against the wall's base, above its foundations. Problems with inflowing water precluded careful excavation of this deposit, which yielded twenty-two Roman sherds of 1st/4th-century date; the deposit dates to the late 4th century or after.

In summary, the excavated archaeological evidence for the importance of the south-west defences of the fortress in the post-Roman period is ambiguous. In several places the wall is known to survive to heights of almost 3m or more, but it is not known how quickly the deposits accumulating against it reached this height, or if the wall was standing even higher in the pre-conquest period. The evidence of the street layout and the parish and property boundaries may indicate that the Roman defences were still a significant feature during part of the Anglo-Scandinavian period, but since the excavation at 16-22 Coppergate has demonstrated that in certain conditions 2m of occupation debris may build up during a single century, and with these conditions apparently prevalent along at least part of the fortress's south-west facade, what may have been a barrier at the start of the period could have been minimised or obscured before the Norman conquest; it is certainly unlikely to have been defensible at that time.

Norman and later defences here certainly took no account of their Roman predecessor except at its western extremity against the Multangular Tower, and it may be conjectured that the stretch of wall running to the

River Ouse from St Leonard's Hospital, immediately beyond the medieval Finkle Street and Footless Lane, may have a pre-conquest origin. The waterfront here will have been as important in the Anglo-Scandinavian period as later, if not more so, and would have warranted the protection that such a defence would afford.

4.1.d. Earlsburgh

To the west of the medieval city lay St Olave's, a church with what superficially appears to be a documented origin, since the Anglo-Saxon Chronicle records that St Olave's was built during the earldom of Earl Siward (1035-55). This, however, may possibly have been a rebuilding and rededication of the earl's own church in Earlsburgh, for it is likely that Siward's predecessors also had their own church attached to their residence.

Earlsburgh itself may have provided an additional fortified enclosure beyond the western limit of the city proper: Dugdale recorded a tradition that its defences were still standing in 1085, when monks were induced to settle here propter loci munitionem [on account of the site's fortification] (William Dugdale, Monasticon Anglicanum (1817-30), III, 529).

If a munitionem existed, it could perhaps have been based upon a Roman defended enclosure which was appended to the north-west side of the fortress. The south-west limit of this Roman enclosure seems to have been a substantial wall continuing the line of the fortress's south-western facade beyond the west corner tower towards the present Marygate, which itself approximates to the enclosure's north-west side, recognised in two short lengths of wall of Roman appearance below the street's surface near its northern end. There have been no sightings of any north-east and south-east boundaries, and these are assumed to run along the south side of the street Bootham, the external continuation of the fortress's via principalis dextra, and back down the south-east side of the fortress (RCHMY 1, 46-7). This would give a defended area of approximately 3.45 ha., with St Olave's church in the south-west corner. It seems an overlarge area for an earl's residence, but might possibly have been the earl's enclave, for example, an area from which they drew rent. There is, however, no evidence that Earlsburgh corresponded with one of Domesday Book's seven shires, and

none of these was in the earls' hands. An alternative location for Earlsburgh is provided by RCHMY 2, 9, which defines its probable limits as

(a) to the north-west: the south-east side of Marygate, including St Olave's church and extending south-west to a point where the medieval abbey precinct wall changes direction;

(b) on the north-east: the south-west wall of the Roman enclosure;

(c) on the other sides: lines parallel to these bounds.

This places Earlsburgh within an area of approximately 2.10 ha. at the lower-lying, river end of Marygate, on the quite steep slope of the Ouse terrace, and ignores the possibility for refurbished defence provided by the known Roman walls on the higher ground further north. Although only about one half as large as the Roman enclosure, this hypothetical unit is still a very considerable area.

It seems likely that Marygate in whole or part formed the south-west limit of Earlsburgh, but beyond that it is impossible to proceed with certainty. Willmot's unpublished excavations within and around St Mary's Abbey church, adjacent to St Olave's, produced pre-Norman metalwork of some quality, but apparently nothing to define the presence or absence of an earl's residence. The whole area requires systematic archaeological examination before the extent and character of Earlsburgh can be defined.

4.1.e. The Ouse Frontage - East End and Summary

As it is suggested above (Chapter 4.1.c.) that the medieval defences west of Finkle Street and Footless Lane are of Anglo-Scandinavian origin, it must be asked if there is any evidence for a contemporary defence at the eastern end of the city's Ouse frontage. There is of course the natural barrier caused by the confluence with the Foss; apart from this, the only obvious possibility is that the stretch of medieval city wall running to the Ouse from opposite Clifford's Tower perpetuates an earlier line. There is no evidence, however, that this wall originated as a rampart, as all other parts of the defences with demonstrably pre-conquest origin did, and it seems integrally related to the castle and the Franciscan Friary (RCHMY 2, 158).

To conclude discussion of this area, it seems most likely, on the evidence currently available, that the military usefulness of the Roman south-west defences was reduced during the Anglo-Scandinavian period, to a point

where they were perhaps superseded by a new arrangement with a waterfront fully enclosed to landward upstream by a rampart perpetuated in the medieval defences outside Finkle Street and Footless Lane, and downstream either by the natural barrier of the Foss, or by another, unknown defensive line. Beyond this to the west lay Earlsburgh, a defensible area as its name suggests, but one whose precise limits are in doubt. There is no evidence for defence against waterborne attack: the bridge or ford at medieval Ouse Bridge may have offered a potentially defensible position, the Ouse passage may have been impeded at the east and west limits of the defences, or the beaching of ships on the Ouse strand may have been thwarted by the occasional planting of a stake barricade. The river frontage is an area which demands further investigation.

4.1.f. The South-East Side of the Roman Fortress

As noted above (Chapter 4.1.a.) there is general agreement that the south-east wall of the fortress lost importance in the pre-conquest period, when occupation spread beyond it towards the River Foss. However, the stages and processes by which the wall lost its importance have not previously been assessed, despite the accumulation of a body of relevant evidence, largely thanks to excavations by Stead and Wenham in the 1950s and 1960s. Before considering their results, other discoveries which provide less detailed evidence will be summarised.

Leaving aside the slight possibility that a wall discovered 1.80m - 2.10m under Aldwark in 1876 was part of the fortress wall, or perhaps part of an integral internal interval tower (RCHMY 1, 35), there are several certain sightings of the wall which, for a variety of archaeological reasons, are of relatively little value. Excavation across its line at 5-7 Aldwark (25) in 1984 showed that post-medieval disturbance had destroyed it to foundation level. Observation of the wall in Parliament Street in 1949 was limited to recording its alignment and width (J. Roman Stud. 1949, 100). An adjacent observation (26) in Parliament Street in 1976, revealed the wall's full surviving height of 2.20m and the depth of its foundation at c. 5m below modern street level, but the deposits against the wall were excavated mechanically, with the consequent loss of any dating evidence for their accumulation. The fact that heavy machinery failed to break down the wall is an impressive testimony to the

fabric's strength here, and a similar resilience has been encountered in the south-west defences (Chapter 4.1.c.). In these two stretches at least, poor building standards cannot be cited as a reason for decay.

It is tempting to interpret the abrupt change in the wall's level of survival at the east angle tower, first noted by Miller (1925, 191), as the result of deliberate dismantling at a time when the defences were superseded but it is not known when the stonework was removed. It is also recorded (Waterman 1948, 13) that Miller uncovered a series of wooden stakes at .30m intervals, continuing the curve of the missing wall line around the east corner, which might be interpreted as an attempt to defend a post-Roman breach in the wall. These stakes cannot be reassessed, as attempts to trace the source which Waterman quoted have failed; they are known only through his brief comment, and both their date and function are enigmatic. Approximately 100m south of the east angle in Hawarden Place (27), Miller found that the Roman wall had been robbed to foundation level, but his cursory notes about the post-Roman stratigraphy allow no inference to be made about the date of dismantling:- 'A mass of black earth containing burnt bones and fragments of mixed pottery overlay both walls; its evidence was obviously valueless' (Miller 1925, 189).

Approximately 40m further south again, within its Bedern excavation complex (13), York Archaeological Trust found wholesale attrition of the wall, but in this case associated pottery indicated that the robbing of at least the lowest courses took place in the 12th century (Addyman 1975a, 31). How much had been removed earlier is not known. No other cross-sections of the fortress wall have been cut between this point and the site of the porta principalis sinistra in King's Square, and the survival-level of the wall in this sector is therefore unknown.

The site of the porta principalis sinistra lies under King's Square; the perpetuation of the line of the via principalis and its continuation in the modern Low Petergate and Colliergate indicates a continuing use of this central, cross-town route over the last two millennia. No certain traces of the gateway have been recovered but adjacent sections of the fortress wall on the south side, together with associated stratigraphy, have been investigated.

In 1957, a 1.50m wide trench was dug across the wall at 1-2 King's Square (28), where the wall was found standing up to 2.45m high in places,

although in the centre of the trench a medieval pit had cut it down to 1.20m (Stead 1968, 152). The layers immediately above the topmost surviving courses were of 13th/14th-century date, and the final robbing may have taken place then; how high the wall stood in the pre-Norman period is not known. Some dilapidation had certainly taken place at a relatively early date in the pre-conquest period, for in the outer face of the wall only six courses of the coursed rubble facing stones remained, and .30m of rubble and mortar debris, which resulted from this destruction lay only .30m above the pre-Roman ground surface. The debris was sealed by a sequence of layers dated to the later 9th-11th centuries. This sequence, 2.30m thick, comprises eight layers which are impossible to date closely, and so the rate of build-up to the present top of the wall can only be guessed at. Structural features were absent in the 1.4m width between the wall and the trench's edge, but the presence of a layer of paving, coupled with the heterogeneous nature of the stratigraphy, suggests at least that the whole 2.30m build-up was not a dump deposited on a single occasion in order to raise the level here to that of the wall-top, and thus to overcome the barrier presented by the variation in level across its line. On the contrary, the results of the excavation imply that the wall remained a barrier to uniform development across its line, albeit on an ever-diminishing scale, until the 13th-14th centuries.

The most remarkable intra-mural discovery was a structure probably of 10th/11th century date (Chapter 4.4.a.). This building was aligned with the Roman wall, and was cut into the top of the Roman rampart, which survived here to a height of 2m above the pre-Roman ground surface. The date of the building's erection ostensibly provides a terminus ante quem for the redundancy of the Roman wall as a defensible line, on the grounds that a building only 1.50m from the wall hinders the deployment of defenders: on the other hand, later medieval documents often tell of infringements into what should have been 'military zones' beside current defences, and so too much should not be read into the appearance of this structure.

A subsequent watching brief by Wenham (1968), undertaken when cellars were dug out below 1-3 King's Court, within 10m of Stead's 1957 excavation, demonstrated that the fortress wall was standing here to heights of approximately 2.75m above foundation, although only the uppermost 1.20m - 1.50m was seen. Nothing within the wall was disturbed, but from the 1.20m - 1.50m

of stratigraphy against its upper surviving parts a collection of objects was salvaged, which range in date from fifteen Roman sherds to ten late medieval pieces (Wenham 1968, 165). Over seventy sherds, however, can be attributed to the pre-Norman period, and in spite of the inherent unreliability of evidence gained under such uncontrolled conditions with their attendant problems of residuality or intrusion, it does seem reasonable to suggest that before the deposits accumulated in the 10th and 11th centuries, only the lowest 1 - 1.50m of the fortress wall's outer face had been buried. Once again, however, it is not possible to suggest how high the wall was standing at that time.

The two remaining investigations of the fortress's south-east defences both took place at its southern limits. Approximately 6m north of the southern angle tower at 10 Feasegate (29) the wall was found standing an estimated 2.40m above its foundations, although only the uppermost 1m was exposed (Dyer and Wenham 1958). Soil above the wall had already been removed when excavation started, and in a small area which was limited by cellar walls and further interrupted by a substantial 19th-century intrusion, little of the stratigraphy to either side of the wall could be recorded.

Inside the wall a homogeneous layer of dark soil with some clay extended downwards for the full 1m excavated against the wall. There were no finds from this layer, but a barrel-well visible at this level produced three sherds of 12th/13th-century date which, if not residual, indicate that the soil into which the well was cut had built up before that time.

Outside the wall, 12th/13th-century sherds were found in the layer abutting the wall-top (layer 3). Layer 4 contained no finds; layer 5 with its base approximately 1.60m above Roman foundations, yielded six 10th/11th-century sherds, and layer 6, of which only the topmost .10m was excavated, produced no finds. This meagre evidence can be accorded little weight, although at face value it suggests that only the bottom 1m or so of the wall-face had been covered up by the Viking Age.

Simultaneously with the work at 10 Feasegate, Stead supervised an excavation at 12 Feasegate (30) (misnumbered as 17 Feasegate on his fig. 1) (Stead 1958b). On this site, which lies in part over the south corner tower of the fortress, he was able to investigate small sections of both the tower and the adjoining stretch of wall to its north. The tower itself stood to a maximum

height of 2.70m, and within it all later Roman and post-Roman layers had been removed before archaeological excavation began. Outside the tower a post-Roman sequence survived in part, although its relationship with the fabric of the tower was not clear, except in its lower levels, because of modern disturbance. Grey soil (Stead's layer 12) had accumulated over the Roman building level and against the tower to a height of approximately .60m or more before it was cut into by a pit containing in Stead's layer 11 the first identifiable post-Roman finds, three leather boots or boot fragments, of V-notched whole-upper, turnshoe type with thong or toggle fastening. This type has recently been discussed by MacGregor (1982, 138-42) who draws attention to similar discoveries in Anglo-Scandinavian contexts at 6-8 Pavement (31) and 5 Coppergate (32), York. While earlier examples are not known in Britain, Continental parallels can be traced back to the 7th century, and so it is possible that the boots from 12 Feasegate could belong to the pre-Viking era in York's history, although it is perhaps more likely that they are of Anglo-Scandinavian date.

Only a few centimetres above the pit-fill, in layer 8, there occurred the first appearance of Torskey-type ware (this is a re-attribution of the sherds described by Stead as 'Thetford-type ware'), and above this again in layer 7 were further sherds of Torskey-type ware and York ware, pointing to a date in the late 9th century or later. The severely attenuated layers above this contained no artefacts, and the sequence was truncated 2.15m above its base by 19th-century foundations.

It is unfortunate that the sequence provides no evidence for the origins of the nearby street Feasegate, whose line runs almost directly through the axis of the corner tower. The origin of this street is clearly of importance for it signals, if not the total abandonment of the defences here, at least their breaching. Conceivably the street name itself provides a clue to the nature of the street's earliest phases; although recorded first c. 1259 as Fesegayt (the late appearance of the name is as likely to reflect absence of earlier records as non-existence of the street) the alternative form Fesegayl occurs in 1299, with its connotations in the element geil of a narrow passageway rather than a street (Palliser 1978, 3, 9). This may indicate that its creation was not associated with any widespread sweeping away of the defences here, but rather that it resulted from a strictly localised

breaching of the Roman wall.

Feasegate seems to represent an addition to an earlier street system in this part of York, for the present Market Street and Jubbergate (earlier Bretgate), Newgate and St Andrewgate approximate to the hypothetical line of a Roman extra-mural street skirting the south-east wall of the fortress. Whatever the precise relationship with a Roman street-system, this alignment certainly respects the Roman wall-line, and is notable for the few cross-streets which join it from within the fortress. With the exception of the perpetuated Roman via principalis, the only streets which cross the wall-line are Bedern and Aldwark to the north of the porta principalis sinistra, and Patrick Pool and Silver Street to its south.

Bedern can be dismissed quickly from the discussion - earlier an ecclesiastical cul-de-sac established in the mid 13th century, its continuation across the wall dates only from 1852 (RCHMY 5, 57).

Aldwark, first recorded c. 1180 x 1190 as Aldewerke, derives from Old English (e)ald (ge) weorc meaning, 'the old fortification', and is one of the few Old English names to be used in post-866 York (Palliser 1978, 4). The street continues the line of Ogleforth across the 13th-century realignment of Goodramgate, parallel to the fortress's north-east wall from which, presumably, it took the name which was later transferred to embrace the extension of the street across the defences. The survival of its Old English name hints that this extension took place before the Scandinavian conquest, but this has yet to be demonstrated archaeologically.

Silver Street is not recorded until the mid 16th century, and so late a date may cast some doubt on its existence in the Anglo-Scandinavian period. Patrick Pool, which today is an equally insignificant street, has a longer pedigree, being recorded as Patricpol 1190 x 1210; at that date the name referred also to the present Swinegate. Its early appearance in the records suggests the possibility that it may be of pre-conquest origin, but this has yet to be proved archaeologically. The street name itself is currently unexplained.

Summarising this evidence of street names, layout and dates, the only fact that emerges is the continued importance of the fortress wall, which determined the line of Market Street-Jubbergate-Newgate-St Andrewgate. The origin of the medieval cross-streets and of Feasegate is obscure.

In contrast, parish boundaries show a much greater tendency to oversail the wall line, and its presence clearly did not inhibit the creation of irregular trans-mural parishes. This perhaps reflects the diminishing of its importance as a boundary when the parishes were established, probably in the 11th-12th centuries. The parish of Christ Church, King's Square (now demolished) illustrates this point; the church stood immediately outside the porta principalis sinistra of the fortress, but had a parish which extended inside the walls to either side of Low Petergate as well as outwards along King's Court/Shambles and Colliergate, streets which converge at the Roman gateway.

There has been speculation that the Roman gateway was itself defensible in the pre-conquest period, and that it formed the nucleus of a royal palace. The evidence for the presence of a palace comes in the street names King's Court/King's Square; although not recorded until c. 1270, their mutual early form Kuningesgard (King's Garth) is of Old Norse derivation and may represent a genuine tradition (Palliser 1978, 8). What may be evidence for the possible defences of a palace here has come from a more questionable source, the discovery by workmen in 1854 of a Roman memorial stone recording the erection of the gateway, variously described in the two original sources as being found at a depth of 7.90m or 8.50m below the current ground surface (Yorkshire Gazette, 12 August 1854, 5; Wellbeloved 1854, 282). It came to light in digging a sewer from Goodramgate to the River Ouse, not on the direct line of the drain, "but about 4 feet (1.20m) on the east side of it, in King's Square, near the house which stands at the corner of the Square and Goodramgate" (Wellbeloved 1854, 282). Its depth indicates that it lay in some man-made depression cut approximately 3m into the natural soil.

The line of the sewer at 89 Goodramgate, the corner building referred to, is approximately 15m inside the Roman fortress wall, and taking the recorded depth of the findspot at face value, there can be no possibility of it lying at the bottom of a Roman defensive ditch. It has therefore been suggested that the feature in which it lay was a Viking-age ditch, forming part of the defences of a palace which had the Roman gatehouse as its nucleus, and which was indeed the castrum razed by Athelstan in 927 (RCHMY 2, 8).

This is certainly possible, although two points should be noted. Firstly, as a commemorative tablet intended to be read, the stone would have been placed in a visible, and presumably not too lofty spot on the gateway - the height of its lettering decreases from .15m to .09m in the six lines of the inscription. Its displacement will thus signal a time when the gateway was in considerable disrepair. William of Malmesbury's story of the razing of the castrum provides a ready context for the displacement of the stone, but doubts about his reliability have already been expressed (Chapter 4.1.a.). Whenever the stone was dislodged the gate was obviously in decay; but when that was is unknown. Secondly, although a ditch system of the Viking-age could account for the depth of the find, so too could a well-shaft of Roman, pre-conquest or later medieval date. With these alternatives, and without excavation, the possibility that the porta principalis sinistra was a defended, Viking-age palace seems less certain, although it remains a plausible hypothesis.

To summarize, the totality of evidence for the role of the Roman defences along the south-east of the fortress in the Anglo-Scandinavian period is thus ambiguous. Its line influenced the development of the post-Roman street system, and to some extent the tenemental layout; it was probably still recognisable in places beyond the Norman conquest. Its defensibility is uncertain but throughout the Anglo-Scandinavian period it is likely to have remained a recognisable divide between the fortress area, dominated by the metropolitan church's holdings, and the developing settlement on the west bank of the River Foss.

4.1.g. Between the Fortress and the Foss

Turning to the area east of the fortress, beyond its south-eastern wall, the main evidence usually cited for the physical limits of Jorvik comes from rescue excavation below the present Telephone Exchange at Hungate (3) in 1950-1 (Richardson 1959). Here 18.30m of embanked, curving waterfront averaging 2m in height and at least 14.60m in width (its rear, north-western limit was not reached) lay over a sequence of sandy silts (Fig. 3).

As described by its excavator (Richardson 1959, 59) the Hungate embankment is a relatively simple affair in structural/stratigraphic terms consisting, from the base upwards, of two layers of brushwood, the upper defined by stakes and hurdling along its edge, capped by two layers of clay laced with horizontal and vertical stakes. At one point a thin matting of

interlaced stakes covered the second clay layer, and faggots pinned by stakes were included in the make-up. Related to this structure was a series of small gullies, with wattle hurdling, described as revetting the channels, to one side of each. These features were at different levels in the embankment; although they are described as all running roughly in the same direction, a plan (Richardson 1959, fig. 6) shows that some ran parallel to the embankment, while others were at approximately 90° to it. Interpreted by Richardson as drainage channels, the fact that the majority ran parallel with the embankment's main axis suggests that this is unlikely, since they would retain water and tend to destabilize it; channels <u>through</u> the embankment would be more appropriate for drainage.

If it is difficult to accept Richardson's interpretation of the gullies, it is equally difficult to concur with her simplistic interpretation of the embankment as a one-period structure. Indeed, her published cross-section through the feature (Richardson 1959, fig. 4) clearly shows a considerably more complex feature than she describes, which may have been heightened at several different periods. The structural/stratigraphic evidence for this is firstly that the front of the lowest clay layers 36 and 37 is some 8.50m behind the front face of the embankment at its top, and secondly the deposition of the silt 38 against the front of 36 and 37, for 38 may have been waterborne, and perhaps indicates water lapping against 36 and 37. The fact that the brushwood layers 39/41/17 underlying 36 and 37 stop short of the front of the embankment also suggests that originally it was not intended to extend the feature to the limits it ultimately reached. The occurrence of wattle hurdles at various heights in the embankment may be a further sign that the feature was built up in stages, with clay layers 8 and 10 marking its final limit and the revetted channels at different levels suggest an expanded time-scale of years separating the different stages rather than merely weeks (Fig. 3).

The dating evidence from within the feature is of little help here, for three reasons. Firstly, there is a possibility that layers within the embankment are contaminated by intrusions unnoticed during excavations. These are held by the excavator to account for the presence of half a dozen 13th/14th-century sherds - 'there is no reason to doubt that glazed sherds are intrusive in earlier levels, which are much disturbed by digging rubbish

pits and dumping household refuse' (ibid, 90). Secondly, both the pottery and the other artefacts recorded are of types which can be dated only within broad limits of a century or more; they are of no help in refining a chronology. Thirdly, there is the possibility that in any case a large proportion of the soil used to construct the embankment had itself been dug or scraped up elsewhere, and thus included large quantities of residual material. The relatively large size and generally unabraded condition of the sherds apparently counter this suggestion, but the value of this material for dating is nonetheless questionable.

With these caveats in mind, and remembering too that the small quantity of pottery (61 pre-conquest sherds) does not permit any meaningful chronological analysis, it can be said that the various types of pottery found are distributed without significant variation throughout the embankment, and that with the exception of the six possibly intrusive sherds they and the artefacts can all be dated to the period c. 850-1100.

Material from the uppermost layers of the silts underlying the embankment includes a small quantity (7 sherds) of York-ware, Torksey-type ware, shelly ware and Stamford ware, which, if reliably stratified, would indicate that the earliest levels of the embankment were constructed after c. 850-900: there is a risk, however, that they too are intrusive from the layers above, and too much weight should not be attached to them. More interesting and reliable is the assemblage stratified directly over the embankment which produced in the main very abraded 'survival' sherds of the 13th and 14th centuries, with a few fragments of later Dutch and German imports (ibid, 95). Elsewhere on the site, equivalent layers directly overlying the embankment produced 'gritty ware' cooking pots (ibid, 92) which are now thought to date to the period c. 1075-1250 (Holdsworth 1978, 11). Although the 12th and 13th centuries may be represented only by pottery sherds deposited as rubbish (Richardson 1959, 66) nonetheless this rubbish is directly above the embankment, and provides a terminus ante quem for its construction.

The feature may have evolved through several phases of accretion during the Anglo-Scandinavian and/or early Norman period, functioning as a flood barrier, or quayside or as both: alternatively, it may be a one period construction of similar purpose or purposes. The dating evidence is

ambiguous; Richardson suggested, primarily on the basis of the pottery and artefacts, that the embankment dated to the 10th-late 11th century, and concluded that it must predate 1069 on the basis that York suffered considerable damage at the hands of William I's garrison in that year (ibid, 64-5).

It is now recognised that William's depredations did not abruptly alter the material culture of later 11th-century England, and this leaves open the possibility that the Hungate embankment was erected a little later than the Norman take-over. Indeed, the refortification of York by William in 1069, and in particular his flooding of the ditches around his motte on the spur between the Rivers Foss and Ouse, which he contrived by diverting the Foss and damming it just below the castle, provides the sole historically attested motivation for land holders in the Hungate area to protect their property by constructing an embankment.

The result of William's action was the creation of a large lake, stagnum regis, which extended north beyond Hungate to Layerthorpe, and which survived until the dam was breached and the Foss was canalized in the 18th century. Recent excavations at 16-22 Coppergate (4), approximately 300m nearer the dam, have shown that the reaction of occupants there to William's action was to dump 2m of soil at the riverside end of their properties, and it is possible that the Hungate embankment represents a contemporary and broadly comparable action. If this is correct, the Hungate 'embankment' is not of Anglo-Scandinavian but of early Anglo-Norman date, and prompts the question of whether there was ever a clearly defined defence or other limit to occupation in this part of Jorvik. Apart from the Hungate discoveries, nothing else is known about this peripheral, low-lying area in the period 400-1066, and no other possible trace of a boundary has been recognised on the ground. There is, however, a natural limit to settlement below Foss Bridge in an escarpment, the top of which is marked by the line of St Saviourgate. It remains for excavation to demonstrate whether or not there was pre-conquest settlement beyond this nearer the River Foss.

In an attempt to verify the claim made in RCHMY 2, 8, that the embankment's line was fossilized in parish and property boundaries up to a point where these met the medieval walls at Tower 32, York Excavation Group excavated on the site of the demolished Hunt's Ebor Brewery in

Aldwark in 1974-75 (33). It was not possible to excavate on the line of the parish boundary which runs from the tower to Peasholme Green; but a trench straddling the property division between the brewery and 35 Aldwark was excavated to a depth of 3.50m below the modern ground surface, at which point excavation was curtailed for safety reasons. Below uninformative layers of modern, post-medieval and medieval soil, a 1m thick layer of yellow clay was excavated. Approximately mid-way through the clay changed colour slightly; a short length of slabby limestone rubble averaging .50m in width also marked the interface. This, however, may be no more than a path laid down on the slippery clay surface to facilitate the dumping of the remainder of the clay. The yellow clay sealed a moist, grey, silty clay, which was not investigated beyond its top .10m.

The entire lower part of this sequence is difficult to date with any precision. The bottommost grey silty clay yielded a hog-backed antler comb of Anglo-Scandinavian type, indicating that the earliest date for the clay dump is c. 865. In addition to over fifty sherds of Roman pottery and an early 8th-century sceatta, the yellow clay layers contained five sherds of 9th/11th-century pottery. The layers immediately over the yellow clay contained late 11th/early 12th-century assemblages, with the addition of a few sherds of later 12th/13th-century date which are thought to be intrusive. If these are ignored, the clay dump can be dated to within the period c. 865-1150, but the evidence is not sufficient to indicate whether this is a pre- or post-Norman feature. Even if it is pre-conquest, the small size of the excavation defies any attempt at definitive interpretation of its function. The dump appeared to be tailing off at the northern (fortress) end of the trench, although later medieval intrusion does not permit certainty even on this score, but it extended southwards beyond the trench's limits. There was no indication of any structure or defensive feature on its surface, and the only certainty about its purpose is that it consolidated the unstable soil below. This is a function it shares with the Hungate embankment, but the two features are totally different in their construction, and although they may be broadly contemporary, reflection suggests that an earlier suggestion that both may have formed part of a single programme of civic reorganisation (Hall 1978, 34) is untenable.

As noted above (Chapter 4.1.a.), the 'wickerwork hedge' or 'stockade'

discovered by Benson at 5-7 Coppergate (1) in 1902-3 was seized upon by Richardson (1959, 61) as a component in her picture of the Danish defences. The idea was not taken up by Cramp (1967), nor by Radley (1972a) except insofar as the plan accompanying his text seems to take account of it, perhaps for reasons explained earlier (Chapter 4.1.a.). Other commentaries, however, have reported and elaborated Benson's discoveries; in each of the two relevant volumes of the Royal Commission on Historical Monuments (RCHMY 2, 8; RCHMY 4 xxxii-xxxiii) and also in Ramm (1972, 248), an underlying earthen bank is referred to, complementing the 'stockade' in continuing the fortress's south-western defences southwards. Apart from noting this elaboration, there seemed little possibility of investigating the stockade further until structural alterations below 5-7 Coppergate in 1974 provided an opportunity to look again at part of the area recorded by Benson. The alterations only just impinged upon the course of the stockade as planned by Benson, but there was no trace of a row of posts where he recorded one, and no sign of any intrusion or disturbance which might have removed it. Nevertheless, an alignment of posts was found traversing the trench from south-east to north-west, and consisting of rather irregularly positioned posts standing to a height of .30m, with wattling interwoven around them. The largest post in the alignment had a diameter of .14m, but the average was only 50-70mm. In addition, posts were observed in both the north-western and south-eastern sides of the trench, approximately .40m north-east of the main alignment, and suggesting the possibility that a second row of posts ran parallel to it.

The date of these features can only be estimated within broad limits, Seventeen sherds of pottery were recovered during the work, none associated with a particular archaeological context, and as a group they can be dated c. 850-1150.

The stakes recorded in 1974 are comparable in size to those which Benson measured, and the 1974 observation suggested that there might have been two parallel rows of posts present, another similarity to Benson's 'stockade'. Bearing in mind the difficulties under which Benson must have worked and the problem of measuring accurately from his small-scale plan, it is not impossible that both observations, undertaken in less than ideal conditions, may have recorded parts of the same feature. There is a 9^{o}

differential between the two alignments; of the two, the new one corresponds almost exactly to the alignment of the later 'tan-pits' and their superimposed structures which Benson also recorded (Chapter 4.4.c.). So close is this correspondence that it suggests continuity of layout and alignment, and highlights the divergence from this norm of Benson's 'stockade' which stratigraphically must lie between the 1974 alignment and the 'tan-pits'.

The stakes seen recently are most reasonably interpreted as a fence line, comparable to those seen in several recent excavations of Anglo-Scandinavian and Anglo-Norman levels in York, for example the 10th-century and later series at 16-22 Coppergate. Alternatively the stakes could perhaps have formed part of a structural wall, but since at both 16-22 Coppergate and 6-8 Pavement (Addyman 1975b, 221-22) most such wattle walls were reinforced with stouter upright posts or staves which were not present here, their interpretation as a simple fence remains most acceptable. Even if they were not part of the feature recently recorded, Benson's rows of stakes also seem in retrospect most likely to have been part of a simple fence. This re-interpretation removes the sole basis for suggesting that there was a defensive wall running towards the River Foss from the south angle tower of the fortress.

4.1.h. East of the Foss

With no evidence for any Anglo-Scandinavian defence along the west bank of the Foss, the river itself seems to have provided the only substantial barrier to an assault on Jorvik by land from the east. There is, however, a possibility that the Walmgate area, to the east of the Foss, was itself defended in the pre-conquest period, although there has been categorical assertion that this was not the case (RCHMY 2, 10). There certainly was widespread occupation within this area (Chapter 4.4.d.), and the lack of evidence of an Anglo-Scandinavian defence here may simply reflect the fact that there has been no opportunity yet to investigate the origins of the extant medieval rampart.

4.1.i. South of the Ouse

The number of excavations and watching briefs which have taken place along both actual and hypothetical defensive lines has provided an opportunity

to reassess the limits of the city north of the Ouse at some length, but a total absence of similar work means that the city south of that river can be dealt with briefly.

The full circuit of the Roman walled colonia is unknown, and even where its line has been discovered, it is not invariably followed by the later medieval walls. No sections have been cut through either the Roman or the later medieval defences in which post-Roman/pre-Norman accretions or alterations might show. Evidence for widespread occupation within the area of the later medieval walls (Chapter 4.4.e.) suggests that there is likely to have been a defended circuit during the Anglo-Scandinavian period, and it is likely to have followed the Roman lines at least as closely as do the medieval walls, but this has yet to be proved.

4.1.j. Summary

On the basis of all the evidence discussed above the area of Anglo-Scandinavian York can be estimated. A minimal and approximate view, including the Roman fortress of 20 hectares, the 35 hectare strip between the fortress and the River Ouse to the south and Coppergate, Pavement and the Foss scarp to the east, and the Roman colonia/medieval walled town south of the Ouse, with approximately 27 hectares, totals some 82 hectares; this takes no account of the Walmgate area, a further 20 hectares, of Earlsburgh, or of any extra-mural settlement. While, as will be demonstrated below (Chapter 4.4.), it cannot yet be shown whether or not the defended areas were fully occupied, these figures do suggest that a recent estimate of York's size in the 10th century (Biddle 1976, 123) 'at least 40 ha' is a considerable underestimate, and emphasise a parallel comment (ibid) that York 'was one of the greatest North Sea trading places of the Viking Age, and probably excelled them all in size and wealth.'

4.2. SUBURBAN SETTLEMENT

It seems probable that there was suburban occupation on at least a limited scale along the main routes into the city. To the north-west, the present street name Bootham, first recorded as Bouthum c. 1145 x 1161, closely echoes its Old Norse source buðum, a locative paralleled at Leicester (Lindkvist 1927, 356) meaning 'at the temporary dwellings/huts'. Now that

the theory that these buildings were later in date and related to a fair at the adjacent Norman foundation of St Mary's Abbey has been disproved (Palliser 1978, 6), there are stronger grounds for suggesting a pre-conquest origin for the suburb, with the initial transient activity which named the area perhaps giving way to permanent occupation before the Norman conquest. At present, however, the evidence of the name is not supported by any archaeological data.

To the north-east of the Roman fortress lies an area known in the later middle ages as Newbiggin. The name, from Middle English niwe, 'new', and Old Norse bygging, 'building', is certainly recorded by the early 13th century, although some doubt has recently been expressed over supposed occurrences in the later 12th century (Smith 1937, 295; Palliser 1978, 12). Ramm (1968) has suggested that it applies to a deliberately planned and newly created suburb of 12th-century date, laid out beyond the portra decumana of the fortress which continued to define the north-east entrance to the city until Monk Bar was erected further east in the 13th century. As the Newbiggin development was on the same rectilinear alignment as the fortress, it probably cut across the line of the main Roman road leading to the portra decumana, which presumably ran directly to the gateway from a crossing of the River Foss on the site of the modern Monk Bridge. Any occupation here which was earlier than the 'new buildings' will presumably have been aligned with the Roman road, but no archaeological remains of this date have yet been recorded from this vicinity. Excavations on the site of St Maurice's church, which served the Newbiggin suburb in the later medieval period, revealed that the Victorian rebuilding had destroyed all earlier stratigraphy and its origin was thus untraceable (Addyman 1972, 22).

To the east of Newbiggin, limited excavations in the area of the post-conquest Jewish cemetery at Jewbury have failed to locate any evidence there for activity between the Roman period and the post-Norman cemetery. This site is adjacent to Layerthorpe Bridge, a successor to that which by the mid-14th century had replaced an earlier ford on the site leading to the suburb of Layerthorpe, which is first recorded 1070-88 (Palliser 1978, 12). The derivation of this name's first element is obscure, but its second clearly comes from Old Norse þorp, signifying a secondary settlement dependent upon or colonised from an adjacent, larger one (Cameron 1970, 35). The

size, nature and origin of 11th-century Layerthorpe are unknown.

This is also true of the second -thorpe settlement on the city's periphery, south of the River Ouse, at Clementhorpe. The name, first recorded as Clementesthorpe 1070-88, is echoed in the name of the nunnery of St Clement, whose foundation charter is dated 1125-35. It has been suggested that the nunnery's kernel was a pre-conquest church with that dedication, and that the name was transferred to the surrounding area (Palliser 1978, 8; Dobson and Donaghey 1984, 7). Excavation on the nunnery site has produced evidence which may corroborate this suggestion; substantial cobble foundations outlining a structure measuring at least 28m x 5m have been found to overlie and incorporate parts of a Roman town house, but to pre-date the nunnery. The size and nature of the building remains, the association of oriented burials and an absence of normal domestic debris all suggest that this is an ecclesiastical building, and associated coins of Aethelred of Northumbria (841-48) from the foundations and of Aethelwulf of Wessex (839-58) and Edward the Confessor (1042-66) from the general area indicate that it was a focal point of pre-Norman activity (Addyman 1977, 38-39).

Of the other important approaches to the city and possible extra-mural settlement along them, little is known. To the east of the city, north of the River Ouse, ran Fishergate, first recorded as Fiscergate 1070-88, and meaning 'street of the fishermen' (Palliser 1978, 9). The name as originally given applied to what is now Fawcett Street and part of George Street, the modern line being a recent diversion. There has been no archaeological investigation here, and pre-conquest activity is attested solely by a gold finger ring, possibly of late 9th/10th-century date, found between the present Fishergate and the River Ouse (Cramp 1967, 18 and P1 VIIb). In its original line, Fishergate extended towards the Walmgate area; there is now archaeological evidence for Anglian activity here in the 8th-9th century in the area east of the ancient Fishergate (15), immediately outside the medieval walls (Addyman 1973, 18-19). This evidence is limited to a single, coin-dated pit also containing recognisably contemporary metal-work, which may relate to a scatter of undated, adjacent post-holes. Both the meagreness of this evidence and the fact that no Anglo-Scandinavian material was found might be due to modern 19th-century land clearance here,

but there is at present no evidence for Anglo-Scandinavian occupation. Lawrence Street and Hull Road, which now continue the line of Walmgate beyond the medieval defences, were originally also known as Walmgate but it is not known if the pre-conquest buildings discovered within the medieval walls had counterparts beyond their line.

The main approach to York from the south now reaches the city via The Mount and Blossom Street, streets only marginally off the line of their Roman counterparts (RCHMY 1, fig. 70). Blossom Street, immediately outside the medieval walls, was formerly called Ploxwangate, from Old Norse plogsveinn 'ploughman', but is not recorded until 1241 (Palliser 1978, 6). Archaeological knowledge of this vicinity is restricted to the chance discoveries of Roman burials.

The general dearth of evidence for suburban settlement and activity is alleviated slightly by early post-conquest records which cast some light on certain extra-mural areas, notably along the River Ouse. A record of the privileges of Archbishop Thomas I of York (1070-1100), preserved in the Great White Register of York Minster, a document of c. 1080 (Liebermann 1905 passim) lists, among other places, Layerthorpe, Walmgate, Clementhorpe and Fishergate as rendering dues to the Archbishop, and a record of the privileges of the Archbishop and canons of York in 1106, incorporated in the White Book of Southwell (Leach 1891, 190ff), specifies Walmgate and Fishergate as areas where wheat and fish from the East Riding were sold, and mentions Clementhorpe and land beyond as a berthing-place for ships. These two documents jointly indicate that in the later 11th and early 12th centuries these extra-mural areas represented a valued source of revenue for the Archbishop, and imply that there was activity and perhaps occupation on an unquantifiable but by no means negligible scale which, it may be assumed, had its roots in the pre-Norman period.

4.3. TOPOGRAPHY AND DEVELOPMENT

4.3.a. The 'shires'

Whatever physical boundaries delineated Viking-age York, the city was subdivided for both secular and religious purposes. The largest divisions were the seven shires which are referred to collectively in

Domesday Book. Only sparse additional details of them are known. In 1066 six were in the possession of the king, and one in that of the archbishop. Their locations are not clarified beyond the statement that one of the royal shires had been devastated by the erection of the castles. This implies that a single shire spanned the River Ouse, as later did Micklegate ward, one of the six high medieval administrative divisions of the city. The recent discovery of an outer bailey at York Castle, increasing the area of the shire vastata in castellis, goes some way to explaining the large discrepancy between the number of dwellings which Domesday Book records in the city before and after the conquest, since it gives a greater area to be destroyed in castle-building. The allegedly widespread fire-damage recorded in the Anglo-Saxon Chronicle sa 1069 may also have caused a long-term reduction in the number of habitable tenements, although it has not been identified archaeologically. But although the extent of the Norman castles is now clearer, the pre-conquest layout of their sites is unknown (Addyman 1981, 51; Addyman and Priestley 1977, passim).

The only shire which can be located in general terms with some certainty is Marketshire, in existence in 1301 when the street Pavement is recorded as being strata de Marketskire; by 1421 the name seems to have been obsolete (Palliser 1978, 13). It is not certain, however, that this 14th-century sub-division of the city accurately reflected the situation recorded in Domesday Book. It has been suggested that in the Pavement area of Marketshire there are the in-filled relicts of two triangular market areas, one defined by King's Square, Shambles and Colliergate, and the other by Ousegate, Coppergate and Pavement (Ramm 1972, 250). As will be demonstrated below, Coppergate at least probably originated shortly after 900 AD, in an area which had been virtually deserted for about 450 years, but there is no evidence to suggest that the Viking-age redevelopment here left large open areas suitable for a market place, and evidence from between Ousegate and Coppergate points to a high density of buildings, and seems to rule out a market place there (Chapter 4.4.c.).

Domesday Book's record that one shire was under the Archbishop's control has prompted speculation that the name Bishophill, applied to two adjacent parish churches within the medieval city south of the Ouse, reflects archiepiscopal ownership there in the pre-Norman period. The name can

be traced back only as far as c. 1271, from which time it gradually supplants an older name, Bichill, first recorded in the 12th/early 13th century, whose etymology has no connection with the word 'bishop' (Palliser 1978, 5). Yet Harvey (1965, passim) has demonstrated that the Archbishop held lands in the Bishophill area at least from 1194, if not earlier, and that he held St Mary Bishophill Junior church (17) c. 1080. This, however, does not prove that the Bishophill area was the Archbishop's shire, and Dickens (1953) has put forward an alternative argument, that the Archbishop's shire was in the area later known as the liberty of St Peters, around the Minster. He also suggested that another shire corresponded with the Walmgate and Fishergate area whence, as Domesday Book records, the Archbishop drew his third share of revenue (ibid, 139-40).

These sometimes contradictory historical conclusions are the totality of our knowledge of York's pre-conquest shires. They can probably be compared to the internal divisions called custodiae which Domesday Book records for Cambridge and Stamford, and the ferlings of Huntingdon. All these, it may be noted, are Danelaw towns, and it is possible that a tenurial break-up caused by the settlement of independent Scandinavian soldiers hastened the evolution of a pattern of local government or representation within these centres, represented in historical terms by the shires, custodiae and ferlings of Domesday Book.

4.3.b. Churches and Parishes

The origins of York's seven pre-conquest shires are obscure, but a little more is known of its pre-conquest churches, from which the medieval parochial system developed in the 11th or 12th centuries (Brooke 1970, 68f; Campbell 1979b, 126).

Leaving aside the cathedral church (Chapter 4.4.b.) the enigmatic dedication to Alma Sophia (Chapter 3.2.d.) and other, dubious references (cf Harrison 1960), the earliest reference to a church in York comes in the Anglo-Saxon Chronicle s.a. 1055, when Earl Siward of Northumbria is recorded as being buried in the Church of St Olaf which he had built at Galmanhoe in York. Galmanhoe and the associated name Galmanlith have recently been confirmed as referring to the vicinity of Bootham and Bootham Bar at the north end of Marygate (Harvey 1976, 13) and as noted earlier

(Chapter 4.1.d.) Earlsburgh, a name derived from the area occupied by the residence of the pre-Norman earls, was synonymous in the 18th century with Marygate, the street where the church of St Olave now stands. There can thus be no doubt that St Olave's is to be equated with Siward's church.

