University of Huddersfield

University of Huddersfield Repository

Cliff, David

Lincoln c. 850-1100 : a study in economic and urban growth

Original Citation

Cliff, David (1994) Lincoln c. 850-1100 : a study in economic and urban growth. Doctoral thesis, University of Huddersfield.

This version is available at http://eprints.hud.ac.uk/4662/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/

LINCOLN C.850-1100

A STUDY IN ECONOMIC AND URBAN GROWTH

DAVID CLIFF

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements for the degree of Doctor of Philosophy

April 1994

University of Huddersfield

Abstract

The dissertation investigates the increasing number and complexity of towns between c.850 and c.1100, through the detailed study of Lincoln in this period. Utilising archaeological and documentary evidence to trace the multi-faceted nature of early medieval towns, it confirms that economic change was the principal cause of urban growth. Pottery and coin evidence shed some light upon the progress and nature of economic development.

The role of a significant elite centre or an elite-founded wic are both disputed in considering the origins of urban Lincoln. The questioning of the importance of these reinforces the view that the Vikings had a considerable impact on the development of Lincoln. The nature of their role was to create a small concentration of population, which then served as a focus for the economic growth already underway in the rural economy; which the Great Army must have initially disrupted.

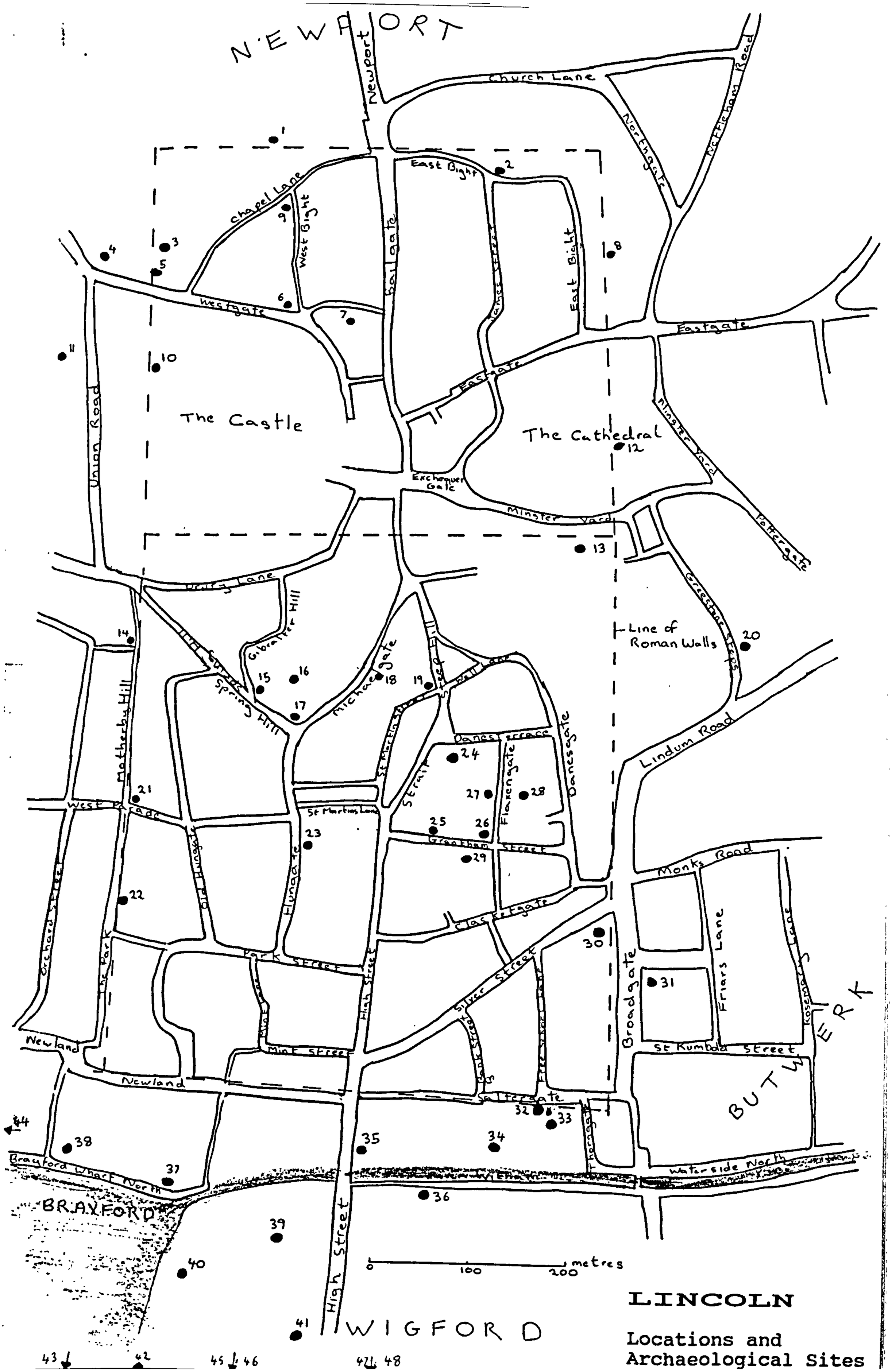
The key role of Viking rulers or West Saxon kings in the later economic and urban development at Lincoln is disputed. Instead the thesis considers that subsequent topographical and economic change is mostly attributable to urban elites in Lincoln rather than to distant political figures. Many of these developments were utilised by Viking and West Saxon rulers but they were not influential in creating them. Once established Lincoln's development seems to have been most pronounced in the tenth century, with urban status rapidly attained.

Lincoln had an impact on the surrounding area through trade, and tenurial links can also be identified in the late eleventh century. Lincoln did not however dominate the surrounding area, although it may have brought about greater landholding complexity and influenced the composition of the surrounding rural populace.

Acknowledgements

The prolonged passage of my research has meant that I have incurred debts too numerous to mention in full. Among many debts are those due to the staff at the City of Lincoln Archaeological Unit, particularly to Jane Young for clarifying and discussing the pottery evidence and my subsequent chapter and saving me from legal action! and to the Unit's director M J Jones for providing considerable unpublished information. Thanks are also due to Mark Blackburn who provided information on unpublished single coin finds. Professor N P Brooks kindly supplied a draft copy of his recent article of Rochester Bridge. Dr Paul Everson kindly discussed the evidence relating to the dating of the towers of St Mary le Wigford and St Peter at Gowts. Professor G H Martin has read drafts of much of my thesis and has given courteous and friendly assistance and encouragement as well as providing fresh and sharp insight. Thanks are due to Dr David Westwood for the coin illustration and Charlie Easingwood for assistance with the maps. Also I have greatly appreciated the support and encouragement that has been provided by University of Huddersfield Research Office.

Finally more than gratitude is owed to the following, without whose contribution the thesis would not have been possible. Firstly to Peter Ryde of Spalding Grammar School who propagated an interest in history which has remained with me ever since. To my parents who have done all they could to encourage my curiosity. To Dr Pauline Stafford, who has been more than a brilliant supervisor; it was she that set me on this path and has done more than anyone to keep me on it. Finally to Gill who has borne the greatest strain in the last few hectic months - to you a bedroom.



LINCOLN

Locations and Archaeological Sites

Key to Archaeological Sites Map

1. Cecil Street
2. East Bight
3. Westgate School, 1973
4. Cuthbert's Yard
5. Westgate School, 1990
6. West Bight
7. St Paul in the Bail
8. Eastgate Hotel
9. Chapel Lane 1985
10. Castle West Gate
11. Lawn Hospital
12. The Cathedral, 1986
13. Bishop's Palace
14. Motherby Hill
15. Gibralter Hill
16. Michaelgate, 1978
17. Spring Hill/ Michaelgate, 1983-4
18. Michaelgate/ Chestnut House, 1984-5
19. Steep Hill
20. Greestone Stairs
21. West Parade, 1971-2
22. The Park, 1970-2
23. Hungate
24. Danes Terrace
25. Grantham Place
26. Flaxengate, 1972-6 and 1979
27. Flaxengate, 1969
28. Flaxengate, 1945-8
29. Grantham Street
30. Silver Street
31. Broadgate East
32. Saltergate
33. Waterside North
34. Waterside North West
35. Woolworths
36. Waterside South
37. Brayford Wharf North
38. Lucy Tower Street
39. St Benedict's Square
40. Dickinson's Mill
41. 181-3 High Street
42. Brayford Wharf East
43. St Mark's West
44. Brayford North
45. St Mark's Church
46. St Mark's Station
47. Monson Street
48. St Mary's Guildhall

Abbreviations

ASC	Anglo-Saxon Chronicle
BAR	British Archaeological Reports
BNJ	British Numismatic Journal
CBA	Council of British Archaeology
CC	Circumscription Cross - an An Anglo-Saxon coin type
CL	pottery category associated by Hayfield with Lincoln
CLAU	City of Lincoln Archaeological Unit
CT	pottery category associated by Hayfield with Torksey
EHD	English Historical Documents
EMASPP	East Midlands Anglo-Saxon Pottery Project
ELSW	Early Lincoln Glazed Sandy Ware - a pottery category
GM	Goltho Manor - Excavation deposits
HMBC	Historic Monuments and Buildings Commission
HT	Horizontal Trefoil - a coin type, see below p.94
ha	hectares
LES	Lincoln Early Shelly - a now redundant pottery category
LFS	Lincoln Fine Shelled - a pottery category
LG	Lincoln Gritty - a pottery category
LKT	Lincoln Kiln Type - a pottery category
LS	Lincoln Sandy - a now redundant pottery category
LSh	Lincoln Late Saxon Shelly - a pottery category
LSloc	Late Saxon local pottery - a pottery category
LSLS	Late Saxon Lincoln Sandy - a pottery category
LSNS	Lincoln Saxo-Norman Shelly - a now redundant pottery category
NEI, NEII, NEIII,NEIV, NEV	Coin die styles associated with the north-east Midlands during the tenth century by C E Blunt
Reg. Ant	Registrum Antiquissimum of the Cathedral Church of Lincoln
SCBI	Sylloge of Coins of the British Isles
SNLS	Saxo-Norman Lincoln Sandy - a pottery category
TRE	Tempore Regis Edwardi - the time of King Edward, 1066
TRW	Tempore Regis Wilhelmi - the time of William I, 1087

CONTENTS

		page
Chapter One	Definition, Origins and Development	3
Chapter Two	Lincoln and Coins	51
Chapter Three	Pottery and Lincoln	100
Chapter Four	Other Industry	151
Chapter Five	Aspects of Lincoln's Trade	171
Chapter Six	Lincoln and Anglo-Saxon Urban Topography	201
Chapter Seven	Lincoln and Its Agrarian Hinterland	283
Chapter Eight	Lincoln and Its Urban Populace	325
Chapter Nine	Conclusion	360
	Tables	384
	Figures	408
	Maps	439
	Appendices	481
	Bibliography	502

CHAPTER 1

The Definition, Origins and Development of the Early Medieval Town

Definition

The definition of a town in the early medieval period provides an essential starting point for the study of Lincoln in this period. Definition here has a twofold purpose, firstly to enable a distinction to be drawn between towns and other settlement forms and secondly to provide the means to identify a point at which Lincoln's development has made it urban. Even though English early medieval towns have some shared characteristics, each possesses its own individual identity. Nonetheless a conceptual view of the town is required, if urban history is not to become simply a series of town histories.

The nature of towns in this period is a subject that has occupied historians for over a century. At least part of the discussion of the features and origins of towns can be traced back to differences in the understanding of what we shall term urbanism. Carl Stephenson for instance noted that 'much of the controversy that has raged over the origins of mediaeval towns resolves itself into a matter of definition' [1]. This is not surprising given that wide variations are found in the terminology of places possibly considered as urban from Bede to Domesday Book [2]. This section will consider the main components of definition and description offered by earlier historians before discussing the more recent contributions of archaeologists, geographers, anthropologists and historians.

As with much of early medieval history, Maitland provides a good starting point. Whilst his 'garrison theory' has never

found widespread support, it has often served as the point of departure for later historians proposing their own explanation of urban development. He rhetorically asked 'what is it that makes a borough a borough?', and responded that 'it is a legal problem' [3]. This characterises much of the early work on urban definition. From this perspective the distinctiveness of towns came from their different courts and tenure arrangements, linked to their original military functions. Maitland drew attention to the 'tenurial heterogeneity' of towns, whereby its inhabitants held property from a large number of different nobles and ecclesiastics as well as the king, in contrast to manors held by a single lord. Tenurial heterogeneity and the neat administrative geography of the English Midlands led Maitland to argue that each borough was maintained by its shire. Thus Maitland's tenth century borough was inhabited by *cnihts* who provided a garrison and were perhaps fed by the manors to which they belonged [4]. Commerce had a role to play, but this was viewed from a legal perspective. The establishment of a market was a legal act, assisted by laws prohibiting trade elsewhere and enforcing a stringent peace in boroughs and on those travelling to and from them, as well as ensuring that the minting of coin was confined to boroughs [5].

Ballard built upon the ideas of Maitland. He noted four features that could be used to indicate a borough: a court (the *buruhgemot* of Edgar's laws), heterogeneous tenure, the payment of a third of royal revenue to the local sheriff or earl, and a mint. The acquisition of a mint was here regarded as an administrative, rather than economic, function, related to the

process of fortification [6]. For Mary Bateson boroughs did not grow through the expansion of a village but instead resulted from a place being granted their own hundred court [7].

Fresh impetus was given to the process of urban definition by Pirenne, who focused on their commercial functions, particularly long-distance trade. He argued that the ninth century marked Europe's economic nadir because of the disappearance of long-distance trade. Carolingian Frankia had fortified places and administrative centres, but neither were towns as they lacked the commerce that made towns [8]. For Pirenne the key event in the acquisition of urban status was the arrival, and permanent settlement, of merchants.

The nature and definition of English towns underwent further development through the literary jousting of James Tait and Carl Stephenson. Tait began by questioning the means by which tenurial heterogeneity had come about [9]. Overall he argued that this mixed tenure 'may have grown up independently of military arrangements', being instead explicable in terms of needs for lodgings in commercial centres, refuge or the financial attractiveness of urban property [10]. More broadly Tait defined the medieval borough 'as an urban area in which tenements were held by low quit rents in lieu of all or nearly all service, and were more or less freely transferable by sale, gift or bequest' [11]. Here the medieval borough is 'an urban area' which has this property holding freedom, by implication other urban areas which lacked this freedom were not boroughs, although they might be considered as towns. More generally from this discussion it is apparent that 'borough' has acquired specific legal connotations, which mean that town and borough are not

necessarily synonymous. For this reason the use of the term borough will hereafter be confined to references to places with particular legal privileges.

Later in his Medieval English Borough, Tait regarded towns from a wider perspective, largely because the book also served as a rejoinder to Stephenson. In this Tait pinpointed three main features of the pre-conquest town: a market, burgess tenements and a urban court. Markets, as well as being legal creations, were also the means by which kings could recoup the cost of fortification [12]. Furthermore in those early urban communities, where urban simply meant 'an aggregation of exceptional numbers at certain points', Tait pointed to three features: firstly they formed an agricultural unit; secondly they were usually fortified; thirdly they were involved in trade [13].

Tait's divergence from his main theme of the origins and constitutional history of the 'boroughs' owed much to the work of Carl Stephenson [14]. Stephenson applied the ideas of Pirenne to the English medieval town, and concluded that, with the exception of a few large centres including Lincoln, most did not exist before the Conquest. Instead most Anglo-Saxon 'towns' were in fact only military or administrative establishments, as they lacked commerce, particularly of the long-distance variety. Stephenson accepted the widespread existence of towns in twelfth-century England, but argued that to assume they were continuations of earlier institutions was both unwarranted and misleading [15]. He also began to see the contribution that archaeology and urban topography could make to questions of urban origin.

It was not until the 1960's that urban definition fully broadened out beyond the legal framework associated with the term borough. Since then the economic aspects of urbanism have been redefined, with long-distance trade no longer the sole indicator of significant economic activity. Mumford for instance suggested that the town was primarily a centre of exchange for local agrarian and handicraft production, such that even in the later eleventh-century merchants and their retainers accounted for a small proportion of the urban population, with most instead concerned with production [16]. A Marxist critique of merchant-stimulated urbanism is offered by Levitsky, who stresses the central role of the artisan. He regarded towns as the creation of the productive forces of a society in the process of feudalisation. Here the transformation was brought about not by fortification, or an administrative presence, nor a market, but by the possession of an indigenous population of artisans [17].

One of the most popular modern approaches to urban definition has been the 'bundle of criteria' approach. Particularly influential among these were the twelve attributes of the medieval town put forward by C Heighway [18]:

1. defences 2. a planned street system
3. market 4. mint 5. legal autonomy
6. role as a central place 7. large and dense population 8. diverse economic base
9. plots and houses of an urban type
10. social differentiation 11. complex religious organisation 12. judicial centre

This bundle emphasises the multi-faceted nature of Anglo-Saxon towns, combining as it does economic, with legal, demographic, defensive, social, religious and topographical criteria. This contrasts sharply with the solely or mostly legal criteria employed by earlier historians, for perhaps three reasons.

Firstly many nineteenth-and early twentieth-century historians had legal backgrounds; Ballard for instance was a solicitor and town clerk of Woodstock. Secondly the nature of the evidence has broadened considerably. Ballard's three criteria reflected the evidence available to him, and even then they involved some arguing backwards from twelfth-century laws and charters. Modern historians have a much wider range of material at their disposal, including ever increasing amounts of archaeological data, that provide information on patterns of trade, craft production and urban topography not previously available. Thirdly the wider range of Heighway's 'bundle of criteria' reflects the interest and input of disciplines other than history.

The modern 'bundle of criteria' enable the known characteristics of a place to be assessed against a checklist, and enable places to grow and change over a period of time. The main problem is that the acquisition of urban status is largely dependent on the amount of written and archaeological material available. Furthermore the criteria describe rather than define, and often lack accompanying information to enable decisions to be made about the point at which a place satisfies sufficient criteria to be considered urban. Lastly elements of the bundle have come to be regarded as sufficiently crucial to urban status as to be regarded as enough on their own. For instance Dolley drew attention to

> 'England's current archaeological over simplification, the tenet that the existence of a mint presupposes the existence of a town' [19].

The inability of 'criteria bundles' to provide an adequate definition has led to a search for the fundamental elements of a

place that make it a town. An early example of this form of definition, now widely accepted was provided by an urban sociologist, Gideon Sjoberg. He defined the pre-industrial city as 'a community of substantial size and population that shelters a variety of non-agricultural specialists, including a literate elite' [20]. On similar lines S Reynolds defined a town as

> 'a permanent human settlement, with two chief and essential attributes. The first is that a significant proportion, (but not necessarily a majority) lives off trade, industry, administration and other non agricultural occupations (a variety of occupations). The second essential attribute of a town is that it forms a social unit more or less distinct from the surrounding countryside' [21].

Similarly N Pounds in his Economic History of Medieval Europe, whilst noting that urbanism meant different things at different times and places, accepts that there were two features common to towns of all ages. Firstly they were compactly or more densely built than the surrounding countryside, and secondly non-agricultural pursuits were relatively important to them [22]. G H Martin defines towns as

> 'permanent settlements with multiple functions, too populous to live on their own agricultural resources, and therefore dependent on a trade which might, and usually did, serve other and wider purposes' [23].

Of these 'multiple functions' he picks out trade and defence as the main elements, with trading places acquiring walls and garrisons; and garrisons needing to be victualled.

The consensus that seems to have emerged remains when the contributions of other disciplines are considered. R Hodges in his study of Dark Age Economics combines the work of archaeology with that of anthropology. He concludes a discussion

of urban definition with one of his own, which terms a town as

> 'a settlement of some size and population which is markedly larger than communities concerned with subsistence alone; the majority of its inhabitants, moreover, are not engaged in full-time agrarian pursuits. Such a community should include the presence of more than one institution' [24].

The final proviso serves the same purpose as that in the definition of Susan Reynolds; in both cases the intention is to exclude institutions such as fortresses and monasteries.

Whilst Hodges has considerable familiarity with the work of non-historians, it is interesting to note that his definition is closely akin to that of most modern urban historians. This indicates the impact that other disciplines have had for some time on the study of English medieval towns. This is further emphasised by the definition proposed by B J Graham, a geographer concerned with the development of early Irish towns. He defined towns as

> 'a morphologically distinctive settlement form, possessing a distinguishing array of redistributive, administrative, cultural and military functions combined with a population concentration characterised by an occupational structure not totally dependent on agriculture' [25].

In conclusion there appears to be a large degree of modern consensus about the definition of towns. From this discussion it has become apparent that there are two key elements to the definition of towns. Firstly a more dense concentration of population containing more than one institution, and secondly an occupational structure which is largely dependent on non-agrarian pursuits. These demographic/economic characteristics stand in stark contrast to the heavily legalistic outlook of earlier

definitions. With regard to the second purpose of definition, Lincoln may be considered urban at the point when it can be shown to be a centre of particular economic significance. This can be established through a number of indicative elements. The production of coin, if accompanied by evidence of significant trade, or craft production would indicate urban status, if such activity was occurring on more than a temporary basis. So too would evidence of a systematic topographical development, where a significant proportion of the inhabitants of such development could be shown to be permanently based economic players; rather than individuals principally involved in military, ecclesiastical or administrative duties; or craftsmen and traders meeting at the site for exchange or production on a temporary basis.

Origins

Having decided upon a working definition for towns, this section will identify a number of potential Anglo-Saxon urban origins, serving as a prelude to a discussion of the development of towns between c.850 and 1100. The origins of the Anglo-Saxon town is a subject that has undergone major revision. At one time it was even argued that towns were a concept alien to the Anglo-Saxons, and urban history, like most history, did not really begin until after the Conquest. That has now been replaced by a far more complex picture, which traces the beginnings of Anglo-Saxon urban development perhaps as far back as the seventh century. Whilst the origins of Anglo-Saxon towns are obscured by the lack of evidence available, it is nevertheless possible to identify four distinct strands of Anglo-Saxon urban origin.

From later discussions it will be apparent that many of the most important eleventh-century towns, including Lincoln, were on the sites of major Roman settlements [26]. To regard that as simply a matter of coincidence would be to ignore the influential physical legacy of Roman occupation. This however does not mean that Anglo-Saxon urban occupation was a direct continuum of that found in Roman Britain. Instead there is evidence of a settlement hiatus within the walled area of most former Roman towns. For instance excavations at Canterbury have shown that 'there was almost certainly a clear break in occupation between the middle of the fifth and the middle of the sixth century' [27]. After this break there is evidence of occupation, which is perhaps not surprising given the protection their walls must have offered in hostile times. Once encountered it is particularly important to identify the nature of such occupation. If, as the

archaeological evidence tends to suggest, occupation was sparse and predominantly of ecclesiastical or secular elites then its significance for urban origins may be strictly limited.

From documentary sources three former Roman towns stand out as returning to urban status unusually early: Canterbury, London and York seem to exhibit urban aspects by at least 800. Tatton-Brown suggests Canterbury began to be reoccupied in the later sixth-century, with huts built amongst the ruins, but it was not until the eighth-century that it is likely to have become a town. By the early seventh-century there was a cathedral within the walls and four extra-mural churches, with at least three further churches in existence by the early ninth-century. More importantly there was a mint from the seventh-century, a market is referred to at the Queen's gate in the eighth-century and in the ninth-century custom required a two-foot eaves drip between houses, suggesting some concentration of population [28]. London is also mentioned early in the sources: a charter of 672-4 refers to ten hides 'near the port, where ships come to land' [29]. There is also Bede's reference to London 'which is on the banks of that river (Thames), and is an emporium for many nations who come to it by land and sea' [30]. Limited excavation in the north-west of the city has produced minimal evidence of occupation before the ninth-century. Also there is no evidence of any substantial local pottery before about 850. A similar dichotomy is apparent at York, which became a see in 625 following on from Canterbury (597) and London (604). Again documentary evidence suggest the existence of a town from an early date. Alcuin portrays it as a booming trading settlement

occupied by men of many nations [31]. Altfrid's Life of Saint Liudger notes that before 783 Liudger was forced to leave York with a colony of Frisian merchants after one of their number had killed a local inhabitant [32]. However archaeological excavation on a number of sites within the medieval city has found few traces of occupation in this period. At Coppergate up to 50cms of sterile grey soil covered the latest Roman remains, and represent the period from the Romans to about 850. The picture of abandonment is reinforced by evidence that the field vole and water shrew, which are animals not usually found alongside man, were present there [33]. Thus, until recently, there was a clear dichotomy between the written and the archaeological evidence concerning the level of urban activity at Canterbury and more particularly at London and York.

Other Roman towns appear much the same as Canterbury, York and London in the archaeological record. Heighway suggests that middle Saxon Gloucester was occupied by a reduced population occupying a series of small estates within the 'town', which perhaps accounts for the layer of dark loam between Roman and tenth-century layers on most sites [34]. Gloucester pottery has been found with a date range of fifth to eighth-century, but amounts are small, particularly when compared with amounts found at the nearby villa site of Frocester [35]. At Exeter there is hardly any evidence of urban life before the late tenth century [36]. Roman East Anglia was not heavily urbanised, but at the Roman centres of Caistor and Caister there is no evidence of urban continuity, although Caistor functioned as a central place until the ninth or tenth century [37]. Archaeology suggests most, if not all, of such places seem to have ceased to be urban

for some time before they once again achieved urban status, if indeed they ever regained it. Winchester, with Roman walls and streets, might look urban in the seventh to ninth century, but in reality it seems to have been a royal and ecclesiastical centre inhabited largely by a social elite [38]. Overall the physical legacy meant that former Roman towns mostly had the potential for later urban development, but such development was not inevitable.

A second strand of later Anglo-Saxon urban origins is indicated by a group of places that appear to have been undefended trading settlements, particularly on the coast. These were often characterised by 'wik ' place names, such as Hamwih and Ipswich in 'England', and Quentovic and Wijk bij Dorestad on the Continent. Fordwich and Sandwich are both mentioned before 800, and both are specifically described as ports in the first reference to them [39]. Tatton-Brown encapsulates the essence of such settlements in his description of these two as almost certainly founded on virgin sites, near good harbours, as new trading settlements in the middle of the seventh-century [40]. There has been little excavation at these two places, but considerable work has been undertaken at Hamwih. Here extensive excavation suggests that it was founded around 700, and soon had a regular street plan, a significant amount of industrial activity and a number of continental trading contacts [41]. According to Holdsworth, it was 'possibly the largest and most densely populated town in eighth-century England' [42]. The commercial and industrial aspect is one which seems common to all examples of this type of settlement so far excavated, with

Ipswich, for instance, associated with the first wheel-thrown pottery made in England since the Roman period.

Often these trading settlements seem to have had a symbiotic relationship with royal or ecclesiastical centres some distance inland, such as between Hamwih and Winchester, Fordwich and Canterbury, and perhaps between Ipswich and Rendlesham. The idea of duality can be taken further, if Middle Saxon London, York and Canterbury are regarded as comprising of two distinct settlements. Recent archaeological evidence suggests that such duality provides the explanation for the apparent contradiction between the written and archaeological evidence from these places. Archaeology has now revealed that the centre of Anglian York was not within the Roman walled enclosure, but to the east of the river Foss, near its confluence with the Ouse. In contrast with excavated sites within the walls, excavations at Walmgate, north of Walmgate Bar and at Paragon Street all yielded evidence of Anglian activity. Then larger excavations at Fishergate revealed an extensive area of pre-Viking occupation including timber buildings, a road and some evidence of industrial activity [43]. This settlement, covering at least 25 hectares, is comparable in area with that of Quentovic and Ipswich. Furthermore Kemp suggests, from the provisional sorting of the residues that there was an 'economic base for settlement'. The similarity with earlier trading centres is further emphasised by finds of Niedermendig lava, Frisian combs, continental pottery, coins, and weights and balances all of which point to trading activity; whilst waste from bone manufacture, local handmade pottery, crucibles and slag indicate industrial activity was taking place [44].

London probably fits a similar pattern. According to A Vince 'the first extensive re-use of the Roman city can now be dated archaeologically to the decade 870-880' [45]. The international port, referred to in contemporary sources, was probably located to the west of the Roman enclosure, in the area of modern Aldwych; a place name of some possible significance. As yet there seems little evidence of the activities that were carried out there. Whilst Hamwih is characterised by a wide variety of imported pottery and glass, in the Strand area only a single glass bowl and very little pottery has so far been found. Nor has much early coin been found, although much larger excavation in the city itself has also failed to find early coin [46]. If the area to the west of the Roman walled area was the site of the 'wic', whilst the cathedral and perhaps some royal government were situated within the walls, this would provide a further example of adjacent sites with different functions. At Canterbury Tatton-Brown has postulated that an area to the north-east of the city walls, near St. Augustine's Abbey and St. Martin's church, was an extra-mural trading area. Excavations here have uncovered pits which mostly contain Ipswich-type ware, in contrast with pits within the city which mostly contain very coarse local pottery [47]. Some of the place name evidence emphasises this duality. York, for instance, on occasions is known as Eoforwicceaster, which contains both the 'wic' and 'ceaster' elements; London is called Lundenburh, Lundenceastre and Lundenwic; and Canterbury may also have been referred to as 'Cantwic' [48].

If the concept of Middle-Saxon dual settlements is accepted,

doubts may be raised about other Roman towns that archaeology suggests were largely unoccupied. Whilst excavations in places such as Exeter have suggested that urban activities did not return until the ninth or tenth century, it is conceivable that an area outside the walls served as the urban focus. The apparently earlier importance of places such as London and York probably derives from the fact that they combined the function of trading with those of being a royal and ecclesiastical centre. In many ways, despite their Roman past, both are comparable to the new-born coastal trading centres.

The third and apparently most numerous origin of later Anglo-Saxon towns were the fortified centres of the middle or later Anglo-Saxon period. These have mostly been attributed to the late ninth and early tenth centuries, although it has recently been suggested by Jeremy Haslam that many of these were instigated by Offa in the later decades of the eighth century [49]. It is argued that some were located within established Roman fortifications, such as at Cambridge, Leicester, London and Lincoln, whilst others were newly purpose built defensive centres, of a rectilinear or sub-rectilinear form, such as at Bedford, Hereford, Nottingham and Stamford. This hypothesis is important, firstly because it postulates late eighth-century development at the two principal 'towns' in Lincolnshire, and secondly, in terms of origins, it seriously questions the central significance of the late ninth and early tenth centuries.

Haslam is unequivocal that Offa's 'burhs' mark a crucial epoch in urban development. For instance at Cambridge the formation of the eighth-century burh 'can be seen as.... the beginning of the development of the town of Cambridge' [50].

Haslam points to two key aspects which are to be found at both the Roman and non-Roman sites; firstly a defended enceinte linked with a river crossing requiring a bridge or at least a built causeway, and secondly the extra-mural character of associated elements, such as churches and markets [51]. The purpose of such settlements, it is argued, were initially defensive. They were positioned on the main rivers into Mercia so as to block access to Viking warships, and hence protect the Mercian heartland. Such centres however rapidly became multi-functional, or were even multi-functional from their foundation. For instance Offa's concern for trade 'strengthens the possibility that the formation of the burh at Cambridge was as much a measure for the protection of an established trading centre - a direct outlet for Mercian trade to the North Sea - as it was a strategic answer to a purely military need' [52]. It is clear that Haslam regards these eighth-century settlements as urban or proto-urban [53]. By the end of that century he regards Cambridge as being: an administrative centre for a large part of a later shire, a place supervised by a royal reeve, the guardian of a bridge, a meeting point of road and river communications, and probably endowed with a burh church, a market place and wharves [54].

Before accepting the existence of a network of often urban burhs in eighth-century Mercia, it must be noted that the evidence is meagre. As Haslam admits at Cambridge, 'archaeological evidence for any actual community settled within the old Roman town before the late Saxon period is slight', and at the northern burh there is an 'absence of all but the sparsest

evidence of middle Saxon occupation' [54]. Haslam's ideas must remain, for the time being, a thought-provoking hypothesis requiring further analysis given the sparse nature of the evidence, and also because of more general concerns with the hypothesis as a whole. These include doubts about the degree of Viking threat in the 780's and whether these sites would actually fulfil their supposed defensive purpose.

Whatever the feasibility of Haslam's hypothesis, the more firmly proven fortification by Alfred and his successors is widely regarded as the probable origin of a significant number of later Anglo-Saxon towns. Fortification gave rise to a wide variety of places; some were and remained small fortresses, but many were, or rapidly became, fortified towns. Within Wessex some, such as Winchester, already had Roman stone defences, but most were probably newly defended settlements with timber and earthen banks. Outside Wessex fortified centres were constructed by both sides during the early part of the tenth century as the West Saxons attempted to conquer the Danelaw. Excavations at Hereford suggest that Æthelflæd's fortifications were not the first on the site, and Biddle suggests that there may have been a planned and defended town here in the ninth or perhaps even the eighth century, as does Haslam [56].

Whilst, it is possible that some of the ninth- and tenth-century fortifications in Mercia had earlier defended predecessors, there does not seem to be much evidence of this in Wessex [57]. Mostly the West Saxon burhs seem to have been preceded only by non-fortified settlements. Elsewhere in Dorset L. Keen has noted undefended proto-urban development before the late ninth century. He and Haslam both argue against regarding

the fortification of these 'burhs' as the origin of most urban centres in Wessex. Keen for instance regards fortification as 'part only of the process of urban development' [58]. Instead both stress the importance of earlier development at these places resulting from their role as the sites of early monasteries, mother churches or royal estate centres, to which we shall later return. Whilst the burhs, in Dorset at least, were sited on or near existing settlements, that does not mean that burghal fortification was not the real origins of a later Saxon town on the same site. The nature of this pre-burh settlement needs to be looked at very closely before fortification can be replaced as the origin of many Anglo-Saxon towns in Wessex. The onus lies on those who play down the role of fortification to demonstrate that settlements that pre date the fortification phase of 'burhs' were already distinct from other rural settlements. Whilst earlier settlements may have been influenced by the same geographical factors, it was often large-scale fortification that marked the critical epoch by providing a focus and catalyst for urban development.

Before leaving the questions of origins a fourth strand, already briefly touched upon can be distinguished, before in many cases it was subsumed by later developments. This strand can loosely be defined as 'elite centres', which shared many of the characteristics of Everitt's primary towns. Some of these early and middle Saxon elite centres, such as Canterbury, have already been discussed. The importance of others however, it is argued, derives solely or mainly from their function as elite centres. The group is quite diverse: some were sees or monastic centres

from an early date, whilst others were the administrative centres of royal or ecclesiastical estates which 'must have early entailed upon them certain economic functions beyond those of the administrative centre' [59].

Northampton is cited as an example of such development with, according to Williams, its emergence as a late Saxon burh 'the culmination of a gradual evolutionary process throughout the Anglo-Saxon period rather than .... the result of a single dramatic act of fortification' [60]. Williams regards Northampton as the centre of an extensive royal estate [61], and the later urban area also contained structures that were possibly a royal palace and a minster church. Its status as an elite centre may go back to the seventh century or more likely the eighth century, for it was then that the settlement is said to 'assume a decidedly aristocratic aspect' [62]. This 'aristocratic aspect' is largely derived from excavation of two 'halls'. The first of these was a timber structure measuring 29.4m x 8.35m, then a stone hall was constructed on the same site measuring 37.3m x 11.5m, with five associated mortar mixers nearby [63]. The timber hall had strong parallells with the hall at Yeavering. The stone hall is without parallel in Britain, although it shared some similarities with continental 'palaces'. The only other mortar mixer found in Britain was at Monkwearmouth, and the 14 continental examples are almost all from high status sites.

Haslam suggests that similar elite developments were underway in Wessex before the spate of fortifications. The key question with regard to elite centres is the degree to which they were already distinct, as at Northampton, even before

fortification. The danger is that many elite centres were in fact one of a number of similar centres in a particular area, with the majority remaining rural as they did not receive the stimulus of fortification. In other words there is a risk that hindsight picks out some centres as having a distinctive importance, which they did not have at the time.

From the discussion of urban origins it seems likely that these four possible categories of urban origins, that is 'wics', former Roman towns, fortifications of the eighth to tenth-centuries and early/middle Saxon elite centres can be identified. These however provide a somewhat artificial distinction, with few places fitting neatly into one category. What were the origins of late Saxon London? It was a Roman town, but from an early date it was also an international trading emporium and an ecclesiastical and probably royal elite centre? Later fortified centres often had a Roman past, or the possibility of an associated market area from an early date. It is more useful if these categories are not regarded as mutually exclusive, but between them are seen as providing an explanation of the origins of most Anglo-Saxon towns.

Overall the most important aspect of a site was its ability to develop from having a single function to being multi-functional. Its initial function might be as a royal or ecclesiastical centre, a trading place, or a fortified centre, none of which are uniquely urban functions. More important was its ability to acquire additional functions, such as Canterbury which D Hill describes in the first half of the ninth century as an archbishopric, administrative centre, monastic centre, forti-

fied centre, and refuge, with churches, a palace, a mint, and a market. What makes Canterbury a town is that these functions are 'focused on a single enclosed space' [64].

Development

Having considered the definition and origins of the later Anglo-Saxon town, this section discusses their development from 850 to 1100, to provide a backdrop for the detailed study of Lincoln. The evidence currently suggests that in c.850 towns in England were few and far between, with their number perhaps confined to Canterbury, London and York. Elsewhere urban activity is hard to find. Whilst Hamwih was probably a town c.800, by c.850 it was in decline, and by 875 trading at Hamwih seems to have ceased. As undefended coastal sites Hamwih and the other 'trading wics' were not ideally suited to a period characterised by sea-borne Viking raids. At York the area of pre-Viking extra-mural settlement seems to have declined c.850 and there is a possibility that life returned to the walled area before the arrival of the Great Army [65]. It may be that the central decades of the ninth-century mark an important transition in urban development, which saw the demise of the undefended trading settlement and a shift towards defended settlements with a market within, or adjacent to, the walled area.

There are few signs of urban occupation at the other Roman sites, although given the extra-mural nature of earlier development these may await discovery, given that most urban excavations have concentrated on the area within the walls. An extra-mural market area has been suggested for Rochester for instance, where there seems to have been substantial occupation on the eastern side of the walled area by the ninth century [66]. At Exeter and Gloucester archaeological excavation has not so far revealed any indication of extensive settlement by c.850 [67].

In Devon and Wiltshire, Haslam suggests that slow proto-urban development was taking place around royal and/or ecclesiastical centres such as Bradford on Avon and Wilton [68], although there appears to be nothing distinctly urban about these places in c.850. It is possible that some of the fortifications attributed to Alfred were in fact the work of his immediate predecessors. At Wareham, Wallingford, and Lydford the archaeological evidence only establishes that the defences were post-Roman [69]. Even at Winchester, excavations within the walled area have uncovered no evidence of urban activity around 850. Instead within the walls there were several distinct settlements, including a royal dwelling, an episcopal community as well as a large amount of uninhabited space. The later laying out of a new street plan also suggests earlier occupation at Winchester was sparse, as this would have been difficult had the area already been covered with buildings [70].

In East Anglia there is little evidence of urban activity around 850, with the exception of Ipswich. This was a Middle Saxon trading 'wic' like Hamwih, but unlike the others it remained urban, though of declining relative importance, without any signs of later settlement shift, perhaps due to its acquisition of defences in the ninth century [71]. Elsewhere in East Anglia, Thetford may have been a fortified royal and administrative centre; as Brooks suggests all the bases of the 'Great Army' formerly were, although excavation has so far revealed very little Middle Saxon occupation here [72].

In Mercia the extent to which places were urban in c.850 has been a matter of recent debate. Haslam's model postulates large extra-mural market areas adjacent to defended enclosures, that

carried out centralised administrative or ecclesiastical functions [73], in much the same way as early ninth-century London and York. If places such as Cambridge and Northampton had those elements by 800 it is likely they were towns by 850. There is however very little physical evidence for urban settlement in these places c.850. At Northampton, within the small area of settlement there is, according to Williams,'nothing to suggest that Northampton was a town' [74]. At Hereford some defences have been archaeologically established as being of middle-Saxon origin, and probably enclosed an area of over 13 hectares which according to Biddle is more than just a fort [75]. Hereford's defences had a regular outline, with some elements of planning and including a cathedral. By 913 a further 7.5 hectares had been enclosed, raising the possibility that some suburban expansion had occurred during the ninth century which was then enclosed [76]. Overall that does not prove that Hereford was a town by 850, but it was at least clearly proto-urban. Whilst further excavation may add to the number of towns seen to exist early in the ninth century, at present it is difficult to add with any degree of certainty to York, London, Canterbury, Ipswich and Hamwih.

Signs of proto-urban developments seem widespread. In many instances that may have been interrupted by the development of burhs in the following century. The decades around 850 perhaps saw the transformation of urban development with the disruption of much proto-urban organic development, to be replaced by royally instigated fortified centres.

By 1100 England had over a hundred places that were probably

urban, and others that hovered around the line between urban and rural. Beccles in Suffolk had by the later eleventh century an estimated population of about 600, a market and a local port on the Waveney, although it was still classed as a manor of Bury St Edmunds and provides no evidence of minting or defences [77]. At the other end of the scale others such as York and London had populations of over 5,000, mints, defences, a variety of craft producers, evidence of both local and international trade, and legal and administrative functions. It is likely that the greater availability of evidence for the later eleventh century has meant that small towns, such as Beccles, are known of, whereas small towns are more difficult to identify in 850. Even so it seems likely that between 850 and 1100 there was a pronounced expansion in the number of towns in England. This finds further support from the fact that tenth- and eleventh-century towns regularly provide no evidence of urban occupation in the mid-ninth century [78]. Whilst there were more towns in 1100, exhibiting a far greater diversity, the question remains whether towns were simply more numerous than their ninth-century counterparts, or whether they were also fundamentally different. Each town has its own unique history, but even so a number of general observations can be made about urban change over this period, especially if attention is confined to those that occupied the top tier of the urban hierarchy in about 1100 [79].

The development of these English towns during our period can be traced through a number of aspects. Here attention will particularly focus on three key areas: defences, minting activity, and trade and craft production.

The defensive nature of the later-eleventh-century English

town stands very much at variance with their mid-ninth-century counterparts. Most of the major towns had defences that had often been built, or brought back into use, during the late ninth and tenth centuries. Later William I rapidly grasped their defensive role and built castles within the defensive circuits of many of these towns including Lincoln and York. Fortification work was undertaken early in our period by West Saxons, Mercians and Danelaw Vikings. Our knowledge of this owes much to the written sources, as defences are notoriously difficult to date archaeologically. This has led to a very close association between the processes of defence and urbanism. Atkin notes for instance that all towns in East Anglia with evidence of pre-eleventh-century development, except Bury St Edmunds, have documentary or archaeological evidence for defences before about 1050 [80]. This strongly contrasts with the towns of c.850, which appear to have lacked defences. Whilst some were situated near to fortified settlements, the importance of Hamwih and Ipswich clearly argue that defence was not a primary function.

Other aspects of 'planned layout' have been closely linked to defence and urban development in this period. Planned or regular layouts were not a new development, as planned streets were an aspect of Hamwih. Both earlier at Hamwih, and later at Winchester, such planning has been regarded as indicative of royal influence. The planned layout of the larger West Saxon burh has been regarded as evidence that they were intended from the outset to function as towns. Initially land was granted, presumably by the king to elites, in large blocks, delineated by new streets. These blocks soon perhaps had a large residence and

possibly a church added. Only later did economic growth make it attractive to split these blocks up into smaller units and let them out. Earlier at Hamwih the planned layout does not appear to have included urban-type tenements [81]. Quickly at Winchester, and perhaps less quickly elsewhere, occupation became more dense and blocks were split into smaller blocks, in which street frontage space was at a premium, thus creating narrow urban tenement plots. This argument owes much to the large scale excavations at Winchester. This may however be an untypical West Saxon burh for a significant proportion of the walled area was occupied by royal and ecclesiastical palaces and other buildings. Also Winchester may have attracted traders who had previously occupied declining Hamwih.

Recently it has been suggested that elsewhere in the south and midlands there was little in the way of urban development in the tenth-century [82]. The laying out of defences and street plans was not accompanied by the urban development which historians have suggested Alfred and his successors hoped for. The pattern appears different in the north where there is less evidence of planned layouts but stronger evidence of urban development in the late ninth and early tenth centuries. The links between defences, and perhaps the royal influence they have come to epitomise, and urban development, were not necessarily that close, and need to be investigated rather than assumed.

Economic development is widely regarded as the main cause of urban growth in our period. In early medieval England a number of different categories of evidence suggest that economic change was underway.

In 850 coinage production in 'England' seems to have been

confined to London, Rochester, Canterbury, unidentified mint(s) in East Anglia, and possibly the very end of 'styca' production at York [83]. Different coins were minted in different kingdoms, in the name of the local king, or occasionally the archbishop. The broad pattern was of one minting place per kingdom, with the West Saxons acquiring a mint through their takeover of Kent. Up to c.973 there was little uniformity, and most coin changes were short-lived or confined to particular regions. By about 900 the number of mints in 'English' England had increased to 5, with the opening of mints at Winchester, Exeter and perhaps Gloucester in addition to London and Canterbury. In the Danelaw there were perhaps a further four, although the practice of minting coins without a mint-signature makes this far from certain [84]. By the reign of Athelstan the number of mints had further increased to around 30, although again precise numbers are difficult. The increase occurred throughout southern and central England, although one mint per 'kingdom' remained the norm in East Anglia and Northumbria. Aspects of coin production become clearer after c.973 when Edgar, using many changes tried previously, reformed the English coinage. Mint signatures were universally adopted, only one coin type was current, and this was periodically changed. Thirty-four mints are known to have produced Edgar's Reform type, a figure that was little changed from that of Athelstan's reign [85]. However, as Edgar died about two years after his reform, it is more representative to add the mints of Edward the Martyr. This gives a combined total of 44 different mints, representing an increase, but not a dramatic one from the reign of Athelstan. The areas with net gains were Lincolnshire,

East Anglia and the south-east midlands (see fig 1). By the beginning of the eleventh century the number had risen to about 60, and the minting pattern that had taken shape by then remained largely intact until the end of our period, with England south of the Humber well provided with mints.

A possible ten-fold increase in the number of minting places between c.850 and c.1050 does not seem to have lead to a similar increase in coin production. At the beginning of our period Metcalf has estimated that almost 50 million coins were produced in the name of Burgred, and then perhaps 20-30 million during the reign of Edward the Elder [86]. Even after the reform, total coin production figures are difficult to calculate. There are considerable variations between the estimates for different types. For instance during the reign of Ethelred there are estimates for the production of adjacent types of 12 and 40 million, declining to a low point of 2.5 million in the reign of Edward the Confessor [87]. However Lyon has warned that such estimates could be incorrect by a factor of five or ten [88]. Overall there seems little to suggest that the expansion of mint numbers led to a major expansion in coin production, with Edward the Elder's coinage broadly similar in size to that of Cnut [89]. The expansion of mints numbers may instead be seen as part of a politically motivated process, or as a means of further facilitating trade. Individuals may also have had a role in this process, particularly at smaller mints where the initiative to open a mint may have come from an individual on the spot rather than as part of wider royal policy.

Post-reform coinage provides a means of ranking places that are usually accepted as towns. There are a number of ways of

using the coin evidence to provide rankings, but perhaps the most acceptable method is to count the number of dies used [90]. This method assumes that the coins found in Scandinavia are a random sample, and thus can be used in conjunction with Scandinavian finds of coins minted at Lincoln. This involves a calculation of the number of dies used, plus an estimate of those not found [91]. This results in figures for the number of 'equivalent reverse dies', which enable comparison between mints during the same coin type, but should not be used to compare the outputs of different types [92]. Whatever method is used gives broadly similar rankings, although the proportions between small and large mints vary (see Table 1).

From 973-1086 four mints head most rankings and each list is headed by London which may have accounted for 20% of national coin output. Three towns follow, with Lincoln and York ahead of Winchester, with Stamford often ranked fifth. Together these five probably accounted for at least half of England's total coin output. Behind them were 'county towns' that accounted for at least 1% of coin output. The most numerous category were small, probably intermittent, mints providing a good deal less than ½% of coin output [93].

Whether this mirrored the pre-reform situation is impossible to tell. Metcalf has suggested that London and Winchester were leading mints in the first quarter of the tenth century, and Chester also appears to have been prolific [94]. The most striking change between the ninth and eleventh centuries was the output of Danelaw centres such as Lincoln and Stamford, although this may be exaggerated by the earlier absence of mint-

signatures. Coin output was influenced by the economy, although moneying was probably more indicative of long-distance trade than other aspects of the economy, such as craft production or agrarian change.

Other archaeological evidence enables further consideration of the economy. The most plentiful evidence for craft production is provided by pottery finds. Pottery was either made without a wheel, wheel finished, or fully wheel-thrown, before being fired either in little more than a bonfire, or in a proper kiln with flue and stoke pit. After the Roman withdrawal slow wheel-thrown production resumed in the eighth century at Ipswich and at monastic sites in the north-east [95]. At Hamwih and elsewhere the demand for quality wheel-thrown wares seems to have been met by imports from the Rhineland and northern France. More basic pots were supplied by very coarse handmade wares, probably often the products of subsistence producers. In c.850 there was a wide variation in pottery provision. At Ipswich wheel-thrown pottery was fired in proper kilns and traded along much of the east coast. Elsewhere only handmade wares were available, and in much of western Britain there was no pottery at all [96]. Ipswich-ware indicates the presence of full-time craft specialists, reflected by the scale and distribution of production, and its receptiveness to new ideas.

The second half of the ninth-century witnessed a rapid geographical expansion of fast wheel-thrown quality pots fired in fully developed kilns [97]. Some of this expansion has been attributed to the Vikings, although production at Jarrow, Whitby and perhaps Stamford may be pre-Viking. Haslam argues that immigrant potters from the Rhineland brought pottery innovation

to Yorkshire, Lincolnshire and East Anglia in the late ninth and early tenth centuries, whereas pottery developments in southern England arrived from France later in the tenth century [98].

The period from the late ninth century onwards seems to have been characterised by a greater use of pottery than in c.850. Towns functioned as pottery production centres, with kiln(s) or wasters found at Norwich, Stamford, Thetford, Ipswich, Torksey, Lincoln, Leicester Northampton, Nottingham, Gloucester and Exeter [99]. The largely urban location was unusual for this craft. Outside this period most medieval pottery industry was rurally located. Potting formed part of the earliest phase of development at a number of towns, particularly in eastern England [100], although the dating for this craft is rarely precise enough to enable its place in urban development to be fully understood.