Domesday Book names seven churches in York:- St Cuthbert, All Saints, St Crux, St Mary, St Andrew, St Martin, Holy Trinity. Of these, five can be identified with extant churches with reasonable certainty - St Crux in Pavement and St Cuthbert, Peaseholme Green because they have dedications unique in the city, Holy Trinity (Christ Church), Micklegate because of its known endowment at a later date with lands associated in Domesday Book with the church of this name (VCHY, 374, 377-8), and St Martin, Micklegate, and All Saints, Pavement (French 1961, 497-8), by tracing the descent of the advowson from the Domesday owner. There seems no firm evidence for the Domesday church of St Andrew being that in St Andrewgate as some recent commentators suggest (VCHY, 376), rather than that in Fishergate as others think (Waterman 1959, 66; RCHMY 4, 24). In the case of the church of St Mary, although again there is no historical evidence which permits the particular church mentioned in Domesday Book to be singled out from other medieval churches with the same dedication, the survival of Anglo-Scandinavian stonework at three churches with this dedication, St Mary Bishophill Senior, St Mary Bishophill Junior and St Mary Castlegate, indicates that they are all of pre-Norman origin. One or other of the three is probably the Domesday Book church. A fragmentary cross shaft found in St Mary Bishophill Junior church (17) before 1861 suggests an ecclesiastical presence hereabouts from the 9th century (Roesdahl et al 1981, 45) and the church's tower is considered to be work of the 11th century (Taylor and Taylor 1965, 697-9; Briden forthcoming).

Excavations by L. P. Wenham in 1963-67, within and just beyond the churchyard to the north of the present nave, established a sequence of occupation which started in the Roman period. The first securely dated post-Roman activity (see Chapter 3.2.d. for intervening activity of uncertain date) was the burial of two adults with grave goods. One grave contained a coin minted c. 905-15 (Pirie forthcoming) suggesting that the burial took place in the first half, and perhaps in the first quarter, of the 10th century. The adjacent burial is dated c. 850-950 by jewellery found with it. The

graves of two adolescent girls, excavated nearby, are dated only through their proximity to the two adults, coupled with a rather uncertain stratigraphic association (Wenham and Hall forthcoming). The custom of burial with grave goods, and the style of the ornaments in the second grave, indicate that the two adults at least were either born in Scandinavia or descended from Scandinavian immigrants; it seems less likely that they were non-Scandinavians who had adopted some Scandinavian culture. They were buried on an approximately east-west alignment, contrasting with that of the adjacent church, with its 11th century west tower, which has its principal axis running north-east - south-west, parallel to and presumably influenced by the adjacent Roman features.

There are several possible explanations for the presence of this small, 10th-century cemetery, and for the alignment of its graves. It could be interpreted as being purely Scandinavian and pagan (cf Brøndsted 1936, 217); the evidence for a contemporary church is no more than a single piece of portable sculpture found ex situ. Alternatively, there may have been a contemporary Christian cemetery here, with or without a church, which might have attracted the burial of both Christians and polytheist pagans for reasons of custom or convenience respectively. This uncertainty makes interpretation of the burials' wider significance equivocal. There is, however, a useful comparison to be drawn with discoveries made during excavation in and around the church of St Mary Bishophill Senior (34).

This church, which was demolished in 1963, contained fabric of pre-Norman style (Taylor and Taylor 1965, 699-70; RCHMY 3, 32-33); subsequent excavation revealed that the pre-conquest footings contained pottery reportedly of 11th-century character (it has not proved possible to locate these sherds) and a sculptural fragment dated to the 10th century (RCHMY 3, 30 and 34). This fragment, and twenty others of 10th/11th-century date recovered during demolition, must represent a graveyard here which in part preceded the earliest recorded fabric. Discounting a burial resting on a bed of charcoal, which on typological grounds was thought to be pre-Norman but which evidence from elsewhere in York suggests could equally be of Norman date (Ramm 1976, 45; cf Dawes and Magilton 1980, 10), two fragmentary, disturbed burials were distinguished as underlying the foundations for the pre-Norman church, and another as underlying its precinct

walls (Ramm 1976, fig. 5: note that the north-easternmost burial is incorrectly located there - it is correctly shown in RCHMY 3, fig. 34(1)). Only small quantities of human bone were found in each case, and indeed when a bronze strap-end of early 10th-century date, now considered to belong with the grave under the precinct walls, was first published, it was ascribed to a 'disturbed Romano-British 4th century destruction level' rather than to a grave (Wilson 1965, 154). Both the strap-end and, perhaps, a 16mm square made from two closely plaited strands of silver wire, possibly a dress ornament, found nearby (Ramm 1976, 58) may indicate that there was a burial here accompanied by objects in the Scandinavian manner. There is also the faint possibility that another skeleton which had an iron knife at the waist may be contemporary, although the excavator considered it more likely to be 12th-century or later (ibid, 59). The alignment, positioning and size of the pre-conquest church had clearly been determined to a considerable extent by the remains of a suite of stone-built Roman structures, some parts of which underlay the church while others, still standing to heights of 1.1m in the 12th century, formed part of a churchyard wall (ibid, 45-7). The excavator suggested that the builders of the pre-conquest church had no sight of the Roman walls which underlay or approximated to those of the church because they were covered with soil when the church was erected, and therefore that there must have been an intervening building phase for which no evidence was found. This interpretation does not reflect the published site records, which show the foundations for the pre-conquest church resting directly upon the Roman walls in places (cf Ramm's section 11 on fig. 10, and section 13 on fig. 11).

At both the St Mary Bishophill churches, then, the evidence available at present indicates the existence of an early 10th-century cemetery in which bodies were interred with grave goods in the pagan Scandinavian tradition. These cemeteries perhaps lay beside a contemporary church, although the surviving or excavated structures are dated to the later 10th or 11th century. The in situ remains of Roman buildings helped to determine the layout of these structures, and re-used Roman building stone provided much of the churches' fabric. The sculptured gravestones indicate the burial of people of some means (a considerable number at Bishophill Senior), who can be viewed as the leading parishioners or even patrons of these churches

in the 10th century. Although they may not have been either the first or, in their time, the only occupants of these churchyards, the easily recognised remains of their burials suggest that these two sites at least served surrounding communities which flourished in the 10th century and which constructed or reconstructed their churches before the Norman conquest.

Two further churches adjacent to Micklegate on its eastern side support the view that this was a well-populated area. St Martin's, mentioned in Domesday Book, and with two sculptured fragments of Anglo-Scandinavian date now built into the later medieval tower, was a normal parish church in the Norman and succeeding periods, and presumably served a local community in similar fashion before the conquest. Holy Trinity, Micklegate, a Benedictine Priory church from c. 1090-1100 onwards, continued a tradition of worship on its site which, as Domesday Book shows, had existed before the Norman Conquest with the minster of Christ Church, served by canons (RCHMY 3, 10). For a possible 8th-century foundation here, see Chapter 3.2.d. Christ Church may have carried out wider-ranging ecclesiastical duties than the other, neighbouring churches, but neither its precise function nor its size and layout is known. Even so, the fact that four of the seven parish churches within the medieval walls, with parishes covering three-quarters of the area, were demonstrably in existence by the 11th century, suggests that there was a significant regeneration here in the Anglo-Scandinavian period. Discoveries at the few non-ecclesiastical sites investigated in the area add weight to this suggestion (Chapter 4.4.e.). Surviving sculpture also indicates a pre-conquest origin for other churches. The churchyard of St Denys, Walmgate, is the source of two 10th-century grave covers, and a shaft recovered from Newgate suggests that the nearby St Sampson's church may also have been established then (Pattison 1973, 211). Excavation has recently shown that St Helen-on-the-Walls, Aldwark, may also have had a pre-Norman origin (Magilton 1980, 16ff and 37), although the dating evidence is exiguous; no pre-conquest sculpture was found on the site.

In addition to these thirteen churches there are others, for example, All Saints, Fishergate, St Michael, Spurriergate, and St Saviour, Saviourgate, which are first mentioned in historical sources before 1100 AD, and which might well have been in existence at the Norman conquest. Failure to be recorded in a relatively early source is, of course, not an absolute bar to

a pre-Norman existence - St Mary Bishophill Senior, on architectural and sculptural grounds unquestionably a 10th-century or earlier foundation, is not recorded historically until 1202 (VCHY, 368ff). Nonetheless, negative evidence currently suggests that there were substantial areas within Jorvik which later were individual parishes, but which may have been contained in the pre-Norman period in larger units. There is no unambiguous archaeological evidence for undocumented churches which might have been closed by the 13th century when documentation becomes fuller, and which might have filled some of these gaps at an earlier date although a cemetery represented by coffins and stone sculpture dug up at 37 Parliament Street (35) in the 19th century may represent an otherwise unknown pre-Norman church (Wellbeloved 1881, 67). It is, however, from a part of the city where other pre-conquest churches are known to exist, and even if it did represent a 'lost' church, would not help to balance the irregular distribution of pre-conquest churches throughout the city.

Until archaeological excavation establishes whether or not other York churches have a pre-conquest origin, only the thirteen churches named above can be taken as pre-Norman foundations. The stages by which their parochial boundaries reached the state finally recorded on the 1852 Ordnance Survey map of York are not known. It seems reasonable to suggest that some proto-parochial group of appendant properties was linked to each church from its foundation, but the extant ecclesiastical records do not allow even the later medieval parishes to be reconstructed with confidence.

4.3.c. The Street Plan

Establishing the pedigree of York's streets shares many of the problems which beset a study of its churches. Most are not mentioned in historical sources until the 13th century (Lindkvist 1927: Smith 1937: Palliser 1978), and only Shambles, 'butchers' street', is recorded, under the Latin form in macello, in Domesday Book. However, the positioning of other streets indicates that they have an even earlier origin. Stonegate, Chapter House Street, and Petergate coincide almost exactly with the via praetoria, via decumana and via principalis of the Roman fortress, and although continuity of activity along them from the Roman period cannot be proved, their alignments on the main entrances to the Roman fortress

ensured their survival.

It is a commonplace that the gate element in Stonegate and many other York street names derives from Old Norse gata, 'street', and that these names are among the most obvious Scandinavian influences discernible in York today. This cannot be doubted; but it does not follow that all streets whose names incorporate these elements necessarily have a pre-conquest origin. The street name Newgate, first recorded as late as 1328 (Palliser 1978, 13) suggests that this name element remained current in use well after the Norman conquest.

Topography suggests that streets such as Colliergate and Fossgate on the axis south-eastwards from the fortress area, or Andrewgate, Market Street, Coney Street, Gillygate and Lord Mayor's Walk around the fortress perimeter are all likely to have been in existence in the pre-Norman period, but there is no direct archaeological evidence to confirm this. Indeed, in contrast to towns as diverse and widespread as Lincoln (Perring 1981, passim), Oxford (Hassall 1971, 3, 8), Northampton (Williams 1979, 140-41) and Winchester (Biddle and Hill 1971, 70-78), there has been no opportunity to investigate the origin of any street through archaeological excavation. Only outside 8 Coppergate (36) has the observation of service trenches provided a glimpse below a medieval street, and here, although it is thought that layers of the 11th/12th centuries were penetrated, there was no sign of any metalled road surface.

In the absence of direct observations of York's streets, inferences concerning their development can be drawn from excavations of tenements fronting onto them. At 16-22 Coppergate (4) the major part of four adjacent tenements have been investigated in an area extending from directly behind the modern pavement line. After Roman occupation, which continued at least into the late 4th century, there followed approximately 450 years of abandonment until activity resumed on the site during the second half of the 9th century. This took the form of glass making, rubbish disposal in large pits, and sporadic burials. Slightly later alignments of posts which disregarded the Roman layout may represent property divisions, and there may have been some buildings erected at this time, although this is not clear.

c. 935 the putative property boundaries were realigned by approximately 10^{o}, and four tenements created, with buildings now certainly present

behind the modern street frontage, extending underneath the present pavement beyond the excavated area. This was the start of intensive domestic occupation and manufacturing activity which generated large quantities of organic-rich debris, and led to a rapid rise in ground level, which rose on average 2cm per year throughout the next century. This is in contrast to the later 9th-century activity which hardly affected the ground level.

It cannot be doubted that the four 10th-century tenements fronted on to a street approximating to modern Coppergate, for their buildings are laid out to respect an arc corresponding to the street's present curved frontage. There is no such clear evidence that a street existed there in the later 9th century, and perhaps the intensive activity starting c. 935 may be interpreted as a symptom of urban growth or regeneration, which included the simultaneous creation of a street and the adjacent tenements.

This development of 'Coppergate' (whatever its original name) has further implications for York, for topographically the street is of secondary importance compared to the nearby and nearly parallel Ousegate, which leads directly from the only pre-19th century crossing point of the River Ouse at York. Thus, if Coppergate originated at latest c. 935, it provides a terminus ante quem for the creation of Ousegate and, by extrapolation, for the use of the site of the present Ouse Bridge as a crossing point. This in turn points to Micklegate, the main road which runs in a sweeping curve through York south of the river down to the bridge, being in existence by c. 935.

Although there has been general consent that principal elements in York's street plan originated in the Anglo-Scandinavian period, the Coppergate discoveries and their implications have provided closely dated supporting inferential evidence for the first time. Other sites, not so precisely dated, have nevertheless yielded corroborative evidence. Excavation at 6-8 Pavement (31 revealed 10th century walls and fence lines either at 90^{o} to or parallel to the street, indicating that the street alignment and the tenement layout had not changed in essence since that period (Addyman 1975b, 221). With the hindsight provided by the nearby Coppergate evidence this was only to be expected, as Pavement is a continuation of the merged Ousegate/Coppergate cross-town route.

South of the River Ouse at 58-59 Skeldergate (5) the walls of Viking-age buildings coincided with the alignments of modern property boundaries (Addyman 1976b, 14). The implication once again is that the tenement layout

in this part of Skeldergate was established in the Anglo-Scandinavian period, perhaps by the later 9th century, and that the street itself was in existence at that time. The erection of these structures indicates a major reorganisation of the area, and represents a parallel development to that examined in more detail at 16-22 Coppergate.

At 118-126 Walmgate (14) structures of 9th/10th-century date have been excavated, their main axes either parallel to or at 90° to Walmgate, and thus indicating that there too a street was in existence in the Viking Age (Addyman 1979, 45).

4.4. DISTRIBUTION AND DENSITY OF OCCUPATION

4.4.a. The Palaces

Having examined the skeletal frame of Jorvik, its settlement pattern can now be assessed. It can be stated immediately that in social terms it is at present impossible to define areas of greater or lesser prosperity. Analysis of the material assemblages from the four tenements excavated at 16-22 Coppergate will ultimately allow some assessment of the standard of living in that area to be made, but cross-town comparisons must await the recovery of similar large, well-stratified groups of material.

At the highest level, the royal and aristocratic residences in the city have not been identified archaeologically, although two sites, King's Court/ King's Square and Earlsburgh, are indicated by place-name evidence. Both of these, however, are likely to post-date a hypothetical, earlier royal palace at the heart of the Roman fortress, centred on the substantial standing remains of the Roman principia, which survived in good repair into the 9th century (Phillips 1975, 24). This prestigious structure may have been taken over by the Anglian kings of Northumbria as their private property and used as a palace; assuming that the present Minster does approximate to the site of the church where King Edwin was baptized in 627, this hypothesis explains the siting of that church, which would have been essentially a royal baptistery (Chapter 3.2.a.).

A re-siting of the palace might have followed the destruction of the principia and the name Kuningesgard, which is first recorded c. 1270 (Palliser 1978, 8) relates to the modern King's Court/King's Square, and suggests

that the royal palace may have been re-sited there, perhaps based on the adjacent porta principalis sinistra. Such a move could perhaps be interpreted as showing a desire to use another substantial, stone-built Roman structure as the strong point of a palace, a desire not unreasonable in the more troubled times of the 9th century; if it occurred during the Anglo-Scandinavian period, it might also have been influenced by a political desire to demonstrate the separate nature of royal and archiepiscopal power. As discussed above (Chapter 4.1.f.) the archaeological evidence quoted in support of the palace theory may be interpreted in a number of ways, and is certainly far from proving the hypothesis. The porta principalis sinistra has not been excavated, but work some 25m to the south-west (28) demonstrated that a sunken-floored timber building of 10th/11th-century date lay within 1m of the fortress wall's inner face, and that beyond the wall there was a sequence of contemporary occupation levels (Stead 1968). Neither area revealed anything obviously to be associated with a palace.

Earlsburgh, on the opposite side of the fortress, has been identified as the location of the Anglo-Scandinavian earls' residence (Chapter 4.1.d.; 4.3.b.). Excavations undertaken around St Mary's Abbey by Willmot in the early 1950s (37) produced a small collection of metalwork and coins of the 9th-11th centuries, but no contemporary structures were reported (Willmot 1952-55; Wilson 1964, 115; Cramp 1967, frontispiece; Pirie 1975, xxxix). A single sherd of mid-Saxon pottery from the site, found unstratified earlier in the century, may indicate activity here in the pre-Viking era (Stead 1958a).

4.4.b. The Roman Fortress Area

Whether or not Edwin's baptistery was sited in the lee of the Roman principia, there was a church at the centre of the fortress by the later 7th or early 8th century, as unpublished finds of sculpture demonstrate (Chapter 3.2.a.). This church, metropolitan in rank from 735, apparently existed throughout the Anglo-Scandinavian period, as tombstones from the 10th/11th century cemetery found in the Minster excavations suggest (Lang 1978, 151-52). Even before there was this supporting sculptural evidence for an Anglo- Scandinavian minster in this area, not only had its existence been generally accepted but its presence and the extent of accompanying land-holding had been suggested as an explanation of the paucity of Anglo-Scandinavian finds from within the

Roman fortress. Waterman (1959, 69) suggested that the minster church had paramount interests over the area, and that there was a corresponding lack of Anglo-Scandinavian domestic or industrial activity. He supported this by pointing out the apparent absence of pre-conquest churches within the fortress, and by citing the meagre total of Anglo-Scandinavian finds from the area. Aware that distribution maps may be misleading, he contrasted the paucity of Anglo-Scandinavian finds with the relatively substantial quantity of 13th/15th-century pottery from the same area, and concluded that there must truly have been a different level of occupation inside the fortress in the two periods. A similar comparison of data for the colonia area suggested to him that the few discoveries of Anglo-Scandinavian material there did not necessarily mirror sparse occupation, for there was equally little later medieval pottery despite a well-attested intensity of later medieval occupation.

This view of the fortress area was followed by Radley who speculated that a growth of ecclesiastical power might have precluded commercial development on a large scale within the fortress, although he also recognised that archaeologically the fortress was an unknown quantity (Radley 1972a, 39, 54). His paper is also noteworthy as that which, above all others, focussed attention on the Pavement/Ousegate/Clifford Street area as a manufacturing quarter of Anglo-Scandinavian York, by drawing together records of past discoveries and adding to them his own observations on building sites in the area.

Ramm (1972, 248) concurred that an absence of 'Danish' finds indicated that most of the fortress area presumably belonged to the Minster, but pointed to 'Danish' discoveries in the south-east third of the fortress. These he linked with others which came from the adjacent area outside the fortress, where he suggested that there was a separate Danish defended enclave. The evidence for this 'Danish enclave' in terms of a defended area has already been discussed above (Chapter 4.1.g.) and its existence disproved. Furthermore, the thesis that there was a specifically 'Danish' enclave, defended or not, cannot be substantiated by reference to the excavated material assemblages which, while containing a small percentage of objects which would not appear intrusive if found on a Scandinavian site, consist largely of English-derived or Anglo-Scandinavian types.

The suggestion that the south-east portion of the fortress and the area

beyond was the commercial heart of the Anglo-Scandinavian town, and that there was no commercial activity over much of the fortress, requires critical examination. The preponderance of finds from the area within and around the south corner of the fortress can be ascribed to two causes. Firstly, it is this area which has been most altered by redevelopment in the 19th and 20th centuries, and has provided most opportunities for observation and, more recently, archaeological excavation, of the pre-Norman levels. Secondly, these sites have been particularly fruitful, thanks to both the great depth of stratigraphy which has accumulated (up to 9m in places) and to the waterlogged conditions that prevail in this area and which preserve organic remains including large structural timbers not overlooked easily even in the archaeologically difficult circumstances of contractors' excavations (Addyman 1975b, fig. 11). In turn these two features may be linked to the topography of the natural, pre-Roman ground surface which, from a relatively even plateau that extends over most of the fortress area, slopes away markedly to its south-east towards the River Foss (Kenward et al 1978, fig. 40). This slope has been levelled out by the rebuilding activities and rubbish dumping of successive generations, who thus created a rich and extensive sequence of archaeological deposits.

This contrasts with the majority of the fortress area, where the archaeological stratification averages 3-4m in total depth, and where waterlogging, if present at all, penetrates only the earliest levels. This in itself could be taken to account for the absence of waterlogged Viking-age organic remains, but does not account for the general absence of other classes of Anglo-Scandinavian artefacts such as metalwork, which normally survive well in York, even in dry soils. Waterman's conclusions about the limited nature of activity here, based on his comparison with later medieval pottery distribution, seemed an uncontestable argument. Within the last decade, however, a series of excavations bracketing the fortress has shown that in widely separated areas the lack of Anglo-Scandinavian objects is due to an extensive soil clearance which took place c. 1200 leaving deposits of the early 13th century resting directly upon late Roman-Anglian remains. This phenomenon, whose cause is not known, has been noted in the praetentura of the fortress at 17 Davygate (38) and below 9 Blake Street (12) (Addyman 1975a, 32) and has also been recorded in the retentura adjacent to 1-5 Aldwark (25) (Addyman 1976a, 36).

At 9 Blake Street, one pit-base of Anglo-Scandinavian date had been cut down into Roman levels and thus survived the earth moving. Among its contents were fragments of a clay mould used in the manufacture of a trefoil brooch, a type commonly found in 9th and 10th century Scandinavian graves (MacGregor 1978, fig. 24). Nearby, in Davygate, there may have been glass-working in the Viking Age (Chapter 4.5.d.). These discoveries suggest that there could have been industrial and domestic activity at this period in parts of the Roman fortress which have previously been conspicuously blank on distribution maps of Anglo-Scandinavian material. Considered in conjunction with the fact that approximately one quarter of the fortress is archaeologically sealed by the Dean's Park, and that there is little opportunity for archaeological excavation or even observation elsewhere in the fortress because of the high density of preserved medieval buildings, the paucity of Anglo-Scandinavian material can no longer be taken as proving lack of activity here during this period. Although church buildings and their surrounds occupied an area in the centre of the fortress, it seems possible that the majority of the fortress area was inhabited and, while the evidence is scanty, there was at least one workshop producing jewellery in operation here. This is the only unequivocal evidence for manufacturing industries within the fortress, but given the negative nature of the evidence, the possibility that there were others cannot be ignored. It therefore seems inappropriate to call the Ousegate/Coppergate/Pavement area 'the commercial heart of Viking Age York' (particularly when, as demonstrated below (Chapter 4.5.), some of the evidence usually quoted in support of this assertion is wrongly adduced)- rather, it seems possible that commercial activities were widely spread within that part of Jorvik north of the River Ouse and west of the River Foss. For other areas of the city, the evidence is not sufficient to be the basis of any conclusion.

4.4.c. Between the Roman Fortress and the River Foss

The Ousegate/Coppergate/Pavement area is the only quarter of Jorvik where it is possible to trace the development of tenements and to gain an impression of buildings. Excavation at 16-22 Coppergate (4) has revealed long, narrow tenements, 5.30m wide at the frontage, extending from Coppergate down towards the bank of the River Foss. They were laid out c. 935, and a succession of variants on the post and wattle type of structure was erected within them over the next half century (Hall 1982, 234-38). These

structures, one at the Coppergate end of each tenement, measured 3.50m - 4m in width and over 8.20m in length. Each had a large, central, rectangular hearth measuring 1.20m x 1.80m. The areas behind these buildings were occupied by rubbish-pits, cess-pits and wells.

c. 973 these structures were rebuilt as sunken-featured structures, their floors as much as 1.75m below the surrounding ground surface. They were constructed of rebated foundation beams, oak posts and horizontal planks. On two of the tenements two ranks of these structures stood at the street frontage. The buildings measured 3.20m - 4.40m in width, from 7.50m or 7.60m when complete to over 8.20m in length, and they were preserved for up to 1.80m above their foundation beams. Although it is not clear how they should be reconstructed above ground level, they belong to a well-defined late pre-conquest urban building tradition (Hall 1984, 73-75).

The interpretation of these remains as buildings prompts a reassessment of structures recorded between 5-7 Coppergate and 25-27 High Ousegate (1), just above the 'stockade' noted above (Chapter 4.1.g.; Benson 1902). These structures incorporated a series of foundation beams enclosing and overlying three rectangular 'pits' each measuring 6.95m x 3m x 1m deep. The 'pits' had rebated beams at their bases,. and timbers defining their sides, although these are not described in detail.

Benson's conclusion that these were tan-pits, reiterated in his report on discoveries made in 1906 directly across the road at 2-6 Coppergate (39) (Benson 1906, 72), has since been accepted at face value by Richardson (1959, 60), Radley (1972a, 43), who commented that the excavation report leaves much to be desired, Ramm (1972, 248), the Royal Commission on Historical Monuments (RCHMY 2, 8; RCHMY 4, xxxii) and MacGregor (1978, 51). It has also become ingrained in further-ranging surveys of pre-conquest industry (e.g. Wilson 1976b, 274). Radley (1972a, 43), who made the most detailed critique of Benson's record previously attempted, nevertheless reaffirmed that the symmetrical relationship between the timber foundation beams and the pits below implies that they were components in a single entity, and stated that it is 'the only reasonable (sic) complete Danish industrial building so far discovered in York'.

Any reappraisal of Benson's conclusions must start by considering what evidence there is that the pits and the overlying timber structures are

really integral. In the upper structure cross-beams subdivide the main range into rooms and in doing so traverse all three pits. Apparently the same size as the beams which formed the long axis of the range and presumably carried the weight of the building, their scantling suggests that they too served a primarily structural purpose. Radley (1972a, 43) attempted to give them a functional connection with the pits below by suggesting that they were part of a system of racks for drying and hanging skins, but this is entirely hypothetical and they seem unnecessarily large for that purpose alone. If they are accepted as being purely structural, as inference suggests, it may seem surprising that the rooms into which they divided the range do not correspond with the pits below. This would present less of a problem if traces of a wooden floor covering the pits had been recognised, either in the form of planking or joists, or through signs that such members were originally attached to the foundation beams. Transverse beams overlying what may have been tan-pits have been found in a probably 11th century context at Winchester, and it has been suggested that they either supported a planked floor or served as narrow walkways (Biddle 1975a, 316-7). Benson, however, apparently recognised no signs of such a floor, and the asymmetrical layout of the pits and superimposed rooms remains problematic.

Discoveries at 16-22 Coppergate suggest that the resolution of this problem may be to interpret the upper structure in isolation from the features below. In only one case were buildings found there above the sunken-floored structures, as overlying later deposits had been destroyed elsewhere by modern intrusion, but in this single instance the remains included squared foundation beams, lying parallel to but outside the foundations of the sunken building below - in other words, disposed very much like the timbers on two levels which Benson recorded. In this case, however, it was clear that two distinct buildings were represented, and this also seems a preferable interpretation of Benson's observations.

Although it has hitherto received scant attention, the nature of this upper structure deserves some comment. It varies from other examples previously discovered in having piles supporting the sill-beams, but it belongs to a tradition of building now well known in York. Foundation beams of this sort have been seen on several excavation sites in York, including 68 Low Petergate (Wenham 1972, 76, misnumbered as 65 in note 1) where a

12th-century date seems most likely, 13 Parliament Street (Hall and Tolhurst forthcoming) where again a 12th-century date is indicated, and 16-22 Coppergate, in a late 10th-century context. They also occur in pre-Norman contexts at 58-59 Skeldergate (Bishop 1976, 14).

What distinguishes Benson's upper structure, however, is its exceptional size. The foundation beams on Benson's plan define a building which extended as a unit from a frontage below that of present-day Coppergate to another close to that of High Ousegate, a total length of 27.10m. Of this length, the 8.50m nearest Coppergate are shown only in dotted line and perhaps were only hypothesis on Benson's part, leaving a structure 18.60m long marked more definitively. Even this smaller unit would be by far the longest building of Anglo-Scandinavian or Anglo-Norman date yet discovered in York. Indeed, there are few buildings of equal or greater size known from any English town in these periods, although building G and the cumulative structure C/D/E from the 1964 excavations at Thetford, Norfolk, do exceed it (Davison 1967, 191-92). The width of the rooms enclosing the pits is 5.30m, a dimension which is close to the average width of 5.50m for medieval and pre-conquest tenements which Radley (1972a, 45) suggested for the High Ousegate area, and virtually identical to that recorded for each of two later 10th century properties in recent excavations at 16-22 Coppergate.

The upper structure planned by Benson is also unusual in its layout, since the range containing the pits is shown as integral with another range of at least two rooms to its north-east. The two ranges were apparently separated by a passage 1.20m wide, which may have been closed at its north-west end where a foundation beam ran continuously between them. If the two ranges were integrally connected, it may mean that they formed part of a single structure extending over an amalgamation of two earlier tenements; alternatively they may have been separate buildings erected by one builder in a single operation, when private access to one or both from the street was provided for by a passage. The symmetrical layout of the most north-westerly rooms in each range may suggest either that a single builder was involved, or that a standard plan was adhered to. A further hint of a well-regulated layout is that another parallel passageway, just over .90m in width, seems indicated by a length of foundation beam to the south-west of the central part of the main range, although it is not known if passage and range were integral.

There must, however, be some reservations about the record which Benson made; the conditions which must necessarily have prevailed on a damp, muddy building site in autumn and winter, when approximately 1260m^3 of soil were dug out by hand within five months, are likely to have affected the quality of his observations and explain why his published record, both written and drawn, is extremely brief. Anomalous among the admittedly limited number of approximately contemporary structures excavated in York, the building cannot be cited as a well-authenticated Anglo-Scandinavian or Anglo-Norman structure, and should be treated with caution.

The theory that the underlying features were part of a tannery had been prompted by their interpretation as pits, and the deposits found associated with them may have bolstered the idea. A .13m thick deposit of lime in the pit nearest Coppergate abutted the foundation beam nearest the street and rose in level to just above the top of the opposite foundation beam. The deposit is thus related stratigraphically to the structure, either as a basal layer, or one deposited relatively early in the process of infilling. Radley (1972a, 51) hypothesised that the lime had been slaked and had acted as a depilator on skins stored in the pit: although Benson did not say so he may have thought the same, as the lime is the only deposit found in any of the structures which is definitely linked with tanning on other sites. Benson's identification cannot, of course, be checked, and it is conceivable, for example, that without careful examination a deposit of pure ash might have been described as lime. If there was indeed lime at the level of the beams, it could have been deposited to form a floor:- crushed mortar, although not so thick or so extensive, performed this role in a comparable structure at 16-22 Coppergate.

The deposit in the central pit which Benson noted was a .23m thick layer of yellow sand. Radley (ibid, 51) thought that this might have resulted from the process of soaking skins. This is difficult to accept since there is no reason why the soaking of animal hides should produce such a deposit. In any case the layer is clearly shown as above the level of the foundation beams, and is therefore not likely to have been associated with the structure's initial use, but rather to have been a layer of secondary infill.

The third pit had below its south-eastern foundation beam a .30m thick layer of puddled clay which ran the length of the pit. In this position it

clearly pre-dates the structure, and Radley's suggestion that it too could be linked with the washing of skins (ibid, 51) lacks a supporting explanation. In summary, it seems that neither the nature nor stratigraphical position of these three deposits supports the tannery hypothesis.

In reconsidering the tan-pit explanation of these three features which Benson proposed, another point which deserves attention is their supposed siting on the frontages of two of the principal thoroughfares of Jorvik. Usually the process of tanning, with its associated smells of putrefaction, has been found relegated to open, backyard areas (cf Biddle 1975a, 316-7), and comparable instances where tan-pits have been found below contemporary structures are unknown to the writer.

It can be seen from this discussion that there is no evidence that Benson's 'pits' were connected in any way with a tannery, and reason to doubt the plausibility of such a suggestion. Once divorced from the super-imposed structure, however, they can be recognised as closely similar in both size and constructional detail to the sunken-featured buildings excavated at 16-22 Coppergate, and it is suggested that they were indeed further examples of that building type.

Turning to the dating of the structural remains, Benson did not (and presumably could not)specify the precise relationships between the structures and the various artefacts recovered from the site, which ranged in date from Roman to post-medieval. The majority of the objects would not be out of place in an Anglo-Scandinavian or Anglo-Norman context, like many of the finds discovered twenty years earlier in Clifford Street (Waterman 1959 passim). These had been described as 'Danish' in the Yorkshire Philosophical Society's Museum (Benson 1902, 67), and it was a comparison with this Clifford Street material which led Benson to date his discoveries to the Danish period also, a dating which has been generally accepted. His finds, however, can do no more than suggest a broad Anglo-Scandinavian/Anglo-Norman chronological horizon for these features, and attempts to date the buildings must depend upon comparisons of their structure with those of other buildings excavated more scientifically. As outlined above, buildings with similar substantial squared foundation beams not sunk into the ground have been uncovered in York in contexts ranging from the pre-Norman period to the 12th century. Sunken buildings like those observed by Benson have, however, been recognised

on only two sites; at 1-2 King's Court, where one was dated on minimal pottery evidence to the 10th/11th centuries (Stead 1968, 154), and at 16-22 Coppergate where they are firmly dated dendrochronologically to the period c. 973. Given these few dates, the suggestion of RCHMY 4 xxxii that the tan-pits (meaning the whole structural complex) may be assigned to the later 10th or 11th century seems a reasonable estimate, although the slender nature of the evidence should be fully appreciated.

As noted below (Chapter 4.5.) the structures at 16-22 Coppergate were occupied by craftsmen engaged in various occupations. It is not known what the buildings between 5-7 Coppergate and 25-27 High Ousegate were used for, but it seems probable that they too were the houses and workshops of craftsmen. While the remains suggest that structures of these sizes and types were the norm for the industrial inhabitants of this sector of the town, buildings elsewhere in Jorvik may have been different in scale, layout and function, but other areas have yet to be investigated on an appropriate scale.

4.4.d. East of the River Foss

More than twenty years on, knowledge of the Walmgate area in the Anglo-Scandinavian period has increased little beyond what Waterman recorded (1959, 68-9). He listed a coin hoard of c. 915 found by chance opposite St Denys's church in 1856 (Pirie 1975, xxxiii) from which only a handful of coins survive, and a group of objects unearthed opposite St Margaret's Church in 1840. These included 'bone combs, pins, pieces of querns and many piles and timbers' (Raine 1955, 100, presumably quoting a source which has not been identified), but none of these can now be located, and their attribution to the period can be accepted only with reservation.

The only scientifically excavated material from the area has recently been discovered in limited trenching at 118-126 Walmgate (14) (Addyman 1979, 45). There was evidence to suggest occupation here in the late 9th or 10th century, with structures whose main axes were either parallel or at 90° to Walmgate, implying that the street was already in existence. No complete buildings could be recognised, but elements including a substantial bedding trench and post-holes indicate that on this site, presumably near the periphery of Jorvik, buildings of a type different from those excavated in the Coppergate area were erected. There is, however, no obvious indication

of the function of these buildings, and no evidence for the nature of domestic or industrial activity.

The three sites discussed so far are all located at the Walmgate street frontage, and St Denys's churchyard, also fronting onto Walmgate, has been noted as the findspot of two pre-conquest grave-covers (Chapter 4.3.b.). Superficially these sparse discoveries suggest that Walmgate was merely a strip development on an approach to a crossing point of the River Foss, but this assumption can be challenged. There have been no opportunities to examine archaeologically the 'backlands' to either side of Walmgate, and this may largely explain the absence of finds. A watching brief at Leadmill Lane (40) in the southern corner of the Walmgate area has, however, produced evidence to suggest that activity may have been taking place here before the Norman conquest. The debris of antler comb-making which was retrieved from a rubbish pit exposed during building works (Addyman 1975b, 217; MacGregor 1982, 72ff) is known from the Anglo-Scandinavian period, but it was also current in the later 11th and early 12th centuries. The associated pottery from Leadmill Lane can also be dated only to a broad 10th/early 12th-century span, and there must therefore be some doubt about the precise date of the comb-making activity.

In summary, the occasional insights of the last decades have demonstrated that Walmgate itself has an origin at least as far back as the 10th century, and that it had a developed frontage (although not of the type seen in the city's central area) at a point some 400m from the crossing point of the Foss and the city's nucleus. There may too have been industrial activity of an environmentally unexceptionable nature well away from the street, suggesting that its frontages were completely built-up, although this is not certain. Despite the problems of interpretation, and whether within a walled area or not, these traces of occupation and activity at least emphasise the magnetic qualities which York exercised as a population centre in the Anglo-Scandinavian period, and suggest that this area west of the Foss was fully occupied, although not perhaps with the same density of buildings as in the city centre across the River Foss.

4.4.e. South of the River Ouse

Across the River Ouse, excavations published or undertaken during the last decade have demonstrated Anglo-Scandinavian occupation or activity at several sites within the putative colonia area and the medieval walled town. Most of the new information relates to the Bishophill area which lies south-east of Micklegate, the main thoroughfare leading to the Ouse crossing.

In excavations in 1973-74 immediately beside the medieval church-yard of St Mary Bishophill Senior (16), evidence for activity in the Anglo-Scandinavian period was restricted because of intensive later disturbance (Carver 1976). Nonetheless, it was clear that whatever remains of an extensive Roman stone building which had survived to this time were robbed out in the 9th-11th centuries. Furthermore, pottery of this period and a penny of Edgar (959-75) were found in the backfill of a series of pits which were identified over all parts of the site. These discoveries indicate occupation close by, and if buildings were not constructed within the area excavated - a moot point, given the disturbed nature of the stratigraphy - they may well have been sited at the street frontage of Bishophill Senior, an area not excavated.

Further down the Ouse terrace excavation in 1974-75 at 58-59 Skeldergate (5) also produced occupation debris of the 9th-11th century, but here firmly associated with buildings both near the river front and 17m further back up the slope (Bishop 1976). The possibility of Anglian occupation or activity on this site has already been mentioned (Chapter 3.2.d.) but the excavated evidence indicates an intensification of occupation in the Anglo-Scandinavian era, including the establishment of property boundaries (Chapter 4.3.c.).

These sites are the only ones excavated in the Bishophill area, but both point to occupation in the 9th-11th centuries on a scale not seen since the late Roman period. It is not known whether this pattern holds true for that part of the colonia west of Micklegate, which has been examined archaeologically on two recent occasions. A single trench at 5 Rougier Street (6) revealed only shallow deposits of 9th/11th-century date, with few associated objects and little contemporary pottery (Addyman 1981, 50-51). More extensive trenches at the corner of Tanner Row and Rougier Street (41) revealed a similar picture in terms of the paucity of Viking-age artefacts and stratification; here, however, a Roman stone structure had been dis-

mantled to its foundations in the 10th or 11th century (Addyman 1983, 41). Although both excavations were limited in scale, and further analyses of the results is required, they suggest that the two sites, which lay beside the line of the main Roman road to the Ouse bridgehead, were not intensively occupied in the Anglo-Scandinavian period, partly, perhaps, because of the establishment of Micklegate and a new river crossing 200m downstream. It is possible, however, that Viking-age deposits had been truncated by later disturbances, or that these small areas have not given a true picture of the level of occupation in the vicinity. Furthermore, there has been no opportunity to excavate the up-slope areas further from the river, and for all of these reasons it is premature to claim that the western half of the colonia area was of little importance at this time.

4.5. MANUFACTURING IN JORVIK

4.5.a. Introduction

The wealth of Jorvik, demonstrated in the considerable output from its mints, shows that for much of the Viking Age the city was second in economic importance only to London (Hill 1978, fig.9.1). The city was at once a stimulus to and a base for manufacturing industries, and supplied the region and areas beyond with locally-produced and imported goods. The archaeological evidence for Jorvik's manufacturing and trading activities has recently been reviewed by MacGregor (1978). His paper followed the convention, which can be traced back through Waterman's well-known 'Late Saxon, Viking and Early Medieval Finds from York' (1959) ultimately to the Yorkshire Museum's Handbook (Wellbeloved 1881), of listing the single finds and particularly the assemblages of objects which have been found by chance, unstratified, during non-archaeological excavations, and of adding to them material recovered in controlled excavations.

Through frequent citing and repetition many of the unstratified objects have acquired an unwarranted but hitherto unquestioned acceptance as being 'Viking Age' in date. With continuing advances in typological and dating studies, some of them can now be identified as types whose currency continued after the Norman conquest and they are therefore of only doubtful relevance here. Others more clearly post-date the conquest, since their

occurrence elsewhere is always in a later context. It is time, therefore, for a critical reappraisal of the evidence for York's crafts and trades, which will be discussed generically.

In introduction, a word of caution about the interpretation of street-name evidence may be sounded; although their name forms may be of Old Norse or Old English types, of all the many York street-names which include elements naming crafts and industries, only Shambles (in macello, 'fleshmarket') can be assumed to refer to activities there in the Anglo-Scandinavian period because it is mentioned in Domesday Book. Even in the single case where archaeological evidence suggests the presence of a group of eponymous craftsmen in the pre-Norman period, the turners of 10th-century Coppergate (Chapter 4.5.i.), their activities seem to be linked to a single property, with neighbours engaged in different occupations. The name Coppergate has been a source of considerable confusion; recent study has demonstrated that it is not derived from Old Norse or Old English words for copper, as has been suggested (Benson 1902, 66; Palliser 1978, 8), but rather is connected with the Old Norse word for cup-maker (Jensen, forthcoming). The street names are thus no sure guide to the range of crafts practised in Jorvik, or to concentrations of particular groups of craftsmen at that time. This conclusion contrasts with evidence from 11th-century Winchester, where timber-lined pits excavated on two adjacent tenements in Tanner Street have been interpreted as tan-pits, and indicate an agglomeration of tanners in the street as the name suggests (Biddle and Keene 1976, 434).

4.5.b. Iron Working

Both excavated and chance finds in the city have brought to light a considerable variety of metal objects of personal, domestic, industrial and military types. Many of these were probably made in York, but the evidence for blacksmithing and whitesmithing is limited. Nonetheless, metalworking remains the most frequently attested of all the contemporary industries.

Until recently there has been very little evidence for iron working. Iron-smelting slag discovered at 12 Feasegate (30) was from an undated context which stratigraphically pre-dated the earliest Anglo-Scandinavian

activity and so could well be Roman (Radley 1972a, 48; Stead 1958b, 519 and fig. 2). The evidential value of a single fragment of vitrified furnace lining recovered by Radley (1972a, 49) at High Ousegate/1-3 Parliament Street (42) is difficult to assess; firstly because although collected at the same time as a quantity of pre-conquest pottery, it is effectively unstratified and secondly because, although it was the only evidence for iron-working found on this 186m^2 site, the circumstances of recovery might account for this since they allowed only a tiny quantity of artefacts to be rescued. These impond-erables require that the piece be disregarded as proof of pre-conquest iron-working here, although such activity there remains a possibility.

Excavations at 16-22 Coppergate (4) have produced over 100kg of iron slag from both smelting and smithing, including some pieces which have solidified with one hemispherical face, and thus seem to be furnace bottoms. These pieces were not in situ, however, and no iron-smelting furnaces were identified. Since they were found with coin-dies and other objects associated with coin production, these ferrous residues may indicate that among other objects, iron coin dies were manufactured and engraved here, although blanks thought to be for knives and keys indicate more clearly some of the products of this workshop.