Some areas which lacked wheel-thrown pottery might be considered economically backward, such as Lancashire and Cumberland. However the first wheel-thrown wares were not produced in Worcester until the thirteenth century, and hand-made wares were produced in London until after the Conquest, and make up the majority of pottery finds here between 1000 and 1150 [101]. Changes, when they occurred appear to have been abrupt rather than evolutionary [102]. Overall a regional pattern emerges in which eastern England between 900 and 1100 has much higher levels of more technically advanced pottery than western and much of southern England. Furthermore most of the pottery in the East was produced in towns. Pottery is far more important to twentieth-century archaeologists than it was to the economy in

the tenth century. Therefore study of the more fragmentary evidence for other industries is required in order to broaden the economic picture derived from pottery.

Having commented upon some of the trends that effected economic and urban development, it is now possible to consider how the top ranking towns in the late eleventh century differed from their mid-ninth-century counterparts. Firstly towns in 850 seem to be confined to coastal, or near coastal positions, whereas by 1100 inland towns were also important. In c.1100 towns were part of a hierarchy, in which the top ranking towns served as multi-functional regional centres, with a redistributive role for those centres lower down the hierarchy. In c.850 there is little sign of any urban hierarchy. Instead there was a hierarchy that included 'wics', and other specialised settlements such as the iron smelting site at Ramsbury, or the corn mills at Tamworth, or meat processing at Wicken Bohunt [103]. Amongst these specialised sites there may have been small, possibly seasonal, trading places, which would have left little archaeological trace, particularly if their trade were in perishables or luxuries, or little craft activity was undertaken.

Towns in c.1100 mostly combined a wide range of functions within 'a single enclosed space'. This appears to have been less the case in 850. Then many take the form of dual settlements, consisting of an undefended area that concentrated on trade and craft production, with a nearby possibly defended area containing elite residences with associated administrative and possibly fiscal functions. This second element could alternatively take the form of a settlement some distance away from the first, such as between Hamwih and Winchester in the eighth and early ninth

centuries.

Recently it has been suggested that there were regional variations in the broad pattern of urban development between 850-1100. Archaeological and documentary evidence demonstrate the early urban character of some southern towns, such as Winchester and Oxford, but these may not be typical. Exeter only paid geld in 1086 when London, York and Winchester did. It shared a Roman past with these, and was described as 'magnificent and wealthy, abounding in every kind of merchandise' by William of Malmsbury [104]. Coins and the Anglo-Saxon Chronicle suggest that a burh was established here by Alfred. Excavation has however revealed little sign of urban life before the late tenth or early eleventh century [105]. Other burhs provide evidence of large open spaces in the tenth century. For instance at Cricklade, whilst parts of the street plan were contemporary with the defences, excavations in the western half of the defended area have suggested that much of this area was an empty space [106]. This suggests that the 'refuge' role of Alfred's burhs has been under-estimated, in our desire to regard them as urban foundations. Archaeological finds need to be studied alongside the topography of a settlement before concluding that defences enclosing a large area with planned streets mean that a place must be urban. Furthermore it is argued that whilst there was insufficient economic activity in the south to enable many urban expectations to become a reality until late in the tenth century, in the north and east towns were apparent early in the tenth century [107].

Throughout this discussion the importance of precise

archaeological dating is apparent. Archaeology provides essential information on towns and their economy, but needs to be accompanied by accurate dating if the processes and chronology of urbanism in England are to be understood.

Whatever the patterns of growth, by Domesday Book it is clear that England had an extensive urban network. The principal causes of this are however more obscure. As a prelude to the study of Lincoln the most regularly discussed political factors, namely the role of English kings and the Vikings, and a number of economic factors that are believed to have lain behind this growth will be introduced.

The role of kings in urban development has received much discussion from Maitland through to the present day. Haslam for instance points to the key role of Offa in the foundation of centres fulfilling civil and ecclesiastical administrative functions and including market areas during the 780's. He postulates that

> 'Offa sought to implement a similar (to Charlemagne) policy of the creation of a system of regional markets ...linked both spatially and functionally with the system of newly created burhs [108].

Hodges, writing of Hamwih, notes that it

> 'reflects the royal authority to manage and, critically, control not only trading but also craft production on a great scale [109].

Or again Hill has noted that in the late ninth and early tenth century 'the king founded towns or he founded forts - towns did not grow out of forts nor did they appear spontaneously' [110]. In each instance kings are regarded as the creators of urban layouts and/or the controllers of economic development.

As well as control, English kings also pursued policies

which directly influenced the economy. Kings presumably took a leading role in the expansion of minting place numbers, most of which were situated in places that were or soon became urban. Laws provided for the punishment of bad moneyers and stated that there should be one coinage throughout the realm, and tried to limit trade to burhs. Whilst one might question the success of laws as determinants of normal behaviour in Anglo-Saxon England, they do at least suggest royal interest in these matters. Through all of this there is the clear theme of a royally instigated urban blueprint. Royal action is seen as the guiding hand that shaped English urbanism. If southern England lacked development in the tenth century, one gains the impression from the literature that it was because kings were ahead of their time, for they had provided an urban infrastructure which was under utilised for a century or more.

The Vikings are regarded as the other important political group which shaped towns, especially in northern and eastern England. In part they were important as their presence brought about the burh-building of Alfred and perhaps Offa. Hall suggests 'it was Viking raids and settlement which led to the foundation and growth of towns throughout the country' [111]. Furthermore the Vikings in the Danelaw are seen as transforming an area that had previously economically lagged behind Wessex. They achieved this, according to Hodges, 'by imitating the West Saxon transformation using alien artisans and moneyers' [112]. Hall, Hodges and others regard Viking rulers as serving as a positive force for economic and urban change. Thus the Vikings are transformed from pirates and pillagers in search of easy loot, to instigators of urban growth, who copied the policies of

southern kings. Even their raiding served positive benefits by bringing a good deal of hoarded wealth back into circulation and breaking up old landholding patterns, and creating a 'more free' rural populace. Furthermore it has been suggested that the Vikings were responsible for the introduction of fast-wheel-thrown pottery and for opening up new areas of trade. The more advanced urbanism of 'Danish England' has been seen as general evidence of the positive role of the Vikings. The nature of this positive role is less clear. It may be that, as postulated in the south, ruling elites directed growth, or equally it may have been on a more ad-hoc basis involving lesser individuals, perhaps acting in groups.

Thus far the emphasis has been very much on the role of elites in urban development, rather than on the role of lesser individuals. Rulers shaped urban topography by providing defences, and perhaps streets, but this only created an urban skeleton. The construction of properties and churches, development by the waterfront and in the suburbs completed the topographical transformation. At this level it can be argued that most development was by urban inhabitants themselves, either individually or in groups. Their contribution to this, and to other aspects of urban development needs to be borne in mind, lest we see urban development as the fulfilment by elites of elite conceived master-plans.

The credit one should assign overall to Kings and Vikings for urban development depends on the nature of this growth. Most would accept that urban growth owed most to economic change. The nature of economic change is however problematic, particularly as

it is difficult to describe the economy in c.850. At the beginning of our period emphasis has been placed on long distance luxury trade, which has long been associated with the 'wics'. Holdsworth for instance suggests that Hamwih's decline was brought about by a change in the components of the trading system, which removed Hamwih's raison d'être [113]. This change is seen as a shift away from luxury exchange between royal, noble, and ecclesiastical elites which had flourished throughout Europe during the eighth and first half of the ninth century. This is not entirely convincing, Bourdillon for instance has noted that the animal resources of Hamwih do not indicate a production centre for elite gifts. Whilst some of the bone combs are decorated, most are of a robust practical shape [114]. Similarly the 'basic dullness of the food seems to rule out the conspicuous presence of any class of merchants' [115]. Evidence for the wide distribution of Ipswich-ware in East Anglia and along the east coast further suggests that there was more to 'wics' than long-distance trade. At Hamwih Bourdillon suggested that the bone evidence, and that for the manufacture of pins and needles indicate the importance of wool and cloth, and place the emphasis very much on exchange and production involving the local economy [116]. As evidence continues to emerge it seems that wics were economically complex and diverse, encompassing craft production, local and international trade, and an important economic relationship with their hinterland. This is true of towns at the top of the urban hierarchy throughout the period. The thesis will make some assessment of the relative importance of each economic factor for Lincoln, including aspects of the links between it and its rural hinterland.

Towns, in any period, are more than simply economic planned or unplanned entities. They have populations. Indeed the concentration of population was one of the defining characteristics of towns identified earlier. The urban populace in c.850 remains obscure, but documentary and archaeological sources enable some study of these at the end of our period. Various evidence suggests that a significant proportion of the urban population were involved in non-agrarian economic activity. Little is however known of the existence and nature of urban elites in this period, or of the point at which parts of the urban populace began to act collectively.

A final area, much neglected in discussions of early medieval towns, is their relationship with the surrounding countryside. Whilst inhabitants of towns made up no more than 10% of the population, little note has been taken of the way in which the other 90% influenced, and were influenced by, towns. Domesday Book enables some of the possible economic and tenurial links between Lincoln and its hinterland to be investigated.

For the last century most historians have accepted the multi-faceted nature of early medieval towns in England. The thesis will use the full range of available evidence to consider the factors that made multi-functional towns a reality. Towns were topographical, economic, social and political entities and the reasons for their growth cannot be fully understood without reference to each of these aspects.

Chapter 1: Notes

1 C Stephenson, Borough and Town: a study of urban origins (Cambridge Mass., 1933), p.20, fn2

2 The words used to describe possible towns in the Anglo-Saxon period varied not only over time but between different authors. The key distinction for Bede was between places with Roman and non-Roman origins, and a similar distinction apparent from the listing of the bishops present at the Council of Clofesho. *Burh* was used along with *geweorc* and *faestenne* in the late ninth century, sometimes to describe the same place. Later *burh* and to a lesser extent *port* became the words most usually associated with towns. In Domesday Book most towns are termed either *burgus civitas* or *villa*. Whilst Lincoln is a *civitas*, Torksey is termed *suburbium, villa, vicus* and *urbem*.

3 F W Maitland, Domesday Borough and Beyond (Cambridge, 1897), p.173

4 Ibid., pp.187-91

5 Ibid., pp.193-4

6 A Ballard, The English Borough in the Twelfth-Century (Cambridge, 1914), pp.2-11

7 M Bateson, Medieval England, 1066-1350 (London 1905), p.125 A definite legal act was necessary to sever a borough from a hundred, and give it a hundred court of its own.

8 H Pirenne, Medieval Cities- their origins and the revival of trade (New York 1957), especially pp.75-76

9 This process began with his review of Maitland's Domesday Book and Beyond in English Historical Review (1897), especially p.767

10 J Tait, 'The Study of Early Municipal History in England' 1921 lecture reprinted in J Tait, The Medieval English Borough (Manchester, 1936), p.342

11 J Tait, 'The Study of Early Municipal History in England', Ibid., p.355

12 J Tait, The Medieval English Borough (Manchester, 1936), p.64 and p.135

13 Ibid., p.6 and p.13

14 Indeed Tait's conclusion to the pre-conquest section of The Medieval English Borough is largely a recasting of a review he wrote of Stephenson's Borough and Town.

15 C Stephenson, Borough and Town, a study of urban origins in England (Cambridge, Mass, 1933), p.207

16 L Mumford, The City in History, extract in Town Origins: the evidence from Medieval England ed., J F Benton (Lexington, Mass., 1968), p.11

17 E Gutnova, 'Levitsky's Artisanal Theory in England', reprinted in J F Benton ed., op.cit., p.38

18 C M Heighway, The Erosion of History (London, 1972), section 3.9

19 M Dolley, 'An introduction to the coinage of Æthelræd II' in Ethelred the Unready: Papers from the Millenary Conference, ed., D Hill, BAR Brit. Series 59 (Oxford, 1978), p.125

20 G Sjoberg, The Pre-Industrial City (Glencoe, 1960), p.11

21 S Reynolds, An Introduction to the History of Medieval English Towns (Oxford, 1977), p.ix

22 N J G Pounds, An Economic History of Medieval Europe (London, 1974), pp.224-5

23 G H Martin, 'Domesday Book and the Boroughs', in Domesday Book: a reassessment, ed., P H Sawyer (London, 1985), p.144

24 R Hodges, Dark Age Economics: The origins of Towns and Trade, AD 600-1000 (London, 1982), p.23

25 B J Graham, 'Urban genesis in early medieval Ireland', Journal of Historical Geography, 13, No.1 (1987) p.7

26 For example London, Canterbury, York and Winchester

27 T Tatton Brown, 'The Towns of Kent', in The Anglo-Saxon Towns of Southern England, ed., J Haslam (1984, Chichester) p.5 and p.8. A further example T Dyson and J Schofield, 'Saxon London' in Ibid., p.285

28 T Tatton Brown, 'The Towns of Kent' op.cit., pp.4-11 (Sawyer No. 1204)

29 Sawyer No. 1165, English Historical Documents vol.I, (c.500-1042), ed., D Whitelock, (London, 1968) p.440

30 B Colgrave and R A B Mynors eds. and trans., Bede's Ecclesiastical History of the English People, (Oxford, 1969), pp.192-3

31 Alcuin, *Monumenta Germaniae Historia Epistolae IV*, 42 cited in M Biddle, 'Towns', in The Archaeology of Anglo-Saxon England, ed., D M Wilson (London 1976), p.117

32 'Life of St Liudger, by Altfrid', English Historical Documents, vol I, op.cit., No.160 p.725

33 R Hall, The Viking Dig : Excavations at York, (London, 1984) p.30

34 C M Heighway, 'Saxon Gloucester', in Anglo-Saxon Towns in Southern England, op.cit., p.361

35 Ibid., p.364

36 J Allan, C Henderson and R Higham, 'Saxon Exeter' Anglo-Saxon Towns in Southern England, op.cit., pp 385-414

37 M Atkin, 'The Anglo-Saxon Urban Landscape in East Anglia', in Landscape History, 7 (1985), p.3

38 M Biddle, 'Towns' in The Archaeology of Anglo-Saxon England, ed., D M Wilson (London, 1976) pp.119

39 S Reynolds, An Introduction to the History of Medieval English Towns, (Oxford, 1977), p.25

40 T Tatton Brown, 'The towns of Kent' in Anglo-Saxon Towns in Soutern England, op.cit., p.16

41 P Holdsworth, 'Saxon Southampton' in Anglo-Saxon Towns in Southern England, op.cit., p.335, and also D A Hinton, 'Hamwih', in The Anglo-Saxons, ed., J Campbell (Oxford, 1982), pp.102-3

42 P Holdsworth, ibid., p.335

43 R Hall, 'The Making of Domesday York' in D Hooke, ed., Anglo-Saxon Settlements (Oxford 1988), p.238

44 R Kemp, 'Anglian York - The Missing Link?' Current Archaeology, 104 (1987), pp.259-63

45 A G Vince, 'The Aldwych: Mid Saxon London Discovered?', Current Archaeology, 93 (1984), p.311

46 Ibid., p.312

47 T Tatton Brown, 'Anglo-Saxon Towns in Kent' in Anglo-Saxon Settlements, ed., D Hooke (Oxford, 1988), p.215

48 For example the Old English translator of Bede normally terms York *Eoforwicceaster* and London as *Lundenceastre*, and *Lundenwic* appears in the Kentish laws of Hlothhere in the late seventh-century. *Cantwic* in the Anglo-Saxon Chronicle entry for 842 may be Canterbury, although Quentovic is more likely.

49 J Haslam argues this in 'Market and Fortress in England in the reign of Offa' World Archaeology, 19 (1987), pp.76-93

50 J Haslam, 'The Development and Topography of Saxon

Cambridge' in Proceedings of the Cambridgeshire Antiquarian Society, 72 (1984), p.13

51 J Haslam 'Market and Fortress in England in the reign of Offa', World Archaeology, 19 (1987), pp.86-7; also J Haslam, 'The second burh at Nottingham',Landscape History, 9, (1987), pp.45-51

52 J Haslam, 'The Development and Topography of Saxon Cambridge', op.cit., p.15

53 Where proto-urbanism implies a place with attributes making it more than a village, but not in amounts sufficient to make it a town. For example B J Graham Journal of Historical Geography op.cit., p.111, *contra* R Hodges who has argued that a place is either urban or it is not: there is no in-between stage.

54 J Haslam, 'The Development and Topography of Saxon Cambridge', op.cit., p.15

55 Ibid., p.18

56 M Biddle, 'Towns' in The Archaeology of Anglo-Saxon England, ed., D M Wilson (London, 1976), p.121

57 Exceptionally at Wareham there is perhaps evidence of a timber faced rampart that pre-dates the reign of Alfred, which was probably re-used in the same way as the Roman defences at Winchester. L Keen, 'The Towns of Dorset', in Anglo-Saxon Towns in Southern England, op.cit., pp.231-2

58 Ibid., p.242

59 A Everitt, 'The Primary Towns of England', Local Historian, 11, no.5 (1975), pp.263-77

60 J H Williams, 'From palace to town: Northampton and urban origins', in Anglo-Saxon England, 13 (Cambridge, 1984), p.113

61 For the reasoning behind the assertion that Northampton was the centre of a royal estate see Ibid., pp.123-4 and p.135 for a revision of dating.

62 Ibid., p.118; and J H Williams,'A review of some aspects of Late Saxon urban origins and development' in Studies in Late Saxon Settlement, ed., M Faull (Oxford, 1984), p.27

63 J H Williams,' From palace to town: Northampton and urban origins', op.cit., pp.118-120

64 D Hill, 'Towns as structures and funtioning communities through time: The development of central places, 600-1066, in Anglo-Saxon Settlements, ed., D Hooke (Oxford, 1988), p.201

65 R Hall, The Viking Dig: Excavations at York (London 1984), p.43

66 T Tatton Brown, 'Anglo-Saxon Towns in Kent' in D Hooke, ed., op.cit., p.222

67 J Allan, C Henderson and R Higham, op.cit., pp.385-414; and C M Heighway, 'Saxon Gloucester', op.cit., pp.359-383

68 For example J Haslam, 'The towns of Wiltshire' in Anglo-Saxon Towns in Southern England, op.cit., pp.89, 136 and 139

69 N P Brooks, 'England in the Ninth-Century: The Crucible of Defeat' Transactions of the Royal Historical Society, 29 (1979), p.17

70 M Biddle and D J Keene, 'The Late Saxon Burh' in Winchester in the Early Middle Ages: Winchester Studies vol 1, ed., M Biddle (Oxford, 1976), pp.449 and 453

71 M Atkin, op.cit., p.30

72 Ibid., p.30 and N P Brooks,'England in the Ninth-Century: The Crucible of Defeat' op.cit., p.9

73 J Haslam, 'Market and Fortress in England in the reign of Offa', World Archaeology, 19, summarized on p.93

74 J H Williams, 'From palace to town: Northampton and urban origins' Anglo-Saxon England, 13 (Cambridge, 1984) p.127

75 M Biddle, 'Towns' in D M Wilson ed., op.cit., p.121; and D Hill suggested that most Alfredian fortifications with an area of less than 16 hectares remained forts, whilst those larger soon became forts. D Hill An Atlas of Anglo-Saxon England (Oxford, 1987 reprint), p.143 and D Hill, 'Towns as structures and functioning communities through time: The development of central places, 600-1066', in D Hooke (ed.), op.cit., p.202

76 M Biddle, 'Towns', in D M Wilson ed., op.cit., pp.120-1

77 M Atkin, 'The Anglo-Saxon urban landcape in East Anglia', op.cit., p.33 and Table 1 p.28

78 For instance Exeter, J Allen, C Henderson and R Higham, op.cit., p.410 and C M Heighway op.cit., p.365

79 It may be more accurate to speak of the top two tiers as London may have warranted a tier of its own by then, others include Lincoln Winchester York, Norwich and Oxford. Overall this can be justified on the grounds that Hamwih etc represented the top tier (although admittedly possibly the only tier) in 850.

80 M Atkin, op.cit., p.34

81 A D Morton, Excavations at Hamwic, I., CBA Research Report 84 (London, 1992), pp.40-42

82 G G Astill, 'Towns and Town Hierarchies in Saxon England', The Oxford Journal of Archaeology, 10, (1991) especially pp. 104-11

83 H Pagan, 'Coinage in southern England, 796-894' in Anglo-Saxon Monetary History, ed., M A S Blackburn (Leicester, 1986), p.45

84 D Hill, An Atlas of Anglo-Saxon England, op.cit., p.127

85 Calculated from Ibid., pp.131-2

86 D M Metcalf, 'The monetary history of England in the tenth-century viewed in the perspective of the eleventh-century', in Anglo-Saxon Monetary History, ed., M A S Blackburn (Leicester, 1986), p.137 and p.141

87 D M Metcalf, 'Continuity and Change in English Monetary History, 973-1086, part 2, British Numismatic Journal, 51 (1981), p.56

88 S Lyon, 'Some problems in interpreting Anglo-Saxon coinage' in Anglo-Saxon England, 5 (Cambridge, 1976), p.217

89 D M Metcalf, 'The monetary history of England in the tenth-century viewed in the perspective of the eleventh-century', op.cit., p.141 and p.156 and for instance M K Lawson, 'The collection of Danegeld and Heregeld in the reigns of Æthelræd II and Cnut', English Historical Review, 99 (1984), p.721

90 Other methods include counting the number of moneyers. D Hill uses a method in which if a mint has 5 different moneyers each issuing one of the 5 different types of a reign it is considered a 5 moneyer mint, but if the same moneyer mints each issue it is a one moneyer mint. Freeman has a more complex moneyer count. For example Wilton during Hammer Cross has 8 moneyers, of which 2 issued no other, perhaps operating as replacements for 2 others who retired during this type. Wilton is hence interpreted as a 6 not 8 moneyer mint. A Freeman, The Moneyer and the Mint in the reign of Edward the Confessor, 1042-66, (Oxford, 1985), pp.26-7

91 The statistical estimate of the total number of dies used is calculated by dividing the number of coins which are die-duplicates by the total number of coins found, then multiplying by 100 to give a percentage. Hence if 175 reverse dies are known for a particular type at Lincoln, and this estimated to be 90% of the total then Lincoln is said to have used 194 'equivalent reverse dies'. If Lincoln accounts for 10% of finds of this type the national output is calculated as 1940 'equivalent reverse dies'. This gives a national output of 19.4 milion coins of this type, based

on the assumption that each die produces 10,000 coins. More fully explained in D M Metcalf, 'Estimation of the volume of the Northumbrian Coinage, c.738-88', in Sceattas in England and on the Continent, Seventh Oxford Symposium on Coinage and Monetary History, eds. D Hill and D M Metcalf (Oxford, 1984), pp.113-17

92 D M Metcalf, 'Continuity and Change in English monetary History, 973-1066, Part 2', op.cit., p.53

93 H B A Petersson, 'Coins and weights. Late Anglo-Saxon pennies and mints, c.973-1066' in Studies in Late Anglo-Saxon Coinage, ed., K Jonsson (Stockholm, 1990), pp.213-4. Coins from 107 mints, 50 of these mints contribute less than 0.1, and 25 less than 0.01%

94 D M Metcalf, 'The monetary history of England in the tenth century viewed in the perspective of the eleventh century', in Anglo-Saxon Monetary History, ed. M A S Blackburn, op.cit., p.142 and C E Blunt, 'The coinage of Athelstan, King of England 924-39: A survey', British Numismatic Journal, 42 (1974), p.115

95 J Hurst, 'The Pottery', in The Archaeology of Anglo-Saxon England, ed. D M Wilson (London, 1976), p.283

96 R Hodges, The Hamwih Pottery: the local and imported wares from 30 years of excavations at Middle Saxon Southampton and their European context, CBA Research Report 37 (London, 1981), p.54

97 J Hurst, op.cit., p.314

98 J Haslam, Medieval Pottery in Britain (Princes Risborough, 1984), p.15

99 M R McCarthy and C M Brooks, Medieval Pottery in Britain, A.D. 900-1600, (Leicester, 1988), p.63

100 M Atkin, 'The Anglo-Saxon Urban Landscape in East Anglia', Landscape History, 7 (1985), p.34 and P A Stafford, The East Midlands in the Early Middle Ages (Leicester, 1985), p.58

101 J Hurst, op.cit., p.284 and A Vince, 'The Saxon and Medieval Pottery of London: A Review', Medieval Archaeology, 29 (1985), pp.34-5

102 At Nottingham early eleventh-century wheel-thrown wares predominate, but in post Conquest fills the majority are a handmade reduced sandy wares from a different pottery tradition. V Nailor, 'A preliminary note on a late Saxon ware from Nottingham', Medieval Ceramics, 8 (1984), p.62

103 J Haslam, 'A Middle Saxon Iron Smelting site at Ramsbury, Wiltshire, Medieval Archaeology, 24 (1980), p.64. P Rahtz, 'Buildings and Rural Settlement', in The Archaeology of

Anglo-Saxon England, op.cit., pp.89-90

104 J Allen, C Henderson and R Higham, op.cit., p.385

105 Ibid., p.410

106 J Haslam, 'The Towns of Wiltshire' in Anglo-Saxon Towns in Soutern England, op.cit., pp.107-110

107 G G Astill, op.cit., pp.108-113, also argued by A Vince, 'The Urban Economy in Mercia in the 9th and 10th centuries', in Archaeology and the urban economy: Arkeologiske Skrifter Historisk Museum, 5 (Bergen, 1989), pp.136-159

108 J Haslam, 'Market and Fortress in England in the reign of Offa', op.cit., pp.76-93

109 R Hodges, 'The Rebirth of towns in the Early Middle Ages' in The Rebirth of Towns in the West A.D. 700-1050 , CBA Research Report 68, (London, 1988), p.5

110 D Hill, An Atlas of Anglo-Saxon England, op.cit., p.143

111 R A Hall, 'The Vikings as Town Dwellers', History Today, 36 (1986), p.29

112 R Hodges, 'The Rebirth of Towns in the Early Middle Ages', op.cit., p.6

113 P Holdsworth, 'Saxon Southampton', in Anglo-Saxon Towns in Southern England op.cit., p.337

114 J Bourdillon, 'Countryside and Town: The animal resources of Saxon Southampton', in D Hooke, ed., op.cit., pp.191-2

115 Ibid., p.189

116 Ibid., p.192

CHAPTER TWO

Lincoln and Coins

Most coin was minted in towns and therefore the development of towns and the production of coins in the Late Saxon period are inextricably linked. The significance of coin evidence however goes beyond the ability to identify some places as being involved in coin production. Coins, or more particularly the penny which apart from the odd halfpenny was the only denomination, are a particularly useful historical source, as they provide information relevant to a wide variety of issues. Coins have particular historical value because of the decentralised nature of the moneying system with coin struck in the localities using dies provided by die cutting centres. Dies, as well as being provided by a central workshop, were also often produced at regional centres.

In the first half of the period the coinage exhibited a large degree of regional autonomy. The design on the penny for instance varied between the different 'kingdoms' [1]. Even after Athelstan had taken control of much of England the variation continued. Mercian coins for instance were unknown with a king's head, whilst this was the only type used in East Anglia [2]. The weight of the coin was however closely controlled for most of the period. Even after the establishment of a national coin type following Edgar's reform in c.973, coins continued to exhibit regional stylistic variations as a result of local die cutting [3]. Dies were required both to issue coin to replace that which

had worn out, and also to issue new coin types when this was periodically changed by the king. After c.973 a change in the type took place approximately every six years, and later at two to three year intervals. This was probably not as regimented a process as has previously been suggested, and perhaps required only that coin for royal dues and taxes were in the current type, rather than that all coin was reminted at each change of type [4]. Most coins contained the king's name and that of the moneyer, and sometimes that of the mint before the reform, and always after. Some moneyers minted coins for several decades at a single mint, whilst others had short careers, or appear to have issued the same type at several different mints, either by regularly travelling between mints or by having very short careers at several mints. The Anglo-Saxon coinage system was very sophisticated, perhaps more so than we fully understand, but its guiding principle was almost certainly royal profit. The changes of type, the varying of weights and the expansion of minting would not have occurred, had they involved the crown in expenditure that exceeded their income from moneying.

Numismatic evidence is particularly useful after Edgar's coin reform of c.973. From then periodic recoinages of the whole currency ensure that coins are closely datable. If Dolley's six yearly cycle is accepted as a working framework almost all post-reform coins can be dated to within a six, and later a two-to-three year time span [5]. Indeed some, such as the 'Benediction Hand' variant of the 'Second Hand' type, can be dated to within a few months [6]. No other Anglo-Saxon artifact can be dated so precisely. Secondly the provision of mint-signatures after 973 tells us where a coin was minted. Thirdly, as each coin contains

its moneyer's name comparisons are possible between places based on the number of moneyers at each mint. This also provides a large corpus of onomastic evidence, that can be used to indicate areas influenced by the Vikings and also the existence of other continental immigrants perhaps indicating a lack of suitably skilled craftsmen in England [7]. The provision of the moneyer's name also makes it possible to follow the movement of moneyers between mints and enables comparisons between places, based on the number of moneyers at each mint to be refined, as temporary or short-lived moneyers can be given relative weight in such calculations.

The value of numismatic evidence is reduced before 973 by two main drawbacks. Firstly pre-reform coins regularly lack mint-signatures, making it impossible to attribute many coins to mints with any degree of certainty. This limitation makes any attempt to compare pre-reform mint outputs a very speculative process. Secondly there appears to have been no complete recoinage between 887 and 973, which makes the dating of coin issues and hoards far less accurate, as coins remained in circulation for many years after their production [9]. Most coin hoards from this period contain coins from a number of reigns; whereas in the second half of the period hoards are closely datable as they often consist of coins from a single reign or sometimes a single type because of the regular recoinages. Nonetheless through the work of numismatists it is possible to piece together aspects of coin production before 973.

Information gained from the coin evidence can be split between that relating to coin production and coin circulation.

It has been argued that coin circulation has much to tell us of the nature and patterns of trade, therefore the discussion of evidence relating to this will mostly take place in the trade chapter. The principal concern of the present chapter is the production of coin in Lincoln and the surrounding area, beginning with a chronological overview of the development of the mint at Lincoln, and its standing relative to other mints. This takes account of the numerous Lincoln coins found in Scandinavia, although the means by which they arrived there will be discussed in the trade chapter. The moneyer names are used to consider the source of minting expertise. The Lincoln mint is considered in terms of its links with other mints, in the form both of personnel and of die cutting expertise. The production of the mint is also considered comparatively to assess the importance of Lincoln vis-a-vis other regional centres. To facilitate the study of Late Saxon coin production at Lincoln the period has been split into four chronological blocks.

c.880-927

The study of the early history of the mint at Lincoln encounters a number of problems, deriving from the lack of mint signatures and the confused political history that accompanied the struggle between Viking and West Saxon kings for supremacy in this area.

The first coins that can be attributed with certainty to Lincoln are a small group of Viking imitations of coins of Alfred with a Lincoln monogram. The next issue which can be attributed with near certainty are the 'St Martin' coins, which bear some

form of the legend *LINCOLIA CIVITAS* on the reverse. Apart from these, and a small number of Crowned Bust coins in the reign of Eadred, no other coin is known with a Lincoln mint signature until after Edgar's coin reform of 973. However it is likely that these issues formed but a small part of the coin produced at Lincoln before 973.

A considerable amount of late-ninth and more particularly tenth-century coinage produced without a mint signature has been attributed to the north-eastern Danelaw including Lincoln. Earlier, in the eighth and the first half of the ninth century, finds suggest that the coins circulating in Lincolnshire were sceattas or pennies of southern kings, or of the Archbishop of Canterbury, or 'styca' minted at York. From the single finds it seems unlikely that any coin was produced in the Lincoln area before the arrival of the Vikings in the late 860's [10].

From the mid 880's some minting activity resumed in the Danelaw, beginning with the coinage of Guthrum [11], who died in 890. His coins exhibit close links with those of Alfred, identified by the sharing of moneyers and of one reverse die, as well as stylistic similarities. These links have led to the suggestion that Guthrum's coinage was struck at London in c.886 under Alfred's authority as part of the peace terms [12]. Recently however analysis has shown that these were of a lighter weight suggesting they were produced in the Danelaw [13]. Also at roughly the same time Viking imitations of Alfred's Two Line type, and also of his rarer mint-signed issues appear to have been struck, although they are not always easy to distinguish [14]. Of particular interest are six coins with Lincoln mint signatures which are Viking imitations of Alfred's coinage.

These are imitations of Alfred's London monogram issue, with a monogram of Lincoln instead. Two, three or four different moneyers are named on these; Heribert, Herbert, Ercener and Erifer [15]. These are not copies of the moneyer named on the genuine London monogram coins, as these were either issued without naming the moneyer, or later in the name of Tilewine [16]. The London monogram is dated from 886 or perhaps slightly earlier, which means obviously that the imitations cannot be any earlier than this [17]. The imitations are quite extensive, outnumbering the surviving originals, and die duplicates are rare suggesting the use of a large number of dies. Blunt and Dolley suggest that imitations of the London Monogram pennies, and also of the extensively copied halfpennies, 'were produced in the general area of Lincoln and Stamford' [18]. In general the main phase of imitation of Alfred's coinage seems to have been during the later 880's and early 890's, before the introduction of the St Edmund Memorial coinage in the southern Danelaw and the regal Viking coinages at York.

Recently a new coin type has been found at Ashdon in Essex. This was minted in the name of Guthfrith, which is likely to date from between the early 880's and 895. Guthfrith was probably Guthfrith, king at York between 881 or 883 and 895. M Blackburn suggests that this was minted in the area of the Five Boroughs rather than in York itself [19]. The moneyer of this also minted a coin of Alfred in a similar style which is probably imitative [20]. The narrow margins of this style are also found on halfpennies of 'Alfred' in the Stamford hoard and on a Lincoln monogram coin of Erifer. Taken together this evidence suggests a

possible Lincolnshire origin for the coin of Guthfrith, with Stamford or Lincoln the most likely. Overall in the years around 890 Lincoln may have struck Lincoln monogram coins and other imitations of Alfred, and perhaps the coinage of Guthfrith, although the amounts, particularly of the latter, are unlikely to have been that large.

The Guthfrith coin could suggest that the Lincoln area was under Northumbrian control, however the stylistic similarity of this with other coins, including a coin of Winegar who minted the St Edmund Memorial currency and coins of Guthrum, question this. It may be that Northumbrian control was short-lived, or alternatively that this coin was commissioned for political purposes from a moneyer further south because of a lack of moneyers in York, or that it is a Danelaw copy of a Northumbrian coin. The first definite coins produced in York were the Sieferth and Cnut issues in the late 890's. They may have been preceded by imitations of the 'Osnaforda' coins of Alfred, and before that on a very small scale issue of the St Edmund Memorial pence [21].

During the late-ninth and early-tenth-century single finds suggest that the main types of coin circulating in the Lincolnshire area were the St Peter's coinage from York and the later issues of the St Edmund Memorial pence, which gradually replaced Alfredian imitations. Whether any of this coin was minted at Lincoln is far from clear, but it seems most unlikely that the swordless St Peter were struck anywhere but York. The St Edmund Memorial issue (c.895-c.910) have generally been regarded as an entirely East Anglian produced coinage [22], although it is largely without mint signatures. However two of

the moneyers of this, Win(e)gar and Stefanus, produced coins for Edward the Elder of NE I style [23], which Lyon associates with the Five Boroughs. Lyon rules out Lincoln as a probable source of dies for this as he regards the town as being under the influence of the Northumbrian Vikings, and so an unlikely base for Winegar or Stefanus during the imitative 'Two Line' or St Edmund Memorial production [24]. It is possible that some of the St Edmund Memorial coinage was minted outside East Anglia, perhaps on an imitative basis, including a few perhaps struck in York [25]. If the Guthfrith coin was minted at Lincoln before 895, it may reflect a lack of minting expertise in York prior to the issue of the Cnut and Sieferth coins, perhaps after 895, rather than the direct control of Lincoln from Northumbria. If Lincoln instead lay outside this control, or only under it briefly, it would have been free to mint St Edmund Memorial coins. Even if Lincoln remained under Northumbrian control it could have minted some of these on an imitative basis.

Lincoln may have been under the control of Northumbria, or at least outside direct West Saxon control after 918. Numismatic evidence casts doubt on the assumption that Lincoln fell to Edward the Elder in 918 after the fall of Nottingham. It can instead be argued that it was not until as late as 927 that Lincoln was placed under southern control by Athelstan [26].

The argument for this rests on two coin issues, attributed to Lincoln and dated between 921 and 927. There are seven known coins of the first of these, which has the name of St Martin on the obverse and a Lincoln mint signature on the reverse. On the obverse are the letters SCI M above, and ARTI(N) below a

possibly struck south of the Humber, some perhaps at Lincoln, it is also possible that these moneyers moved to this area from York after Athelstan extended his kingdom. I Stewart suggests that Sihtric's coinage followed the St Martin issue, fitting into the period immediately after his treaty with Athelstan in 926 [31]. If Sihtric coins were struck in Lincoln at some point after 921, then the town was, at least for a time, outside West Saxon control.

This dating scheme is not however universally accepted. M Archibald instead suggests that all of the St Peter's were produced before 919, with the Sword St Peter's dated from 910 onwards [32]. This would allow plenty of time for the Vikings in Lincoln to have produced the St Martin coins before submitting in 918. She further suggests that the Sihtric coins were copied, not from contemporary coins, but from earlier coins which were still in circulation [33]. If this is accepted then Lincoln did not mint the Sihtric coinage. Whilst she accepts there are problems with this chronology in terms of the hoard evidence, Archibald argues that these are of less significance than the alternative which contradicts the historical record on the strength of coin hoards, which are prone to inexplicable vagaries.

The historical record is however far from unambiguous. Whilst the assumption that Lincoln fell to Edward in 918 is widespread, the historical evidence for this is meagre, consisting solely of part of the Anglo-Saxon Chronicle entry for 918. This states that

> then he (Edward) went from there (Tamworth) to Nottingham, and captured the borough and

> ordered it to be repaired and manned both with Englishmen and Danes. And all the people who had settled in Mercia both Danish and English submitted to him. [34]

Stenton, acknowledging that 'the fate of Lincoln is implied by the contemporary statement (in the Anglo-Saxon Chronicle entry for 918)', states that by the beginning of 918 the 'Danish armies based on Nottingham and Lincoln were now isolated;..... , and before the end of 918 they had surrendered' [35].

The historical evidence such as it is, rests solely on a particular interpretation of the phrase 'And all the people who had settled in Mercia both Danish and English submitted to him'. It could for instance be argued that Lincoln was part of Lindsey not Mercia, or that this final phrase serves as a conclusion to Edward's Mercian campaign, as seen from a southern perspective that was little concerned with the niceties of northern geography. Thus the 'historical record' does not rule out the possibility that Lincoln was under Viking control for at least some of the period 918-27 [36].

There are also a group of irregular coins in Edward's name, which on stylistic grounds I Stewart provisionally suggests were products of the area between the north-east Midlands and East Anglia [37]. These very closely resemble coins of Athelstan in the NE I style which Blunt associates with the Northern Danelaw. It is possible that Lincoln minted some coin of Edward the Elder. Perhaps Lincoln was under fluctuating political control between 918 and 927.

Overall in the period up to 927 Lincoln may have produced a number of different issues. These suggest an area influenced by the Viking kingdoms of York and East Anglia, and perhaps also

West Saxon England, but above all indicate an area of political vacuum, trapped between powerful neighbours. The actual amounts produced remain uncertain. The rarity of the St Martin and Sihtric coins may suggest low levels of production, or instead testify to the efficiency of West Saxon kings when it came to demonetising Viking issues that carried a political message contrary to their own. Overall the general lack of die duplicates and the number of different moneyers, despite the small numbers of most issues found, may argue for coin production on a significant scale.

c.927-c.973

Soon after the accession of Athelstan the Viking kingdom of York fell into West Saxon hands. Athelstan appears to have tried to impose a single coinage on his newly unified kingdom. In southern England, English Mercia and York a new type was introduced with a circumscription on each side including the name of the mint. In the Danish East Midlands the old type continued which had the moneyers name between two lines, but lacked a mint-signature. Blunt, in his study of the coinage of Athelstan, identified a number of styles which he associated with mints in the part of the Danelaw outside East Anglia [38].

Overall Blunt identified three separate styles, termed NE I NE II and NE III, which lack mint signatures but are associated with the 'north-east'. Together these were minted by up to 52 different moneyers, which accounts for almost 30% of the known moneyers of Athelstan [39]. Of the major mints later in the tenth century, only Stamford and Lincoln do not have mint signed coins of Athelstan. Whilst named mints may also have produced

some unsigned coins, there are few links between NE moneyers and moneyers at any of the named mints. The origins of NE I, the largest of these issues, are to be found in the reign of Edward. Stamford would probably be the most likely initial producer of dies for this, given that for minting purposes Nottingham and Derby looked west, and Lincoln was probably not under full West Saxon control during this reign. Once Lincoln fell under West Saxon control it probably shared in the production of NE I even if the dies continued to be cut at Stamford. NE II was probably produced in the southern part of Danelaw, although there were some mints that received both NE I and II dies. The Bust Crowned design reached the northern Danelaw later in the reign of Athelstan with dies in a style Blunt terms NE III. Some of the moneyers of this may also have been NE I moneyers [40]. The dies for NE III may have been produced at Lincoln, although one of the coins struck by Hildulf contains 'EBRO' which is difficult to regard as anything other than a York mint signature [41]. Overall whilst NE I and III moneyers were probably active at a number of mints, their overall total suggest that a mint or mints in the northern Danelaw had moneyer complements at least on a par with the six allocated to Winchester in the Grateley code.

During the reign of Athelstan mint signed coins are known from Derby, Leicester and Nottingham. If mint-signatures are a sign of West Saxon control this supports the contention that Lincoln came under such control somewhat later than these, although Stamford also lacks any mint-signed coins for Athelstan.

Following the death of Athelstan, the Five Boroughs again fell under Viking control. Twelve coins have been found which I

Stewart regards as having been produced south of the Humber between 940-2, under the control of Anlaf Guthfrithsson and Anlaf Sihtriccson [42]. Four of these are attributed to Derby. Of the remainder, seven coins are of HT1 type, which was the principal type produced in the northern Danelaw in the reign of Athelstan [43]. These were produced in two different lettering styles (A and B) by six different moneyers. Five of these six moneyers struck coins for Athelstan or Edmund, mostly in the NE I or NE III styles associated with the Five Boroughs [44]. Lincoln and Stamford probably struck most of these, as Derby already has coins attributed to it, and Thurstan and Osulf the current moneyers at Leicester and Nottingham respectively were not named on any of the coins. If style A is to be associated with Lincoln then the mint had at least two moneyers, Arnulf and Baciager, in this brief period [45]. The remaining coin was struck by Odeler, a moneyer previously associated with York, although a moneyer of the same name is now known for NE I type of Edmund, so this could also have been struck at Lincoln.

During the 940's production of Bust Crowned (BC) type took place in the north-east Midlands. This was accompanied by the appearance of 30 new named moneyers, many of whom have a 'north-eastern flavour' [46]. Given the short time Eadred controlled York, and the usual avoidance of royal bust types in Northumbria, Lincoln and Stamford are likely bases for some of these moneyers [47]. Particularly interesting are two examples of this type minted by Are. He produced coins in the preceding reigns of Athelstan and Edmund, and also produced the Sihtric coinage. One coin reads +AREM+ AENLCOIAIIV, the other +AREIIIICOIA IIIVIT, which with a little imagination could be converted into LINCOIA

CIVIT - one of the forms found on the St Martin coins. This points to a moneyer active for at least twenty years, with perhaps all of them spent at Lincoln.

During the reign of Eadwig NE I continued, but most of the rare coinage of the north-east Midlands was of a new style NE IV [48]. There are similarities between these two styles, and four moneyers: Ive, Eaenolf, Levich and Manna, are found in both groups. As Eanulf and Levig are Reform moneyers for Edgar at Lincoln, Blunt considers it likely that NE IV is a Lincoln based replacement for NE I [49]. If NE IV was only produced at Lincoln then this mint had at least seven moneyers operating during the short reign of Eadwig [50].

The NE I style drew to a close early in the reign of Edgar, with five moneyers recorded, three of whom had probably minted this type for Eadwig [51]. This, and NE IV, seem to have been replaced by HT1 type in a NE V style which is strongly represented in the Tetney hoard. Over fifty moneyers are recorded for this type, and on the few occasions when these moneyers are named on later mint signed coins they tend to be from either Lincoln or Stamford. For instance Adelaver and Eanulf are also named on coins of Edward the Martyr minted at Lincoln, and Levic is known from coins of Edgar struck at both Lincoln and Stamford [52]. Indeed of the ten NE V moneyers of coin in the Tetney hoard as many as six can be identified on early post Reform issues at Lincoln. This is of particular significance because of the rarity of names like Adelaver, Gri(n)d, Eanulf and U(n)bein which are only found on coins at Lincoln after 973 [53].

Much rarer are a group of Circumscription types, which may have been minted in the north-east Midlands late in Edgar's reign. Most of these CC type coins come from York; however four moneyers struck coin of a similar style, but do not fit into the pattern of the York mint, which usually operated with a single master moneyer and a privy marking system [54]. The output of these four seems to have been small, and Asferd and Grid also minted NE V with Grid also die-linked with the Lincoln moneyer Eanulf. However Blunt argues that Lincoln is unlikely to have been the source of this issue, as the coinage in that area was 'very substantial and points to HT1 type not having been superseded at that mint by the CC type'[55]. Instead they were perhaps minted at other mints in this area, including perhaps Newark.

To summarise, there is very little coin which can be definitely attributed to Lincoln before 973. However it does seem from the numbers of moneyers involved that coinage was produced on a large scale in the north-east Midlands. Furthermore the importance of Lincoln and Stamford once mint signatures became universal, suggests these two centres were the major sources of the local pre-reform issues, at least in the decades leading up to the reform. The high proportion of Lincoln moneyers found on NE IV and V suggest that Lincoln perhaps served as a die-cutting centre, providing dies to mints including Newark and Stamford. Whilst it cannot be proven that Lincoln served as a major mint between 927 and 973, most of the links that can be identified in this largely anonymous period are with Lincoln, and to a lesser extent Stamford. Furthermore the evidence suggests that this area was able to maintain a high degree of

independence, with the types minted often out-of-step with those elsewhere.

973-1042

The development of the Lincoln mint from 973 is much clearer and its importance more apparent. During the Reform/Small Cross issue (973-9) it has been estimated that Lincoln produced over 5% of national coin output, and was ranked fifth equal [56]. Interestingly Stamford produced almost 8%, even though no mint signed coins are known from here in the preceding hundred years; which serves as a reminder of the likely hidden role of Stamford in pre-reform coin production. For Reform-First Small Cross and First Hand issues (c.973-85) fifteen different moneyers have been identified at Lincoln [57]. Three of the four Lincoln moneyers named on the Reform type of Edgar may have struck either NE IV or V, probably also at Lincoln. Nevertheless the minting importance of Lincoln appears to have been relatively less than it was in the second quarter of the eleventh century. During the last quarter of the tenth century there remains some suggestion that Lincoln and the area of the Five Boroughs were still slightly detached from minting in southern England. Lincoln does not appear to have produced the Second Hand type, apart from a solitary example of a mule with Crux. If Lincoln instead minted First Hand for an extended period then production appears slack, as Lincoln accounts for only 4% of First Hand produced, despite the possibility that First Hand was being struck for twice as long a period at Lincoln as further south [58]. Nor is there any significant increase in moneyer numbers during this issue. It is

also possible that there was a clear break between First Hand and Crux, with the minting of coin suppressed at York and Lincoln for at least part of this issue [59]. This would be possible if dies produced in the south were not dispatched to Lincoln. Indeed it has recently been argued that Second Hand was a die variant rather than a separate type, as only 6% of the this were minted outside East Anglia and southern England [60]. Whatever the reasons for the lack of Second Hand at Lincoln, the short-lived nature of this downturn suggests political rather than economic causes.

During the second half of the reign of Ethelred (from c.997), Lincoln accounted for 8-12% of national coin output. This identifies it as a minting centre of primary importance, being surpassed only by London and occasionally York [61]. From this point onwards Lincoln became established as one of the top three mints, as well as performing a role as a die cutting centre. Furthermore the number of moneyers increased considerably from 11 during First Hand (979-85) to 36 for Last Small Cross (1009-17). Of these 36, 19 were new moneyers whose first issue was Last Small Cross [62]. This rise cannot be explained simply as an influx of temporary moneyers to mint coin for a local geld, as their number remained as high for the first two issues of Cnut, and over two-thirds of these new moneyers struck at least the next issue [63]. However, whilst new moneyers used on average 5 reverse dies each for Last Small Cross, the established moneyers used an average of 12 [64]. This indicates either that many of the new moneyers began minting well into the production span of Last Small Cross, or that many of them were fulfilling a subsidiary minting role. The difference

between the production levels of new and established moneyers is considerably less in the next issue [65]. At least some of the new Last Small Cross moneyers were probably brought in late in the issue to meet an urgent need; although the fact that their numbers remained so high suggests they met a wider economic need.

During the reigns of Cnut and his sons, Lincoln accounted for 8-14% of national coin output, with the area of the Five Boroughs accounting for about one-fifth of the national coin total. The coin output of this region was heavily dominated by Lincoln and Stamford, which together usually accounted for at least 80% of the regional total [66]. Hence fluctuations in regional output were caused by changes in production levels at these two, for instance the Five Boroughs increased its percentage share of coin output by 6% during Last Small Cross (1009-17) because Lincoln produced 4% more and Stamford's production was increased by 2% [67]. The output evidence clearly identifies Lincoln as a mint of national importance from about 1000 onwards.

1042-c.1100

The coinage produced during the reign of Edward the Confessor has been subjected to detailed study by A Freeman [68]. Based on a detailed counting of moneyers, he considers Lincoln to be the fourth most important mint in the first part of the reign up to about 1056, after which it moves clear of Stamford and Winchester to occupy a position of third, behind London and York. Severe contractions in moneyer numbers took place at the other leading mints during this reign, including a halving of the

complement at Stamford and Winchester (1053-6), whereas Lincoln had its complement of moneyers cut from 18 to 13 at the beginning of the reign [69]. These cutbacks ended a national mint structure that had been headed by London and with York, Lincoln, Winchester and Stamford, standing well clear of the remaining mints, at least in terms of moneyer numbers [70].

It seems from die utilisation that for much of this reign one moneyer, Godric, accounted for between one-fifth and one-quarter of Lincoln's output, perhaps serving as the master moneyer in a system similar to that at York. Freeman suggests that increased productivity compensated for the reduction in moneyer complement at Lincoln early in the reign [71]. In the light of this, rankings of mints based on moneyer numbers must remain questionable as reductions in the number of moneyers may reflect changes in organisation rather than output. Freeman suggests that these reductions were linked to the ending of Heregeld payments and the longer validity periods of the coin type.

Unfortunately from the second half of Edward's reign, and particularly in the post-conquest period, the coin evidence becomes very sparse. During the short reign of Harold II eight or nine moneyers are recorded as working at Lincoln, compared to twelve at York, which unlike Lincoln, may have cut some of its own dies [72]. A large find of coins of William I's Paxs type (1084-7) at Beauworth in Hampshire provides most of the evidence for the post conquest period. From this it appears that Lincoln had undergone a relative decline; now acting as one of a large group of mints ranking behind Winchester, Canterbury and London

[73].

Lincoln's low ranking may however partly be a consequence of the southern situation of the hoard, particularly given the evidence of monetagium payments in Domesday Book. Thirteen mints are recorded in Domesday Book as making such payments, including Lincoln, which paid £75 to the king [74]. Whilst this is unlikely to be a complete record of places making monetagium payments, from Table 2 it is clear that Lincoln ranks well above the others mentioned, with only Thetford paying more than £20 [75]. To continue the comparison with Thetford, 123 coins were found from this mint compared with 171½ from Lincoln in the Beauworth hoard. However whilst six moneyers were named on the Thetford coins, only 2, Sigeferth and Ulf, minted those from Lincoln [76]. The evidence for the post-conquest period paints a contradictory picture of the importance of the Lincoln mint.

Behind the Chronology

From the chronological survey it is clear that Lincoln was a very important mint for most of the period after 973, and probably for much of the century prior to this. The factors which lay behind the formation and importance of the mint at Lincoln are far more difficult to pinpoint.

It seems certain that Lincoln only began striking coin after the Viking takeover. Smart drew attention to the high number of continental named moneyers for the St Edmund Memorial issue, but this was also the case for Danelaw issues that preceded this, and for the early Viking issues generally [77]. Also there are virtually no Scandinavian names amongst the earliest imitations [78]. At Lincoln the earliest named moneyers were Ercener/Erifer

and Herbert, which may be continental German, although Old English is possible for Herbert. The Danelaw moneyers contrast with Alfred's far less cosmopolitan named moneyers. Overall this suggests a lack of moneyers resident in the Danelaw, which is not surprising given the lack of coin production in this area prior to the Viking settlement. The appearance of continental moneyers perhaps indicates continental craftsmen associated with the Viking armies, unless they were recruited from abroad once the Vikings had become established.

The striking of coin imitating that of Alfred suggests an economic need, as there is little propaganda value for a Viking ruler in striking coins which proclaim Alfred king. The large numbers of Viking imitated halfpennies, which followed rapidly from Alfred's very limited introduction of the denomination may suggest coin minted for spending rather than simply for hoarding. The Viking imitation coins probably resulted from the melting down of large quantities of bullion acquired by the Vikings, with the imitation of a readily available currency a common first stage in the development of coin production.

The St Martin's type was probably minted under Viking control, although the nature of this control is unclear. At York the St Peter's issues were until recently regarded as an archiepiscopal coinage; however it seems doubtful whether the Archbishop would have sanctioned the minting of a design that included 'Thor's Hammer'. Archibald regards both the St Peter and St Martin issues as the coins of christianised Danish rulers in York and Lincoln, with Thor's Hammer more understandable in the context of recently converted leaders [79]. If these were

secular issues it is interesting that they were issued anonymously, in contrast to the coinage of Ragnald and Sihtric. The authority behind the St Martin coins is particularly obscure, as is their choice of St Martin. Whilst a church of this name existed in Lincoln, it does not appear to have been particularly important, and certainly far less so than St Mary's, the 'mother church', which would surely have been named on these, had they been an ecclesiastical issue. Apparently for someone the saint had sufficient importance to be named on Lincoln's coinage. In the absence of a king's name perhaps they were issued under the auspices of a small group of important citizens. If so this has important implications for the commercial organisation of Lincoln at this early date, suggesting that by the early part of the tenth century Lincoln already had, what one might loosely term, an 'independent municipal authority' [80].

The St Martin's coins are one of a whole host of anonymous issues struck outside the areas of West Saxon control up to 927. The type of authority which issued the plentiful St Peter's pence before and after the reign of Ragnald in York may have mirrored the authority behind the St Martin's type. The Sword St Peters were issued at York, when the city was under the control of Sihtric, king of Dublin and York. Whilst he issued some coin in his own name, most coins minted during his rule in York were the anonymous Sword St Peters. Smyth has argued that these were minted under the authority of the Archbishop [81]. As well as the earlier doubts concerning the use of Thor's Hammer in the design, it seems unlikely that Sihtric would have accepted the minting of an ecclesiastical coinage, beyond his control from which he received no profit. The Sword St Peters may instead

have been minted under Sihtric's control; as the propaganda benefits of a coinage proclaiming Sihtric king, were not ones he or his Norwegian contemporaries seem to have valued. The limited Sihtric Rex coinage perhaps fits at the end of his reign, following his treaty with Athelstan in 926. If Sihtric accepted St Peter on coinage under his control at York, there is no reason why St Martin would not be acceptable on coinage issued under his control at Lincoln.

In general Viking issues tend to exhibit far less uniformity than their 'English' counterparts. This may reflect a far looser political control of the coinage, although the silver content remained high. The latter perhaps paradoxically reflects a lack of political interference, as reductions in the silver content were usually the result of official coin tampering. Overall the impression given by the assorted Viking coinages is of a practical currency where the inscription on the coin was of far less consequence than its silver content.

Lincoln was probably involved in the minting of coin for Athelstan. The NE I style suggest both that the area was distinct from much of England and that the coin output was on a scale comparable with the rest of England. The coinage of the 920's and 940's suggest that moneyers at Lincoln had little problem minting for both Viking and West Saxon rulers. Stewart has also noted a link between increased production of NE types, and the periods during the 940's and 950's when York was under Viking control [82]. The production levels of York's Viking coinage do not seem that high. Furthermore extensive privy marking appears on HT1 coinage of the period, which was a trait

usually confined to York, perhaps suggesting that some of the York moneyers moved further south to continue minting after the Vikings regained control of York. It is difficult however to understand the nature of the relationship between the Vikings seizure of York and increased production at NE mints. If this increased activity is to be explained as a response to the 'non-availability' of York, it must be borne in mind that the Viking takeover need not have stopped York being available to the 'English'. A change in political control perhaps had little effect on economic contact between the north Midlands and York. Some additional activity may instead have resulted from a rapid recoinage in the area of the Five Boroughs including Lincoln to remove the coins struck by Anlaf Guthfrithsson, which would account for the small number of these found.

From c.973 Lincoln was clearly a major mint, and at times was perhaps the second most important in England. It is possible that Lincoln's high output figures reflect its relative proximity to Scandinavia in an age of Danegeld and Heregeld payments, rather than necessarily identifying a centre of crucial economic importance. Firstly the large number of finds in Scandinavia may exaggerate Lincoln's output at the expense of other mints, particularly those in the west; and secondly, if the large scale of production was a reality much of it may have met political rather than economic demands [83].

The suggestion that the coins found in Scandinavia exaggerate Lincoln's importance can be tested by omitting coin found in Scandinavia and seeing how drastically this alters our picture of the Lincoln mint. From fig 5 it can be seen that in the early part of Edward the Confessor's reign the majority of

Lincoln coins are derived from Scandinavian sources. Without the Scandinavian evidence a number of 'single type' moneyers would have gone unrecorded, especially during Pacx (1042-4), and 16 of the 111 known moneyer/issue combinations would have remained unknown [84]. However the careers of major moneyers for the most part remain unchanged, and the three or four moneyers who appear to have accounted for 50% of Lincoln's output are all known from non Scandinavian coin, although the absence of Scandinavian coins would have a more pronounced impact on calculations of dies used [85]. Comparison of figs 5 and 6 shows that Lincoln does not radically differ from the national picture in terms of the source of the coins found, with the reliance on Scandinavian finds in the first half of the reign pronounced for English coins as a whole. Even coins from the major western mints, are quite strongly represented in Scandinavia during the early issues of the reign [86]. Thus the degree to which Lincoln's output is exaggerated by finds from Scandinavia may be limited, although it should be noted that this conclusion is based on only a small part of the period in which English coins arrived in Scandinavia in large amounts.

Lincoln's output may have been particularly prolific because as an entry mint one of its major functions was to convert incoming foreign coin into the current English type. It is known that foreign coin did reach Lincoln, as three Scandinavian coins have been found in or near Lincoln. This may appear an insignificant amount, but the English monetary system was very good at excluding foreign coin, and perhaps as few as seven other Scandinavian coins have been found in England for this period

[87]. There does not appear to be any way in which the coins of such activity can be identified. It may have been that such coins were lighter, however Petersson's detailed study of English coin weights has found no evidence to support this [88]. If Lincoln's mint activity was increased by this function, it still, in most cases, reflects economic activity, as most of the foreign coin was likely to have been brought into England by foreign traders, or English traders returning home. If they chose to change money at Lincoln, they did so presumably during the process of normal trading activity, unless foreign coins could only be changed at particular mints.

Lincoln and other mints

As well as being the principal mint in the area, Lincoln may have influenced other mints in the area, by providing them with moneyers or dies. In the pre-Reform period it not possible to be sure which mints are operating let alone consider spheres of influence. After the reform however the movement of moneyers and, for some issues, the sources of the dies used by various mints can be identified. This makes it possible to investigate the two main ways in which the regional importance of the mint at Lincoln is likely to have manifested itself.

During Edgar's Reform issue almost all dies were centrally cut, however after Edward's troubled accession local die cutting began at Lincoln and elsewhere. Thirteen of the fifteen known dies used for Lincoln coins were probably cut in Lincoln, as well as providing dies for six other mints including most of those used at Oxford [89]. Local die-cutting became more widespread with the accession of Ethelred. For his First Small Cross (978-

9) all Lincoln dies were locally cut, as well as one-third of those used at York. Overall a style associated with Lincoln accounted for 35% of all dies used for this issue, although this may be exaggerated by the geographical distribution of hoards. Whilst the production of dies at Lincoln may have resulted from an inability to enforce central cutting due to political conflict, it nonetheless demonstrates that Lincoln was the principal regional centre for a large area of the north-east Midlands.

During Ethelred's First Hand issue (979-85) dies of a regional style grouping labelled as 'Midlands A and B' were used at a number of mints. Midlands A dies produced a Chester coin and one from Derby. Midlands B dies produced coins from Leicester, Lincoln, Shrewsbury, Stamford, Torksey and Worcester, and were also muled on Shrewsbury and Chester coins. Dolley suggests that Lincoln was the source of these dies, suggesting that Lincoln was cutting dies for a large part of northern and central England [90]. From this limited study it is difficult to say which of these mints were supplied mostly or solely with dies of Midlands A or B, although all three Stamford coins were of Midlands B as were both Worcester coins. Lincoln used dies of a Northern type associated with York as well as Midlands B. If Lincoln were the source of these it reveals a contrast between Lincoln functioning as an important die cutting centre at the same time as its minting activity was relatively depressed. Not surprisingly Lincoln also appears to have been supplying all the dies to the local mints of Torksey, Grantham and Caistor, during First Small Cross (c978-9) [91]. At Stamford some dies were from

Lincoln (22%) and London (14%), although the rest were cut in a style only found at Stamford [92].

Dies were also cut at Lincoln late in the issue of Long Cross and during Last Small Cross (1009-17). During Last Small Cross a few of the early dies used at Lincoln came from Winchester and some of the later dies, which strongly influenced the main Lincoln style, were cut at York. In addition Lincoln A dies may actually have been cut at Stamford [93]. However the vast majority (c. 70%) of the dies used for this issue at Lincoln were produced there, and the mint also supplied dies to the surrounding mints. The main Lincoln die cutter for this issue may also have cut dies for an issue of Cnut's produced in Denmark perhaps as early as 1015, which styles him as King of Denmark [94].

Blackburn and Lyon in a study of die cutting during Cnut's Quatrefoil issue (1017-23), identified nineteen centres producing dies [95]. Lincoln was one of the most prolific of these, although unlike London, the most prolific, its dies appear to have been cut by a single hand. For this issue Lincoln appears to have supplied virtually all of the dies used at Nottingham, Derby and Lincoln itself, as well as at Stamford until this mint began to produce its own dies. Lincoln dies were also used at Caistor, Torksey, Leicester, Warwick, Northampton, Huntingdon, Bedford, Cambridge, Ipswich, Thetford and Norwich, with the occasional die even being used at York and London [96]. Locally Lincoln provided all of the dies for Torksey although Caistor used a single die from Thetford. Whilst all of the major mints and many of the secondary ones had their own die cutter, very few have as wide a distribution as those produced at Lincoln. For

instance those cut at York and Chester were virtually confined to use in their city of origin [97]. Overall Lincoln supplied dies for about 13% of all Quatrefoil coins found in the systematic collections of Stockholm and Copenhagen [98].

Whilst it seems that Lincoln was a major die-cutting centre the significance of this unclear because the process of die distribution is not fully understood. Die-cutting should perhaps be seen as indicating a degree of political autonomy, or at least the acquisition of a privilege granted from the centre. Such a privilege would enable a mint not only to avoid the presumed costs of obtaining dies from London or Winchester, but perhaps also to make a profit by charging other mints for dies. All of which points to die-cutting as an indicator of political rather than economic power. However the means by which Lincoln dies came to be used on occasions at London or York, or for that matter why a small mint near Lincoln like Caistor came to be using a die from Thetford raises doubts about our understanding of the die cutting system. It is possible that the 'system' of die-cutting varied considerably, with dies often supplied by itinerant die cutters. In which case some styles attributed to Lincoln may instead identify Lincoln as one of the most productive stops on an itinerant die-cutters 'round'. This would help to explain anomalies such as the use of Lincoln dies at London, which may then be regarded as the result of the short-lived presence of this die-cutter in London.

Lincoln may have provided moneyers for the expansion of minting places in Lincolnshire that took place during the Reform and First Hand issues (973-85). Apparently new and short-lived

mints were set up at Louth, Horncastle and Grantham, and more long-lasting, but nevertheless minor, mints at Torksey and Caistor. Whilst it is possible that some of these operated before 973 but were not identified because of the lack of mint signatures, none of the five appear to have minted Edgar's Reform issue. All of them then produced Edward the Martyr's version of this, produced from about 976. For most of these mints the evidence that it produced a particular type often consists of a single coin, making it likely that this is not a complete list of the types they produced [99].

At Grantham the moneyer of the First Hand (979-85) coin, which is the only one so far found, was Mana. A moneyer of this name is recorded at Lincoln, but not until the Last Small Cross issue (1009-17), although a moneyer of this name issued pre-reform coins for Edgar and Eadwig which are associated with Lincoln die cutting [100]. Closer chronological links can be drawn with a number of moneyers of this name known to have struck the Reform issues at Leicester, Stamford, Tamworth, York, and the First Hand issue at Nottingham [101]. Leicester, Stamford and Nottingham are all particularly plausible bases for a moneyer sent to Grantham, or perhaps Grantham was just another, presumably brief, stop in the career of an itinerant moneyer.

Louth is represented by two possible coins; one of which has a mint signature beginning 'Lv', the other with reads 'Lvveic'. If both signatures are from Louth then two different moneyers operated at Louth during the reign of Edward the Martyr; one with a name ending ....ald, and the other Etheln (Æthelhelm) [102]. One of the ten moneyers active at Lincoln during this issue, Leofwold, is a possibility as the first moneyer at Louth,

although the connection is somewhat tenuous. Æthelhelm does not appear to have been a moneyer at Lincoln at any time from the Reform issue onwards, nor is one recorded for the local pre-Reform issues of Eadwig or Edgar [103]. However this moneyer does reveal a possible link with another mint in Lincolnshire. The only known coin of Edward the Martyr with a mint signature HOR, presumably Horncastle, was also struck by an Atheln. These Æthelhelms were probably the same person, particularly as the distance between Louth and Horncastle is little more than ten miles. Horncastle also struck the First Small Cross (978-9) issue of Ethelred, and both surviving examples were struck by a moneyer signing as 'Adel', which Jonsson regards as a shortening of Æthelhelm [104]. At Lincoln a moneyer known as Adelaver struck coins for Edward the Martyr, but on the only surviving die his name is rendered in full [105]. There is also a single surviving example of First Hand coin minted at Horncastle, by the moneyer Æthelgar [106]. No moneyer of this name is known at Lincoln, although there is a possible link with Stamford where Ælfgar minted Second Hand (985-91) and Crux (991-7) [107]. Overall there is little evidence of links of personnel between Louth or Horncastle and Lincoln.

Caistor probably began by producing coin for Edward the Martyr. There is a single coin of his with CASTR as the mint signature and Leofman (Leoinan) signing as the moneyer [108]. This moneyer also struck Ethelred's First Small Cross (978-9) and First Hand (979-85) at Caistor, represented by three and one coin respectively [109]. A moneyer of the same name struck Crux (991-997) at Lincoln [110]. Whilst this may point to links

between Caistor and Lincoln, there is at present no evidence that this moneyer was active at Lincoln prior to his term at Caistor. Rather he may have moved from Caistor, after striking three successive issues, to Lincoln, where he only appears to have struck Crux. A single surviving coin with a mint signature of CESD raises the possibility that Caistor was also operational during Cnut's Quatrefoil type (1017-23) [111]. This was struck by Ælfsigi, who may also have been a moneyer at Lincoln, as here a moneyer or moneyers known as Ælfsige struck Crux (991-7), Long Cross (997-1003) in large amounts, and Last Small Cross (1009-17) [112]. Finally there is a coin of Cnut's Pointed Helmet type (1023-29), with a possible Caistor mint signature, CESTR [113]. The moneyer of this coin was Anthor, of whom there is no record at Lincoln, although Arnthorr minted Crux (991-7), Long Cross (997-1003), Helmet (1003-9) and Last Small Cross (1009-17) at York [114]. Thus apart from the possible move of Ælfsige from Lincoln to Caistor there is little sign of links between the two.

The mint at Torksey raises particular problems because it seems likely that at least some of the coins attributed by Hildebrand to it were in fact Scandinavian imitations. The first coin attributed to Torksey is a coin of Edward the Martyr, with a TOR mint signature, which was struck by a moneyer with a name ending ....EL [115]. There is another coin of this issue from a Scandinavian hoard, which was minted by Thurcetel, who probably minted the other coin. There are Torksey coins for most issues from Edward through to Cnut's Pointed Helmet type (1023-29). Whilst the later issues (1009-29) are likely to be Scandinavian imitations, the earlier issues are Torksey products [116]. The three genuine Torksey moneyers, namely Ælfcetel, Leofing and

Thurcetel all shared names with moneyers operating at Lincoln at this time. Ælfcetel only struck Helmet (1003-9) at Lincoln which followed the Crux (c.991-7) and Long Cross (c.997-1003) types which he may have struck at Torksey [117]. If they were one and the same, then once again it suggests links, but with the movement of personnel to, not from, Lincoln. Thurcetel struck the Last Small Cross (1009-17), and Quatrefoil (1017-23) issues at Lincoln. A moneyer of the same name is to be found on these two issues plus Pointed Helmet (1023-9) with a Torksey mint signature, but these are regarded as imitations. Thurcetel genuinely minted each of the four types from c.975 to c.991 [118]. Here the time lag suggests the Torksey and Lincoln moneyers are not the same man. Leofing struck Crux (c.991-7) at Torksey, and two moneyers of this name probably operated at Lincoln, as coins from here are minted by a Leofing for every king from Edgar to Harthacnut [119]. The first Leofing probably minted each issue from c.973 to c.985, then a further Leofing(s) probably struck coins from c.1003-c.1042. The Torksey Leofing fits exactly in the middle, separated by a full type either side. The Leofing minting the earlier issues is perhaps the more likely to be the Torksey Leofing, as the issues between 985 and 991 were not struck at Lincoln, although there may be no connection at all as this was a common name.

Overall there is no definite evidence that the moneyers who staffed the apparent expansion in minting in Lincolnshire during the reign of Edward the Martyr were drawn from Lincoln, although there are indications that when some of these new mints ceased to function the moneyer may have gone to work at Lincoln. The

strongest possibility of links are between Lincoln and Torksey, although even these are far from clear-cut.

The study of moneyers active at mints within the area of the Five Boroughs between 973 and 991 suggests that whilst there was some sharing of names between moneyers operating at Lincoln and Stamford, there is nothing to indicate that many moneyers worked at both, or that Lincoln was necessarily the dominant partner in any transfers. Between 973 and 991 fifteen moneyers mint coin at Lincoln, three of these having similar names to moneyers elsewhere in the area [120]. Freeman reveals a similar lack of a contact during the reign of Edward the Confessor, when again Lincoln does not appear to act as a centre of supply of moneyers for neighbouring mints. When Lincoln moneyers appear to stop producing for an issue or issues they do not then produce elsewhere. Similarly moneyers who mint a single type at Lincoln did not continue their careers at other mints [121]. Whilst moneyers could be peripatetic given the simple tools and facilities they required [122], there is little to suggest that Lincoln served as a base for such craftsmen.

Lincoln coin and Lincolnshire

The circulation of coin in Lincolnshire will be considered in depth elsewhere, however the importance of Lincoln coin within the county can be briefly summarised here. In the period from the Reform to c.1100 52 coins have been found in the county excluding Lincoln, and all but four of these have been assigned to particular mints. Lincoln minted almost half of these and a further three were minted at Stamford, and eight were from York [123]. This suggests not only, as one would expect, that Lincoln

was the most important mint in the county, but also that Lincoln, Stamford and York between them accounted for perhaps as much as 75% of the coin used in the county between 973 and c.1100.

In the period from 973-1100, 25 English coins have been found in Lincoln, of which 19 could definitely be assigned to particular mints and of these 9 were struck in Lincoln. The predominance of Lincoln is even more pronounced if the post-conquest coins are omitted, then Lincoln produced 9 out of only 14 coins which can be assigned to particular mints [124]. Lincoln was far less important in the pre-reform period. Whilst in this period the absence of mint signatures makes it difficult to attribute coins to Lincoln with certainty, there is a lack of single finds that could possibly have been minted at Lincoln. In the century prior to the reform it is possible that none of the eleven coins found in Lincoln were struck at Lincoln [125].

Conclusion

It is clear that Lincoln was an important mint from c.973, and probably for much of the period from c.870. Also when local die cutting was tolerated, Lincoln cut dies for many mints mostly in northern and eastern England. Nevertheless it does not seem to dominate nearby mints, with even minor mints like Horncastle and Louth not giving the appearance of being mere Lincoln minting satellites.

It is difficult to gauge the importance of the mint at Lincoln before 973, but very soon after it had become established as one of England's most important mints. The high output of post-Reform Lincoln perhaps argues that it was as important as this

throughout the tenth century, although the high percentage of national coin output are not really established until Long Cross (997-1003). It is probable that mint outputs for the last quarter of the tenth century were affected by political considerations that meant Lincoln did not mint Second Hand at all (c.985-991). The example of Chester warns against assuming relative outputs changed little during the course of the tenth century. Around 1000 Chester accounted for between 2% and 3% of coin output, whilst during the reign of Edward the Elder output appears to have been on an astonishing scale, with moneyer numbers rivalling even those at London [126].

Minting activity in the area including Lincoln was clearly reliant on continental artisans in its earliest phases. This suggest that the skills required were lacking amongst the craftsmen of the Danelaw, which may provide a pointer to developments in other craft areas. However elsewhere the Vikings do not have strong associations with the development of coinage. The crucial factor was probably that coinage was very well established in 'English' England. The Vikings began by copying 'English' pennies using continental moneyers before using the same moneyers to establish their own currency with a weight standard based on the old East Anglian rather than West Saxon weight standard. The continental influx appears to have dissipated quite quickly, either because they adopted local naming practices, or because minting in this period was not hereditary and they came to be replaced by local craftsmen. Between 973 and 1066 less than 10% of moneyers have continental names, and there is no sign that their distribution was linked to the Danelaw, as the highest number are to be found at Winchester

[127].

In terms of output, the mint at Lincoln probably expanded from the late tenth century up to the reign of Edward the Confessor. After this the evidence is contradictory. Lincoln's monetagium payment suggests that it maintained its position as one of the top mints, but the limited hoard and single find evidence suggests it had undergone a relative decline. In the pre-Reform period the lack of mint signatures makes it difficult to gauge the relative output of Lincoln. A mint operated at Lincoln for most of the period from c.920-973, although up to c.920 it is unclear what coin Lincoln was minting.

Production may have begun with the coin of Guthfrith, but after this Lincoln was on the periphery of East Anglian and York minting. During this period Lincoln probably produced some imitations of the St Edmund Memorial coinage. The later St Martin and Sihtric issues are rare finds, although the five St Martin coins were each produced using a different reverse die, each with a different rendering of the Lincoln mint signature. Also the coins of Sihtric have three different reverse designs, and the three coins of type A were produced by three different moneyers. It may be that the efficiency of Athelstan's recoinage ensured that the circulation of these issues was short-lived and so had little time to be lost or hoarded. The high number of NE I moneyers in the reign of Athelstan suggest that the relative output of the Five Boroughs in the second quarter of the tenth-century was at least on a par with that in the last quarter. Whether Lincoln's contribution to this was similar is not known but the balance of probabilities suggest that it was. If so

Lincoln may have minted anonymous coin on a significant scale in the decades leading up to the reign of Athelstan, as there is little evidence of mints becoming prolific producers overnight.

For over a century at the beginning of our period the coinage of Lincoln shows signs of political isolation or independence. Until the mid tenth century Lincoln was under fluctuating political control, and the lack of Second Hand suggests that even late in the tenth century it was part of a politically distinct area. This provided scope for alternative political control. The St Martin coins may reflect a separate, possible urban based authority. Alternatively the NE I style may point to the influence of the local ealdorman in running an area newly under West Saxon control. Following the conquest of this area by Edward or Athelstan it was probably placed under the control of an ealdorman. Jonsson has argued that such style variations reflect the independent control of ealdormen [128]. Athelstan gave minting privileges to the York 'moneyer', and in East Anglia coins were struck in the name of Edward well into Athelstan's reign. In the area of the Five Boroughs the stylistic differences reflect either Athelstan's inability or reluctance to interfere directly in moneying. Instead perhaps moneying was under a figure similar to Athelstan Half King in East Anglia, controlling the coin design and production process. The level of royal control should not however be underestimated; despite the variety of designs their weights were similar. Athelstan may have tolerated a degree of independence, reflected in the coinage, as the price for incorporating a new area into his kingdom.

The mint at Lincoln was very important, but what this tells

us about Lincoln depends on how we regard the nature of moneying. In other words was it in essence an economic, political or administrative process? The political is apparent from the inscriptions, and without economic activity the production of large amounts of coin would have been superfluous. Nonetheless the production of coin was an administrative process, and so the high output of Lincoln identifies it as an administrative centre of primary importance. Whilst there are few signs of its personnel controlling nearby mints, Lincoln's influence over them may have been in forms other than personnel. Whilst attention has been drawn to the independence of Lincoln, it flourished as an administrative centre in a newly unified England. This may be seen in the distribution of dies associated with Lincoln, in contrast to the more insular and less integrated situation at York and Chester. This administrative role undoubtedly brought a whole range of economic spin-offs in terms of trade links and of more nebulous 'central place' benefits, which will be investigated in further chapters.

Chapter 2: Notes

1 For instance in the reign of Alfred coins from Exeter and Winchester had the title Rex Saxonum, which was omitted from coins struck in Mercia. M Dolley, 'Alfred the Great's abandonment of the concept of periodic recoinage', in Studies in Numismatic Method presented to Philip Grierson, eds., C N L Brooke et. al. (Cambridge, 1983), pp.156-7

2 C E Blunt, 'The coinage of Athelstan, King of England 924-39: A Survey', British Numismatic Journal, 42, (1974), p.41

3 All Edgar's Reform type (c.973-5) dies were struck at a single centre, whereas for Cnut's Quatrefoil the number had grown to 19. M Blackburn and S Lyon, 'Regional die production in Cnut's Quatrefoil issue' Anglo-Saxon Monetary History ed., M Blackburn (Leicester, 1986), p.259

4 See for instance I Stewart, 'Coinage and Recoinage after Edgar's Reform', in Studies in Late Anglo-Saxon Coinage, ed., K Jonsson (Stockholm, 1990), pp.456-485

5 The principal exception to this is the Last Small Cross (c.1009-1017), which probably had an extended run due to the death of Ethelred and the ensuing conflict between Edmund and Cnut.

6 M Dolley, 'An Introduction to the coinage of Æthelræd II' in Ethelred the Unready, Papers of Millenary Conference, ed., D Hill (Oxford, 1978), p.120

7 V Smart, 'Scandinavians, Celts and Germans', in Anglo-Saxon Monetary History, op.cit., pp.176-7

8 For instance the 'Two Line' coins of Alfred were produced by about sixty moneyers; numismatists, by using variations in lettering, style and insciption have been able to divide these coins between Canterbury, London, Winchester and Mercia. This however only distinguishes between various die cutting centres, not actual mints. D M Metcalf, 'The monetary history of England in the tenth century viewed in the perspective of the eleventh century', in Anglo-Saxon Monetary History, op.cit., p.139

9 C S S Lyon, 'Historical problems of the Anglo-Saxon coinage, 4- The Viking Age', British Numismatic Journal, 39 (1970), p.197

10 See Appendix 1 and Map 34. More fully discussed in the trade chapter

11 M Blackburn, 'The earliest Anglo-Viking coinage of the southern Danelaw (late 9th century)', Proceedings of the

10th International Congress of Numismatics 1986, ed., I A Carradice (London, 1990), p.341

12 M Archibald, 'Coins and Currency', Viking Artefacts, ed., J Graham-Campbell (London, 1980), p.104. Suggestion that they were struck in London from, M Dolley and C E Blunt, 'The chronology of the coins of Alfred the Great, 871-99', in Anglo-Saxon Coins, ed., M Dolley (London, 1961), p.85

13 M Blackburn, 'The earliest Anglo Viking coinage of the southern Danelaw', op.cit., p.344

14 Ibid., p.342, and M Blackburn, 'The Ashdon (Essex) hoard and the currency of the southern Danelaw in the late ninth century', British Numismatic Journal, 59 (1991 for 1989) p.17. Their identification rests on an anomalous style, light weight and poor literacy. If two of these criteria are present a coin is likely to be imitative, but the presence of one is usually insufficient unless an extreme case.

15 H R Mossop, The Lincoln Mint, c. 890-1275, (Newcastle, 1970) plate I

16 C E Blunt and M Dolley, University Collection - Reading Sylloge of Coins of the British Isles 11 (Oxford, 1969) Nos. 20 and 28

17 M Dolley and C E Blunt, 'The chronology of the coins of Alfred the Great, 871-99', Anglo-Saxon Coins, ed., M Dolley, (London, 1961), p.83. and M Archibald, A Viking copy of an Alfred London monogram penny from Doncaster', The Yorkshire Numismatist, 1 (1988), pp.10-11

18 M Dolley and C E Blunt, Ibid., p.90

19 M Blackburn, 'The Ashdon (Essex) hoard and the currency of the southern Danelaw in the late ninth century', British Numismatic Journal, 59, (1991 for 1989) p.19

20 Including a radiating 'O', narrow margin and delicate lettering, Ibid., p.19

21 D M Metcalf, 'Introduction', Coinage in Ninth-Century Northumbria, Tenth Oxford Symposium on coinage and Monetary History, ed., D M Metcalf (Oxford, 1987), p.6

22 For example M Blackburn, C Colyer and M Dolley, Early Medieval Coins from Lincoln and its Shire, Archaeology of Lincoln, 6 (London, 1983), p.12

23 M Blackburn,'The earliest Anglo-Viking coinage of the southern Danelaw', op.cit., pp.101-2

24 C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England: from Edward the Elder to Edgar's Reform (Oxford, 1989), p.54

25 P Grierson and M Blackburn, Medieval European Coinage: I, The Early Middle Ages (Cambridge, 1986), p.320

26 For example ibid., p.323

27 I Stewart, 'The St Martin coins of Lincoln', British Numismatic Journal, 36 (1967), pp.46-54

28 C E Blunt, C S S Lyon and B H I H Stewart Coinage in Tenth Century England, op.cit., p.106. See also Fig 2

29 I Stewart, 'The Anonymous Anglo Viking issue with sword and hammer types and the coinage of Sitric I', British Numismatic Journal, 52 (1982), p.112

30 I Stewart in C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England op.cit., p.107 and p.192. Also see below for further discussion of this possible Lincoln mint signature.

31 I Stewart, 'The anonymous Anglo-Viking issue with sword and hammer and the coins of Sitric I' op.cit., p.114

32 M Archibald, 'Coins and Currency' op.cit., pp.107-8

33 Ibid., p.108

34 ASC Ms.A 918

35 F M Stenton, Anglo-Saxon England (Oxford, 3rd Edition 1971), p.326

36 A P Smyth also questions the certainty that Lincoln fell under West Saxon control in 918. He suggests that even if it did it may have fallen back under the control of York during the early 920's. A P Smyth, Scandinavian York and Dublin II: The History and Archaeology of Two Related Viking Kingdoms (Dublin, 1979) pp.7-9

37 I Stewart, 'English coinage from Athelstan to Edgar' The Numismatic Chronicle, 148 (1988) p.202. 35 of the 47 or 48 orthodox Late Horizontal coins in the Morley St Peter (near Norwich) hoard were of a NEI related type, and some of the moneyers of this style were also moneyers of the St Edmund Memorial coinage.

38 C E Blunt, 'The coinage of Athelstan, 924-939',British Numismatic Journal, 42 (1974), pp.35-160

39 Calculated from ibid., pp.62-106

40 For instance Arnulf, Enelbert/Incgelbert, and Sproc/Sprohene. Ibid., pp.81-2 and 85-6

41 Ibid., p.87

42 This can be compared with the 72 minted in York between 939 and 944. I Stewart in C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England, op.cit., p.213

43 In C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England op.cit., the coinage of this period is broken down into three broad types- namely Bust (B), Circumscription (C), and Horizontal (H). The Horizontal group constitute the bulk of the coinage. The second letter in the classification indicates the ornament to be found above and below the inscription- in the case of HT, Trefoil. HT is found throughout the series and is the most plentiful. The final number indicates the central line of ornamentation. In this case 1 = 3 crosses. Hence HT1 =

```
o
o   o
+   +   +
o   o
    o
```

For further details of this typology see Ibid., pp.11-13

44 I Stewart in ibid., p.218

45 Style B is to be associated with Stamford if 'RE ZT' legend is a blundered version of 'RE(X) ST'. Ibid., p.219

46 Ibid., p.193

47 Ibid, pp.192-3

48 I Stewart, 'English coinage from Athelstan to Edgar', op.cit., p.204

49 C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England, op.cit., p.148

50 Ibid., pp.153-4. Our knowledge of this style is largely derived from a hoard deposited late in the reign of Edgar at Tetney, which is about 28 miles north-east of Lincoln. There are six different moneyers on 19 NE IV coins in the Tetney hoard, which made up about 25% of all coins of Eadwig in this hoard.

51 Ibid., pp.160-1

52 Ibid., p.159, footnote 2

53 Ten moneyers: Adelaver, Eanulf, Farthein, Grid, Ubein (all Lincoln), Levic (Lincoln or Stamford), Manna (Stamford), Ingolfr (Newark), Albutic and Isembert not identified on any post 973 coin. Information from C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England, op.cit., p.208 and p.244. and K Jonsson and G van der Meer, 'Mints and moneyers, 973-1066', in Studies in Late Anglo-Saxon Coinage, ed., K Jonsson (Stockholm, 1990), pp.80-83 and 123-136

54 C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England, op.cit., pp.178-80

55 Ibid., p.180

56 D M Metcalf, 'Continuity and Change in English Monetary History', British Numismatic Journal, 51 (1981), Appendix V pp 72-85. Dates for post Reform coinage issues are those postulated by Dolley in his sexenniel cycle. Whilst doubt has been cast upon this, most criticism is of the system itself rather than the dates. For instance I Stewart, 'Coinage and recoinage after Edgar's Reform', op.cit., Most alternative dates vary at most by one or two years from those of Dolley.

57 K Jonsson and G van der Meer, 'Mints and moneyers, 973-1066', op.cit., pp.80-83

58 D M Metcalf, 'Continuity and Change in English Monetary History', op.cit., Appendix V pp.72-85

59 P A Stafford, 'The historical implications of the regional production of dies under Æthelred II' British Numismatic Journal, 48 (1978) pp.35-51

60 I Stewart, 'Coinage and recoinage after Edgar's reform', op.cit., p.473

61 D M Metcalf, 'Continuity and Change in English Monetary History', op.cit., Appendix V pp.72-85

62 Calculated from K Jonsson and G van der Meer, 'Mints and moneyers, 973-1066', op.cit., pp.80-83

63 Ibid., pp.80-83

64 H R Mossop, op.cit., plates XIX-XXXI.

65 The eight moneyers new to Quatrefoil (c.1017-24) used on average 6 reverse dies each whereas the 24 established moneyers used 8.7 reverse dies. Calculated from Ibid., Plates XXXI-XLI

66 Calculated from D M Metcalf, 'Continuity and Change in English Monetary History', op.cit., Appendix V pp.72-85

67 Ibid., pp.72-85

68 A Freeman, The Moneyer and the Mint in the reign of Edward the Confessor, 1042-66, BAR Brit Series 145 (Oxford, 1985)

69 Ibid., p.56

70 See Figs 3 and 4, calculated from ibid., p.528 and p.530. During the early issues of the reign the top 7-8 mints accounted for about 50% of all moneyers, by 1062-5 this percentage was dispersed between the top fifteen, p.55. Metcalf,in his ranking based on die usage, places Lincoln second behind London, although Freeman suggests this is a result of the greater study of Lincoln coins and hence dies

than has so far occurred for other mints

71 A Freeman, op.cit., p.116

72 H E Pagan, 'The coinage of Harold', in Studies in Late Anglo-Saxon Coinage, op.cit., p.198-9, and K Jonsson and G van der Meer, 'Mints and moneyers, 973-1066', op.cit., pp.80-83

73 D M Metcalf, 'Continuity and Change in English Monetary History', op.cit., Appendix VII pp.84-5

74 Lincolnshire Domesday Book, folio 336c

75 P Grierson, 'Domesday Book, the Geld de Moneta and Monetagium: A forgotten minting reform' British Numismatic Journal, 55 (1986), Table 2, p.89

76 D M Metcalf, 'Notes on the Paxs type of William I', The Yorkshire Numismatist, 1 (1988), pp.13-26

77 V Smart, 'Scandinavians, Celts and Germans', op.cit., p.176

78 M Blackburn, 'The earliest Anglo-Viking coinage of the southern Danelaw (late 9th century)', op.cit., p.347

79 M Archibald, op.cit., p.108

80 'Independent municipal authority' is further discussed in Chapter eight, Lincoln and the Urban Populace

81 For instance A P Smyth, op.cit., p.6

82 I Stewart, 'The English coinage from Athelstan to Edgar' op.cit., p.204

83 This second aspect is discussed more fully in the Trade chapter, pp180-4.

84 Calculated from A Freeman op.cit., Table 8A and 8B, pp.16-17

85 Ibid., p.16-17 and Table 12 p.117

86 See fig 7. Calculated from A Freeman op.cit., Appendix V pp.540-2 and Appendix IV pp.535-8. The major Western mints are those which are represented by more than 100 coins from the reign of Edward the Confessor; that is Chester, Gloucester, Exeter, Shrewsbury and Wilton,

87 M Blackburn, C Colyer and M Dolley, op.cit., p.24

88 H B A Peterssen 'Coins and weights. Late Anglo-Saxon pennies and mints c.973-1066', in Studies in Late Anglo-Saxon Coinage, ed., K Jonsson (Stockholm, 1990), pp.207-433

89 K Jonsson, The New Era. The Reformation of the Late Anglo-Saxon coinage (Stockholm, 1987), p.90. The other six are

Caister, Louth?, Horncastle, Stamford, Northampton and Oxford.

90 M Dolley and T Talvio, 'The regional pattern of die cutting exhibited by First Hand pennies of Æthelred II preserved in the British Museum' British Numismatic Journal, 47, (1977), pp.53-65

91 K Jonsson,'Grantham - A new Anglo-Saxon mint in Lincolnshire?' op.cit., pp.104-5

92 K Jonsson, The New Era, op.cit., pp.88-93

93 M Blackburn, 'Do Cnut the Great's coins as King of Denmark date from before 1018? - Appendix', Sigtuna Papers, Proceedings of the Sigtuna Symposium on Viking-Age Coinage, 1989, eds., K Jonsson and B Malmer (Stockholm, 1990), p.61

94 Ibid., pp.55-61

95 M Blackburn and S Lyon, 'The regional die production in Cnut's Quatrefoil issue' op.cit., pp.223-72

96 Ibid., p.238

97 Ibid., p.235-6

98 Ibid., Appendix I pp.260-3

99 K Jonsson and G van der Meer, op.cit., pp.47-136

100 H R Mossop, op.cit., 'Table of types and moneyers', V Smart fold out sheet in the back. And C E Blunt, C S S Lyon and B H I H Stewart, Coinage in Tenth Century England, op.cit., Table 18 p.244

101 K Jonsson and G van der Meer, op.cit., pp.49-136, and K Jonsson, 'Grantham - A new Anglo-Saxon mint in Lincolnshire?' op.cit., p.105

102 K Jonsson and G van der Meer, op.cit., p.89. Elsewhere Jonsson argues that coins with *Lvveic* mint signature are more likely on stylistic grounds to be from East Anglia, Wessex or southern Danelaw, and suggests Lympne is the most likely mint K Jonsson, The New Era op.cit., p.147

103 H R Mossop, op.cit., Index of moneyers

104 K Jonsson and G van der Meer, op.cit., p.74

105 H R Mossop, plate I

106 K Jonsson and G van der Meer, op.cit., p.74

107 Ibid., p.102

108 V Smart, Sylloge of Coins of the British Isles, 28

Cumulative Index of volumes 1-20, (1981). fuller detail Sylloge of Coins of the British Isles 2, 736

109 K Jonsson, Viking Age Hoards and Late Anglo-Saxon coins (Stockholm, 1986), p.37

110 H R Mossop, op.cit., Plates V, VI and CI

111 It has been suggested that this was perhaps minted in Scandinavia, as the obverse die of this coin found its way to Scandinavia. C S S Lyon, G van der Meer and R H M Dolley, 'Some Scandinavian coins in the names of Æthelred, Cnut and Harthacnut attributed by Hildebrand to English mints', British Numismatic Journal, 30 (1961), p.243

112 H R Mossop, op.cit., Table of types and moneyers, V Smart, Fold out sheet at the end

113 A J H Gunstone, Sylloge of Coins of the British Isles, 27, Lincolnshire Collections, (London, 1981), 1. As Chester has been ruled out as the source for this, Caistor does seem a likely contender, particularly as the signature on the earlier coins was CASTR, which is not so far removed from this signature.

114 K Jonsson and G van der Meer, op.cit., p.116

115 A J H Gunstone, Sylloge of Coins of the British Isles, 17, Collections in Midlands Museums (1971), 180. This is the cut half of a penny, excavated at Tamworth.

116 For a fuller discussion of the reasons behind the suggestion that these were imitations see C S S Lyon, G van der Meer and R H M Dolley, op.cit., pp.235-51

117 H R Mossop, op.cit., plate XVI and K Jonsson and G van der Meer, op.cit., p.107

118 K Jonsson and G van der Meer, op.cit., p.107

119 Ibid., p.82

120 Leofing, as we have seen, mints coin from Reform to First Hand (c.973-85) at Lincoln and to First Small Cross (c 978-9) at Stamford. If they were the same individual this would involve him working at both Lincoln and Stamford during an issue that ran from c.978-9. An Æscman minted Reform at both Lincoln and Stamford, then minted the issue of Edward the Martyr at Stamford and First Hand at Lincoln. It is difficult to know whether these were the same moneyer, but even if they were it need not suggest Lincoln was strongly influencing Stamford. Grimr mints from Edward the Martyr to Long Cross at Stamford and at Lincoln, although at Lincoln there are no examples of First Hand by this moneyer. A moneyer of the same name also mints Edward the Martyr's issue at Derby. Information on the moneyers at Lincoln Stamford, Derby, Leicester, Nottingham, Newark and

Peterborough derived from K Jonsson, Viking Age Hoards op.cit., pp.37-42, with additional information from H R Mossop, op.cit., plates V, XII, and XIII

121 The only exception to this is Wilgrip, but he was well established at Stamford before he perhaps minted a single issue at Lincoln. A Freeman, op.cit., p.118 and p.123

122 For a fuller discussion of minting techniques see D Sellwood, 'Medieval Minting Techniques', British Numismatic Journal, 31 (1962), pp.57-65

123 See Appendix 1 and M Blackburn, C Colyer and M Dolley op.cit., table 1

124 See Table 3

125 The only one of these eleven that was possibly struck at Lincoln was a Two Line of Edgar, struck by Ingolf, who was a post-reform moneyer at Newark. M Blackburn, C Colyer and M Dolley, op.cit., table 1, pp.34-36 nos. 1-11.

126 D M Metcalf, 'Continuity and change in English monetary history - Part 2', op.cit., p.76 and D M Metcalf in Anglo-Saxon Monetary History, op.cit., p.144

127 Seven at Winchester, information from K Jonsson and G van der Meer, op.cit., pp.123-136

128 K Jonsson, The New Era: The Reformation of the Late Saxon Coinage, op.cit.

CHAPTER 3

Pottery and Lincoln

The focus of this section will be upon the early medieval pottery found or produced in Lincoln. Closely linked to the function of towns as minting centres was their role as centres of industrial and craft production, and trading exchange. Pottery perhaps offers the greatest potential for advances in the understanding of Anglo-Saxon craft production. The evidence itself comprises sherds of finished pots and occasionally of wasters, and very occasionally of actual kilns. Its value as evidence stems not only from the sheer quantity of material but also because some pottery can be closely dated, its place of production located and its use identified, although this is far from always the case. Furthermore some of the variations in production techniques can be identified from the excavated pottery sherds [1].

Before discussing the Lincoln evidence, some consideration of the development of this craft up to the later Anglo-Saxon period will provide an essential backdrop. It seems that in the centuries following the Roman withdrawal the expertise for producing wheel-thrown pots was lost and remained so for several centuries. At some point during the seventh century slow wheel-thrown production resumed at Ipswich [2]. Similar wares were also produced in the north-east of 'England' at monastic sites such as Whitby during the same period [3]. Elsewhere the demand for quality wheel-thrown ware seems to have been satisfied by foreign imports from the Rhineland and Northern France. Demand

for more basic pots was met by very coarse handmade wares, usually produced by coiling long strands of clay. Some of these may have been made by specialist producers, as they were carried over considerable distances despite their coarseness; most however were probably purely subsistence products.

By c.850 there was a wide variation in the nature of pottery provision. At Ipswich quality pots were well fired in proper kilns and traded both overland and along most of the east coast, although the fast wheel was not used for their production until the late ninth or early tenth century [4]. In some other areas only coarser handmade wares were available, and in much of western Britain there seems to have been no pottery at all [5]. Only at Ipswich does Hodges detect the production of pottery by full-time craft specialists, whose specialisation was indicated by the scale and distribution of their production as well as their receptiveness to new ideas. He suggests that those areas using other pottery were supplied by local domestic craft production, using very local resources and traditional forms [6]. Recent research has questioned this and instead suggest that even in the Middle Saxon period production centres were few. For instance southern Maxey-type wares, produced in Bedfordshire or Northamptonshire were found as far away as southern Lincolnshire, and more northern types produced in Lincolnshire were found in Yorkshire [7].

From the late ninth century onwards there seems to have been a far greater use of pottery than was apparent in the Middle Saxon period. It was only in the later Anglo-Saxon period that the practice of using pottery for culinary purposes again became widespread, with cooking pots the most common vessel type [8].

Archaeology provides evidence for pottery production at a wide range of places from very small rural settlements to elite centres and large towns. Overall there seems to be a strong association between 'towns' and sites of pottery production in late Anglo-Saxon England, with kiln(s) and\or wasters found at Norwich, Stamford, Thetford, Ipswich, Torksey, Stafford, Lincoln, Leicester, Northampton, Nottingham, Gloucester, Chichester and Exeter [9]. An urban-based pottery industry was quite unusual outside this period, with potting mostly a rural rather than urban craft in the medieval period as a whole. Pottery production even in this period was not a solely urban activity. Kilns or wasters have also been found on a number of rural sites. In East Anglia for instance there is evidence of several rural kilns, particularly at the very end of the Anglo-Saxon period. Wasters suggest a tenth- or eleventh-century kiln at Bircham, and an eleventh-century kiln was in operation at Langhale, which McCarthy and Brooks describe as 'an isolated kiln in a dispersed rural settlement', yet this contained 100-120 vessels [10]. In Domesday Book there are three references to potting or potters, at Bladon (Oxon.), Haresfield (Gloucs.) and Westbury (Wilts.) [11], and a number of associated place-names such as 'Potertun' in Yorkshire. Some of these rural potteries referred to in Domesday Book were probably established earlier in the period. For example a group of potters at Marchington (Staffs) must have been settled there well before the mid tenth century as reference is made to *Potteresaege* here in a charter of 951 [12]. Nonetheless the Anglo-Saxon pottery industry seems to have exhibited a definite and unusual tendency to be situated in

towns.

Much of the urban pottery, particularly in eastern England, has a starting date which is very close to that postulated for urban take-off, including at Stamford, Leicester, Northampton, Norwich, Torksey and Lincoln [13]. Whilst this connection may, in part, derive from a circular argument in which urban finds of significant amounts of pottery are seen as one of the most important indicators of urban take-off, the link is possibly stronger than this. Newly emerging towns probably encouraged potters either indirectly through the market opportunities they offered, or more overtly by offering incentives or prohibitions against producing elsewhere. Unfortunately dating is rarely precise enough to enable the beginnings of pottery production to be exactly positioned on the chronology of a place's urban development.

Pottery of the late ninth- and particularly the tenth-century has been found on a large number of sites in Lincoln and its suburbs [14]. Detailed information about the pottery found in Lincoln relies very heavily on four excavated and published sites: Flaxengate, Silver Street and to a lesser extent Broadgate East and St Marks Church. Of paramount importance are the 79,000 sherds of pottery from the post Roman period up to the early thirteenth-century recovered from the excavations carried out at Flaxengate between 1972 and 1976 [15]. Most of the sherds were from loam dumps which sealed successive building phases, and so were often stratigraphically fairly secure [16]. Unfortunately after publication it became clear that some of the stratigraphy of the Flaxengate site had been wrongly dated due to the mistaken assumption that a turf line on one side of the site was a

continuation of one on the other side of the site. Now after further work a number of different turf lines have been identified, which has led to the pottery sequence on some parts of the site being moved forward and others moved backward [17]. Flaxengate still however offers the best opportunity for statistically significant analysis of the forms and types of pottery utilised in a part of Lincoln over the whole of the early medieval period. Whether this assemblage accurately reflects the pottery used in early medieval Lincoln will only be known once a number of sites throughout the city have been excavated, published and resulted in further large and stratigraphically secure pottery collections.