4.5.c. Non-ferrous Metalworking: Gold, Silver, Copper and Lead Alloys

These are discussed together because discoveries not only in York but in Lincoln, Northampton and elsewhere show that all could be produced within a single workshop. Before presenting the evidence, one frequently cited discovery of copper strips, made at 5-7 Coppergate in 1902, can be dismissed from the reckoning here - this material, which does not survive, was completely unstratified, and cannot be attributed to the Anglo-Scandinavian period.

Evidence for non-ferrous metalworking has come from two sites in York. At 9 Blake Street (12) within the area of the Roman fortress, a pit-base cut into earlier levels contained fragments of a clay mould for casting a trefoil brooch, and also sherds of crucibles upon which traces of zinc were detected. The presumption is that there was a workshop close by (MacGregor 1978, 42 and fig. 24).

At 16-22 Coppergate at least two adjacent tenements were occupied by metalsmiths in the years c. 935-73. Abundant crucible fragments with metallic residues adhering indicate that they were working in gold, silver and copper, and half-finished objects and a number of pieces of run-off show that lead was also worked. The half-finished objects are items of jewellery - a pendant and a bow brooch - and taken in conjunction with the relatively large number of other items of contemporary lead-alloy jewellery from the site (Roesdahl et al (eds.) 1981, 107, 118, passim) they suggest that a principal component of the workshops' output was lower-quality jewellery. The evidence for gold and silver working also argues for the manufacture of more expensive pieces.

In addition to their other output, these workshops also housed one or more stages in the production of coins. Three lead 'trial pieces' bearing impressions of pristine coin dies, and two iron coin dies, one of which is known to have been issued, point to this being at least a die-maker's workshop, and taking account of the large proportion of the crucibles which contain traces of silver, it is also likely that coins were struck here in the period c. 935-73 (Pirie 1985). This licensed specialisation within a wider metal-working background is in accordance with such literary evidence as there is for minting in pre-Norman and Norman Winchester (Barlow et al 1976, 396-422); the siting of a moneyer's workshop on a main street such as Coppergate is also paralleled by Winchester's 11th- and 12th-century High Street.

In addition to the specific evidence discussed above, discoveries of crucibles at other sites, previously overlooked in reviews of this evidence, also indicate that metalworking of some description was in progress, although in the absence of analytical work the metals concerned have not been identified. (It is also possible, but less likely, that these crucibles were used in glass-making - cf Bayley 1982, 488.) These finds include a single Stamford-ware crucible from 1-3 Parliament Street (42) found in the same unstratified group as all the other, pre-conquest, forms recovered there (Radley 1972a, fig. 11, 6; Kilmurry 1980, 288-9); two Stamford-ware crucibles excavated at 6-8 Pavement (31) from a layer with a single radio-carbon determination of AD $960^{+}-100$ (Holdsworth 1978, 5, 23 and fig. 7 83/4); a single 'grey ware' crucible (probably Stamford ware) from

Coppergate/Castlegate (Waterman 1959, 100 and fig. 24, 8), and an example in an unidentified ware but of a typically Viking-age form, recovered unstratified from Parliament Street (Bayley 1982, 493, described simply as 'unstratified York').

Other relevant vessel-forms have also been discovered and then overlooked. A rim fragment coated internally and externally with a thick lustrous greenish-brown glaze, also found at 6-8 Pavement, has been described as belonging to a bowl or cup but is perhaps from a 'heating-tray', like those from 16-22 Coppergate in York, or Flaxengate in Lincoln; these vessels are also thought to have been used in copper-alloy or silver working. It is from a 10th-century context (Holdsworth 1978, 23 and fig. 7, 88; Bayley 1982, 492 and fig. 3). A single, slightly larger vessel from 'Bishophill' may be either a crucible or, perhaps, a lamp (Kilmurry 1980, 18, 'Form 19'). Found in 1882, unstratified, it was associated with a hoard of approximately 600 Anglo-Saxon pennies deposited c. 1065/6 (Waterman 1959, 102 and fig. 24.18; Dolley 1971, passim). Another similar vessel was found unstratified at 1-3 King's Square (28) (Wenham 1968, fig. 1, no. 36).

It is difficult to interpret these finds, which are either without an archaeological context or come from excavations severely limited in scale. Radley's comment (1972a, 50) that the evidence for metalworking is concentrated around Ousegate and along the River Ouse under Clifford Street still seems correct - but since this is true also of the evidence for most aspects of Anglo-Scandinavian York, it would be premature to suggest that this was a deliberate zoning of a group of activities which may have been widely practised throughout the city, as the brooch mould from 9 Blake Street indicates. Recognition of the possible heating-tray from 6-8 Pavement, a site where leather-working evidence was predominant in the 10th-century levels, may suggest either that the occupants were more versatile craftsmen than appears from a superficial assessment of the evidence, or that resident metalworkers operating over a number of decades from a permanent workshop did not have a monopoly in their products and that itinerant metalworkers played a part in the economy of the 10th-century city.

4.5.d. Glass

Until recently evidence for glass manufacturing in York was confined to two sites. The 1884 unstratified discoveries in Clifford Street, also noted in the discussion of amber working (Chapter 4.5.h.) included over 70 complete

or broken annular beads which, with varying degrees of certainty, have been ascribed to the Viking Age (MacGregor 1978, 42; Waterman 1959, 96; Radley 1972a, 49). The 1951 discoveries in 7-13 Pavement (43), again unstratified, included some 230 beads, mostly broken (MacGregor 1978, 42; Waterman 1959, 104 and fig. 25). Lobed, annular, tubular, biconical and cylindrical types were found. Since 1951 one particular group, the opaque, black cylindrical beads, have been paralleled in finds made in 1975 during the observation of building works below 34 Shambles (44), some 50m from the Pavement site. Over 100 cylindrical beads and one lobed bead were collected, together with pottery of 12th-century types. This group, like the others, is essentially unstratified, but the pottery found among the beads suggests that these types were still being manufactured a century after the Norman conquest. Thus the similar beads from Pavement may not warrant inclusion in the corpus of evidence for pre-Norman manufacturing.

Evidence for two different types of glass-working has recently been recovered at 16-22 Coppergate. A quantity of high lead glasses (60-70% by weight lead oxide) in the form of beads and rings, excavated in early 10th-century contexts, is supplemented by a few fragments of crucibles containing similar glass which points to the making of these lead glasses on the site (Bayley 1982, 493). This activity had been preceded by the distinctly different process of manufacturing alkali glass, suitable for making windows or vessels. A cache of some 30-40 pieces of glass including Roman gaming counters and vessel fragments, together with glass trails and droplets, was found at the edge of an area of burnt soil surrounding a kiln or oven base. This consisted of re-used Roman tiles, and was defined on two (or perhaps three) sides by shallow trenches which may have held the foundations of a domed superstructure. Archaeomagnetic determinations calibrated from samples taken from the tile base indicate that the kiln was in use c. 860^{+}-20. The glass cache is interpreted as cullet, including both glass of Roman origin and debris from recent glass-working, and its presence suggests that the kiln itself may have been used in the glass-making.

Within a radius of approximately 6m from the kiln, several dozen sherds of wheel-turned, wide-mouthed jars were found, their interiors coated with a crazed transparent glaze. Some examples, however, had a layer of 'glaze' almost 1cm thick at their base; under analysis this has proved to be

an alkali glass. Simultaneously it has been realised that vitrified concretions adhering to the rims and external surfaces of many of these sherds are residues of the batch used to produce the glass. Although the connection is not precise, it seems at least probable that the kiln base and these sherds are jointly evidence for a relatively short-lived production of glass here, either very late in the Anglian period or early in the Viking Age.

Manufacturing glass from batch is exceptional in pre-conquest England, and the vessels used to hold the molten glass are also unusual in their form, fabric and decoration, which closely resemble oxidised Roman grey wares. Their origin has not yet been traced, but they can be paralleled in a single sherd from Trench 6 in the 1955-8 excavation at 6-14 Davygate (21) (Wenham 1962, 547 and fig. 18, no. 120). Found in association with two sherds of what is now recognised as Torksey-type ware, the sherd had broken in antiquity but the two fragments are affixed together by 'a yellow translucent vitreous glaze' which 'in places ..... forms white opaque blobs'. The sherd is thus identical in form, fabric, 'glaze' and 'opaque blobs' to the Coppergate assemblage. The original conclusion that it is a Roman form may well stand, but it is unlikely to have 'been glazed accidentally after it was broken' as was then supposed - although the evidence is minimal (as was the area excavated) it now seems possible that glass-working was also undertaken thereabouts, within the area of the Roman fortress, in the Anglo-Scandinavian period.

4.5.e. Pottery

The inception of the Anglo-Scandinavian era coincides with a re-introduction of the widespread use of ceramic vessels in York, and in the two centuries before the Norman conquest several different wares were current in the city (Holdsworth 1978, 3-11). There is as yet no evidence, however, that there were pottery kilns within or on the outskirts of the city, and it seems on the basis of initial petrological analysis that the so-called York ware, one of the two most common pre-conquest wares, is unlikely to have been manufactured within the city. Conversely, scientific analyses have demonstrated that nearly all the so-called 'Torksey-type wares' from York, the city's other common pre-conquest ware, did not originate at Torksey, and 'a fairly local production' for most of them has been postulated

(Brooks and Mainman 1984, 70). Jorvik's large population must have provided a ready market for pottery, and it seems inherently likely that there were kilns operating on a substantial scale within easy access of York.

4.5.f. Bone and Antler and Horn Working

The huge numbers of domestic animals slaughtered in York provided a ready supply of bone which was made into a variety of simple objects, the majority of which were pins, combs, knife-handles or skates. All of these, except the combs, may have been made casually by their future owners rather than by professional craftsmen, and simple bone-working was doubtless a common cottage industry. An unstratified group of up to six fragmentary comb cases and a comb, all made from bovine rib bones, which was found at Leadmill Lane (40), is perhaps of Anglo-Scandinavian date but may belong to the immediately post-conquest period (Chapter 4.4.d.), and has been interpreted as indicating the presence of a workshop nearby (MacGregor 1982, 94-5, 163). There is not enough material to substantiate this conclusion, however, and while bone working must have been in progress hereabouts it could possibly have been undertaken by peripatetic craftsmen, as evidence from elsewhere suggests was sometimes the case (Christophersen 1980, passim). It is equally difficult to interpret the group of unfinished and waste bonework found during building work in Clifford Street in 1884 (Waterman 1959, 68). The material is essentially unstratified, and did not necessarily form a closed group - it indicates that boneworking took place nearby, but on what scale and basis is unknown.

In contrast to the boneworkers' raw material, which became available within the city, most of the basal burrs of antler which have been found in the city show signs of natural eruption, and were collected in the countryside around York where they were shed (MacGregor 1978, 46).

A dense concentration of waste antler, mainly in the form of sawn and chopped tines and points, but including a strip and several plates of beam suitable for use in comb-making, has been found at 5-7 Coppergate (32) (MacGregor 1982, 162-3) in an essentially unstratified but probably pre-Norman context (Hall forthcoming), and strongly suggests that there was a workshop on the site. This could also be true of 1-3 King's Square (28), where twenty-five undecorated, sawn antler tines were recovered in Anglo-Scandinavian

layers (Wenham 1968, 163). A more scattered collection of antler waste found at 16-22 Coppergate (4) may, in contrast, represent the work of itinerant or domestic craftsmen, and the same interpretation may hold true for the group of antler offcuts and four plates of worked antler from 6-8 Pavement (31) (MacGregor 1982, 162).

A substance which is not preserved in the moist or dry soils of York is horn. It is therefore difficult to gauge its importance as a raw material in the Viking Age, but the large number of tanged knives which survive without a handle of wood or bone/antler suggests that horn may have been commonly used for this purpose. There may have been other uses, most obviously as drinking vessels, but non-survival of the substance does not allow further comment.

4.5.g. Stone Working

The range of lithic artefacts found in York's Anglo-Scandinavian layers is limited and many, perhaps the majority, of these objects were brought into the city in a finished state from elsewhere. It is possible, however, that two small groups of stoneworkers operated within the city. Firstly, a group of masons may be postulated, responsible for the construction of the stone churches. Secondly, there was a school or schools of carvers who produced the crosses and recumbent slabs of various sorts which survive in some quantity. Their work ranges from 'the influential and highly decorative' to the 'crude and unambitious' (Lang 1978, 146). Most of this sculpture is dated on art-historical grounds to the later 9th or 10th centuries; the eleventh century graveyard excavated around York Minster contained re-used stones, a circumstance which may owe as much to taste as to the state of the stone-carving industry (ibid 151ff).

Neither stonemasons nor sculptors had to look far for their raw material, for a ready source of supply was to hand in the decaying and demolished remains of the Roman city. The Viking Age was a period when there was considerable stone-robbing on sites throughout the city, and the 11th-century tower of St Mary Bishophill Junior, recently analysed, has proved to have been built virtually entirely of re-used Roman stones (Briden forthcoming). There is no evidence that stone was being freshly quarried to supply York at this time.

4.5.h. Amber and Jet Working

MacGregor (1978, 41) refers to finds of amber and jet from several sites but the only two with evidence for working either of these materials are Clifford Street and 6-8 Pavement. The Clifford Street group of thirty-one amber beads was unstratified; it included both trapezoidal and annular beads (Waterman 1959, 95) of types since discovered in unambiguously 10th century contexts at 16-22 Coppergate. Many of the specimens had been broken during manufacture, and the group points to the existence of a workshop nearby in the Anglo-Scandinavian period. The excavations at 6-8 Pavement brought to light just two roughouts, one of amber and one of jet, for finger rings (MacGregor 1982, 89); despite the small size of these excavations, their paucity and the complete absence of waste flakes suggests that they may not derive from an industry on the site.

Utterly convincing, however, is the assemblage of amber and jet beads and rings, roughouts, and manufacturer's waste recovered from a tenement at 16-22 Coppergate in layers provisionally dated to the last quarter of the 10th century. A substantial quantity of roughouts, rejects, and waste flakes as well as finished products show that amber beads and pendants were manufactured, while a number of broken finger rings combine with a lesser quantity of raw and semi-worked jet to indicate a subsidiary product. The quantity of amber involved suggests that it is most likely to have been imported from the Baltic area; jet was available from a variety of sources (not only Whitby) in north-east Yorkshire (Rayner and Hemingway 1974, 175) and its collection or mining in adits may also have been a commercially viable operation.

4.5.i. Wood Working

In spite of the important role that wooden utensils of all sorts played, particularly in the domestic scene, there is as yet little evidence for wood-workers' workshops in Viking-age York. Sporadic finds of carpenters' tools, such as the axe, drawknife and shaping chisel from 16-22 Coppergate (Hall 1982, 232-3) can be assigned to the average householder's tool-kit; only the discovery of significant numbers of waste products or a dense concentration of specialised tools allow a workshop to be recognised. The single site in York yet to fulfil one of these criteria is 16-22 Coppergate,

where over two hundred cores from the lathe-turning of wooden bowls have been found in 10th century levels, together with iron tools which may be turners' gouges, and a wooden object identified as part of the support for a latheturner's tool-rest (Morris 1982, passim).

In addition to the makers of portable objects, the archaeological evidence suggests that professional builders may have existed - this seems the implication of the very regular pattern and style of construction seen on the four 10th-century tenements at 16-22 Coppergage. While the redevelopment of Coppergate at that time may have been initiated and planned by a single landlord, the uniformity of construction, particularly when semi-basement structures were erected virtually simultaneously on all the tenements c. 973, indicates that a single group of workmen may have been responsible for the work on site. Many details of the construction, such as the regular c. 6m length of rooms, may have been dictated by the available timber supplies (Rackham 1976, 75) but the overall consistency of basic form and finish argues for a specialist team of craftsmen.

In a city with approximately 1875 tenements in 1066 there must have been ample scope for builders who, with the latheturners and other wood-workers, had to be supplied with raw materials. Timber was presumably available in the surrounding area, and while such evidence as there is suggests that in the Anglo-Scandinavian era the countryside around York was extensively deforested (Kenward et al 1978, 60-1), this is likely to have been a continuing process rather than a legacy from the Anglian period. If the evidence from 16-22 Coppergate is representative of even part of York the specific demands of the builders changed in the middle of the 10th century when wattle structures, which must have fuelled the need for coppiced wood, were replaced by structures in which substantial oak planks and beams formed the main elements. If this was a widespread change, it will have had an important impact on the supplies of timber and on the appearance of woodland and forest around the city - it might even have been a factor accelerating the forest clearance noted above.

The limited range of woodworking evidence as yet recorded in York will undoubtedly be extended by further excavation, particularly in areas of the city not yet examined where other specialists would have been based. On the river frontage of the international port, for example, there may well have

been waterfront revetments such as that now discovered at Billingsgate in London, and it is also inherently likely that shipbuilding was practised within the city's limits. Perhaps more than for any of the other trades and industries, the paucity of the evidence for woodworking in Anglo-Scandinavian York is a reminder of how little is currently known of the city's economic diversity.

4.5.j. The Leather Industries

With a substantial population to feed and a trade in butchered meat attested already in Domesday Book's reference to the Shambles (in macello), there must have been a ready supply of hides available in pre-Norman York, and the products of contemporary leatherworkers are preserved for examination in the waterlogged soils. Shoes and scabbards, some of them elaborately decorated, are commonly found, and other more unusual items such as pieces of harness fitting demonstrate something of the range of leather goods current in the Anglo-Scandinavian period (MacGregor 1978, 51-6; 1982, 136-43). Although it is inherently likely that there was a substantial leatherworking industry in the city at this time, as there certainly was by the later 13th century (Radley 1972a, 51), much of the evidence for it that has previously been put forward has almost certainly been misinterpreted. This is particularly so with regard to the first stage of leatherworking, the preparation of the hides.

One of the strands of evidence most frequently adduced to support the argument that there was an extensive leatherworking industry in Anglo-Scandinavian York is the series of structures which Benson recorded between 5-7 Coppergate and 25-27 High Ousegate (1) and which he interpreted as tan-pits (Benson 1902), but as noted above (Chapter 4.4.c.) they can be interpreted as sunken-featured buildings, and it is suggested that they be expunged from the body of evidence for leatherworking in Jorvik.

Properties at 6-8 Pavement (31) excavated more recently have also been tentatively suggested as the site of a Viking Age tannery (Buckland et al 1974, 29; Addyman 1975b, 223). A reassessment of the biological data upon which this speculation was put forward has shown, however, that there is no proof that tanning took place (Hall et al 1983, passim). Shoe-making and repairing was, however, carried on there in the 10th century, as a large quantity of leather offcuts and, in particular, two shoe lasts testify (MacGregor

1982, 144 and passim). Another substantial group of offcuts, recovered from 10th-century levels during building works at 5-7 Coppergate (32) possibly represents a contemporary shoemaker's workshop; widely dispersed leather offcuts and some possible leather-working tools, particularly awls, found at 16-22 Coppergate, are more difficult to interpret, and may represent domestic rather than industrial leatherworking. These locations are the only places where evidence for leatherworking has been found, and Radley's statement (1972a, 50) that this is the best (archaeologically) documented industry in pre-Norman York is now seen to be optimistic.

4.5.k. Textile Production

The evidence of spindle whorls, which are ubiquitous on the city's Anglo-Scandinavian sites, coupled with the less frequent occurrence of loom-weights and occasional finds of spindles suggest that spinning and weaving were practised on a domestic scale in virtually every household. Identification of remains of a variety of plant dye stuffs in the yards of several of the tenements at 16-22 Coppergate further suggests that all stages in the production of finished items were widely undertaken (Hall et al 1984, 58-60). Perhaps extra garments, surplus to home requirements, were sold or bartered, but the extent, nature and organisation of commercial textile production are impossible to assess.

Surviving garments which are presumably of local origin include only a few linen items, for linen does not survive well in York's soil, but the great majority are of wool, and the supply of wool will have been an important service industry.

4.5.l. The Service Industries

Arrangements for the supply of raw materials and essential commodities to the city must have varied considerably. It is likely that some properties and their occupants had tenurial links with rural estates, which could supply most of their basic needs. In other cases, there may have been a direct commercial arrangement between a rural supplier and an urban purchaser. Other evidence, however, suggests that retailing middlemen operated. The clearest evidence is provided by the street name In macello (Shambles), recorded in Domesday Book, which shows that by the Norman

conquest professional butchers were established. This, however, may have been a recent development for while, unfortunately, there is at present no detailed study of the evidence for butchery practices on groups of domesticated animal bone from York which might indicate when specialist butchers became established, evidence from Lincoln suggests that this did not occur there until the 11th century (O'Connor 1982, 16).

Another branch of the food supply service industry may have been fishing - the evidence for the handling of sprats, found adjacent to the site of St Mary Bishophill Junior, has been mentioned above and the ambiguities of the evidence discussed (Chapter 3.2.d.); nonetheless, it might be interpreted as evidence for professional fishermen operating from York. Fish, both freshwater and marine species, were clearly brought to Jorvik in large quantities, as analysis of bone samples from 16-22 Coppergate is demonstrating. Shellfish were also introduced in large quantities.

Yet another food-related service industry may be implied by Domesday Book's record of two new mills, destroyed by the creation of stagnum regis on the River Foss upstream from York Castle in 1069, which may have been private or commercial ventures.

4.5.m. Summary

To summarise, evidence for manufacturing in Jorvik is varied, even after dubious interpretations are deleted from the corpus of material, and is more widely spread throughout the city than has hitherto been recognised. Relatively few sites have been investigated in a sufficiently thorough manner or on a large enough scale to produce unambiguous evidence for a scale of production which is industrial rather than domestic, and the range of crafts and industries identified would undoubtedly grow if further areas were carefully investigated. Nonetheless there can be no doubt that Jorvik was a substantial production centre, using a wide variety of raw materials from its hinterland (Addyman 1984, 18-20).

4.6. TRADE

4.6.a. Introduction

York's importance as a Viking Age entrepôt has long been appreciated,

thanks mainly to a group of literary allusions and references which show merchants operating to and from York on both a national and an international level. Some were local men: York merchants, by which is presumably meant men for whom York was a home base, were in Thanet in 974 (Roger of Wendover, Flores Historiarum, translated in Whitelock (ed) 1955, 257; the year was 969, according to the Anglo-Saxon Chronicle), and it is most likely that they were going to or returning from the continent. Other traders may have been foreigners, but the literary evidence for this, the passage in the Anonymous Life of St Oswald which records that York was filled with the treasures of merchants 'maxime ex Danorum gente' may not be so straightforward as is usually thought, since it is possible that the Danes in question were Anglo-Danish settlers.

4.6.b. Local and Regional Trade

The role of regional exchange and manufacturing centre was of great importance to York's continuing prosperity, but this aspect of its commercial life was overlooked by the chroniclers and other writers, who ignored what must have been the commonest of contacts, those on an inter- and intra-regional basis. Nonetheless it was these contacts which ensured a supply of raw materials for the city's craftsmen and householders - commodities such as timber, wool, metal ores and jet. Some of these goods may have reached the purchaser direct from the supplier's estate, but others, for example pottery, were brought in sufficient quantity and from sufficient distance to indicate that their supply involved middlemen. It seems unlikely, for instance, that potters from Stamford themselves arranged the transport and distribution network (perhaps overland via Ermine Street, thence by water along Foss Dyke, the Trent and the Ouse) which brought their products to York in such quantity.

In this context, it has long been realised that the term Thetford-ware, applied to some York pottery in the 1950s and earlier 1960s, is a misnomer, as the pottery in question does not emanate from the Thetford (Norfolk) kilns; and more recently it has also been recognised that the 'Torksey' and Torksey-type grey wares which predominate in the city's 10th-century pottery assemblages are almost all not products of the Torksey kilns known to date. Thus, although there certainly was an easy route from Torksey to York via Trent and Ouse as is shown in Domesday Book, it was probably not one along which much Torksey ware passed (Chapter 4.5.e.: Brooks and Mainman 1984, 70).

4.6.c. International Trade

The range of foreign goods recognised in York was most recently summarised by MacGregor (1978, 37-40), who listed steatite brought from Shetland or Norway, honestones from Norway, walrus and elephant ivory from Norway and Africa/India respectively, lava quernstones and (wine) vessels from the Rhineland, and silk, most probably from one of the Mediterranean production centres - Byzantium, S. Italy or Spain. Further examples of all of these types, except elephant ivory, have come from excavations at 16-22 Coppergate, and in addition the range of contacts has been augmented by the discovery of jewellery from Ireland, Scotland, France/Germany, the Low Countries and Scandinavia, coins from Carolingian France, Denmark and Samarkand, a cowrie shell from either the Red Sea or the Gulf of Aden, a wooden box paralleled only at Hedeby, and banded slate whetstones paralleled at Birka (Roesdahl et al 1981, passim).

These finds present problems of interpretation, and it is possible that the jewellery represents personal travel or gifts rather than organised trade. This may also be true for other unusual and small-scale items such as the wooden box, banded slate whetstones andcowrie shell, but at the least these demonstrate a contact, however occasional and perhaps via several middlemen, between York and Western Europe, Scandinavia and the Arab and Byzantine worlds. They further raise the possibility that other exotic perishable goods which would leave no trace (except, perhaps, their containers), were known and traded in York - oils, perfumes and spices from the east are all possibilities, as are slaves, and furs and hides from the north.

Interpreting the level of trade on the basis of excavated finds is very difficult. There are, for example, only two small sherds of Badorf-ware amphorae among the estimated 230,000 pieces of pottery from 16-22 Coppergate, and only about twenty sherds of imported redpainted wares. If these pots contained wine, it appears to have been a rare treat for the inhabitants, but as they appear to have been artisans, this is perhaps not surprising. The fact that some 15% of the hundred or more Viking-age textiles recovered on the site are imported silks (Walton forthcoming) ostensibly suggests a rather higher standard of living, and a very substantial link with the E. Mediterranean, but they may be interpreted as indicators that the inhabitants were engaged in the manufacture of high quality garments incorporating silk embellishments, and

thus give a misleading view of the amount of silk generally available in Jorvik.

The quantities of a non-luxury item, Norwegian schist hones, are sufficiently great to suggest that there was a continuing and well-organised trade in these throughout the Anglo-Scandinavian period, but the other classes of evidence are so meagrely represented that superficially they might be accounted for by only sporadic overseas commercial contacts. It must be recognised, however, that most of the evidence for international contact has come from the Coppergate/Ousegate/Pavement area, a commercial quarter in the city, and it may be that investigation of properties belonging to the landowning, aristocratic and entrepreneurial classes, both in the city and beyond in its hinterland, would yield a higher quantity if not a greater range of imported goods. It is, indeed, difficult to isolate any factor other than international trade which fuelled Jorvik's prosperity and growth, and while the imported goods noted above are a tangible indicator of this trade, it is likely that Jorvik was principally an exporter of goods, perhaps including wool (Sawyer 1965, 163-64), and operated a balance of payments surplus which brought foreign silver into the city.

5. THE FIVE BOROUGHS

5.1. INTRODUCTION

The Anglo-Saxon Chronicle's entry for 942 lists five boroughs - Derby, Leicester, Lincoln, Nottingham and Stamford - where King Edmund liberated the Anglo-Scandinavian population from the rule of 'heathen Norsemen'. These places all lie within that part of Mercia settled by Vikings in 877, and all had initially been brought under nominal West Saxon rule during the campaigns of the second decade of the 10th century. The grouping was one still recognised later in the reign of Ethelred II, for it is mentioned again in the Chronicle entry for 1013, probably composed c. 1016-23 (Keynes 1978, 231), while a related phrase, 'the seven boroughs', possibly alluding to these five with York and perhaps Torksey, occurs in the entry for 1015.

Historical sources do not shed light on the status of the Five Boroughs in the period c. 877 - c. 917-18, and the archaeological evidence for their possible roles as fortresses, or as social, administrative and economic centres, has not been explored recently, although generations of historians have put forward various hypotheses about their origin and development, ranging from a total stress upon their military significance to a noting of their possible administrative function (Chapter 1). Recent excavations have provided new evidence for the origins and growth of these places, and for activity within them in the Viking Age; this is reviewed here against the background of historical references and previous discoveries to provide a new assessment of their form and function.

5.2. DERBY

5.2.a. Origins

The earliest concentration of activity in the immediate vicinity of what is now central Derby was 1st-century Roman occupation 1km to the north-west of the medieval town at Strutt's Park, the probable site of a Neronian fort controlling access to the Peak District via the valley of the River Derwent (Brassington 1970, 25). Within decades this fort had been resited on the opposite bank of the River Derwent as Little Chester (Derventio), where the earliest recorded pottery is of the Flavian period (Webster 1961, 109). The

reason for this change of location is not clear. The fort, its vicus and a nearby industrial complex below the modern Derby Racecourse Fields were occupied into the mid-4th century at least (Wilson et al 1975, 242-3: C J S Green pers. comm.).

5.2.b. Early- and Mid-Saxon Activity

There is no evidence for continuity of occupation in the 5th century but Little Chester was again a focus for activity in the pagan Saxon period. A 6th/7th-century inhumation cemetery of seventeen graves has been excavated by Green in and around a late Roman colonnaded structure outside the east gate of the fort. No traces of contemporary occupation have been found, but this is not surprising in view of the small amount of excavation undertaken, particularly within the fort.

While there is no coherent historical narrative dealing with Derby's role in the mid-Saxon period, sporadic later literary references illuminate specific events. Athelweard's Chronicle, composed at the end of the 10th century (Campbell (ed.) 1962, xiii note 2) reports that in 871 the body of Aethelwulf, ealdorman of Berkshire, who had been killed in battle with the Danes at Reading, was carried away secretly into Mercia in loco qui Northworthige nuncupatur, iuxta autem Danaam linquam Deoraby ('to the place called Northworthy, but in the Danish language Derby'). This passage does not, of course, imply that the Danes were taking any special interest in the site in 871; rather it demonstrates that the site exerted an attraction which led Aethelwulf's retinue to transport his body for a considerable distance (140km as the crow flies) under the difficult conditions brought about by the invasion.

Aethelwulf was a Mercian - he was already an ealdorman in 844 when the Mercian king Berhtwulf granted him land in Berkshire (Sawyer 1968, no. 1271: Whitelock (ed.) 1955, no. 87) - and this may explain his link with the locale, which could be a purely secular one. Northworthy/Derby may have been his estate or residence; Hart's suggestion (1977, 53) that it was the 'capital' of the kingdom of Northern Mercia mentioned by Bede (H.E. III, 24), and was so called to distinguish it from that of the South Mercians which, he suggests, was at Tamworth, is speculative and cannot be substantiated. Cameron (1959, 446) suggested that the name Northworthy was given in relation to the River

Trent: any likelihood that Northworthy, 'the northern enclosure', was so called to distinguish it from another nearby enclosure, the Roman camp at Little Chester, is nullified by Little Chester's position to the north-east of Northworthy.

In the absence of archaeological evidence for a mid-Saxon secular site, it may be suggested that it was the influence of an important religious centre which prompted the return of Aethelwulf's body, and such a centre is documented in the Old English List of Saints' Resting Places, which was compiled in its present form by c. 1031, although based on earlier, undated components (Rollason 1978, 68). This records that 'Eahlmund rests at Northworthy'. The background to this statement is known only through the compilations of much later chroniclers. The Historia Regum, which is generally attributed to the early 12th-century monk Simeon of Durham, incorporates contemporary or near-contemporary Northumbrian annals in its 8th and 9th century sections (Whitelock (ed.) 1955, 118), and records that in AD 800,

> Alkmund, filius Aluredi regis, ut dicunt quidem, a tutoribus Eardulfi regis est apprehensus eiusque jussione cum suis profugis occisus est

(Eahlmund, son of King Alchred [of Northumbria] was seized, as some say by agents of King Eardwulf, and on his order was killed with his fellow exiles') (Rolls Series LXXV ii, 63). Higden's 14th-century compilation Polychronicon reports a fuller, variant version, the source for which is unknown. In it, Eahlmund was killed in a battle between a Mercian sub-king and an ealdorman of Wiltshire c. 802. The source continues

> Cuius corpus apud Album Monasterium deinde apud Derbeiam urbem in ecclesia aquilonali suo nomine constructa reconditur.....

('His body was buried at the White Monastery [Lilleshall, Staffs] and then at Derby, in the north church built in his name') (Rolls Series, XLI, vi, 290). The Lilleshall reference may, however, stem from a Norman or later confusion (Rollason 1983, 4-5 and note 17), and it is possible that he was

never interred there.

In conjunction, the List of Saints' Resting Places, the History of the Kings and the Polychronicon indicate that Eahlmund was killed c. 800 and venerated at Derby before c. 1031. Even if the translation from Lilleshall to Derby reported in the Polychronicon is fictitious, the date by which Eahlmund's body reached Derby is uncertain. The use of the name-form Northworthy in the List of Saints' Resting Places rather than Derby might suggest that it arrived before the Scandinavian take-over, but this is questionable since it is not known how long the older name remained current. Nonetheless, there is evidence for an early 9th-century religious presence on the site later known as St Alkmund's church (1), on the north side of the medieval town of Derby, and this may have been the magnet which attracted the body of ealdorman Aethelwulf.

Excavation on the site of the Victorian and medieval St Alkmund's church revealed that the earliest recognisable structure was a two cell stone building, possibly with porticus to south and north (Radford 1976, 31ff). The date of this structure is uncertain. The chancel wall incorporated two fragments of pre-conquest sculpture, thought to be of 9th-century style, but the date of their use here as building rubble is unknown. It is, however, the recovery of these pieces and others, including an elaborately carved coffin of c. 800 which had been filled with rubble and buried in the south-east corner of the nave at an unknown date, thought by the excavator to be in the 12th century (ibid, 35-7), which suggests strongly that there was a church here from the ninth century, dedicated to St Alkmund, and therefore that this area is the Northworthy referred to by Athelweard and in the Saints' Resting Places.

5.2.c. Anglo-Scandinavian Derby

Derby's earliest appearance in a contemporary source is in the Mercian Register section of the Anglo-Saxon Chronicle, for the year 917. At that date it was a centre of Danish resistance, captured by Aethelflaeda after a battle in which four of her thegns were killed within the gates. The area's first serious visitation by the Scandinavians had probably been in 874, when the Chronicle records that the Viking army took up winter quarters at Repton, drove out the Mercian king Burgred, and conquered all Mercia. Derby, already an important ecclesiastical site if nothing else, can hardly

have failed to interest a Viking army based only 9.5km away. After a two-year respite, the Viking army returned to Mercia in 877 and settled in its eastern part, which included Derby. Their interest in the site is not, however, explicitly mentioned until 917; in 942, when Derby is next recorded in the Chronicle it is as one of the five burhs re-taken by King Edmund after the invasion of Olaf Guthfrithsson. The Chronicle's only other pre-conquest reference to the site is the report of an earthquake at Derby, Worcester and Droitwich in 1048.

Domesday Book records two churches at Derby in royal ownership with the status of minster, and although neither is named there, evidence in the cartulary of Darley Abbey, compiled c. 1275, indicates that one was St Alkmund's and the other All Saints (Darlington (ed.) 1945, 164). The other information contained in Domesday Book's reference to Derby as it was in 1066 has been described as 'only fragments of information which do not constitute the ordered survey' (Holly 1962, 322). 243 resident burgesses were recorded, 41 of whom had shares in the twelve carucates of land belonging to the burh. In addition to St Alkmund's and All Saints churches, one of which had seven and the other six priests, at least four other churches seem to have been in existence by 1066, since in 1086 they had each had one previous owner. There were 14 mills, and the town rendered £24 to the king.

These statistics are of little help in assessing the role which Derby played in the Anglo-Scandinavian period. The fact that in 1086 there were 143 burgesses and 103 waste tenements, equivalent to the number of burgesses in 1066, allows the equation of burgess with tenement to be made here with conviction, and thus indicates that in 1066 Derby was a settlement of at least 243 properties, with a population of perhaps 1000-1500. In size the town was then broadly comparable to other Danelaw centres with population or housing/tenement statistics recorded in Domesday Book's entries for 1066, such as Cambridge, Huntingdon, Leicester, Nottingham, Stamford and Torksey.

There have been few attempts to investigate Viking-age Derby by excavation. On the basis of a single penny of c. 900 struck at York, it seems possible that activity around the early 9th-century church of St Alkmund continued in the 10th century (Radford 1976, 42), although it has been suggested that the Viking Age saw neglect or destruction of the church (ibid, 34). The only excavation of a secular site within the post-conquest town, in its south-

east corner at Full Street (2), demonstrated that occupation there commenced in the later 11th century (Hall and Coppack, 1972).

This sparse archaeological record of the pre-Norman period is not credibly augmented by other chance finds in the vicinity. A pilgrim's flask from the shrine of St Menas at Karm Abu Mina on the edge of the Libyan desert, dated to the 4th-7th centuries was found in Nuns Street in 1949 (O'Ferrall 1951); it could have entered England at any time from the late Roman period onwards, but in view of the proximity of the Benedictine nunnery of St Mary, founded c. 1160 (Knowles and Hadcock 1953, 212) it is most likely to be a post-conquest importation. The origins of the so-called 'Derby' runic inscribed bone mounting, ascribed to the period 700-1000, are equally nebulous - it has no firmer connection with the town than that it first came to general notice whilst in the possession of a former resident, and must therefore be discounted here (Bately and Evison 1961).

Only the identification of St Alkmund's and All Saints churches are of use in locating the area of the burh as it was in 1066. St Alkmund's, 'the north church' of the 14th century Polychronicon, may not have been on the north of the pre-Norman settlement, but was presumably within or close to the main concentration of occupation, as presumably was All Saints. Until the relocation of St Alkmund's in the late 1960s, both occupied a relatively elevated position with potential for defence. The River Derwent formed a barrier to the east; there is no evidence for a pre-conquest bridge, and it is possible that the ford, known later as the Causey, may have been the crossing point in the pre-Norman period. Indeed the settlement shift from the Little Chester area 1km south-west to the All Saints/St Alkmund's area may have been inspired by the decay of the Roman bridge thought to have existed north of Little Chester (Brassington 1970, 30) and the need for a defensible position controlling an alternative crossing point. Water may also have provided a natural barrier to the west and south, where the Markeaton Brook and its tributaries curve sharply to define a promontory before joining the Derwent. With or without the addition of a rampart, settlement here would be protected on three sides, and it would require only the erection of an earthwork across the neck of the promontory to defend it against assault from the north. To date, however, there is no archaeological evidence to substantiate these hypotheses.

In contrast with the paucity of pre-conquest evidence from the area of the post-conquest town, C J S Green's excavations at Little Chester have unearthed evidence which may be interpreted as representing activity and possibly occupation in the Anglo-Scandinavian period. Traces of timber buildings outside the East Gate built over Ryknield Street, and on the berm inside the 4th century ditch, may belong to this period; a cess pit containing Stamford and St Neots ware was dug through the ruins of a Roman building outside the East Gate; and a rubble platform added to the south-east corner of the Roman walls sealed sherds of St Neots, Stamford and Thetford-type ware, and may be contemporary with them. A narrow ditch immediately south of the platform, following the line of the defences, produced similar pottery (Green, pers. comm.).

This evidence raises the question of the role of Little Chester at this time. Stukeley's illustration ostensibly shows that the stone defensive circuit was intact when he visited the site in 1721, and he records that the walls were being blown up during his second visit in 1725 (Haverfield 1905, 216); the surviving stonework may have been largely the rubble of the wall-core, for facing stones had earlier been used in the late medieval manor house. Nevertheless, with substantial lengths of the wall still in existence into the early 18th century, it is possible, if not probable, that the fortification could have been defensible in the 9th or 10th centuries. The only written evidence for Little Chester's pre-Norman role is Domesday Book's record that the parish of one of the two churches in royal ownership in Derby held two carucates freely at (Little) Chester, thus suggesting that the site had itself been in royal ownership in the pre-Norman period.

Archaeological evidence for activity within the fort at this time is minimal - the only discoveries which may possibly relate to this era are five human skeletons found close to the west wall in 1926 (Clews 1927). Three adult males, one adult female and a child aged about six had been buried, each on an east-west alignment, their feet to the east. There is no record of any objects interred with the bodies, or of coffin fittings. These burials, which lay only .75m below the modern surface, could be dated to any period from the Roman onwards, but as there is no reference to a church or burial ground here in the post-Norman period, it is more likely that they pre-date the Norman conquest. Their orientation ostensibly suggests a Christian milieu, but a non-

Christian Roman origin cannot be ruled out, as has been pointed out of other similar cemeteries (Rahtz 1978, 6). Although they are perhaps related to settlement here after the conversion of Mercia in the late 7th century this cannot be proved, and Clews's claim for a mid-late Saxon date must be treated with reservation (Clews 1927, 377). Nonetheless, the evidence from Green's excavations points to secular activity at Little Chester in the Anglo-Scandinavian period, and as suggested above, Little Chester may well have been defensible at this time.

It is therefore worth considering the possibility that when in 917 Aethelflaeda captured what the Anglo-Saxon Chronicle's B text copyist of c. 1000 called 'Derby', she was attacking the refurbished Roman fortification at Little Chester. The place-name Derby, synonymous with Northworthy by the late 10th century if Aethelweard is taken at face value, was already current in the reign of Athelstan (924-39) when it appeared on his coinage in a variety of closely-related forms (Blunt 1974, 94). It is not impossible that this new name of Scandinavian form, combining the elements by 'settlement' and djur, 'animal' or 'deer' (Cameron 1959, 446; Jensen 1978, 44), was given initially by the Scandinavians to the vicinity of Little Chester, and then later transferred to the Anglian settlement of Northworthy, which is certainly to be equated with the Derby of Domesday Book and the modern town centre. In the absence of archaeological evidence this can be only speculation, but it emphasises the need for examination of post-Roman levels at Little Chester as well as the obvious requirement for further excavation within the medieval nucleus of Derby.

The reason for the complete change of name, unique among the late 9th/early 10th-century Viking strongholds, continues to puzzle place-name scholars. The most recent survey (Jensen 1981, 141-42) suggests, on the basis of onomastic evidence alone, that Derby's position towards the western outskirts of the Danelaw encouraged its Viking settlers to cluster for protection at the burh in a way not necessary at their other strong-points, and that this led to a change to a purely Scandinavian name-form. Given the uncertainties of place-name evidence, notably the relatively late first record of most names and the problem of interpreting distribution patterns of various name types in political or ethnic terms, this remains a possible but unverifiable hypothesis.

Once Northworthy/Derby had played out its role as a Scandinavian

military centre, its function becomes more difficult to determine. The transfer of its name to the surrounding area (Derbyshire is first recorded in 1049) may merely reflect its early 10th-century role as the rallypoint of a particular group of Scandinavian settlers, but the volume of its coinage as early as the reign of Athelstan (924-39) when minting commenced there, when compared with contemporary mints in the region such as Nottingham, Tamworth and Leicester (Blunt 1974, 93-97), shows that Derby predominated in the striking of coins. It has been pointed out, however, that centres of high mint output were not necessarily an index of commercial activity or general prosperity (Metcalf 1978, 162-63), and it may be that the reason for Derby's importance in this sphere was its proximity to the lead deposits in the Peak district, which may also have been a source of silver through the use of the cupellation process. The Peak lead deposits were worked in the pre-Viking period - that at Wirksworth was referred to in 835 (Sawyer 1968, no. 1624) and in Domesday Book lead mines or renders are mentioned in connection with seven places in the Peak (Darby and Maxwell 1962, 324). No archaeological or direct historical evidence exists to prove that cupellation was practised, but it remains a possible explanation of Derby's predominance over the mints of Nottingham, Tamworth and Leicester in the time of Athelstan, a supremacy which, however, had virtually disappeared after Edgar's reform of the coinage (Metcalf 1981, 75-76).