Flaxengate's capacity to serve as a microcosm of the pottery in Lincoln at this time is perhaps most questioned by the sites' proximity to the Silver Street kilns [18]. The type produced in the kilns there accounts for well over half of the early medieval pottery found at Flaxengate. It has also been suggested that the semi-industrial nature of the site may have distorted the pottery finds [19]. Its 'semi-industrial nature' may in fact increase, rather than decrease, the likelihood that the pottery found at Flaxengate was typical of that utilised in Lincoln, given that semi-industrial may prove to be a very apt description of most sites in Anglo-Saxon towns.

Excavations at a site near Silver Street have also uncovered a large amount of pottery as well as the kilns. Whilst some was given to collections before it was documented, and some Roman and non-kiln type pottery were discarded at the time of excavation, and several thousand tiny flakes found in the kilns were not

quantified, this still left a sample of over 22,000 sherds [20]. Unlike Flaxengate however these provide little guide to pottery proportions in Lincoln as a whole, as all but 495 of these sherds were probably products of the Silver Street kilns. The pottery from Silver Street does however offer some insight into the various forms produced in a single Lincoln ware.

More importantly the Silver Street site provides the only actual evidence of Late Saxon kilns found in Lincoln. The remains of three kilns were found in one of the three trenches that were used to excavate the site due to the time constraints [21]. The stratigraphy of the Silver Street site was far more complex and insecure than that at Flaxengate, and was exacerbated by the necessary speed of excavation. Whereas at Flaxengate the finds can often be dated within 25-40 year periods, at Silver Street the phases are of a far longer duration, with much of the material categorised as belonging to period IV\V which is 'Late Saxon or Medieval'. In addition, the kiln remains are quite fragmentary, and probably only relate to a relatively short period within the extended period of Lincoln Kiln Type production. The small area of excavation means that it is not possible to tell whether these kilns formed part of a much larger complex, or whether there were few or no other kilns in the vicinity.

The excavations at Broadgate East, in the medieval suburb of Butwerk just outside the city walls, uncovered timber buildings of probably the tenth or early eleventh century. However the complexity of the site and the general lack of detailed work on the pottery prior to these excavations have meant that Broadgate East provides only a preliminary sketch of the pottery industry

[22]. Unlike Flaxengate and Silver Street, there are few remaining pottery sherds for the period up to the end of the end of the eleventh century, which now number only just over 700 [23]. The dating of the pottery groups was quite wide, for instance many of the groups are dated from the tenth/early eleventh century [24]. At St Marks Church much of the pottery found came from Roman or post seventeenth-century levels. 244 sherds of post-Roman pottery were found in the post-Roman layers up to c.1120, although some of this was definitely intrusive [25]. Overall the finds from St Marks appear to have been thoroughly mixed by construction and grave digging activity.

Pottery in Lincoln c.900

Beginning our study of the Lincoln pottery industry with a discussion of the pottery available around 900, enables this to act as a basis for a discussion of later developments. It also provides a firm starting point from which the earlier origins of pottery production at Lincoln can be traced back from.

Information on the pottery used in Lincoln c.900 is largely derived from the published Flaxengate material, as the material from Broadgate, St Marks Church and Silver Street is slightly later in date. As can be seen from Fig 8 almost all the pottery found and dated to Periods 1 and 2 (c.870-930/40) at Flaxengate is regarded as being produced at or very near Lincoln. Whilst the data on which Fig 8 is based is currently undergoing revision, the broad conclusions of this figure are likely to remain. Only 4% of pottery is attributed to centres other than Lincoln, including sources both within and outside Lincolnshire.

Over four-fifths of the pottery found at Flaxengate for this period comprised of a single type known as Lincoln Kiln Type shelly ware (LKT) (see fig 8). An actual production site has been located for this ware, at least in the mid to later tenth century. Large quantities of LKT sherds, mostly misfired, have been found in the kiln fills at Silver Street, which are similar to sherds attributed to the mid to later tenth century at Flaxengate [26]. The examples of this ware found at Flaxengate c.900 may have been produced at the same site using different kilns, outside the small excavated area at Silver Street. Alternatively they may have been produced elsewhere, particularly as there seems to be a lack of earlier LKT products found at Silver Street [27].

Lincoln pottery has two basic tempering substances, either sand or shell. LKT is a shelly ware, although whether shell occurred naturally in the clay or whether fossilised shell occurred in the temper remains an unresolved matter [28]. Most of the earlier LKT pots were fully wheel-thrown; however after Period 1 (c.900) it seems that most vessels were piece-formed, that is the body of the vessel was wheel-thrown as a cylinder, then the base was added after the cylinder was removed from the wheel [29]. It is possible that this production technique would enable a less skilled worker such as a child to form the bases enabling production to be speeded up [30]. The excavated kilns and the pottery itself tend to suggest that the pottery was fired in simple bonfire or clamp 'kilns', that consisted of stone and/or clay lined pits, which were filled with fuel and pots and then possibly covered with some sort of temporary roof structure constructed out of sand, earth, clay or some other material [31].

This picture is however far from established, partly because of the unique size of kiln 200 at Silver Street. This was approximately 1.5m x 5.9m, with walls surviving up to 1.2m, which makes it of a scale not found elsewhere in England. The unique size has led to the suggestion that it was used, either to dry pottery prior to firing, or as a lime kiln [32]. There is however little evidence for either suggestion, and it is still regarded as a likely kiln, although the lack of rounded corners would have resulted in particularly high wastage rates.

LKT, unlike most other Lincoln wares, consists almost totally of a single fabric. The Flaxengate sherds were classified using four element fabric codes. Of the 40,627 sherds of LKT found at Flaxengate all but 108 of these are given the same fabric code; C/5/p/14 with the remainder C/1/p/3 [33]. The fourth element distinguishes between fabrics which although sharing the first 3 coding elements are similar rather than identical. This final element takes account of the method of manufacture, the surface texture, decoration, glaze surface, core colour, and clay description [34]. The LKT from Flaxengate consists of a very uniform production run despite the large amounts produced. It is the dominant type in tenth-century levels on every early medieval site so far excavated in Lincoln [35], and was by far the most numerically important pottery type for the residents of early to mid tenth-century Lincoln.

The other main category produced in this period were sandy and gritty wares, which used sand as the basic tempering agent. The former Lincoln Sandy category has undergone major revision (see fig 9). Originally attention was drawn to the continuous

production of LS from the ninth to the thirteenth century [36]. Now however it seems that sandy ware was produced in three distinct periods, with quite lengthy dormant phases in between. Around 900 Late Saxon Lincoln Sandy (LSLS) and Early Lincoln Glazed Sandy Ware (ELSW) were probably being produced. Late Saxon Lincoln Sandy ware can be split into two groups, A and B [37]. The other category, Early Lincoln Glazed Sandy is also sub-divided, this time into three sub groups. Group A is a hard, almost semi-vitrified fabric, which resulted in some sherds of this ware previously being categorised as wasters, leading to the suggestion that it was produced close to Flaxengate. This ware may not however have been produced in Lincoln, and parallel forms have been found at Coppergate in York [38]. Group B is mostly splash-glazed unlike A which is usually glazed with a thick overall glaze. Group B and Group C exhibits many elements, such as rim shape and diamond roller stamping, not found on other sandy wares but similar to LKT shelly ware [39]. The lead glazing on ELSW was very competently executed. Adams Gilmour has noted that the interchangeability of decoration of the various fabrics of the former LS category, suggests that by c.900 there were probably several workshops producing sandy wares in Lincoln [40]. The wide variety of sandy fabrics found at Flaxengate may support this, although the Silver Street authors suggest that similarities in manufacturing, form, colour and rim shape provide a better guide than fabric as a means of attributing wares to individual potters or potteries [41]. Whilst some of the finer Glazed wares may have come from elsewhere, some of the cruder wares are from Lincoln. Overall detailed analysis has suggested a common source for the clay and possibly also for the quartz

filler for both LSLS and some of ELSW [42].

The other group of sandy wares found at Flaxengate in this period, termed Lincoln Gritty wares (LG), were tempered with coarse quartz sand. Whilst the tempering differed, LG seems to have shared a common clay source with the other sandy wares. LG seems to have had a very short production life. It only makes up about 1% of all the pottery found at Flaxengate, and over 60% of the total number of LG pottery sherds found at Flaxengate were deposited by the end of Period II, suggesting that this ware had ceased production by 900 or a little after [43]. The concentration of Lincoln Gritty within this earlier period has also led to its association with the beginnings of pottery production at Lincoln. LG wasters were found by Webster in pits on the eastern side of Flaxengate in 1945-8, probably suggesting production in the vicinity [44]. This ware comprises of six closely related fabrics, with all but one of these being wheel-made. Whilst the scale of production appears to have been quite limited, the quality was good, with nearly all of the sherds showing signs of well executed finishing techniques, such as very clear roller stamping [45], although unlike the other sandy ware none of this appears to have been glazed.

Only 4% of the pottery found at Flaxengate c.900 has been attributed to sources other than Lincoln. Most of this was probably produced elsewhere in Lincolnshire, with the largest groupings Local Late Saxon Shelly Ware, Stamford Ware and Torksey Ware. The largest of these groups in the early period were the Local Late Saxon Shelly wares, which account for 35% of the non-Lincoln wares. The relatively large quantities of Local Shelly

wares found at Flaxengate and the wide variety of fabrics and also of techniques employed suggests a number of different production centres, some perhaps near Lincoln [46]. The proportion of this and also of local sandy and sandy/shelly ware can perhaps be regarded as providing evidence of contact between Lincoln and its rural hinterland, although the variety of types argues against an organised trade, involving a rural pottery producing to satisfy an urban demand.

Stamford was the largest identified external source of pottery in the late ninth/ early tenth century, accounting for 21% of the non-Lincoln finds. There is evidence of contact between Lincoln and Stamford from an early date, and although numbers are small it does provide evidence of specialised trade. Over half of the Stamford sherds from this period have deposits on them that indicate they were used for industrial purposes, including a group of sherds from what appear to have been copper-working crucibles [47]. This points to a product produced at Stamford to fulfil specific industrial purposes at other urban centres such as Lincoln and York [48]. The early association of Stamford ware with industrial usage was very different from Lincoln products, and from other non-Lincoln wares which rarely show signs of industrial usage.

The other one-fifth of the non-Lincoln pottery from c.900 were initially regarded as products from further afield. The 'English and Regional' group mainly consisted of a wide variety of fabrics termed 'regional shelly wares'. Adams Gilmour tentatively suggested that they were the products of a number of centres located along a limestone formation running from Lincolnshire through to the south east Midlands [49]. More

recently research has led to most of these being considered as local products which probably reflect the circulation of local pottery, rather than indicating trade with specific centres [50].

The remaining wares found in this early period are termed 'foreign'. They will be considered when the pottery is looked at from the perspective of trade; here it is sufficient to note that 5% of 4% is not very much, and that no more than four sherds of any one 'foreign' fabric are found in any one period of the early Middle Ages [51].

A number of general observations can be made about the pottery being used in Lincoln in about 900. Firstly by far the most common form was the basic utilitarian pot (cooking pot/jar). At Flaxengate about 86% of pottery finds, whose form could be identified, were cooking pots or jars [52]. Pottery was mostly used for the storage and cooking of foods, with table-wares only becoming a feature later in the period. The pottery being used in Lincoln c.900 was almost all produced in Lincoln, and consisted principally of LKT and LSLS, with small amounts of LG which had probably ceased production by then. Whilst only LKT can certainly be attributed to Lincoln, Lincoln Gritty wasters were found by Webster in pits on the eastern side of Flaxengate (1945-8) and some of these have now been re-identified as LSLS wasters, and over 300 waster sherds of the various Lincoln sandy wares have been found all over the Flaxengate site. Furthermore LSLS and ELSW wasters were dumped at Flaxengate to serve as hardcore for the road, which makes it likely that they were produced in Lincoln [53]. Overall Lincoln is very likely to have been the production centre for these wares, although only LKT is

actually proven as a Lincoln product. Finally even though the industry was producing basic pottery the quality of the production was good. LKT was fully developed by this time, LG was mostly finely finished and some of the sandy wares were very competently glazed.

Origins of the Lincoln Pottery Industry

Having discussed the types of pottery available in c.900, consideration will be given to the starting date and origins of this industry in Lincoln. Dating relies heavily on the Flaxengate sequence. Whilst this provides a very useful basis, care must be taken to avoid fixing too rigidly chronologies that are solely based on the Flaxengate evidence.

The starting date of pottery production in Lincoln is an issue of more than solely ceramic significance. Elsewhere the second half of the ninth century seems to have witnessed the rapid geographical expansion of fast wheel-thrown production into new areas, with the widespread production of quality pots fired in fully developed kilns with a single flue [54]. The Vikings and immigrant potters have been identified by some as the key players in the introduction and spread of this type of production. Haslam for instance argues that it is 'likely that both the forms and the manufacturing techniques were introduced by immigrant potters' [55]. Furthermore he argues that differences in pottery form suggest that potters from the Rhineland brought pottery innovation to Yorkshire, Lincolnshire and East Anglia in the late ninth/early tenth century; whereas the development of potting in southern England arrived from France in the later tenth and eleventh centuries [56]. However,

similar wares were used at Whitby and Jarrow just before the Viking arrival, and some St Neots and Stamford ware may also be pre-Viking. McCarthy and Brooks have pointed out that 'the Danes do not themselves make pottery in their homelands at this period' [57]. Hurst also rules out the necessity of postulating an influx of foreign potters, as the knowledge of the potters wheel and of improved kiln technique could, it is argued, have been brought by a single person.

At Flaxengate the excavated area seems to have been largely deserted from the end of the Roman period until the first timber structures, which have been dated to around 870-80 [58]. However finds of small amounts of early and middle Saxon pottery on the site raise the possibility that there was some earlier occupation in the vicinity [59]. A comparison between wares found in pre-Period I contexts and those in Period I originally showed a close similarity, although most of the samples were quite small [60]. Now however the validity of fig 11 is seriously undermined by changes in the chronology brought about by the re-examination of the turf-line evidence. The development of the Flaxengate site has been dated to the late ninth century, and LKT is present in the earliest levels of the first period. LKT was therefore being produced before the kilns excavated at Silver Street came into operation. Whether LKT production moved to Silver Street in the mid tenth-century, or whether earlier kilns were close by, but outside the relatively small area of excavation, takes us no further on the date of the beginnings of LKT pottery production.

Some evidence from other sites in the county provides additional insight. At Goltho, LKT occurred in the earliest

deposits of GM1 and GM2, which have suggested dates of c.800-50. There is however considerable dispute surrounding these very early dates, and it now seems that Coppack himself is no longer convinced of this early dating [61]. Young considers that the inturned rims on the LKT bowls in these groups would be dated typologically to the early to mid tenth century if found in Lincoln [62]. The strongest evidence for a starting date of no later than 870 has emerged from recent excavations at Repton in Derbyshire, which have uncovered a ship-repairing area associated with the Viking takeover of Mercia in 874. Among the finds from here were sherds of Torksey and LKT, and a single sherd of LSLS [63], which suggests a starting date of around 870 at the latest for LKT production.

LKT need not necessarily have been the first ware produced at Lincoln. Recent work at Lincoln has suggested that in the ninth-century layers at Flaxengate, sandy wares are the most common pottery find, unlike in the rest of the early medieval period. This was also the case with pottery found from this period at Saltergate 'f' and Flaxengate 1945, which are the only other sites in Lincoln with identified ninth-century levels. Confining our attention to the most stratigraphically secure deposits at Flaxengate both LG and LSLS outnumber LKT in Pre-Period I deposits. Overall the early importance of sandy wares may suggest that here is where the origins of the Lincoln pottery industry lie, despite the absence of LG from Repton.

If large-scale pottery production was brought to Lincoln by the Vikings, the most likely period would be in the decade following the arrival from northern France of the Viking Great Army in 865. Hence if LKT or one of the other Lincoln wheel-

thrown wares is dated earlier than 865 then the likelihood that the Vikings were responsible for the introduction of fast wheel-thrown wares into the East Midlands is greatly diminished.

At Stamford, Kilmurry has suggested that northern France was the most likely source for the potting technology used there, especially because distinctive aspects of Stamford ware, such as the use of red paint, can be parallelled there [64]. Similarly at Lincoln several of the wheel-thrown types found in late ninth-early/mid tenth-century contexts show signs of foreign influence. The authors of the Silver Street report point to 'the developed use of a wheel including its use for complex types such as pedestal lamps and for handles; the use of decorative features such as criss-cross burnished lines; the use of glaze; and rim shapes reminiscent of those from northern France or the Low Countries' [65]. Some parallels have also been drawn between LG and the products of the French Gritty ware industry [66]. Influence may have been in the form of personnel, either in the form of French craftsmen travelling with the Vikings, or Viking craftsmen who acquired their skills whilst in northern France/ Low Countries.

Northern French wares may instead have served as the model for the earliest Lincoln potters. There however seems to be little evidence of trading links between the Five Boroughs and northern France. At Flaxengate there is only one ware associated with France, a Beauvaisis ware, of which only 6 sherds have been found among the 79,000 for the site as a whole, and the earliest of these sherds occurred in a Period 2 (900-930/40) context [67]. If northern French wares served as a model for the beginnings of

the industry in Lincoln, they were either traded only for a very short period or brought in small amounts by the Vikings at a very influential point in the history of pottery development in Lincoln. Also if the northern French pottery simply provided a model, it would be expected that the earliest production would have been characterised by experimentation and mistakes as a local potters struggled with new forms, or a totally new skill. However no such early products have been identified. The finds of LKT and Torksey ware at Repton presumably arrived there courtesy of the Vikings, which lends support to the idea that they may have been responsible for the spread of wheel-thrown wares in England.

Whatever the medium of influence, the case for external influence is further strengthened by the high quality of the earliest LKT vessels and the apparent absence of experimental vessels. The Silver Street authors suggest that these factors, plus the technological attributes of wheel-thrown handles and the widespread use of decoration 'all point to skilled craftsman producing a familiar type of pottery', that appears to have been fully developed by c870/80 [68]. The main evidence of experimentation is to be found in some of the ELSW fabrics, which show definite signs that the amounts of quartz were varied in order to see which gave the best glazing results [69].

If pottery produced at Lincoln in the late ninth century represent the final evolution of wares derived from local Middle Saxon types one would expect to find some types which stylistically and technically fall somewhere between the two. The Silver Street authors suggest that Lincoln Gritty may exhibit signs of both traditions [70]. Adams Gilmour has suggested that

a fabric group, which is now split between Lincoln Shelly groups C and E represented this transitional stage. However the shapes are almost identical to LKT, and are not found in securely stratified pre- Period and Period 1 deposits. There does appear to be a clear distinction between Middle Saxon wares and shell-tempered wares such as LKT in terms of decoration. Coppack notes that the rouletted decoration commonly found on shell-tempered wares was unknown in Lincolnshire from the late Iron Age until the onset of shell-tempered wares with the exception of a few Roman imports [71]. There are some links between Middle and Late Saxon wares in terms of manufacturing methods, and some are quite similar when seen in profile. The use of rouletting however suggests a degree of outside influence, although whether this is symptomatic of more substantial outside influence is less clear.

Overall many questions concerning the pottery of the late ninth-century remain unanswered. If, as seems likely, shell tempered wares such as LKT mark a clear break from middle Saxon wares, where did the model for this new type come from? If the influence for this was continental, what was the nature of this, as there does not appear to have been a flourishing pottery trade between Lincoln and northern France or the Rhineland. Did this continental influence instead arrive second-hand via Stamford, and what was the starting date for this new type of pottery? Such developments can be regarded as being closely inter-linked with the beginnings of Flaxengate c.870, but this may just be an illusion created by the disproportionate influence of the Flaxengate evidence.

Lincoln Pottery, c.900-1100

Our discussion of Lincoln pottery between 900 and 1100 will focus on changes in the types, forms and techniques employed, as well as identifying changes in the balance of provision of the different wares. This will be achieved by assessing each of the wares individually for changes, and then by taking a broader view of pottery provision in general.

LKT pottery from Flaxengate seems, over time, to have undergone a decline in the technical competence of its production. Whilst the vessels from the earliest levels were entirely wheel-thrown, from the tenth century there is evidence, after thin section analysis, of piece-forming. In other words the pots appear to have been thrown as cylinders, which then had bases added to them after they had been removed from the wheel [72]. Secondly the wall thickness of the earlier vessels was consistent over the whole vessel, whereas on the later vessels there is a good deal of variation. Thirdly the earlier vessels were well centred on the wheel whereas many of the later examples, especially of medium sized jars, are irregularly shaped [73]. Overall the Silver Street authors have noted a slight decline in the technical standard of LKT from possibly early in the tenth century, which becomes more evident from about the middle of that century. Other changes have also been noted in the forms and colour of LKT, as well as a general reduction in the use of decoration [74].

Before the end of our period LKT was probably no longer being produced. The Silver Street report authors note that the percentage of LKT in well stratified deposits at Flaxengate drops from 81% to 39% between Periods IV (970-1000/10) and V (1000/10-

1040), and so suggest that the probable end date of LKT production was likely to have been about 1000-1010 [75]. This illustrates the problems of residuality, as using the figures from the tables of all pottery found at Flaxengate, LKT still accounts for 69% of the pottery from Periods V and VI (c.1000-c.1070). That is, in the half century after LKT production is said to have ceased, it still accounted for over two-thirds of pottery found at Flaxengate [76]. This is however partly a consequence of the techniques employed in the Flaxengate report. If, for instance, a deposit was attributed to Periods II to VI, it was then placed in the latest possible phase. Also the tables which provide the bases for these calculations are flawed by the problems of the mistaken turf-line. Lastly the periods which are defined at Flaxengate were developed to provide a chronology for the building sequence. In many ways the pottery does not fit neatly into these periods in the same way that buildings do. Much of the pottery found in Period II deposits probably derived from the levelling of the Period I buildings. So in effect this pottery really 'belongs' to Period I. This applies to the deposits of each period, so much of the LKT pottery attributed to Period V (1000/10 - 1040), actually comes from the 'make-up' of Period IV (970 - 1000/10) [77].

A similar date for the end of LKT production was also earlier suggested by Adams, who from the limited Broadgate East evidence concluded that the last firings of the Silver Street kilns were early in the eleventh century [78]. At Goltho the percentage of shell-tempered wares, of which LKT was probably the most numerous, fell from about 70% in the mid tenth century down

to about 35% in c1000, and then as the eleventh century progressed this percentage continued to fall sharply [79].

Even before its production ceased, LKT experienced a gradual decline in its numerical superiority as the tenth century progressed. This is probably a consequence of increases in the production of other wares, rather than reflecting an actual decline in LKT production, although it is very difficult to gauge levels of total production. The output of LKT seems to have risen fast and then remained at high levels until the end of its production [80]. Overall whilst LKT continued to be produced in large amounts, it seems to have undergone a technical decline, perhaps because the demands for quantity took precedence over those for quality.

During the first half of the tenth century another shelly ware grouping began to be produced at Lincoln. This is now termed Lincoln Late Saxon Shelly (LSh), replacing the former Lincoln Early Shelly (LES) and Lincoln Saxo-Norman Shelly (LSNS) categories, and also includes one of the former Lincoln Sandy (LS) fabrics [81]. Lincoln Late Saxon Shelly (LSh) accounts for about 6% of the pottery found Flaxengate using the unrefined Flaxengate figures. This ware has been split into four sub-groups A,B,C and E, using visual differences, such as colour decoration and form, although thin section analysis suggests that there is little difference between them in terms of fabric [82]. They were however produced using a variety of techniques. Group A was coil/ring built and then wheel finished, although most of these vessels were only roughly cleaned up. Group B was wheel-made with thinner walls and careful finishing [83]. Group C is less common than the others and was probably not produced until

after 900. Group E products were manufactured using a variety of techniques, often on the same pot [84]. Until very recently the main reason for attributing these wares to Lincoln were their similarity to LKT. Now however a small group of wasters have been found following a watching brief at the Technical College [85]. Some of these were clearly wasters as the shell and clay fragments had almost totally disintegrated as a result of overfiring. There were no sherds of LKT, even though this was being produced close by, which suggests that these finds are derived from a LSh kiln situated close by.

It is far harder to pinpoint changes in LSh and other Lincoln wares during the tenth and eleventh centuries, because relative to LKT there are far fewer sherds found. Often it is only possible to suggest dates after which certain types were no longer produced. For instance both ELSW and LSLS seem to have gone out of production fairly early in the tenth century, and LG may well already have died out by the end of the ninth century. Thus by the end of the first quarter of the tenth century it seems likely that no sandy wares were produced in Lincoln. So, whilst sandy wares were probably produced in larger quantities than shelly wares before 900, for much of the tenth century sandy wares were totally replaced by shelly wares.

Whilst LKT, and to a lesser extent LSh, dominated the tenth-century pottery finds, during the early part of the eleventh century the production of these major 'industrially produced' shelly wares came to an end. Gradually a new shelly ware, Lincoln Fine Shelled (LFS), came to prominence. LFS seems to have been produced in small quantities during the tenth century,

but in the period following the end of Lincoln wheel-made shelly wares this ware's proportion of the pottery found at Flaxengate rose from one-fifth to half by the end of the eleventh century [86]. LFS was very different from wares like LKT; it was a soft handmade, occasionally wheel finished ware, that began with pots of a cylindrical shape that were rarely decorated [87]. Later the pots evolved into shapes that were more typical of medieval cooking pots [88].

Elsewhere in the county similar fine shelled wares have been found on a number of rural sites in ninth- and tenth-century contexts. At Goltho 'harsh shell tempered ware' became the main ware there in the later tenth and throughout the eleventh century [89]. Coppack argues that, as harsh shell tempered ware is found on rural sites, such as Goltho before it is found in Lincoln, it is possible that it is a rural product [90]. As we have seen however great caution needs to be attached to the dates associated with the Goltho evidence. Potter Hanworth has been identified as a production centre for harsh shell tempered ware in the thirteenth-century, but extensive fieldwork has failed to find any traces of earlier production in the vicinity. The source of LFS is likely to be near the city given both the quantities found and the fact that the larger forms of this are found only in Lincoln [91]. LFS may mark not only a change in the pots supplied to the residents of Lincoln, but also a shift in their main source of supply from urban to rural.

The dominance of shelly wares, which had become a feature of Lincoln pottery from early in the tenth century, continued during the eleventh century. Sandy wares however constitute an important minority, with over one-tenth of the Flaxengate finds

of the period c.1000-c.1070 being Saxo-Norman Lincoln Sandy ware (SNLS). This ware, whilst sharing almost all its fabrics with ELSW and/or LSLS, differs in manufacturing, decoration and form [92]. This ware has been split into two main fabric groups; A and B. Group A type vessels were wheel-thrown, but less competently so than their LSLS predecessors, and were also less well finished, showing fewer signs of general trimming and used simple thumb/finger pressing for decoration rather than roller stamping [93]. Group B wares are similar to those of A except that they are oxidised, and more common from the eleventh century onwards. Adams Gilmour noted that the main fabrics of the now defunct LS group exhibited a progressive decline in the standard of clay preparation, and that the techniques employed for Groups 1 and 2 of LS gradually changed in favour of faster production [94]. So there seems to have been a reduction in the technical competence of sandy ware production, similar to that found in the production of shelly ware.

The percentage of non-Lincoln pots increased, from 4% to 10% between the late ninth /early tenth century and the eleventh century. Later consideration will be given to how the sources of this non-Lincoln pottery changed over the period, but here it is sufficient to note that whilst the percentage increased, the vast majority of pottery used in Lincoln was still produced there, or perhaps in the case of LFS nearby.

Compared with the late ninth century the number of forms available decreases for the rest of the early medieval period. Dishes in LKT, for instance, are largely confined to the early period, and a small cup, produced in LG, does not appear in any

other ware when LG production ceases. The wider diversity of forms in the earliest period perhaps indicates that potters were among the first craftsmen to arrive in Lincoln. In other words, in the absence of other craftsmen, many objects were made in ceramics, which were later produced in other materials [95]. The LG cup, for instance, may have been replaced by wooden cups, similar to those made by the cup-maker of Coppergate in York.

The only new form that grew in importance was the jug or pitcher. Until the middle of the eleventh century the proportion of these was negligible, but by the thirteenth century it had risen to 20% [96]. A similar change occurred at Goltho, where jugs are not found until the early eleventh century, and then after 1100 their importance grows rapidly [97]. The growth of jugs and pitchers was also accompanied by a growth in tablewares, such as glazed pitchers and the earlier tiny drinking pots. However, even late in the eleventh century, the pottery market was still dominated by demands for basic cooking and storage vessels, rather than fine tablewares.

Despite the changes outlined above much remained unaltered. Most of the wares found in eleventh-century levels in Lincoln, just as in those of the ninth century, were cheap (presumably), utilitarian wares produced for the cooking and storing of food. The basic pot (cooking pot/jar) form accounted for between 78% and 86% of all identifiable forms in all periods at Flaxengate up until the thirteenth century, and at the top end of the range until the twelfth century [98]. The other major form was the bowl or dish which accounted for about 10% of the identified vessels. Not only did these proportions remain largely unchanged over the period, but they also varied little between different

ware groupings. The pot form accounted for at least 75% of the identified vessels in each of the wares attributed to Lincoln, and bowls were the second most numerous category in each [99]. The Flaxengate sample is therefore probably indicative of the forms in use and their proportions, as if pottery was being dumped in batches one would expect more variation between the pottery types. Only rarely do forms, such as suspension lamps, seem to be a speciality of a particular ware [100]. These, like most of the few examples of wares with limited specialised forms were produced at Stamford.

Further continuity during the period is evident from the number of similarities between the different Lincoln pottery types, both in terms of the decorative techniques applied and the types of clay used. Thin section analysis has revealed little variation in the basic fabric of any of the shell tempered wares from Lincoln. There are variations in the amount of calcerous and quartz inclusions, but Young suggests that such variations were related to the vessel form and size, rather than to differences in clay source [101]. For instance additional shell tempering has been found in many handles and in some LKT bowls. The reasons for this are unclear but may have been added to reduce the amount of heat transferred from the contents to the handle. The decorative techniques of 'square or diamond roller stamping' are found on most of the different Lincoln shelly wares [102], although not both on the same vessel. Nor were such relationships confined to shelly wares. Square shaped roller stamping as well as being a common feature of many shelly wares is also the decorative technique most typical of group 2 of LS

(now split between LSLS and SNLS) [103]. The form shape, rim shape, and the diamond roller stamping of fabric group B of ELSW, shares similarities not with other sandy wares, but with LKT shelly ware [104]. Furthermore it is possible that producers of sandy ware sometimes used the same clay sources as shelly producers, although confirmation of this awaits further analysis. These similarities have led Adams Gilmour to suggest that the same potters may have been involved in the production of both sandy and shelly ware [105].

So what does all this tell us of Lincoln's early medieval pottery 'industry'? McCarthy and Brooks regard shelly wares such as LKT and LSh as being 'industrially produced, ie. mass produced to a considerable degree of uniformity and standardisation' [106]. Production was certainly on a large scale if the size of kiln 200 at Silver Street provides any indication. This was unusually large and has no contemporary English or close continental parallells, except possibly kiln 25/55 on the same site, although a pit makes it unclear whether the features are two halves of the same structure or two separate structures. Feature 25/55 was lined with 5 cms of clay and some limestone slabs similar to those in kiln 200 and would have measured 1.8m by at least 3.5m [107]. There is no evidence to suggest that these large structures were 'true kilns', with vessels and the fuel segregated, although the existence of separate stoke holes and raised floors or flues, cannot be ruled out [108]. Miles suggests that these would have functioned as clamp kilns, although the problems of creating an even temperature would have resulted in very high wastage rates [109]. Silver Street kiln 200 is probably slightly later in date than kiln 25/55 and kiln

35, although it is not clear whether 200 replaced these kilns or whether there was a period of overlap in their operation [110]. Assuming somewhere dry could be found to store the pottery, a year or a seasons production by a single potter could feasibly be saved up and fired together [111]. This would however make little economic sense and hardly justify the considerable effort involved in constructing such a large kiln. Instead these very large kilns should be regarded as meeting the firing needs of a group of potters perhaps sharing a workshop area, producing in large amounts to meet a substantial, and perhaps increasing demand.

Increased production to meet increased demand may explain the technical deterioration that characterised a number of Lincoln wares in the later tenth and eleventh century [112]. It is far from established however that demand in the eleventh century exceeded that in the early tenth century. It is not even possible to say whether pottery usage increased at Flaxengate over this period, despite the large quantities of well stratified deposits, as most of the pottery was retrieved from the loam dumps sealing successive building phases, rather than coming from the buildings themselves [113]. The pottery content of each loam layer does not provide an accurate guide to the amount of pottery used during the life of each building phase. Also some pottery was dumped on the site to serve as hardcore for the road during the early part of the tenth century. It is the period from c.900-970 which stands out as being particularly prolific in terms of pottery finds, with one quarter of all the non-Roman pottery found at Flaxengate, assigned to this period. Adams

Gilmour suggest that the high vessel counts for this period are partly the result of this dumping [114]. Tenth-century deposits on sites all over the town however provide the largest quantities of early medieval pottery. This period may have had particularly high levels of pottery usage, or instead this may reflect a change in rubbish disposal methods towards the end of the tenth century, perhaps as a consequence of population growth [115]. Overall there is as much evidence for a decline in demand between the early tenth and the eleventh century as there is for an upsurge.

Continuing with the scale of production, the 80,000 pottery sherds in ninth- to thirteenth-century levels at Flaxengate represent a maximum of 63,000 vessels, and over 52,000 of these have been attributed to the period up to the end of the eleventh century [116]. Adams Gilmour suggests that 'most of the pottery used and broken on site was dumped there or nearby and the amount used was considerable' [117]. This total may be exaggerated by the proximity of the site to the Silver Street kilns, but the percentage of LKT at Flaxengate does not seem unusually high in comparison with the percentages found elsewhere in the town, and anyway the Flaxengate site is no nearer the Silver Street kilns than most of the south-east quadrant of the lower town [118]. If the pottery found on the site provides an accurate reflection of the amount of pottery in use at Flaxengate then it is difficult to regard such a quantity of vessels, even over a period of more than two centuries, as anything but considerable. As can be seen from fig 10 the area of the Flaxengate site is not particularly large in relation to the size of Lincoln as a whole. If similar amounts were used elsewhere in Lincoln, then the total amount of

pots used must have run into millions. This is however underpinned by a number of assumptions: firstly that Flaxengate is fairly typical of Lincoln, secondly that the actual vessel total for Flaxengate is not vastly removed from the maximum vessel count, and thirdly that the degree of pottery dumping at Flaxengate was not that great.

If, and it remains a big 'if', pottery production was on the sort of scale postulated above, it provides a valuable insight into the broad characteristics of Lincoln pottery producers. It seems certain that Lincoln's early medieval populace were provided with pottery by commercial craft specialists. The products of Peacock's mode 1 household producers, and perhaps also of mode 2 household industry seem largely absent from Lincoln [119]. The scale and standardisation of much of the pottery points to workshop industry, Peacock's mode 3, which involves a number of people in year round production, labouring to produce pottery for regular markets.

Year-round production does however present a technical problem. One of the advantages afforded by true kilns were that they enabled pottery to be fired in adverse weather conditions. The balance of probabilities suggests that kiln 200 at Silver Street was a clamp kiln which at best would have a 'roof' of sand or earth, and may well have had no covering except that provided by the fuel. It also seems likely that the earlier LKT kilns were clamp kilns, as a sharply defined oxidised layer was found on many LKT wasters, caused by the very rapid cooling that occurs in a clamp kiln open to the elements. If the cooling process were more gradual, as in a true kiln, then the oxidised layer

should be broader with less clearly defined edges [120]. Examples of all the shelly ware fabrics were oxidised, that is red in colour, due to the presence of oxygen during firing, suggesting the kilns were open. LKT finds may indicate that it underwent some changes in its firing. Early LKT has both reduced (i.e. grey colouration caused by the carbon which is unable to escape in a proper kiln) and oxidised patches, suggesting that oxygen was able to get at the pottery at the very end of the firing. Later LKT, such as the sherds from the Silver Street kilns, is more heavily oxidised [121]. However the stacking of pots for firing, which prevents oxygen reaching some pots, means that the colouration of the finished pots would vary considerably within the same kiln. Clamp kilns, especially on the scale of kiln 200 must have been very difficult to use for production on a year-round basis and would probably have required a 'drying house' which would have needed some heating in winter [122], although the limited area of excavation Silver Street makes it impossible to know if one existed.

It is difficult to discern whether all producers were the craft specialists suggested by LKT, as potters in Lincoln may have produced more than one ware. McCarthy and Brooks regard wares such as LES and LSNS (now grouped together as LSh) as sharing the industrial characteristics exhibited by LKT, pointing to production by craft specialists [123]. Indeed the similarities have led to the suggestion that some LSh potters had left a LKT workshop to set up on their own [124]. LFS, which McCarthy and Brooks describe as a traditionally-made, carelessly finished, non-industrial ware, stands apart from the other Lincoln wares [125]. It is not clear however whether this

separateness can be attributed simply to differences in technique, or whether such differences go deeper and indicate a different type of producer. In other words did LFS and the 'early eleventh-century resurgence of handmade pottery', which Hurst noted elsewhere, represent a shift back from commercial to kin-based pottery production [126]? LFS was produced in small quantities from early in the tenth-century, but it does not come to the fore in Lincoln until the demise of LKT in the eleventh century. At Goltho harsh shell tempered wares, such as LFS, were the major fabric throughout the later tenth and eleventh centuries, replacing shell tempered wares such as LKT. Coppack suggested that harsh shell-tempered wares may have served local needs better than the utility wares (such as LKT) which were intended for the urban market [127], and it is now clear that such wares also came to serve Lincoln's needs before the Conquest. The increased production of LFS appears to have been in response to market demands following the demise of LKT, although the production methods themselves remained unchanged. There does not seem to be any evidence that handmade producers of LFS were any less 'commercial' than the wheel-thrown producers of the other shelly wares. Whilst the technical inferiority of LFS is apparent, its scale and its existence in a single fabric, provide close parallells with LKT.

The inherent conservatism of potters has been noted elsewhere, and was also apparent in most wares at Lincoln. For instance the cooking pot form of harsh shell tempered ware remained virtually unchanged for five centuries [128]. Coppack has drawn attention to conservatism at Lincoln, in contrast with

Derby and Nottingham whose wares, although initially inferior to Lincoln, continued to develop in the twelfth century past a point at which development in Lincoln ceased [129]. In our period however Lincoln pottery continue to change, although in terms of technique, decline is perhaps more apparent than progress. Again this supports the hypothesis that some sort of external stimulus lay behind the introduction of pottery production to Lincoln in the ninth century, as there is no sign of any internal motor that prompted the transition from Middle Saxon handmade to wheel-thrown Late Saxon ware. Instead the evidence is suggestive of a craft being passed on from generation to generation. Most change took the form of technical decline or the actual demise of wares. This may literally have been the case if some wares were produced by successive generations of the same family, as the demise of that family may have been accompanied by the disappearance of their pottery type. The interchangeability of decorative techniques suggests that potters did not work in isolation. LFS also shows sign of evolutionary change which fundamentally altered the shape of this cooking pot. The overall lack of technical progress may instead suggest that the forms supplied worked. In any period there is little to be said for change for change's sake.

In the first half of our period the potters serving Lincoln were mostly urban based craftsmen. Most of the pottery found in Lincoln was probably produced in the town, or in the case of LFS nearby. Even the pottery from further afield was usually the product of urban centres. Leaving aside LFS, only c.5% of the pottery from Flaxengate attributed to production sites in Lincolnshire came from rural sites in the county [130]. Given

the large number of different fabrics and very small quantities of these wares, they were probably the wares used in the countryside which had found their way to Lincoln. Others, occurring in larger quantities are regarded as the products of rural kilns near to Lincoln. For instance excavations at St Mark's church have uncovered unusually high proportions of one local fabric, raising the possibility that it was produced at a settlement just south of the walled town [131]. These local wares were predominantly shelly, mostly wheel-made, and in many respects quite similar to the shelly wares attributed to Lincoln. The local sandy wares are also mostly wheel-made, and their mineral similarity to LSLS and SNLS suggests that production was carried out close to Lincoln. Overall the 'local pottery' was not always technically inferior to that produced in Lincoln. The percentages of the different forms are similar to Lincoln wares, with 84% of the shelly ware vessels being pots and 9% bowls [132]. This similarity suggests that local, often rurally produced, shelly wares were fulfilling the same needs in Lincoln as pottery from the town. This contrasts with imports from Stamford which often met the needs of specific urban users.

Our final consideration of the Lincoln pottery producers focuses on the sources of their main raw materials. Fuel was probably their major requirement, and undoubtedly presented particular problems for an industry based in towns. At Silver Street charcoal samples from the kiln fills suggests that twigs and small branches were used as fuel, mostly of hazel or poplar [133]. This was probably the case at other Lincoln kiln sites as alternatives such as coal and peat were not available. It is not

known whether the potter was actually involved in the collection of timber, or whether it was purchased from others, hence perhaps providing work for the local rural populace. From the size of kiln 200 it seems that whoever supplied the timber would have needed to have done so in substantial amounts. Indeed acquiring sufficient fuel may have posed more of a problem than that of clay.

The main problem presented by clay is that its weight makes it difficult to transport. Kilmurry has calculated that a typical cooking pot requires a clay cube about 12cms across, so 1000 such pots could be made from a $1.2m^3$ cube weighing about 3 tonnes [134]. At Stamford, clay was initially obtained from the sites on which the Castle and Wharf Road kilns were situated. At Lincoln petrological analysis of the various Lincoln sandy wares and LG found little that may be diagnostic of particular clay sources. The trace elements were comparable with those present in clay samples collected from a number of localities in the town, although most of the inclusions occur naturally in most clays [135]. Overall it seems likely that clay was not carried far and, at least initially, was available on the actual kiln sites.

Pottery Consumers

It seems clear from the quantities produced and the predominance of the cooking pot form, that most pottery was produced to fulfil basic domestic needs. The vast majority of pottery found in Lincoln is associated with the preparation, cooking and storage of foodstuffs, with only a few wares perhaps used for the serving of food, where aesthetic features such as

glazing were of greater importance [136]. Crucibles are the other exception to wares solely meeting domestic utilitarian needs. Many of the crucibles were produced at Stamford, and should be regarded as specialised items produced to meet the specific industrial needs of copper and glass artisans. Here the consumer of such wares, ie copper-workers, seem to have had a strong influence on production, and such wares may even have been made to order in Stamford.

If utilitarian pottery was strongly influenced by the demands of the domestic consumer, then their primary demands seem to have been those related to functionality and perhaps to price, rather than aesthetic concerns such as the quality of the finish. The vessel shapes shows considerable variation, which Adams Gilmour attributes to changes in domestic practices such as the way in which food was stored, produced and consumed [137]. If this were so then it illustrates consumer influence over production, of special significance given the general pronounced conservatism of pottery producers. Flaxengate provides no real evidence of pottery being produced for the luxury market in our period, either because Flaxengate was an area lacking in luxury consumers, or because pottery was not produced in product forms likely to meet the needs of this group. Many pottery products could also be produced using metal, leather, wood or wickerware, and some of these products were perhaps more suited to the aesthetic demands of luxury consumers. Luxury consumers would still require basic necessities such as cooking pots, but it is impossible to detect whether they demanded superior quality cooking pots, or whether a basic functional suitability was all that was required.

The influence of the consumer can however easily be overestimated. Our observations on consumer influence are based upon the premise that the supply of pots exceeded the demand. If demand instead continued to outstrip supply then the influence of the consumer would be drastically diminished. If potters could sell all they produced, this would go some way towards explaining their underlying conservatism and declining technical standards. It is perhaps too simplistic to explain pottery production simply as an interaction between factors of supply and demand. As Kilmurry has suggested at Stamford other factors, such as 'cultural norms', probably also had a bearing. The role of tradition in determining the types of vessel produced, and also upon many elements of the production process, such as the place and method of clay extraction, should not be underestimated [138]. Similarly Hayfield has drawn attention to the flaw of archaeological explanation, whose absolute rationality ignores 'twists of fate, and the whims of human nature' [139]. The relative weight of these and other cultural factors is impossible to determine, but it is important to remember that pottery production was probably more complex than the satisfaction of consumer demand.

Conclusion

In conclusion, whilst much remains obscured from view, some aspects of the pottery found in Lincoln are at least partially revealed. The chronology of the beginnings of this craft in Lincoln are unclear. It is far from established that c.870 marks the emergence of pottery production at Lincoln. Instead the

significance of this date may be a mirage created by the overwhelming importance of the evidence from the Flaxengate site. The development of the Flaxengate area began in about 870, and perhaps unsurprisingly increasing levels of pottery finds accompanied this development. There is a possibility that pottery production was already underway before 870, particularly given the finds of LKT and LSLS at Repton in levels possibly associated with the Viking encampment here in 874. There are also finds there of Torksey and Stamford ware, both well made and finished. LG was found in the earliest levels at Goltho, although surprisingly not at Repton [140].

The arrival of these wares at Repton suggests that the Vikings were an important factor in the spread of improved pottery techniques, particularly around the Danelaw. It is more questionable whether the Vikings were responsible for the introduction of wheel-thrown pottery to Lincoln. In part this is because the finds of LKT at Repton would require very rapid establishment of industrial pottery production at Lincoln. Also the significant amounts of Lincoln pottery in pre Period deposits at Flaxengate may suggests that pottery activity was underway in Lincoln before 870, which would tend to rule out the Vikings as the original source of this. Finally there is a strong possibility that pottery was being produced in York by c.850.

The absence of a firmly established starting date for pottery production at Lincoln exacerbates the difficulties of identifying the source of pottery innovation at Lincoln. The apparent lack of transitional wares between the middle Saxon and early medieval pottery traditions tends to argue that the former did not develop into the later. This hypothesis also finds

support in the apparent lack of dynamism exhibited by the Lincoln pottery industry. The lack of developments between c.900 and c.1100 suggests that the initial stimulus was external, given the absence of any internal motor for change during this period. Northern France or the Low Countries have been suggested as possible sources of external influence, although there is very little evidence of contact between Lincoln and either area. A continental link may have been provided by the travels of the Viking 'Great Army', although the nature of these links remains very difficult to ascertain. There is also the possibility that the continental influence arrived at Lincoln 'second hand'. In other words, places which had stronger continental links than are apparent at Lincoln, may have provided the external impetus.

Whilst many questions concerning the origins and dating of early medieval pottery production remain, a number of observation can be made about the pottery produced in late ninth-century Lincoln. Firstly the technical standard, even of the earliest products, appears to have been high, with care taken over the finishing processes. Whilst it is difficult to arrive at any estimates of total production, or indeed how the total amount of pottery produced changed over the period, the quantities found suggest that pottery was produced on a large scale. From the early tenth-century production was dominated by LKT type which accounted for at least two-thirds of the pottery found at Flaxengate up to the Conquest. It is important to remember that in some ways LKT is untypical of the pottery types produced in Lincoln, as the quantities are so large and almost totally consist of a single fabric. The other shelly and sandy wares,

despite being found in much smaller quantities, exhibit far wider fabric variations with the exception of LFS. Whatever generalisations might be made about LKT producers need not be applicable to all shelly ware producers, although it is possible that some of the other shelly ware fabrics were produced by former LKT potters setting up on their own.

From the outset the vast majority of pottery was produced locally to meet basic household needs, and remained so for the whole of our period. In the late ninth century the main exception to this were the specialist wares produced at Stamford to satisfy the requirements of metalworkers. This raises the possibility that Stamford provided the external impetus for the industry in Lincoln, although the majority of Lincoln wares are shelly whereas Stamford ware is sandy, and also Lincoln pottery may pre-date that produced at Stamford.

The quality of Lincoln pottery appears to have declined during the tenth and eleventh century. This has been noted in most of the wheel-thrown shelly wares from Lincoln, and has been tentatively regarded as one of the consequences of unproven increasing production levels. Higher production could also have been achieved by increasing the number of producers instead of producing faster.

The eleventh century saw the rapid rise of LFS. This type was very different from the other wares current in Lincoln, and the lack of wasters suggest it was not produced in Lincoln, and so represents not only a different pottery tradition, but also a non-Lincoln source of supply.

Leaving aside questions about the source of LFS, the main non-Lincoln source of supply was Torksey, especially in the

eleventh century, perhaps in response to the gap left by the demise of LKT. Torksey ware seems to have met the same basic pottery needs as those satisfied by Lincoln production. This contrasts with Stamford ware, which was very much associated with specialist products such as copper-working crucibles. It is possible that this is a consequence of the comparative distances of Torksey and Stamford from Lincoln. Whilst the proximity of Torksey to Lincoln would have added relatively little to the cost of their basic wares, the costs of transporting basic Stamford ware is likely to have made it more expensive to Lincoln consumers than locally produced wares. As a consequence the only wares worth transporting would have been those which satisfied specialist demands not met by local products. Without comparative material, which identifies the uses of Lincoln wares found elsewhere, it is not possible to say whether Lincoln ware also met specialist needs in distant markets, or alternatively that Stamford production was largely unique in this respect.

Pottery evidence indicates that from before the end of the ninth-century Lincoln was producing and consuming significant quantities of pottery. The producers of this, were from the outset full-time craft specialists. The dominance of LKT in the tenth-century indicates that a single centre was probably producing most of the pottery used in Lincoln to a standardised format, by utilising the services of several potters in a workshop mode of production. Furthermore this workshop probably had a single clay source unlike its competitors, which mostly had limited lifespans and a number of fabric variations.

The reasons for the demise of LKT and the success of LFS

remain a puzzle. It may be that LKT's clay source ran out, or that the danger of fire forced the potters out of the city, and so perhaps away from their clay source. LFS, for whatever reasons, was able to expand its production to fill some of the gap left by the demise of LKT. Regardless of its technical inferiority there is no reason to believe that LFS was any less commercial than LKT. Lincoln was served by commercial potters in the eleventh century just as it was in the tenth and later ninth century.

Chapter Three: notes

1 Anglo-Saxon pottery can be classed as either handmade, being built up from coils or slabs of clay; or wheel finished, which were basically handmade pots which were then smoothed and shaped on a wheel or turntable; or wheel-thrown where all of the forming process was carried out on a wheel. Firing took place either in a 'clamp kiln' which could be little more than a bonfire; or within a proper kiln often lined with clay and containing a flue and stoke-pit.

2 J Hurst, 'The Pottery', in The Archaeology of Anglo-Saxon England, ed., D M Wilson (London, 1976), p.283. Hurst suggested c.625-50 as the start date for Ipswich ware, but recent research has seriously questioned this, and it is at present safer to regard it as seventh-century.

3 Ibid., p.283

4 A Vince, 'The urban economy in Mercia in the 9th and 10th centuries', in Archaeology and the urban economy: Arkeologiske Skrifter Historisk Museum, 5 (Bergen, 1989), pp.154-5

5 R Hodges, The Hamwih Pottery: the local and imported wares from 30 years of excavations at Middle Saxon Southampton and their European context, CBA Research Report 37 (London, 1981), Fig I p.54

6 Ibid., p.61

7 Jane Young, City of Lincoln Archaeological Unit, Personal Communication 1994.

8 M R McCarthy and C M Brooks, Medieval Pottery in Britain, AD 900-1600, (Leicester, 1988), p.124

9 Ibid., p.63

10 Ibid., p.164

11 Domesday Book Gloucestershire 53,10 folio 168d; Oxfordshire 7,22 folio 156a; Wiltshire 1,16 folio 65b

12 Sawyer No. 166 cited in J le Patourel, 'Potters and Pots', Medieval Ceramics, 10 (1986), p.4

13 M Atkin, 'The Anglo-Saxon Urban Landscape in East Anglia', Landscape History, 7 (1985) p.34 and P A Stafford, The East Midlands in the Early Middle Ages (Leicester, 1985), p.58

14 In Wigford the following sites contained tenth-century pottery mostly beginning in middle of century: St Mary's Guildhall, St Marks Church, St Marks Station, St Marks Station East, Holmes Grainwarehouse, Brayford Wharf East, Waterside North, Waterside North West, St Benedict's Church

and Woolworth's Basement.
In the upper city the only site with definite tenth-century levels including pottery is St Paul in the Bail.
In the lower city and suburbs the following have tenth-century pottery: Flaxengate 1945-8, 1969, and 1972-6, Grantham Place, Hungate, Silver Street a b and c, Saltergate d e and f, Chestnut House, Michaelgate and Swan Street/Grantham Street
Information provided by CLAU October 1993

15 The use of the site name 'Flaxengate' henceforth refers to the excavations carried out there between 1972 and 1976. The earlier excavations carried out elsewhere at Flaxengate will be referred to as Flaxengate 1945-8, or Flaxengate 1969. See also fig 10 for the location of these.

16 Lauren Adams Gilmour (with K Foley, F MacAlister, D F Williams, J Wilkinson and J Young), Early Medieval Pottery from Flaxengate, Lincoln, The Archaeology of Lincoln 17-2 (London, 1988), p.55 and p.57

17 Personal Communication, City of Lincoln Archaeological Unit. A full reassessment of this will not be available until 1996.

18 See fig 10, - it is about 120 metres from the Silver Street kilns to Flaxengate

19 Lauren Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.59

20 P Miles, J Young and J Wacher, A Late Saxon Kiln Site at Silver Street, Lincoln, The Archaeology of Lincoln, 17-3 (London, 1989), p.203

21 See fig 2 of the Silver Street report, Ibid., p.185

22 L Adams, Medieval Pottery from Broadgate East, Lincoln 1973, The Archaeology of Lincoln, 17-1 (London, 1977), p.1

23 Ibid., Groups A-K and M, Table II, p.53

24 A re-examination of the Broadgate pottery is currently being undertaken by the City of Lincoln Archaeological Unit.

25 B J J Gilmour and D Stocker, St Mark's Church and Cemetery, Archaeology of Lincoln 13-1 (London, 1986), p.36

26 P Miles, J Young and J Wacher, A Late Saxon Kiln Site at Silver Street, op.cit., p.194, e.g. the kiln fills of kiln 35, and p.204

27 Ibid., p.226

28 A Woods,'The fabric of Silver Street shelly ware' in P Miles, J Young and J Wacher op. cit., p.205. A Vince

(CLAU) suggests that clay sources will eventually be located that contain shell, whereas Jane Young (CLAU) suggests that fossilised shell was part of the temper added.

29 P Miles, J Young, and J Wacher, A Late Saxon Kiln Site at Silver Street, op.cit., p.205

30 Suggested by Jane Young (1990), (CLAU)

31 P Miles, J Young and J Wacher, A Late Saxon Kiln Site at Silver Street, op.cit., pp.199-200

32 Ibid., pp.198-200

33 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, Table 4, p.78. The first element of the code refers to the major inclusion, which is usually quartz or, as in this case, calcite. The second element describes the frequency of the calcite inclusions or the roundness of the quartz inclusions. The third element refers to the sorting of these inclusions which are coded either 'm' for moderate to well sorted, or 'p' for poor to very poorly sorted inclusions.

34 See Ibid., p.61-3 especially fig 4 and Table 2 for a more detailed explanation of fabric coding. J Young, whilst retaining the fabric codes, has further developed the categories to consider which groups are products of the same potters/workshops. Whilst this has not affected LKT, it has resulted in some changes to other pottery groups.

35 Information supplied by Jane Young (CLAU)

36 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.119

37 P Miles, J Young and J Wacher, Appendix 3; List of Lincoln and Local Late Saxon and Saxo-Norman wares. Both of these are wheel-thrown and fabric A is particularly well finished.

38 Ibid., pp.222-3 and A J Mainman, Anglo Scandinavian Pottery from Coppergate, Archaeology of York 16/5 (London, 1990), pp.450-454

39 P Miles, J Young and J Wacher, op.cit., p.223

40 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., pp.101-2

41 P Miles, J Young and J Wacher, op.cit., p.226

42 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.100

43 Personal Communication Jane Young (CLAU)

44 L Adams Gilmour , Early Medieval Pottery from Flaxengate

Lincoln,op.cit., p.98

45 Ibid., p.98

46 Some are wheel-thrown, others are coil built, whilst some are of a Middle Saxon Maxey-type. L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.124 This group has been divided into six main groups containing seventeen fabrics.

47 Ibid., Table 3, p.71 and Table 5, p.124

48 A J Mainman, op.cit., pp.467-9

49 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.159 and Table 9a, p.160

50 Ibid., Table 6, p.146; Table 7, p.152; Table 8, p.156 and Table 9a, p.160. During Periods 1 & 2; 3 sherds have been found at Flaxengate from Leicester, 2 from Nottingham, 4 from York and 17 from various centres in East Anglia. These numbers are so small as to urge great caution in attributing links between various regional centres in this period. Recent detail supplied by J Young Personal Communication (1994).

51 Ibid., Table 10, p.160

52 Ibid., p.176 and p.177

53 Ibid., p.63 and Personal Communication Jane Young 1994.

54 J Hurst, op. cit., p.314

55 J Haslam, Medieval Pottery in Britain, Shire Archaeology 6, (Princes Risborough 1984), p.15

56 Ibid., p.15

57 M R McCarthy and C M Brooks, Medieval Pottery in Britain, AD 900-1600, (Leicester 1988) p.66

58 D Perring, Early Medieval Occupation at Flaxengate, Lincoln, c.870-1500, Archaeology of Lincoln 18-1 (London, 1981), p.36

59 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln,, op.cit., p.55

60 See fig 11

61 G Coppack, 'Saxon and early medieval pottery' in G Beresford Goltho :The Development of an Early Medieval Manor, c850-1150 English Heritage Archaeological Report No. 4 (London, 1987), p.137. But now G Coppack is less convinced about the very early dating for GM1 and GM2.

62 P Miles, J Young and J Wacher, op.cit., p.234

63 J Young and A Vince, the East Midlands Anglo-Saxon Pottery Project- Newsletter (1991)

64 K Kilmurry, The Pottery Industry of Stamford, Lincs, c850-1250 (London, 1980), p.195. For a fuller discussion of the foreign antecedents of Stamford ware see pp.176-195

65 P Miles, J Young and J Wacher, op cit., p.226

66 Personal Communication J Young (1990) CLAU

67 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., Table 10, p.160

68 P Miles, J Young and J Wacher, op.cit., p.234

69 Personal Communication J Young (1993), CLAU

70 P Miles, J Young and J Wacher, op.cit., p.226

71 G Coppack, 'The Medieval Pottery of Lincoln Nottingham and Derby', (University of Nottingham D Phil Thesis) p.137

72 P Miles, J Young and J Wacher, op.cit., p.205 and Appendix 1A

73 Ibid., p.205

74 Ibid., p.226

75 Ibid., p.234

76 See fig 12

77 Personal Communication J Young, (1990), City of Lincoln Archaeological Unit

78 L Adams, Medieval Pottery from Broadgate East, Lincoln 1973 (London, 1977) p.45

79 G Coppack, 'Saxon and early medieval pottery' in G Beresford op.cit., p.165

80 Personal Communication Jane Young (1993), c.f. P Miles, J Young and J Wacher, op.cit., p.234. The output of LKT 'increased slowly until the end of the industry'

81 For a fuller explanation of terminological changes see fig 9

82 P Miles J Young and J Wacher, op cit., p.220, p.222, and Appendix 1A; Ann Woods, 'The Silver Street Shelly wares'

83 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.94

84 P Miles, J Young and J Wacher, op.cit., p.22

85 Personal Communication Jane Young (1993) CLAU

86 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.113

87 Ibid., p.113 and P Miles, J Young and J Wacher, op.cit., p.223

88 Personal Communication Jane Young, (1993), CLAU

89 G Coppack,'Saxon and early medieval pottery' in G Beresford op.cit., p.166

90 G Coppack 'The Medieval Pottery of Lincoln Nottingham and Derby' op.cit., p.142

91 Ibid., p.144 Coppack tentatively suggests sources to the east of Lincoln, in the area of Wragby or Langwith, but the evidence for this is unclear. Also information from Jane Young (CLAU) 1993.

92 For a full concordance of the new terminology see Appendix 3 of P Miles J Young and J Wacher, op.cit.

93 P Miles, J Young and J Wacher, op.cit., p.223

94 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.101

95 Personal Communication Jane Young, (1993), City of Lincoln Archaeological Unit

96 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.65

97 G Coppack, 'Saxon and early medieval pottery' in G Beresford op.cit., p.165, fig 151

98 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.177 and p.65

99 Ibid., p.119, fig 36

100 Ibid., p.66. Suspension lamps, of which two-thirds are from the period c.1040-c.1130, are mostly made of a Stamford ware, and copper-working crucibles are almost all in a Stamford or Stamford variant fabric.

101 P Miles, J Young and J Wacher, op.cit., p.226

102 Ibid., table 2, pp.220-1

103 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., pp.101-2

104 P Miles, J Young and J Wacher, op.cit., p.223

105 L Adams Gilmour Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.172 and Microfiche section 3A

106 M McCarthy and C Brooks, op.cit., p.147

107 P Miles, 'The Excavation', in P Miles, J Young and J Wacher, op.cit., p.193

108 Ibid., p.199

109 Ibid., pp.200-202

110 J Young, 'The Pottery', in P Miles J Young and J Wacher, op.cit., p.226

111 Personal Communication Andrew McDonald, The Pot Shop, Lincoln, (1993)

112 Including LKT, LSLS and SNLS

113 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.59

114 Ibid., p.63

115 Personal Communication J Young, (1990), City of Lincoln Archaeological Unit

116 Calculated from L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., fig 5, p.64

117 Ibid., p.63

118 See Fig 10

119 Peacock cited in M McCarthy and C Brooks, op.cit., p.149

120 P Miles, J Young and J Wacher, op.cit., p.200

121 Personal Communication J Young, CLAU (1990)

122 K Kilmurry, op.cit., p.84

123 M McCarthy and C Brooks, op.cit., p.148

124 Personal Communication Jane Young, CLAU, (1993)

125 M McCarthy and C Brooks, op.cit., p.151

126 J Hurst cited in L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.114

127 G Coppack, 'Saxon and early medieval pottery' in G Beresford op.cit., p.166

128 G Coppack 'The Medieval Pottery of Lincoln, Nottingham and Derby' op.cit., p.142. But compare with the more

evolutionary development now postulated for LFS by J Young.

129 Ibid., p.332

130 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.133

131 Personal Communication, J Young, CLAU (1993)

132 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.135

133 P Miles, 'The Excavation' in P Miles J Young and J Wacher, op.cit., p.200 and Appendix 1E, C Keepax and G Morgan, 'Identification of Charcoal from Site B'. 90% of the identified charcoal samples were of hazel or poplar type.

134 K Kilmurry, op.cit., p.67

135 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., Microfiche Appendix 3B, F McAllister, 'Petrological and Neutron Activation Report on the Flaxengate Saxo-Norman Pottery'

136 L Adams Gilmour, Early Medieval Pottery from Flaxengate Lincoln, op.cit., p.178. In the thirteenth-century tablewares accounted for 25% of the assemblage. The forms of ELSW group A were confined to small globular vessels which might of been jars, or cups with spouts, or small bowls. These appear to have been glazed all over. Group B forms are confined to medium small and jar shaped pitchers and a few glass melting crucibles.

137 Ibid., p.178

138 K Kilmurry, op.cit., pp.6-7, and fig 2 p.6

139 C Hayfield, Humberside Medieval Pottery; an illustrated catalogue of Saxon and Medieval domestic assemblages from North Lincolnshire and its surrounding region, BAR British Series 140 (London 1985), p.420

140 Personal Communication J Young, CLAU (1993)

CHAPTER 4

Other Industry

In comparison with pottery, the evidence for other types of industry is sparse. This is true both of Anglo-Saxon sites in general and Lincoln in particular. It is unlikely that pottery was the most important industry of this period, yet this is the picture that emerges from the finds. This is because, compared with the near indestructibility of pottery fragments, most organic materials are extremely fragile, whilst most metal fragments can be recycled, rather than being disposed of as rubbish once broken like ceramics. In considering non-ceramic industry it is important to recognise that conclusions are often drawn from small amounts of material. This chapter will discuss each of the major industries for which published material exists from Lincoln. The primary focus of this analysis will be to identify the types of producers and markets for such products, and from this draw some broader conclusions about the economic nature of Lincoln.

Wood clearly indicates the limitations of our current knowledge about the non-ceramic industry of Lincoln. Whilst it is a rare archaeological find, wood was probably the most commonly used material in Anglo-Saxon England. It was used for a vast array of items from ships and buildings to fuel, flutes and tableware. Its enormous versatility, ready availability and the ease with which it could be worked, ensured that it was used in almost every aspect of early medieval life. The wide product diversity and rare archaeological survival of wood, makes a full discussion of wooden objects beyond the scope of this study. A

variety of wooden items have been found in Lincoln, especially on the 'Waterside' site, where the waterlogged conditions aided its survival. These included possibly Anglo-Saxon beams, posts and planks from buildings, and lids, pegs and bungs, although these still await publication [1]. Whilst providing some insight into the range of uses they tell us little about craftsmen in wood. Some domestic items were probably produced by specialist producers, although many household items may have involved little in the way of specialist skills given the ease with which wood could be fashioned.

Wooden vessels using the skills of the lathe-turner and the cooper were likely to be the products of craft specialists [2]. Such craftsmen have been identified at Coppergate in York, producing bowls and cups using a lathe, and in Winchester, but not as yet in Lincoln [3]. The generally poor survival of wood means that we can only presume that such woodworking activity was not confined to Winchester and York. Similarly it is not possible to indicate whether this type of woodworking was unique, or even more common, in 'towns' than in rural settlements. Morris has suggested that, because a springy pole provided the motive power, and as the initial shaping was best done whilst the wood was green, it is likely that Anglo-Saxon lathe-turners also worked in the forest as well as in urban workshops, as remained the case until the 1930's [4]. Specialist lathe-turners and other wood workers were likely to be found in Anglo-Saxon Lincoln but this is not as yet established.

Textiles, like wood, were an essential item in this period and are equally problematic. They were perhaps the most widely

produced craft item in Anglo-Saxon England. Most sites of this period excavated, whether urban or rural, provide evidence of the production of textiles, although rarely the textiles themselves. The very ubiquitousness of finds associated with textile production seriously questions the extent to which production was for the market. If most of the activity took the form of domestic production for the use of the family or kin group it has no more place here than a discussion of Anglo-Saxon cooking. P Walton suggests that at the very end of our period a women's domestic craft was being taken up by professional artisans [5]. It is not currently possible to ascertain which of these two production categories most of the archaeological finds relate to. The most common finds are spindle whorls, which have been found in a range of materials and were used to weight one end of the spindle used for spinning. This technique remained the spinning method until the arrival of the spinning wheel well after the end of our period [6]. There seems little to suggest that the whorls found in Lincoln, such as those of bone from Waterside [7], point to anything other than domestic spinning activity.

The process of weaving was perhaps undergoing technological change during the latter part of the early medieval period [8]. There is little evidence to confirm whether the horizontal loom had reached Lincoln by the end of period, and if so whether this was being used for kin or market production.

There is some evidence for the dyeing of textiles during the Anglo-Saxon period, using materials such as madder and also indigotin which can be extracted from a number of plants. A clubmoss was used to give a blue, yellow or green dye which must have been imported during the Viking Age [9]. The importation of

dyestuffs perhaps indicates that at least some dyeing was on a commercial footing rather than being people dyeing their own textiles. Nor does it seem that dyeing was confined to luxury items, as excavations in London have uncovered a range of dyed textiles, including both coarse and better quality cloth, although there is no published evidence to indicate whether the same was true in Lincoln [10].

The problems with both wood and textiles make any assessment of non-ceramic industry in Lincoln limited, nonetheless the evidence for some other industry can provide some insight into the economy of early medieval Lincoln.

Bone and Antler

These are a group of materials commonly utilised by craftsmen in this period, which feature prominently in Lincoln's archaeological record. These materials were used for a wide range of products including: combs, needles, knife handles, strap ends, spoons and flutes. These objects pose the problem of distinguishing between products produced by their owners and products supplied to the market by specialist craftsmen. Hall distinguishes between items such as needles made from chicken leg bones, and more elaborate products such as strap ends which appear to be the work of a specialist craftsman [11]. MacGregor has assisted this distinction by stressing the importance of considering bone and antler separately as there were distinct differences in the nature of each industry and the means of raw material supply [12].

To begin with bone, there are no shortage of items of Late

Anglo-Saxon and Viking date of this material. MacGregor however has noted that the bulk of pre-conquest bone articles involved no significant degree of craftsmanship, and hence were likely to have been made by individuals, as and when required [13]. Typical of such products are bone pins and spindle whorls found at Waterside, which required no more than shaping with a knife, and were probably produced by those weaving as and when required [14]. Most early medieval sites in Lincoln provide some evidence of bone objects. At Hungate for instance some waste fragments are thought to indicate small scale, domestic, bone working [15]. More importantly there are pieces of split rib being used for comb connecting plates, similar to those found in tenth- and eleventh-century contexts at Flaxengate [16]. Such bone combs are a likely product of professional craftsmen because their production is often quite elaborate and requires specialist tools, such as saws for the cutting of teeth. Indeed saw marks are perhaps indicative of specialist craftsmen as saws do not appear to have been used by butchers before the eighteenth century [17]. From Lincoln there is also evidence of bone comb cases, including one with the runic inscription 'Thorfastr makes a good comb' [18]. If Thorfastr was a professional craftsmen, perhaps working in Lincoln, we have an example of Late Anglo-Saxon advertising!

Combs were more usually made of antler, despite the greater availability of bone, probably indicating an appreciation of the mechanical superiority of antler [19]. Antler was primarily used for combs, with other antler objects such as dice and playing pieces utilising the solid basal area which was not used in comb-making [20]. At Lincoln there is some evidence of antler comb

production, with finds of sawn and chopped antler from the sites just to the north of the Witham. The antler working from the Woolworth's basement site was of particularly high quality with the cut surfaces having almost a mirror finish. This included at least two pieces from comb manufacture, as well as burr and tine fragments, which are also found at Saltergate [21]. There is evidence at Lincoln for the production of composite combs with split rib fragments used to connect a series of rectangular plates between them, with the teeth then cut using a saw. It seems likely that these antler, and antler and bone, combs were the products of specialist producers. It is not however established that such producers were full time craftsmen as, particularly in the earliest 'towns', the volume of production has been considered wholly inadequate to support full-time working. It has been suggested that either they carried out other crafts or agriculture simultaneously, or, as favoured by MacGregor, that they were itinerant, 'being a somewhat transitory figure on the urban scene' [22].

It seems that the antler was mostly naturally shed, as other deer bones are rarely found in places such as Dublin, York and Hamwih where antler has been found in considerable quantities, suggesting that venison was not being eaten in any quantity [23]. The preference of comb-makers for antler also casts an intriguing light upon the relationship between the rural economy and craft production. It seems unlikely that these craft specialists collected their own antler, given the time consuming nature of such a task. Instead they probably relied upon the collecting activities of the rural populace, who were more likely to come

across antler during their day-to-day activities. The process would thus involve urban and rural dwellers in an exchange of more than food. Also the preference for antler clearly indicates an industry producing a product from the best available materials, rather than an industry using antler for whatever products were required. In other words this was a craft driven by a product rather than by a need to use a widely available raw material for whatever products were required.

Glass

The production of objects in wood, bone, and antler involved the shaping and finishing of widely available materials. Other crafts are nearer to what we understand as industry, in that they involved several well defined process from raw material to finished item.

Glass, given the complexities of production, is likely to have been confined to craft specialists. Whilst manufacturing debris has been found on a number of urban sites, glass is one of the more uncommon finds from archaeological excavations. Wilson suggests glass was used for tableware or as a glazing material; both of which are clearly associated with the luxury market [24]. Glazing was mostly associated with stone buildings, which tended to limit it to ecclesiastical architecture and perhaps palaces in the later Anglo-Saxon period. There is no published evidence for the manufacture of alkali glass suitable for vessels or windows from Lincoln to compare with that from Coppergate in York, provisionally dated to the late ninth-century [25]. Some undated fragments of vessel glass were recovered from the environmental residues at Waterside and Woolworth's Basement. Whilst the

manufacture of such glass may have been an urban craft, the nearest parallel to the York material are furnaces and pots recorded in ninth- or possibly tenth-century levels at Glastonbury Abbey [26]. The manufacture of this glass at Coppergate was possibly for a specific building project in York itself, rather than directly for the market.

A third group of glass products has emerged from recent excavations, that were far more closely linked to urban markets. In Lincoln glass beads and rings have been found at Flaxengate and rings have also been found on the Waterside, Saltergate and St Mark's church sites [27]. A green glass finger ring, with a high lead content, from a mid-tenth-century context at Waterside and a yellow glass finger ring from Saltergate are both very similar to rings probably manufactured at Flaxengate during the tenth century [28]. The suggestion that Flaxengate was a manufacturing site is derived from some of the glassy residues found in crucibles on this site, which share similarities with the beads and rings both in terms of colour and lead contents, sometimes exceeding 70%. Preliminary work suggested that glass was manufactured from cullet (scrap glass - probably Roman) and lead, rather than from crushed quartz and lead; with the addition of copper and iron to colour it [29]. The beads and rings were probably made on a open fire by winding glass threads onto a iron rod, or placing a blob onto a hard surface. Some crucibles have also been found to contain opaque glass, which was perhaps used for enamelling, although a single bead of opaque orange glass has been found at Flaxengate [30].

It is possible that glass beads were the work of a jeweller

rather than a glassmaker. Whilst the amounts found are not that great, much of the glass waste could be re-used as cullet and so would not remain to be excavated. Overall glass beads and rings were probably the work of a specialist craftsmen, although probably not one limited to working in glass. They provide a glimpse into the production of items, which, although not basic necessities, were probably aimed for a mass rather than elite market.

Non-Ferrous Metalworking

The main evidence for non-ferrous metalworking comes from non-metallic evidence, as waste metal could usually be reused, although scrap metal including rods sheets and wire as well as blobs and dribbles have been found. Crucibles for melting lead tin and pewter are also rarely found, as these metals melt at lower temperatures and so do not need special refractory vessels [31]. Nonetheless there is evidence in late Anglo-Saxon urban centres for the working of a wide variety of non-ferrous metals, from copper, tin, zinc and lead to the precious metals of gold and silver.

In Lincoln evidence has so far emerged particularly for the working of silver and copper alloys. The evidence, which consists of crucibles, heating trays, moulds, waste metal and ingots, has been found in the greatest amounts at Flaxengate, although there is evidence of metalworking on other sites such as Hungate. To begin with silver, there are waste pieces but not surprisingly these are rare, and most of the evidence comes from crucibles. Crucible fragments with traces of silver have also been found on urban sites in London, Northampton, Winchester and

York [32]. At Flaxengate there is evidence for the manufacture of silver wire, and jewellry including a ring and bracelet; and a brooch of twisted silver wire has been found at Waterside [33]. Whilst silver was one of a number of metals found in locally made crucibles and heating trays, the use of Stamford ware crucibles seems to have been largely confined to silver [34]. This perhaps reflects the cost of losing silver if a crucible broke during heating. This made the probable extra cost of Stamford ware crucibles worthwhile, whereas for base metals the extra cost of a product that was likely to have been used only once was less easy to justify. This indicates a degree of sophistication, with some craftsmen not simply using the cheapest available ceramics. Once melted the silver was either cast into the shape of the final product, or cast into ingots prior to further working. There is evidence for the latter in the form of ingot moulds, usually of stone though occasionally ceramic. Traces of copper, zinc and lead in these can either be interpreted as accidental impurities or deliberate additions [35].

Most of the non-ferrous metalworking evidence from Lincoln relates to the production and working of copper alloys. Of the 424 ceramic vessel fragments associated with glass or metal-working from Flaxengate, 320 showed signs of cuprous waste or slag, with a further 27 containing a glassy residue perhaps related to copperworking [36]. Preliminary study of the Flaxen-gate material supports the contention that such alloys tend to be heterogeneous; being bronze or brass or an alloy of copper, zinc tin and lead. The most common material was leaded brass although the levels of zinc and lead within this varied considerably [37].

White suggests that this variation was a result of the melting of scrap metal, perhaps available in the form of Roman metalwork found on the site [38]. Once melted some of the alloy was cast directly into objects, as demonstrated by mould fragments found at Hungate, although none are complete enough to indicate the final product [39]. In addition there is also evidence of casting from Flaxengate in the form of casting sprue and many blobs and dribbles of copper alloy. Some of the alloy was cast into ingots, with several coarse sandy stone ingot moulds and also a few in fired clay being found at Flaxengate. These ingots were then worked into bars, rods, wire or sheets, all of which have been found in quantity at Flaxengate [40]. These sub-manufactures were then worked into the finished objects, such as 'garter tags', which have been found in large amounts in all stages of production at Flaxengate, including some with niello inlay. An unusual twisted and knotted bronze wire pin of probable Late Saxon date has been found at Woolworth's Basement [41].

The largest concentration of copperworking finds at Flaxengate were associated with structure 20 (1040-160/70) [42]. These finds included tiny Stamford crucibles, 2cms in diameter, some of which contained a brass alloy [43]. Whatever else was being produced in copper alloys, the production of large amounts of items like garter hooks suggests that producers were specialising, rather than in any way meeting family needs. The picture of specialist producers gains further support from the ceramics used. Of 373 vessels associated with copper alloy melting, only a few were of local fabrics and forms, whilst 358 were of Stamford ware and mostly purpose made for glass and

metalworking [44]. Thus it appears Stamford ware is being imported into Lincoln in forms and fabrics whose usage were often confined to industrial processes. It is not clear at present whether copper was produced and fashioned into the finished product at a single site, or whether different workshops carried out different stages in the process. Bayley has noted that whilst R Hodges considered that tenth-century York was one of the most industrially active places in Latin Christendom, evidence of a similar variety suggests that the same was true of Lincoln [45].

Iron

Iron was a very important material whose productive usage was likely to have been confined to craft specialists. Wilson describes iron as perhaps the second most important raw material after wood in Anglo-Saxon England, and the smith was an indispensable member of the medieval society with virtually all other crafts depending on his work [46]. The all pervading importance of iron-working makes it difficult to isolate urban aspects, as it is widely found on rural sites and was an economic essential long before the return of urban settlement.

Two main processes are involved in the production of iron objects, firstly the smelting of iron ore, and then the working of the resulting iron. Both activities were widespread; iron ore is known to have been smelted at one time or another in at least 29 of the 41 English counties, and most settlement sites produce some evidence of smithing. Neither smelting nor smithing seem to have been particularly urban activities, indeed it seems that

smelting rarely occurred in towns [47]. At Lincoln there may be evidence of iron smelting at Silver Street in the form of iron tap slag and hearth lining fragments, although the complex stratigraphy of the pits in which this was found make it difficult to date this closely [48]. Tap slag can also be produced in small quantities during smithing, raising the possibility that such slag should be associated with smithing rather than smelting at Silver Street. At present there seems little to suggest urban producers in Lincoln or elsewhere were more technically advanced or worked on a larger scale. For instance the shaft smelting furnaces situated on the High Street of eleventh-century Stamford were similar to those found from the same date in the village of West Runton in Norfolk [49].

Once iron had been smelted the resulting bloom was then processed into wrought or cast iron or steel. The evidence for smithing activity in Lincoln is more firmly based. Initially no evidence for iron working areas was found at Flaxengate, however more recent analysis using X-rays has pinpointed areas of hammer-scale and slags indicative of smithing [50]. It is not clear however what was being manufactured, partly due to the poor state of preservation of recovered objects. There is evidence of smithing in the vicinity of Silver Street, perhaps associated with tenth-century levels [51]. At 'Waterside' more favourable soil conditions have ensured the survival of a number of iron objects including; a bowl, a stylus, objects containing nails, keys, needles and awls, and a fish hook. It is not possible to say which, if any, of these objects were produced in Lincoln, but it seems likely that basic objects, like nails, and perhaps keys

and locks would have been produced in the town to meet the obvious need. Some idea of the amounts produced are perhaps indicated by the Coppergate site where iron is very well preserved. Here, in the refuse, there were 4,000-5,000 iron objects found, half of which were nails [52]. A consideration of the skills required and the likely demand for iron objects makes it likely that Lincoln iron workers were craft specialists, mostly producing for the mass market.

Jet and Amber

The working of jet or amber has been found on a number of sites, particularly those with Viking associations. At York for instance amber working was a well established industry in the Anglo Scandinavian period, with a quantity of finished or partly finished beads found on a number of sites, with rings and ear-rings as well at Coppergate [53]. There are also objects of jet found in York, including some which appear to have been broken in the course of manufacture [54]. Some pieces of jet waste were found at Flaxengate, all of which seem to be from the production of rings/finger rings, and fragments of bracelets have been found from the Waterside site [55]. Whitby is the most likely source of this jet, which suggests the specialist working of raw materials transported over considerable distances.

Conclusion

At Lincoln most of the archaeological evidence for industry other than pottery comes from the major sites at the Waterside and Flaxengate. Most of this still awaits publication, although a few preliminary remarks can be made about such industry in

Lincoln. There is clear evidence of craft specialisation, with those working in copper alloy and silver clearly specialist craftsmen. Whilst the dating of industries within the period has been largely ignored, due to the questionable relevance of changes in the crafts undertaken in what are only very small parts of the town, it does seem that copperworking can be shown to be taking place quite early in the tenth century, and perhaps also in the mid to late ninth century, although in the latter case probably not actually at Flaxengate [56]. This suggest not only that Lincoln was occupied by craft specialists, but that they were a feature of its earliest development.

There also appears to be specialist antler workers making combs, although we need to be aware of the suggestion that these were itinerant due to the limited amounts of waste. The probable inability of a single town to maintain resident comb craftsmen raises the question as to whether other craftsmen were itinerant, at least in the early phases of urban development. It is difficult to see why antler craftsmen alone would have adopted an itinerant lifestyle. Therefore it seems important to make some assessment of the actual quantities of production that the finds provide evidence of. In other words could the waste from industries such as jet working or silver smithing have been left by an itinerant craftsman only briefly based in Lincoln, or one briefly using these materials as a sideline to their main material? For instance could the jet, glass, and silver working evidence all be related to a single jeweller working at Flaxengate? Whatever the extent of craft activity at Flaxengate it does seem that it can be disregarded as part of an 'industrial

quarter', as finds from Hungate and the Waterside sites point to other areas with commercial craftsmen.

Whilst this survey has approached industry in terms of single raw materials there was probably a good deal of inter-relation. The manufacture of bone combs used rivets, either of iron or copper [58], which were likely to have been produced for this specific purposes by other craftsmen. Undoubtedly there was considerable exchange between different craftsmen, with the arrival of some crafts tending to have a 'snowball effect', with other industries growing up in part to serve other trades, as well as the market directly.

Chapter Four: notes

1 Val Williams, 'Finds from Waterside', Lincoln Archaeology 1988-89, (1989), pp.9-11

2 According to C Morris the skills of 'lathe turning and coopering are specialised crafts... which have to be learnt over an extensive period, and the technical problems are too great to allow the inexperienced to make the fine vessels found'. C A Morris, in 'The Discussion' of S McGrail ed., Woodworking techniques before AD 1500, BAR Int. Series 129 (London, 1982), p.370

3 R A Hall, The Viking Dig: Excavations at York, (London, 1984) p.78

4 C A Morris, 'Aspects of Anglo-Saxon and Anglo-Scandinavian Lathe-Turning', in S McGrail ed., op.cit., pp.247-9

5 P Walton, 'Textiles', English Medieval Industries: Craftsmen Techniques Products, eds., J Blair and N Ramsay (London, 1991), p.319

6 Ibid., p.325

7 V Williams, op.cit., p.9. See also J Mann 'Finds from Hungate', Archaeology in Lincolnshire 1984-5, First Annual Report of the Trust for Lincolnshire Archaeology, (1985), p.48 Finds of whorls some of which decorated, needles and possible woolcomb teeth suggest textile working though probably on a domestic scale.

8 The warp weighted loom was being replaced by the faster horizontal loom. The actual date of its introduction is unclear but the treadle operated loom was being used in France and Poland by the eleventh century, and loomweights become much rarer finds after the tenth century. Overall Walton suggests that urban centres such as Lincoln were unlikely to be using anything else by the twelfth century. P Walton, 'Textiles', English Medieval Industries op.cit., p.328

9 A R Hall and P R Tomlinson, 'Dyeplants from Viking York' Antiquity, 58 (1984), pp.58-60

10 F A Pritchard, 'Late Saxon Textiles from the City of London', Medieval Archaeology, 28 (1984), p.58

11 R A Hall, op.cit., p.81

12 A MacGregor, 'Antler Bone and Horn', in English Medieval Industries, op.cit., pp.355-78

13 A MacGregor, 'Bone, Antler and Horn Industries in the Urban Context' in Diet and Crafts in Towns: The evidence of animal

remains from the Roman to the Post-Medieval periods, eds., D Serjeantson and T Waldron, BAR Int. Series 199 (London, 1989), p.110

14 V Williams, op.cit., p.9 and p.11

15 J Mann, 'Finds from Hungate', op.cit., p.48

16 J Mann, 'Finds from Saltergate', Lincoln Archaeology No.2 1989-90, (1990), p.9

17 A MacGregor, 'Antler Bone and Horn', English Medieval Industries op.cit., p.363

18 R A Hall, Viking Age Archaeology in Britain and Ireland (Princes Risborough, 1990), p.44

19 A Macgregor, 'Antler Bone and Horn', English Medieval Industries, op.cit., p.357

20 Ibid., p.360

21 V Williams, op.cit., pp.9-11 and J Mann 'Finds from Saltergate', Lincoln Archaeology No 2, 1989-90, (1990) p.9

22 A MacGregor, 'Bone, Antler and Horn Industries in the Urban Context', in Diet and Crafts in Towns, op.cit., p.110

23 Ibid., p.107 and J Bourdillon, 'Countryside and Town: The Animal Resources of Saxon Southampton' in D Hooke ed., Anglo-Saxon Settlements, (Oxford, 1988), p.180

24 D M Wilson, 'Craft and Industry', in The Archaeology of Anglo-Saxon England , ed., D M Wilson (London, 1976), p.269

25 J Bayley , 'Non ferrous metal and glass working in Anglo Scandinavian England: an interim statement' Second Nordic Conference on the Application of Scientific Methods in Archaeology: PACT 7 being Journal of the European Study Group on Physical, Chemical and Mathematical techniques applied to Archaeology (1982), p.494

26 Ibid., p.494

27 V Williams, op.cit., p.9, J Mann, 'Finds from Saltergate', op.cit., p.9

28 J Mann, 'Finds from Saltergate', op.cit., p.9

29 K Foley, 'Flaxengate Glass Working', Archaeology in Lincoln, 1981-2, Tenth Annual Report of Lincoln Archaeological Trust (1982), p.28

30 J Bayley, 'Lincoln, Flaxengate: Crucibles and associated materials from the 9th-10th century levels' Unpublished Manuscript, p.2

31 Instead most cooking pots would serve this purpose. J Bayley, 'Non-ferrous metal working: Continuity and Change' in PACT, op.cit., p.201

32 M Campbell, 'Gold, Silver and Precious Stones', English Medieval Industries, op.cit., p.123

33 J Cowgill, 'Flaxengate Industry - Stratigraphic evidence' Unpublished Manuscript p.3

34 J Cowgill, 'Metalworking at Flaxengate', Unpublished manuscript, p.3

35 J Bayley, 'Ingot moulds from Flaxengate and Holmes Grain, Lincoln', Ancient Monuments Lab Report 4163, (1984), Unpublished Manuscript

36 L Adams Gilmour, Early Medieval Pottery from Flaxengate, Lincoln, Archaeology of Lincoln 17-2 (London, 1988), p.70 and J Bayley, 'Lincoln, Flaxengate: Crucibles and associated materials from 9th-10th century levels', Unpublished manuscript, p.1

37 R White, 'Flaxengate's Non Ferrous Metals', Archaeology in Lincoln, 1982-3, 11th Annual Report of the Lincoln Archaeological Trust (1983), p.30

38 Ibid., p.30 and p.32

39 J Bayley, 'Non-ferrous metal and glass working in Anglo-Scandinavian England: An interim statement', PACT op.cit., p.491

40 Ibid., pp.491-2

41 V Williams, op.cit., p.11

42 L Adams Gilmour, op.cit., p.71

43 J Cowgill, 'Metal working at Flaxengate', Unpublished manuscript

44 L Adams Gilmour, op.cit., pp.70-77

45 J Bayley, Non Ferrous Metalworking from Coppergate Archaeology of York 17-7 (London, 1992), p.816

46 D M Wilson, op.cit., p.261

47 With examples elsewhere currently confined to York and Stamford. J McDonnell, 'Ferrous metallurgy at York', Historical Metallurgy Conference 1990

48 P Miles, 'Evidence for metalworking' in P Miles, J Young and J Wacher, A Late Saxon Kiln Site at Silver Street, Lincoln, Archaeology of Lincoln, 17-3 (London, 1989), p.198

49 D M Wilson, op.cit., p.262

50 J Cowgill, 'Metal working at Flaxengate', Unpublished manuscript p.2

51 A Vince and M J Jones eds., Lincoln's Buried Archaeological Heritage (1990), p.C14

52 P Ottaway, 'The manufacture of iron artefacts at 16-22 Coppergate', Historical Metallurgy Conference paper

53 M Campbell, 'Gold Silver and Precious Stones', English Medieval Industries, op.cit., p.138

54 A MacGregor, 'Industry and Commerce in Anglo Scandinavian York' in Viking Age York and the North, CBA Research Report 27, ed., R A Hall (London, 1978), p.40

55 V Williams op.cit., p.9

56 J Cowgill, 'Metalworking at Flaxengate', Unpublished manuscript, p.3

57 J Mann, 'Finds from Saltergate' op.cit., p.9

CHAPTER 5

Aspects of Lincoln's Trade

There is little doubt that eleventh-century urban centres including Lincoln were involved in trade. Nor is there any doubt that trade and its associated activities were important factors in the development of most towns, including Lincoln. Trade, that is the exchange of goods for money or other goods, took a wide variety of forms, from the transfer of precious metals across continents to the sale of agricultural surplus direct from the field. Some Anglo-Saxon lawcodes refer to buying and selling, such as clause 1.1 of the laws of Edward the Elder which links towns and trade. This states that

> 'And I intend that every man shall have a warrantor (to his transactions) and that no one shall trade except in a *port* ; but he shall have present the port reeve or other men of credit who can be trusted' [1].

Most references to trade, markets and towns are however incidental. For instance in <u>The Life of king Edward who rests at Westminster</u> there is a reference to the position of the abbey

> 'hard by the famous and rich town, and also a delightful spot ..... near the main channel of the river, which bore abundant merchandise of wares of every land for sale from the whole world to the town on its banks' [2].

Most documentary sources provide few clues of the goods being traded, or the areas involved in long-distance trade. An exception is provided by IV Ethelred, which refers to merchants from Normandy, Flanders, Scandinavia and the Rhineland in London c.1000, and a few goods are known to have been traded from other sources including wine, tin and cheese [3]. In practice most

information about early medieval trade can only be derived from archaeology.

Archaeology can identify the movement of goods, but trade does not account for the circulation of all goods. Some items circulated through gift exchange mechanisms, particularly between elites, and perhaps also within kin groups. Some gift exchange is hardly distinguishable from trade as goods or services were given with the expectation of named goods or services in return. For instance King Æthelberht of Kent sent Bishop Boniface a silver cup and requested a rare falcon in return [4]. The church also offered and received gifts in return for prayers. Goods also circulated through the processes of tribute and plunder that are associated with warfare in this period. Kingdoms such as eighth-century Mercia were largely sustained by their ability to exact tribute from their neighbours on a regular basis. Later Viking raids brought about a further large scale transfer of wealth and valuables by non-economic means.

Whilst we can point to such distinctions in theory, in practice they are difficult to apply as most as our evidence is derived from archaeology. The difficulties of this distinction are particularly acute when dealing with luxury goods and coin, which were especially prone to transfer by non-economic means. In addition there are the problems, outlined in the industry section, that beset archaeological evidence in general [5]. Only certain materials survive burial for a thousand years; most disappear leaving no archaeological record of their production or trade. This, and the vast diversity of items that were probably traded in the ninth to eleventh century, ensure that a full

discussion of the trade of Lincoln is beyond the scope of this study. Instead our attention will mostly focus on the movement of coin and pottery in Lincolnshire, for which detailed archaeological evidence exists. Coins were a key element in the establishment of a developed market economy, and pottery has the advantage of being a mostly utilitarian item and so probably less prone to gift-exchange or plunder.

Trade involved both finished goods and raw materials. Some craftsmen may have collected their own raw materials, which points to low levels of productivity and economic sophistication; others acquired raw materials through trade, improving productivity, increasing economic sophistication, and necessitating interaction between Lincoln and its rural hinterland. Most of the industries so far discovered in Lincoln for this period would have required the movement of materials into Lincoln to enable production. For instance the ubiquitous wood-based crafts probably acquired most of the wood from outside Lincoln. Wood also had a role as fuel, which was an essential for industries such as potting and metal-working, and so was likely to have been a traded item, although some craftsmen probably collected their own. Antler-workers in Lincoln were probably similarly served by conveyers of shed antler from the countryside. This type of local trade probably underpinned much of the urban development in our period, although unfortunately the movement of most raw materials is obscured even from the view of archaeologists.

Archaeology does provide some evidence of trade over longer distances. At Flaxengate there is considerable evidence of copper-working, which may have required the importation of

copper. White however suggests that most was derived from scrap Roman metalwork found in the vicinity, although if this were the case it points to low production levels [6]. The jet waste, found from the manufacture of jewellry in Lincoln, can with more certainty be regarded as a trade import probably from Whitby, either directly or via York [7]. From further afield there was silk, and foreign pottery including soapstone vessels, although the latter are likely to have arrived in Lincoln as possessions rather than traded items. In the other direction an almost complete LKT jar that was found in a grave at Birka [8]. Whilst this gives some idea of the range of Lincoln's possible trading contacts, in some cases items reflect isolated contact rather than trading relations.

The above examples also indicate the potential of ceramic evidence for investigating the nature and range of Lincoln's early medieval trade. Pottery is especially important because its use in later Anglo-Saxon society was widespread and utilitarian; it is virtually indestructible in most soils; and its production site can often be identified. Excavations in Lincoln have indicated that most of the pottery used in Lincoln was produced there. Even so Lincoln was not self-sufficient in pottery, and did offer some market opportunities for other pottery producers. Finding pottery in Lincoln that was produced elsewhere need not necessarily suggest that direct trading links existed between the place of production and Lincoln, especially when such pottery was found in very small amounts.

Some of the pottery that arrived in Lincoln served as a container for another product. A prime example of this is

offered by the East Anglian pottery found at Flaxengate. Whereas large containers made up only about 1% of all of the pottery from Flaxengate, 34% of the pottery attributed to East Anglia were large containers [9]. This area may have specialised in the production of large vessels, but it is more likely that they arrived in Lincoln filled with a traded product. A similar use is postulated for much of the continental pottery of the ninth and tenth centuries found in Lincoln.

From the beginning of the tenth until the mid eleventh century Stamford and Torksey were the two main identified external sources of pottery in Lincoln. Stamford ware seems to have been more widely traded than any other type in this period, so it is no surprise that sherds representing about 2,500 vessels of this type were found at Flaxengate [10]. However four-fifths of this were found in post-Conquest levels, and it was not until the middle of the eleventh century that the proportion of Stamford ware found at Flaxengate began to rise dramatically. Prior to this, Stamford ware seems to have served a small but specialised section of the Lincoln market: namely ceramics especially crucibles for industrial activities, and also suspension lamps for domestic use [11].

Torksey ware was probably the most numerous single source of pottery exported to Lincoln in our period. Torksey ware finds were concentrated in deposits from the first half of the eleventh century, with 70% of all Torksey ware found in Periods V-VII (c.1000-c.1090) [12]. During the period c.1000-1070, 58% of all non-Lincoln pottery came from Torksey, compared with only 20% from Stamford (see fig 14). It may well be that demand for Torksey ware was one of the responses of the Lincoln pottery

market to the demise of LKT. Whilst Torksey ware would not single-handedly have filled the gap left by this ware, it would provide an explanation for its sudden importance. Furthermore 87% of the Torksey ware found at Flaxengate, whose form could be identified, were pots, and 10% were bowls, which is very similar to the proportions found in Lincoln produced pottery forms [13]. In addition over half of the finds Torksey ware had sooting on the walls or rims; suggesting that it was principally used in Lincoln as a cooking ware. Torksey ware was meeting the same needs for basic domestic wares as those fulfilled by wares such as LKT. Thus suggesting that a need as basic as this was, at least in part, being fulfilled by pottery traded in Lincoln and produced more than 10 miles away.

Pottery evidence from Flaxengate does not suggest that long distance trade in pottery satisfied any important need for the residents of Lincoln. In the period from 1000-1070 for instance, when the demise of LKT might have been expected to draw in exports from further afield, over 90% of the small amount of pottery that was not produced in Lincoln can be attributed to sources in Lincolnshire [14]. Foreign wares contribute only about 1% of the non Lincoln pottery in this period. Most of the foreign vessels, which number less than a 100 over a period of four centuries, can only be attributed to non-identified foreign sources; and no ware occurs in quantities sufficient to merit the conclusion that it was the product of established trading links. From pottery finds it is clear that Lincoln's involvement in trade in foreign pottery was strictly limited to redistribution rather than it having direct overseas trading links.

Trade, as a two-way process, can also be investigated in terms of the pottery 'exported' from Lincoln. Study of the material found from other sites in Lincolnshire, should eventually make it possible to describe the role of Lincoln within the pottery supply and demand network of the county. Whilst this aspect does offer considerable scope [15], it is hindered by the fact that most finds and sites were excavated before the pottery types produced at Lincoln had been clearly identified. Detailed evidence is now however emerging from the East Midlands Anglo-Saxon Pottery Project (EMASPP), which will greatly increase the usefulness of pottery evidence.

Hayfield in his study of the pottery of Humberside/North Lincolnshire, considers that the sandy wares found are mostly attributable to Lincoln or to Torksey, particularly from the ninth to the eleventh century. Furthermore he suggests that these two wares 'were common finds on most Late Saxon sites in the area' [16]. Thus the distribution of what Hayfield terms CT and CL fabrics points to trading activity from urban to rural centres. Unfortunately the identification of CL and CT to Lincoln and Torksey respectively was achieved macroscopically, relying on observable distinctions, and has not received any confirmation from the City of Lincoln Archaeological Unit, nor is it possible to identify which of the various Lincoln sandy wares have been found.

Excavations at Goltho, which is about 9 miles from Lincoln, have unearthed pottery sherds representing 1549 vessels, dating from perhaps the beginning of the ninth to the middle of the twelfth century [17]. These have been separated into six distinct categories, labelled A-F by Coppack, and the percentages

of each up to c.1100 are shown in Fig 15 [18]. The assemblage is dominated by wares A and B, which between them account for 84% of the pottery for this period. Ware A is a shell tempered ware, with varying degrees of inclusions, which Coppack suggests is similar to that produced at Silver Street (LKT) [19]. Ware B is also a shell tempered ware but this is handmade, and dominates the later part of the period, increasing as the amounts of fabric A decline. Some of fabric B may be the same as LFS ware which also dominates the later period in Lincoln. Fabric C is a grey sandy ware, which although quite similar to Torksey ware is generally coarser, and because of the apparent wasters of this ware from the Old City School site is tentatively attributed by Coppack to Lincoln [20]. Thus it is possible that products from Lincoln accounted for over 90% of the Goltho pottery, although the actual figure is likely to be considerably less than this. This is firstly because there is no direct connection between any of Coppack's categories and the different wares produced in Lincoln, contrary to Coppack's suggestion that A is 'in essence the principal late Saxon fabric produced in Lincoln' (LKT) [21]; and secondly LFS is no longer regarded as a Lincoln product. Nonetheless figures from the EMASPP suggest that LKT was probably the principal pottery found here, numbering around 3000 sherds, compared with less than 100 of LSLS and one of LG.

Torksey and Stamford ware only feature at Goltho as minor elements throughout the sequence. It remains to be seen whether the small proportions of these wares are exceptional because of the proximity of Goltho to Lincoln, or whether such quantities are typical of proportions in Lincolnshire as a whole. As in

Lincoln, the Torksey ware mostly consists of cooking pots, whereas the principal Stamford ware form at Goltho was the pitcher [22]. The appearance of these wares does not mean that this manor had direct trading links with Torksey and Stamford, instead such wares probably arrived at Goltho via the Lincoln market-place, indicating Lincoln's redistributive function.