Its mint apart, there is nothing tangible to indicate Derby's economic, social or administrative function in the pre-Norman period, and Darby has commented that 'the salient features of the borough in 1066 may still have been military and agrarian' (Darby 1961, 215). There is no direct evidence for industry or a market, although toll was rendered to the king, but this hardly counterbalances the rural aspect presented by references to fourteen mills, twelve carucates, meadowland, underwood and fishery (the last three mentioned in Domesday Book's return for 1086, but presumably equally applicable to the situation in 1066). The evidence at present suggests that Derby was a local centre for the shire, important for control of the Peak but for little more. Sited off the principal routes from north to south, it was apparently a political backwater in the 10th and 11th centuries, unvisited by English kings who, when they ventured north, travelled via Nottingham where the witan met in 934 and in c. 973 (Stenton 1971, 350). Its secondary importance

is emphasised by the comparative neglect of Derby by William I - no Norman borough was established like the one at Nottingham, and no castle was built to overawe its inhabitants.

Derby remains as Stenton described it over 60 years ago, the unit of the Five Burghs 'whose history is most obscure' (Stenton 1920, cxviii).

5.3. LEICESTER

5.3.a. Prehistoric Activity

Leicester stands on the east bank of the River Soar, approximately 29km above its confluence with the Trent. The site has been of regional importance since at least the late Iron Age; Kenyon (1948, 124f) found pre-Roman pottery of both local and imported types at her Jewry Wall excavations and, more recently, crouched inhumations dated to the immediately pre-Roman period and other features containing pottery of c. 10 BC - AD 40 have been found at Blackfriars Street (Goodburn et al 1977, 435); both imply a late Iron Age settlement on the east bank of the river. In all, five sites in the western part of the Roman town have now produced Iron Age pottery, and its recovery alongside kilns at a further site approximately 1km south of the Roman walls demonstrates that Iron Age activity was not confined within the Roman fortified area as earlier suggested (Todd 1973, 3; Whitwell 1982, 25). Coins of the Corieltauvi have also been recovered within the town, and since the first element of the Roman name for the site, Ratae, is derived from a Celtic word meaning 'ramparts' it has been suggested that this Iron Age site was defended, and perhaps an oppidum (Wacher 1974, 335). A more recent analysis, however, proposes that Ratae was a Celtic name for the defences of the Roman fort, and that the pre-Roman settlement was undefended (Rivet and Smith 1979, 443-44).

5.3.b. Roman Occupation

The early history of Roman military activity at Leicester is not yet clear. Two apparently unrelated lengths of military ditch have been excavated, but their precise dates and the layout of the forts to which they belong are unknown (Mellor 1981, 51). The forts lay on the Fosse Way, the Roman road running from north-east to south-west, and after the frontier was pushed

northwards, the site was replanned as a civilian capital for the Corieltauvi, and ultimately defended by walls on the north, east and south sides, the line of which was followed in later medieval refortification (Wacher 1974, 351-3). The existence of a west wall in both the Roman and medieval periods has been doubted, with the River Soar suggested as a sufficient defence. Now, however, Lucas (1979, 62ff) has assembled evidence which proves the existence of a medieval west wall, and suggests by implication that a Roman wall may also have existed here. The Roman street plan seems to have exerted little influence on that of the later medieval period as recorded in plans of c. 1600 and 1610 (ibid, plates 4 and 5), and even the position of the Roman gateways is conjectural (Mellor 1981, 51).

5.3.c. Early- and Mid-Saxon Activity

There is, too, little evidence for Leicester in the early- and mid-Saxon periods, partly because later medieval disturbance has often destroyed the latest Roman and post-Roman levels. In the forum and basilica there is evidence for a fire which occurred after AD 364 and which may have finally ended occupation of parts of the building, but in one room there was some evidence for reconstruction or tidying up in the shape of a new floor above the destruction debris. A coin, pierced for re-use as a pendant, was found in the destruction level of another room, and might indicate that the destruction took place in the pagan Saxon period when such pendants were common, as opposed to the Roman period, when they were very uncommon, but either interpretation is possible (Hebditch and Mellor 1973, 42-43).

To the north of the forum and basilica, Wacher (1974, 357) observed that the west range of the macellum had also been destroyed by fire, 'during' or perhaps after the last quarter of the fourth century; after a period of abandonment, a rough pebble floor had been laid, unfortunately without any datable objects on top of it. Lucas (1981, 6) has interpreted the thinning of archaeological deposits over the forum to indicate that it stood 'for some time' and was not rebuilt with a corresponding accumulation of debris, but this is essentially speculative. The still upstanding Jewry Wall, the east side of the baths complex which occupied the insula immediately west of the forum, has been proposed as part of the fabric of an early (or mid) Saxon building on or near the site of the late Saxon St Nicholas (Kenyon 1948, 8); elsewhere the only

hint that Roman structures continued to exert an influence on later development has come from Causeway Lane (1) where Roman and medieval pits have been shown to respect the same alignments (Grew et al 1981, 336).

There are more early Saxon objects from Leicester than from any other of the Five Boroughs, although some of the material previously assigned to this period has recently been re-attributed. For example, the bronze 'strap end', a buckle loop assigned a mid 5th-century date by Kendrick (in Kenyon 1948, 255) may now be placed in the mid 4th century and is therefore not relevant to this discussion (Hawkes 1974, 387-93; Clarke 1979, 288-91): neither is the bronze belt plate of Hawkes and Dunning's Type IIA, also found unstratified at the Jewry Wall (Hawkes and Dunning 1961, 52). Other objects are only dubiously assigned to the early Saxon period - there is a single 'possibly Saxon sherd' from the forum (Mellor 1981, 51), and the possibly post-Roman coin pendant from the same site (Hebditch and Mellor 1974, 42-3). Unequivocal, however, are several items of jewellery, as well as pottery and miscellaneous objects, which point to activity among the Roman structures in the early Saxon period (Rutland 1975, 54-62). Two pagan Saxon cemeteries have been identified, at East Gate and Westcotes (Meaney 1964, 146, 150), and the frequently destroyed or badly disturbed state of the relevant levels may account for the only possible cases of early Saxon occupation being those recorded above in relation to the forum, basilica and macellum, which are of uncertain date.

The start of the middle Saxon period in the area may be taken as coincident with the conversion to Christianity of Peada, princeps of the Middle Angles, in 653, and the subsequent division of the extensive see of Mercia into a number of smaller bishoprics which probably took place c. 680 (Bailey 1980, 4-6). There is no conclusive proof that Leicester itself was the Middle Anglian diocesan see before 737, when the site is mentioned in contemporary episcopal lists, but it is at least likely that the see was there from its institution in the late 7th century, and Bailey (ibid, 10) has suggested that this positioning was due not just to a nostalgia for the Roman origin of Leicester, but rather to the contemporary importance of the site as a focus of population in the early Saxon period, as indicated by both archaeological and place-name evidence. The relatively large quantity of early Saxon artefacts from Leicester supports this interpretation, but nothing at all is

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known of the site in the mid-Saxon period between the establishment of the church and the coming of the Vikings, and 'it would certainly be most unwise to assume that Leicester was truly urban at this time' (Liddle 1982, 9).

The hypothetical building which may have preceded St Nicholas and which may have incorporated the Jewry Wall is most likely to have been a church, perhaps the bishops' seat; its position between two of the principal Roman municipal buildings, the baths and the forum, may offer a comparison with important early churches at York and Lincoln, for example, but since the post-Roman history of both buildings and of other Roman structures in Leicester is hardly known, the significance of this site is impossible to assess.

5.3.d. Anglo-Scandinavian Occupation

Whatever the size of the bishop's establishment, and whatever, if any, other functions mid-Saxon Leicester exercised, the site became one of the Vikings' strongholds in the late 9th or early 10th century, being recorded as an army base in the Anglo Saxon Chronicle's entry for 913 and 917. The bishopric apparently ceased to function some time after 872 (Bailey 1980, 3). The Chronicle records the Leicester army's submission to Aethelflaeda in 918 and Leicester is named in the celebratory entry for 942. It was then occupied by Olaf Guthfrithsson and Archbishop Wulfstan in 943, who were besieged within it by King Edmund but escaped by night. Nothing further is recorded of Leicester until Domesday Book's terse summary. In 1066 the town rendered £30 and fifteen sesters of honey, and supplied twelve burgesses or four horses in time of war. By 1086 the render had increased to £42.10.00, but it cannot be known if the 1086 figures of sixty-five burgesses, three hundred and twenty houses and six churches likewise reflect a forty per-cent increase on the figures for 1066.

The numismatic evidence points to relatively small scale minting at Leicester under Athelstan (Blunt 1974, 96-97); after the reform of Edgar, minting at a modest level is again attested, the scale being normally greater than at Derby or Nottingham, but less than Stamford and Lincoln (Hill 1978, 216-17; Metcalf 1981, 75-76).

An archaeological lacuna marks the Anglo-Scandinavian period of Leicester's development. A small collection of miscellaneous and mostly unstratified artefacts of this period exists (Rutland 1975, 54-62), but little

else is known. The defences within which Olaf Guthfrithsson and Archbishop Wulfstan were besieged are unidentified; the Roman walls may still have provided a defensible circuit, but this is hypothetical, and there could equally have been other, smaller enclosures as yet unlocated. Similarly, the development of the street plan remains enigmatic, and no trace has yet been found of any secular structure of this period (Dornier 1975, 19; this was still true in 1984, Mellor, pers. comm.). Liddle's (1982, 13) suggestions concerning the area occupied at this time, based as they are on the hypothetical identification of Domesday Book's churches and the tacit assumption that these were the only churches at this time and thus define an inhabited area, cannot be sustained. Only St Nicholas, immediately east of Jewry Wall,can be identified as retaining pre-conquest fabric (Taylor and Taylor 1965, 384-86).

The one site which has produced intact levels of this period is the stoke pit of a pottery kiln at Southgate Street (2) tentatively dated on the basis of the form of its products to the second half of 10th century by its excavator (Hebditch 1968, 9), but assigned a wide bracket by other authorities (Hurst 1976, 332). Thus Leicester appears to follow the Anglo-Scandinavian urban tradition of town-based potteries, seen also at Lincoln and Stamford, Nottingham and now suspected at York. The discovery supports the suggestion that Leicester, like the better understood centres such as York or Lincoln, was a manufacturing and commercial centre, but the size, layout and more precise role of the site remain enigmatic.

5.4. LINCOLN

5.4.a. Origins

The Roman and medieval walled nucleus of Lincoln is sited where the belt of limestone known as the Jurassic Ridge is cut by the River Witham, flowing into the Wash, some 50km to the south-east. There had been Iron Age activity in the vicinity, evidenced by objects recovered from the river (Baker 1938, 7), and a single structure demonstrating late prehistoric occupation has been discovered at 181-82 High Street, 150m south-west of Brayford Pool, the natural widening of the river where it curves abruptly eastwards to flow through the Lincoln Gap (Jones (ed) 1981, 84).

Lincoln owes its historical importance to the Roman army. It is

thought that a camp was built here in the Claudian period, but its location is uncertain. It may lie below the Neronian fortress (Frere 1978, 113 note 16), or alternatively south of the River Witham, between it and the presumed junction of Ermine Street and Fosse Way (Magilton and Stocker 1982, 16). In the Neronian period a c. 15 ha fortress was constructed with its centre at the highest point on the Jurassic Ridge overlooking the Brayford Pool, which gave its name to the site - Lindon, the first recorded form, is cognate with Welsh llyn, 'a lake' (Ekwall 1960, 298). Early in the 2nd century, when a colonia was founded, the earth and timber legionary defences were replaced in stone, and after mid/late 2nd-century additions these were rebuilt in the late 3rd/4th century (Jones 1980b, 48-55).

In the late 2nd or early 3rd century the defended area was more than doubled by the erection of walls which joined the upper town at their north ends and extended down the steep slope to within 80 m of the River Witham. These walls and their gateways were also remodelled in the second half of the 4th century (Colyer 1975b, 231-45).

In addition to its role as colonia, Lincoln was a provincial capital from the early 4th century (Frere 1978, 241-42). This administrative role was given to a settlement which by then extended south of the River Witham for nearly 1km along Ermine Street (Magilton and Stocker 1982, 13-16). Settlement here was undefended, although Sincil Dyke, an arm of the Witham which encloses this area, may have existed in the Roman period. Two other dykes certainly originated at this time; Foss Dyke, a navigable waterway, connecting the Witham with the Trent, and Car Dyke, partly a natural tributary of the Witham below Lincoln, which was extended in the Hadrianic period towards the Wash, and which acted as both drain and routeway (Simmons 1979, 196).

Although a defended settlement of considerable size and population, there is little evidence from Lincoln of occupation or activity continuing much beyond c. AD 400. A zoomorphic belt buckle fragment of Hawkes and Dunning type IIA, found at The Park, just outside the western defences of the lower city in 1968, unassociated, is now recognised as a possibly earlier product than previously believed, perhaps dating as early as c. AD 350, and representing the equipment of an army unit whose ethnic origin and role are debateable (Hawkes 1974, 387-93: Clarke 1979, 288-91). There is no reason

to believe that the object represents evidence for a continued military presence here into the 5th century.

5.4.b. The Early- and Mid-Saxon Periods

Since the publication of Stenton's paper entitled 'Lindsey and its Kings' (1927b) it has been accepted that in the early- and mid-Saxon periods, until the time of Offa, there was a distinct political kingdom, Lindsey, which took its name from, and therefore was in some way associated with, Lincoln. Although its existence has been baldly denied (Davies and Vierck 1974, 237), the evidence of the Anglo-Saxon regal genealogies (Dumville 1976, 31, 46-47) the Tribal Hidage and the Chronicle's passage for 841 which refers to it in conjunction with other kingdoms all encourage belief in it, as does the geography of the area, with its well-defined natural boundaries.

The fact that there was a separate bishopric of Lindsey from the later 7th century, albeit created in the aftermath of Ecgfrith of Northumbria's annexation of the area in 674, again suggests that there was a separate political entity here, for the bishopric survived the Mercian re-annexation of Lindsey in 678 (Stenton 1971, 134). The bishopric's boundaries are not clear - as mapped by Blair (1977, 145) or Hill (1981, 148) they encompass the Kingdom of Lindsey and more - but it seems that Lincoln will have lain within the diocese. Nonetheless, there is no record that Lincoln was the bishops' seat - it is generally thought that the bishop of Lindsey was the Syddensis civitas episcopus who attested a document from the Council of Clovesho in 803 (BCS 312), but Syddensis civitas has not been identified. The usage of civitas in the document supports an identification with a Roman centre, and it is possible that Lincoln may have had an alternative name to that which has survived - Campbell (1979a, 36 note 5) has pointed out an exemplar here with reference to Bath. Nonetheless, until some corroborating evidence is found, Lincoln cannot claim with certainty to have been a bishop's see in the pre-Viking period, as has sometimes been suggested (Hill 1948, 22).

Although the historical sources are so tantalizingly uncertain, there is archaeological evidence for Lincoln after the Roman withdrawal. Excavation at the church of St Paul-in-the-Bail (1) at the heart of the upper city within the courtyard of the Roman forum has revealed a sequence of buildings and cemeteries with their main axis running east-west, an alignment

they share with the forum. All these features are thought to be Christian. Within the earliest structure, an apsidal stone building closely comparable in plan and dimension to the Kentish churches thought to be associated with the 7th-century Augustinian mission, was a grave containing a possibly 7th-century hanging bowl (Gilmour 1979). The date of this earliest church is called into question by the results of carbon-14 determinations on six skeletons from the earliest levels of the adjacent cemetery, determinations which fall between the late 4th and early 7th centuries (Jones 1982a, 18). That there was a Christian community in later Roman Lincoln is unquestioned - a bishop of Lincoln attended the Council of Arles in AD 314 (Frere 1978, 375 note 30). It is possible that the St Paul-in-the Bail cemetery is to be associated with this late Roman Christian community, and also possible that this community's sub-Roman descendants continued to live in the city in succeeding centuries, and were the population represented by the excavated early phase burials. The earliest stone church might also be re-interpreted as a Roman structure (and thus may prompt re-interpretation of some of the Kentish 'Augustinian' churches).

This late 4th-early 7th-century community is of great interest when viewed against the evidence for Anglo-Saxon settlement in the vicinity of Lincoln. Cremation cemeteries of the 6th century have been noted at both Cherry Willingham and Middle Carlton, each only some 7km from Lincoln, indicating that there was no long-lasting, independent sub-Roman territorium or kingdom based on the city (Everson 1979, 79). Furthermore, Bede's record of Paulinus's visit to Lincoln in 628 includes a reference to the city's praefectus Blaecca who, with his household, was the first Christian convert (HE II, 16). This man's status is uncertain, although it is likely that he was either of royal stock or a regally appointed official, and he was in a position of authority in Lincoln. It is conceivable that he was leader of the descendants of the Romano-British community, who may be represented by the St Paul-in-the-Bail burials; alternatively he may have been an Anglo-Saxon representative of the new political order. Yet neither his presence, nor the community represented by the 4th-7th-century burials at St Paul-in-the-Bail, is evidence that in these centuries Lincoln was anything other than largely deserted. Even in the generations after Blaecca's conversion there was evidently no viable Christian community to maintain the ecclesiam operis egregii de lapide built

by Paulinus, for it was in ruins in Bede's day (HE II, 16).

There is only a little other evidence for activity in Lincoln before the Viking takeover of 877. At Flaxengate (2) a Roman building which stood in part into the 8th or 9th century had a number of pits containing pre-Viking pottery, some attributed to the 6th century, cut through its floors, and the site also produced window and vessel glass of the 7th-9th centuries. Other activity here included the construction of a dry-stone wall across the site, perhaps a property boundary, before the start of intensive Anglo-Scandinavian occupation (Colyer and Jones 1979, 59-61; Perring 1981, 5-6). No remains of domestic structures were recognised. 20m away, at the corner of Grantham Place (3) it is suggested that Roman buildings were dismantled in the sub/post Roman period, before the 9th/10th centuries, but there appears to be no evidence for occupation here until the 11th century and so the reason for the demolition is enigmatic (Jones 1982b, 6-8). Equally nebulous in their context are the pre-Viking sherds, found in residual contexts at 4-7 Steep Hill (4) (Colyer and Jones 1979, 79).

Only excavation between Saltergate and Silver Street (5) has yielded what is ostensibly more clear-cut evidence for post-Roman but pre-Viking activity. Here the collapsed debris of part of a Roman building, sealing pottery which may itself be of post-Roman date, was cut into by four graves, one of which was dated to AD 780 $^{+}_{-}$ 90 by a single C^{14} analysis of the skeleton (Colyer and Jones 1979, 88: cf 84). In the area of an adjacent Roman room, there was a cobbled surface into which a series of post-holes had been dug; these may represent part of a sunken-floored structure, possibly contemporary with the burials. The reservation about this evidence is that the chronology is dependent upon one C^{14} determination.

This archaeological evidence demonstrates that there was activity in widely spread parts of Lincoln in the 5th-9th centuries, but is not sufficient for conclusions to be drawn about the site's status throughout this period. No certain domestic structure has been identified, and there is no evidence for craft/economic activity. The Wigford suburb south of the river, first recorded as Wikeford c. 1150 (Foster (ed.) 1931, 200) contains in its name the element wic, which occurs in the name of several important pre-Viking trading centres such as Hamwic, Lundenwic and Eoferwic, but there is as yet nothing to demonstrate that such a centre existed at Lincoln. No finds of sceattas are

reported (Rigold and Metcalf 1984, 254), there are no coin hoards to mark the Viking takeover, a notable contrast with York, and it has been commented that, judging by the rarity of silver coin finds of the period the economy of Lindsey, and thus of Lincoln, was sadly depressed c. 825-75 (Blackburn et al 1983, 9).

5.4.c. The Anglo-Scandinavian Period

5.4.c.i. Historical introduction.

Lincoln's role in the Anglo-Scandinavian period is scarcely illuminated by historical sources. It was taken over during the Viking settlement of eastern Mercia in 877, but its sole mention in the Anglo-Saxon Chronicle's record of the period is in 942, when Edmund regained control of the Mercian Danelaw. By the early 11th century at latest it had given its name to the surrounding shire - Lincolnshire is first recorded in the Chronicle in 1016. Domesday Book reports that there were 1164 inhabited messuages in the city in 1066; of its statistics for 1086, the twelve and a half carucates in the fields outside the city, the one hundred acres of meadow, and the city's twelve lawmen all also echo the pre-Norman situation.

5.4.c.ii. The Defences.

The Roman fortifications continued to define the defended area up to the Norman conquest and beyond. The most systematic study has been that of the upper Roman enclosure, where the Roman stone wall was found to survive to considerable heights in several places:- at East Bight (6) the North wall ran for 10m standing up to 5.5m above its plinth; at Cecil Street (7) a 25m length survived up to 3m in height; and at the Eastgate Hotel (8) 29m of the East wall were observed, standing in places nearly 7m above the Roman ground surface (Jones 1980b, 17; 31-2; 20). Nowhere is there any evidence for modification to the Roman defences before the Norman conquest.

The lower Roman enclosure defences have also been investigated. On their western side at The Park (9) the Roman wall had stood on average at least 4.5m high above its foundations throughout the medieval period, but there were no surviving traces of post-Roman modification (Colyer 1975b, 241-5). Approximately 50m to the north at Motherby Hill (10) the Roman wall survived up to a height of 3m; neither it nor the associated rampart showed

any sign of later alterations except for the post-Norman insertion of a postern gate at one point - thus demonstrating that the Roman wall formed the nucleus of the late medieval defences (ibid, 246-59).

On the south of the lower Roman enclosure at Saltergate (5) the Roman wall was found surviving to a height of 2.25m, capped by an undated medieval stone wall (Colyer and Jones 1979, 86). On the east of the lower Roman enclosure at Silver Street (11) the Roman stone wall had been largely robbed and there was no trace of what state the defences were in here in the Anglo-Scandinavian period (ibid, 81-84).

At present then, there is no evidence for Anglo-Saxon or Anglo-Scandinavian defences other than the likelihood that the Roman walls survived in a largely defensible state - certainly it was the Roman enceinte, with an extension to the south, which was defended in the later medieval period, and 18th century antiquarians record and depict the enceinte as largely intact (ibid, 91 note 59), although some of the defences they described may be of the medieval period.

Nonetheless, in the absence of any indication of other fortifications, for example sub-dividing the Roman enclosures, it seems at present that if Lincoln was defended by walls, palisades or ditches in the pre-Norman period, these defences followed the Roman lines.

5.4.c.iii. The later influences of Roman topography.

The fact that Roman features survived at Lincoln until the Anglo-Scandinavian period has long been recognised, not only in relation to the defences but also with regard to an intra-mural structure, the Mint Wall, which still survives for a length of 22.5m, stands up to 7.5m above the present ground level and is now identified as the northern limit of a forum-basilica complex, (Jones and Gilmour 1980, 69-72). In addition to these visible structures, recent excavations have now added a considerable body of new information about the influence of other Roman features on the appearance and development of the city in subsequent centuries.

To start with the negative evidence, there is a number of sites where there seems to have been a break in occupation or activity in the 4th or early 5th century, and Roman features were unknown or disregarded in later periods. At East Bight in the upper walled town (6) a Roman road was apparently disused

by the end of the Roman period, buried by material which had, perhaps, washed down from the adjacent rampart (Jones 1981, 12). At The Park (9) the west gateway to the lower walled town is believed to have become disused soon after the end of the Roman period; since, however, the pen-penultimate surface incorporated a coin of Arcadius, probably of 388-92, disuse may not have come as swiftly as the excavator suggests (Colyer 1975b, 245). Nonetheless, there was no evidence for continuity into the medieval period, and the gateway is not on the line of a modern or medieval street. Also in the lower walled town, Roman north-south streets discovered at Silver Street (11), and Saltergate (5) were both abandoned after the end of the Roman period; that at Silver Street was covered at one point by an Anglo-Scandinavian period kiln (Colyer and Jones 1979, 83; 86). At the corner of Hungate and St Martin's Lane (12) 1 - 1.5m of soil built up over the Roman structures before the area was re-occupied in the late 9th/early 10th century (Jones and Nurser (eds.) 1982, 6-7).

Equally clear evidence for the disregard of Roman features has recently come from Wigford, where St Mary's Guildhall (13) has been shown to lie over rubbish pits of the Anglo-Scandinavian period, which are themselves cut into Fosse Way, the main Roman road to Lincoln from the south-west (Jones 1982b, 12-13). Also relevant as an indicator of the decay of the Roman layout is the alignment of Silver Street in the lower walled town, which runs from the Roman south gate at an angle of forty-five degrees towards the presumed site of an east gate. It seems unlikely that this alignment could belong to the Roman period, and presumably it indicates the ability to create easy access between the two adjacent gates at a time when Roman buildings here had collapsed or been cleared. Chapel Lane in the upper walled town may reflect a similar situation.

Few streets in Lincoln are known to have a Roman origin, although this may as much reflect the absence of information on the Roman layout as later divergence from it. Bailgate connects the north and south gates of the upper walled town, and certainly has a Roman origin; East Bight might be thought to reflect the Roman intra-mural road, but such a feature could have been instituted at a later period, and the rapid covering of the Roman road at one point (supra) does not encourage a belief in continuity here. The insertion of Lincoln Castle and cathedral into the upper walled town in the Norman period

has also brought about changes in layout which the medieval street pattern reflects; the plan of the area in the Anglo-Scandinavian period is not known. In the lower walled town the principal north-south route, High Street, is on the line between the south gates of the upper and lower towns, but elsewhere there is no evidence that the later medieval street pattern reflects a Roman origin. Indeed, such evidence as there is demonstrates that the establishment of streets on entirely new lines took place in the Anglo-Scandinavian period.

The evidence comes from the lower walled town at Flaxengate (2), previously assumed to reflect a Roman street; the excavation of 1972-76 has shown, however, that it was a creation of the early Anglo-Scandinavian period, perhaps c. 900, which was resurfaced, sporadically, up to the Norman conquest and beyond (Perring 1981, 6 and passim). Grantham Street, which runs east-west and intersects with Flaxengate, did not lie within the excavated area but formed its southern boundary. The earliest structures which apparently respect the alignment of Grantham Street were dated c. 970, and from this it might be inferred that the street dates from this time; if, however, the area excavated at Flaxengate was all one property, as has been suggested (Perring 1981, 43), then the south boundary of the site, Grantham Street, may have been laid out at the same time as Flaxengate.

Although the weight of the newly excavated evidence favours the conclusion that, with the few principal exceptions noted above, the Roman street pattern of both lower and upper walled towns exerted relatively little influence on Anglo-Scandinavian developments, it has become increasingly clear that individual Roman structures sometimes played a significant role in later developments, although in other cases Roman buildings were demolished before redevelopment took place. An example of such clearance was discovered in the case of the Roman apsidal structure which occupied the western portion of the Flaxengate site. This building was apparently still standing, at least in part, into the 9th century, for when a layer of dark brown loam was deposited over the site at approximately this time, only the area defined by this structure was not covered by it. A further layer of loam, which then sealed the entire site and provided the horizon upon which the earliest Anglo-Scandinavian buildings were constructed, may be interpreted as partly debris from the trenches excavated to rob the stone from the apsidal building, an activity which took place at approximately this time. The demolition of Roman structures

at the adjacent Grantham Place site (3) may be interpreted as a contemporary event (Jones 1982b, 8).

It has been claimed that the east wall of the Flaxengate Roman building, which had previously also acted as a terrace revetment, influenced later developments through being perpetuated as the western boundary of the single unit of property envisaged here in the Anglo-Scandinavian and Norman periods, and also suspected in the later medieval period (Perring 1981, 43; Jones 1980, 52). This is not supported by published plans and sections which show structures assigned to the Norman period traversing this line and also show no trace of a terrace here during the Anglo-Scandinavian phase (Perring 1981, figs. 34; 30 structures 24, 25, 32); any continuity can only have been perpetuated by features so ephemeral as to leave no recoverable trace. Indeed, it is only the fluidity which characterises the siting of Anglo-Scandinavian structures at Flaxengate which suggests that most of the excavated area was a single property - the negative evidence of lack of divisions within the site might again reflect that such features were ephemeral rather than a true absence of such divisions.

These sites at or near Flaxengate and another in the angle between Spring Hill and Michaelgate at the northern limit of the lower walled town (14) (Jones and Nurser (eds) 1984, 14) are the only ones which have produced evidence for clearance preceding Anglo-Scandinavian redevelopment - elsewhere Roman structures survived to exert a positive influence, to attract activity or occupation, and in several cases to be incorporated into new Anglo-Scandinavian structures. Anglo-Scandinavian activity or occupation within Roman structures is known in the lower walled town from the Saltergate site (5), where sherds of this period were found on a floor sealed by the building's destruction levels (Colyer and Jones 1979, 88). The case of the possibly Roman building at St Paul-in-the-Bail in the upper town has already been discussed (Chapter 5.4.b.); other possible instances of the re-use of Roman structures in this part of the town have been noted behind 2 West Bight (15) (Jones 1977, 8) and north of Mint Wall (16) (Jones 1980a, 14), but in both cases the suggestion is based on negative evidence gleaned from small-scale work, and must be treated with caution until larger-scale excavations allow a clearer perspective to emerge. The influence of other upstanding Roman features such as the Mint Wall in the upper town, or those Roman walls which

were incorporated into 12th/15th-century buildings at Danes Terrace I in the lower town (17) (Colyer and Jones 1979, 68-69) has not yet been elucidated. Evidence for the incorporation of Roman structures into Anglo-Scandinavian structures has come from the St-Paul-in-the-Bail site (1) where sunken-featured structures of perhaps 10th-century date consisted in part of a Roman wall in situ (Jones 1979, 15). At 4-7 Steep Hill (4) one wall of a Roman structure was also modified for re-use in the Saxo-Norman period, although it is not clear if this was before or after the Norman conquest (Colyer 1975a, 20).

5.4.c.iv. Anglo-Scandinavian occupation and activity.

Until the recent campaign of excavation by Lincoln Archaeological Trust, and other complementary work, the Vikings' occupation and settlement of Lincoln were known in archaeological terms through only a handful of objects, all of them chance finds (Bjørn and Shetelig 1940, 99). Now, Anglo-Scandinavian activity and presumed occupation have been identified at sites widely spaced throughout Lincoln, mainly through the discovery of rubbish pits or layers containing recognisable artefacts. These sites include West Parade (18), Danes Terrace (17), Saltergate (5) and St Mary's Guildhall (13).

Domestic structures have been recorded in the upper city at St-Paul-in-the-Bail (1) (Jones 1979, 15), where a sunken-floored structure probably served a domestic/industrial function; in the lower city at Flaxengate (2) (Perring 1981), and on the corner of Grantham Place (3) (Jones 1982b, 8); immediately east of the lower city at Broadgate (19) (Jones (ed.) 1981, 104); and south of the Witham, in Wigford, where at 181-182 High Street (20) a fragmentary structure dating from the mid-10th century has been found (Jones (ed.) 1981, 87-88).

The St Paul-in-the-Bail cemetery, already established in the pre-Viking period, seems to have been in use in the Anglo-Scandinavian period, although the tentative phasing of superimposed churches initially proposed (Gilmour 1979) may have to be revised in the light of the unexpectedly early carbon-14 determinations from the earliest inhumations (Jones 1982a, 18). More immediately comprehensible are the results of excavations at St Mark's church in Wigford (21), where Christian burials started in the early 10th century and seventeen stone grave covers of the 10th/11th centuries were discovered. This cemetery may have been initiated in conjunction with the

erection of a church, although no structural remains earlier than the late 11th century were identified; traces of an earlier church may have been totally destroyed, or it may have stood alongside the later building, outside the excavated area (Jones (ed.) 1981, 98-100). The position of the cemetery, perhaps with its church, 450m south of the walled city, together with the 11th-century churches of St Mary-le-Wigford, St Peter-at-Gowts and possibly St Benedict (Taylor and Taylor 1965, 390-8) complement the evidence from 181-182 High Street (20) and from the Dickinson's Mill (22) and Brayford Wharf East (23) sites, that the Wigford suburb was revived in the Anglo-Scandinavian period after a decline which, starting in the late Roman period, led to its disappearance in the Anglo-Saxon era.

Other churches, for which no archaeological or architectural evidence survives, may also have existed in the Anglo-Scandinavian period. The position of St Martin's at the centre of the lower walled city, mirroring that of St Paul-in-the-Bail in the upper, is perhaps an additional pointer to its being an early foundation; however, the most plausible indicator of its early origin is the appearance of the name of St Martin on the series of coins minted at Lincoln c. 920 (Stewart 1967b). Analogous to the York St Peter issue, where the dedication is taken to refer to the cathedral church, the series suggests that St Martin was an important figure and St Martin's an important church in the pre-Norman town.

Domesday Book's entry for Lincoln does not, of course, clearly state the number of churches there, but refers in its statistics for 1086 to four and a half (i.e. at least five) churches within the city and to two recently built outside on land previously undeveloped (Darby 1971, 79). Apart from St Paul-in-the-Bail and perhaps St Martin's, there is no evidence to enable those within the city to be identified. Of the two new suburban churches there are strong historical grounds for believing that one is likely to have been the now demolished St Peter in Baggerholme on the east of the upper walled city (Hill 1948, 133-4, 161). This is of interest not for the church itself, which as a Norman construction is not relevant here, but because it points to an area not built up in the Anglo-Scandinavian period.

Investigation on the banks of the Witham has shown that attention was paid to the riverside in the 10th century, after a period of neglect; at Dickinson's Mill, on the east side of the Brayford Pool (22), the area was

found to have been reclaimed from a waterlogged or at least extremely marshy state in the 10th century, when limestone metalling was laid above a sequence of silt and peat deposits (Jones (ed.) 1981, 90). Approximately 150m to the south the Brayford Wharf East excavation of 1982 (23) showed that in the 10th century the river, which had been virtually stagnant here since the late Roman period, was cleared, and started to flow freely, and soon afterwards, probably before the Norman conquest, fish-traps were laid in the shallows. These two sites clearly demonstrate the resurgence of activity in Lincoln after the Scandinavian take-over, and combine with the structural and artefactual evidence outlined above to indicate a marked contrast with the preceding four centuries.

5.4.c.v. Crafts and industry.

Evidence for the economy of Anglo-Scandinavian Lincoln is all but restricted to one site, on the corner of Flaxengate and Grantham Street in the lower walled city, and even here interpretation is hampered by problems of residuality, considerable uncertainty over dating, and the lack of recorded associations between finds, or between finds and structures. In addition, the likelihood of contamination and the regular shifting of earth and debris make it impossible to determine whether particular crafts were confined to individual structures or were practised in all the buildings in a given phase of occupation (Mann 1982, 4, 43). Furthermore, there is as yet no detailed study of the metal and glassworking evidence reported from the site. It is only possible, therefore, to generalise about the material from Flaxengate.

Manufacturing on a commercial scale is clearly evident in phases IV-VI of the site's occupation, broadly dated c. 970-1060/70. Finger-rings and perhaps beads of high-lead glass were produced, and copper-alloy working also took place, with hooked-tags being common finds; silver-working may also have occurred (Perring 1981, 41). There was much waste antler, particularly in the late 9th/10th-century contexts, and rather fewer bone offcuts which, however, maintained a steady level throughout the 10th and 11th centuries. Composite combs and cases may have been made but with a total representation of only eight apparently unfinished pieces (albeit from a total comb population of twenty nine fragments), such production may have been either domestic or carried out by an itinerant worker (Mann 1982, 4-8, 44;

Christophersen 1980, passim). Another craft, often considered a specialist's preserve, is jet-working; this is represented in an 11th-century context by five fragmentary finger-rings in addition to jet flakes and chips. The other craft represented, textile production, was probably a broadly based domestic industry.

Other evidence for manufacturing in Lincoln is severely limited, and what there is cannot yet be interpreted satisfactorily. At 181-182 High Street in Wigford, evidence for small-scale industrial activity in the vicinity has been found in layers dated only broadly to the mid-10th - early 12th centuries. It includes crucible fragments for copper-alloy and glassworking, and a small amount of smithing slag (Jones (ed.) 1981, 88). More firmly dated to the pre-Norman period are the crucible fragments for copper-alloy working, found in association with an early 11th-century timber structure at St Paul-in-the-Bail (Jones 1979, 15). The scale and purpose of these operations is not yet clear, but they suggest a further example of the widespread appearance of evidence for industrial activities already noted in York (Chapter 4.5.). There are also pointers that pottery manufacture was taking place in Lincoln in the Anglo-Scandinavian period; cooking pot wasters were found on the Flaxengate site in levels of this period (Roesdahl et al (eds.) 1981, 101), and a kiln excavated at Silver Street (11) produced shelly wares of contemporary date (Colyer and Jones 1979, 84; Roesdahl et al (eds.) 1981, 101).

5.4.c.vi. Trade.

The Flaxengate site, with the coin evidence, is also the principal source of evidence for Lincoln's inter-regional and international contacts (Mann 1982, passim). Within Britain there was evidently contact with the Derbyshire/Yorkshire Pennine area which accounts for Millstone Grit items; with the jet sources in North Yorkshire, perhaps via York; with the Wealden area for Kentish Rag honestones; and into the Bristol/Forest of Dean area for Coalmeasures sandstone hones. Pottery includes Thetford, Grimston, St Neots and Ipswich wares from East Anglia; Stamford and Torksey wares from Lincolnshire; one sherd of York ware and two sherds of Winchester ware. The wide range of contact areas around England, even if contacted at several removes, is also attested in the pre-conquest coin finds from the site which include issues from Northampton/East Anglia, Rochester, the West Midlands

(? Chester), Hertford, Hereford and York (Blackburn et al 1983, passim). International contacts are demonstrated by four soapstone vessel sherds, walrus ivory, and amber, all of which probably originated in Scandinavia; and by Niedermendig lava quern fragments (although these may be residual material), Badorf ware sherds found in contexts pre-dating the earliest timber buildings, and early continental glazed sherds, probably from the Low Countries and Spain, found in early 10th century contexts. Badorf ware has also been found at 181-182 High Street (20) and West Parade (18) (Roesdahl et al (eds.) 1981, 101-2).

More remarkable are the six sherds of an early 9th-century Islamic vessel, attributed to North Syria, and the rim of a Chinese stoneware Yüeh bowl of the 8th/9th centuries, both found in layers pre-dating the earliest timber buildings at Flaxengate (Adams 1979, 218; Perring 1981, 33; Mann 1982, 47). The attempt to place the construction of this earliest phase of buildings in the decade c. 870/80, that is, to coincide with the Scandinavian settlement of Lincolnshire in 877, is not wholly convincing; the evidence could as well support a date of c. 900 or even slightly later (pace Perring 1981, 33, 36). In conjunction with the virtual absence of evidence for Anglo-Saxon activity on the site, this suggests it is as likely that the foreign material found in the immediately pre-building levels reached Lincoln in the decades between the Scandinavian take-over and the start of redevelopment on the site as that these items were brought to Lincoln in the pre-Viking period. The volume of Lincoln's emission of coinage in the Anglo-Scandinavian period combined with the evidence for manufacturing and trade found at Flaxengate, demonstrates the regional pre-eminence of Lincoln in that era.

The earliest and apparently sparse coinage of Lincoln is the imitations of King Alfred's London monogram issue of c. 886 (Dolley & Blunt 1961, 90); this was superseded by the exiguous St Martin coinage c. 925 (Stewart 1967b), perhaps also by the coinage of Sihtric I of York struck late in his reign (921-26) (Stewart 1982a, 114), and then probably by either the North-Eastern II or North-Eastern III group of unsigned coins of Athelstan as isolated by Blunt (1974, 88). From the time when mint signatures appear regularly on the coinage until the Norman conquest, Lincoln's output was on a scale surpassed only by London, and approximately equivalent to that of York (Mossop 1970 passim; Hill 1978, fig. 9.1; Metcalf 1981, 72-78).

Lincoln's importance in 10th/11th-century economics is further illustrated by its role as a die-cutting centre. There was some local die-cutting throughout the reign of Ethelred II, and for part of Cnut's reign . Lincoln supplied dies to Nottingham, Derby, and Ipswich, and was also connected with the export of dies for Cnut's Danish coinage (Lyon 1970b, 12).

The scale of minting and the die-cutting activities place Lincoln in the category of larger towns which overshadow all others in the use of coinage, despite having no obvious extra administrative functions as regional centres, and which may therefore have owed their prosperity largely to overseas trade (Metcalf 1978, 194). The late Saxon monetary policy of not permitting foreign coins to circulate (II Athelstan, 14) has, it is generally assumed, lessened the the amount of evidence for overseas trade by requiring foreign coins to be re-minted. Two Scandinavian coins have, however, been found in Lincoln. The first is a Danish coin of c. 1045 found at West Parade (18); the second a Norwegian coin struck at Trondheim early in the reign of King Olav Kyrre (1067-93) (Blackburn & Dolley 1982); they may be interpreted as further indications that international trade did indeed play a part in Lincoln's prosperity.

5.5. NOTTINGHAM

5.5.a. Origins

Nottingham occupies a defensible eminence by the River Leen, a tributary of the navigable Trent system, at a point where the river was fordable (Barley and Straw 1969, 1). The commanding but spatially limited vantage now occupied by the castle is separated from the less elevated area of the medieval town by a shallow valley. It has been suggested that the castle crag may have been fortified in the Iron Age (ibid), but no traces of Iron Age occupation or defences have been discovered in excavations there to date (Drage 1983, passim). Evidence for Iron Age activity is, however, present below the medieval town north of Fishergate (Young 1971, 1-2) and at Halifax Place (Young, 1981, unpaginated). On both sites there was evidence for farmsteads of the late Iron Age, with occupation at Fishergate continuing into the 3rd century AD. With the exception of a small quantity of Roman sherds there is, however, no evidence for a Roman or Romanized presence at Nottingham; the main Roman presence in the area was 11km , north-east

at Margidunum (Castle Hill), East Bridgeford, a small walled town enclosing some 2.5 ha. Todd (1970, 120) has suggested that this was essentially an administrative centre, and as such would have withered after the breakdown of the Roman administration.

5.5.b. Early- and Mid-Saxon Occupation

The name Nottingham, first recorded in the Anglo-Saxon Chronicle for 868 as Snotengaham (Ekwall 1960, 345) meaning 'the village of Snot's followers' is an ingaham place-name, a type now generally believed to belong to a secondary stratum of Anglo-Saxon settlement names, perhaps of the 6th and 7th centuries (Cox 1975, 72, 79). At present there is no archaeological evidence from the town for pagan Anglian settlement, the nearest pagan cemeteries being at Holme Pierrepoint and Cotgrave, 5km and 10km respectively to the south-east (Meaney 1964, 200-1): a shield boss and a cruciform brooch have been dredged from the River Trent at Clifton, some 5km upstream (south-west) (Phillips 1941, 142). Although pagan finds from Margidunum are few (Todd 1969, 78) it may be that the Roman precedence which that site enjoyed continued into the 5th/7th centuries. Before the mid-Saxon period, however, there is little evidence that Nottingham and its vicinity was a focus for occupation in the way that Northampton and its surrounds was (Chapter 7.2.e.).

Asser, writing in the late 9th century, records a British name Tig Guocobauc, literally meaning 'cavey house', the first reference to caves at Nottingham. Caves formed an important element in the storage facilities of medieval Nottingham, being easily and safely dug from the sandstone, but there is no evidence that either man-made or natural caves were occupied in Asser's day, and it has been suggested that the name was of Asser's invention rather than being current in Wales (Keynes and Lapidge 1983, 241, note 59). Even so, it demonstrates that Asser had some knowledge of the area and its characteristic geology.

Traces of a possible mid-Saxon enclosure which pre-dates the Viking takeover recorded by the Chronicle in 868 have been found at the eastern side of the medieval town. North of Fishergate (1) a c. 50m length of ditch, c. 5m wide and up to 1.5m deep, running east-west, has been located (Young 1971, 1-2), and approximately 150m to the north, between Woolpack Lane and Barkergate (2) a parallel and similar ditch has been traced for approximately

15m (Young 1972, 2). Both these lengths of ditch are dated to the mid-Saxon period on the basis of pottery found in their backfill.

There is no indication of the eastern boundary of this enclosure, which could have extended to The Beck watercourse; alternatively, medieval defensive ditches below Lower Parliament Street could have removed all traces of an earlier cutting there. An observation just west of the Fishergate excavation failed to record the ditch continuing on its alignment there and so, unless there was an interruption of the feature at that point, for example for a gateway, the ditch may be presumed to have turned northwards some 10-20m east of Bellar Gate. It is to the east of this line that all but a handful of the approximately two hundred sherds of mid-Saxon pottery known from Nottingham have come, a fact which supports this hypothetical layout of the mid-Saxon defence. Nevertheless, there are other, undated lengths of defensive work which could have extended this mid-Saxon enclosure to the west. On the Halifax Place site (3) some 250m further west the earliest feature recognised was an undated defensive ditch running east-west across the excavated area (Young, pers. comm.). There is also evidence for an undated ditch at Drury Hill (4), preceding the firmly dated late Saxon one (Young 1970, 2), but this earlier phase may itself be late Saxon. At neither Halifax Place nor Drury Hill can the undated, early ditches be linked by their form with the wide, shallow ditches recognised at Woolpack Lane/Barkergate and north of Fishergate, and in the absence of such a link and given the distribution of mid-Saxon pottery, it seems wisest at present to suggest that the mid-Saxon enclosure was limited to the east end of the medieval town. The putative area enclosed there is not in the best defensive position, since it is overlooked to the west, and it may therefore not have been primarily of military importance. As yet the nature of activity within it is unknown, for no structures or features contemporary with the ditches have been located, and there is no evidence for an early church there - St Mary's, the mother-church of the Anglo-Scandinavian burh, lies outside this earlier enclosure (Rogers 1972, 51-56).

5.5.c. Anglo-Scandinavian Nottingham

5.5.c.i. Introduction.

The Anglo-Saxon Chronicle's entry for 868 describes the Viking army wintering in a fortress at Nottingham, and being besieged there by the English: Asser adds that the English could not break down the wall. From the Chronicle we know that in 918 Edward captured the borough and repaired it, and that in 920 he returned to Nottingham and built a second borough on the south bank of the river opposite the earlier one, connecting the two with a bridge. Little else is recorded of pre-Norman Nottingham: its standing as one of the Five Boroughs is recorded in the Chronicle for 942, and the witan is known to have met in Nottingham at least twice, in 934 and c. 973 (Stenton 1971, 350). Domesday Book's record of Nottingham at the conquest provides meagre details of one hundred and seventy three burgesses, two moneyers, nineteen villeins and perhaps a further thirty-eight burgesses in the town, accounting for a maximum of two hundred and thirty-two inhabitants. There is mention of a church and, most interestingly, the importance of both the Fosse Way, the road to York, and the River Trent is stressed. A reference in Domesday's Derby entry confirms that there was a shire court in Nottingham.

5.5.c.ii. Defences.

The best understood element of Anglo-Scandinavian Nottingham is its defences north of the river, although even here there is still uncertainty. It is not clear if the mid-Saxon enclosure recognised at the east end of the medieval town was still functioning when the Viking army arrived in 868, and was the site of the English siege of that year. Alternatively, the Vikings may have fortified a new position, as yet unlocated. Either or both of the undated ditches found at Halifax Place (3) and Drury Hill (4) could perhaps be associated with such an enclosure (Chapter 5.5.b.), or it could have been defined by the ditches discovered to the north between Woolpack Lane and Hockley (5) and to the west at Drury Hill (4) (Young 1970, 2). This enclosure presumably had its southern boundary north of the cliff line which runs between High Pavement and Narrow Marsh (now Cliff Road). The eastern limit is uncertain, although there were indications of a possible north-east corner at the Woolpack Lane site (5), and a later, medieval ditch below Lower Parliament Street may have

removed traces of an earlier eastern boundary. Such a fortification, positioned to embrace the most readily defended area east of the castle crag, would enclose an area of approximately 13.75 hectares. This work was refurbished at least once in the pre-Norman period, with evidence for a re-cutting of the ditch from a flattened U-shaped profile to a flattened V-shape with a deeper central channel at both Woolpack Lane/Hockley (5) and Drury Hill (4) (ibid).

Precise dates for the two phases of defence identified on both these sites cannot be determined; indeed, the Woolpack Lane/Hockley site contained no dating evidence whatsoever in either phase, and is attributed to the Anglo-Scandinavian period only by analogy with Drury Hill. There the recut ditch contained quantities of 11th-century Stamford ware in its backfill, above which was a building dated to the mid 11th century, and perhaps to be equated with one of those erected in the city ditch to which Domesday Book refers. A sunken-featured structure beyond the ditch contained Stamford ware of the 11th century, identical to sherds recovered from the ditch, but the relationship of ditch to structure was unclear, thanks to a modern intrusion. This evidence, together with the presumption that this circuit must pre-date the enlarged Norman circuit which incorporated the castle to the west, seems to place at least the later of the two phases in the Anglo-Scandinavian period, but no further refinement is possible, and the various refurbishments cannot be attributed either to the original Viking army, to Edward the Elder, to the brief period of domination by the York Viking Olaf Guthfrithsson c. 940, or to any other hypothetical late Saxon strengthening. Further investigation to recover more dating evidence is therefore required, as is the location of the southern burh.

5.5.c.iii Topography.

The defensive ditches, cut relatively deeply into the Bunter sandstone, have largely survived later intrusions except in the case of direct re-cuttings, but widespread medieval disturbance of the ground, notably the creation of undercrofts, cellars and caves, coupled with Victorian and more recent re-building, has severely limited the survival of pre-Norman deposits. Additional archaeological problems are created by the well-drained subsoil, probably the principal factor in the generally poor condition of surviving artefacts, and

the apparent lack of rubbish or occupation deposits associated with the buildings that have been recognised.

In ecclesiastical terms, there is documentary evidence for only one church in Domesday Book, and the inter-relationships of parish boundaries suggest that St Mary's, which seems originally to have encompassed the whole burh, was the primary and principal church (Rogers 1972, 51-53). It retains no pre-conquest fabric, however, and no archaeological trace of the Anglo-Scandinavian church has been found.

Secular structures assignable to this period are now known from the south frontage of Woolpack Lane (2), where a late 9th/early 10th-century date is inferred on the grounds of relative stratigraphy for a slight building of wattle and daub construction; at Fishergate (1), outside the mid-Saxon ditch, where a bow-sided structure thought to be of similar date is reported; the sunken-featured structure cut by the ditch system at Drury Hill (4) may also belong to this period; and a sequence of three building phases uncovered at Halifax Place (3) is thought to pre-date c. 1000, although the earliest structure is not closely dated and might pre-date the Viking arrival. At none of these sites is there evidence that the Anglo-Scandinavian layout exerted a long-lasting influence on the tenurial pattern in the vicinity; indeed, at Halifax Place, there is evidence for clearance of the structures c. 1000, and wholesale re-organisation of the area c. 1100 (Young 1981, passim).

5.5.c.iv. Crafts, industry and the economy.

Evidence for manufacturing is restricted to a group of pottery wasters and kiln material excavated at Halifax Place (Nailor forthcoming). The forms are of cooking pots/jars, bowls and possible storage vessels; the cooking pots/jars were thrown on a fast wheel. None of this pottery has been identified on other excavated sites in Nottingham, but it is clearly in the late Saxon tradition, and the kiln equates with those known in other East Mercian Danelaw towns such as Lincoln, Stamford, Torksey, and further afield at Thetford.

The only other clue to Nottingham's role in the economy of the area is the Nottingham mint. This was in existence from the reign of Athelstan (Blunt 1974, 95-6), but only two moneyers were recorded in Domesday Book, a reflection of its limited output in the Anglo-Scandinavian period, when it can have been only of local significance (Hill 1978, 216); for most of the

period 973-1066 it was the least important minting centre among the Five Boroughs (Metcalf 1981, 76-77).

5.5.c.v. Conclusion.

At present if the documentary evidence is left aside, it is principally the evolution and growth of its defences which demonstrate the importance of Nottingham in the later pre-conquest period. Were it not for two Viking graves discovered on the south side of Bath Street in 1851 (Archaeol. J. 1851, 425-6), the presence of a Scandinavian army or settlement would not be deduced through the known artefacts. The documents attest the political and social importance of Nottingham as a shire centre with corresponding judicial functions, but there is no indication of a substantial commercial or mercantile presence in the town.

5.6. STAMFORD

5.6.a. Origins

Stamford is sited on the line of the prehistoric route the Jurassic Way, on either bank of the River Welland, less than 1km downstream from where the Roman Ermine Street crossed the river at a ford (Grimes 1965, 2-7; Mahany and Roffe 1983, 197). Hoskins (1972, 98-9) has suggested that a ford just east (downstream) of the present bridge was the eponymous ford of the place-name, the site of the earliest post-Roman river crossing, and in this he has recently been followed by Perrott (1978, 38-40). Alternatively, it has been suggested that there was an early ford approximately 180m upstream of the present bridge, where the twin branches of the river, flowing through water meadow, are now crossed by the Lammas and George Bridges (RCHMS, xxxviii-xxxix). This latter hypothesis gains support from Stamford's street plan - the sharply curving course of the existing main through-route across the river has the appearance of being an alteration to a more direct route leading from the south via Pinfold Lane and Wothorpe Road to this second suggested ford and then via Castle Dyke and Mallory Lane to Scotgate. The date when these streets were established has not, however, been investigated, and a third derivation of the place-name sees it originating from the Roman ford 1km further upstream (Mahany and Roffe 1983, 197).

The principal settlement at Stamford seems always to have been on the north bank, where the limestone plateau overlooking the river is traversed by the Scotgate valley (RCHMS, xxxv). The bridge at Stamford is at a point where the Welland's course narrows markedly in contrast to the wide area of water-meadow to both east and west; the river passage from the North Sea could be cut here, with river crossing and, if necessary, river blocking, controlled from positions of some strength on the limestone ridges which ran steeply down to the river.

There is no evidence for prehistoric occupation where the medieval town stands, while such Roman structures and objects as are known suggest that at that time there was only very limited occupation in the vicinity (RCHMS, xxxv). There are one or two poorly documented pagan Saxon funerary urns which may have come from Stamford (Meaney 1964, 164) and it has been suggested that the site fits neatly into a series of quite regularly spaced early- or mid-Saxon settlements situated on the north bank of the Welland (RCHMS, xxxvi). There is as yet an absence of features which could be attributed without question to such a pre-Viking phase of Stamford's existence, although a defended enclosure, discussed below (Chapter 5.6.b.) could possibly belong to the immediately pre-Viking period.

5.6.b. Anglo-Scandinavian Occupation

5.6.b.i. Historical introduction.

Although mentioned in passing by the late 10th-century chronicler Athelweard in connection with events of c. 894, Stamford is not mentioned in any contemporary historical source until 918, when the Anglo-Saxon Chronicle records the submission of the [Vikings in the] northern borough and the construction of a second burh on the south bank. Stamford next appears in the Chronicle's list of Five Boroughs in 942; the Chronicle later records that in 1016 Cnut passed through Stamford. Between 942 and 1016 minting activity commenced at Stamford, the earliest coins yet known being of Edgar's Reform issue of c. 973 (Dolley and Metcalf 1961, 145). Domesday Book's record of the borough in 1066 is typically short, referring only to sub-division into six wards, five in Lincolnshire and one in Northamptonshire. The five Lincolnshire wards contained one hundred and forty one messuages at that date.

Mahany and Roffe (1983, 201) have presented evidence supporting the thesis that St Peter's was one of the four churches mentioned in the Domesday entry; the significance of this is discussed below.

5.6.b.ii. Defences.

Elements of three distinct fortifications of the pre-conquest period have been examined at Stamford. Between Bath Row and Castle Dyke (1) below the bailey of the Norman castle, an area comprising three concentric ditches was traced over a total length of approximately 33m (Mahany 1976, 237, fig. 6). The relatively slight, innermost cut is interpreted as a palisade trench. The other two ditches were both at least 1.4m - 1.5m in depth, the uncertainty being caused by later features which may have cut away their tops; their widths at the extant top varied between 1.8m and 2.75m. The central ditch at least was V-shaped, and ran some 3m inside the outermost (ibid, 233; Mahany and Roffe 1983, 203 and note 21). The outermost ditch is possibly later than the inner two (Kilmurry 1980, 32), although there is no direct stratigraphical evidence for their sequence, and this distinction is suggested on the basis of a difference in the material back-filling them. The feature seems too substantial merely to mark a property boundary, and is better interpreted as a defended enclosure. Since even the short length investigated does not form a true arc, the continuation of the ditches' line and the area they enclose are both difficult to estimate; nonetheless, it has been suggested that these works could have encircled the knoll upon which the castle was later built, thus enclosing an area of approximately 1.1 hectare. This is the same size as the 7th-century and earlier ditched and pallsaded 'Great Enclosure' at the Northumbrian palace site of Yeavering, which although interpreted by its excavator as a cattle corral may have served the function of a burh (Hope-Taylor 1977, 78ff, 157), and is almost three times as large as the earliest ringwork of c. AD 850-940 at Goltho, Lincolnshire, a defensible domestic, presumably aristocratic site where, by the early 11th century, the refurbished bank and ditch enclosed approximately 1 hectare (Beresford 1982, 20ff).

Dating evidence for the Stamford Castle ditch system is varied in its form. The cuts appear to have been backfilled after a short period with their own upcast, a clean pink clay. In the fill of the centre ditch was found a

coin of Alfred, most probably lost c. 890-925. Pottery wasters were also found here. The outer ditch cut a layer containing red-painted Stamford ware, and this layer also pre-dated a pottery kiln which has yielded an archaeomagnetic determination of AD 850^{+}-50 (two carbon-fourteen determinations calibrated at AD 678^{+}-83 and AD 837^{+}-77 (Kilmurry 1980, 32) based on charred wood found in the kiln's stokehole, may be disregarded as the sampled wood may be considerably older than the use of the kiln). Although each of these strands of evidence presents difficulties when viewed individually, cumulatively they suggest a date of c. 900 for the defences.

This date is sufficiently uncertain to allow various interpretations of the defensive work, which might be pre-Viking, Viking, or even Edwardian English in origin. If, however, the causeway across the river opposite the castle is the earliest crossing point at Stamford, and if the secondary bridge site downstream can be attributed to the Edwardian period, a pre-Viking or Viking origin would be suggested for these defences. Furthermore, as Mahany and Roffe have argued (1983, 201-206), St Peter's Church, which is sited either immediately adjacent to or within these defences, may have been the 'mother' church of Stamford and may itself be of pre-Viking origin - it was a 'royal' church in the hands of Queen Edith in 1066, and associated with an estate or manor which was tenurially distinct from the borough at the time of Domesday Book. There are, in sum, several pointers which suggest that the defended enclosure at Stamford Castle may be a mid-Saxon, pre-Viking, aristocratic manor or estate nucleus, although the form this took and the function it fulfilled are unknown. Alternatively, this area may have been the nucleus of a newly founded, Viking, aristocratic stronghold, although this seems a less likely milieu for an early church.

Whatever attribution is given to the pre-conquest defences at the castle, they cannot be linked with the other defended enclosure which has been recognised north of the Welland. Topographical analysis has suggested to Mahany (1978, 8) and to RCHMS (xxxviii) among others that the pre-conquest burh was bounded by Broad Street to the north, St Mary's Street to the south, Star Lane and George Street to the east and St John's Street/Red Lion Square to the west. The only site yet excavated on this putative defensive line is to the north-east, to the north of 4 St George's Street (2). Here an undated series of post-holes and slots was recorded in association with a possible turf

rampart, and compared to the more readily comprehensible remains of defences discovered at Tamworth (Mahany 1978, 10). It is possible, however, that this supposed defence may have been part of a timber building, for its remains were encountered only at the extreme western edge of a small trench, and the complete feature was not uncovered. Furthermore, traces of 9th/10th-century occupation and activity, including iron-working slags, underlay the slots and post-holes (Mahany et al 1982, 10), indicating that even if the feature is interpreted as a defence it was not a primary feature of occupation here, and may be a product of the Edwardian or an even later pre-conquest period. The area enclosed within the putative defences is approximately 6 hectares.

South of the river the rectangle enclosed by Park Lane, Pinfold Lane and Church Street, with High Street St Martin's running axially through the centre, seems the most likely area for the southern burh built by Edward in 918, and an excavation at the rear of 24 and 24A High Street St Martin's (3) located a ditch running north-south which is at present the only possible vestige of the southern enclosure which would encompass approximately 3.75 hectares (ibid, 10). The study of parish boundaries is unhelpful on both sides of the river because of later medieval parish amalgamations (Rogers 1972, 62-63).

5.6.b.iii. Topography.

Within the hypothetical defended area north of the river, High Street appears to be a centrally positioned east-west route. High Street, however, has been shown to overlie iron-working residues which are presumed to be in situ, although there is a possibility that they were brought in from elsewhere as road make-up. Similar residues have been discovered at several intra-mural sites including High Street (4), High Street/Maiden Lane (5), St Leonard's Street/St George's Street (6), St Leonard's Street (7) and 32-34 High Street (8). Pottery associated with the deposits at 32-34 High Street has been dated to before the mid 11th century (Mahany et al 1982, 119), and by comparison with this assemblage the iron-working at High Street/Maiden Lane has been placed in the early 10th-early 11th century (ibid, 10). These dates should not, however, be extrapolated to suggest when the residues below High Street were laid down or when High Street was created; and they are in any case too vague to be of much value in that respect. Since, however, timber structures which

may be as early as the late 9th century preceded the iron-working at High Street/Maiden Lane and apparently respected the line of High Street, it may have been created before AD 900, although this event has been placed considerably later in the pre-conquest period (ibid, 9).

Across the river, High Street St Martin's likewise takes a central course through the presumed south burh, but the date of its creation has not been tested in excavation.

Suburban settlement has been suggested, on the basis of documentary evidence (Mahany and Roffe 1983, 215), but has not been recovered in excavation.

5.6.b.iv. Structures.

With the exception of the timber remains excavated at 4 St George's Street (2) and interpreted as parts of a defensive line (Chapter 5.6.b.ii.), the only pre-conquest building remains investigated at Stamford are those at High Street/Maiden Lane (5). These structures, the earliest features on the site, appear to have been demolished to make way for iron-working dated broadly to the early 10th-early 11th century on the basis of ceramic evidence (Mahany et al 1982, 24). It is possible that the underlying buildings may therefore date as early as the later 9th century, and may reflect the occupation of the burh by the Danish army inferred from the Chronicle.

The remains themselves were so limited in extent as to be virtually uninterpretable, although it has been suggested that two buildings and a dividing fence were represented, and that at least one of the structures was perhaps a substantial hall or barn (ibid, 21). Most striking is the apparent rectilinearity of their layout, closely spaced and with gable ends on to High Street, the nearest point of which lay some 6-7m north of the visible part of the structure. This may imply that the High Street was already in existence before the iron-working residues were placed on its line.

5.6.b.v. Industry and economy.

Archaeologically, the economy of Anglo-Scandinavian Stamford is dominated by two industries, pottery and iron-working, both the product of local geology. A range of clays suitable for pottery production occurs in the area, although the precise source of those used has not been determined (Kilmurry 1980, 63ff). Ironstone formations also occur, specifically of

Northampton sand ironstone, which outcrops immediately south of the river and west of the putative south burh, and also at other sites in the immediate vicinity (Mahany et al 1982, 136).

The Stamford ware pottery industry, represented in its pre-conquest phase by kilns at the Castle (1) and Wharf Road (9) both of which lie outside the area thought to be the Anglo-Scandinavian burh, is well known through its distinctive glazed forms, and has been more fully studied than any other pre-conquest ware. It also appears to be more generally and widely distributed than other contemporary wares, with a distribution network extending over a 200km radius from Stamford (Kilmurry 1980, 156, 162). The types traded included fine table wares and some culinary wares, as well as storage vessels, the contents of which were perhaps more important than the pottery itself, and crucibles, for which, it is suggested, there was relatively little competition from other suitable wares (ibid, 166-68).

It has recently been shown that manufacture of Stamford ware started at an early date; kiln debris and wasters pre-date the concentric ditched defence discovered at the Castle, which itself may date c. AD 900 (Kilmurry 1977). These wasters include red-painted sherds, which seem to indicate contact with and inspiration from continental production centres. Such contacts would also have initiated the use of glaze and the fast wheel, and the growth of the industry has been tentatively linked to the disruption of the north French potteries caused by Viking raids in the mid 9th century and the consequent migration, enforced or otherwise, of a French potter or potters (Kilmurry 1980, 193-95). Although stress has been placed on the relative unimportance of the potters' contribution to Stamford's economy (ibid, 152), the town was nonetheless a principal ceramic production centre of the pre-conquest period.

As with pottery production, evidence for iron working has come from sites quite widely spread throughout Stamford both inside and outside the northern burh. Hearths for roasting iron ore and dumps of slag and waste 'fines' dated to the 10th and early 11th centuries were found at High Street/ Maiden Lane (5) (Mahany et al 1982, 23ff), and an area used in the later 10th-early 11th centuries for roasting, smelting and secondary working is known from 32-34 High Street (8) (ibid, 106ff). The near absence of metal objects on these sites indicates that only the mass-production of wrought iron was carried out here, with the forging/manufacture of objects taking place elsewhere.

Watching briefs have recorded further evidence for iron working below the St Leonard's Street/St George's Street junction, where a bowl furnace was revealed (6), slag in the centre of St Leonard's Street (7), ore residues in the centre of High Street (4) and slag below the timber features east of St George's Street (2) (ibid, 10). The material from these watching briefs cannot be closely dated, and neither can the dated, excavated sites be used as an indication of the date of material recorded elsewhere. The various iron working locations need not be contemporary, and might represent quite widely spaced chronological stages in this industry. Its prevalence in Stamford's Anglo-Scandinavian archaeological record seems marked at present but there is no reason to believe that the industry was more than of local/regional significance.

5.6.b.vi. Conclusion.

With the notable exception of its pottery industry and now, to a lesser extent, its iron working, Anglo-Scandinavian Stamford remains little known. Settlement appears to have developed c. AD 900, perhaps from the basis of a mid-Saxon estate centre, an interpretation based on the pottery kilns and ditches at the Castle site. The only evidence for occupation within what can be recognised as the defended burh north of the river is the vestigial and imprecisely dated structures from High Street/Maiden Lane; and nothing is yet known of activity south of the Welland. Only the Viking and Kufic coins found in a hoard dated c. 895 (Dolley 1966a, 49) and a hitherto overlooked ringed pin from the castle, found in a 13th-century context, may be interpreted as tangible proof of a Scandinavian presence.

The fortress aspect of the Vikings' burh, recognisable in the Anglo-Saxon Chronicle, has recently been suggested as a continuing raison d'être for the site in the mid and late 10th century, controlling part of a buffer zone against the Vikings of York, linked closely with and supporting Lincoln, and commanding the route between Scandinavian colonies in Northumbria and East Anglia (Mahany and Roffe 1983, 214-15). There must, however, have been more to Stamford's role than this, for its mint ranks among the top ten most prolific coining centres in late Saxon England (Hill 1978, 216; Metcalf 1981, 76-77), out-done by Lincoln and York, but clearly busier than other centres in the north-eastern Danelaw. Perhaps as Sawyer has suggested

(1965, 161-64) wool exports were already important in the late Saxon economy, and Stamford already enjoyed the eminence in this branch of archaeologically invisible exports which it is known to have had in later centuries.

5.7. SUMMARY

The proportion of new information about the Five Boroughs which has become available during the last decade or so of increased excavation is a substantial one, but ignorance of many vital topics is still total or nearly total. Many of the conclusions which may now be drawn are argued on the basis of negative evidence, and they may be overturned by future discoveries.

The Five Boroughs have in common positions on navigable rivers, with important prehistoric or Roman land-routes either passing through them or nearby. Their origins, however, are diverse: Leicester, Lincoln and Nottingham were all occupied to an unknown extent in the Iron Age, but prehistoric activity has yet to be found at Derby or Stamford. In the Roman era, Leicester and Lincoln both eventually became substantial walled towns, and there were also fortifications at Little Chester, 1km from Derby, but the sites of Nottingham and Stamford were apparently not occupied. This pattern seemingly continued into the pagan Saxon period, with pagan cemeteries at Little Chester and just outside Leicester, and the late 4th-7th century cemetery, perhaps continuously Christian, at St Paul-in-the-Bail, Lincoln. Derby itself has not produced pagan Saxon material, and there are no other finds from Lincoln, but at Leicester objects of this period have been found in limited quantities throughout the Roman area. Nottingham's name suggests a 6th/7th century origin, but there is no archaeological confirmation of this, while Stamford has only a dubious pagan cemetery, represented by ill-provenanced pottery vessels.

All Five Boroughs have, however, produced evidence which, with varying degrees of certainty, point to occupation in the mid-Saxon period. From Derby and Leicester the evidence is ecclesiastical. St Alkmund's, Derby, has produced sculpture of the 9th century which, unless it was transported to the site, indicates a contemporary Christian site; and Northworthy/Derby was the burial place for a Mercian aristocrat in 871. Leicester was a bishop's seat certainly from 737, and perhaps earlier, and the upstanding Roman fabric of the Jewry Wall may have been incorporated into a mid-Saxon church.

Nothing else of the 7th-9th centuries is known from these two places.

At Nottingham and Stamford there is evidence for a defended enclosure which probably belongs to this period. At Stamford it is approximately 1.1 ha. in area, with a putative mid-Saxon church within or immediately adjacent; at Nottingham the area may be 1.5 ha. - 3 ha., not in the strongest defensible position, and without any indication of an associated church. Both may represent the secular focal point of their hinterland.

At Lincoln, where the presumption is that the Roman defences continued to define at least an outer boundary, there is evidence for activity in the lower walled town at Flaxengate, more ambiguous data from elsewhere, and the suggestion that to the south of the River Witham Wigford represents an important trading settlement.

Thus it seems that at all five the Vikings found a pre-existing centre of occupation which had natural potential for development, but what, if any, development they underwent in the four dacades between their takeover (if this happened as soon as the Vikings settled the area) and their recapture by the Anglo-Saxons is mostly unclear. The pottery kiln at Stamford Castle can be assigned to this phase with some confidence, but this apart the only clear evidence is from Flaxengate, Lincoln, where occupation was resumed perhaps c. 900 on a site largely deserted since the Roman period. The two 'pagan' Viking burials from Nottingham do not contribute to this study of settlement development, and indeed, by analogy with those from St Mary Bishophill Junior, York, could date to after the English recapture. The assumption that the Five Boroughs were principally defensive centres for surrounding immigrant landowners remains, but defences which can be definitely assigned to this phase are unknown, and although the Roman works at Leicester, Lincoln and Little Chester near Derby may all have continued to function, they would perhaps have been too large to be easily defended by a segment of the Viking army which, when a single unit, required only 1.4 ha. for its fortification at Repton. From the recapture to the Norman conquest there is a little more evidence at some of the Five Boroughs, although Derby and Leicester remain particularly enigmatic. The extent of Anglo-Scandinavian Leicester is unknown, although if the Roman defences continued to form a boundary, some 35 ha. were enclosed. To estimate Derby's size, several assumptions must be made. If the peninsula enclosed by the River Trent

and the Markeaton Brook is taken as the likely area of the burh, and the peninsula's neck was defended just above the Causey ford, then an area of approximately 29 ha. was enclosed.

Nottingham and Stamford were both established as double burhs by Edward the Elder, although it is not known how actively this defensive provision was later maintained. At Nottingham a northern defensive enclosure of 13.75 ha. has been identified, but the southern burh is unknown; at Stamford the putative north burh is 6 ha. in extent, and the southern one 3.75 ha. At Lincoln, if the Roman walls were maintained and extended to the waterfront, an area of some 38 ha., was defended, and there was a further 59 ha. enclosed between the River Witham and the Sincil Dyke in the Wigford suburb.

The defensible nuclei of the Five Boroughs thus varied considerably in size, although the extent to which the enclosures were built up is not yet known. In area they may be compared with the re-used Roman fortifications of some Wessex burhs such as Winchester with 58 ha., or with the de novo Wessex earthworks such as Crickade with 29 ha. (Biddle 1976, 126); in the south-east Danelaw 10th/11th century Northampton covered 24 ha. (Williams 1984b, 133); in East Anglia settlement at Norwich before c. 900 was restricted to no more than 20 ha., but had doubled in area by c. 1000 (Carter 1978b, 201), and in western Mercia the defences of Tamworth enclosed some 20 ha. (Biddle 1976, 135). The sizes of many of the west Midlands shire centres are not certain, and it is therefore not possible to make all the comparisons required, but it does appear that Derby, Nottingham and Stamford were small-medium sized burhs.

The development of internal layout can be discerned only at Lincoln, with the laying out of Flaxengate perhaps c. 900, and other indications that the Roman plan was largely disregarded, although individual Roman structures exerted an influence, as Jewry Wall possibly did at Leicester.

With the exception of coins struck at their mints, which were not prolific, pottery kilns at Southgate Street, Leicester, and at Nottingham are the sole remains of manufacturing known from either place, and Derby has produced no evidence for industry apart from its coins. Stamford's pottery and iron-working industries are better represented, but they do not convincingly account for the quite substantial output of its mint which, as a

reflection of the burh's size, is exceptional; the silver flowing into Stamford presumably reflects trading activities, and in addition to its glazed pottery, wool may also have been exported.

A single excavation in Lincoln at Flaxengate accounts for most of the available information on manufacturing and trade there, but the range from here and elsewhere in the town is impressive, an additional index of Lincoln's position as the most important of the Five Boroughs in terms of size and wealth. This reflects in part a larger and perhaps wealthier hinterland than those which the others of the Five Boroughs serviced, and perhaps too the export of wool via either the Foss Dyke/Trent or the Witham/Wash. The Flaxengate manufacturing evidence comes from layers dated c. 970 onwards, but Lincoln's long-distance international contacts were present from the late 9th/early 10th century, although their scale is unknown. Simultaneously coin-minting began at Lincoln, and this was to grow in volume until by the later 10th century the city was one of the major mints in England.

Thus even from an early stage after the Viking take-over Lincoln started to develop markedly, in a range of ways and on a scale not detected in the other four east Midland boroughs, and it is clear that by the late 10th/early 11th century the term Five Boroughs embraced a series of places varied in their size, economy, and perhaps in other ways yet to be detected. The number of Viking settlers in any one of these places is impossible to assess, and the only indication of their population comes in Domesday Book, which gives what is likely to be an underestimate. Only the proportion of moneyers' names of Scandinavian derivation gives some insight into the degree of Viking settlement in the burhs, and this is a source available only from the late 10th century to the Norman conquest, and one which may be biased by the social position of the moneyers and the name-giving habits of this successful class. Study of the coinage of 973-1016 has shown that at Lincoln almost 50% of moneyers' names were Scandinavian and at Stamford the figure is 14%. The percentages for Derby, Leicester and Nottingham are based on very small numbers of recorded moneyers, and do not have much statistical weight; the figures are 50%, 22% and 50% respectively (Smart 1968, 240-41). This superficially suggests a higher proportion of Scandinavian settlers or a more enduring Scandinavian culture north of the Trent, but the nature of evidence does not allow conclusions to be drawn with confidence.

6. SMALLER FOCI IN THE NORTH-EAST DANELAW AND YORKSHIRE

6.1. INTRODUCTION

In addition to the Five Boroughs and York, a variety of sources refer to other places in the study-area which share one or other characteristic of the larger burhs already discussed. The two principal reasons for considering a site here are either a statement in Domesday Book that the place had urban features or the existence of coins struck there. In this chapter the historical references to and archaeology of these places are surveyed, although in most instances there is not a large corpus of either written or excavated material.

6.2. TORKSEY

Torksey's claim to urban status in the pre-conquest period rests largely upon the Domesday Book entry which describes it as suburbium and outlines its close connection with Lincoln. Geographically its association with Lincoln, 9.5km to the east, was by way of Foss Dyke, the Roman canal joining the Rivers Witham and Trent. Roman occupation at the junction of Foss Dyke and Trent, the area of what later became Torksey, is known in the form of pottery kilns and a tesselated pavement (Barley 1964, 165). On the present evidence it does not appear to have been a substantial Roman settlement, and there is no evidence for any activity or occupation in the succeeding early- and mid-Saxon periods save for a penny of Offa (757-96) found in the Foss Dyke at Torksey before 1842 (Blackburn et al 1983, 5).

It seems on the available evidence that it may have been Torksey's defensible position at the confluence of two rivers, and perhaps the choice of a passage along either waterway, which prompted the Viking army to overwinter there in 873-4, as recorded in the Anglo-Saxon Chronicle, rather than the lure of an important mid-Saxon settlement; on the basis of evidence from the early Norman period, however, there seems at least a likelihood that the Foss Dyke would have silted in the period of commercial decline following the Roman withdrawal. It seems to have been forgotten in recent discussions of Torksey that the place-name originates in a form meaning 'Turoc's island' (Ekwall 1960, 477) and the island in the Trent now traversed by the railway line may, with its obvious defensible potential as a winter base,

have been an important factor in attracting the Viking army.

A handful of coins attributed to a mint at Torksey demonstrate that there was very small scale minting there from the reign of Aethelred II, although there appears some uncertainty about precisely when in the reign it first occurred. Dolley and Strudwick (1956, 294) identify a coin of Aethelred's First Hand type of c. 979-85; Smart, however, (1968, 240) refers only to a Last Small Cross coin of 1009-16, while Metcalf (1978, 207) notes coins of Second Hand (985-91), Long Cross (997-1003) and Last Small Cross (1009-16) issues. Whatever its precise date, the output was exiguous, with the maximum contribution to the national total being a mere 0.05% in Last Small Cross (ibid, 210). Torksey comes seventieth in Hill's ranking of mints by output (1978, 216). There seems no evidence, moreover, for a mint operating at Torksey after the reign of Cnut, and even if a small emission has escaped detection, it can only have echoed the minimal working of the mint in the late 10th and early 11th centuries. There is no mention of a mint in Domesday Book.

Domesday Book does, however, clearly demonstrate the size of the Torksey suburbium in 1066 and it is the Domesday Book reference which suggests that Torksey may have been one of the two sites additional to the Five Boroughs which were in the mind of the author of Anglo-Saxon Chronicle's entry for 1015 who wrote of 'the seven boroughs'. With 213 burgesses, who had the right to alienate their property and who enjoyed the same customs as Lincoln with the addition of some exemptions from toll (Stenton 1924, xxxv). the town was ostensibly more populous than, for example, the shire centre of Nottingham. Torksey immediately before the conquest was held in demesne by Edith, wife of Edward the Confessor, and thus appears to have been an important royal centre. In conjunction with the adjacent hamlet of Hardwick, it was assessed together with Lincoln, a further emphasis of the link between the two. There is also in Domesday Book a reference to the importance of its position on the waterways which linked the Midlands to York - royal messengers arriving at Torksey were to be escorted on to York along the rivers by the inhabitants of Torksey.

Archaeological evidence of settlement to amplify the historical record is limited. A cluster of ploughed-down post-holes and a gulley, totalling 4.88m in length and interpreted as part of a building's foundation, have been excavated in Castle Close and dated as contemporary with a pottery kiln (Kiln 1),

itself dated c. 1050-1150 (Barley 1964, 184). If correctly interpreted, this structure thus falls at the very end of the Anglo-Scandinavian period. There is also an uncertainly dated clay-bonded stone foundation, seen only in a 1.8m square further south in Castle Close, which on stratigraphic grounds pre-dates another kiln, Kiln 2. This was itself initially placed c. AD 1000 (ibid, 187, 182) on no other evidence than a stylistic study of the pottery from it, which may be rather later than at first suggested. Another, reportedly similar, stone spread has been identified in Castle Close, and traces of what may be another very late pre-conquest structure, contemporary with Kiln 5 of c. 1050-1150, were found in the field opposite Castle Farm (Barley 1981, 268-69, 287). None of these imprecisely defined structures assist in defining the character of the pre-conquest Torksey; it has been suggested that the Anglo-Scandinavian borough occupied the site of the present village, centred approximately 1km north of Foss Dyke (ibid, 186-87), and it might be thought therefore that the kilns were at the periphery of urban settlement. There is, however, a general lack of evidence to substantiate or refute this proposition - there is, for example, no report of pre-conquest pottery scatters in the area of the present village - and it is not even clear how large an area the two hundred and thirteen burgesses of Edward the Confessor's Torksey might have occupied. There is as yet no sign of a defensive enclosure of this date (Barley 1981, 266), a remarkable circumstance in comparison to all the sites so far discussed.

If the position and plan of pre-conquest Torksey are unknown, there is at least one element in the borough's economy which has been studied - its pottery industry. Seven kilns have now been investigated, and all of the three which have been dated archaeomagnetically may have been in use in the pre-Norman period - Kiln 4 in the 10th century and Kilns 1 and 5 from c. 1050 to c. 1150 (Barley 1981, 287). The dark, sandy fabrics were turned competently into a limited range of predominantly culinary vessel forms, and although it was suggested initially that Torksey products were traded quite extensively to York and the East Midlands, the uncertainty in correctly distinguishing dark sandy wares by visual examination alone, also expressed at that time (Barley 1964, 182-84), has proved to be well founded. It is now recognised (Barley 1981, 287-89) that although true Torksey ware is known at Lincoln and other sites in that shire and in Nottinghamshire, much if not quite

all the similar-looking pottery from York is not from the clay sources used in the Torksey kilns known at present (Brooks and Mainman 1984, 68-69). It thus appears, on the available evidence at least, that Torksey was not as important a bulk-supplier to York as had been previously thought. Yet commerce seems the most likely reason for its development: although at first a suitable winter camp for the Vikings, its proximity to Lincoln makes it an unlikely military centre, as Stenton remarked (1927a, 207 note 1). This commercial role was inevitable, given the possibilities of the River Trent and the Foss Dyke, and although there is no evidence to prove it, it is possible that the 10th century clearance of the River Witham, recognised in excavation at Lincoln (Chapter 5.4.c.iv.) was mirrored in works on the Foss Dyke. Speculation of this sort, however, covers virtually all aspects of Anglo-Scandinavian Torksey, which currently presents unrivalled opportunities for research on an urban site largely undisturbed by modern development.

6.3. HORNCASTLE

Horncastle lies at the south-western limit of the Lincolnshire Wolds at the junction of the River Bain with its tributary, the Waring; the Bain itself is tributary to the Witham, which it joins approximately 10km south of Horncastle. It is believed that the site was once considerably closer to the coastline of the Wash than at present, and it has been suggested that in the Roman period only about 16km of river separated Horncastle from the coast (Field and Hurst 1983, 85). In addition to this potentially important water route, Horncastle was also astride one of the principal north-south prehistoric land routes through eastern England, being on the so-called Ermine Street which linked the Humber and the Wash along the Lincolnshire Wolds via Ancaster and Horncastle.

Late Iron Age finds suggest a pre-Roman settlement or settlements originating in the 1st century AD and continuing throughout the Roman period until at least the late 4th century (ibid, 47). At its maximum, this apparently undefended settlement complex extended over some 54 hectares. In the late 3rd or 4th century a walled enclosure of 2 hectares was initiated on a new but adjacent site, well defended between the two rivers, and the strategic positioning of this fortification has led to a suggestion that it formed part of a defence system for the east coast of Britain (ibid, 85).

There is evidence from a small number of 6th-century burials found in and around the defended enclosure for an Anglian presence in the area by that time (White 1981, 71-72), and a fragmentary small-long brooch from excavations at 27 High Street may be a further indicator of this presence (Field and Hurst 1983, 73).

There is as yet no evidence for mid-Saxon activity at Horncastle, although it has been suggested by Rigold (1977, 73-74) that Horncastle is the most likely site for Sidnacester, the see of Lindsey. The site is totally ignored in all pre-conquest historical sources; a tiny emission of mint-signed coins from the reign of Edward the Martyr and the beginning of Aethelred II's rule indicate some activity here in the later 10th century (Hill 1981, 131). Domesday Book shows the site giving its name to the surrounding wapentake, and records that Queen Edith was the sole landowner, holding three carucates in 1066.

There has been relatively little archaeological study of Horncastle apart from the Roman defences, and on all sites investigated to date there has been no trace of post-Roman but pre-Norman occupation, in part, perhaps, attributable to the degree of medieval-modern disturbance encountered on virtually all these sites (Field and Hurst 1983, passim). A collection of 9th/10th-century wheel-thrown wares from 27 High Street and a 9th-century strap-end from the same site may, however, indicate Anglo-Scandinavian activity there (ibid, 69, 73).

The interpretation of this meagre data is discussed below (Chapter 6.9.).

6.4. CAISTOR

Dominating the Ancholme valley in north Lincolnshire from its position near the north-west limits of the Lincolnshire Wolds, along which it had good communications via the prehistoric trackway Caistor High Street, Caistor appears in many respects a twin to Horncastle. It is sited on a spur, and its position was clearly determined by the geomorphology of the vicinity.

There is no evidence for prehistoric activity on the site of Caistor, and little is yet known of Roman occupation. The list of coin finds from the town includes issues ranging in date from Vespasian to Honorius, but the defences are dated to the later Roman period, as is the operation of pottery kilns just west of the walled town (Whitwell 1982, 58, 77). An excavation at

the south-west corner of the enclosure revealed no traces of *in situ* buildings, and all the approximately two hundred sherds of Roman pottery found could be placed in the 3rd and 4th centuries (Rahtz 1960, 182). The Roman defended area was an irregular polygon enclosing approximately 3 hectares (ibid, 187) and both the pottery evidence from Rahtz's excavation and the morphology of the bastioned defences indicate that the fortifications were a late Roman phenomenon, possibly an inland augmentation of the coastal defences of which Horncastle also may have formed a part (Chapter 6.3.).

Caistor and its immediate vicinity have yielded several discoveries of pagan Saxon burials. In addition to those found between Caistor and Nettleton, 4kms to the south-west, at Nettleton itself (Meaney 1964, 160), and at Fonaby, 2kms to the north-west (ibid, 155; Cook 1981), there is also evidence for burials within 1 km of the Roman walls (Parsons 1973, 79-81; Everson 1981, 70).

A sceat of Eadberht (737-58) (Rigold and Metcalf 1984, 248) may indicate activity here in the mid-Saxon period; potentially a more important piece of evidence is a fragmentary Latin inscription, now lost, found at Castle Hill in 1770, which is interpreted by Radford (1946, 98-99) as a *titulus*, a dedicatory stone for a church or altar, and indicative of the presence of a large and important church at Caistor. Radford dated it to the 8th century - Okasha (1971, 58) considered its date uncertain, while conceding that there was 'a little epigraphic evidence which might suggest an early date' [in the Anglo-Saxon period] - and suggested tentatively that it might point to Caistor having been the location of *Sidnacester*, the pre-Danish see of Lindsey. There is no other evidence to substantiate this claim at present, and Caistor's role in the pre-Viking era remains undefined.

If it was a centre of importance in the mid-Saxon/Anglo-Scandinavian periods, it escaped the notice of all contemporary writers. The justification for its consideration here as a possible *burh* is the minimal output from a mint sited here, an output least among the eighty-seven identifiable late Saxon mints (Hill 1981, 130). Coins are known from the reign of Edward the Martyr (975-8) and from Aethelred II's *First Small Cross* issue (978/9); there is then a gap until Cnut's first, *Quatrefoil*, issue (1017-23) (ibid, 131). The earlier grouping may perhaps indicate that Caistor received new, mint, status as a result of Edgar's 973 reform of the coinage, although no coins of Edgar survive: Cnut's early years coincide with minting at a small number

of otherwise dormant mints, including Peterborough and 'Eanburh' (ibid, 131-32), but this pattern, if such it is, cannot be adequately explained.