As a result of the on-going research for the East Midlands Anglo-Saxon Pottery Project some remarks can be made about the distribution of Lincoln wares around Lincolnshire. LKT ware has been found throughout the county with finds as far afield as Stamford and Whaplode Drove in the south of the county Mablethorpe in the west and Keelby in the north [23]. This indicates a very wide distribution with some sherds found more than 30 miles from the Lincoln kilns. Some LKT pottery was probably distributed by peasant farmers buying pots whilst in Lincoln. This would presumably have been confined to those nearest Lincoln, giving a concentration of LKT finds around the town. The extensiveness of the distribution however argues for a trading mechanism that included middlemen buying pots in Lincoln for sale at other small markets in Lincolnshire. Whilst there are gaps in the distribution, particularly in the north of the county and south of Lincoln, these are mostly due to the fact that pottery from these areas is awaiting attention. The widespread nature of LKT distribution is even more pronounced when compared with that of LSLS and LG (see maps 31, 32 and 33). In part this contrast reflects the longevity of LKT's production run compared to LSLS and LG, but it also reflects a distribution that is likely to have involved trade.

Lincoln wares have also been identified outside the county,

and the number of such identifications is likely to increase following the clear establishment of a Lincoln pottery series. Lincoln pottery has so far been identified at Beverley and York in the north, and to the south west in the area bounded by Newark, Repton, Tamworth and Leicester [24]. The finds, particularly of LKT, at a number of sites argue for movement by trade. Also these and the Lincolnshire finds suggest the activities of middlemen, buying Lincoln pottery and selling it on either at markets further afield or by hawking it directly around the countryside. The finds of LKT demonstrate that pottery was being produced in Lincoln for a market wider than that of the residents of the town. It may have occupied particular niches in the pottery markets of other urban pottery producing centres, just as Stamford ware did in Lincoln; but in the countryside it probably served a full range of uses.

Pottery provides indications of trade, and it has been argued that coin finds do the same. The circulation of coin was brought about by a number of mechanism, of which trade was only one. Coins do however enable some consideration of the relationship between Lincoln, its county and areas further afield. Most Lincoln coin of our period comes, not from finds in the county, but from Scandinavia, where very high numbers of late Anglo-Saxon coins have been found.

The reasons why English coin found its way across the North Sea are particularly important for Lincoln, as coins from here are more common in Scandinavia than those from almost any other mint. Most of the 50,000 plus English coins found in Scandinavia are from issues dating from between about 980 and 1050. Coins

from Lincoln, like English coins as a whole, become increasingly less common from the middle of Edward's reign. Overall this suggests that most of the coin arrived in Scandinavia because of tribute taken from Ethelred's England and the subsequent Heregeld payments which ceased in 1051.

Several numismatists have however argued that trade made a significant contribution to this, especially from mints like York and Lincoln. Blackburn and Jonsson suggest that the coins from Scandinavia represent 'a period of increased money-oriented trade overlaid and emphasised by the fruits of raiding and payments of tribute and heregeld' [25]. Three basic strands to this argument can be detected. Firstly it is argued that coin arrived in Scandinavia outside the chronological limits imposed by tribute and Heregeld. Secondly, factors other than the demise of the heregeld, such as the beginnings of domestic coinage and economic recession, account for the reduction in English coins reaching Scandinavia. Thirdly that the trading elements within some Scandinavian hoards can be detected.

Blackburn and Jonsson earlier calculated that there were just over seventy English coins produced in the 200 or so years prior to Edgar's Reform found in Scandinavia; less than fifty of these were from the tenth-century prior to 973; but that at least 111 and probably by almost 150 of Edgar's Reform type reached Scandinavia [26]. The contrast is even more pronounced when it is remembered that Edgar's Reform issue probably ceased production around 975, giving it a production span of only two or three years. There is no evidence that Viking raids resumed before c.980, so some explanation is required of how Reform coins came to be in Scandinavia. It is more likely that when the

Viking raids began again this, and the issue of Edward the Martyr, were still current coin types, rather than that these finds resulted from trade, particularly given that English coin are so scarce before c.973.

This is emphasised by more recent figures from Denmark, which 'contains a high proportion of Scandinavia's total of pre-Reform English coins [27]. From Table 5 it can be seen that no English coins have been found in Denmark before c.870, compared with 28 during the first 70 years of the tenth century. These finds are put in perspective however by the number from the following 70 years which amount to over 7,600. Some numismatists nonetheless argue that earlier Scandinavian finds can be regarded as evidence of trade and furthermore that the hoard evidence suggests that this trade was mostly with York and the Danelaw especially Lincoln. This is because York and possibly Lincoln coin are heavily represented among the few English coins that reached Scandinavia before 973 [28].

There was a rapid decline in the amounts of English coin found in Scandinavia from about 1050 onwards. In Denmark for instance English coins number over 6,000 in the period 1040-59, but only 76 in the following twenty years. It has been argued however that other factors in addition to the abolition of the Heregeld lay behind this decline [29]. There is a similar decline in the amounts of German coin found in Scandinavia in this period. Blackburn and Metcalf regard German coins as much more closely related to trading activity with Scandinavia than English coins, so any decline in German coins is more likely to reflect economic changes. It is suggested that the decline in

the numbers of German coin indicates a silver shortage in Western Europe, although any such shortage did not stop William I levying a geld of six shillings on the hide in England. Sawyer however argues that the coins from Germany in Scandinavia were, more probably, the fruits of tribute and raiding, and so little significance need be attached to a decline in their numbers corresponding with that of English coins [30].

Whilst Lincoln coins in Scandinavia do exhibit a numerical decline, Lincoln is less affected than other mints. For twenty years from 1051 the amounts of Lincoln coin in Scandinavia are unusually high, with finds from here outnumbering those of all other English mints including London [31]. Whilst, as Sawyer notes, there are some non-economic reasons for this, such as William's buying off of the Viking fleet of 1069, which had been 'welcomed by the people of Lindsey' [32], it raises the possibility that some degree of trading linkage existed between Lincoln and Scandinavia in the eleventh century which was concealed by large numbers of English coin reaching Scandinavia by non-commercial means.

Finally it has been argued, that a distinctive trading element can be identified in some Scandinavian hoards. In a discussion of the List hoard Blackburn and Metcalf identified two separate components, each of which they associated with trading activity. Part of the hoard consisted of 66 bent and pecked coins, which had 'passed through the Baltic where they had been used for trade' [33]. The assumption being that the bending and pecking of coin to test its composition was an activity associated with Scandinavian traders. It is however far from established that such activity was confined to traders; raiders

and mercenaries would be just as concerned about the quality of their coin. Also, even if pecking and bending was confined to traders, it does not mean that coin in this condition had not found its way to Scandinavia by non-economic means, prior to being used for trade.

A further postulated aspect of 'trading hoards' is that some mints are 'over represented', reflecting, it is argued, trade with these particular areas. The other part of the List hoard consists of 29 Hiberno-Norse coins and 580 freshly minted Long Cross pennies [34]. It is argued that the Long Cross pennies are derived from trade with particular areas as coins from Stamford, London, Exeter and Lydford are over represented; that is, there are proportionately more coins from these mints than would be expected from their numbers in the Swedish Systematic and Danish National Collections. 'Over-representation' however is a questionable concept. Firstly because it is not established that these collections are necessarily representative of finds in Scandinavia, let alone of coin actually produced in England. Secondly it is unclear why coin acquired through tribute or Heregeld should be representative of national coin production as a whole. It seems unlikely that even large Heregeld payments would have consisted of a fully proportionate mixing of coin. The taxation of some areas surely reached the national collecting point before that of others, and one need not assume that Anglo-Saxon administration ran with a clockwork precision that ensured that national tributes impinged equally upon different areas. Anyway, in the case of tribute, it would surely be expected that much of this was met on a local basis, bringing coin to

Scandinavia in precisely such parcels with particular mints being over-represented [35].

The small amounts of Lincoln coin, both of the pre-Reform period and after 1051, found in Scandinavia raise the possibility of trading links. However if Viking settlement was taking place in Lincolnshire from the 870's it is not surprising that coin from this area should find its way to Scandinavia in the following century. Similarly Lincoln coins may have found their way there following the Danish invasion of 1069, and this probably included more than the current type following the probable end of full periodic re-coinages.

Nearer to home evidence exists for the circulation of coin in Lincolnshire. This consists of five coin hoards and over 150 single coin finds from Lincoln and the rest of the county. The first Lincolnshire coin hoard of the period was deposited at Walmgate near Louth in c.873 and contained nine Lunette coins [36]. Of these seven were from Wessex and two were coins of Burgred of Mercia [37]. This probably does not indicate strong links between the area and southern England, as its deposition is probably linked to Viking activity associated with the Great Army, which had overwintered at Torksey in 872 and subdued Mercia in 873.

This was followed by a hoard deposited in Stamford in about 895. Less than forty coins from this hoard were identified, although the actual number of coins originally deposited was probably a good deal higher than this. Halfpennies make up a major component of the surviving coins, largely due to research by Grierson whose efforts increased the number identified from 4 to 23. The unusually high number of halfpennies is one of the

reasons behind the assertion of Blunt and Dolley that this hoard is indicative of the coin circulating in the Danelaw at the time [38]. Unfortunately there is no way of knowing how representative the surviving coins are of the hoard as a whole. Halfpennies probably did not outnumber pennies in the hoard itself, as elsewhere few halfpennies have been found in hoards of this period.

Most of the identified coin from this hoard was minted in the name of Alfred. This points to southern influence, but not control, as many of the coins are Viking imitations of those of Alfred, and were probably minted locally. For instance one of the coins has a Leicester mint signature, one was a Lincoln monogram halfpenny minted by Herbert [39]. The rapid copying of Alfred's coins plus the genuine examples from this hoard suggest that Lincolnshire need not have been economically isolated from southern England, at least by late in the ninth century, despite the political separation, although many southern coins including those at Walmgate may be the fruits of Viking raiding rather than trade.

The largest Lincolnshire hoard of our period was deposited at Tetney, perhaps as early as 963 [40]. This contains over 400 coins in increasing amounts from the reigns of Eadred to Edgar. Only three coins were produced by Viking rulers, which testifies to the success of the English monetary system, in removing from circulation those coins which were not produced in the name of 'English' kings. Patterns of circulation remain unclear due to the lack of mint signatures, although certain moneyers have been associated with dies cut at Lincoln and York. Using Thompson's

list of coins from Tetney, which has been slightly added to since, 390 English coins were attributed to this hoard. Nearly three-fifths of these were minted at York or by moneyers related to York, one-third were minted by moneyers from Lincoln or nearby, and the remaining 29 coins were minted at other unidentified mints [41]. York's predominance owes much to the 153 coins produced by Heriger, and suggests York was still very important to the economy of northern Lincolnshire, including areas far closer to Lincoln than York. In contrast with the moneyers associated with Lincoln and York, the others are mostly represented by single examples and none are represented by more than three coins, which suggests that coin from elsewhere arrived in Lincolnshire in small amounts. Nonetheless if the hoard was deposited in 963 it points to a considerable degree of circulation, as only four years had probably elapsed since Edgar's coins were first minted.

There appears to have been a hoard deposited at Welbourn in about 1000, which was subsequently disturbed, resulting in a number of single finds over a distance of 250 yards [42]. There were probably twenty or more coins, although the merest of detail exists for only nine coins. These eight pennies and a single halfpenny were all minted in the name of Ethelred at Lincoln. The surviving coins range from the First Hand issue (977-85) to Long Cross (997-1003), which, if the coins came from a single hoard, as Blackburn suggests, is quite exceptional, as hoards of this period normally contain only one or two coin issues [43]. The occurrence of four different issue may instead suggest that all of the coins do not belong to a single hoard. That all nine known coins were minted at Lincoln is of limited significance

given that full details exist for only one of these coins, and that the nine may only constitute a small part of one or several hoards. Also the coins were found in spoil heaps from an old airfield on the line of the Ermine Street which raises the possibility that some of these were single stray coin losses [44].

The last coin hoard relating to our period was found at Barrowby, about two miles west of Grantham. This was also dispersed after only 12 of the, probably, several hundred coins had been listed [45]. Those listed were all minted at Stamford and are of either the Quatrefoil (1017-23) or Pointed Helmet (1023-9) types of Cnut. Nothing can however be said of the provision of coins to an area equidistant from the mints of Lincoln, Stamford, Leicester and Nottingham, as it is not known how representative the coins listed are of the hoard. In general hoards are of limited utility, as often the known detail is sparse. Furthermore they may often represent parcels of wealth accumulated elsewhere and then perhaps brought to the area by a single person, and thus reflect the travels of one warrior or trader, rather than the circulation of coin in Lincolnshire.

The single finds provide an indispensable tool for any analysis of coin distribution, as they bring us closer to coin circulating in the county. Their usefulness continues to grow as their number increases year by year. At present 38 coins have been found within Lincoln, and details of over 100 from the rest of the county in the period from c.800 to 1100 have been published [46]. The coins found within the city are mostly derived from excavations, whereas those from the rest of the

county are becoming increasingly common because of metal detector finds. The growth in 'treasure hunting' has greatly affected the ratio between Lincoln and non-Lincoln finds. In 1983 the 38 coins from within the city had already been found, and outnumbered the 32 from the rest of the county, now the latter figure has more than trebled. The increasing number of rural single finds confirms the notion that coin usage was as much a part of the rural, as of the urban, economy.

The single finds from Lincoln itself suggest a lack of economic activity in the city before about 870, as none have been found and dated earlier than this, whilst over 40 coins have been found in the rest of the county from the period 796-845 alone [47]. Even during the 860's and 870's, which coincided with the Viking takeover of Lincoln, there seems no great evidence of economic activity in the town, with finds confined to four coins, all found in the churchyard of St Paul-in-the-Bail. This can be compared with York where seven hoards have been found that were deposited between c.865-875 [48]. If these four coins from St Paul-in-the-Bail were not from a dispersed hoard then it is possible that the area around this church represents an early economic focus.

There is also a lack of early coin finds in the area around Lincoln, which makes it unlikely that any part of Lincoln or the vicinity formed a Middle Saxon economic focus or 'wic' [49]. The lack of coins, especially compared with the finds from Flixborough suggest that Lincoln was of little importance, even as an elite centre in the centuries prior to c.870.

Twenty-five English coins of the period from 973-1100, have been found in Lincoln. Of these, 19 could definitely be assigned

to particular mints, including nine that were struck in Lincoln [50]. Whilst the absence of mint signatures in the pre-reform period makes it difficult to attribute coins to Lincoln with certainty, there is a definite lack of coins that could even possibly have been minted at Lincoln. In the century prior to c.973 only one of eleven coins found could have been struck at Lincoln and even this is more likely to have been produced at Newark [51]. The earliest coins found in Lincoln came from different parts of England. The four coins from the 860's and 870's are all from mints in the South East. Following these are two St Edmund Memorial coins struck in, or close to, East Anglia and two coins struck at York. Overall the small amounts of coin found in Lincoln make it unwise to suggest a range of trading contacts for Lincoln simply on the strength of them. Indeed the most striking aspect of the pre-reform period in Lincoln is the overall lack of coin.

The single finds from the rest of the county are listed in Appendix 1. From this, and the accompanying map, it is clear that a high proportion of the coin finds are from Lindsey, particularly during the ninth-century. This is partly an illusion created by the sources of information available. M Blackburn has recently collated all coin finds known to him for Lindsey in the period 600-900 [52]. No comparable collations have been undertaken for the tenth or eleventh century or for Kesteven or Holland. Thus for some of the analysis it has been necessary to ignore the 20 coins which appear only in Blackburn's Lindsey collation. In addition there are problems associated with the way in which information becomes available on coins that

result from 'treasure hunting'. Some coins found by metal detector users are sold without the knowledge of the authorities or of numismatists. Information on many of these finds is available only because of links built up between numismatists and 'treasure hunters'. Lincolnshire is particularly well served by these informal links, nonetheless some coins finds in some areas probably remain unknown. Some areas which appear to have high levels of coin loss may instead reflect areas of particular cooperation between numismatists and 'treasure hunters'. Even so most coins have an equal chance of being found and their details given to numismatists, and so single finds provide valid and important information on the sources and types of coin found in Lincolnshire.

The single finds have been arranged in terms of their earliest possible loss date. The single finds from the county show a similar lack of locally minted coin in the pre-reform period, though in part this is because most of the pre-reform coins are from the period before Lincoln had a mint in operation [53]. There are only ten coins found in the county from the period c.890-973, whereas over 40 have been found from the period c.796-875. This comparison is not direct as half of the earlier coins were 'styca', which as base coins were presumably of lower value, and half of the earlier coins come from Blackburn's collation. Nonetheless this warns against assuming the period c.890-970 was one of rural as well as urban economic growth. 'Styca' were particularly suited to local trade and Blackburn has suggested that they circulated alongside finer southern pennies, serving as small change [54]. Of the ten coins c.870-973, the coin of Sihtric and the two Two Line coins of Edgar were perhaps

struck at Lincoln. In the next ninety or so year period, up to the Norman Conquest 41 coins have been found in the county, and all but two of these have been assigned to particular mints. Lincoln minted 20 of these and a further three were minted at Stamford, and eight were from York [55]. This suggests not only, as one would expect, that Lincoln was the most important mint in the county, but also that Lincoln, Stamford and York perhaps between them accounted for three-quarters of the coin used in the county between 973 and the Norman Conquest.

Given the size of Lincolnshire it might be expected that Lincoln only dominated particular areas of it. Parts of northern Lincolnshire (currently South Humberside) are as near York as they are Lincoln and one might have expected Stamford coins to predominate in the south of the county. In fig 16 the coin finds from 973-1100 from the county have been plotted. From this most coins seem to have been found in the area to the north and east of Lincoln, with particular numbers found around Louth, Willingham and Torksey. The single finds of coin minted at Lincoln mirror the overall pattern by being concentrated in areas to the north and/or east of Lincoln. Rather surprisingly all three of the Stamford coins are found to the east of Lincoln and a considerable distance from Stamford. The York coins are all found north of Lincoln, but mostly to the north-east rather than being associated with routes from York. Most of the coins found in Kesteven and Holland are from other English mints to the south of Lincoln. Some findspots of these are quite near the Ermine Street, perhaps suggesting that they were lost after being spent by travellers on their way to Lincoln, rather than being

redistributed from Lincoln.

The single finds also enable some comparison between urban and mostly rural non Lincoln finds. It may have been expected that rural finds would be more parochial, reflecting a circulation pattern in which coin principally moved between urban centres with rural centres receiving coin as a result of secondary re-distribution from urban centres. The mint of coins found in Lincoln are broadly similar to those found in the rest of the county, with 30% of both coin groups being minted in Lincoln (see figs 17 and 18). As coins minted before c.870 have not been found in Lincoln, it is perhaps more accurate to compare Lincoln finds with those found in the county c.870-1100 (see fig 19). Lincoln coins accounted for 45% of rural finds compared with 30% in Lincoln. The percentage of York coins was also higher in the county, perhaps because of the high number of coin finds that come from the north of the county. The differences should not however be overstressed, finds in the rest of the county reflect more than a trickle of coins distributed from the nationally important mint of Lincoln.

Overall coins found in Lincolnshire, including those in the town are largely from three mints: namely Lincoln, York and London; which together accounted for over 70% of all coin finds between 800 and 1100 (see fig 20). The pattern did change over the period with the majority of York coins minted in the mid-ninth-century, and the majority of those minted in Lincoln coming from the eleventh-century (see fig 21). Changes in this pattern reflect the development of the Lincoln mint, which accounts for no ninth-century finds, but over 50% of those minted between 996 and 1045. Any assessments of trade contacts need to recognise

that any coin found in the ninth-century will of necessity reflect contact with areas outside Lincolnshire. Nonetheless considerable contact remains despite the growing importance of the Lincoln mint. In this Lincolnshire can be contrasted with Yorkshire, where most single finds are York coins [56].

Single coin finds in this period are disproportionately common in Lindsey, which even ignoring the information from M Blackburn's recent collation still accounts for 85% of single coin finds from Lincolnshire [57]. Whilst this may suggest an area more involved in trade, the number of variables that affect the finding and reporting of single coin finds make this no more than a possibility [58].

Appendix 1 omits finds from recent excavations at Flixborough, and six irregular 'stycas' from sites near Torksey, because the details available for these are incomplete. At Flixborough 53 Anglo-Saxon coins were found on the site, all from the eighth or ninth century. Those from the ninth century comprised one from Canterbury, one from Mercia, three from Wessex and 22 Northumbrian stycas [59]. The coins at Flixborough are not dissimilar from the pattern of those from Lindsey as a whole. The large number of 'styca' finds from here and the rest of the county identify the influence of York, especially around the middle of the ninth-century. Contact with areas further afield is also evidenced by finds from Canterbury and Wessex. Whilst this may reflect non-commercial contact it does suggest Lincolnshire was not totally isolated from southern England.

In conclusion the pottery and coin evidence can be used to begin a consideration of the growth of trade in Lincolnshire and

the role of Lincoln within this. Archaeological evidence indicates that Lincoln was involved in trade in a wide variety of goods by the eleventh century, but the roots of this are difficult to discern. S Jones has recently argued that a profound transformation occurred in the levels of trade in England between the eighth and eleventh century [60]. The level of trade in the Middle Saxon period is, it is argued, reflected in urban centres which, if they produced anything at all, were for trade over longer distances. Even when internal trade began to quicken in the eighth century it had little impact on the agrarian economy, and by the ninth century towns had declined and the currency had been debased, representing the nadir of market based trade [61]. In Lincolnshire the trading of pottery does not seem to get underway until the late ninth century. The single coin finds however question Jones' pattern. Even ignoring the latest collation of ninth-century Lindsey finds, the numbers of coins found from that century is considerable. Much has been made of the debased nature of 'stycas', but as a low value coin they were far more suited to the requirements of local commerce than the silver penny. Local trade may have been an important aspect of the early and mid-ninth century, at least in Lincolnshire.

Coin seems to be circulating in the county regardless of whether the county had a mint. The amounts of coin in the county do not seem to be determined by mint activity at Lincoln which suggest that the rural economy took part in trade mechanisms that did not require access to a functioning mint. This is further supported by the relatively small amount of coin that turns up once Lincoln has a busy mint in the later tenth century. Whilst

the highest number of coins come from the eleventh century (if Blackburn's collation is ignored), finds from the ninth still exceed those from the tenth century. At the same time as coin finds are at their lowest the LKT distribution reveals an extensive trading network around the county. This ware was meeting a basic requirement over a large part of Lincolnshire, and the mechanism that brought it to the countryside was trade. Whilst the contradictory nature of some of the evidence precludes firm conclusions, it is important to avoid the assumption that 850-1100 was a period that saw a pronounced straight-line increase in trading activity in Lincolnshire.

1 F L Attenborough, ed., The Laws of the earliest English Kings (Cambridge, 1922), pp.114-5

2 F Barlow, ed., and trans., The Life of King Edward who rests at Westminster (London, 1962), p.43

3 A J Robertson, ed., The Laws of the Kings of England from Edmund to Henry I, (Cambridge, 1925), pp.72-77

4 The Letters of Boniface cited in P Grierson, 'Commerce in the Dark Ages: a critique of the evidence', Transactions of Royal Historical Society (1959), p.139

5 Above pp.151-4

6 R. White, 'Flaxengate's Non Ferrous Metals', Archaeology in Lincoln, 1982-3, Eleventh annual report of the Lincoln Archaeological Trust (1983), p.30

7 V. Williams, 'Finds from Waterside', Lincoln Archaeology 1988-9 (1989), pp.9-11

8 J Young, 'The distribution of Silver Street Kiln-Type pottery in Lincolnshire' in Atlas of Lincolnshire eds., N. Bennett and S. Bennett (Hull, 1993), p.30.

9 L Adams Gilmour, Early Medieval Pottery from Flaxengate, Lincoln (1988), fig 64, p.177 and p.151

10 Ibid., p.123

11 Ibid., p.175. Adams Gilmour suggests that its refractory qualities may initially have recommended it.

12 Ibid., p.175,

13 Ibid., p.123

14 See fig 14

15 G Coppack, 'The medieval pottery of Lincoln, Nottingham and Derby', University of Nottingham D.Phil. thesis (1980), p.37. Work along these lines is now being undertaken by J Young at the City of Lincoln Archaeological Unit.

16 C Hayfield, Humberside Medieval Pottery; an illustrated catalogue of Saxon and Medieval domestic assemblages from North Lincolnshire and its surrounding region, BAR British Series 140 (London, 1985), p.52

17 G Coppack, 'Saxon and early medieval pottery', G Beresford, Goltho :The Development of an Early Medieval Manor, c.850-1150, English Heritage Archaeological Report No. 4 (London, 1987), p.134 and p.164

18 Ibid., p.134 Fig 15, calcalated from the data on pages 137-164

19 Ibid., see pp.134-7 of this for a description of each of the ware categories. However whilst Coppack notes that the earliest examples of 'A' have the finest inclusions with the fabric becoming harder as the period progress; at Flaxengate LKT is is said to have 'remained constant throughout the production period'. L Adams Gilmour, Early Medieval Pottery from Flaxengate, Lincoln, op.cit., p.83

20 G Coppack, 'Saxon and early medieval pottery' in Goltho :The Development of an Early Medieval Manor, c850-1150, op. cit., p.135

21 G Coppack, 'The medieval pottery of Lincoln, Nottingham and Derby' op. cit., p.296

22 L Adams Gilmour, Early Medieval Pottery from Flaxengate, Lincoln, op.cit., p.166

23 See map 31.

24 Found at Beverley, York, Repton, Little Chester (Derbys), Nottingham, Newark, Collingham (Notts) Thurgarton (Notts), Leicester, South Croxton (Leics) and Tamworth. G Coppack, 'The medieval pottery of Lincoln, Nottingham and Derby' op cit., p.296. J Young, 'The distribution of Silver Street Kiln-Type pottery in Lincolnshire' in Atlas of Lincolnshire eds., N. Bennett and S. Bennett (Hull, 1993), p.30. J Young and A Vince The East Midlands Anglo-Saxon Pottery Project-Newsletter (1991).

25 M Blackburn and K Jonsson, 'The Anglo-Saxon and Anglo-Norman element of North European coin finds' Viking Age coinage in Northern lands, eds., M Blackburn and D M Metcalf (London, 1981), p.108

26 Ibid., p.150

27 K Jonsson, Viking Age Hoards and Late Anglo-Saxon Coins, (Stockholm, 1987), p.14

28 M Blackburn and K Jonsson, 'The Anglo-Saxon and Anglo-Norman element of North European coin finds' op.cit., pp.150-1

29 For instance it is argued that the development of national currencies in Denmark and Norway reduced the amounts of foreign coin which survived. This was because they, like most of Western Europe, adopted a monetary system which sought to exclude foreign coin in order to maximise the profits of minting. However in Denmark, Bendixen notes that such developments were a feature only from about 1075. K Bendixen, 'The currency in Denmark from the beginning of the Viking Age until c 1100', Viking Age coinage in Northern Lands, op.cit., p.413

30 P Sawyer, Kings and Vikings, pp.124-9

31 P Sawyer, 'Anglo Scandinavian trade in the Viking Age and after' Anglo-Saxon Monetary History ed. M A S Blackburn (Leicester, 1986), p.195. Even so there are only 14 Lincoln coins of William from Scandinavia in Mossop, compared with 241 from 1042-51 and 44 from 1051-66.

32 Ibid., p.196

33 M Blackburn and M Dolley, 'The Hiberno Norse element of the List Hoard from Sylt British Numismatic Journal, 49 (1979) p.18

34 Ibid., p.18

35 P A Stafford, 'The Historical implications of the regional production of dies under Æthelred II', British Numismatic Journal, 48 (1978), p.47

36 C Marshall, 'My Saxon Coin Hoard', Treasure Hunting, (1987), pp.40-42

37 Ibid., p.42

38 C E Blunt and R H M Dolley, 'The hoard evidence for the coinage of Alfred', British Numismatic Journal, 29 (1959) p.240

39 Ibid., p.240, and J D A Thompson, An Inventory of British Coin Hoards, 600-1500 (Oxford, 1956), pp.127-8

40 J D A Thompson, op.cit., p.355, C E Blunt, B H I H Stewart and C S S Lyon, Coinage in Tenth Century England, from Edward the Elder to Edgar's Reform (Oxford, 1989), pp.252-3

41 See Table 6

42 M Blackburn, 'The Welbourn (Lincs) hoard 1980-82 of Æthelred II coins', British Numismatic Journal, 55 (1985), p.79

43 Ibid., pp.80-3

44 M Blackburn, C Colyer and M Dolley, Early Medieval Coins from Lincoln and its Shire, Archaeology of Lincoln, 6 (London, 1983), p.39, Table 3

45 J D A Thompson, op.cit., p.11

46 See Appendix 1, and M Blackburn, C Colyer and M Dolley, op.cit., Table 1

47 See Appendix 1 and Ibid., table 1

48 E J E Pirie, Sylloge of Coins of the British Isles, 21 Yorkshire Museum, York, the City Museum, Leeds and the University of Leeds (London, 1975), pp.xxix-xlii

49 M. Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, ed., A. Vince, (Lincoln, 1993), p.83

50 See Table 3. The predominance of Lincoln is particularly pronounced in the period c.973-1066, when Lincoln produced 9 of the 14 coins assigned to particular mints.

51 M Blackburn, C Colyer and M Dolley op.cit., table 1, p.34-36 nos. 1-11. no. 11 may have been struck by Ingolf working at Lincoln before he moved to Newark.

52 M. Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, op.cit., Appendix A pp.87-89

53 42 of the 52 pre-reform coins were struck before 890. M Blackburn rules out the possiblity that Lincoln had a eighth- or early-ninth-century mint. Ibid., p.80

54 M. Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, op.cit., p.82-83.

55 See Appendix 1 and M Blackburn, C Colyer and M Dolley op.cit., table 1

56 D M Metcalf, 'The fall and rise of the Danelaw connection, the export of obsolete English coin to the Northern lands, and the tributes of 991 and 994', in Sigtuna Papers-Proceedings of the Sigtuna Symposium on Viking Age Coinage eds., K Jonsson and B Malmer (London, 1990), p.213

57 For this the coins found in Lincoln, although technically in Lindsey, were ignored. Proportion is dfficult to calculate for this period because the dimensions of unclaimed marshland are not known. For this purpose the number of Domesday settlements in Lindsey and in Kesteven and Holland were counted. Lindsey accounts for 65%, and one might have expected it to have accounted for a similar proportion of single coin finds.

58 The post-conquest coin finds from Lincoln tentatively suggested a decline in the dominance of the Lincoln mint. Initially the five coins from the county supported this picture, but more recent finds have questioned this. All in all this serves to illustrate that many of the percieved patterns are derived from small numbers of coin, which may be changed by coins found in the future.

59 M. Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, op.cit., p.87

60 S R H Jones, 'Transaction costs, institutional change, and the emergence of a market economy in later Anglo-Saxon England', Economic History Review, 96 (1993), pp.658-678

61 Ibid., pp.666-7

CHAPTER SIX

Lincoln and Anglo-Saxon Urban Topography

The topography of towns provides both an insight into the forces that shaped urbanism and a productive means of distinguishing towns from other, non-urban, settlement forms. There were, just as there still are, physical differences between towns and small hamlets. Today particular topographical elements, such as major chain stores and bus and rail termini, are characteristic aspects of urban centres. Similarly, some elements can be associated with Anglo-Saxon urban centres, such as those commonly identified by the 'bundle of criteria' approach to definition [1]. This section will consider the characteristic physical components of Lincoln, paying attention to streets and defences, bridges, possible market areas, suburban and waterfront developments, the churches and parishes, and plots and buildings. This will draw heavily on recent archaeological work although evidence such as street names and parish boundaries also have an important contribution to make.

The Evidence and its Limitations

Despite much recent excavation our archaeological knowledge of the physical aspects of towns remains sketchy. Even in the most archaeologically well investigated towns, detailed knowledge exists only for a very small percentage of the total area [2]. Towns of this period should not be assumed to have been uniform across their entire area. Some parts developed earlier than others, and there were probably variations in the activities,

social class, and layout of different areas; all of which exacerbate the problems of limited excavation. For instance in Fig 22 the small percentage of Lincoln which has received archaeological investigation is apparent. About 1% of the area outlined in Fig 22 has been excavated, and even this figure is likely to be an overestimation. At Gibraltar Hill, for instance, excavations were carried out in advance of ground stabilisation work, but they were only to the depth of 1.2m and encountered only modern levels. On some sites the levels associated with this period were quickly removed to get at the Roman deposits, whilst on others disturbance had removed or seriously disrupted the stratigraphy of this period. Also there are considerable areas, such as southern Wigford or the south- eastern extra mural area, which lack any significant investigation (see fig 23).

To answer many of the questions posed by Lincoln's topographical development requires precise chronological information. For instance, to determine whether the beginnings of Lincoln's urban take-off should be attributed to the Viking takeover or to its incorporation by Edward or Athelstan into the 'English kingdom', requires an ability to distinguish between developments occurring before and after the 920's. Archaeological investigation rarely provides evidence that can be dated with sufficient precision to create such a precise chronology [3]. There is also a tendency to establish dating at one site and then for other sites to be dated from it; hence if the original site was dated wrongly then this can distort the chronology of sites lacking independent dating evidence. Also at Lincoln the vast majority of site datings rely on pottery evidence [4], which is not without its problems.

Non-archaeological sources can assist the investigation of topography, although they are often very limited and/or very late. Historians, particularly those writing before the expansion of urban archaeology, utilised street and place-names as evidence of early settlement. For instance in Hill's survey of Lincoln the 'gate' suffix in street names like Clasketgate has been used as a guide to pre-Norman streets. This is because 'gate' was derived from Old Norse *gata*, and means street, although in the post-conquest period 'gate' became an element of the English language, so later streets were similarly named [5].

Churches and their parishes are often an enduring element within the urban layout. Ecclesiastical provision offers the potential for important insights into urban development, particularly as one of the unique features of urban development in this period was the rapid increase in the number of churches. Not only do many churches owe their initial foundation to our period but most were also provided with parishes in the early medieval period. From early in the twelfth century the rights and income sources of parish churches, as laid out in canon law, were widely enforced. That made it very difficult to establish new parishes in towns, as these would take income away from existing parishes [6]. Towns that emerged after 1100 typically have proportionately far fewer parishes [7]. Many of these parish boundaries then remained largely unchanged until the nineteenth century, by which time their layout had been mapped, prior to the drastic changes wrought by modern development. It has thus been argued that maps of the nineteenth century and earlier provide a chance to view early medieval parishes, and

sometimes identify later parishes, which had been cut out of the earlier large parishes. Urban parish boundaries probably followed features such as streets, defensive circuits, and property boundaries existing at the time of their foundation. So, even if the features themselves later disappeared, evidence of their previous existence survives fossilised in the parish boundaries [8]. Alan Rogers, whilst an advocate of this technique, nonetheless warns of the problems of distinguishing between parishes with the same church dedication, and the susceptibility of urban parishes to migration and absorption [9].

Church dedications may also provide clues to urban ecclesiastical chronology. Whilst almost all of the extensive written material relating to churches was produced after our period, the dedications themselves may in some instances be datable. For instance a church dedicated to St Olave should not be earlier than 1030, the date of his death. Some dedications had particular periods of popularity, which provides probable foundation dates. Others have specific geographical distributions; St Nicholas for instance was particularly popular in Lotharingia and Scandinavia. Churches however sometimes changed their dedications. For instance the church of St Thomas of Canterbury at Pagham in Sussex should post-date the martyrdom of Thomas Becket in 1170, but it includes work which is Anglo-Saxon [10].

Urban Origins and Topography

The detailed study of urban topography provides the means to investigate a number of broad hypotheses which have sought to explain the origins of towns in our period. After very briefly

outlining those theories most applicable to Lincoln, the various aspects of urban topography will be discussed with reference to these theoretical frameworks [11].

The first of these hypotheses might broadly be termed 'Roman continuity theory'. Many of the towns which are important by the end of the eleventh-century, such as London, York, Winchester, and Lincoln, are on the sites of Roman towns. This, proponents of this theory argued, was not simply coincidental. Not only did the Romans provide defences and a ready-to-use urban infrastructure but crucially, occupation in these urban centres ensured that they continued to function, albeit on a diminished scale. Occupation ensured that some streets, defences, and many buildings continued to be used, so when the subsequent economic upturn arrived, much of the urban infrastructure was in a broadly usable condition. The key topographical facet of this was not that a town simply had a Roman past but that its middle/late Anglo-Saxon layout was directly derived from its Roman precursor.

Most hypotheses however begin with a refutation of Roman continuity and instead stress the importance of developments in later centuries. Two broad hypothesis suggest that the development and hence topography of late Anglo-Saxon towns owed much to developments in the seventh and/or eighth century.

The first of these suggests that the earliest sign of post Roman urban development can be found in the trading settlements or 'wics' of the seventh to ninth century. Some, such as Eoforwic and Lundenwic, were in close proximity to former Roman centres, whilst others were on 'green-field' sites. Hamwih, one of the latter, consisted of streets laid out, although not all at

the same time, in a ladder-shaped arrangement [12]. A broad hypothesis proposes that the development of late Anglo-Saxon towns adapted wic activity into a settlement form more suited to the uncertain conditions of raiding and warfare that characterised the late ninth and early tenth centuries. The urban development of the walled area at York and London may be regarded as deriving from the transfer of nearby wic activity. Thus the most important burhs of this period can be regarded as wics with walls.

Haslam, in a number of recent articles, has postulated that the rise of places that became the county towns of midland shires should be traced back to the reign of Offa [13]. Offa, he argues, built burhs at these so as to block access up the main rivers of Mercia to Viking warships. The burhs consisted of a fortified area, either located within Roman defences or newly built in this period, an associated defensive bridge, and usually an extra-mural market area. A distinguishing feature is that the intra-mural area was not necessarily the most important part of a loosely-defined settlement pattern; the regularity of defences do not imply that the internal layout was necessarily regular. Instead the defended area, the bridge, and the market area were all linked by a single spinal street. Viking Lincoln, Stamford and Nottingham are interpreted as a Viking takeover of an existing system which, through political instability or disuse, had ceased to function [14]. As part of this model Lincoln is postulated as being the site of a Mercian garrison, probably in the upper colonia.

A third broad group of theories seeks to explain urban development as a result of factors arising directly or indirectly

from the political events of the late-ninth or early to mid-tenth century. Crucial to some are the burhs of Alfred, with planning and defences that set a pattern which towns outside southern England sought with varying degrees of success to emulate. For Maitland, towns developed from these burhs, which he regards as initially military in nature, with their distinctive tenurial heterogeneity a consequence of the need for such centres to be repaired and garrisoned by the surrounding rural manors [15]. Hence one would expect their urban topography to initially reflect military considerations, although Maitland accepts that these were gradually overshadowed by the needs of traders.

More recently it has been argued that most burhs were designed as urban centres from the outset, because of their size. Commerce, instead of conflicting with military considerations, was to be the means by which these settlements were populated and made financially viable, and so defended [16]. This duality of purpose is widely regarded as a feature of the burhs of Edward, Æthelflæd and the Vikings as well as those of Alfred. In this model topography caters for both military and economic needs.

Whilst there are perceived differences in composition between 'towns' founded by Ine or Offa or Edward the Elder, their chronology forms the most important means of distinction.

Defences and Streets

The defensive function is widely attributed a key role in the origins and early development of towns, and so defences therefore provide an essential starting point for analysis of Lincoln's urban topography. Alfred's burhs have dominated the study of defences in recent decades. His new burhs consisted of

earthen ramparts, sometimes strengthened with wood, fronted by a ditch or ditches. Others reused existing Roman or Iron Age defences. At Winchester, whose Roman origins and Late Saxon importance parallells that of Lincoln, the Roman defences provided the basis for the Alfredian defences. The actual composition of the defensive circuit has not been established, but evidence of extensive repairs in the surviving south-eastern section have been attributed to the Anglo-Saxon or early Norman period and two parallel ditches outside the West wall may be Alfredian [17]. Stone walls have been recognised as additions to the earlier earthen ramparts at towns like Cricklade and Hereford, further supporting the possibility that a new and/or repaired stone wall rather than a timber and earthen bank on the Roman line provided the defences at Winchester.

Internally Alfred's burhs consisted of a regular arrangement of streets which divided the enclosed area into blocks. The streets were planned around a main thoroughfare, which perhaps had two back streets running parallel to it. Other streets were laid out at regular spaced right angles to this, with perhaps a street running around the inside of the walls [18]. In many cases, including Winchester, the internal layout is regarded as being planned and laid out simultaneously with the construction or repair of the defences. The street plan of medieval Winchester, despite its rectilinear nature was a late Saxon rather than Roman creation [19].

There are some instances of planned streets and defences in Mercia. At Hereford the streets, of what was possibly an eighth-century enclosure, formed a regular layout with the intersection of north/south and east/west streets at its centre [20].

Haslam's model aims, by considering such developments, to counter the notion that West Saxon burhs and English planned towns are synonymous. It does not follow that planning was an Alfredian development nor that his 'burhs' exhibit the only instances of planning, nor that they mark a critical urban epoch.

Instead of a narrow conception of planning, epitomised by 'Alfred burhs', a wider view of planning, as simply the deliberate organisation of space for permanent settlement, will be adopted [21]. It is clear that the vast majority of Anglo-Saxon towns were subject to some degree of planning. For instance in Norfolk and Suffolk, which may lack burhs of the ninth/tenth century, almost all towns exhibit some sign of planning [22]. The main exception in Norfolk was provided by Thetford where development within the defences seems to have been casual, unless defences were put around an existing unstructured settlement. The lack of planning here is particularly interesting given its association with the Vikings. In Kent there is evidence of planned streets at Canterbury, Sandwich, Hythe, Romney and possibly at Dover and Rochester [23]. Elsewhere the degree of planning appears to be at least as high, with ninth- and tenth-century 'burhs' providing only some of the examples of this.

Whilst walls were primarily defensive, streets illustrate that planning may have had other purposes including commercial ones. Streets enabled the inhabitants to move around the enclosed area more easily, which was important for both defenders, and traders and craftsmen. Streets also broke up the enclosed area into smaller blocks. At Exeter, for instance, the

axial street seems to have had a slight curve in it, which was mirrored by one of the back streets running parallel to it [24]. It is difficult to find a military purpose for this, as even if an existing structure forced a slight curve in the main street, it seems very unlikely that another building would have forced a similar curve in the back street. More plausibly the curve probably allowed room for a standard plot depth alongside the main street, especially as tenements of a similar size have been found elsewhere in Exeter. This type of regularity, which is found elsewhere, probably indicates attempts by a central authority to encourage settlement on lines which mark a departure from those of the rural economy. Organised plots point to a commercial purpose, especially as these were organised around street frontages; the prime area of activity of traders and craftsmen. Whilst Hamwih indicates that streets and defences were not always an inseparable double-act most planned streets are associated with defended settlements, although defended places may have lacked formal street plans.

At Lincoln, as at Winchester, there were extensive defences already in existence at the beginning of our period. The Roman defended area at Lincoln was the product of a two stage development. Firstly during the second-century the upper city was surrounded with walls enclosing an area of 41 acres. The settlement then expanded down the hill and this additional area was then enclosed during the late second or early third century, giving a combined walled area of 97 acres [25]. Archaeology has confirmed that parts of these walls survived into, and probably throughout, our period. At East Bight the northern wall of the upper enclosure ran for about 10m standing about 5.5m above the

plinth, at Cecil Street a 25m length stood up to 3m and at Eastgate Hotel a 27m length stood up to 7m [26]. The western defences of the lower city have been investigated at The Park, where the wall stood on average at least 4.5m above its foundations, and at Motherby Hill where they stood to a height of 3m [27]. At Saltergate the southern wall survived to a height of 2.25m [28]. Such survivals, which are minimum figures, would mostly have formed an effective defensive barrier.

The parish boundaries suggest the walls of the Bail were of sufficient note in the eleventh or twelfth century to determine parish boundaries. The early modern parishes of both St Paul in the Bail and St Mary Magdalene were clearly delineated by the circuit of the upper town walls (see fig 24). In the lower town the parish boundaries provide no indication of the line of the walls. This may be because the expansion of the parishes of St Martin and St Swithin, resulting from the combining of several parishes, obliterated the line, although the way in which the parish of St Peter at Arches spills over the line of the southern wall perhaps argues against this. Evidence of surviving walls and their influence on some parish boundaries do not prove that the Roman walls formed the Late Saxon defensive circuit, as obviously their effectiveness would have been nullified had other sections been slight or non-existent.

Ditches also formed part of the original Roman defences, although even less evidence survives for these than for the walls. Excavations at Motherby Hill uncovered a series of ditches, with pottery infills suggesting that two of these may have been part of the Roman defences [29]. Pottery from the fill

of the second ditch at Motherby Hill suggest that it was recut in the Late Saxon period [30]. If so this would suggest some Anglo-Saxon usage of the western defences of the lower town. The Broadgate excavations revealed a ditch but a lack of dating evidence means that it could have been cut in the Roman or Anglo-Saxon period, and may not have even formed part of the defences [31].

At present the only other identified earth moving, perhaps associated with a pre-Norman defensive position or observation point, took place on the site of the western Roman gate tower in the upper city [32]. This could equally have been a late Roman alteration, or even an early phase in the development of the Castle.

The Viking/Late Saxon defended area probably consisted of only part of the Roman walled area. This is because, especially at the beginning of the period, the sheer size of Lincoln, with over 2 km of defences, would have caused problems for small numbers of defenders. Using the Burghal Hidage figures, which admittedly never applied to Lincoln, if every 16.5 feet was manned by four men the defensive circuit of Lincoln would have required about 2000 men for the maintenance and defence of its wall [33]. That would have been a major undertaking especially if the claims of Sawyer and others of Viking armies numbering hundreds rather than thousands are accepted. A more manageable circuit may have been achieved by building palisades and cutting ditches within the walls to create a smaller defended area utilising only part of the Roman defences. There is however no archaeological evidence of this. Nor does the parish evidence provide any indications of a smaller defended area.

The laying out of a street plan was closely linked to the development or refurbishment of defences in some other towns of our period [34]. So if datable evidence for the laying out of a street plan at Lincoln could be found it might imply contemporary refurbishment of the defences. At one time it was believed that Lincoln's medieval street plan owed much to the original Roman street plan. That now seems unlikely, although serious gaps in our knowledge of the Roman street plan mean we cannot be certain. Some of the early medieval streets may have followed the line of Roman streets because gates on the opposite sides of Lincoln remained points of exit. For instance High Street follows a line between the south gates of the upper and lower enclosures. Similarly Bailgate in the upper enclosure is likely to have followed a Roman line. Elsewhere in Lincoln however there is evidence of gates falling into disuse. Excavations at The Park have indicated that the western gate of the lower town fell into disuse at some point after the Roman period and before the thirteenth century [35]. Access to the eleventh- or twelfth-century western suburb and St Stephen's church were probably achieved via a gap in the wall on the line of Park Lane, which would have rendered the west gate superfluous by the end of our period.

Most evidence points to the Roman plan being disregarded. At East Bight deposition levels, presumably from the adjacent rampart, suggest that this road had became disused soon after the Roman period. Silver Street, whilst not excavated, is likely to have existed by the late ninth century, as traces of timber buildings of that date have been found aligned with it. This

street overlies Roman buildings on a totally different alignment, and the disuse of the Roman street plan in this part of Lincoln is fully confirmed by the fact that one of the Silver Street kilns was dug into the upper layers of a Roman road [36]. Excavations have shown that Flaxengate was a new cobbled street of the Late Saxon period, with no sign of an earlier Roman street on this site [37]. The Late Saxon origins of Flaxengate and possibly Grantham Street find further support from the earliest recorded names of these streets; Haraldstigh and Brancegate respectively. Brand and Harald, are both Scandinavian personal names, and were presumably early property holders here; *stigh* and less certainly *gate* were also Scandinavian elements. Onomastic evidence taken in conjunction with the archaeological evidence indicates a new development of streets here in the Late Anglo-Saxon period. Silver Street clearly runs across any Roman street plan, with its diagonal course likely to have served as the quickest route between the south and east gates of the lower Roman town. This suggests that its origins lay after the Roman period, but before intensive early medieval occupation began to hinder direct routes between gates. The Roman road just outside the southern defences was buried under nearly 2m of peaty silt, and whilst Saltergate was re-established on roughly the same alignment, that may not have occurred until the thirteenth century [38].

It has previously been assumed that the Roman roads of Ermine Street and Fosse Way, having converged, entered Lincoln from the south on the existing line of High Street, strongly suggesting that High Street was a medieval continuation of the Roman street. However excavations at St Mary's Guildhall have

unexpectedly uncovered two Roman roads tentatively regarded as Ermine Street and Fosse Way [39]. If these are correctly identified then High Street did not precisely follow its Roman predecessor. Furthermore excavations have revealed rubbish pits cut into Fosse Way [40]. Such pits not only suggest disuse in this period, but also that the road itself was buried, as one would not expect pits to be deliberately cut into a road when other ground was available. However along High Street between St Mary's Street and Gowts Bridge trenches revealed the Roman road surfaces at several places, suggesting much of High Street followed the main Roman street [41]. Vince and Steane however argue that Fosse Way/Ermine Street in our period followed the present High Street into Lincoln which ran to the west of the Roman road [42]. Overall much of the Roman street plan within the walls was probably disregarded, suggesting a lack of activity here in the fifth to ninth centuries, although outside the walls the influence of Roman roads was perhaps greater.

If the Late Saxon streets of Lincoln were not simply Roman roads resurfaced then they may have much to tell of urban take-off and development. Unfortunately datable evidence for street development is confined to Flaxengate. Originally the first phase of buildings here were dated c. 870-80 , but a recent reassessment suggest that this first phase of occupation began at the beginning of the tenth century [43]. It has recently been suggested that some of the traces of buildings along Grantham Street may be as early as those at Flaxengate [44]. It would be expected that these two streets were at least as early as the buildings which fronted onto them.

Flaxengate, the only street for which detailed constructional information exists, initially consisted of packed limestone cobbles up to 0.14m deep, laid directly onto the ground to make an uncambered road. Before the end of the first c.25 year period of occupation the surface was replaced on a similar alignment, but slightly wider and with about a 1 in 6 cambered surface, and including a drain. A new road surface was laid at the end of period II (c.930/40), associated with the destruction of this periods' structures, again on a similar alignment. This was the best laid surface, with tightly packed small to medium sized pieces of limestone and less cambered than its predecessor, and remained in use for about a century. A further, inferior, surface was then constructed over the loam dumps that had built up since Period II. By Period VII (1060/70) or VIII (1100/10) loam had been dumped on this surface and a row of about 55 stakes holes formed a north/south line of 14.2m on the road [45]. Overall by the end of the eleventh century, Flaxengate probably no longer served as a road, and the buildings on it were aligned instead on Grantham Street.

It is not however known whether Flaxengate was part of an extensive street creation scheme, as no other streets within the walled area have been excavated. The longevity of the third surface compared with its predecessors may suggest it had a more substantial surface, and formed part of a centrally orchestrated street development scheme, perhaps associated with Lincoln's incorporation into an expanding 'English' kingdom. It may however have lasted longer because the decline in traffic, which later resulted in disuse, had already begun. The association of the second road surface and building destruction levels may

indicate that the two processes were carried out together by a local landholder. We cannot therefore be sure at present whether refurbishment of the defences and the laying out of a street plan actually occurred at Lincoln, let alone be able to decide whether they occurred simultaneously, and if so under whose direction.