Domesday Book records that in 1066 Caistor was linked with Hundon in the possession of the King, and part granted by him to Earl Morcar of Northumbria; the entry makes it clear that Caistor was the manorial centre for the wapentake of Yarborough. Its parish church, St Peter and St Paul, incorporates late Saxon workmanship of around the time of the Norman conquest (Taylor and Taylor 1965, 128), which may conceivably be vestiges of the church listed in Domesday Book. Caistor's royal lordship links it to Horncastle, Grantham, and its status, like theirs, is discussed below (Chapter 6.9.).

6.5. LOUTH

Centrally positioned at the east edge of the Lincolnshire Wolds at what was presumably a bridging point over the River Lud for the prehistoric trackway Barton Street, which traverses the Wold's edge linking the Humber to the Wash, Louth is well positioned as a focal point for inhabitants of the Lincolnshire Marsh and eastern Wolds. There is no evidence for prehistoric or Roman settlement, although sporadic finds of artefacts from those periods are recorded (Field 1978, 2-3). A single cruciform brooch found in the town cemetery before 1933 may indicate the site of a pagan Saxon cemetery (Meaney 1964, 158); this single object is overshadowed by the extensive 5th-7th-century cremation cemetery at South Elkington, 2.5km to the north-west which, it has been suggested, might relate to occupation at and around Louth (ibid, 154; Field 1978, 4). There is no other archaeological evidence for pagan- or mid-Saxon settlement. Louth makes its sole appearance in the Anglo-Saxon Chronicle's entry for 792, where the F version adds to the more widely reported entry concerning Abbot Aethelheard's election to the archbishopric of Canterbury the fact that he had previously been at the monastery of Hludensis, generally equated with Louth (e.g. Stenton 1971, 225). The presence of an important church in Louth is implied by the reference in the 11th-century Liber Vitae of New Minster to the stealing of the body of St Herefrith, Bishop of Lincoln, who had been buried in Louth (Birch (ed) 1892, 289). It has recently been suggested (Owen 1980, 18) that the parish church of St James was Herefrith's original shrine, but this remains conjecture.

Domesday Book records that Louth was in the hands of the Bishop of Lincoln in 1066, and that in 1086 the bishop had eighty burgesses and a market among his possessions there. It is not clear whether the burgesses had been introduced since the Norman conquest; their presence is the sole reason for including Louth in this study. No archaeological remains of an Anglo-Scandinavian settlement are yet known - there is no indication that the site was defended and, contrary to earlier views, there is no conclusive evidence that Louth was ever even a minor mint in the pre-conquest period (Dolley 1957, 503). Urban status for Louth, even in the later pre-conquest period, is thus at present unproven, although it was an important holding of the Bishop of Lincoln.

6.6. GRANTHAM

On the River Witham at the point where it cuts through the southern continuation of the Lincoln Cliff, and with Ermine Street only 3.5km to the east, Grantham enjoys good waterborne and land communications. There is some evidence for both prehistoric and Roman activity or occupation, although their nature has not been defined (Mahany 1981, 42). In the pagan Saxon period the site appears to have been a focus for cemeteries, with finds at New Somerby, Betton Lane and London Road (Meaney 1964, 155-56). Occupation sites of this or the mid-Saxon period are typically elusive, however; the only archaeological evidence for activity or occupation at Grantham in either period is a penny of Offa (757-96) found 'near Grantham' in 1929 (Blackburn et al 1983, 5).

Grantham's claim for consideration in this study arises through its description in Domesday Book. Recorded there as the King's land, it had been held by Queen Edith in 1066, who had a hall there. Also recorded are 111 burgesses and '77 tofts of the sokemen of the thanes', a unique formula, the meaning of which is not clear (Foster and Longley (eds) 1924, 16). In spite of the mention of burgesses, Grantham is not treated separately at the start of the Lincolnshire entries, as Lincoln, Stamford and Torksey were, and therefore it may be concluded that in the minds of the Domesday inquisitors it did not share the urban characteristics which singled out those three places. There has not been any excavation in the town to produce tangible traces of the pre-conquest settlement, but at present there is no

evidence for either a pre-conquest defensive circuit or a mint, two of the features common to the principal burhs of the Danelaw.

Domesday Book makes it clear, however, that Grantham had soke over many of the surrounding vills, and was, in the words of Stenton (1971, 525) 'in effect [a] minor local capital ..... probably ..... the centre of an important estate before the Danish conquest'. It may be that it was only in the years immediately preceding the Norman invasion that burgesses were being introduced to this royal estate in a deliberate attempt to raise revenue through trade and manufacture.

6.7. NEWARK

Its name denoting a distinction from the Roman 'old work' at Ad Pontem (East Stoke) 7km to the south, Newark stands on the east bank of the River Trent, 26.5km north-east of Nottingham and a similar distance south of Torksey. Communication by land was facilitated by the prehistoric trackway Sewstern Lane leading from the Welland at Stamford which reaches the Trent valley at Newark (Barley (ed.) 1956, xvi) and by the Roman road Fosse Way, Newark is positioned on its line, between Lincoln and Leicester, but although there is some evidence for Roman activity between Fosse Way and the Trent just to the north of the later medieval North Bar (Barley 1961, 15), the site seems not to have been important or substantial.

In the early Saxon period Newark was the site of at least one substantial cremation cemetery at the south-west of the medieval town at Millgate (Meaney 1964, 201; Wilson and Moorhouse 1971, 132); a pottery bowl, said to be from the market place, has come to light, perhaps indicating another cemetery site (Alvey 1980, 84-85). The discovery during building work at Balderton, 3km to the south-east,of a gold solidus of Chlotar II, struck at Marseilles c. 625, without any associated objects or an identifiable context, is not explained (Rigold 1975, 669). The earliest documentary reference to Newark is Domesday Book where, notwithstanding a reference to fifty-six burgesses among its population, it is found amid the ordinary entries and not given separate treatment, as the principal urban centres were. Its status as a soke centre is clear, however, and it is linked with two berewicks and pieces of sokeland in fifteen other vills (Terrett 1962, 275). Stenton (1908, 220) commented that whether or not Newark had been a borough

before the Norman conquest, it must very recently have been in the hands of a lord of comital rank since it was given by Godgifu, wife of Earl Leofric of Mercia, to the Bishop of Lincoln and his monastery of Stow in Lindsey. The fifty-six burgesses were, in 1086, in the demesne of the Norman Bishop Remigius, perhaps indicating that burghal status at Newark was a Norman innovation - and yet the value of Newark and its appendages had dropped from £50 in 1066 to £34 in 1086, hardly a result compatible with urban development.

Newark also merits consideration here because it enjoyed the status of a mint on two occasions, in the reign of Eadwig (955-9) and in the final, Last Small Cross issue (1009-16) of Ethelred II. The issue was exiguous, the mint ranking eighty-fourth out of the eighty-seven identified late Saxon mints (Hill 1981, 130-31).

With the exception of a small area south of the Market Place beneath the Old White Hart excavated in 1974 but to date only mentioned in passing in the literature (Todd 1977, 48), no undoubted Anglo-Scandinavian period levels have been excavated within Newark, work generally having been concentrated on the defences. In spite of early claims that the plan of the new, pre-conquest work is clear (Barley 1961, 10), an early plan of the defended area (Barley (ed) 1956, xxiii) has since been amended slightly as regards the eastern side of the enclosure (Todd 1977, fig. 1); furthermore, although excavations have been mounted on the lines of the north, east and south sides of the later medieval defences, there is no trace of any pre-conquest defence anywhere on this circuit. The long-standing assumption that the pre-conquest and later medieval defences were coterminous must therefore be seriously questioned, and it has been suggested that the pre-conquest burh was considerably smaller than the later medieval walled town, and that it lay in the western half of the late medieval enclosure, in the area of the castle (ibid, 47). If this speculation should be correct, it implies that the Anglo-Scandinavian levels excavated at the Old White Hart were probably extra-mural. Elucidation of these questions must await further excavation; the sparse evidence currently available is discussed below (Chapter 6.9.).

6.8. OTHER SITES

In addition to the sites noted above, Domesday Book refers to burgesses at several places in Yorkshire, including Bridlington, Dadsley, Pocklington and Tanshelf. There is no archaeological evidence for any of these places at the Norman conquest or the preceding centuries. Tanshelf (Pontefract) which had sixty 'lesser burgesses' in 1086, was a meeting place for the witan in 947, according to the Anglo-Saxon Chronicle, and Simeon of Durham's reference to the event records a villa regia there. Its position on a main route north must have influenced its growth, but the stages by which this happened remain mysterious (Faull and Moorhouse (eds) 1981, 190). The same is true of Dadsley (Tickhill), with thirty-one burgesses; its strategic position on the Great North Road was recognised in the late 11th century by the institution of a castellaria based at Tickhill (Stenton 1971, 627-28). Bridlington was possibly a small coastal trading centre, although it is credited with only four burgesses, and Pocklington was presumably a market centre servicing the population of the Wolds, below which it is sited; it had fifteen burgesses. All of these sites may have flourished very late in the pre-Norman period, but their development remains conjectural, and they may not have differed greatly from the rural vills around them.

At Doncaster the discovery of ditches of post-Roman but pre-Norman date around at least part of the late Roman 2.3 ha. stone-walled fort, at the nucleus of the medieval town, might suggest that there was a small urban community here in the pre-conquest period, stimulated by Doncaster's position where a main north-south route crosses the River Don (Magilton 1977, 32-34: Magilton, pers. comm.). It seems more likely, however, that Doncaster was a Viking-age fortification, not a town but one of a series of defensible sites in the region identified through their names which include the element burh. Among these is Conisbrough, Cunugesburh in the will of Wulfric Spott c. 1004 (Jensen 1981, 142; Whitelock (ed.) 1955, 542; Wood 1980, 207ff), where it and Doncaster appear as estate centres, and it is in this light that the discoveries at Doncaster should be viewed.

6.9. SUMMARY

Of the sites considered in this chapter, Torksey's burgess population as attested in Domesday Book places it in the category of the shire centres and Stamford, although apart from its pottery industry little is known of it archaeologically. The other sites, although equally unknown through excavation, seem from the historical evidence to have been less important. Horncastle, Grantham and part of Caistor were, however, linked by royal ownership in 1066, the remainder of Caistor and Newark were in aristocratic possession, and Louth was given to the Bishop of Lincoln. After the coinage reform of 973 there had been mints at Torksey, Caistor, Louth and Horncastle and Newark which, although they had not flourished, do demonstrate in tangible form the royal interest in Newark and Louth as well as in the other sites which were held by the crown in 1066. The sparse facts may suggest an attempt to extend the financial benefits of running a mint to royal estates which could serve as market centres in the Danelaw, as also occurred in the south-west (Hill 1978, 222), but their relationships with their hinterlands, and the reasons for their failure, will not be understood until excavation has provided a clearer picture of their form and the activities within them.

7. COMPARATIVE URBAN DEVELOPMENT

7.1. INTRODUCTION

This chapter places the sites reviewed in previous chapters within a wider context by discussing contemporary urbanism both in the British Isles and in relevant areas of north-western Europe. England will be dealt with as a number of distinct sub-areas. The southern Danelaw (Cambridgeshire, Northamptonshire, Huntingdonshire, Buckinghamshire and Bedfordshire) and East Anglia represent areas of Scandinavian settlement, while Wessex and Western Mercia (Herefordshire, Gloucestershire, Worcestershire, Staffordshire, Oxfordshire and Warwickshire) represent 'English England'. The Scandinavian presence in Ireland, largely confined to a series of coastal towns, should provide useful comparisons with the various types of English evidence, as should urban development in that other principal, intrusive, Scandinavian colony, Normandy. Finally the indigenous evidence of the Scandinavian homelands themselves will be treated.

7.2. SOUTH-EAST MERCIA - THE SOUTHERN DANELAW

7.2.a. Introduction

The area between the Rivers Thames and Welland did not share the wapentake land division, the carucate land assessment and the duodecimal reckoning of Yorkshire and the territory of the Five Boroughs, 'the essential Danelaw (Stenton 1927a, 213); it was included in the County Hidage from which 'the essential Danelaw' was omitted (Hill 1981, 96-97), and contains only a very few Scandinavian settlement names (Sawyer 1971, 161). Yet despite these indicators that it was not an area of considerable Scandinavian influence, it was under Scandinavian control from the settlement of 877 to the reconquest nearly forty years later. For this reason, the Scandinavian burhs in the area demand close comparison with their counterparts in the true Danelaw further north. Five places - Bedford, Cambridge, Huntingdon, Northampton and Tempsford - are named in the Anglo-Saxon Chronicle as the bases of Viking armies. The first four of these eventually became shire towns; Tempsford, the site of an advance base for the army of Huntingdon and East Anglia constructed in 917 and captured by the English in the same year, did not

achieve a later permanence, being overshadowed by its neighbour Bedford, 12km further up the River Great Ouse.

There is little historical evidence to suggest that the four future shire centres or Tempsford had been of especial significance in the pre-Viking era. Cambridge is the only one of the group to be mentioned before the Danish invasion. It was the site of the Roman settlement known to the Anglo-Saxons as Grantacaestir, alluded to in Bede's Ecclesiastical History iv, 19, and in the mid 8th-century Life of St Guthlac, iii. These references do not necessarily imply that it was occupied at the time of their composition - occupation is first attested in 875, when the Anglo-Saxon Chronicle records that it was the site of a Viking camp.

Bedford was one of the boundary markers, separating the Danelaw from Wessex, agreed between Alfred and Guthrum in 878 and recorded in the Anglo-Saxon Chronicle. A clue to an early ecclesiastical importance, perhaps the presence of a minster in the pre-Viking period, is provided by the 11th-century List of Saints' Resting Places which includes the information that St Aethelberht's remains were at Bedford. Although Rollason (1978, 64) suggests that the church containing the relics is likely to have been founded after Edward's capture of Bedford from the Danes in 914, he later (ibid, 68) affirms that the entries in the part of the work which includes Bedford deal predominantly with the pre-Viking period. In view of this, and the absence of evidence to support the later attribution, it may be hypothesised that there was an important church at Bedford before the Viking settlement, and that Bedford was already a focus of regional activity in the religious sphere, as the identification of an early church suggests Northampton may also have been (Chapter 7.2.e.).

Huntingdon, Northampton and Tempsford are not mentioned in any source before appearing as the bases or rallying points for Viking armies during the years 913-17.

All five south-east Mercian Viking bases were positioned to good advantage for communication via the river systems draining into the Wash - Northampton and Bedford at the navigable heads and crossing points of the Nene and Ouse respectively, Huntingdon and Tempsford further down the Ouse, with Huntingdon at the point where the river was crossed by Ermine Street, and Cambridge on the Cam, at or near the fen edge. These strategic positions

may have attracted pre-Viking settlement as they did the Viking armies.

7.2.b. Huntingdon and Tempsford

The archaeology of Tempsford and Huntingdon is notable only as a largely untapped and under-reported resource (e.g. Schofield and Palliser (eds) 1981), and nothing is known archaeologically of their pre-Norman development.

7.2.c. Cambridge

Nothing can be added to Addyman and Biddle's (1965, 98-103) recension of Cam's (1935, passim) conclusions about the development of Cambridge; a paltry amount of archaeological investigation of 'cispontine' Cambridge, south-east of the river, has only confirmed their views (Browne 1974, 5). It is clear that Cambridge was successively a focal point from at least the late Iron Age, through the Roman walled town to the Early Saxon period, when cemeteries existed on both sides of the river (ibid, 3-4). Evidence for mid-Saxon occupation or activity has not yet been found; it may be speculated that the Viking army wintering in 875 made use of the Roman fortifications. The main concentration of Anglo-Scandinavian activity appears to be south of the Cam, where the majority of objects have been recovered, as well as pit complexes: there is, however, evidence that the Roman walled town area was also occupied. As yet no pre-conquest structures or even substantial groups of artefacts have been excavated to complement the late Saxon fabric surviving at St Bene't's (Taylor and Taylor 1965, 129-32), and Domesday Book's reference gives only a slight insight into the mid 11th-century town. In nine of the ten ward subdivisions of the town in 1066 there were 373 messuages; the only intimation of the activities of the burgesses comes in references to ploughs and pasture, prompting one commentator to compare Cambridge to an overgrown village (Salzman 1938, 357).

7.2.d. Bedford

The evidence for Bedford's origins presented by Baker et al, (1979) has not been significantly added to since then (Baker, pers. comm.). There is no substantial Roman settlement on the site, and the earliest evidence for occupation within the medieval core of the town consists of incomplete structural remains in the vicinity of the castle to the north of the River Great

Ouse, and at 20-24 St John's Street to the south (Baker et al 1979, 20, 117). These buildings are associated with hand-made pottery in simple, domestic forms normally associated with the mid-Saxon period, c. 650-850, and similar pottery has also been found north of the river at Midland Road (ibid, 94). There seems no reason to associate this pottery with the early mid-Saxon period, as is suggested in the publication, and the areas which produced it were not sufficiently large to allow the nature of the occupation, its density and extent, to be gauged. All that can be said at present is that there appears to be pre-Viking and pre-Edwardian settlement on both river banks.

At the castle site, mid-Saxon buildings were covered by a 'black occupation layer' of later Saxon date which is interpreted as the outcome of intensive domestic 'allotment or kitchen garden' cultivation (ibid, 17, 63); at 29-39 St John's Street the earliest settlement was of 10th-century date, and was apparently aligned with the present road (ibid, 115); at 20-24 St John's Street there were 10th-century pits succeeding the mid-Saxon structures (ibid, 117), while at St Mary's Street, between St John's Street and the river, the earliest material found was of 11th/12th-century date (ibid, 138). Interpretation is hindered by the difficulty of precise dating in most cases, and on the broader scale by the uneven distribution of excavated sites within the medieval core, but at present little more can be said of the late Saxon period than of the mid-Saxon, the only significant discovery being the shared alignment of the 10th-century features at St John's Street and the street itself, perhaps a pointer to the street's date of origin. The nature of Viking occupation and of the Edwardian burhs built on either side of the river in 915 is unknown, as are their layout and their limits. To the north of the river there survive elements of what may have been a deliberately planned rectilinear street system of pre-Norman date, but it is not clear if St Peter's church, which contains some fabric thought to belong to the late Saxon period (Taylor and Taylor 1965, 58-60), is inside or beyond the pre-Norman defensive line (Baker et al 1979, 296-98). It is not yet firmly established that the King's Ditch, enclosing part of the southern settlement, is of pre-conquest date as Hill supposes (1970, 98; Baker et al 1979, 99). The limited excavations have not brought to light a body of material which can be used to reconstruct the economy of pre-conquest Bedford and were it not for the site's known administrative role as shire town, its economic role as mint from at least the mid 10th

century, and the Domesday Book reference to its burgesses (the site itself is styled 'villa'), Bedford's 9th/11th-century importance could scarcely be realised from the archaeological evidence.

7.2.e. Northampton

Topographical evidence for the development of Northampton has been a subject of research at least since the pioneering paper by Lee (1954), accelerated by the work of the Northampton Development Corporation over the last decade. It has now been demonstrated that there has been a focus of activity within 2.5km of the town's medieval core for much of the last six millennia, including a causewayed camp, a hill-fort, a Romano-British small town, and a cluster of early Saxon cemeteries (Williams 1977, 134-35). Most significant for comparative purposes is the information on early/mid-Saxon occupation which has come from area excavations in the south-west corner of the medieval town, an area defined through a topographical analysis of the street pattern as perhaps representing the defended nucleus of Northampton (Lee 1954, 169).

Here a series of sunken-featured and ground-level timber buildings has been found within an area measuring at least 200m x 100m, associated with a massive timber hall with annexes measuring 30m x 9m overall which was later replaced by an even larger rectangular stone building c. 37.5m x 11.5m dated tentatively to the 8th century (F. Williams 1979, 43-44; Williams and Shaw 1981, 94-96; Williams and Shaw 1982, 39). This latter structure, identified in its timber phase by analogy with similar structures at Yeavering as a 'palace', stands immediately off the east end of the Norman church of St Peter; a stone structure largely inaccessible below the church, and known only from its eastern limit, is plausibly identified as a forerunner of the Norman building (J. H. Williams 1979, 110ff). Adjacent mortar mixers, presumably associated either with a phase of the putative stone church or with the stone hall, have a series of radio-carbon determinations which jointly suggest a date of c. AD 700 for this activity (ibid, 140, 247). The economic role of this settlement is not elucidated by the meagre collection of artefacts reported to date - a small amount of copper-alloy and iron-working debris is the sole evidence for manufacturing to have appeared (F. Williams 1979, 44). The broader significance of this complex is discussed below (Chapter 8).

Evidence for the later development of Northampton between the Viking takeover and the Norman conquest has again come from the south-western portion of the medieval town, and principally from excavations at St Peter's Street, where there was an intensification of occupation demonstrated by both structural remains and pits. At this time, however, there were only ambiguous traces of a street surface where St Peter's Street was to develop in succeeding periods, and the structures do not cluster at or closely respect any hypothetical street frontage. There is no evidence which allows this phase of the site's development to be dated closely within the late Saxon period and it cannot be attributed specifically to either the period of Scandinavian domination or of English resurgence. The cumulative evidence of a relatively large number of the late 9th/early 10th-century St Edmund Memorial pennies from all the sites in the south-west of the town, particularly from Chalk Lane, suggests that there was occupation in the Danish period, but there is no evidence yet for town planning or indeed for the development of sites previously unoccupied.

Neither is there as yet any clear evidence for large-scale manufacturing or indeed for any other aspects of an urban economy, although there is evidence of minting from the time of Eadwig (Blunt and Dolley 1971, 94), if not from the reign of Athelstan (Blunt 1974, 72), and it has been suggested by Archibald that some St Edmund pennies were struck in Northampton c. 900 (in Williams and Shaw 1981, 118). There is, too, evidence that Northampton was an administrative centre in the later 10th century, for a record survives of an alderman buying land at the assembly of the army of Northampton in 983-85 (Stenton 1927a, 206). Domesday Book does not define Northampton's size in 1066, and is equally sparing of other details, with no references to either agriculture or trade.

7.2.f. Summary

At present, the limited amount of archaeological research into the origins and development of the south-east Danelaw burhs severely restricts their use in a study such as this. In none is the topography of the Viking phase, or even of later Saxon occupation, adequately defined, and their economic role is virtually unknown. It does not seem that they were exemplars of the

development of the more intensive early 10th-century urban occupation recognised at Lincoln or York; in the current state of knowledge they are most interesting for the hints they provide about the types of places chosen by the Viking armies as bases after the settlement of the 870s.

7.3. EAST ANGLIA

7.3.a. Ipswich

It is generally believed that in the mid-Saxon period, before the Viking settlement, Ipswich fulfilled a role in East Anglia comparable to that attributable to Hamwic for Wessex, London for Mercia, or York for Northumbria - that it was an international trading centre (Biddle 1976, 115; Hurst 1976, 303). If true, or if it maintained this role up to and into the era of Scandinavian settlement in East Anglia, then it might claim to be an influence on Scandinavian urbanisation in East Anglia. Unlike Hamwic, London or York, no contemporary record earlier than the 10th century survives for Ipswich, and the principal evidence that the site was a relatively large, densely occupied commercial centre is the widespread distribution throughout Ipswich of sherds of Ipswich ware, the distinctive mid-Saxon pottery named from kiln sites below the modern town (Dunmore et al 1975, fig. 32). This distribution is tacitly equated with a contemporary occupied area, which in size could indeed be comparable to Hamwic. As noted above (Chapter 2.6.), such equations may be illusory and a cautious approach would require excavated evidence to substantiate the picture built up through casual finds.

There is, too, little evidence of international trade in mid-Saxon Ipswich although Ipswich ware itself, broadly dated to c. 625-875, may in its manufacturing techniques point to a continental stimulus (Hurst 1976, 301ff). There is some continental imported pottery, principally of Badorf-type ware, and some Merovingian/Carolingian glass fragments; much of the pottery at least is believed to be 9th century rather than earlier (Dunmore et al 1975, 59; Wade 1981, 49). Ipswich or its vicinity is presumed to have been the mint for the East Anglian runic sceattas of Series C and R (Metcalf 1984, 37, fig. 6) but it has been noted that there have been 'remarkably few' separate finds, and the total of sceattas found there is only nine (Rigold and Metcalf 1984, 253).

The current paucity of evidence to verify the widespread assumptions

concerning Ipswich's size and role before the Viking takeover may well in part reflect the limited amount of excavation to date. There is, however, equally little evidence that Ipswich was a substantial 10th-century settlement with an important economic role; there are, for example, no mint-signed coins of Ipswich before the last quarter of the 10th century (Dunmore et al 1975, 65). This adds to the generally minimalist picture that can currently be drawn of Ipswich in the 9th century, a picture which hardly suggests that the site could have exerted a great influence on the Danelaw's early towns.

7.3.b. Norwich and Thetford

Of the other East Anglian towns important by the time of Domesday Book, Norwich is currently believed to have been a group of small separate settlements in the 8th or 9th centuries, with a principal nucleus below the Norman castle, perhaps the Needham of some documents, with its principal growth coming in uncharted stages in the 10th and 11th centuries (Carter 1978b, 196ff). Thetford too seems to have expanded from an agriculturally-based nucleus and to have acquired the urban attributes of size, dense settlement, and economic diversity in the late 9th or 10th century (Dunmore 1976, 9-11); it seems to be a product rather than a predecessor of Scandinavian settlement.

7.3.c. Colchester

Finally, within a 'greater' East Anglia, Colchester deserves inspection as a shire town at Domesday, with as its forerunners important Iron Age and Roman centres. A recent assessment (Crummy 1981b, 26) notes that although there is a little evidence of occupation on the site from the 5th to at least the 8th centuries, finds of late 8th or 9th-century date are scarce, whereas the appearance of Thetford ware on some sites is consistent with a postulated replanning of the town in the 10th century. This postulated replanning could be viewed in conjunction with the documentary evidence for a burh here in 917, and the presence of the witan at Colchester in 931, although the site did not become a mint until the last quarter of that century (Crummy 1981a, 24). Here, also, the evidence suggests that the town developed in the post- rather than the pre-Scandinavian period, although Drury (1982, 385-90) has stressed the possibility that there was continuous occupation in at least parts of the town from the end of the Roman period to the Norman conquest, with a villa regalis on the site of the later castle from c. 916 if not before.

7.4. MERCIA

7.4.a. Introduction

As the eastern half of Mercia was settled by Scandinavians, any urban institutions pre-existing in the kingdom would obviously be of the first importance in the search for the origins and early development of the Five Boroughs. Mercia is also an important area of research because, as Brooks pointed out (1971, 76ff), the royal prerogative of summoning the people for fortress-building, an institution common to the Old English kingdoms, is earliest attested in Mercia. The nature of these fortresses has not been established but consideration has been given to the idea that they may have included fortified towns. The example quoted is Hereford, where there has been a series of excavations which have investigated the defensive sequence and thrown some light on the intra-mural area. Hereford, Gloucester, Chester and London are discussed here as the most informative comparisons with the north-east Danelaw burhs. Apart from them, little new information can be added to Rahtz's (1977, passim) summary of the slight amount of evidence for Mercian urban development (cf. Schofield and Palliser (eds) 1981, passim).

7.4.b. Hereford

The earliest defensive circuit at Hereford yet identified is a gravel bank (Stage 1), which was succeeded by a timber-faced turf and clay rampart (Stage 2), later refaced with a stone wall (Stage 3) and then disused. The absolute dating of this sequence has been estimated backwards from a fixed point in the late 10th century, when a dated group of pottery accumulated above the disused rampart. This has allowed the assumption that the Stage 3 stone-work was inserted before c. 950, most likely in the early part of the 10th century. The Stage 2 timber-fronted bank is allowed a lifespan of about half a century, putting its construction in the late 9th or very early 10th century, and the Stage 1 gravel bank, relatively unweathered, apportioned a life of less than fifty years, placing its erection in the mid 9th century (Shoesmith 1982, 73-74).

A deliberately planned and gridded street pattern pre-dating the defences has been recognised by Shoesmith and tentatively dated by him to the period c. 750-850 (ibid, 91-92). It consists of patches of a metalled north-

south trackway or road surface at the western limit of the later enceinte, with a series of timber buildings fronting on to the east side of the trackway, and another series of structures further to the east (ibid, 48ff). These, it is claimed, fronted on to a forerunner of the present Berrington Street, of which, however, pace Shoesmith (ibid, 91), there was no sign. They might, alternatively, have been structures in the backyards of those fronting the metalled street - evidence of land division did not survive. There was no absolute dating evidence for these structures except a radio-carbon determination of AD 960^{+}-70 from what is believed to be a contaminated sample of charcoal, interpreted as burnt wall-cladding (and considered of value only as a terminus post quem (ibid, 49, 71)); a coin of Alfred came from a cultivation layer post-dating the structures (ibid, 49). A possible clue to the relative date of the structures was provided by a stratigraphical relationship which shows that the Stage 2 timber-fronted bank was later than the metalled trackway which appears to be contemporary with these buildings: the Stage 1 rampart was not encountered (ibid, 53).

The tenuous and imprecise nature of this dating evidence need not be stressed, but the case both for a mid 9th-century defended enclosure and for a deliberately planned and gridded street pattern, of the mid 8th to mid 9th century, seems unproven. Indeed, the excavator is rightly tentative in his presentation of the postulated planned element (ibid 92). Hereford retains a considerable interest in having an early, undefended phase of dense occupation at a point over 200m from the hypothetical nucleus of the settlement around the present cathedral, but it is not demonstrably so early a town as to have been a possible model for urban development among the Scandinavian settlers of eastern Mercia.

7.4.c. Gloucester

Gloucester has also been investigated continuously in recent years, and sufficient evidence has emerged to provide some indication of how the site developed in the pre-Norman period. Until the 9th century, there is evidence for little but the decay of the walled Roman town, which perhaps incorporated large enclosures, including that of St Peter's minster, which were essentially estates, probably given over in the most part to agriculture (Heighway 1984, 38-39). In the 9th century there is evidence for the stabling of animals on the site of the town's Roman forum, but the context of this is unclear (ibid, 40).

Even in the 10th and early 11th century there is little archaeological evidence yet for manufacturing, commerce, dense occupation and other attributes of town life; the mid 11th century Gloucester seems to have functioned principally as an administrative and defensible node (ibid, 40-42, 49-51), a possible analogue for the smaller Danelaw burhs.

7.4.d. Chester

Chester demands attention here because of its proximity to Dublin, with which it is known to have been a trading partner in the 10th and 11th centuries, and the possibility that it could have influenced either the 9th-century longphort or the 10th-century refoundation there, and thus, circuituously, have exerted an influence on 9th- or 10th-century York. As yet, however, there is little archaeological information available on the pre-Norman settlement at Chester. 9th- and 10th-century occupation is reported from Crook Street, Lower Bridge Street and Abbey Green (Strickland 1981, 20); the significance of these discoveries cannot yet be gauged, although the four substantial 10th-century coin hoards found in the town affirm its wealth and suggest considerable economic activity (Dolley 1966a, 49-51), as does the sizeable output of its coin mint (Metcalf 1981, 76-77).

7.4.e. London

Hereford apart, it seems that London is the sole location within Mercia which may have an urban pedigree long enough to have influenced Scandinavian settlers. The historical evidence for royal, episcopal and both internal and external commercial interests in London in the 7th-mid 9th centuries has been collected by Biddle and Hudson (1973, 19-22), who suggested by analogy with Hamwic that at that time the city probably totalled at least 30 hectares. Vince, however, has pointed out (1983, 33) that there is not sufficient unexcavated area within London's walls to contain a Hamwic-sized trading settlement, and indeed that there is a notable absence of the imported pottery which is proof of foreign activity at Hamwic. Less surprisingly, there is as yet no structure which need be dated to earlier than the late 9th century. It is possible that some of the locally or at least regionally made pottery and some of the timber structures from the London excavations may date to the pre-Alfredian period, but of the international market described by Bede there is

virtually no trace (ibid, 37). Recently both Biddle (1984, 23-27) and Vince (1984, 310-12) have independently suggested that 7th-9th century London was situated in The Strand/Fleet Street/Aldwych area, beyond the west side of the Roman walled town. This surmise is based upon the find-spots of contemporary coins, metalwork, pottery, burials and churches.

London was known to Viking raiders who stormed it in 842 and 851 and, more importantly, to the great army of Vikings who wintered there in 872-73 and who initiated what seems to have been an uninterrupted period of Viking control until Alfred captured it in 886; it may have been either the Vikings in the 870s or Alfred in the 880s who moved the focus of activity back within the Roman walls. At present it cannot be claimed on the basis of archaeological evidence that knowledge of London would have kindled aspirations of wealth gained through urban-style settlement, manufacturing and trade, although the documentary sources do suggest that London was a substantial international port under the Mercian kings.

Such thoughts could perhaps have been inspired by the London of the last two decades of the 9th century, for there is both documentary and numismatic evidence that Alfred carefully fostered the commercial growth of London (Dyson 1978; Biddle and Hudson 1973, 20). This Alfredian policy has been demonstrated archaeologically in the defence of the waterfront (Hobley and Schofield 1977, 37), in the number of buildings which were erected from this time (Hobley and Schofield 1981, 59) and in the ubiquity of sites producing late Saxon pottery (Vince 1983, 34). Yet the dating of most of these features is, as ever, not sufficiently precise and the totality of the evidence too meagre to justify an assertion that even Alfredian London acted as a model for incipient urban communities in Scandinavian England.

7.5. WESSEX

7.5.a. Introduction

Thanks to the comparatively extensive contemporary documentation which survives, including notably the Burghal Hidage and a range of charters, the burhs of Wessex have attracted considerable historical and archaeological attention. There has been an authoritative summary of work on the Wessex burhs (Biddle 1976, 124-34) and here it will suffice to present new evidence

for and theories about the development of urbanism in Wessex which have been published since Biddle's survey, and to compare the Wessex data with that from the Danelaw.

7.5.b. Hamwic

Recent work in the Six Dials area of Southampton has demonstrated more clearly than before that the settlement of Hamwic was densely occupied up to a boundary defined first by a ditch and then by a fence, and that buildings were laid out on a grid of gravel streets. This settlement, which dates from c. 700 or earlier extended over some 45 ha and has been claimed as 'the earliest regularly laid-out streets in post-Roman North Western Europe' (Brisbane 1983). Its street grid and defined boundary, both laid out at the beginning of the settlement's occupation, the dense and, so far as can be judged from the distribution of pits, regular nature of the settlement, and the extent of varied industrial activity recognised in the recent excavations, including iron-working, copper-gilding, lead-working, and glass-working, combine to indicate that this was not just a site where the exchange of goods brought by foreign merchants could be controlled, but was also a substantial manufacturing centre. Hamwic may not have functioned in a market economy (cf Hodges and Whitehouse 1983, 92-93) but it is indistinguishable in archaeological terms from the English towns of Domesday Book, and may be considered an urban community.

There is, however, some doubt as to its continued existence into the era of Scandinavian settlement. Re-consideration of the numismatic evidence has suggested that there was a significant decline at Hamwic early in the 9th century, and that the settlement ceased to be a major trading station before Alfred's flight in 877 (Cherry and Hodges 1978, 300 and passim). Andrews and Metcalf (1984, 175-7) have surmised that c. 840 appears, in numismatic terms, to mark the end of a phase in Hamwic's (commercial) activity, although they point out that there is some evidence for occupation on a very much reduced scale into the 10th century. The numismatic evidence further suggests that the most important phase of Hamwic's economic decline had taken place by c. 800, although this cannot at present be correlated with archaeological evidence for a decline in the size of Hamwic or the density of its occupation at that time.

A burh at Hamton was listed in the Burghal Hidage, which Hill (1969, 91-92) dated to c. 914 or a little later; Davis has recently suggested an earlier context for the document, shortly before Alfred's occupation of London in 886 (1982, 809). It is possible that the Roman fort at Clausentum, on the east bank of the River Itchen upstream from Hamwic, was the place of refuge for the surrounding population, since the length of the inner ditch there corresponds closely to the length of Hamton's burh defences as computed using the Burghal Hidage formula. No traces of late Saxon occupation have been found at Clausentum, however, and even if it was the burh, it may never have been occupied.

There is now evidence that late Saxon Southampton occupied a defended area of some 6 ha in the south-west corner of the Test/Itchen peninsula (Holdsworth 1984, 337-41). The time when the new site began to flourish and was defended is not certain, but a date late in the 9th or early in the 10th century fits the small amount of evidence available. The settlement pattern and economy of late Saxon Southampton are at present virtually unknown, however, and as Hamwic may have declined too early to have been a prime influence on urban development in the Danelaw, so late Saxon Southampton may not have sufficiently developed urban characteristics in time to stand as an example for the developments there.

7.5.c. Winchester

The nature of Winchester in the later 9th or early 10th century has been elucidated by the discovery of a rectilinear grid of streets, apparently created simultaneously, extending throughout the defended area. This is dated through the discovery of an Edward the Elder penny above the earliest in the sequence of surfaces, by the recognition that New Minster was superimposed over part of the system in 901-3, and through the inference that early 10th century documents, which allude to a street grid, refer to this system (Biddle and Hill 1971, 74-77; Biddle 1976, 130). These pieces of evidence indicate that the street grid was in being c. 900, and it has been suggested (Biddle and Keene 1976, 273 note 7) that Winchester was refurbished c. 880-6. Using the argument that the free hand required for such a wholesale replanning might have been provided by the Viking attack on Winchester in c. 860, Crummy has proposed that date for the town's development (1979, 154). Although the

defended area was certainly not fully occupied until at least the late 10th century (Biddle 1975a, 311), it is now clear that a planned layout, that is, a settlement laid out simultaneiously in a regular pattern for the purpose of dividing and apportioning ground for permanent settlement (Biddle 1975b, 20), existed in Winchester from at latest c. 900, and perhaps two or more decades earlier. Some indication of the economic activities that were envisaged in the new town is provided by the surviving charter for Worcester (Whitelock (ed) 1955, 498), and since this is dated c. 889-99 it provides further evidence for late 9th century nascent urbanism in (greater) Wessex.

As the Lower Brook Street site is the only reasonably large area of late Saxon Winchester yet excavated, it is not clear how rapidly and thoroughly the defended area was developed, and archaeological evidence for the Alfredian and later Saxon town is minimal. Although Winchester, Worcester, and perhaps other burhs in Wessex were encouraged to develop in the late 9th century, perhaps with ecclesiastical as well as regal inspiration (cf Yorke 1980, passim), there is not enough evidence available to determine whether it was they or the Danelaw centres such as Lincoln and York which held the initiative in the expansion of urban development and commerce.

7.6. DUBLIN

7.6.a. Introduction

Although the social structure of early historic Ireland accommodated large monastic centres which have been regarded as 'incipient towns' or 'pre-urban centres' by some recent commentators (Ó Corráin 1972, 88; de Paor 1976, 29), there is as yet no archaeological evidence to support the contemporary descriptions of dense populations upon which this assertion is based. In any case, such descriptions, with one exception, post-date the establishment of Viking coastal settlements in Ireland which may perhaps have provided the basis for literary embellishment, for it was some of these Viking centres which in time developed into the earliest towns in Ireland (Wallace 1982, 139). Sites including Dublin and Annagassan (AD 841), Cork (847), Waterford (before 860), Youghal (before 866), Limerick (before 887), Wexford and St Mullins (before 892), were established initially as what the Irish called longphorts, and most eventually developed into regionally important

medieval urban centres (OCorrain 1972, 90-95). Only at Dublin, however, has the pre-Norman (i.e. pre c. 1170) phase of the settlement's existence been examined archaeologically and interim reports published, and it alone provides a comparison with the development of York and the Danelaw towns.

The comparison of York and Dublin should be a particularly valuable one, since during the first half of the 10th century the two Scandinavian strongholds enjoyed close political links. Unfortunately, information concerning the discoveries at Dublin is limited - much of the preliminary processing of data has still to be undertaken, and although some categories of the excavated material have been referred to in interim reports, their dating is not usually precise. Justifiable comparisons or contrasts can, of course, only be drawn between contemporary assemblages or phases, and this is not at present possible in many instances, for example when material from Dublin is described broadly as '11th century', a range which includes a generation after the Norman conquest of England, a period beyond the scope of this enquiry. A further difficulty has been the emphasis to date in Dublin post-excavation work on structural evidence, leaving artefactual analyses for the future - this has limited the comparisons in economy/manufacturing/trade which can be drawn here.

7.6.b. The 9th-century longphort

Dublin was founded as a longphort in 841. H.B. Clarke (1977, 35ff) has drawn attention to the site's strategic importance at the junction of three important early historic routeways at one of the three notable contemporary fords, on the border of the kingdom of the Ui Neill with the kingdom of Leinster. He has also adduced topographical evidence to suggest that before the Vikings' arrival there may have been both a secular fishing/farming community at Ath Cliath, 'the ford of the wattles', and a small monastic enclosure at Dubh linn, 'the black pool' (ibid). As yet, these hypotheses remain untested by excavation.

Also, as yet, there has been no archaeological trace of the longphort of 841 in the current excavation campaign (Wallace 1982, 138). Two alternative explanations of this have been offered. One view links the 841 longphort with the cemetery of accompanied inhumation graves discovered in the 19th century at Islandbridge/Kilmainham, approximately 2.5km upstream from the 10th-

century and later medieval city. This interpretation has been suggested by Graham-Campbell (1976, 40) and has received guarded support from Wallace (1982, 139). The other argument, that remains of the longphort lie underneath the medieval walled city to the east of the areas investigated to date, has had more widespread support: Ó Ríordáin (1971, 73) enunciated the principle without giving any reason for taking this view; Wilson (1976a, 106) remarked that there was no evidence to suggest a shift in the site's position at the refounding of Viking settlement in the early 10th century; both H.B. Clarke (1977, 38) and Smyth (1979, 238) made the cogent point that the longphort was, from its first mention in the Annals of Ulster for 841, known to the Irish as being at Dubh linn, 'the black pool', which is known to have been at the confluence of the Rivers Liffey and Poddle, immediately south-east of the medieval castle and walled town. This location is one also favoured by Wallace (1981, 110). Since the contemporary annalists' definition of longphort is uncertain, it follows that the comparative suitability of the two proposed locations cannot be assessed, and excavation at the sites is needed to answer this problem. At present, however, lack of evidence means that the earliest Viking Settlement of Dublin cannot be assessed against the sparse indications of 9th century activity in York.

The longphort phase of Viking Dublin appears to have ended with the expulsion of its Viking inhabitants in 902, and there followed a break in Viking occupation until Dublin was resettled by Sigtryggr Caech in c. 914-917. From this time occupation was continuous, and it is this occupation which has been investigated in the current archaeological campaigns.

7.6.c. 10th-century Refoundation

Dublin, from its early 10th century refoundation until the Anglo-Norman takeover of 1170, occupied at least a part of the site of the medieval walled city. The sole boundary to be excavated has been that to the north, against the River Liffey, where a succession of embankments has been defined (Wallace 1981, 110ff). The earliest of these, provisionally dated to the early 10th century, is interpreted as an undefended flood-barrier, but subsequent replacements, a second and a third embankment of c. 950 and c. 1000 respectively, and a wall of c. 1100, are considered substantial enough to have formed an enceinte if continued along the other limits of the settlement. If

the Viking-age enclosure was coterminous with the later medieval walls to east, west and south, it occupied an area of approximately 18 hectares, less, that is, than the Roman fortress area alone at York. At present, with no excavations in the eastern third of the medieval walled city, except work within Dublin castle at the south-east corner of the later enceinte reported briefly and at second-hand by Smyth (1979, 200), it is not certain that Viking-age occupation even extended this far to the east, although this area's proximity to the eponymous Dubh linn almost presupposes occupation here. The Dublin castle excavation apparently produced Viking-age material, but structural evidence is not reported, and the objects could conceivably have reached the site as the result of later earth moving.

Although there has been a tendency to equate the Islandbridge/Kilmainham cemetery with the longphort phase of Dublin's existence, trial excavations in the 2.5km intervening between it and the medieval centre are required to test the extent of Viking-age occupation here. The Dublin Vikings may have maintained traditional pagan burial customs until c. 1000 - the first Viking king of Dublin to accept Christianity was Sihtric III, late in the 10th century - and the accompanied inhumations of the Islandbridge/Kilmainham cemetery may perhaps represent the population of 10th-century Dublin as well as or rather than the inhabitants of the longphort. If there was a ribbon development of extra-mural settlement spreading westwards along the Liffey's south bank, this would help to explain the apparently isolated position of the cemetery.

There may also have been settlement to the east of the walled town, beyond the River Poddle. There is some evidence of Scandinavian interest in this vicinity - an earth mound, called the Thingmote from its earliest documentary appearance in 1241, and removed as late as 1683, was probably the assembly place or thing of the Dublin Vikings, and stood approximately 350m eastward of the Poddle (Haliday 1884, 162-70). There is a possibility that settlement extended also into this area which, however, has not been investigated.

Further, there has as yet been no investigation to the north of the River Liffey, where the place-name Oxmantown, applied to that area immediately opposite the walled town, may indicate another area of Scandinavian settlement, since it derives from Ostmanby, 'the settlement of the Ostmen', a name used for the Dublin Vikings since at least the early 11th century (de Paor 1976, 35).

Currently, therefore, discussion of Viking-age Dublin must be confined

to the evidence from within the medieval walled town. Here the medieval street pattern has been shown at Fishamble Street/Wood Quay to perpetuate an early 10th-century origin (Wallace 1982, 129). Overall the street pattern reflects the terrain rather than being imposed upon it gridiron-fashion; in this respect it equates with those parts of York not influenced by Roman planning. The same Fishamble Street/Wood Quay site has shown that tenement boundaries established early in the 10th century thenceforth maintained their alignments into at least the 12th century, save only for alterations brought about by reclamation of the river front (ibid). Here again there is a parallel with York, in the closely packed, narrow rectangular plots running down to the water's edge, but the dense nature of urban settlements is a ubiquitous feature, not to be attributed specifically to Viking influence.

The structural evidence from sites at High Street, Winetavern Street and Christchurch Place has been studied by Murray (1981; 1983). The principal construction method in the buildings pre-dating the mid 11th century was the use of post and wattle variants in structures of sub-rectangular or irregular form, often with internal partitions. The numerically largest group of buildings, sixteen approximately square structures each with two virtually contiguous skins of post and wattle wall, are not dated, while other types, including larger, sub-rectangular versions of similar construction, a single buttressed structure built of wattles and vertical earthfast planks and two stave built structures, are all dated to the mid 11th century or possibly later, and are therefore excluded from further comment. Only two buildings have been dated to the 10th century - a single, sunken-floored building with walls of vertical planks, and a bow-sided post and wattle structure of c. 1000. It is these latter which can most readily be singled out as intrusive elements in Irish building traditions (Murray 1981, 67 note 4); the post and wattle structure contains elements including benches, internal partitions and hearth positions which echo documentary evidence for early historic period Irish buildings (Murray 1979, 84-89) and (pace Wallace 1982, 135) do not appear to represent foreign techniques transplanted with the Viking settlement. Equally, however, neither the bow-sided post and wattle structure nor the sunken-floored building can be precisely paralleled among the excavated urban buildings of the Danelaw or York, although the initiative for each type could have been introduced from these areas, or indeed from Scandinavia (Schmidt 1973, 60; Hall 1984, passim).

With regard to buildings at least, Wallace is surely correct in minimizing the Scandinavian element in 10th-century Dublin, but there is little in the structural evidence yet available to support his counter-assertion about the importance of English influence in Dublin's early 10th-century recreation (1982, 141).

7.6.d. Dublin's Economic Role

There is general agreement among modern commentators that pre-Norman Dublin was the economic hub of Ireland. Smyth (1979, 136) suggests that in the course of the 10th century, the Dublin Vikings changed from 'wandering free-booters' into a settled community of merchants, and Doherty (1980, 84) states that Dublin was the major source of wealth for all Ireland, and its domination was therefore the goal of 11th/12th century Irish politics. Hodges (1982, 181) asserts that Dublin 'took off commercially' c. 1000, while Wilson (1976a, 110) links the rise of Dublin's trading prosperity to the expulsion of an independent Scandinavian royal authority at York with Eirik Bloodaxe's departure in 954. With the exception of Wilson's, the opinions quoted above concentrate on the period after c. 1000. There is, indeed, little published evidence from the excavations to elucidate Dublin's economic role throughout the 10th and into the first half of the 11th century, up to the time of the Norman conquest of England, an event which may have altered Dublin's role.

Published 10th-century manufacturing evidence is restricted to metal-working debris, including copper-alloy and gold wire fragments, crucibles and unidentified 'vitreous matter', from Winetavern Street (Webster and Cherry 1972, 168), and amber-working waste and other metalworking evidence, including at least one trial piece and a soapstone ingot mould, from High Street (Webster and Cherry 1972, 168; Ó Ríordáin 1971, 73). 11th-century material, possibly relevant here, includes bone/antler working at High Street and wood-turning debris at Winetavern Street (ibid, 75, 77).

Contemporary importation of foreign goods is witnessed by finds of steatite, walrus ivory and amber from 11th-century levels at Wood Quay (Wallace 1981, 113); the steatite used to fashion the 10th-century ingot-mould from High Street referred to above must also have been imported. These goods could have originated in the Scottish Isles (steatite), Norway (steatite and walrus ivory) and the Baltic (amber), and reflect a predictable range of contacts. These imported goods, and the manufacturing evidence noted above, are

comparable, although more limited in range, to the evidence from York, but it may be suggested that Dublin's prosperity was based in part upon two products not yet discussed by archaeologists interpreting the Dublin excavations - silver and slaves.

Silver is known to have been minted into pennies at Dublin from c. 997 (Dolley 1973, 152), a date which probably accounts for the viewpoint, noted above, that Dublin's economic greatness started c. 1000. The context of this coinage need not be a sudden commercial upswing but could lie in fiscal or political matters (Clarke 1977, 46); and there is a considerable body of evidence in the form of hoards of hacksilver and/or imported, principally English, coin, which date mainly to the 10th and mid 11th centuries, which suggests that silver was introduced in substantial quantity at this time. Graham-Campbell has catalogued these silver hoards, and concludes that from the 9th century, but increasingly from c. 920, soon after the refounding of Dublin, it was Scandinavian activity, centred chiefly on Dublin, which resulted in this silver inflow (1976, 48-53). The distribution of coin hoards, which is concentrated in eastern Ireland, suggests to him that the silver was introduced by trade and dispersed throughout areas reasonably close to the principal Scandinavian coastal settlements (ibid, 46). The numerous arm-rings of characteristically Hiberno-Norse style which appear in the 9th century and substantial silver and coin hoards of the first decades of the 10th century indicate that the Vikings in Ireland held considerable wealth in silver before the refounding of Dublin (ibid, 54). This wealth could have been the product of internal raiding rather than commerce - it has been suggested that there was already a considerable volume of native silver circulating in Ireland in pre-Viking times (Doherty 1980, 82) but the English coins show that the neighbouring island was another important source of silver. Furthermore, in the forty-one Irish hoards noted by Graham-Campbell which span the period c. 920-1000, English coins are predominant, and in the period c. 925-75 it is coins of Chester which are commonest (1976, 48), demonstrating the immediate source of this silver; York coins are noticeably infrequent (Wallace 1982, 135). This numismatic evidence points clearly to a principal axis of Ireland's cross-channel contact in the central half of the 10th century, suggests strongly that Dublin, the principal if not the only 10th-century trading centre in Ireland, had itself strong links with Chester at that time (pace Hodges 1982, 181)

and, incidentally, hints that the supposed tangible link between Dublin and York provided by the discovery of a sherd of Samian ware in the former might equally well have emanated from Chester at the English end, contra Wallace 1981, 113.

Whatever, therefore, were the sources of silver found in 9th-century Hiberno-Viking hoards, the numismatic evidence for the 10th century points to a strong link with England generally and Chester in particular. The only item exported from Dublin to Chester for which there is tenuous documentary evidence is marten skins; these are mentioned, though their source is not, in Domesday Book's entry for Chester. Round (1895, 467) was able to demonstrate that in the mid and later 12th century Dublin was a known supplier of marten skins, and it can be plausibly suggested that the ships carrying marten skins to Chester at the time of Domesday likewise left from Dublin. This fur trade seems unlikely on its own to have accounted for Dublin's acquisition of Chester silver, but there was another, archaeologically invisible commodity, frequently referred to as a mainstay of Dublin's wealth - slaves. Smyth (1977, 168) has suggested, apparently contrary to his belief (1979, 168) in a 10th-century change of emphasis by the Dublin Vikings to a concentration on mercantile and slave-trading activities, that the inception of Dublin's role as a trading centre may have come in 871 with the influx of slaves captured in Britain in the preceding years. He has also instanced a number of 9th- and 10th-century raids by Irish Vikings which resulted in the capture of large numbers of slaves, and proposed what is really a parasitic relationship, based upon prolific slave raids, between the Dublin Vikings and Irish monasteries (ibid, 154-68; 1979, 299). The potential importance of slave trading for the Dublin Vikings in the 9th and 10th centuries has also been remarked by Wallace (1981, 113; 1982, 138) and Doherty (1980, 81), and although there is a dearth of early 11th-century reference, the occurrence of Irish slave raiding in England and Wales in the middle and later 11th century (Pelteret 1981, 110-14) suggests that it could have been a continuous process.

The entry in the Annals of Ulster describing the gathering of assorted 'British' slaves in Dublin in 871, referred to above, is the first mention of the site's role as a collecting point or perhaps market centre for slaves, and it is clear from Bishop Wulfstan of Worcester's campaigns that Ireland was the destination of slaves shipped through Bristol in the mid 11th century (ibid, 112).

There is evidence to suggest, however, that Ireland was frequently not the final destination of these slaves or of others captured in Ireland. As early as 843 an Irish slave was transported to Scandinavia and then eventually back to the Orkneys, and Landnámabók suggests that Irish slaves were taken to Iceland by early settlers (Smyth 1977, 158-59). It was conceivable to a Norman writer of c. 1000 that Irish slaves should be present in Normandy - Rouen was itself a renowned slave market (Chapter 7.7.) (Musset 1954, passim) - and Smyth (1977, 160ff) has made a case for both Muslim Spain and eastern Islam as other possible destinations for slaves transhipped at Dublin which, like Scandinavia itself, acted essentially as a clearing house in this trade. De Paor (1976, 33) surmised that the Viking towns in Ireland were basically way stations on the sea routes linking Scandinavia with the Mediterranean and North Africa 'in the fundamental exchange of slaves for silver'.

7.6.e. Conclusion

The evidence for Dublin's economic role in the period up to the mid 11th century is meagre. The city did not act as market place, commercial centre and royal and ecclesiastical capital to a large, friendly hinterland as did York and, to a lesser degree, the Danelaw towns, which were Scandinavian nuclei in a Scandinavianised countryside. Yet there is no reason, apart from occasional political exigency, why Dublin should not have provided a range of goods, particularly luxuries, to the upper strata of society in the surrounding Irish kingdoms - this cannot be proved archaeologically, but there is scarcely more archaeological evidence to substantiate the assumption that York fulfilled this role to its rural satellites. The size of its prospective clientele must have been a decisive factor in determining the size of the manufacturing and importing element among Dublin's inhabitants - there had not been a radical redistribution of landed wealth and the accompanying increase in potential customers which had accompanied the Viking takeover in Northumbria and eastern Mercia. This may be one reason for the relatively small area that 10th- and early 11th-century Dublin seems, on present evidence, to have occupied. Slave-trading too would not have required a large base from which to operate, and it has been conjectured, on the basis of tenuous contemporary documentation, that Dalkey Island, and perhaps Ireland's Eye, the islets approximately 15km south and north respectively of the Liffey mouth, were

used as slave prisons (Smyth 1979, 240). In size, then, Dublin was markedly smaller than York, a reflection of its different relationship with its hinterland. It seems to have shared in the common contemporary north European range of manufacturing on the one hand (Wallace 1982, 129) and of building traditions on another (Murray 1983, 86), and although a recent attempt to emphasise the contribution made by English influences and exemplars, notably York (Wallace 1982, 141) is a welcome step away from attaching to Dublin a purely 'Viking' or 'Scandinavian' development and milieu, a variety of other continental influences as well as local tradition and circumstances probably shaped the development of Dublin. It was certainly not a 'twin' of York, and the differences between the two seem, on the evidence currently accessible, to be more striking and instructive than the similarities.

7.7. NORMANDY

Norse settlement in Normandy was formalised by the Treaty of St Clair-sur-Epte in 911, by which Charles the Simple ceded the region to Rollo. As in Britain, an assessment of the number of Scandinavian settlers in Normandy rests largely upon the interpretations of place-name scholars - most recently a case has been made for an early and heavy colonisation (Bates 1982, 18-19), although Sawyer (1981, 124) has maintained that the settlement was essentially limited and aristocratic. It seems unlikely that these will be the final words on the matter, but since there is equal uncertainty about the size of the Scandinavian settlement in England, this does not vitiate the value of a comparative study.

The arriviste aristocracy took over a territory where the Carolingian administration had been fully functional immediately beforehand. Flodoard's History of the Church of Rheims, a mid 10th-century work, mentions that the Treaty granted maritime pagi and the city of Rouen, where a Carolingian count had been in office as late as 905, and where the Archbishop of Rouen stayed at his metropolitan church at the time of the settlement (Bates 1982, 9-11). Rouen and Bayeux are, however, the only two centres in Normandy known from the historical sources to have been important in the 10th century - both were the sites of comital residences, they were the only 10th century minting places, and both were singled out for attack by the French in 944 (ibid, 128). Both had been Roman foundations, and Rouen was the provincial capital; essential elements of the Roman rectangular street plan can still be seen at Rouen, and

survived at Bayeux into the 17th century (de Boüard and Fournier 1977, 175; Bates 1982, 129). Rouen and Bayeux also shared an importance in ecclesiastical affairs, although the Archbishop of Rouen exercised primacy over the bishopric of Bayeux, which seems to have fallen into desuetude after 876 (Bates 1982, 11).

Rouen also enjoyed the position of principal commercial centre in Normandy. There is only slight evidence for commercial contact between Rouen and Britain during the Roman period and a silence for over three centuries after the Romans abandoned Britain, but indications that the contact had resumed by the early 8th century come from the Life of Willibald, which mentions a market close to Rouen (Musset 1969, 4, 6). Other texts suggest that both a cross-channel trade and coastal contacts with the Rhine mouth and Frisia continued until interrupted by Viking raids in the mid 9th century, but the city was not in the forefront of Carolingian trade, not of the same economic importance as Dorestad and Quentovic.

Following the Scandinavian settlement, however, several contemporary sources refer to commercial activities centred on Rouen and point to the existence of an important slave-market there in the 10th century (ibid, 9). In c. 1000 Garnier of Rouen refers to Irish slaves for sale in the city (Musset 1954, 252-53), and the contemporary Miracles of Saint-Ouen mention Rouen merchants in Paris (Mussett 1969, 9). Dudo of Saint-Quentin's De Moribus et actis primorum Normanniae ducum (c. 1015-26) includes references to Greeks, Indians, Frisians, Bretons, Danes, English, Scots and Irish, and Musset has verified the presence of all these ex-patriots at Rouen around the millennium except for Indians (ibid, 10). Many of them were churchmen, but these ecclesiastically and administratively inspired religious contacts, which naturally are those that feature in clerical texts, indicate that commercial contacts could have been equally widespread. The sole explicit evidence for an export trade, the export of goods from Rouen to London, is documented in Ethelred II's Fourth Law Code, c. 1000, where wine and large fish are singled out for attention (cited in Brooke and Keir 1975, 265). Early 11th-century Normandy up to the Norman conquest of England is not well documented, and this trade is not attested in any later reference.

The historical sources reviewed above have led Musset (1969, 12) to postulate that Normandy, and especially Rouen, enjoyed an economic boom in

Viking-oriented trade in the century c. 930-1030, stimulated by the introduction and circulation of Viking booty - c. 1003 Duke Richard II is recorded by William of Jumièges as concluding a treaty with the Danish king Sven Forkbeard to divide loot won by Sven in England (Bates 1982, 37). Apart from the liquidation of booty and the slave trade already noted, however, the sources do not indicate what goods were imported via Rouen, and they mention only the export of wine and 'craspois'. Musset (1974, 574) has suggested that it was not principally commerce but the service of church and state and investment in land and houses which brought the most substantial rewards to Norman town-dwellers. Nonetheless, commerce and trade are likely to have been important sources of direct and indirect revenue to both church and state, and the historical sources suggest that Rouen at least enjoyed a period of commercial growth in the stable conditions brought about by Norman ducal rule. This suggestion is supported by the fact that a number of new towns are first mentioned in the first half of the 11th century - Dieppe, Fécamp, Caen, Falaise, Argentan and Alençon are included in this category (ibid, 571). The phenomenon of urban foundation is limited to Normandy at this period in France, and further suggests that the Norman dukes created an environment where economic growth was possible.

At present, however, the implication of the documents cannot be assessed against archaeological evidence, for excavation in Rouen, Bayeux and the other Normandy towns has been very limited, and there seem to be no published records of relevant archaeological discoveries (Musset 1975, 44; Bates 1982, 20). Thus it is the documentary evidence which currently provides the only approach to 9th/11th-century urbanism in Normandy, and while it seems to imply a burgeoning of town life at the time, and while historical commentators such as Musset (1975, passim) have suggested that York, with its proven expansion and bouyant economy, provided a model of 'Viking urbanism' for the Norman dukes, the proof or otherwise of this hypothesis awaits an adequate series of archaeological investigations. One of the potentially most interesting comparisons for Danelaw urbanism therefore cannot yet be drawn.

7.8. SCANDINAVIA

7.8.a. Introduction

The extent to which the Danelaw's late 9th/early 10th-century urban development could have been influenced by the example of sites in the Scandinavian homelands is clearly crucial. Recent excavation campaigns have shed some light on this topic, and through them it has become possible to put Scandinavian urbanism into perspective, and to take the study of well-known literary sources a stage further. It is now becoming apparent that social and economic systems in a number of areas of pre-Viking Scandinavia required and supported specialised centres where manufacturing or trade, or both, were carried on, either seasonally or on a permanent basis.

7.8.b. Ribe

Ribe (Jutland) has been recognised, on the basis of artefacts recovered in excavation, as an important manufacturing and importing centre in the 8th century, a role it apparently inherited from the site of Dankirke, 6km to the south-west, where rich occupation levels ranging in date from c. 200 BC up to the 8th century AD are reported (Bencard (ed) 1981, 10-11). Apart from two sunken-featured buildings and what are interpreted as roofless working areas, there are no traces of the buildings of 8th-century Ribe, and the archaeological evidence pre-dates the site's mention in Rimbert's Vita Anskarii by three-quarters of a century. Whatever conditions attracted the German missionary to Ribe, they have not been elucidated in the recent excavation campaign, for the only Viking-age evidence is in the form of single and loose finds. There is as yet no proof of continuity from this 8th-century settlement to the later, medieval town; only the implications of the Vita suggest that Ribe could have demonstrated the economic potential of a manufacturing and importing centre to the Vikings who captured and developed York.

7.8.c. Kaupang

In southern Norway the settlement of Kaupang, equated with the Sciringesheal reported to King Alfred by the Norwegian Óttar (Blindheim 1976a, 71-77) has yielded material of late 8th- and 9th-century date from both its gravefields and the known settlement site; the cemetery evidence also points

to activity in the 10th century but this is not yet confirmed in the settlement's archaeology (Blindheim et al 1981, 189). Of the six house sites excavated along the shoreline, only one is interpreted as a permanent dwelling, and it is suggested that the site may be connected with the nearby Huseby farm settlement, the name of which suggests royal involvement with the site (Ibid). Artefacts from both cemeteries and settlement indicate the unusual status of the site: it has produced the largest collection of insular metalwork yet known in Norway, as well as evidence for the manufacture of insular-style metalwork (Blindheim 1976b, 19 and passim). Other finds, including metalworking debris in iron, bronze, lead, and perhaps gold and silver, textiles, glass, pottery and coins indicate contacts predominantly with north-western Europe including the Rhineland, but also with east Sweden and Gotland (Blindheim 1976a, 80-81). Insufficient is yet known of the extent, development and character of Kaupang, but it bears witness to the existence of non-agrarian settlement in another area of Scandinavia at the time of the Viking takeover of eastern England.

7.8.d. Helgö, Birka and Other Swedish Sites

Helgö, in Lake Mälar, has produced a range of imported goods concentrated in the 5th and 6th centuries but continuing through the 7th and 8th centuries. Glassworking and metalworking again predominate among the manufacturing debris, with the production of jewellery. The limited excavations to date have led the excavator to comment that 'Helgö.....has an urban aspect without being a town in the strict sense of the word' (Holmqvist 1975, 131). Although, yet again, interpretation is restricted by the relatively small scale of the investigation, the site broadly mirrors those of Ribe and Kaupang, and is the precursor of the nearby site at Birka, known from the Vita Anskarii as a trading settlement by the mid 9th century. Here limited excavation of the settlement site (Ambrosiani 1973), viewed in conjunction with phosphate analysis (Ambrosiani 1974, 62), indicates occupation over a substantial area in the 9th and 10th centuries. Other 8th- or 9th-century sites where specialised manufacturing and trading took place have been recognised in Sweden at Paviken (Gotland), Köpingsvik (Öland) and Löddeköpinge (Skåne) (Ambrosiani 1977, 105), and more are still coming to light, e.g. at Åhus in South Sweden (Callmer 1982, passim). The precise functions of all these sites await detailed definition,

but they further the argument that economic specialisation based on trade and manufacture was widely known in early Viking-age Scandinavia.

7.8.e. Hedeby/Haithabu

The Scandinavian site most similar in scale and character to York and Lincoln as they were in the early 10th century is Hedeby (Haithabu), at the base of the Jutland peninsula. This has been identified as the place to which, according to the Frankish Annals, the Danish King Godfred removed merchants from the unidentified Reric in AD 808. This action signals a royal interest in controlling the profits of trade and manufacture, and further evidence on this score also comes from the Vita Anskarii which records that c. 850 King Horik gave Anskar land at Hedeby and allowed him to build a church. The documented events at Hedeby do not mark the site's initial occupation, which took the form of a group of sunken-featured structures and a longhouse, dated to the 8th century, found to the south of the 10th century rampart (Steuer 1974, 15, 47). Discovered in association was evidence for iron and bronze-working, and imported Rhenish pottery, hinting that even at this time the site should be included with the group of non-agrarian settlements discussed above. The layout of this south settlement appears irregular, in contrast to the buildings later enclosed by the semi-circular rampart. Here the principal and unaltered axes of settlement were established over most of the excavated area in the 830s, although there was an alteration in some tenement boundaries, corresponding to a change in the pattern of planked roadways, which took place in the 860s (Schietzel 1981, 64-69). Within the excavated area, which covers approximately 6% of the defended enclosure near its shore-ward, central zone, tenements are densely clustered. The finer points of the settlement's economy remain to be elucidated - analysis of the distribution of craft debris has shown that it is no longer possible to refer to specific artisan quarters in the settlement, and it is possible that in some cases at least individual inhabitants practised a range of industrial activities rather than gaining a living through a single craft specialisation (ibid, 88, 71). Nevertheless, there can be little doubt that the basis of Hedeby's prosperity was as a centre for importing and production, trade and exchange. This is confirmed by the minting of coins at the site from c. 825 onwards (Skaare 1981, 38), the first such activity in Scandinavia. These coins do not carry a king's name, but they represent a further manifestation of

the royal interest in Hedeby already demonstrated in the Frankish Annals and other documentary sources, and further implied by the large-scale civil engineering project at the adjacent Danevirke, the earliest component of which has been dated dendrochronologically c. 737 (Andersen et al 1976, 77).

Hedeby continued as a trading centre throughout the 9th century - it was described in those terms to King Alfred by Óttar, and also mentioned by Wulfstan - and into the 10th, and it would thus have acted as a model for the new Scandinavian kings of York and for other Viking rulers in the Danelaw.

7.8.f. Summary

Some of the specialised economic functions apparent in the Danelaw towns are now known to have had an ancestry of several hundred years within Scandinavia, and this suggests that the Scandinavian settlers of England and their rulers were probably accustomed to their role in the economy, well aware of the benefits which such manufacturing and marketing centres could bring, and as ready to further their development as the contemporary English.

8. CONCLUSION

Throughout this study the principal concern has been to evaluate critically the evidence for urban development in the Danelaw, distinguishing reliable data from speculation, and reinterpreting the excavated material in the light of new information from Britain and Europe. This chapter draws together the conclusions which may currently be drawn, presenting them against a chronological framework.

In the early Saxon period there is the evidence of the burials at St Paul-in-the Bail that Lincoln continued to act as a focal point for a local community, and in the 620s both Lincoln and York were secular administrative centres which were adopted by the church. Lincoln's continuing secular role in the mid-Saxon period is, however, ill-defined (Chapter 5.4.b.). At York (Chapter 3) the historical reference to Frisian merchants indicates cross-channel trade, but its scale is unknown, and it may have been the opportunity provided by civil war rather than outstanding commercial prosperity which attracted the Viking invaders in 866.

At Leicester (Chapter 5.3.c.) and Derby (Chapter 5.2.b.) there is a little evidence for the development of what may have been regionally important churches in the 7th-9th centuries, and at Nottingham and Stamford (Chapters 5.5.b., 5.6.a.) there are indications of contemporary settlement where an ecclesiastical component has not been identified. A comparison with the possible villa regalis and associated church at Northampton (Chapter 7.2.e.) indicates that each of these four places may have been a regionally important administrative centre in royal or aristocratic hands, but this hypothesis awaits confirmation and elucidation.

Historical sources indicate that York was the most important political and economic Anglo-Scandinavian centre, and it is probably the most fully investigated and best understood in archaeological terms, although many fundamental issues remain obscure. Lincoln, which was not subject to such sustained Viking political domination after the English resurgence in the early 10th century, also shared in the commercial growth of the 10th and 11th centuries and was closely comparable to York in size and wealth; the last decade or so has seen a dramatic increase in archaeological understanding of its pre-conquest development.

York and Lincoln are the only two places under discussion where there is sufficient archaeological evidence, including dateable material, to allow the relatively short-term impact of Viking settlement to be assessed. The half-century c. 875-925 is the critical period: York was under direct Viking rule for all of this time, while Lincoln was in Viking hands until AD 918. It is clear from the excavations at Coppergate in York and Flaxengate in Lincoln that both saw a redevelopment during this time. At Coppergate (Chapter 4.1.g.) there was at least renewed activity resulting from nearby occupation, if not occupation itself, in the period from the Viking Conquest until c. 925-35; then, some two generations after the initial settlement, the area was sub-divided into tenements with houses on the street frontage, and industrial activity in the form of metalworking commenced. Economic resurgence was clearly under way during the period of Viking control, and the very plan of this area can now be attributed to initiatives taken c. 925-35 which instituted the dense cluster of tenements and layout of streets still discernible today.

The Lincoln evidence from Flaxengate is rather different (Chapter 5.4.c.iv.). Occupation certainly seems to have recommenced there within the half century in question, although the contention that it began immediately after the Viking settlement may be questioned. There is, however, no evidence for property divisions within the 800 m^2 excavated, nor any evidence for industrial activity at this time. Indeed the whole complex might have functioned as the intra-mural component of a country estate, with an administrative or social role which can only be guessed at. The extremely limited coinage of Lincoln in this first half century of Viking rule is a complementary indication that Lincoln's commercial role was in the early stages of development under its Viking rulers. In all, the evidence currently available suggests that the principal economic and commercial growth of the city came during the subsequent English domination, although the circumstances which initially encouraged it were generated by the Scandinavian settlement.

There is undoubtedly a temptation to assume that each of the 'Five Boroughs' developed in essentially the same manner as the others, and that each fulfilled the same functions. This, of course, is not necessarily correct. Lincoln's size and wealth at Domesday single it out and place it on a par with York; the other four boroughs were apparently centres of relatively less economic importance and of smaller size. This disparity in 1066 may well

reflect differences which existed at the Viking takeover or even before, but in the absence of detailed historical information only archaeology can elucidate this point. At present, however, the archaeological evidence does not often allow the Viking phase of domination to be separated with confidence from immediately preceding or subsequent activity, if indeed any broadly relevant discoveries have been made at all. Thus at Stamford, for example, there is a measure of doubt whether the Castle enclosure is of pre-Viking or Viking date. In general, it is not defeatist but realistic to expect no amelioration of this problem unless either extensive series of sequentially undisturbed coin finds are recovered, or until timbers dateable through dendrochronology are recovered in primary positions, which is unlikely at such places as Nottingham.

In the absence of conclusive evidence, it may be suggested that some if not all of the four smaller Viking burhs of north-east Mercia were occupied primarily for defensive, social and administrative reasons. In each case the site's position at a communications centre had ensured a degree of importance in either the prehistoric, Roman or Anglo-Saxon periods, and it seems that at all four the Vikings took over what was already a local or regional centre. It is possible that a commercial role only gradually accrued, perhaps after independent Viking rule was over, although at Stamford the ceramic tradition of red-painting has suggested the introduction of French potters through Scandinavian agency, reflecting the Frankish contacts recognised in the contemporary York coinage and in the new pottery traditions represented at York, Lincoln and elsewhere in the late 9th and early 10th centuries.

York and Lincoln once again provide most information on the growth of the Danelaw burhs in the century and more between their recapture by the English (in the second decade of the 10th century for all but York, where Viking kings remained in power intermittently until 954) and the Norman conquest. It is a further measure of the general paucity of useful data that even this extended time span, three or four times greater than that of the elusive Viking period discussed above, has of necessity also to be thought of as an entity, with little opportunity as yet to assess more finely calibrated evidence.

Evidence for settlement at Jorvik extends over an area of at least 80 hectares, and it is possible that the entire area of 106 ha. enclosed by the later medieval city wall was occupied before the Norman conquest. The density of settlement, however, is largely unknown. The area of the former Roman

fortress was neither deserted nor wholly an ecclesiastical precinct, as previously thought, although it remains true that the Anglo-Scandinavian minster church is, through its cemetery, one of only two structures of this period which can be identified within the fortress, the other being a fragmentary sunken-featured building (Chapter 4.4.b.). Similarly, it is only the ecclesiastical component of Earlsburgh which has yet been identified, and it may be expected that the nature of activity and the density of occupation here differed considerably from conditions in the manufacturing, artisan sectors of the city. One of these has been located and partly characterised in the various investigations south-east of the Roman fortress, particularly in the vicinity of Ousegate, Coppergate and Pavement.

Across the River Foss it has been demonstrated that the Fossgate-Walmgate axis was occupied along most of its present intra-mural length (Chapter 4.4.c.), but here too there has been no opportunity to test for variation of tenement size or density, or to determine whether or not the river margins were built up, and what if anything took place in the areas between main road and rivers. South of the River Ouse in the former Roman colonia there are clear indications of widespread settlement, but this has also not been characterised (Chapter 4.4.e.).

The presence of a city boundary or defence constructed in the Anglo-Scandinavian period has as yet been proved only along the north-west wall of the Roman fortress, although by implication, and taking into account Radley's re-interpretation of Miller's sections, it extended along the north-eastern side of the fortress as well. Most of the south-west and all of the south-east walls of the fortress seem to have gradually lost their importance as a defensible barrier during the Anglo-Scandinavian period and were probably redundant at the Norman conquest. Given the refurbishment of the defences recognised along the north-western side of the Roman fortress, it seems improbable that other flanks of the settlement were entirely undefended, although the nature of defences along the potentially vulnerable river frontages remains enigmatic. It is possible that the outline of the later medieval walled city was already in being before the conquest, with the extended circuit encapsulating the extensive settlement of Jorvik summarised above. This theory could be readily tested in examination of the ramparts at Museum Street, around the perimeter of the city south-west of the Ouse, and in the Walmgate circuit.

Within its boundaries, the layout of Jorvik inevitably reflected in part its Roman inheritance, with some main streets running virtually along the lines of Roman predecessors between the Roman gates. Other elements of the medieval plan are at variance with the Roman grid, however, and although streets such as Goodramgate, Feasegate or Blake Street are not attested until after the Norman conquest, there are grounds to believe that they were established in the pre-conquest period. Their routes across Roman insulae presuppose either decay or wholesale destruction of Roman structures. Many of these structures were timber framed above stone dwarf walls, and all may well have suffered attrition by natural forces and then have been partially buried by a gradual accumulation of wind- and water-borne soil and debris. This is a process glimpsed at several sites, for example at 16-22 Coppergate, where it seems to have been in progress during the Anglian period. The evidence for a very substantial increase in occupation and activity in the 10th century makes it most probable that the new plan had largely crystallised by then, and it is known that several streets including Micklegate, Skeldergate, Ousegate, Coppergate, Pavement and Walmgate were in existence by the later 9th or 10th century (Chapter 4.3.c.).

Documentary sources testify that the greatly enlarged population of the Anglo-Scandinavian period included regal, aristocratic and ecclesiastical communities whose palaces, precincts, churches and other associated buildings have not as yet been studied or, for the most part, even firmly located, and the extent to which the new aristocracy of the region maintained residences in their capital city is unknown. The segment of the population whose living and working conditions have been investigated is that presumably very large proportion which provided the manufacturing base and serviced both fellow citizens and the surrounding region with a range of utilitarian and luxury items (Chapter 4.5.).

The products of some categories of craftsmen including smiths, wood-workers, leatherworkers and bone/antler workers have been discovered in sufficient quantities to demonstrate the wide range of their skills. Furthermore, the scale of mass-production of items such as knives and jewellery implies a substantial market, and suggests that crafts including those listed above probably had many practitioners. It seems clear that the area south-east of the fortress was a zone of Jorvik densely occupied by craftsmen, but the finds

from within the fortress at Davygate, Blake Street and Goodramgate indicate that industrial activities may also have been carried out there. It is still too early to interpret the apparent absence of manufacturing debris from sites south-west of the Ouse as indicating that, with the exception of the waterfront, this was not an industrial or mercantile area, but it is a possibility to be borne in mind. Perhaps the grouping of fine residences over much of this quarter which is known from the Roman period was unconsciously echoed half a millennium later.

The mass-production of minor luxury items such as jewellery and dress-fittings is one indication of the healthy economy of Jorvik and its hinterland; another, more striking piece of evidence is the scale of coin production in the city. This economic buoyancy seems to have been grounded on a favourable trading balance, perhaps topped up in the first generations of the independent Viking kingdom by the proceeds of raiding and extortion. From early in the 10th century, however, trading was increasingly the mainstay of the economy. Although the export side of this exchange remains mysterious, perhaps being carried on largely in perishable items such as wool, there is now a considerable body of evidence for the overseas contacts from which Jorvik profited (Chapter 4.6.). These extended throughout Scandinavia and the Scandinavian colonies in the British Isles, included much of north-west Europe, and reached to the Mediterranean and the Arab lands in the Near and Middle East. In both its geographical range and the volume of exchange represented this network marks a very significant increase of international activity when compared with the much more limited evidence from the preceding Anglian period.

The coincidence of Scandinavian settlement in York with this commercial flowering is surely not a chance one, but rather a case of cause and effect. The victories of the Viking army in 866 and 867, with the recorded deaths of the two rival Northumbrian kings and in consequence probably the decimation of their aristocracy will have shattered the ties of contemporary society and helped to create a new social and economic mobility which can only have been enhanced by the Viking settlement in 876. A redistribution of land holdings and, perhaps, an influx of portable wealth as the new settlers invested the profits of their raiding ventures, were probably among the principal factors which encouraged urban life to flourish. Furthermore, the Scandinavians' skills as seamen and ship-builders naturally encouraged overseas contact, particularly with the

littoral of north-west Europe, long known to Viking raiders. Viking excursions eastwards opened Scandinavia and its new colonies to goods from the Near and Middle East, which duly arrived in York, and it was clearly the Scandinavian orbit which supplied the majority of imports recognised in Jorvik.

The evidence gathered at Lincoln in the last decade or so of excavation confirms the picture of Anglo-Scandinavian urban renewal and prosperity traced at York. Lincoln shares with York the benefit of a position at an important focus of natural routeways, and there is a further, complementary correspondence in the legacy of Roman structures and, particularly, fortifications which influenced Anglo-Scandinavian development. While the St Paul-in-the-Bail discoveries bear witness to activity in the upper walled town at Lincoln in the 5th/6th centuries, a period for which there is no equivalent in York's archaeology, this activity was clearly limited. As at York, Lincoln's street plan includes elements which cut across the Roman grid and the conclusion that was drawn for York seems to apply equally to Lincoln, that a period of widespread abandonment ensued after Roman town life had decayed. In the Anglo-Scandinavian era, as in the later medieval period, the Roman defences continued to define a defended area, with the remains of some Roman buildings re-utilized, while others were cleared. Viking-age occupation is known from all areas of the Roman and later medieval town, both north and south of Brayford Pool, although it is only occasionally, as at Flaxengate/Grantham Place, that the density of occupation can be gauged (Chapter 5.4.c.iv.). South of Brayford Pool, the Wigford suburb was revitalized after a period of what the current evidence suggests was total desertion; more importantly, for it demonstrates the role of communications in Lincoln's rejuvenation, there is evidence that the River Witham was cleared in the 10th century. Evidence for the industrial side of Anglo-Scandinavian Lincoln is all but restricted to the Flaxengate site, and even there the earliest manufacturing debris, from glassmaking, occurs in levels dated to c. 970, at least seventy and perhaps one hundred years after the area had been resettled; the economic basis for this earlier occupation on the site is unknown. Generally, the industries represented at Lincoln are similar to those known at York - the glassworking referred to above, metalworking in a variety of forms, antler/bone and jet working. The Silver Street pottery kiln is the tangible proof of an urban industry also recognised at several of the other Anglo-Scandinavian towns including Stamford, Leicester and Nottingham, but

so far only hinted at (albeit strongly) in the ceramic products found at York.

In terms of trade, too, Lincoln offers close comparisons with York, not least in the substantial volume of coins minted. English contacts included the south-west, south, south-east, and East Anglia, in addition to the Midlands and Northumbria, while overseas contacts reached Scandinavia, Germany, the Low Countries, Spain, the Islamic world of North Syria and ultimately China. In the 11th century Lincoln displaced York as England's second largest mint, and at the Norman conquest was apparently dominating English trade with the Baltic (Blackburn et al 1983, 23).

York and Lincoln may be viewed together as the two most substantial and important centres in England which fell under Viking domination and which subsequently developed an Anglo-Scandinavian population and culture. The medium- and long-term impact of Viking settlement was identical in both places - repopulation and redevelopment on a very large scale, dependent largely upon an influx of wealth created by trade, and the attendant rise of a class of manufacturing specialists servicing their region as well as their fellow-citizens in urban populations that perhaps numbered between 6,000 and 10,000.

The archaeological evidence from Nottingham, Derby, Leicester and Stamford in the period after the English reconquest of the Danelaw is neither so plentiful nor so detailed as for their more substantial northerly neighbours. Lack of excavation at Derby, and a high degree of later disturbance at Nottingham and Leicester leave an understanding of their role in the Anglo-Scandinavian period impossibly hampered at present, although the information contained in Domesday Book does itself testify to their importance by the Norman conquest. Stamford too is sparsely represented in the Anglo-Scandinavian archaeological record, although its pottery and iron-working industries are increasingly well-known. In spite of its archaeological importance, however, the Stamford pottery industry is considered to have been of relatively minor economic importance, and the manufacturing and trading role of stamford is otherwise little understood.

Of the other places which are distinguished by urban characteristics, Torksey's 213 burgesses in Domesday Book single it out, but there is no evidence for its size, layout, defences, or economy, with the exception of the pottery industry (Chapter 5.6.). Torksey's location and the resulting waterborne

links, particularly with Lincoln, Nottingham and York, presumably account for much of its importance, and for its development during the Anglo-Scandinavian period from nothing to a substantial community. It probably served as a riverside way-station, as did Newark to the south and Gainsborough to the north, but its proximity to Lincoln brought it additional traffic which might not pass either Newark or Gainsborough. This, coupled with its known role as an independent manufacturing centre which it did not, apparently, share with its neighbours on the Trent, presumably accounts for its larger size and greater importance.

Each of the other historically attested small towns of north-eastern Danelaw - Horncastle, Caistor, Louth, Grantham and Newark - may be viewed as the centre of a small sub-region which it serviced from an advantageous position astride one or more routeways, often on a site with a pedigree as a local focus extending back sometimes as far as the prehistoric period (Chapter 6). These minor places have not been subject to much archaeological study, and in none is their Anglo-Scandinavian topography known. They are best interpreted as units in an economic and administrative hierarchy, and their ownership at Domesday helps to define this role. Horncastle, Grantham and part of Caistor were in royal hands at the Norman conquest, Louth was put in the charge of the Bishop of Lincoln, and Newark and the other part of Caistor were held by the aristocracy. The royal holdings in particular and the mints that are known to have operated at two of them (Horncastle and Caistor) suggest that the kings were trying to extend the market system and accordingly increase their revenue by promoting the growth of small, local trading centres in this area, just as they did in the south-west (Hill 1978, 222). Louth, under the Bishop of Lincoln's control, apparently did not have a mint, but is included in the 'small-town' category because of Domesday Book's reference to burgesses in 1086 - presumably the Bishop was attempting to emulate the royal market places, although without the additional revenue accruing from a mint. Newark, a centre in aristocratic hands just before the Norman conquest but with a mint in the mid-10th and early 11th century, had perhaps also been in royal hands when minting was initiated.

A comparison of the evidence for Anglo-Scandinavian urbanism in the south-eastern Danelaw with that already cited for north-east Mercia and Northumbria emphasises that a position on good natural routes of communication,

itself often signalled by traces of prehistoric, Roman or Anglo-Saxon activity, was pre-eminently important in encouraging urban development at this time.

The clearest evidence for the nature of any of the burhs in this area in the pre-Viking period has come from Northampton (Chapter 7.2.e.), more specifically from the south-west quarter of the medieval town in the vicinity of St Peter's church. A large, possibly 7th-century timber hall, comparable in its form and scale with approximately contemporary structures at the Northumbrian palace site of Yeavering has been discovered there; it was replaced by an even larger structure, at least partly constructed of stone, which is tentatively dated to the 8th century. The form of these structures surely indicates that this was a residence, permanent or occasional, of Mercian royalty or aristocracy, or their agents (cf. Williams 1984a, 33). There is nothing about the site at this period to encourage belief that urban conditions existed, and the small amount of metalworking debris found in association suggests occasional craftsmanship rather than industrial manufacturing.

The stone hall seems to have been demolished in the late Saxon period, and it is tempting to see it as a structure rendered redundant by the Viking settlement or the subsequent extension of West Saxon rule into the area. The dating evidence is not precise enough to verify either of these possibilities, however, and the hall may have outlasted both the Viking takeover and the English recapture. If the adjacent, approximately contemporary stone structure discovered below the Norman element of St Peter's was itself a church, the coincidence with St Peter's argues for some continuity in the vicinity, although this is perhaps more readily explicable in the case of a church, presumably with a surrounding graveyard, than for secular structures. Moreover it is precisely this area, around St Peter's church, which has produced evidence for an intensification of settlement in the late 9th- mid 11th centuries, with an associated coin-list which includes a significant number of St Edmund pennies of c. 900, and it seems that at Northampton the Viking army was attracted to and then developed a pre-existing Mercian seat of power. The relative infrequency of later coins may indicate that there was economic regression in the period after the Scandinavians were politically dispossessed.