Our knowledge of the street layout may be expanded by using street name evidence. J W F Hill made use of these in his study of Lincoln, although he also drew attention, both to the way in which Danish *gata* became good English in this area after the Conquest and also to modern imitation [46]. Whilst all street name references are post-Conquest, the three streets which are known to have existed by the late eleventh century add some weight to the use of street names. Flaxengate is known to have existed from excavation. Whilst that name was not recorded until 1661, in thirteenth-century sources the street was referred to as Haraldstigh, from the Scandinavian personal name *Harald*, and Scandinavian *stig* meaning path [47]. Grantham Street is likely, on archaeological evidence, to be as early as Flaxengate, and in twelfth-century sources it was known as Brancegate, which again consists of a Scandinavian personal name *Brand* and *gata* [48]. High Street is also likely to be pre-conquest. Whilst in Domesday Book this is *magnus vicus*, early thirteenth-century sources term it Mikelgate, the Scandinavian equivalent of *magnus vicus* or High Street [49]. Thus each of these pre-conquest streets appear in twelfth- or thirteenth-century sources with Scandinavian or Scandinavian-influenced names. It is likely that many others with similar names in post-conquest sources also belong to the Late Saxon period.

More broadly, a consideration of Lincoln street names show that Scandinavian elements such as *gata, stig* and *holme* are quite common, especially if attention is confined to those which appear in twelfth- and thirteenth-century sources [50]. Of about sixty street names recorded in this period, only twelve appear in non-Scandinavian forms, whereas in Winchester a similar sample all end in English *stret* or occasionally *twichene* [51]. A further thirteen Lincoln streets have early names ending in both stret or lane and gata or stig, including Winnowsty Lane, which appears in thirteenth-century sources as *Waynwellstrete, Waynwellegate* and *Waynwellestig*. Omitting such names it is difficult to decide which of the remaining 35 streets were laid out in our period. Some clearly warn against assuming that all were pre-Conquest: for instance St Giles' Gate is unlikely to pre-date the founding of St Giles' hospital in the thirteenth-century. Lewynsty which is first mentioned in 1271-2 might, with its use of *stig*, have been considered early. However the Registrum Antiquissimum refers to land that was bought by '*Willelme (sic) filio Radulfi filii Lewyn*' [52]. This suggests *stigh* was also a common element in post-Conquest language, explaining why several street names of a similar form first occur in fourteenth-century sources.

Returning to the three known Late Saxon streets, a further pattern emerges. None of these three appear with mixed English and Danish elements [53]. For instance Brancegate, despite numerous references between 1185 and the fourteenth century, never appears as Brancestret, similarly Miklegate is never Miklestret. Thus we should perhaps consider those streets with split elements as less likely to be early than those which are purely Scandinavian. Using this method a further five streets

are probably early: Eastgate, Old Hungate, Clasketgate, Danesgate and Sextongate.

Parish evidence may also be used for a study of early streets (see fig 24). Parishes were determined by topographical elements that existed when they came into being. In Lincoln the formation of parishes perhaps did not occur until the twelfth century. The earliest references are to the parish of St Martin (1154-77), or to land in the parish of All Saints (c.1160) [54]. These may still have something to tell us of streets existing in the late eleventh century. By the time the parishes were mapped in the nineteenth century, many had been combined following the Union of Parishes in 1550, and some had disappeared even before this. The boundary of these early modern parishes may however preserve some of those original boundaries, as whole parishes were usually combined, rather than being split [55]. Flaxengate and Grantham Street which both form parts of parish boundaries provide support for the use of parish boundary evidence. Part of Flaxengate forms part of the parish boundaries of both St Michael and St Martin (see fig 25). The parish boundary of St Martin then follows a line between Grantham Street and St Lawrence Lane west of Flaxengate, suggesting perhaps that a street originally ran here, before shifting further east. The combining of St Peter at Arches and St Peter Pleas makes it likely that the boundary of the modern parish of St Peter at Arches reflects the earlier outer boundary of these two parishes. This boundary suggests that Park Lane and Mint Lane were early streets. Parish boundaries also suggest that Spring Hill, Michaelgate, Silver Street, Bank Street and Danesgate may have been part of

the early medieval street system. Archaeological evidence raises some doubts about Bank Street as a postern gate through the southern wall suggests that the line of the street originally ran west of Bank Street [56].

Identification of the early streets in the Bail poses greater problems as the streets were disrupted by the building of the castle and cathedral. The streets that existed outside the walls cannot be identified from parish evidence, as parish boundaries do not follow existing streets. In Wigford boundaries run east west across High Street, although the boundaries do deviate between one side of High Street and the other. Overall within the walls various evidence suggest that a majority of Lincoln's streets were in existence by 1100, particularly in the lower town. In the Bail earlier streets were obliterated especially by the addition of the castle.

The Waterfront

In recent years it has become apparent that waterfront areas may hold the answer to many questions concerning the origins and development of Anglo-Saxon towns. The waterlogged conditions of many waterside sites create an environment that aids the survival of organic materials, which are rarely found on most sites. In addition if trade was one of the most important starter motors of urban growth then the waterfront area should provide the earliest signs of activity, assuming that water-borne goods made up a significant proportion of traded items. Whilst it is difficult to prove that rivers were the principal highway for towns like Lincoln, London, and York, if long distance, regional and international commerce were important then it is likely that the

rivers provided the main route for its arrival. Water communications were certainly a characteristic which linked eighth-century 'wics' such as Eoforwic, Quentovic, and Hamwih. Later water, rather than roads, may have provided the main medium for the passage of some local agrarian produce which probably were the staple of local trade, although water could not provide access in all directions.

The nature of waterfront development was largely conditioned by the type of boats and ships that were using its facilities. Maritime archaeology suggests that our period was dominated by the Viking shipbuilding tradition, which can briefly be summarised as clinker-built boats with a very shallow draught. Documentary evidence suggest that they were usually 'beached' as do wear marks found on the bottom of wrecked ships from this period. For example marks found on the keel and lower planking of the Skuldelev (wreck 3) ship found in the fjord leading to Roskilde in Denmark, are consistent with it having been frequently run aground on sand and shingle beaches [57]. Wreck 1 from the same site was of a type more likely to have been used for trading with England and also Iceland. This was 16.5m x 4.6m, with a loaded draft of 1.5m, with a carrying capacity of about 16 tons [58].

A possible alternative, especially in non tidal areas, would have been for the vessel to have been moored or anchored in shallow water and then unloaded by wading men or carts driven into the shallows [59]. However ships like Skuldelev wrecks 1 and 3, or the smaller Graveney boat, were not necessarily the typical maritime visitor to waterfronts at Lincoln. Much of the

traffic perhaps consisted of even smaller vessels, perhaps similar to the Clapton log boat. This could carry four adults or their cargo equivalent and would require little or no 'harbour' facilities [60].

Overall the widely held impression is that most craft of the period could have been beached. In which case the main pre-requisite of waterfront facilities would have been a shallow shelving beach or 'hard'. Indeed at the beginning of our period it is likely that this would have been the only requirement, as the boat would probably also have served as the 'shop'. Clarke and Ambrosiani however argue that 'the common belief that Viking ships were beached by being dragged up onto the shore must now be revised' [61]. This follows the widespread discovery of quays and other revetments parallel to the shore, or jetties built out on piers into the water, at Dorestad, Birka and Hedeby for example. The change from beaching to the use of quays and jetties indicates an important economic change. Broadly speaking the use of quays and jetties points to larger ships needing warehousing and retailing facilities. More difficult however is the dating of such a change.

The River Witham and Brayford Pool, along with the Roman defences were probably the factors that had the greatest influence upon the topography of Lincoln. The geography of early medieval Lincoln differed quite markedly from that of its modern counterpart, with a greater area under water or prone to flooding (See Fig 26). The River Witham at Lincoln has been canalised; in the early medieval period it was a much wider river. Brayford Pool was also larger then, and may have extended a good deal further south than now [62]. Layers of silt and sand from the

Dickinson Mill site suggest that that area was part of the Pool until the mid tenth century, then a line across the site marks the eastern limit of the Pool in the tenth or eleventh century [63]. Excavations at St Benedict's Square have revealed that that area, which is now some 80m from the current eastern edge of Brayford, was at the water's edge until the second century, and the water again encroached here in the post Roman period. Then in the Late Saxon period a series of fences were built on the site which then marked the edge of Brayford [64]. That phase of activity has been dated to the tenth century and perhaps lasted fifty years. After this the ground was reclaimed, by dumping large quantities of soil on the site, which advanced the waterfront about 35m. Excavations at Brayford Wharf East again point to a period of neglect between the fifth and ninth centuries, with deposits suggesting that the river had more or less stopped flowing, due presumably to the silting up of the river further downstream. The apparent neglect seems to have persisted until the mid/late tenth century when four wattle fences were put up in the shallows, perhaps to serve as fishtraps [65]. Then in the twelfth century a new bank was put up some 12m west of the earlier one [66].

At 'Waterside' an extensive 'hard' was constructed at some stage between the end of the fourth century and c.900 [67]. This hardstanding seems to have formed the foreshore until the eleventh century. As the period progressed the foreshore seems to have become drier, apparently naturally, until a vertical waterfront was constructed a few metres north of the current waterfront at the very end of our period, or perhaps slightly

later [68]. Thus the construction of jetties and other more advanced waterfront facilities seems to belong to the very end of our period.

A further aspect of waterside development is the process of reclamation. This may partly be linked to the needs of larger ships, which require the removal of the shallows in order to provide a necessary depth of water close to the shore [69]. Reclamation also provided additional space on land to serve maritime trade, and perhaps also helped to counter high tides resulting from reductions in the width of the river [70]. The evidence from London suggests that reclamation was an activity undertaken on a private individual basis, because of differences in the materials used. This contrasts with the Roman period where there is a pronounced regularity about reclamation activity [71]. It also seems that there a primary concern by the end of the period was to increase the size of plots that had the benefit of access to large quantities of water for industrial purposes.

Considerable evidence of reclamation has emerged from excavations in the area between the Witham and the southern wall of the lower city. Early in the Roman period the quayside may have lain beneath Saltergate, but by the fourth century, after reclamation, the river's edge in that area is likely to have lain at least 20m south of the city wall [72]. The Roman deposits on part of the site are overlain by a shelving metalled foreshore which contains pottery of the mid tenth century. That was followed by a period in which the waterfront advanced rapidly, with at least four hurdle structures presumably associated with reclamation in the tenth to twelfth century.

Such reclamation activity provides an important indication

of expansion at Lincoln. This is firstly because it provided extra land in an area especially important for trade. Also it is likely that such reclamation was a large undertaking, which was stimulated by increasing levels of economic activity. It may also indicate some form of 'community action', led either by royal or Viking elites or possibly from a nascent urban 'community'. At present there is no indication as to whether reclamation was undertaken on a plot by plot basis, suggesting individual action.

Whilst excavations have shown reclamation was taking place in areas north of the Witham or east of Brayford, it seems that the area immediately north of Brayford remained waterlogged until the late eleventh or twelfth century. The three main trenches excavated on the Brayford Wharf North site showed little trace of Roman occupation, apart from possibly Roman pits that cut water-laid deposits. The other features found there are believed to be mostly medieval, although the site provided no dating evidence [73]. Recent excavations at Brayford North have revealed very little in the way of activity between the fifth and eleventh century, with the period instead characterised by intermittent floodplain deposition [74]. It seems that it was only during the later eleventh or twelfth century that the waterfront here advanced southwards, probably as part of the development of the suburb of Newland by the Normans [75]. The lower Witham/Brayford also stretched further west. Excavations at St Marks West revealed peaty riverine deposits, suggesting that the riverbank lay between trenches 2 and 3, about 100 m west of its current position [76].

Overall it seems that following a long period of neglect the waterfront area was again in use in the Late Saxon period, although it is very difficult to date exactly when. Apart from the 'hard' at Waterside, the available archaeological evidence conveys the impression of piecemeal development, probably by individual landholders, from the late ninth /early tenth century, although it is not established exactly where the earliest development were concentrated. At London, it is known from documentary sources that developments in the Queenhithe area began in the late ninth-century, but archaeological work has found no developments at other major medieval waterfront areas earlier than the late tenth century. Early developments at Lincoln may also be away from the currently excavated areas. Also if the riverside was particularly suitable for beaching, there might originally have been a limited need for structures that would leave archaeological imprints. It is possible for instance that wattle fences found on the waterfront are actually walkways to enable easier access to beached boats.

Bridges and 'Double Burhs'

Bridges and fords were important in the development of many urban centres as they ensured that land routes converged on particular nodal points. The main problem is to identify when a particular river crossing came into use. At York the present Ouse bridge was probably also the site of the earlier crossing, perhaps beginning as a ford, with a wooden bridge likely to have been built at an early date, perhaps as part of the urban development programme [77]. In many ways our knowledge of the

bridge at York, or rather the lack of it, typifies our understanding of the role of bridges in urban development; they are believed to be closely associated with urban development, but the proof is often slight or non-existent. Winchester provides a possible parallel with Lincoln as here the important east-west route was hindered by the river Itchen. The present bridge is positioned about 16m north of the line of the Roman road, whose accompanying timber bridge on stone piers probably did not long outlast the end of regular maintenance [78]. It is suggested that the present line may have begun as a ford, sited so as to avoid the currents caused by the ruins of the earlier bridge. Slightly more information is available at Rochester, where the Anglo-Saxon bridge probably had a span of over 430 feet. This seems to have consisted of a timber roadway running between nine stone piers that remained from the Roman bridge [79].

At Lincoln it is known from documentary sources that by the mid twelfth century at least two bridges crossed the Witham [80]. The position of High Bridge was probably determined by the main road approaching Lincoln from the south, although the exact line of this remains a matter of considerable debate. The earlier High Bridge was likely to have been very close to the current position of High Bridge, particularly as excavations adjacent to High Street, show that this was on the same line as Roman Ermine Street at a point which is now less than 30 metres north of the Witham and was considerably nearer in the late Anglo-Saxon period [81]. Unfortunately there is no archaeological or written evidence to indicate the existence of a Roman bridge. The previously much greater width of the Witham would have made any bridge a greater undertaking, but nonetheless well within the

means of the Romans, particularly given the work they appeared to have carried out to build a causeway to carry Ermine Street through low lying Wigford [82].

The other bridge was the Thorn Bridge, first mentioned in a thirteenth-century copy of cartulary of 1147. This features on the Speed map of 1610, although it does not appear to lead anywhere [83]. It seems unlikely that the effort involved in bridge building would have been undertaken to provide an alternative crossing point for the eastern suburb of Butwerk. Winchester also had a secondary bridge linking the heavily populated quarter of the city with the suburb of Winall and the road to London [84]. The Thorn Bridge at Lincoln however does not seem to have a role in the long-distance road communications of the town.

It is possible that one, or both, of the bridges at Lincoln were linked to the construction of a defensive burh. In some instances burhs and bridges have been regarded as single defensive units created in the late eighth or early tenth centuries especially in Midland England. N Brooks for instance has drawn attention to the three common military obligations of army service, bridge work, and fortress work and concluded 'that bridge and fortress were a single military unit; together they secured the river crossing for the armies of the kingdom and together they prevented the movement of enemy troops either by land or river' [85].

It is argued that Edward the Elder and perhaps earlier Offa responded to the Viking threat by constructing double burhs and bridges. P Stafford notes that 'double boroughs.... were a

development of fortified bridges and were designed to block Viking access along the crucial waterways of eastern England' [86]. J Haslam argues that this was a continuation of a policy adopted by Edward in southern England in the first decade of the tenth century [87]. The basis for any discussion of bridge-burhs is provided by the Anglo-Saxon Chronicle, which refers to Edward building double burhs at Hertford, Buckingham, Bedford, Stamford, and Nottingham [88]. It has been argued by writers on individual towns that the list is far from complete, with other towns, perhaps including Lincoln, possessing double burhs [89].

Parallells have been drawn with Carolingian defensive measures. The defensive bridge was certainly a feature of Carolingian attempts to resist the Vikings, with the construction of Pont de l'Arche on the Seine and Les Ponts de Ce on the Loire during the 860's. However if Carolingian bridges are to be regarded as a forerunner of those of Edward the Elder it is necessary to clarify exactly what these consisted of. S Coupland has questioned whether such bridges were part of a network which sought, with limited success, to defend northern Frankia by blocking rivers [90]. He instead concludes that Pont de l'Arche and Les Ponts de Ce were the only new bridges, elsewhere the work took the form of a temporary re-build. The blocking of rivers was only a temporary measure, perhaps achieved by blocking the arches with wood, which were removed as soon as the immediate danger had passed, as they prevented river based commerce. Also he argues the bridgehead rather than the bridge itself was fortified. Thus Frankia provides evidence of a piecemeal approach rather than of a systematic network of defensive bridges, that could have served as a model for an English system.

The detail given in the Anglo-Saxon Chronicle also points to considerable variation between the different double burhs, suggesting an ad hoc rather than systematic arrangement. Hertford and Buckingham appear to have been established as double burhs from the outset by Edward, whereas at Bedford, Stamford and Nottingham a second burh was added to an existing, presumably Viking, fortification. At Stamford the Chronicle gives the impression that Edward's southern burh was built to promote the surrender of the Viking northern burh, for once he built the southern burh 'all the people who belonged to the more northern borough submitted to him'. Only at Nottingham does the account refer to the construction of a 'bridge over the Trent between the two boroughs'. The archaeological and topographical evidence for these and other possible double burhs does not identify those places as being identical components within a 'grand design'.

Clues to the possible locations of burhs and bridges at Lincoln may be provided by analogy with other instances in the Five Boroughs of the 'bridge and double burh' phenomenon, associated with Edward the Elder's advance against the Vikings. At Nottingham Edward captured the burh in 918 and ordered its repair and remanning, and then returned with his army in 920

> 'and ordered to be built the burh on the south side of the river, opposite the other and the bridge over the Trent between the two boroughs' [91].

Nottingham, was the only instance of a burh known to have had a linking bridge, although the location of this is not as yet established. The second burh was originally believed to have been sited at West Bridgeford, although more recently J Haslam has suggested that it lay at Wilford. Both are locations over

1km from Nottingham and both would have involved bridges over the rivers Trent and Leen and also a linking causeway which would have been quite a major undertaking. If Haslam's small enclosure at Wilford was the southern burh, then this was positioned at the end of a defensible spur with the river Trent immediately to the north [92]. Overall this southern burh, through which the road from the south passed would have occupied 4.5 ha. Haslam argues that the function of such a burh-bridge would have been to deny Viking access to the military base at Repton, further upstream. He also argues that these arrangements were added to existing routeways, and so the southern burh was in part to restrict Viking movements by land through control of this important river crossing [93]. The Anglo-Saxon Chronicle makes it clear that a northern burh, of Viking or possibly earlier origin, was already in existence.

According to the Anglo-Saxon Chronicle, at Stamford

> 'In this year (918) between Rogation days and Midsummer King Edward went with the army to Stamford and ordered the borough on the south side of the river to be built; and all the people who belonged to the more northern burh submitted to him and sought him as their lord' [94]

Thus the southern burh here was built to assist the capture of the northern burh, although it is far from apparent how the building of one burh brought about the surrender of another. Here, Haslam suggests that Edward added a southern burh to an existing burh bridge defensive complex. Mahany and Roffe however regard Edward the Elder as the likely builder of the first bridge, following his capture of the Viking northern burh [95].

The function of that bridge-burh is unlikely to be linked to the control of land communications, as the important Ermine Street continued to cross the Welland some ½ mile west of Stamford. Haslam broadly accepts the topographical elements put forward by Mahany and Roffe, although there are some slight differences in the exact location of the various enclosures, which give a southern burh occupying between 4 ha and 5.25 ha [96]. The main differences between them are chronological. For Haslam the northern burh and the defensive bridge were arguably eighth-century additions, with the northern enclosure then re-used by the Danes rather than actually being built by them [97].

Thus we have at least two postulated examples of burh-bridge complexes formed in the late eighth or early tenth-century in the area of the Five Boroughs. Lincoln would have had a role to play in Haslam's putative scheme for the defence of Mercia by Offa, particularly if the Foss Dyke provided access from Lincoln to the Trent. There are however considerable historical problems with this model. In the first place it is far from established that the Vikings constituted a threat to Offa. The first recorded Viking raids did not occur until very near the end of his reign. Whilst Offa is known to have been concerned with defence in Kent, it is unclear whether isolated piratical raids would have justified a system of defence involving the construction of around fifteen bridge burhs. Evidence suggests that the Viking threat was in no way comparable to that faced by Alfred a century later, which led him to construct burhs on a scale similar to that postulated for Offa.

At Lincoln, Haslam postulates a middle Saxon emporium around

Brayford, with a Mercian burh in the upper city. There is no archaeological evidence to support either of these entities in late-eighth-century Lincoln. Late in the ninth century, Haslam suggests, Wigford and the lower town were extensively occupied, although he does not suggest that a double burh and bridge were built there.

Lincoln does however present a tempting topographical location for a defensive bridge and double burh constructed by Edward the Elder. High Bridge may have been (re)built partly to block access to the Lower Witham, and also to the Trent if the Foss Dyke was open, and could also have linked the lower walled town to a possible southern burh in part of Wigford. Such a southern burh would have been of great strategic value, being bounded by the Witham on two sides and controlling the main road south. To the east of this lay either low lying marsh and meadow, or perhaps the Sincil Dyke. Hill believed that Sincil Dyke was a Roman creation, although he accepted there was no positive evidence for this. More recently the possibility has been raised that it was constructed in the tenth century, or later because it is aligned with modern High Street which they consider was on a different alignment from its Roman predecessor [98]. A southern burh could usefully have been built by Edward however regardless of whether Sincil Dyke existed.

If Edward constructed a southern burh at Lincoln it would presumably have been of a similar size to those at Nottingham and Stamford. If High Bridge formed part of this complex, it may be associated with a period after the capture of Lincoln by Edward and before it perhaps returned to the Vikings, during the 920's

[99].

It is also possible that Sincil Dyke was created as part of Edward's defensive complex, although there is admittedly no evidence from elsewhere of ditch cutting. If Sincil Dyke was earlier and navigable in the early tenth century then a bridge burh would have been needed further upstream. The Thornbridge, first mentioned in a thirteenth-century copy of a 1147 cartulary, would, being further upstream, have prevented access to the Dyke until its route was changed after 1475. This would give a purpose to a bridge that on the Speed map of 1610 does not appear to lead anywhere [100].

Overall it is impossible to be sure about the existence of bridges and second burhs at Lincoln in the Anglo-Saxon period. A bridge or ford must have existed by at least the mid-tenth-century when Wigford began to grow. If Edward or possibly Athelstan built a burh the obvious place would have been at the northern edge of Wigford, although excavations in this area have failed to find any trace. At Nottingham the two burhs were separated by a long causeway. A similar arrangement could have been in place at Lincoln, with a burh situated towards the southern edge of Wigford, where unfortunately little excavation has occurred. A bridge would probably have been a smaller undertaking around 1100 than it would in 900 due to the falling water level and narrowing of the river. With this in mind, and the lack of archaeological or documentary evidence for Edward's presence at Lincoln, the balance of probabilities suggest that High Bridge was constructed in the eleventh or early twelfth century.

Markets

So far, apart from the waterfront, little attention has focused upon the overtly economic aspects of urban topography. The market place is perhaps the most obvious aspect of this. The 'market place' wherever it was situated is perhaps the most difficult aspect of urban topography to archaeologically investigate, because in effect it involves a search for empty space. In the later Anglo-Saxon period three possible topographical formats have been suggested for urban market areas. Firstly a triangular or rectangular open area, usually in an extra-mural position close to one of the 'gates'. For example at Bedford, J Haslam has drawn attention to a triangular open area, north of his postulated north gate near St Peter's church [101]. Markets, so positioned, could be controlled by royal reeves lodged within the defended enclosure, which also provided a refuge for the traders in emergencies. The evidence for these extra-mural market areas is however far from conclusive. At Cambridge the evidence consists of a boundary between the northern burh and the manor of Chesterton. This follows the line of the eastern defences, and then instead of following the wall as it turns westwards it continues for about 80m before turning west to meet the road leaving the burh about 50 m north of the gate [102]. That defines an area of about 1 ha, which perhaps served as the extra-mural market area. Winchester also had market places away from the central area, with a market outside the west gate and inside the north gate, with the latter perhaps associated with the sale of sheep [103].

Secondly streets, usually the central ones, served as market areas. Biddle noted that 'the streets of Winchester were its

market place', especially the High Street which by the late Anglo-Saxon period seems to have had an area that specialised in the sale of meat and perhaps fish [104]. The early use of High Street in Winchester as a market is firmly suggested by the use of the name *ceap straet* by c.900, and the only markets mentioned in the 'Winton Domesday' are on High Street [105]. This street is particularly wide, as whilst the north/south streets were initially 24-30ft wide, High Street is on average 40ft and in places even wider. This suggests a conscious planning decision, perhaps related to the intended function of that area as a street market. The beachmarket is a third possibility in places with good water communications and may have provided the ideal setting for the exchange of agricultural surpluses.

At Lincoln there are documentary references to markets but all are post-Conquest and many are chronologically far removed from our period. Lincoln has over twenty area and place-names associated with markets [106]. Half can be dismissed because of the lateness of their first written appearance [107]. Nine first appear in, or before, the fourteenth century. Of these, Clewmarket, the Drapery and Poultry Hill, can probably be discounted as their names are derived from Middle English, leaving six which may be pre-Conquest [108]. The earliest reference is to the *alto mercato* (High Market) in c.1200, which partly remains as an open space just below the southern gate of the Bail [109]. The siting of what was also known as the Fish Market probably reflects the importance of wealthy customers in the Bail, as this would not have been the most convenient of places for traders to bring fish, given the climb from the

waterfront. The Cornmarket was situated lower down Steep Hill at its junction with The Strait. The centrality of this location perhaps suggests an early market area, although it is not mentioned until the fourteenth century, and the linkage of central location and earliest development is far from proven. The *Lus Market* only appears in two thirteenth-century documents and its location is unknown. After also taking the name into account, it seems likely that this was a small, insignificant and relatively short-lived market. Reference is made to the *Bu(t)cheriam* in 1201, although that soon became St Lawrence Lane. The Skin market was referred to in the thirteenth century and was probably situated at the junction of Michaelgate and Spring Hill. The Malt Market, which was situated outside the walls near the Thornbridge, [110] rather surprisingly it is the only market site which stands outside the walls.

From fig 27 it is clear that there was a strong association between the northern half of the lower town and markets. This perhaps indicates the importance of wealthy customers in the Bail. Other evidence suggests that the southern half of the lower town was the principal area of development. In the light of this it is difficult to interpret the location of markets in Lincoln. It may be that at the time of market formation the southern half of the lower town was already too crowded for markets. Alternatively later development may have encroached upon, and so concealed those markets areas in the southern half. In the tenth and eleventh century market areas here were probably provided by the waterfront and the High Street.

The only evidence to suggest that markets and gates were linked in Lincoln in our period was that of High Market.

Although this area whilst outside the Bail was inside the lower town. There were stronger signs of links between markets and churches. Three of the five early market areas are very close to churches (see fig 27). This phenomenon has been noticed elsewhere, for instance Haslam's extra-mural market areas are often in close proximity to a church, although that may simply be coincidence as the practice of situating churches near gates meant that they were often near markets which were also often situated near gates. Elsewhere churches and markets away from gates can be found in close proximity. In Lincoln the close relationships between St Cuthbert and the Corn Market and St Peter Stanthaket and the Skin Market are especially pronounced. These examples may suggest that some markets in Lincoln originated outside church doors and in churchyards, which later developed into fully-fledged market places. The attractions of such a site, close to centres where people 'congregated', are obvious, especially in the early history of towns when the sparse urban populace was perhaps quite widely spread The links between church and market may find support from the number of coins found in graveyards, although this could equally reflect the custom of placing a coin in the grave [111]. Later legislation which forbade the holding of markets in churchyards, also suggests that such a practice was known, and perhaps well established.

Suburban development

A further aspect of early medieval urban layout was the growth of suburbs; commonly perceived as settlements outside the walled area of towns. This concept's usage provides evidence of

the overbearing influence of West Saxon 'planned towns' upon considerations of urban growth in England as a whole. Suburban development is widely regarded as undefended extra-mural development at fortified urban centres. From our discussion of urban origins it appears that the early development of towns such as London were typified by extra-mural development adjacent to a non-urban walled settlement. This was also the case at York and perhaps at Haslam's Mercian burhs, where the probable urban foci were postulated as being extra-mural. Whilst 'wics' and suburbs are conceptually different they were often morphologically similar.

Assumptions about suburban development provide the basis for a further supposition; namely that suburban development implies that the walled area had become crowded, forcing traders and craftsmen to find space elsewhere [112]. This was clearly not the case at the few urban centres of the seventh to ninth century. Even in the period from 850-1100, when it is probably true to say that most urban development took place within defended settlements, caution must be exercised in dealing with suburban development. We cannot know what lay behind the decision to settle outside the walls, but factors such as the possibility that it was cheaper to live there, or that trades which constituted a serious fire risk were unwelcome within the walled area, probably played their part.

It is often apparent that space existed within the walls at a time of suburban, or more appropriately, unwalled development, thus seriously undermining the assumption that suburbs imply the walled area was becoming crowded [113]. Biddle and Keene however regard Winchester as exceptional, contending that suburban

development provides a 'reasonable indication that space was becoming scarce to find within the walls' [114]. Whilst Winchester covered a large area, a third of its walled space was occupied by palaces and monasteries, which obviously reduced the space for other development [115]. Nonetheless the beginnings of Winchester's western suburb have been dated to early in the tenth century, which would have necessitated a phenomenal rate of growth to have filled those parts of the 58 hectares within the walls available for development within a few decades.

At this juncture it is important to recognise that suburban development took two distinct forms [116]: either of a 'ribbon-type' development along the frontages of routes into the town, or of a more compact grouping of houses, adjacent to the town, which were often incorporated into the town by later wall building.

At Lincoln suburban development has been observed in a number of areas before the end of the eleventh century. The most studied and probably most important suburb was the southern suburb of Wigford. As we have seen earlier, much has been made of its possible 'wic' place name and geographical position, in order to suggest that it was the initial focus of post-Roman development [117]. To summarise however, despite considerable excavation in the northern part of Wigford, archaeology has so far drawn a blank in terms of eighth- and early ninth-century development. Here our attention is instead focused on the development of this area from the late ninth century to c.1100.

At the beginning of our period there appears to be no evidence for occupation in Wigford. Excavations at St Mark's Station found rubbish pits of the tenth to twelfth century on

top of deposits of sterile 'dark earth' which lay over the latest Roman deposits [118]. Admittedly this site was a considerable distance from the street frontage, however other excavations closer to the main street frontage have drawn similar ninth-century archaeological blanks. At 170 High Street the stratigraphy survived from the Roman period up to the eighteenth-century, yet a thick deposit of 'dark earth' lay between the Roman layers and Saxo-Norman deposits [119]. Evidence for occupation in Wigford comes from the use of an area near St Mark's for burials, which Carbon 14 dating suggests are tenth- to eleventh-century [120]. The only indications of earlier occupation are raised by the possibility that a few of the burials at St Marks are slightly earlier than the tenth-century and the suggestion by Kate Steane that a small part of the pottery finds point to ninth-century activity. There are no structures associated with the few oddments of late ninth-century pottery and these probably arrived here through refuse disposal at a later date [121].

The development of this area may have been linked to the building of a southern burh by Edward the Elder. Wigford's development may however owe most to Ermine Street, which brought traffic from the south to Lincoln. Suburban development, particularly of the ribbon-type, has also been used as a means of determining the most important routes into a town. This seems a reasonable hypothesis as such settlements were likely to derive most of their custom from passing trade, with the busiest routes providing the most custom. Suburban development at Wigford points to this being the most important route into Lincoln from the Roman period to the present day.

There is comparatively much less information on Lincoln's other suburbs. Hill suggested Lincoln had 'overflowed its walls to the south of the river and on the western and eastern hillsides before 1066' [122]. To the east of Lincoln lies the suburb of Butwerk; probably derived from '*butan*' and '*geweorc*', 'meaning place outside the work/fortification' [123]. A pre-conquest suburb in this area finds further support from a church dedicated to St Clement, which was a favourite Danish dedication, although the nearby churches of St Bavo and St Rumbold may point to post-conquest Flemish piety [124]. The only excavations carried out in this area were on the Broadgate site, which is situated about 30 m to the east of the lower city wall [125]. From these excavations Jones suggests that the earliest post Roman occupation on the site dates to the early eleventh century, although the evidence consisted only of the slight remains of timber structures along the eastern and western frontages, with rubbish pits in the middle of the site. From the excavations it is not clear that the Friars Lane frontages were as early as those on the Broadgate side of the site, although it is suggested that Friars Lane may have been in existence before the eleventh century [126]. Overall the street layout suggests a compact suburban block in contrast to the ribbon development in Wigford.

In Domesday Book there is a reference to Kolsveinn who had four plots in Lincoln, and

> 'outside the city he has 36 houses and 2 churches to which nothing is attached which he settled on waste land which the king gave him and which had never been settled before' [127].

Freeman suggested that this development was in Wigford, however

Hill argues more plausibly that these two churches were in Butwerk. In a confirmation charter of the abbey of St Mary of York in 1156-7, reference is made to the gift of the church of St Peter, by Picot son of Kolsveinn [128]. Hill suggested this Kolsveinn of Lincoln is the same as the one in Domesday Book, and hence wherever St Peter's was, so too was the suburb. St Peter's is identified as St Peter-ad-fontem which was situated on the eastern edge of Butwerk. That does not mean Butwerk emerged around the time of the Conquest, as if the land lay around the church then this may imply that the land nearer the walls had already been built upon, and Kolsveinn's land marked the eastern edge of Butwerk. There is no real evidence to identify the second church of Kolsveinn [129].

To the west of the city lies the Westgate or Willingthorpe area, which Hill regarded as part of Lincoln's pre-Conquest suburban development, although the evidence that Lincoln 'overflowed its walls' on this western hillside is slight [130]. Whilst it seems likely that Willingthorpe was an Old English settlement, and the site of a manor of Bishop Remigius, that provides evidence only of an estate close to Lincoln. There has been little archaeological work carried out in this area, with excavations confined to The Lawn and Cuthbert's Yard. At The Lawn, apart from a road surface from the very end of our period and some fragments of middle Saxon pottery, there were no signs of occupation, although it is possible that deposits had been truncated [131]. At Cuthbert's Yard excavations again found little trace of early medieval occupation [132]. Whilst neither site provides conclusive evidence that this was not a Late Saxon suburb, the church evidence points in a similarly negative

direction. Of Lincoln's 47 medieval parish churches only one, St Bartholomew, was in the Westgate area. One would expect an eleventh-century suburb to share in the rapid proliferation of parish churches. The Westgate area shares a paucity of parish churches with Newport and Newland which both had only two medieval churches [133]. This contrasts with Butwerk which had five and Wigford with thirteen medieval parish churches. Archaeological and documentary evidence, and the French influence on both these place names indicate that Newport and Newland were Norman suburbs, and that developments in the Westgate area should probably be dated to the same period.

Overall it seems that Wigford and Butwerk were the principal and perhaps only Late Saxon suburbs. Wigford serves as the archetypal ribbon development stretching over 1km from Lincoln, with buildings clustered alongside Ermine Street. The importance of Wigford probably indicates the primacy of long distance routes from the south. In contrast the cluster of churches in Butwerk is indicative of the more compact type of suburban growth. The proximity of this area to the walls suggests that it developed on previously empty land rather than being a former village that had adapted to changing circumstances.

Plots and Buildings

Following our consideration of the large-scale aspects of urban topography, this and the final section will investigate the sub-divisions within towns; namely plots and parishes. The nature of urban plots are a feature that often distinguishes urban from rural settlements. In the High Middle Ages urban

plots or tenements were typically quite long with very narrow street frontages, but when this pattern developed is far from clear. Narrow urban plots may have been a feature of some towns from the outset, or have resulted from organic development linked to a realisation by elites of the economic potential of urban holdings and of the differing needs of urban and rural tenants.

Initially the biggest problem facing the originators of 'planned towns' was probably to encourage sufficient numbers of people to settle there and hence provide viable defence. In Winchester it is argued that once the streets were marked out the land behind them was parcelled out in large blocks [134], presumably to secular and ecclesiastical elites. Later documentary evidence suggests that these varied in size, with a plot in High Street having an area of 2,400 sq.yds (0.2 ha) whilst another in Flesmangerstret may have been as large as 5,200 sq. yds. (0.43ha). Initially, according to Biddle, these were provided with a church and dwelling, and plenty of space for the temporary accommodation of people and their livestock from the landholder's rural estates [135]. If so, then originally urban landholding had much in common with the existing rural pattern. Over a period of time the large blocks were then split up, either by the operation of a land market or through landlords building on, and then renting out their land as separate tenements. Either way by the twelfth century the area of the average tenement in the more densely occupied parts of Winchester was 4-500sq. yds. (330-420 sq. m.), with a street frontage of 30 - 40 ft. (9-12 m) [136]. A different pattern emerges from the excavations on the Coppergate site in York. Here new tenement boundaries were laid out in c.910, with the creation of at least

four long tenements each with a width of about 5.3m. These exactly met the needs of urban tenants, as evidenced by the fact that they remained in use for the following 1000 years [137].

In Lincoln the archaeological evidence of Late Saxon plots and buildings is confined to the Flaxengate/Grantham Street area, with 13 phases of timber building postulated during the period from c.900-1230 [138]. It is argued that the area excavated was all under single ownership. This is firstly because there were loam deposits which sandwiched the occupation levels and some of these loam horizons could be traced across the site [139]. Secondly the way in which the alignment of the whole site changed between periods point to the work of a single hand. The southern and eastern boundaries of the site were undoubtedly formed by Flaxengate and Grantham Street, but the other boundaries are more problematic. The northern boundary may lie quite a way north of the edge of the site as excavations regularly only located a small part of what may have been the northernmost structure on the Flaxengate frontage of this plot [140]. The parish evidence may shed further light on the line of the northern boundary. The division between the parishes of St Michael and St Martin runs east-west to the north of the excavated area. (see fig 28). The whole block occupied about 0.9 ha, the parish line split this, giving two blocks of about 0.45 ha. Whilst this may seem large for an urban block it corresponds to the large plots at Flesmangerstret in Winchester. This line would have made a feasible northern boundary, particularly during the early part of the town's development.

Perring raises the possibility that the western boundary ran

along a line formed by the eastern wall of a Roman stone building on the site. This however appears to be no structural evidence to support this, as no buildings occupy the western part of the site until the later eleventh century, and even than the structures take no account of this line [141]. Perring himself notes that at the end of period I 'loam was found over the full length of the site..... also around the area of the Roman stone building', also the terrace line associated with this was effected by a gradual slope rather than a vertical break. It may well be that the land between High Street and Flaxengate was split by a line running roughly north/south which would give plots with a width east-west of about 50m, which given evidence from elsewhere would not be excessively large. This would have meant that this block was initially split into four plots each occupying between 0.2 and 0.25 hectares.

The association of Grantham Street and Flaxengate with Scandinavian individuals Brand and Harald suggests that blocks of land were held in the vicinity by these, and perhaps initially distributed in the manner postulated for Winchester. Many of the property blocks within the walls contained a church although none can be identified for the Flaxengate/Grantham Street/Strait block. Whatever the original distribution of land, it is clear from fig 29 that the buildings on the plot were not arranged in a tenement pattern. For instance whilst the buildings of Periods I, II and III are regarded as being aligned with Flaxengate some have their longer sides fronting onto Flaxengate. Alternatively S2, S6 and S10 may be fronting onto Grantham Street, but if they are, each is the only building on a long length of street frontage. Even at the end of our period there is no real

evidence of a tenement system, in which street frontage space was at a premium. If the site was under single ownership there is very little to suggest a development plan that fully utilised street frontages space in a heavily populated area. These observations must remain tentative however given the conjectural nature of many floor areas and wall lines. There is no way of knowing how typical this small area was of Lincoln as a whole, particularly as Flaxengate or Grantham Street were probably not amongst Lincoln's most important streets. One might expect smaller sized plots on the High Street, perhaps in tenement form.

The identification of urban building types, even more than that of plots, is totally dependent on archaeology. A limited number of urban buildings have been found, although usually only the base of buildings survive, so other aspects including the type and composition of the roof remain obscured. Buildings occupied the Flaxengate site from c.900 to the end of our period and beyond. Apart from one structure with dry stone foundations the buildings were of wooden post construction, and were surface laid rather than sunken [142]. From the late ninth to the thirteenth century there is a steady improvement in the techniques used, with the earliest simply consisting of posts set directly into the ground, whilst in the early twelfth century the buildings were fully framed. Changes and improvements to building techniques have also been noted elsewhere. Nonetheless it is likely that urban structures were built with a consideration of the short amount of time they were likely to survive. Their temporary nature and the simplicity of the building techniques used, perhaps reflects a realisation that

fire was likely to end the life of a building before the process of decay was complete.

At Flaxengate the structures all appear to have been rectangular and most of them were about 5m wide. This sort of width is common amongst urban buildings. For example on the four plots at Coppergate in York, the first buildings were 4.4m wide and at least 6.8m long, with gaps of about 1m between them [143]. Many of the Flaxengate buildings however seem to be longer than those found in London and York. Some were up to 16m long, although the lengths were often interrupted by later features or extended outside the excavated area [144]. Whether these are typical of urban buildings in Lincoln is not known, but the building variations found in London suggest that early medieval Lincoln was probably occupied by a range of different timber-structured buildings.

Churches and Parishes

Churches provide a rare physical link between Anglo-Saxon and modern towns. Whilst little in the way of fabric survives, the siting of many churches has remained largely unaltered since the Anglo-Saxon period. The proliferation of churches appears to have been a unique feature of towns in this period. The development of the parochial system which divided towns up into, often very small, parishes followed the proliferation of churches. For instance for 250 years the Old Minster was the only religious community and perhaps the only church in Winchester; then shortly after 900 two other minsters were founded, and by the Norman Conquest it seems that a substantial

proportion of the 57 churches existing by the late thirteenth century had already been established [145]. Neither is such proliferation confined to Winchester. Campbell has estimated that by the time of Domesday Book there were at least 49 churches in Norwich [146]. Estimates of the number of Anglo-Saxon urban churches are arrived at by taking slightly later figures from documentary sources and then applying them, with a few subtractions, to the end of the Anglo-Saxon period. In general, the similarity between estimations in different towns by different people supports R Morris' suggestion that in the large towns of pre-conquest origin at least three-quarters of the churches in existence at their medieval maximum had been founded by 1100 [147]. This is also supported by archaeology with only 5 or 6 of the 25 urban churches excavated showing signs of having been founded after 1100. Once burial and other parish rights became established in towns, as they did by the twelfth century, it became difficult to create new parishes.

As more is often known of churches than any other town building, parish churches provide a means of comparison between towns. Church foundation was often a secular rather than ecclesiastical activity, and so probably reflected variations between towns in terms of population and wealth. The proliferation of churches has been regarded as leading to church numbers that far exceeded that which were strictly necessary. However it may well be that the majority of such foundations were very small. In Winchester a church of the period has been excavated measuring 13ft x 16ft, and based upon this Campbell has suggested that even 49 churches were perhaps hardly enough for a town like Norwich [148].

The starting point for the study of ecclesiastical provision in a large Anglo-Saxon town like Lincoln is to establish the number of churches later in the medieval period when information become slightly more plentiful. The Ross manuscript notes that Leland came with Henry VIII to Lincoln in 1541 and a catalogue of old churches was shown to him numbering 52 [149]. This did not give names or location, but this detail was provided by T Sympson (d.1749), 'no doubt correctly' according to Ross. A map, annotated by Ross, that accompanies Sympson's list has the suggested location of churches that no longer existed sketched on, based mostly on the detail in this list [150]. It now seems likely his confidence in Sympson may have been mis-placed as some of the churches are duplicates and others are not known from any other sources. Hill considered this list, and removed some doubtful ones, concluding that the medieval maximum was 46, with at least 43 in being by the middle years of the twelfth century. Furthermore Hill goes on to hazard a guess that not fewer than 35 of these churches were founded by 1100 [151]. D Stocker suggests there were at least 32 and perhaps as many as 37 churches in Lincoln by c.1110 [152]. These estimations are in line with R Morris' assertion that about 3/4 of medieval parish churches had already been founded by the end of the eleventh century.

Whilst the evidence for the existence of particular churches was often quite slight in the first half of the twelfth century, once one moves back to the Anglo-Saxon period the evidence for most churches disappears. In c.850 it is likely that there were one or more churches in existence in Lincoln. The first reference to a church in Lincoln occurs in Bede, who refers to

Paulinus converting Blaecca the *praefectus* of the city of Lincoln, after which Paulinus built a stone church 'of wonderful workmanship' [153]. It remains an open question which, if any, of Lincoln's later churches now occupies this site. Ralph de Diceto, who became dean of St Paul in the Bail in 1180, stated that his church had been the one that Paulinus had consecrated, and had initially been known as the church of St Paulinus [154]. This idea was popularised in the eighteenth century by William Stukeley and appeared to receive further support from excavations on the site of St Paul's in 1972-9 and again in 1984. These uncovered a church, that was similar in plan and dimensions to seventh-century examples from Kent, the home of Paulinus before he travelled North [155].

Hill however doubted this attribution, principally because it required two changes of dedication, firstly of the original in favour of Paulinus and then the abridgement of this to St Paul - which would require neglect of the story in Bede [156]. Hill's scepticism has found some support from further work carried out on the finds from this site. Radiocarbon dating of bones, which cut through the foundations of the first church, suggest these were buried before the seventh century. Two burials cut through the northern foundation trench, and so were buried after the church had gone out of use, yet these give dates of 500 and 540 [157]. Furthermore Bede stated that Paulinus' church was of stone, yet the evidence for the earliest church suggests the earliest church(es) here were of a timber framed construction. Currently the most acceptable suggestion is that the first church at St Paul in the Bail was a Late Roman foundation [158]. The dedication to St Paul, rather than to St Peter and St Paul also

points to early foundation, as at St Paul's in London.

Whether this church was Late Roman or founded in the seventh century, does not mean there was a functioning church on this site in 850. Indeed by Bede's day, a century after construction, the roof had fallen in on St Paulinus' church. Nonetheless the onomastic evidence perhaps implies a reasonable religious continuity on the site, as does the radiocarbon dating of bones which produced dates ranging throughout the Anglo-Saxon period. There was probably a functioning church here in c.850, particularly as many bones were dated to the ninth century [159].

St Martin is another dedication often associated with early churches. Venables for instance, commented that 'as a rule it will be found that in any town the church dedicated to St Martin is almost, if not quite, the oldest in the place' [160]. There was also the series of Lincoln coins struck early in the tenth century with a dedication to St Martin on one side, similar to a series minted at York and dedicated to St Peter [161]. The minster at York is and was dedicated to St Peter, so perhaps the church of St Martin had a similar importance in Lincoln. Even if St Martin's was functioning as a mother church in c.920 it need not have existed by 850. However it is possible that the central position of St Martin and St Paul in the lower and upper walled town respectively may be indicative of early co-existence [162].

The see of Lindsey was consecrated in 678 and disappeared after 875, so c.850 there was perhaps the church of this see to be found in Lincoln. In a recent paper S Basset has argued that the church of the bishop was to be found in Wigford [163]. In the sources the citations for this bishop vary but are most

usually of the form *Lindissi episcopus* or *Lindensis Faronensis episcopus*. Bassett argues that *Lindissi* was a specific part of Lincoln, the isle of Lindis, ie Wigford, rather than the kingdom of Lindsey [164]. This early seat of the bishop may have become one of Wigford's twelve parish churches, or disappeared entirely, when the head minster was perhaps transferred to the walled area in the Viking period. It has to be admitted that as yet there is no strong proof of the existence of such a church let alone whether it was still functioning in c.850. Overall Lincoln may have had two churches in 850, although none can definitely be shown to have existed. Whilst the sparsity of the evidence does not rule out the existence of several more churches, comparison with other towns suggests that two is of the right sort of magnitude.

Any investigation of the proliferation of churches between 850 and 1100 is heavily dependent on later documentary sources. After Bede, the earliest references to churches in Lincoln occur in Domesday Book and in the earliest post-Conquest documents in the Registrum Antiquissimum. Domesday Book mentions by name the churches of All Saints (which was probably in the Bail), St Lawrence, St Peter (which was probably St Peter Pleas), and perhaps St Michael (on the Mount), in addition to St Mary [165]. Domesday Book also refers to two churches held by the Bishop, 2½ held by Auti and 2 held by Kolsveinn.

Most of Lincoln's churches are not mentioned until the twelfth century, when they appear in documents in the Registrum Antiquissimum [166]. This information exists largely as a result of the acquisition of Lincoln's parish churches by the Bishop. None of these documents refer to the foundation of churches, and

so they only provide a date before which the church must have been founded. Unfortunately these acquisitions occurred too quickly for there to be much information about their former owners. Over half of Stocker's 32 churches make their first appearance in a document of 1146. The churches listed in this are those which had been granted to the bishop by Henry I, but had not yet been confirmed to a particular prebend or to the canons in common. It thus seems reasonable to infer that these churches already existed in 1115 when the earlier grant was made.

Some work has also been undertaken to identify the unnamed churches in Domesday Book. It seems likely that the two churches referred to as being held by the Bishop were St Martin and St Lawrence, as these were granted to Bishop Remigius by William I when the see was transferred to Lincoln in 1072 [167]. Earlier, one of the two churches which Kolsveinn built, was identified as St Peter *ad fontem* or in Baggerholme [168]. Hill suggests that one of Tochi's 2½ churches was St Peter at Arches because of links between Shelford Priory and Ralf Alselin, the priory founder and the nephew of Geoffrey Alselin who succeeded to Tochi's lands. The priory later claimed the moiety of advowsons of a number of churches including St Peter at Arches [169].

There is also a possibility that another church existed by the time of the Conquest, prior to the foundation of the cathedral. The first account that describes the actual site of the cathedral was written about 200 years later by John of Schalby, Bishop Sutton's registrar. This states that the cathedral was founded where St Mary Magdalene in the Bail had previously stood, and parishioners of this church served at the

altar of the same dedication until Bishop Sutton gave them a separate church at the West gate of the cathedral enclosure [170]. This appears to be at odds with the writ of William I which transferred the see and provided Remigius with 'enough land free and quit of all custom for the cathedral and its other buildings' [171]. Although free and quit of all customs may not necessarily mean unoccupied.