Spectacular though the Northampton discoveries have been, however, there is still no excavated evidence to illuminate the urban characteristics which other sources indicate were present there by the end of the Anglo-

Scandinavian period. Evidence for a planned and regulated layout is ambiguous and inferential, and although it has been claimed that the artefactual evidence, both in its proliferation, and particularly through the presence of silver-working debris, indicates 'at least an infant urban community' (Williams 1984a, 32), neither the quantity nor the range of material points inevitably to this conclusion, since they could result equally from the output of a manorial caput. It would be premature, therefore, to claim any more than a theoretical possibility that Northampton was already a commercial centre in the last quarter of the 9th century, and it is still impossible to discuss either its topography or its economic role during the Anglo-Scandinavian period in anything but speculative terms. The contemporary situation in the other three centres of the south-east Danelaw which became shire towns (Bedford, Cambridge and Huntingdon) is even more obscure (Chapter 7.2.). Only at Bedford is there evidence for mid-Saxon occupation; the Vikings' impact on all three in topographic or economic terms is unknown, and there is little evidence for the Anglo-Scandinavian phase of their occupation. On the current evidence, it seems unlikely that any of these places was in the forefront of urban development.

This conclusion seems also to apply to East Anglia, an area of lesser Scandinavian settlement (Chapter 7.3.). The frequently made suggestion that Ipswich was a large and thriving mid-Saxon commercial settlement (e.g. Hodges and Whitehouse 1983, 109) is an extension rather than a reflection of the published evidence, although it should be stressed that, as with so many of the sites under discussion, further excavation could well alter the picture radically. As yet, however, this emporium remains hypothetical; the effect that this shadowy centre might have had upon urban development certainly cannot be defined. Norwich, Thetford and Colchester, all imperfectly understood at present, seem to have been developing into urban centres in the 10th century, (the time-scale for these developments is currently imprecise), but there is nothing to suggest that they were early or formative examples of urban development.

West Mercia seems devoid of urban centres before the 10th century (Chapter 7.4.). In most of the sites which later became towns this conclusion is based upon negative evidence, but excavation and observation at Gloucester point to there being no pre-10th-century activity below the medieval town other than ecclesiastical sites and quasi-rural estates (Heighway 1984, 38-40). Hereford, as demonstrated above (Chapter 7.4.b.) has not been proved to have

been a planned and defended site of the mid 8th-mid 9th centuries, as has been claimed, while Chester, a centre of great potential interest, is still little understood in its 9th-11th century phase.

Within Mercia only London seems to have been a substantial trading centre in the pre-Viking period, with cross-channel contacts, but although a probable location for 7th/9th-century Lundenwic has recently been established, and the suggestion reiterated that it extended over at least 24 ha and perhaps as much as 80 ha or even 112 ha (Biddle 1984, 27; Vince 1984, 310), its topography is virtually unknown except for the clear importance of the Thames waterfront itself. Its economic peaks and troughs are also unknown, and it is possible that, like Hamwic, it was in decline in the mid 9th century and that Alfred did not so much transfer a thriving centre as inspire a new lease of life into a previously contracting port.

The contemporary Wessex port of Hamwic, also attested documentarily, is the only pre-Viking trading centre in England with a layout reasonably well understood, but it seems already to have declined as an international trading centre by the time that it was raided by the Vikings in 840 and 842 (Chapter 7.5.). There is therefore some doubt that its example would have encouraged the Vikings to initiate urban development on their settlement some three decades later.

Winchester provides another perspective of urban development within Wessex and there a determined reorganisation of settlement took place certainly by 900, and perhaps two, three or even four decades earlier. Winchester seems to be the site in Wessex where a recognisable move to enlarge the population and perhaps to create a town took place earliest in the 9th century; by extrapolation, the Worcester charter suggests that commercial activities were probably fostered there; but archaeological evidence for the economy of late 9th- or 10th-century Winchester remains elusive.

In summary, there is little available archaeological evidence to support any assertion that English urban life was vibrant at even a few, first-rank regional centres in the third quarter of the 9th century. This was the time when the Viking micel here campaigned throughout England and gained first-hand knowledge of its institutions before settling in 876-80. The Viking settlers certainly imitated some English institutions - the penny coinage, for

example, was introduced to Northumbria in the 890s under the auspices of Viking kings - but as this survey has demonstrated, in the period c. 850-75 England apparently had hardly any thriving towns upon which the Vikings could model the more important of their new foci. Hamwic was in terminal decline, contemporary Ipswich is an unknown archaeological quantity, London was perhaps also in decline, and neither York nor Lincoln was necessarily very much more than a regal, ecclesiastical or administrative centre.

Nonetheless, such functions in the exercise of power provided sufficient reason for the Viking leaders to occupy and maintain the role of these first-rank centres and other smaller regional or sub-regional nuclei such as Nottingham, Derby, Stamford and Northampton. This is, perhaps, an early example of that awareness of the value of continuity which is more often associated with Cnut in the second wave of Viking invasions. The prevailing view that the number of Viking warriors and settlers was small suggests that a 20 ha fortress such as York was too large to recommend itself purely as a defensible focus, a point perhaps emphasised by the Northumbrians' ability to enter the city in their counter-attack of 867, and in taking over both York and Lincoln the Vikings reveal that their perception extended beyond short-term military measures.

The early 10th century urban development so clearly recognised at Coppergate, York, with its densely clustered tenements and manufacturing and commercial economy, may have been in the van of contemporary urban development in England, for nowhere else is there such unambiguous evidence for urban life at so early a date. The Winchester street plan hints that there may have been hopes of such development within Wessex at an earlier date, but it is not yet clear whether this hope was fulfilled so early. At present it may be claimed that the Danelaw, and York in particular, was at the forefront of urban development in England.

To place this observation in a wider context, it is necessary to turn to other Viking colonies and to Scandinavia itself. Dublin is the sole Irish site to offer comparable data (Chapter 7.6.). The 9th-century longphort which may have been no more than a raiding base has not yet been found, and attention must be confined to the 10th-century and later settlement. The irregular pattern of streets within the area known to have been occupied at that time suggests the same organic growth that may be recognised at York or Lincoln, but in size,

as in political importance, Viking-age Dublin seems to have been the cadet of contemporary York. The quantity of silver circulating in late 9th- and 10th-century Ireland and the numismatically attested link with Chester suggest that there was an important commercial connection across the Irish Sea, particularly with north-west England, but there is not sufficient archaeological evidence yet published to elucidate either the trading or manufacturing aspects of Viking-age Dublin. Furthermore, as noted above (Chapter 7.6.e.) Dublin's relationship with its hinterland differed from that of York with its region, a point which further hinders comparison of the two centres. By the 930s at the latest York was certainly an expanding town, and one well known to the Dublin Viking dynasty, but seniority in the matter of expansion and economic growth cannot be claimed convincingly by either place.

An even greater archaeological lacuna exists concerning town-life in the Viking colony of Normandy, a subject which cannot yet be discussed in anything but historical terms (Chapter 7.7.). Although the written sources do suggest that the 10th century was a period of growth, particularly at Rouen, a complete absence of relevant excavation inhibits comparison between York and sites across the English Channel.

If comparisons with the Viking colonies are not particularly illuminating in the study of Anglo-Scandinavian urbanism, it is even more important to evaluate the influence that native Scandinavian traditions may have exerted on the development of town life (Chapter 7.8.). Manufacturing and trading centres existed throughout the area even in the pre-Viking period when sites such as Ribe and Helgö fulfilled these roles, and from the 8th or early 9th century Kaupang, Birka and Hedeby are only the best known of a growing number of sites where such activities have been recognised. Although the full detail of the economy of any of these places has yet to be demonstrated, it is clear that some of the industrial and commercial functions apparent in the Danelaw towns had an ancestry of several hundred years at sites within Scandinavia and that from the late 8th century the wealth and importance of these places was significantly increased by the development of trading contacts with the Abbasid caliphate (cf Hodges and Whitehouse 1983, 115f). This suggests that the Viking settlers of England and their rulers were probably well aware of the economic potential of manufacturing and marketing centres from their own

native experience, not merely from observation of declining continental sites such as Dorestad (Van Es and Verwers 1980, 298-9 and passim) and the shadowy English centres discussed above. The economic development of York, Lincoln and perhaps other centres when under Scandinavian control does not therefore represent the adoption of an alien economic system, but the transplanting and perhaps modification of an already indigenous phenomenon.

The extremely limited evidence upon which conclusions must currently be based has become apparent in the course of this survey. The areas excavated within the Anglo-Scandinavian burhs of Northumbria and eastern Mercia represent only tiny portions of those places. Within York, for example, all the excavations combined probably total no more than the equivalent of five or six of Domesday Book's mansiones or tenements as recognised at 16-22 Coppergate. Thus, in terms of mansiones, only about 0.3% of Domesday York has been investigated. Furthermore, many excavations have not encountered recognisable Viking-age deposits, because they have been removed or comprehensively disturbed by later features. The best that can be claimed for the evidence is that occasionally, as in the Coppergate/Ousegate/Pavement area of York, it is sufficient to provide a representative sample of a particular locale, and to highlight some principal facets of Anglo-Scandinavian development. In all the centres discussed in this study there remains as a basic requirement the systematic sampling of diverse localities within and adjacent to the pre-conquest boundaries. It is only through such an approach that a more coherent picture of the Anglo-Scandinavian impact on urban development will emerge.

ABBREVIATIONS

AL: The Archaeology of Lincoln (CBA, London)

AY: The Archaeology of York ed. P.V. Addyman (CBA, London)

BAR: British Archaeological Reports (British or International Series) (Oxford)

BCS: W. de G. Birch (ed), Cartularium Saxonicum (London) (1885-1893)

CBA: Council for British Archaeology

HE: Bede's Ecclesiastical History of the English People (ed. B. Colgrave and R.A.B. Mynors (Oxford) (1969))

RCHMS: Royal Commission on Historical Monuments. The Town of Stamford (London) (1977)

RCHMY 1-5: Royal Commission on Historical Monuments. The City of York (London)

1. Eburacum. Roman York (1962)
2. The Defences (1972)
3. South-West of the Ouse (1972)
4. Outside the City Walls. East of the Ouse (1975)
5. The Central Area (1981)

VCH: The Victoria County History (Oxford/London)

VCHY: The Victoria County History. A History of the County of York. City of York (ed. P.M. Tillott) (Oxford/London) (1961)

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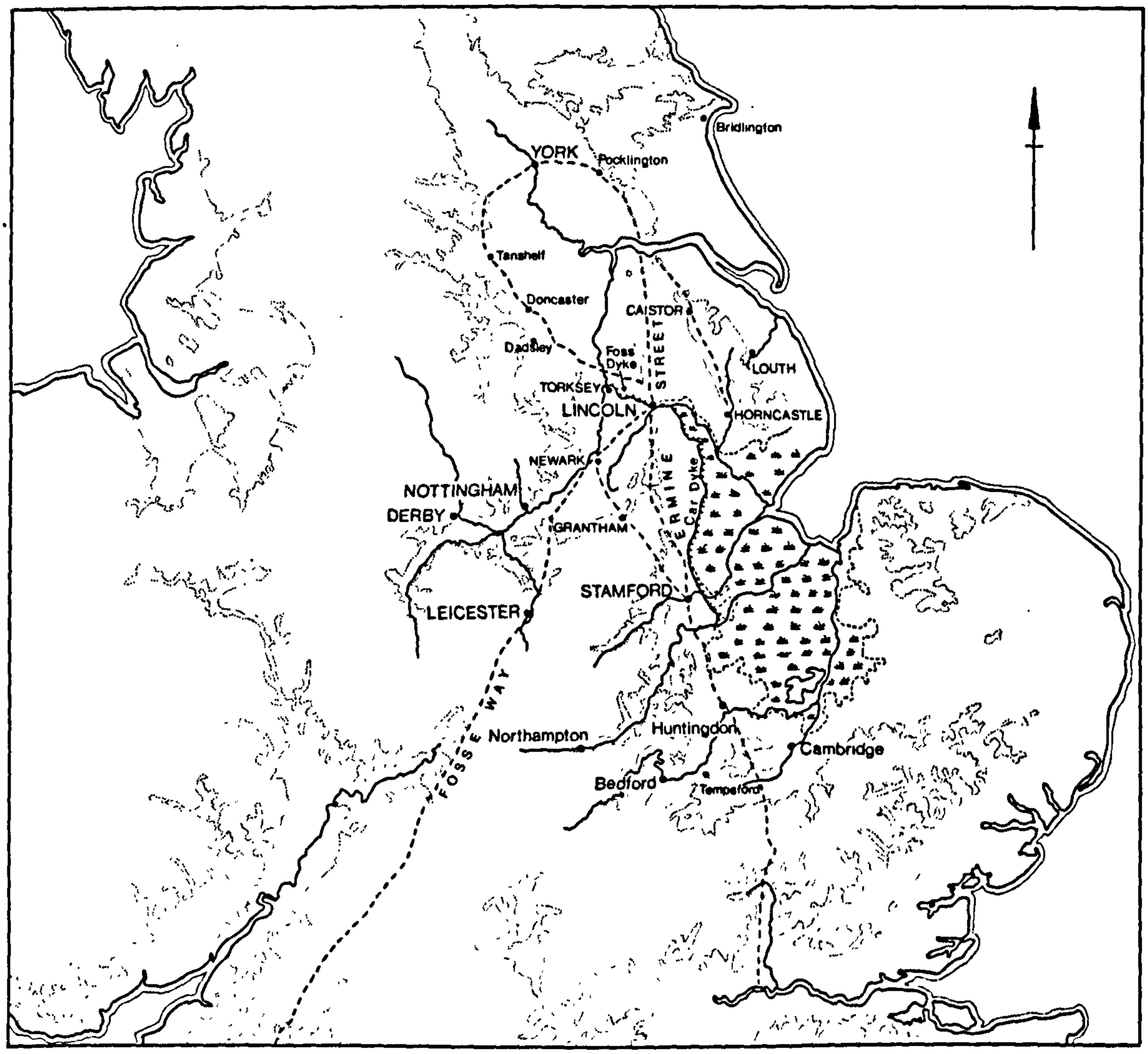
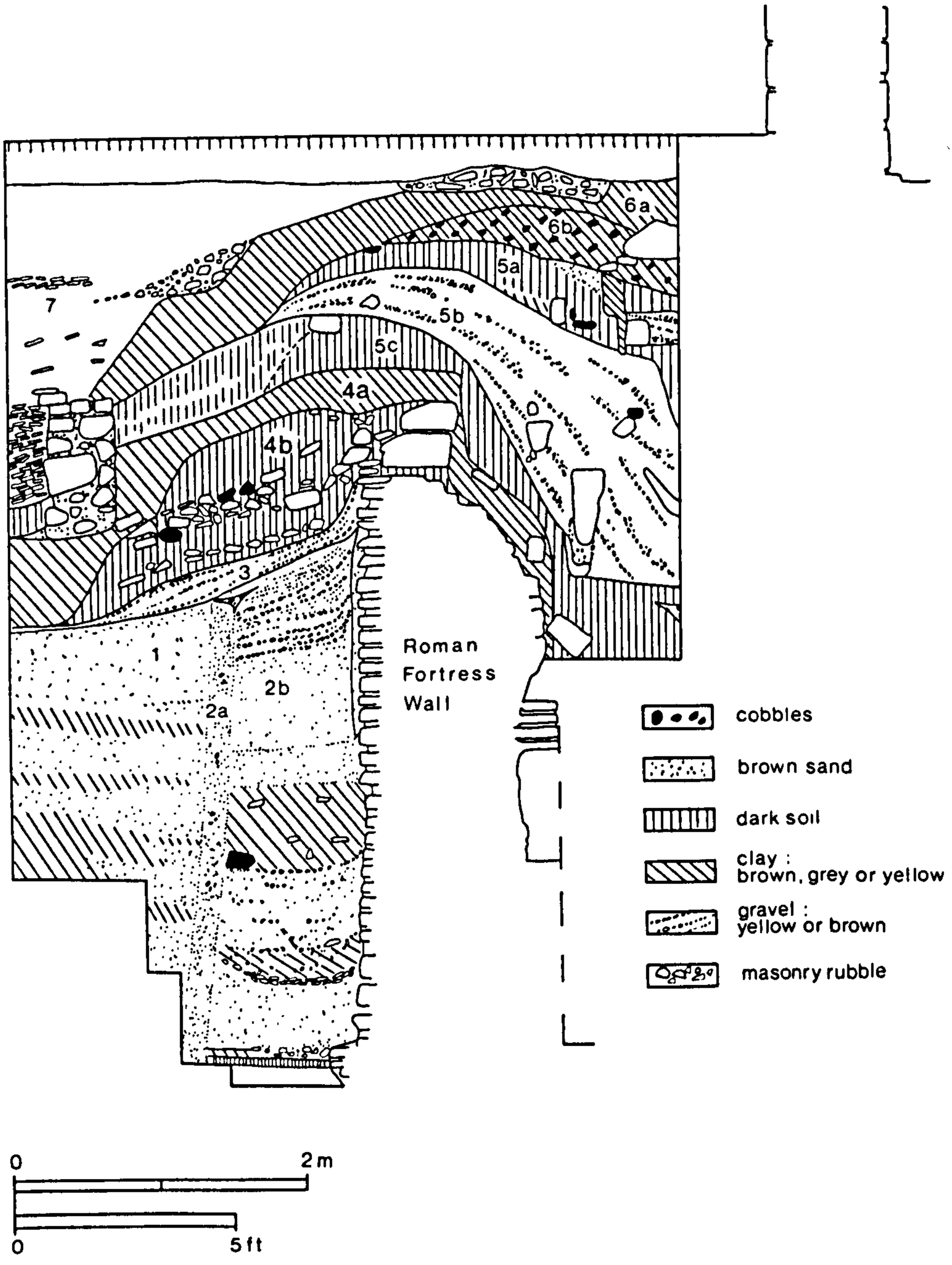
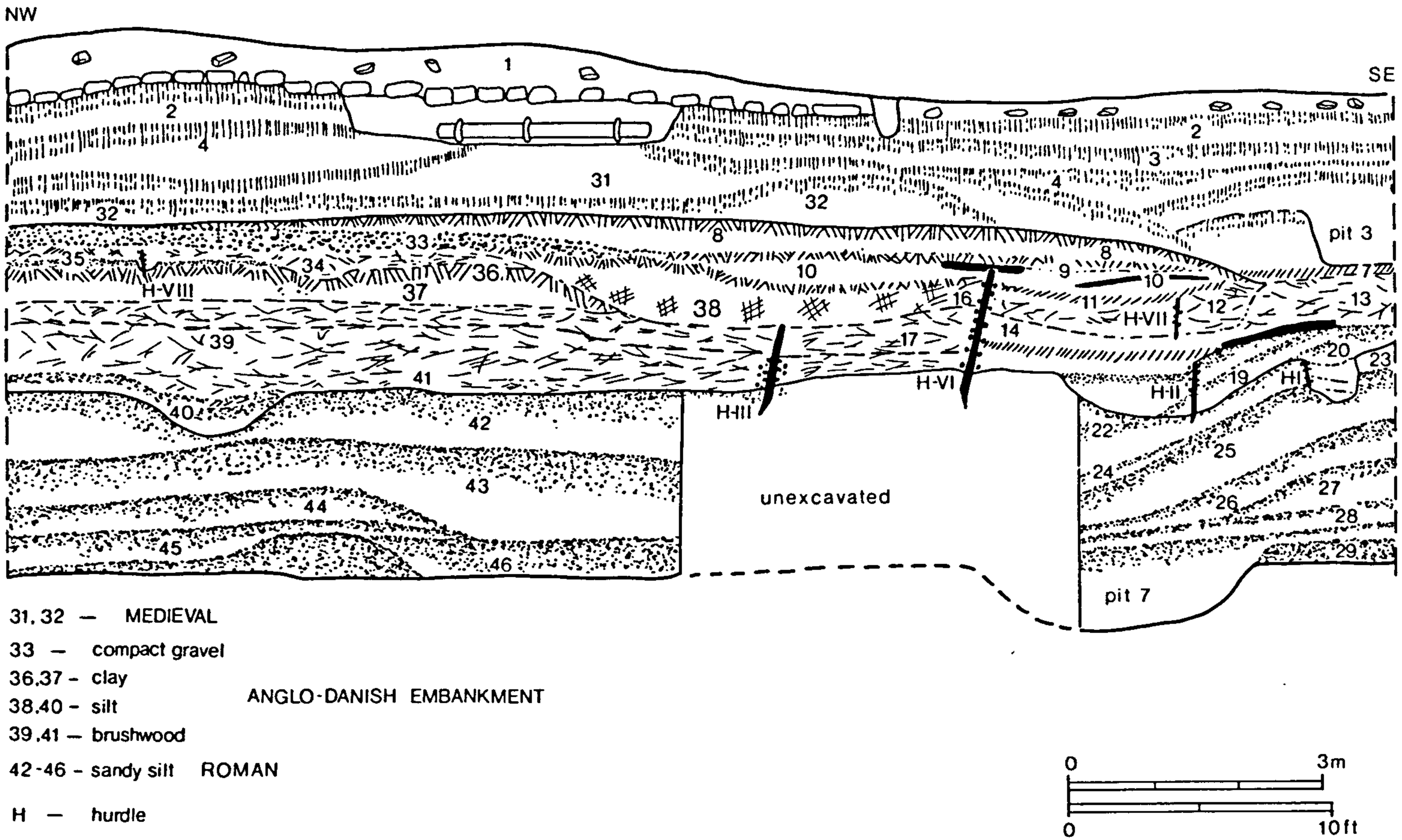

Bridlington
YORK
Pocklington
Tanshelf
Doncaster
CAISTOR
STREET
Dadsley
Foss Dyke
LOUTH
TORKSEY
LINCOLN
HORNCASTLE
NEWARK
ERMINE
Car Dyke
NOTTINGHAM
DERBY
GRANTHAM
STAMFORD
LEICESTER
FOSSE WAY
Northampton
Huntingdon
Cambridge
Bedford
Temsford
0
100 km
0
50m
Roads
Fens
61 metre contour

FIG. 1



Section across north-west fortress defences, York.
(after Radley 1972b fig 8)

FIG 2



31, 32 — MEDIEVAL

33 — compact gravel

36,37 - clay

38,40 - silt — ANGLO-DANISH EMBANKMENT

39,41 — brushwood

42-46 - sandy silt — ROMAN

H — hurdle

Hungate, York: embankment section PS (after Richardson 1959, fig 4)

FIG 3

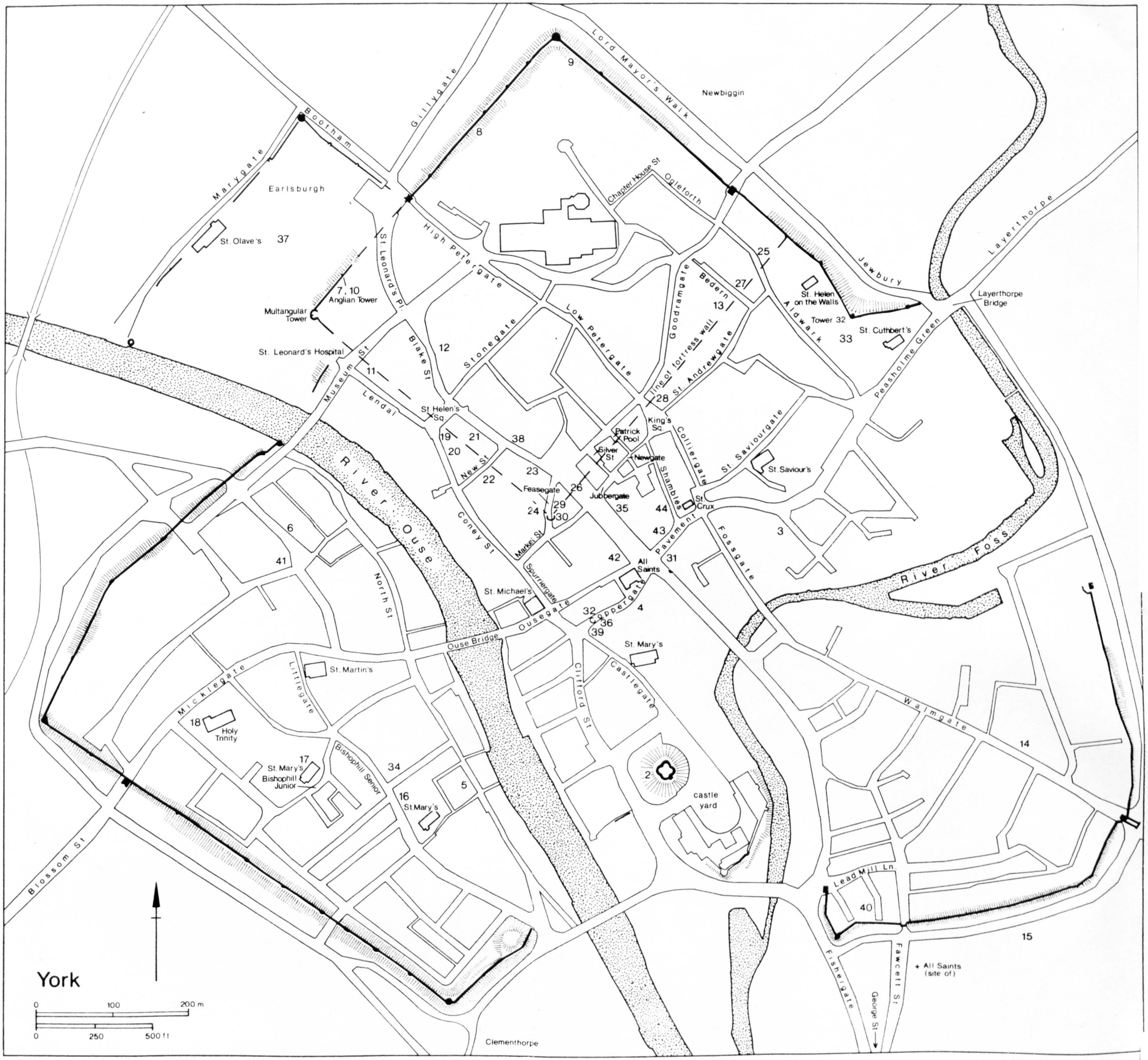

Lord Mayor's Walk
Newbiggin
Gillygate
Bootham
Marygate
Earlsburgh
St. Olave's
37
St. Leonard's Pl.
High Petergate
Chapter House St
Ogleforth
Goodramgate
Bedern
27
25
Jewbury
Layerthorpe
Layerthorpe Bridge
St. Helen on the Walls
Tower 32
St. Cuthbert's
33
Aldwark
Peasholme Green
7, 10
Anglian Tower
Multangular Tower
St. Leonard's Hospital
Museum St
Blake St
Stonegate
Low Petergate
12
11
Lendal
St Helen's Sq.
Linegt fortress wall
St. Andrewgate
28
King's Sq.
Patrick Pool
Silver St
Newgate
Colliergate
St. Saviourgate
St. Saviour's
19
20
21
38
New St
22
23
Feasegate
26
29
30
24
Jubbergate
35
44
Shambles
St Crux
43
Pavement
Market St
Coney St
42
All Saints
31
Fossgate
3
River Foss
River Ouse
6
41
North St
St. Michael's
Spurriergate
Ousegate
Coppergate
32
36
39
4
Ouse Bridge
St. Mary's
Clifford St
Castlegate
Micklegate
Littlegate
St. Martin's
18
Holy Trinity
17
St. Mary's Bishophill Junior
Bishophill Senior
34
16
St. Mary's
5
2
castle yard
Walmgate
14
Blossom St
Lead Mill Ln.
40
15
Fishergate
Fawcett St
George St
+ All Saints (site of)
Clementhorpe
York
0
100
200 m
0
250
500 ft

FIG 4

Nun's St
250 metres
1
St. Alkmund's
All Saints'
2
Causey
River
Derwent
Markeaton Brook (course of)
(after G. Moneypenny 1791)
Derby
0
100
200 m
0
250
500 ft

FIG 5

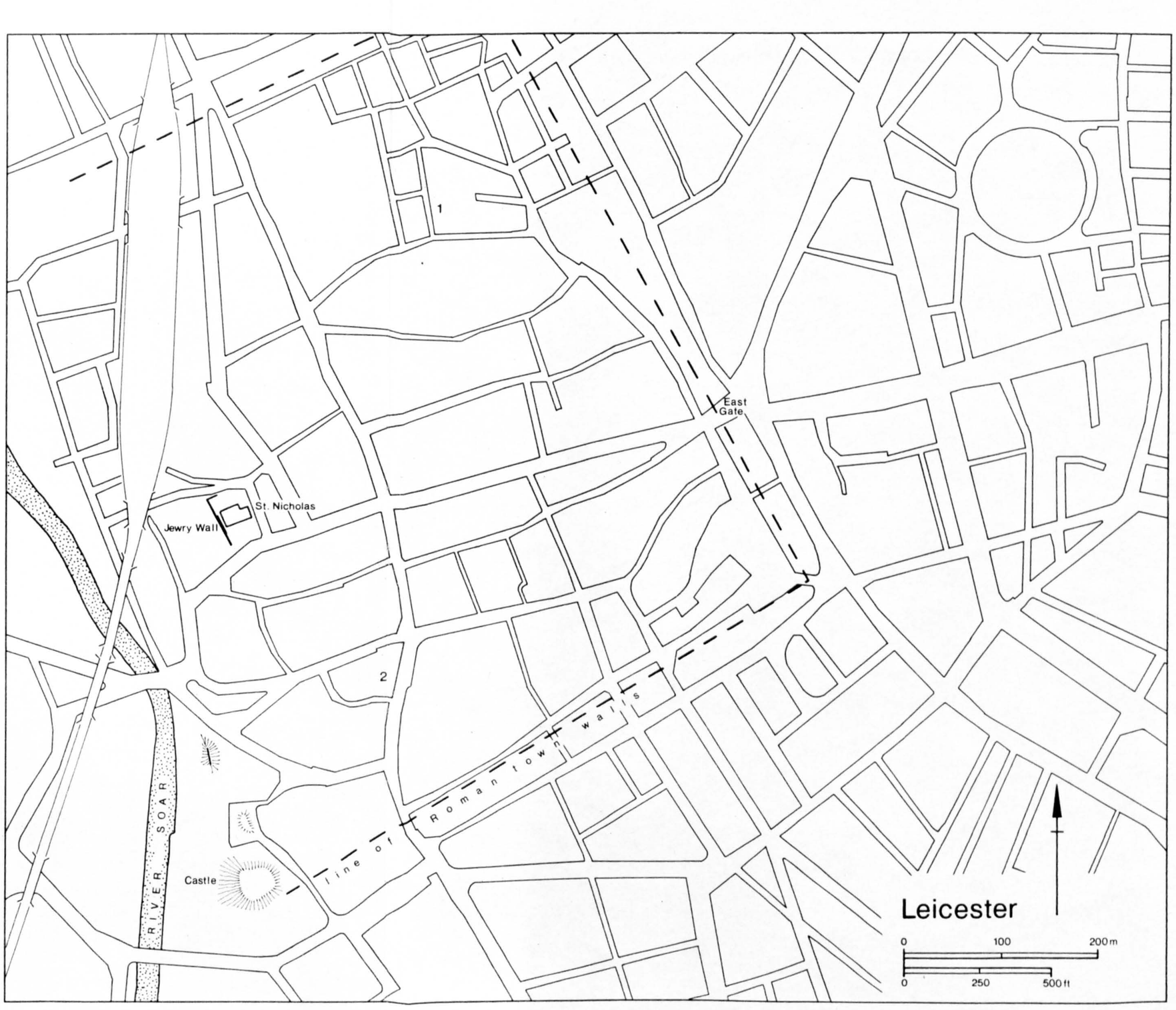

1
2
East Gate
St. Nicholas
Jewry Wall
RIVER SOAR
Castle
line of Roman town walls
Leicester
0
100
200 m
0
250
500 ft

FIG 6

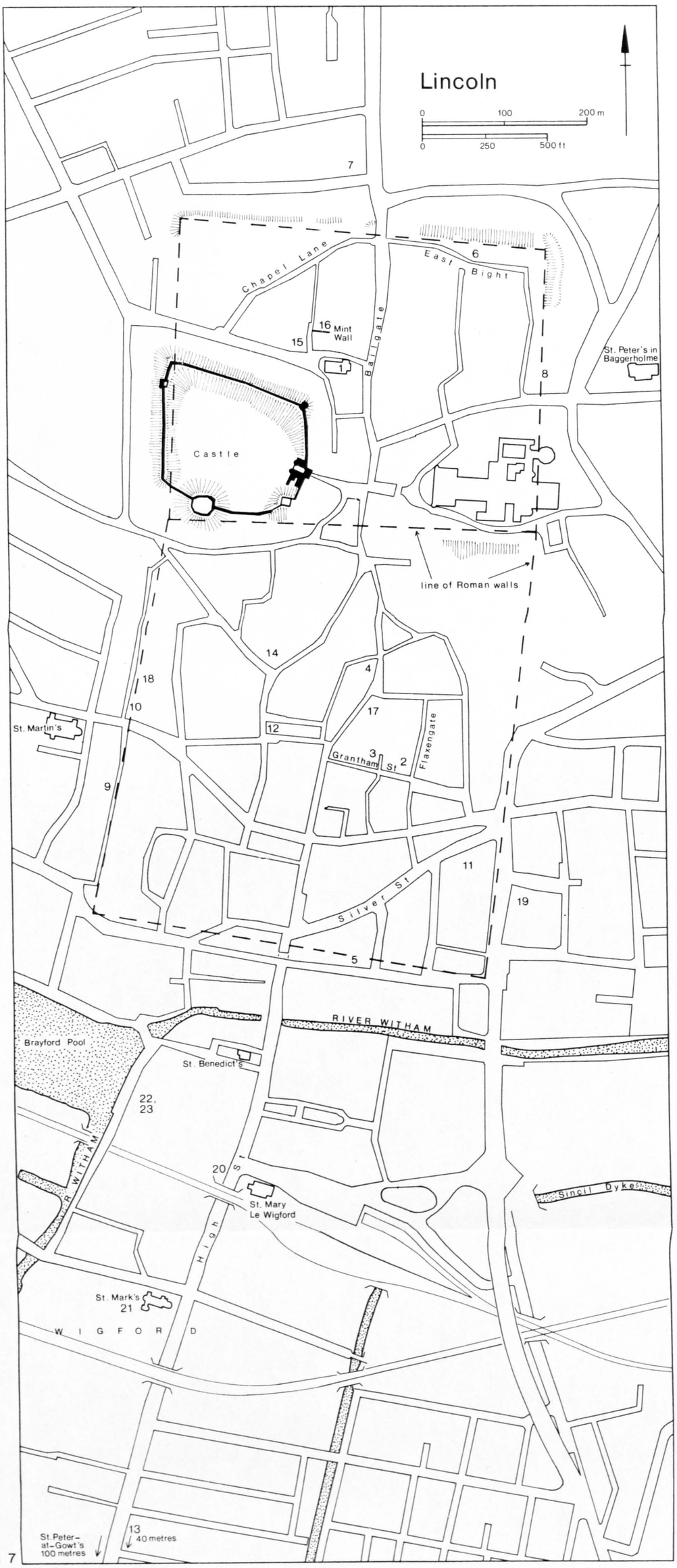

Lincoln
0 100 200 m
0 250 500 ft
Chapel Lane
East Bight
Bargate
16 Mint Wall
15
1
Castle
St. Peter's in Baggerholme
8
6
7
line of Roman walls
14
4
18
10
17
St. Martin's
12
Grantham St
3
2
Flaxengate
9
11
19
Silver St
5
RIVER WITHAM
Brayford Pool
St. Benedict's
22, 23
20
St. Mary Le Wigford
High St
Sincil Dyke
St. Mark's 21
W I G F O R D
St. Peter-at-Gowt's 100 metres
13
40 metres

FIG 7

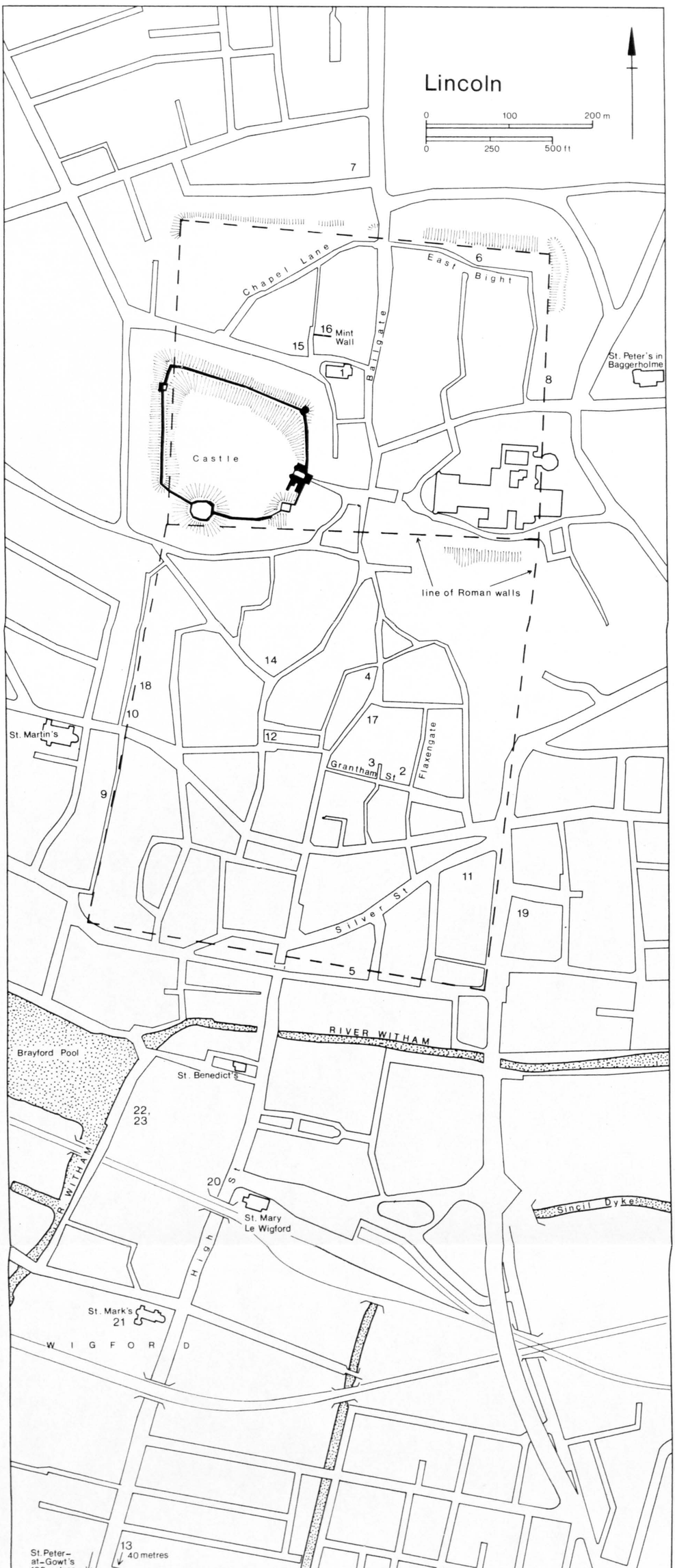

Lincoln
0 100 200 m
0 250 500 ft
Chapel Lane
East Bight
Mint Wall
Baile gate
St. Peter's in Baggerholme
Castle
line of Roman walls
St. Martin's
Grantham St
Flaxengate
Silver St
RIVER WITHAM
Brayford Pool
St. Benedict's
St. Mary Le Wigford
High St
St. Mark's
WIGFORD
Sincil Dyke
St. Peter-at-Gowt's 100 metres
40 metres

FIG 7

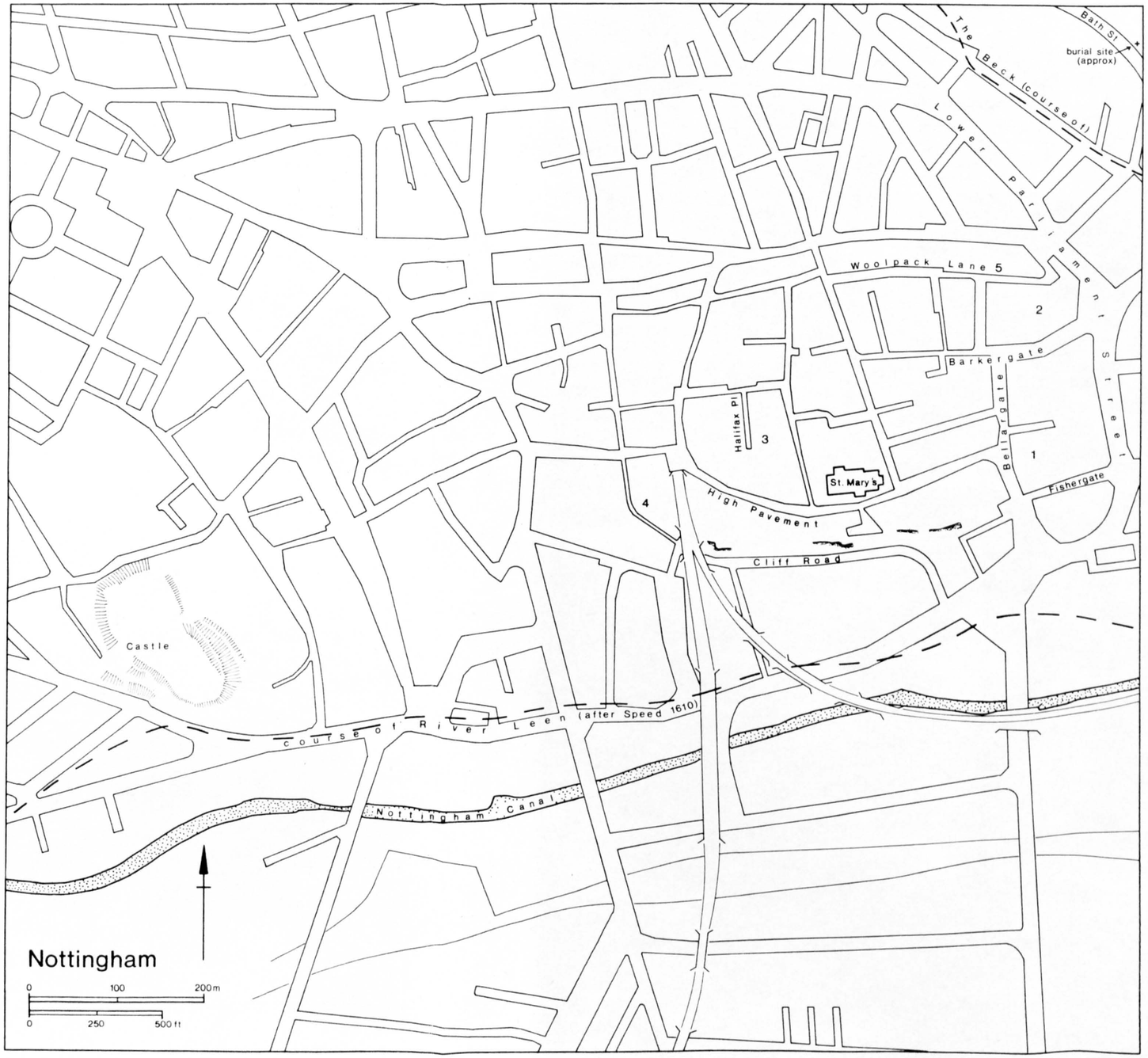

The Beck (course of)
Bath St
burial site (approx)
Lower Parliament Street
Woolpack Lane
5
2
Barkergate
Bellagate
Halifax Pl
3
1
St. Mary's
4
High Pavement
Fishergate
Cliff Road
Castle
course of River Leen (after Speed 1610)
Nottingham Canal
Nottingham
0 100 200m
0 250 500 ft

FIG 8

Scotgate
Broad St
Star Lane
High St
St. George's St
St. Leonard's St
Red Lion Square
Mallory Ln
St. John's St
St. Mary's St
St. Peter's (site of)
Castle Dyke
Bath Row
Wharf Rd
WELLAND
RIVER
St. Martin's
Church St
High Street St. Martin's
Park Lane
Wothorpe Road
Pintold Lane
1
2
3
4
5
6
7
8
9
Stamford
0 100 200m
0 250 500ft

FIG 9