Two entries in Domesday Book support the existence of a church of St Mary before the cathedral was transferred in 1072. One relates that

> 'St Mary's of Lincoln, where the bishopric is now, had and has the remaining ½ carucate of land (in the fields of the city)- *Residuam dimidiam carucatae terrae habuit 7 habet Sancta MARIA de Lincolia in qua nunc est episcopatus'* [172].

Most important here is the usage of '*habuit 7 habet*' which usually implies land was held before as well as after the Conquest. Also there is the additional clause explaining that St Mary's is where the bishopric now is - implying that St Mary's existed before this. The second entry refers to the 'lands which Alsige and Wulfgrim had in Lindsey' and 'placed (among the lands of) the church of St Mary, Lincoln, and at Bishop Wulfwige discretion'. Wulfwige held the position of the Bishop of Dorchester from 1052 until his death in 1067. Thus there was already a link between the possessions of St Mary's of Lincoln and the see of Dorchester, even before the arrival of Remigius. Taken together these strongly suggest that an important church dedicated to St Mary existed at Lincoln before 1066.

Excavations add three further churches to our list of those existing by c.1086, namely: St Paul in the Bail, St Mark's and St Peter Stanthaket. Excavations at St Paul's suggest that after the

early church fell into disuse and was robbed out, the area was overlain with burials. These graves were then cut by a small rectangular building with stone foundations. This has been interpreted as a late-tenth-century church, particularly as a burial sealed by a surface within this had a radiocarbon date of 910 [173]. At the centre of this building lay a cist grave containing a hanging bowl, stylistically dated to the seventh century [174]. Steane raises the possibility that a seventh-century stone church survived as a ruin to form part of a late Saxon church [175]. Whatever the truth of this, it remained a single cell structure until the later eleventh century when a stone chancel was added.

Whilst at St Paul's the evidence points to a site of long standing religious significance and continuity, the site of St Marks appears to have been of no religious significance until the tenth century. Here a number of postholes have been interpreted as part of the probable first timber church. Whilst the length is unknown because the eastern part of the church lay outside the excavated area it is unlikely to have been very great as the church had an internal width of only 3m [176]. This building is regarded as a church largely because of the surrounding burials, as in this period cemeteries rarely existed without a church. Radio-carbon dating of bone samples and the evidence of a single in-situ gravemarker suggest that this church was built in the mid tenth century [177]. This gravemarker, on stylistic grounds dates that particular burial between the late tenth and late eleventh century, but this had been preceded by four earlier burials in the immediate vicinity. Whilst it is not known how

long lapsed before each burial site became lost Stocker and Gilmour considered it likely that the earliest burial, and hence the earliest church, were no later than the mid tenth century [178]. This was replaced by a larger stone church, built slightly to the north and west of the earlier timber church. The mid- or later eleventh-century dates for this rely on a small amount of pottery associated with construction contexts. The graveyard was extended further westwards, probably at the same time as the stone church was built. The building of a larger church in stone, suggests increases in population and/or local wealth.

At St Peter Stanthaket excavations encountered the nave, a western tower and southern aisle. The nave, built in the mid eleventh century, was probably the earliest part excavated [179]. In the late eleventh or early twelfth century the tower was added and the nave slightly lengthened. No earlier wooden church was identified on the site, although one could easily have lain outside the small excavated area.

Excavations at St Mark's draw attention to the inadequacies of the written evidence. St Mark's first appears in a document of 1147 in the Registrum Antiquissimum, which archaeology now suggests was about 200 years after its foundation. Stocker argues that St Marks was a later addition to the parish system, with parishes already existing to the north and south of it [180]. The suggestion that parishes or proto-parishes existed by the mid-tenth-century has implications for the foundation of other churches in Wigford, particularly St Mary le Wigford and St Edward. Nascent urban parishes by this date in Lincoln would however be considerably earlier than suggested elsewhere and the

parish boundaries provide no evidence to support Stocker's suggestion.

Architectural evidence may add to our list of late-eleventh-century churches. In particular two church towers in Wigford, St Peter at Gowts and St Mary le Wigford, have been considered as Anglo-Saxon on architectural grounds [181]. Both have towers that are tall and narrow and have double belfry openings with mid wall shafts, but neither have other elements that are regarded as the decisive characteristics of pre-Norman origin [182]. At St Mary le Wigford the tower is built against the nave, but without any bonding, suggesting that the west wall of the nave was slightly earlier than the tower. The chief evidence for the Anglo-Saxon origin of this tower rests with an inscription slab built into the tower presumably at the time of construction. This reads 'Eirtig had me built and endowed to the glory of Christ and St Mary' [183]. The inscription is in Anglo-Saxon rather than Latin, suggesting a pre- rather than post-conquest origin. However in the forthcoming corpus of Anglo-Saxon stone sculpture in Lincolnshire D Stocker and P Everson omit these two church towers as they consider them to be Early Romanesque, and probably post-date the construction of the cathedral which provided a prominent model as it took shape on the hill [184]. This need not mean the churches themselves were not Anglo-Saxon foundations, especially at St Peter at Gowts where differences in the quoining suggest that an appreciable period elapsed between the building of the nave and the addition of the west tower [185]. Nonetheless architecture does not prove that St Mary le Wigford and St Peter at Gowts were definitely in existence by the

end of the Anglo-Saxon period.

Overall there were definitely at least eight churches including the cathedral in existence by about the time of Domesday Book, and a further three are very likely to have existed [186]. The actual number was however almost certainly much higher than this. Especially given the evidence from St Marks, whose relatively late appearance in the written sources and its parish size point to it being 'a 'typical' urban parish church ....., with a history and archaeology which may perhaps prove characteristic of many other churches both in Lincoln and elsewhere' [187]. Yet it was in being by the mid tenth century and had been rebuilt larger and in stone before the Norman Conquest. Whilst one cannot say that all or most of Lincoln's urban churches followed a similar pattern to this 'typical' church. On reflection it is difficult to disagree with the hypothesis that between 30 and 35 churches existed in Lincoln by the end of the eleventh century, and significant proportion of these existed, perhaps in timber, by the end of the tenth century.

Elsewhere links have been postulated between churches and principal streets, or gates, or particular areas of towns. Such locational relationships have also been regarded as a guide to the chronology of church foundations and perhaps urban growth. Biddle and Keene have drawn attention to the way in which churches in Winchester are mostly intra- rather than extra-mural, and more importantly that they tend to be concentrated around High Street [188]. Similar concentrations on the principal streets have also been found at Exeter, Colchester and to a lesser extent in Canterbury [189]. It is presumed that such

concentrations reveal those areas that were developed first. Thus by a somewhat circular logic the date of the initial church foundations may be closely linked to the period when development of these towns began. Furthermore it is argued that churches occupying positions on principal street frontages were built early in the development of the town when space still existed here. Those to the rear of such plots away from the street frontage perhaps indicate that street frontages were already heavily occupied. In this general scheme principal street frontage churches would belong to the earliest phase of church development, whereas those occupying frontages in back streets or non street frontage positions are likely to have been later.

Churches were also clustered within particular parts of a town. At Wallingford, six of the eleven churches were to be found in the south-east quadrant, and a further two are on the main street which marks the western edge of this quadrant [190]. Churches were also linked, sometimes physically, to the gates of a town. This association has been noted in a number of towns especially in the south [191]. In both spiritual and financial terms gates provided a very good position for a church. The association of gates with journeys meant that such churches were particularly appropriate places to express gratitude for journeys completed or to invoke divine protection for ones about to be undertaken. This would often involve a pecuniary aspect. Such churches may also have, or be adapted for, military usage, such as St Michael Northgate at Oxford [192].

The links between churches and early street frontages in Lincoln can only be considered in broad terms as it is not

possible to confidently pinpoint the exact location of most of its churches. This circumspection is derived from the excavations at St Marks, where the site of the church shifted when it was built in stone. Whilst the distance between these church sites was a matter of metres, the timber church probably fronted onto the street whereas the stone church did not. It seems likely that many of Lincoln's churches began life as timber structures. When these churches were replaced by ones in stone, it seems eminently sensible for the new church to be built in another part of the graveyard, so that services could continue to be held at the old church until the new one was completed. If this occurred regularly then any conclusions drawn from the study of church location must be questionable as they are mostly based on the location of medieval stone churches, which may not be congruent with churches existing earlier in our period.

The Speed map of 1610 shows fifteen churches including the cathedral, but the stylised nature of this makes it impossible to ascertain exact positions [193]. There are a few clues to church location in the Registrum Antiquissimum, but again these give indications of general locations rather than enabling the exact position to be identified.

Some remarks can however be made about the general location of churches in Lincoln. Concentrating on the area within the walls, there are eighteen possible churches here by about 1100 [194]. These are quite evenly spread within the walls, with the largest area without a church located to the west of Hungate. The wide distribution of churches raises the possibility that the building of the castle resulted in the destruction of a church, although Domesday Book refers only to the destruction of

mansiones. The greatest concentration of churches was to be found in the southern third of the lower town, and was even more pronounced if Stocker's estimate of 14 churches within the walls by 1110 is accepted, as none of the four he omits were in this area.

The association of churches and the main street within the walls is not particularly pronounced, with only 3 or 4 associated with the High Street. If the main street was an area of early development, then the churches here are likely to have existed by the early tenth-century, as churches are unlikely to have been built here once the area became built up. If so St Martin, which has been considered as one of the earliest churches in Lincoln, St Peter at Arches, St Peter Mootstone (Pleas) and perhaps St Cuthbert should be among Lincoln's earliest churches. Domesday Book refers to St Peter Pleas as St Peter of Lincoln which may indicate its precedence over other churches, particular as earl Morcar was one of its former holders [195]. St Peter at Arches' existence early in the development of the town is perhaps supported by its parish which seems to have included an area outside the walls, which Rogers has regarded as being a sign of early existence [196]. St Cuthbert is less likely to be early as other evidence suggest that early development may not initially have spread this far up High Street.

There are few signs of association between churches and gates at Lincoln. Ross places St Rumbold near the eastern gate of the lower town [197]. It was certainly described as St Rumbold *extra clachislide*, that is outside the east gate of the lower town. Hill however places it on St Rumbold's Lane, and

more recent research suggests it lay at the corner of Friars Lane and Rumbold Street. It may well be that outside the gate simply referred to its suburban position. The only other possible link between church and gate was St Nicholas outside the northern gate of the Bail.

Overall there appears to be a clustering of churches in the southern third of the lower town. This perhaps suggests that the foundation of churches belongs to the earliest phases of Lincoln's development, and that the southern part of the lower town was the initial focus of this development.

Conclusion

There are a number of themes which emerge from this discussion of the urban topography of Lincoln. It is clear that most aspects of its topography have been transformed between 850 and 1100. Here one thinks most notably of the proliferation of churches and the development of streets, plots and buildings. More difficult is any analysis of the forces and groups which served to shape the topography of Lincoln up to c.1100. Whilst the role of kings was apparent in the planning of burhs and wics elsewhere, at Lincoln no evidence has emerged for a large-scale urban masterplan that could be associated with Offa, Viking leaders or Edward the Elder. The impression gained from the waterfront and Flaxengate is that some planning may have taken place, but on a small scale, with the onus very much on local community/individual action. Lincoln's topographical development perhaps resulted from organic growth, which elites tried to harness but did nothing to create.

Whilst Lincoln may have served as a centre for secular or

ecclesiastical elites, as suggested by Bede's account of the conversion of *praefectus* Blaecca by Paulinus, in the centuries prior to our period, on reflection there is little to suggest they had much of a role in the shaping of Lincoln's urban topography. It is probably only at the very end of the ninth century in parts of the walled area, and during the tenth century in the important southern suburb of Wigford, that major topographical changes begin to appear.

The clearest indications of topographical change are provided by the laying out of the street and the beginning of building activity on the Flaxengate site after a lacuna of several centuries. Activity seems to have begun around 900 although the dating remains somewhat fluid. By plotting finds of Lincoln Gritty pottery, which went out of production by c.900, Young and Vince have provided an insight into the beginnings of medieval topographical change in Lincoln, by indicating areas of activity [198]. From this plot, development seems to be centred in the eastern half of the lower town, although in part this picture is misleading because of the lack of sites in the western half of the lower town [199]. From the sites lacking Lincoln Gritty it is clear that c.900 there had been little development outside the walls or in the upper town, or in the northern and western fringes of the lower town. The finds of LG to both the east and west of High Street and the pattern of development elsewhere suggest that High Street within the walls shared in this early development. Overall the Flaxengate area was unlikely to have been the first area to be developed, instead High Street was probably at the forefront of development, although without

excavation this remains only an unproven hypothesis.

On the waterfront there are archaeological indications of fence and hurdle structures and the dumping of soil, which all suggests reclamation, probably deriving from the stimulus of economic development at Lincoln, rather than forming part of a central plan. Again areas lacking excavation, especially on the south bank of the Witham, make the nature of this activity and its diffusion unclear. Boats were beached at Lincoln on the 'hard' that occupied some of the area between the southern wall and the Witham. This hardstanding may have been one of the earliest Late Saxon developments at Lincoln, although it could have been constructed several centuries earlier. The development of a vertical waterfront probably did not begin until after our period.

The other immediately apparent transformation in the topography of Lincoln was the proliferation of churches. Whilst it is difficult to precisely date the foundation of most of Lincoln's churches, it seems likely that well over half of the medieval maximum of 47 were founded before the Norman Conquest. Also it seems unlikely that the unexceptional St Mark's founded in the mid tenth century should be among the very first to have been founded. The early settlement, with perhaps one or two churches, can be contrasted with the 30 or more churches that were present by c.1100. With this, as with most aspects of Lincoln's topographical development, it is hard to identify the chronology of changes between c.850 and 1100. A Late Saxon proliferation of churches occurs, but how many of these existed by c.950 or c.1025 is impossible to say. A tentative model may be constructed based on the excavations at St Mark's. If St Mark's existed as a small wooden church in c.950, perhaps a large proportion of Lincoln's

other churches existed in a similar form. Between c.950 and the early eleventh century there may have occurred not so much an expansion in the number, as in the size of churches. This period may have seen the replacement of timber churches by larger stone churches, which by 1100 had often seen the addition of a stone tower.

Central to any understanding of the urban growth, which the changes to churches streets and waterfronts personify, is some investigation of the 'architects' of these changes. After the Norman Conquest the topography of the Bail area was transformed by the king and bishop, with the construction of the Castle and Cathedral; but should these be regarded as the most visible sign of centuries of elite topographical transformation in Lincoln? The indications are that these should be regarded as exceptional. Emphasis should lie not with king earl or bishop but with those lower down the social scale, perhaps in some instances working in groups. The 'planning' so far revealed by archaeology could easily have been carried out by prominent citizens working singularly or as part of some form of 'community action'. The Flaxengate site for instance suggests the planning carried out here was undertaken periodically by a landholder of the whole site. Similarly waterfront development could have been arranged on a small scale, with separate landholders developing their own piece of waterfront. As yet there is nothing to suggest that the reclamation encountered formed part of a 'city-wide scheme'.

If doubts remain about the ability of such figures to transform the topography of Lincoln, one need look no further than the churches, whose expansion, both in terms of numbers and

perhaps also size, can be attributed to such nameless individuals. Kings and other elites were often associated with the earliest religious foundations in a town, such as Edward the Elder with the New Minster in Winchester or Offa with St Pauls in Bedford [200]; but we need to look elsewhere to find those responsible for the later proliferation.

The nobility aped kings by founding monasteries and probably did likewise by also founding urban minster churches. For instance Earl Siward died in York and was buried 'at Galmanho in the minster which he himself had built and consecrated in the name of God and (St) Olaf' [201]. Church foundation was not however the preserve solely of the highest ranks of the nobility. In York an inscription of perhaps 950-1050, records that Grim, Aese and another created this minster 'in the name of the holy Lord Christ and to ....St Mary and St Martin and St C(uthbert?) and All Saints' [202]. This shows townsmen working in unison and probably suggests they were of relatively lowly status. Later documentary sources often show urban churches in the hands of 'smaller' men, prior to falling into the hands of nearby religious establishments, such as the Cathedral in Lincoln. For example in Norwich, Domesday Book records that the burgesses held 15 churches and that TRE '12 burgesses held the church of Holy Trinity and now the bishop (holds it)' [203]. At Lincoln the Eirtig who was presumably responsible for the tower at St Mary le Wigford is otherwise unknown, suggesting perhaps relatively lowly status. If such people were investing in church building in Lincoln, it seems reasonable to suggest that they were also investing in other physical features of Lincoln, such as the roads abutting their property, or reclaiming parts of the

waterside to extend their land.

The main caveat to this hypothesis lies in the sphere of streets and defences. Gaps in the evidence currently make it impossible to rule out a major scheme of street laying perhaps linked to some, so far obscured, defensive refurbishment. There is no immediately obvious historical context for the laying out of Flaxengate around 900. If the best road surface at Flaxengate should be dated c.930/40 then it may be linked to the incorporation of Lincoln into 'England' by Athelstan, although this remains very speculative.

Finally, more broadly, what was the physical nature of Lincoln at the end of our period? It seems likely that by the end of the eleventh century Lincoln was well defended, perhaps with some Norman refurbishment of the walls to accompany their castle. The extent of the street layout remains obscure. The principal street was probably High Street/Steep Hill/Bailgate, with Old Hungate and Danesgate providing additional north-south routes. Silver Street, Clasketgate and Grantham Street provided east west routes in the lower town, although in the west these may well have ended as cul-de-sacs if the west gate in the lower town was no longer operational. A large part of Lincoln's later medieval street plan probably existed by c.1100, especially in the lower town. In the upper town the late Anglo-Saxon layout is largely obscured by the addition of the Norman castle and cathedral. It is therefore not possible to say whether the very different character of the Bail was already a feature of Lincoln by the end of the eleventh century. Fronting on to this extensive street system were buildings often serving as shops

and/or workshops with accommodation away from the street frontage, especially on the principal streets. At Flaxengate it seems from the outset that street frontage occupation was quite intense, with buildings less than 2m apart. Away from the main streets things were probably different; here houses probably had considerable areas of accompanying open land. A number of lanes no doubt then ran down to the waterfront, where boats perhaps continued to be beached. Overall a Middle Saxon Lincolnian coming back three centuries later would 'hardly recognise the place', such was the degree of physical transformation in some areas of Lincoln.

Chapter Six: notes

1. See above p.7

2. For instance only 0.0125% of York and at best 5% of Hedeby has been excavated. H Clarke and B Ambrosiani, Towns in the Viking Age (Leicester, 1991), p.139

3. For instance at Silver Street many of the deposits were attributed to period IV/V, which equals Late Saxon/Medieval.

4. Personal communication Kate Steane CLAU

5. For example Priorygate, J W F Hill, Medieval Lincoln (Cambridge, 1948), p.33

6. R Morris, Churches in the Landscape (London, 1989), pp.169-71

7 For instance Boston, despite its medieval importance only had only one parish, probably becuse much of its development was post Conquest.

8 For an example of the use of parish boundaries see J Haslam, 'The Development and Topography of Saxon Cambridge' Proceedings of the Cambridgeshire Antiquarian Society (1984), 72, pp.19-20

9. A Rogers, 'Parish Boundaries and Urban History: Two Case Studies', The Journal of the British Archaeological Association 3rd series, 35, (1972), p.49

10 C Platt, The Parish Churches of Medieval England (London, 1981), p.8

11 These theories are covered in greater detail in the definition section.

12 A D Morton, ed., Excavations at Hawic, vol I, CBA Research Report 84, (London, 1992), p.38

13 For instance J Haslam, 'Market and Fortress in England in the reign of Offa', World Archaeology 19.1, (1987) pp.76-93

14 Ibid., p.79

15 F W Maitland Domesday Book and Beyond: Three essays in the early history of England (Cambridge, 1897), pp.172-219

16 For example M Biddle, 'Towns', in The Archaeology of Anglo Saxon England ed., D M Wilson (London, 1976), p.125 or R Hodges,'Society, Power and the First Industrial Revolution', Medieval History, 2 (1991), pp.99-109

17 M Biddle and D J Keene, 'Winchester in the Eleventh- and

Twelfth-Century' in Winchester in the Early Middle Ages, M Biddle et al. eds. (Oxford, 1976), p.275. D Hinton Archaeology, Economy and Society: England from the Fifth to the Fifteenth-Century (London, 1990), p.76

18. M Biddle, 'Towns', in D M Wilson ed., op.cit., pp.127-31

19. M Biddle and D J Keene, op.cit., p.277

20. M Biddle, 'Towns', in D M Wilson ed., op.cit., p.120

21. M Biddle, 'The evolution of planned towns before 1066' in The Plans and Topography of Medieval Towns in England and Wales, ed., M Barley, CBA Research Report 14 (London,1976), p.20

22. M Atkin suggests that Ipswich was founded or replanned as a single act of policy in much the same way as suggested of Hamwih. Even at Norwich, where much emphasis has been placed upon its organic development from a number of small hamlets, there is evidence of planning. Atkin notes 'the possibility of a more extensive grid plan than previously imagined, built around the north to south bridging points'. Also north of the Wensum there is a possible tenth-century enclosure with a surviving intra-mural road. M Atkin, 'The Anglo-Saxon urban landscape in East Anglia',Landscape History, 7 (1985), pp.27-40. Compare pp.34-5 with J Campbell, 'Norwich and Winchester' in The Anglo-Saxons ed., J Campbell (Oxford, 1982), pp.174-5

23. T Tatton Brown, 'The Towns of Kent', in The Anglo-Saxon Towns of Southern England, ed., J Haslam (Chichester, 1984), p.2

24. J Allan, C Henderson and R Higham, 'Saxon Exeter', The Anglo-Saxon Towns of Southern England, op.cit., p.402

25. J W F Hill, op.cit., pp.4-6

26. M J Jones The Defences of the Upper Roman Enclosure, The Archaeology of Lincoln, 7-1 (London, 1980), pp.17,20,31-2

27. C Colyer, 'Excavations at Lincoln, First interim Report: The Roman and Medieval Defences of the lower town' Antiquaries Journal, 55 (1975), pp.241-59

28 C Colyer and M J Jones eds., 'Excavations at Lincoln: 2nd interim Report , Excavations in the lower town' Antiquaries Journal, 59 (1979), p.86

29 A Vince and M J Jones eds., Lincoln's Buried Archaeological Heritage: A guide to the Archive of the City of Lincoln Archaeology Unit (revised forthcoming edition), p.11

30. Ibid., p.11

31. R H Jones 'Broadgate', in 'Sites outside the walled city',

ed., M J Jones Antiquaries Journal, 61 (1981), p.103

32 D A Stocker, 'Lincoln Castle', Archaeology in Lincoln: 11th Annual Report of Lincoln Archaeological Trust (1983), pp.21-2

33 Roman wall approx 9000ft long.

34 For instance in Wessex it does seem that the laying out of the defences and the laying down of a street plan were carried out simultaneously.

35 K Steane and A Vince, 'Post Roman Lincoln: Archaeological evidence for activity in Lincoln from the 5th to the 9th centuries' in Pre Viking Lindsey ed., A Vince (Lincoln, 1993), p.76

36 P Miles, J Young and J Wacher, A Late Saxon kiln site at Silver Street, Lincoln, Archaeology of Lincoln, 17-3 (1989), p.186

37 C Colyer and M J Jones eds. op.cit., Antiquaries Journal, 59 (1979), p.57

38 P Miles, 'Post-excavation : The Lower Walled City in Detail-The South East area', Lincoln Archaeology No.1 (1989), p.26

39 J R Magilton and D A Stocker, 'St Mary's Guildhall', Archaeology in Lincoln 1981-82 , 10th Annual Report of Lincoln Archaeological Trust (1982), p.15

40 Ibid., pp.12-13

41 A note by P N Brockendon cited in J W F Hill, op.cit., p.11

42 K Steane and A Vince, op.cit., p.76

43 D Perring Early Medieval Occupation at Flaxengate, Lincoln, Archaeology of Lincoln, 9-1 (London, 1981), p.36 and A Vince, 'Post-excavation : the results' Lincoln Archaeology No.1 (1989), pp.18 & 20

44 A Vince, Ibid., p.20

45 D Perring, op.cit., pp.6,8 and 18

46 J W F Hill,Medieval Lincoln op.cit., pp.32-4

47 K Cameron, The Place Names of Lincolnshire, Part 1, English Place Name Society 58 (London, 1985), pp.66 and 71

48 Ibid., p.53

49 Ibid., pp.72-3

50 See Appendix 2

51 Ibid., and M Biddle et al Winchester in the Early Middle Ages, op.cit., pp.231-5

52 K Cameron, op.cit., pp.53-4, 71, 72-3

53 Ibid., pp.53-4, 71, 72-3

54 Registrum Antiquissimum of the Cathedral Church of Lincoln, VIII, Lincoln Record Society, 51, ed., K Major (1958), no.2336 and Registrum Antiquissimum of the Cathedral Church of Lincoln, VIII, Lincoln Record Society, 62, ed., K Major (1968), no.2493

55 The only known exceptions are Holy Cross in Wigford which split between St Botolph and St Peter at Gowts; and St John in Wigford which split between St Mary le Wigford and St Benedict.

56 P Chitwood and L Donel, 'Waterside North Project' in Current Archaeology 129, p.371 and Mapping the Saxon City in Current Archaeology, 129 (1992), p.387

57. This ship was 13.3m x 3.5m and regarded as typical of small merchant ships of this period. It may have travelled across the North Sea, although it was probably used principally for crossing the Baltic and trading up large rivers. S McGrail 'Medieval boats ships and landing places', Waterfront Archaeology in Britain and northern Europe, CBA Research Report 41, eds., G Milne and B Hobley (London, 1981), pp.19 & 22. See also Appendix 3.

58 Ibid., p.22 and Anon, The Viking Ship Museum in Roskilde For fuller discussion of carrying capacity of Skuldelev ships see O Crumlin-Pedersen, 'The Cargo Ships of Northern Europe, AD 800-1300' Conference on Waterfront Archaeology in North European towns, No 2, 1983, ed., A E Herteig (Bergen, 1985), pp.84-7

59 S McGrail op.cit., p.22 and D Ellmers, 'Loading and unloading ships using a horse and cart standing in the water: The Archaeological Evidence', Conference on Waterfront Archaeology in North European Towns, No 2, 1983 ed. A.E. Herteig (Bergen, 1985), pp.25-30

60 G Milne and D Goodburn, 'The Early Medieval port of London, AD 700-1200, Antiquity, 64 (1990), p.633

61 H Clarke and B Ambrosiani, Towns in the Viking Age (Leicester, 1991), p.1

62 J W F Hill, Medieval Lincoln, p.11

63 R H Jones, 'Dickinson Mill', in M J Jones ed., 'Excavations at Lincoln: third interim Report, Sites outside the walled city' Antiquaries Journal, 61 (1981), p.90

64 C J Guy, 'St Benedicts Square', Archaeology in Lincoln-

shire 1985-1986: 2nd Annual Report of the Trust for Lincolnshire Archaeology, (1986), p.24-5

65 Lincoln's Buried Archaeological Heritage (forthcoming edn), op. cit., p.13

66 B Gilmour, 'Brayford Wharf East' Archaeology in Lincoln 1981-2, (1982), p.24

67 P Chitwood and L Donel, 'Waterside North Project', Current Archaeology, 129 (1992), p.372

68 Ibid., p.373

69 Evidence from the London waterfront associates that phase with the twelfth century onwards, with timber and stone revetments constructed and then infilled with rubbish. M Carver, Underneath English Towns: Interpreting Urban Archaeology (London, 1987), p.79

70 Ibid., p 79 and figs 55 and 56

71 T Dyson, 'Early harbour regulations in London' in ed., A E Herteig, op.cit., p.22

72 P Chitwood and L Donel, 'Waterside North' , Lincoln Archaeology no.1 1988-1989 (1989), p.12 and M Jones and L Donel 'Saltergate' Lincoln Archaeology no.2 1989-90, (1990), p.8

73 'Brayford Wharf North 1975', in A Vince and M Jones eds., Lincoln's Buried Archaeological Heritage, op cit., (forthcoming edn.) p.9

74. P Chitwood, 'Brayford North', Lincoln Archaeology no.2 1989-90 (1990), p.10

75 This place name, first mentioned in the late twelfth century supports the suggestion that most of the area can be regarded as a Norman development. K Cameron, op.cit., p.85

76 A Vince and M Jones eds., Lincoln's Buried Archaeological Heritage, (1990 edn.), p.C71

77 R A Hall, The Viking Age Dig: Excavations at York (London, 1984), p.51

78 M Biddle ed., Winchester in the Early Middle Ages, op.cit., pp.271-2 and 450.

79 N P Brooks, 'Church, Crown and Community: Public Work and Seigneurial Responsibilities at Rochester Bridge' in Warriors and Churchmen in the High Middle Ages: Essays presented to Karl Leyser ed., T. Reuter (London, 1992), pp.1-20

80 K Cameron, op.cit., pp.26 and 42-3

81 P Chitwood and L Donel, 'Waterside North Project', Current Archaeology, 129 (1992), p.371

82 J W F Hill, op.cit., pp.10-11

83 Ibid., Fig 15 John Speed, Lincoln in 1610, p.155

84 Durngate, M Biddle et. al., Winchester in the Early Middle Ages, op.cit., pp.275-6 and fig 7 p.262

85. N P Brooks, 'The development of military obligations in eighth-and ninth-century England' in England before the Conquest eds. P Clemoes and K Hughes (Cambridge, 1971) p.72

86 P A Stafford The East Midlands in the Early Middle Ages, (Leicester, 1985), p.112

87 J Haslam, Early Medieval Towns in Britain (Princes Risborough, 1985), pp.31-45

88 ASC Ms. A 912, 914, 915, 918, 920 English Historical Documents I, ed., D Whitelock (London, 1979), pp.211-17

89 For instance at Oxford, excavations have been carried out underneath the Norman bridge, near the Shire Lake, which originally formed the main channel of the Thames. They show that before this bridge was built there was a paved ford and a timber bridge on the same site. Also the abutments to the earlier bridge were positioned on small promontories, suggesting perhaps a defended bridgehead of Edward the Elder. B Durham, 'The City of Oxford', Current Archaeology, 121 (1990), p.31. Or again Norwich, B Ayres, 'The birth of a Saxon port', in Conference on Waterfront Archaeology in North European Towns, ed., A E Herteig (Bergen, 1985), pp.46-54.

90 S Coupland , The fortified bridges of Charles the Bald' Journal of Medieval History, 17-1 (1991), pp.1-12

91 ASC Ms. A, English Historical Documents, I, 500-1042, ed., D Whitelock (London, second edition, 1979), p.217

92 J Haslam, 'The Second burh of Nottingham', Landscape History, 9 (1987), p.47

93 Ibid., p.47 and p.49

94 ASC Ms. A, , English Historical Documents, I, ed., D Whitelock, op.cit., p.216

95 C Mahany and D Roffe, 'Stamford: the Development of an Anglo-Scandinavian Borough' Anglo-Norman Studies 5, Proceedings of the Battle Conference, 1982 ed., R Allen Brown (Woodbridge, 1983), pp.204-6

96 Ibid., p.207 cf. J Haslam, 'Market and fortress in the reign

of Offa' op.cit., p.85

97 J Haslam, 'Market and fortress in the reign of Offa' op.cit., p.86

98 A Vince, J Young, 'Mapping the Saxon City', Lincoln Archaeology no.3 (1991), p.27

99 See chapter two above pp.58-62

100 J W F Hill, op.cit., pp.10-11, and Fig 15 John Speed, Lincoln in 1610, p.155

101 J Haslam, 'The Origins and Plan and Bedford' op.cit., pp.29-30

102 J Haslam, 'The development and Topography of Saxon Cambridge', op.cit., pp.16-17

103 M Biddle ed., Winchester in the Early Middle Ages, op cit., p.460 and p.477. Also for example London and Canterbury. G Milne, 'King Alfred's plan for London?', op.cit., p.207 and T Tatton Brown, 'The Anglo-Saxon Towns of Kent' in J Haslam ed., Anglo-Saxon Towns in Southern England, op.cit., pp.8-9

104 M Biddle ed. Winchester in the Early Middle Ages, op.cit., pp.285-6 & 460

105 Ibid., pp.285 & 282

106 K Cameron op.cit., pp.13-111

107 For example Beast Market, Pig Market, Swine Market and Fish Hill, which all first appear in the eighteenth- or nineteenth-century.

108 Butcheriam, Cornmarket, Fish Market/High Market, Louse Market, Malt Market, Skin Market

109 K Cameron op.cit., p.23 and J W F Hill op.cit., p.157

110 K Cameron op.cit., pp.28, 22, 94, 39 and 29

111 D Hinton, 'Coins and commercial centres in Anglo-Saxon England' in M A S Blackburn ed., Anglo-Saxon Monetary History, (Leicester, 1988), p.15

112 For example D J Keene, 'Suburban growth' in M Barley ed., The Plans and Topography of Medieval Towns in England and Wales, (CBA, 1976) p.82

113 At Exeter for instance it seems likely that there was an eastern suburb in the late Saxon period and there is also evidence of occupation at two sites outside the South Gate. Yet at the same time it seems that much of the lower part of the walled area was very sparsely occupied. Friernhay Street is, for instance, likely to be pre-Conquest, yet

excavation of a sizeable stretch of the frontage has produced little evidence of occupation earlier than the late thirteenth century, and Rack Street and Preston Street were only sparsely occupied before the seventeenth century. J Allan, C Henderson and R Higham, 'Saxon Exeter', Anglo-Saxon Towns in Southern England op.cit., p.404. Similarly at Gloucester pottery finds suggest fairly rapid occupation along the principal street frontages, but with the occupation of subsidiary streets taking longer, yet even in the tenth century there was probably a 'suburb beyond the eastern arm of the river and outside the South Gate'. C M Heighway, 'Saxon Gloucester' in Ibid., pp.369-70 and p.376

114 M Biddle and D J Keene,'The Late Saxon Burh' in Winchester in the Early Middle Ages, ed., M Biddle, op.cit., p.455

115 J Campbell, 'Norwich and Winchester' in The Anglo-Saxons, ed., J Campbell (Oxford, 1982), p.174

116 D J Keene, op.cit., pp.76-7

117 More fully discussed in the Chapter one and Chapter nine pp.361-3

118 M Otter and M Jones,' St Marks Station', Archaeology in Lincolnshire 1986-1987: 3rd Annual report of the Trust for Lincolnshire Archaeology (1987), p.27

119 M J Jones, '170 High Street', Lincoln Archaeology No.2 (1990), p.11

120 B Gilmour, 'St Mark's Church' in M J Jones eds., 'Excavations at Lincoln: 3rd interim report, Sites Outside the Walled City', Antiquaries Journal , 61 (1981), pp.98-9

121 Ibid., p.98 and K Steane, 'Wigford from the Roman to the Late Saxon period', Lincoln Archaeology No.2 (1990), p.20

122 J W F Hill, op.cit., p.35

123 K Cameron op.cit., p.20

124 J W F Hill, op.cit., p.36

125 R H Jones, 'Broadgate', in M J Jones ed., 'Sites outside the walled city' Antiquaries Journal, 61 (1981), op.cit., p.102

126 Ibid., p.104

127 Domesday Book Lincolnshire, folio 336c

128 J W F Hill, op.cit., pp.133-4,

129 J W F Hill suggests that the second church may have been St Augustines although the evidence for this is simply its similar position on the fringes of Butwerk.

130 J W F Hill, op.cit., p.35

131 A Vince and M Jones eds., Lincoln's Buried Archaeological Heritage, (forthcoming revised edn.) p.22

132 A Vince and M Jones eds., Lincoln's Buried Archaeological Heritage, (1990) p.C61

133. A Vince, 'Where is Lincoln's oldest church', Lincoln Archaeology 1990-1, p.32

134 M Biddle ed. , Winchester in the Early Middle Ages, op.cit., p.453

135 Ibid., p.454

136 Ibid., p.453 and p.378

137 R A Hall, The Viking Dig op. cit., p.49

138 A Vince and M Jones eds., Lincoln's Buried Archaeological Heritage, op.cit., (1990 edn) p.C6

139 D Perring, Early Medieval Occupation at Flaxengate Lincoln, The Archaeology of Lincoln, 9-1 (London, 1981), pp.5, 9 and 43

140 See Fig 29

141 D Perring, Early Medieval Occupation at Flaxengate Lincoln, op. cit., p.43, and fig 34

142 Ibid., pp.36-40

143 R Hall, The Viking Dig, op cit., pp.50-51

144 D Perring, Early Medieval Occupation at Flaxengate Lincoln, op.cit., p.36

145 M Biddle et. al., op.cit., p.452 and pp.458-9

146 J Campbell, 'Norwich and Winchester', op.cit., p.174

147 R Morris, Churches in the Landscape (London, 1989), p.169

148. J Campbell, 'The Church in Anglo-Saxon Towns' in The Church in Town and Countryside, Studies in Church History, 16, ed., D Baker (Oxford, 1979), reprinted in Essays in Anglo-Saxon History, J Campbell (London, 1986) p.146

149 Ross Ms, volume I on Lincoln, p.9

150 Ibid., p.9

151 J W F Hill op.cit., p 147. There are 39 churches shown on his map of Lincoln c.1100, p.57, fig 5

152 D Stocker cited in R Morris op.cit., p.169 and fig 39 pp.172-3

153 Bede's Ecclesiastical History of the English People, Book 2, chapter 16, eds. and trans., B Colgrave and R A B Mynors (Oxford, 1969), pp.192-3

154 J W F Hill, op.cit., p.103

155 B Gilmour, 'The Anglo-Saxon church at St Paul in the Bail, Lincoln' Medieval Archaeology, 23 (1979), pp.214-7

156 J W F Hill, op.cit., p.104-5

157 K Steane, 'St Paul in the Bail', Current Archaeology, 129 (1992), p.378

158 A Vince, 'Where is Lincoln's oldest church' Lincoln Archaeology, 3, 1990-1 (1991), p.33

159 K Steane, 'St Paul in the Bail', Current Archaeology, 129 (1992), p.378

160 E Venables, 'A list and brief description of the churches in Lincoln previous to the Reformation', Reports and Papers of the Associated Architectural and Archaeological Societies, 19-1 (1888), pp.372-3

161 See Chapter two pp.58-62 for further detail

162 A Vince, op.cit., pp.32-3

163 S Basset, 'Lincoln and the Anglo-Saxon see of Lindsey', Anglo-Saxon England, 18 (Cambridge, 1989), pp.1-32

164 Ibid., pp.2-12

165 Domesday Book, Lincolnshire, folios 336b, 376b, 371c, 336b, 337c. A E B Owen, 'Carlton, Reston and Saint Michael: A Reconsideration' Nomina, 12 (1989), pp.107-8

166 See Table 7

167 Registrum Antiquissimum of the Cathedral church of Lincoln, 1, Lincoln Record Society 27, ed., C W Foster (1931), no.2

168 See above p.243

169 J W F Hill op.cit., pp.131-2

170 D M Owen, 'The Norman Cathedral at Lincoln', Anglo-Norman Studies, 6, Proceedings of the Battle conference 1983, (Woodbridge, 1984), p.190

171 Registrum Antiquissimum of the Cathedral Church of Lincoln, 1, op. cit., no.3, cited in S Bassett, op.cit., p.27

172 Domesday Book, Lincolnshire, C17 folio 336b

173 B Gilmour, op.cit., p.217, and K Steane, 'St Paul in the Bail', Current Archaeology, 129, (1992), p.378

174 R Bruce Mitford, 'Late Celtic Hanging Bowls in Lincolnshire and South Humberside', in Pre Viking Lindsey, ed., A Vince (Lincoln, 1993), p.52 and p.60

175 K Steane, 'St Paul in the Bail', Current Archaeology, 129 (1992), p.379

176 B J J Gilmour and D A Stocker, St Mark's Church and Cemetery, Archaeology of Lincoln, 13-I (London, 1986), p.14

177 Ibid., pp.16-17

178 Ibid., p.16 and pp.61-2

179 K Snell, 'Spring Hill', Archaeology in Lincoln 1983-4, The Twelfth and Final Annual Report of the Lincoln Archaeological Trust, (1984), p.10

180 B J J Gilmour and D A Stocker, op.cit., p.83.

181 J W F Hill, op.cit., pp.135-41 and H M Taylor, 'St Mary le Wigford, Lincoln' and 'St Peter at Gowts, Lincoln' Archaeological Journal, 131 (1974), pp.348-50

182 J W F Hill , op.cit., p.135. That is long and short quoins, pilaster strips or double splayed windows.

183 H M Taylor, op.cit., p.348

184 D Stocker and P Everson Corpus of Anglo-Saxon Stone Sculpture: vol 5, Lincolnshire (forthcoming), and Personal Communication P Everson

185 H M Taylor, op.cit., p.350

186 St Paul in the Bail, St Peter Stanthaket, St Marks, All Saints in the Bail, St Peter Pleas, St Peter *ad fontem*, St Martin, St Lawrence, St Peter at Arches?, St Mary?, St Peter at Gowts?

187 B J J Gilmour and D Stocker, op.cit., p.93

188 M Biddle and D J Keene, 'Winchester in the eleventh- and twelfth- centuries' in M Biddle ed. op.cit., p.334 and fig 10, p.331

189 R Morris, op.cit., p.193, fig 47 p.196, fig 57 p.217

190 Ibid., fig 50 p.202, and p.198

191 In Canterbury for instance by the twelfth century most of the gates had churches upon or beside them. Ibid., fig 57

p.210 and p.216

192 B Durham, 'The City of Oxford', Current Archaeology, 121 (1990), pp.29-31

193 Map of Lincolnshire by John Speed, J W F Hill, op cit Fig 15, p.155

194 See fig 25. Hill estimates 16, omitting St John the Poor and St Clement; Stocker's conservative 14 excludes these plus St Cuthbert and St Andrew, R Morris op.cit., fig 39, pp.172-3 from information by D Stocker

195 J W F Hill, op.cit., esp pp.130-1

196 A Rogers, 'Parish Boundaries and Urban History: Two case studies', Journal of British Archaeological Association, 35 (1972), pp.46-64

197 Ross Ms vol I p.9

198 For a fuller discussion of Lincoln Gritty pottery see above p.110 J Young and A Vince, 'Mapping the Saxon City', Current Archaeology, 129 (1992), pp.385-6

199 See Fig 30

200 J Haslam, 'The Ecclesiastical Topography of Early Medieval Bedford', Bedfordshire Archaeology, 17 (1986), pp.42-3 and 45. A further example can be found at Gloucester with the foundation of St Oswalds by AEthelflaed and Ethelred of Mercia in c.900. C Heighway, 'Saxon Gloucester', in Anglo-Saxon Towns in Southern England, op. cit., p.371 and A Thacker, 'Chester and Gloucester: Early Ecclesiastical Organization in Two Mercian Burhs', Northern History, 18 (1982), p.209

201 ASC Ms D 1055, English Historical Documents II, eds., D.C. Douglas and G. Greenaway (London, 2nd. edn., 1981). Although this was principally a monastic foundation.

202 E Okasha, Handlist of Anglo-Saxon non runic Inscriptions, (Cambridge, 1971), No 146

203 Domesday Book, Norfolk, 1,61 folio 116b

CHAPTER SEVEN

Lincoln and Its Agrarian Hinterland

This chapter will consider the interaction between Lincoln and the local agrarian economy. Some aspects of the local rural economy's trading relationship with Lincoln have been considered elsewhere. This chapter concentrates on the tenurial/economic relationship between Lincoln and its rural hinterland. The development of towns owed something to, and had an effect upon, the rural economy that surrounded them. The aim of this chapter is to incorporate aspects of the late eleventh-century rural hinterland into the study of Lincoln's urban development. This will investigate whether Lincoln had any effect upon the surrounding countryside, particularly by changing the patterns of landholding or influencing upwards the value of the surrounding land. The principal source for this investigation will be Domesday Book. Whilst this only provides information on the situation quite late in the period, this information is both detailed and statistical. Much has been made of the difficulties of using Domesday Book, but it does provide comprehensive information on the holders of land in Lincolnshire and some information on the holders of property in Lincoln.

The first stage in any analysis of the relationship between rural and urban landholding is to identify, where possible, the holders of land and property in Lincoln. There were 970 occupied *mansiones* in Lincoln in 1066 by Danish reckoning. This is equivalent to 1150 *mansiones* by English calculations, although this figure is slightly contradicted later in Domesday Book where there is said to have been 1140 [1]. Domesday Book then gives

some detail on those holding property in Lincoln (see Table 8). Those named in the account of the city are mentioned either because their holdings have special privileges, or because they have not paid their geld. It is impossible to know exactly what proportion of the property in Lincoln features in this list, because of the differences in the terminology and ambiguities in the text. Property in Domesday Lincoln consisted of *domus, mansiones, crofts* and *tofts*, but the total was given as 1140 or 1150 *mansiones*. The account actually gives detail on at most 122½ mansiones, 28 tofts, 43 domus and 40 crofts. The crofts and tofts have strong agrarian connotations, and should perhaps be regarded as peasant dwellings with an attached field or garden. Domus and mansio were the usual terms for urban property in this part of England. In Nottingham, which was probably on the same Domesday circuit as Lincoln, reference is made to 3 *mansiones* in which 11 *domus* are sited (*in quibus sedunt*) [2]. This suggest that domus was probably a smaller unit than, or a sub division of, a mansio, in Nottingham and perhaps also in Lincoln. Whilst only about 10% of the *mansiones* are allocated to named holders, Domesday Book does provides a sample of the holders of property in Lincoln, although not necessarily a large or representative one.

The list of Lincoln property holders at least provides material to undertake some analysis of the tenurial relationships between Lincoln and the county as a whole. The other Lincolnshire holdings of the landholders in Lincoln have been mapped. The first thing that emerges from these, taken together, is the wide distribution of their holdings throughout the county.

Overall there was no close tenurial relationship between Lincoln property holders and land close to Lincoln. From this mapping it is also clear that these holdings took a wide variety of forms. Some landholders had one, or sometimes more than one, major concentration of land in Lincolnshire; whereas others had little or no land in the county. The Abbot of Peterborough held concentrations of land in the north of the county, to the north-east of Lincoln and in the south of the county around Stamford (see map 1). Geoffrey Alselin held a group of manors to the south of Lincoln, with a couple of separate holdings in north Lincolnshire (see map 2). Other landholders had more disparate holdings, such as the Bishop of Lincoln or Gilbert of Ghent who held land in 20 and 19 of the 33 Lincolnshire Wapentakes respectively (see maps 3 and 4). Other Lincoln property holders were not important landholders in the county. Occasionally this was because their holdings were concentrated in other counties, such as Roger of Bully who held little land in Lincolnshire but was perhaps the greatest landholder in Nottinghamshire [3]. Others were small landholders who held a little land in Lincolnshire and none elsewhere, such as some of the lawmen, to whom we shall return, and men such as Cola and Thorald of Greetwell (see maps 2 and 3). Thorald's parochialism was emphasised by his by-name in Domesday Book; Greetwell being the only village in which he appears to have held land. Other Lincoln property holders, including Ertald and the Abbot of Ramsey held no land at all in the county.

The analysis of Lincoln property holders can perhaps be taken a little further by categorising them, in terms of the land they held elsewhere. Due to the differences between the

information available it was necessary to rank the 1066 and 1086 holders separately employing slightly differing criteria. The holders in 1066 were categorised from A to F, beginning with the King and, because of their exceptional land holding TRE, the earls Harold and Morcar, which together form category A. Category B consisted of individuals known to have holdings in several counties. Category C comprised those with holdings in Lincolnshire worth more than 500 shillings. Some of those in category C may have held land in several other counties but the lack of by-names makes it difficult to be certain. Category D comprised those with holdings in Lincolnshire worth less than 500 shillings, but more than or equal to 100 shillings. Category E consisted of those landholders with several Lincolnshire holdings, in total worth less than 100 shillings. Those in category F held only a single holding in Lincolnshire in addition to any Lincoln holdings. Some of the 1066 holders were omitted as they proved impossible to identify. Those holding land in 1086 have been divided into seven categories. The first category, here termed category 0, consists of any Lincoln property holder, who cannot be shown to have held any more than this single landholding. Category 1 is made up of minor landholders, who held only one or two other minor holdings. Major Lincolnshire landholders, that is those with significant holdings in Lincolnshire, or at least a position as tenant-in-chief, but little or no land elsewhere, are termed Category 2. Category 3 consisted of a group of landholders here termed regional landholders. These held land, usually as a tenant-in-chief, in several counties, up to a maximum of six, in close

proximity, such as could be considered a regional block. Category 4 was occupied by a group termed semi-national landholders. This group were tenants-in-chief in more than six, but no more than twelve counties, or held land in six or less counties, but not in a way that could be termed a regional block. Those in category 5 held land as tenants-in-chief all over England, or in at least more than twelve counties, or in several distinct regional groupings. The King completed the categories with his own category - category 6. Obviously the landholding of some placed them on the edge of two categories, nonetheless where possible they have been placed in a single category.

From Tables 9 and 10 it is apparent that whilst the information given on urban holders is very selective it nonetheless indicates that a wide variety of lords held property in Lincoln. Some property was held by national landholders such as Earl Hugh and King Harold and regional holders such as Ulf Fenman. Their Lincoln holdings were probably of little significance to them given the extent of their holdings elsewhere, including some in other towns [4]. In contrast the Lincoln holding of men such as Thoraldr of Greetwell, Cola or Svartbrandr were probably a major part of their total holdings. Whilst there is no way of knowing how representative of Lincoln property holders these are, Domesday Book indicates that the holding of urban property was not confined to any particular rural landholding group.

In general the land held elsewhere in Lincolnshire by Tenants-in-Chief with holdings in Lincoln shows very little association with the city. For instance Hugh son of Baldric whilst holding 2 or 4 tofts in Lincoln had no other land within

12 miles of the town, and most of his holding was around twice this distance to the north and east of Lincoln [5]. Lincoln property holders in both 1066 and 1086 with landholding concentrations around Lincoln are very much the exception. In general those who held property in Lincoln held property in Lincolnshire as a whole rather than just in the area around Lincoln. Unfortunately with much of the Lincoln property 'missing' from Domesday Book it is impossible to know how many of the Lincolnshire Tenants-in-Chief held property in Lincoln.

Of those few exceptions with concentrations of land near Lincoln perhaps Kolsveinn provides the most interest and may shed light upon those landholders without land near Lincoln. Kolsveinn's Lincoln holdings amounted to 4 tofts formerly held by his '*nepos*', Cola, plus 36 *domus* and 2 churches which he had built on waste land granted to him by the king [6]. In the county his estates were in two concentrations; one to the north of Lincoln and the other in central Kesteven (see map 8). These were post-conquest creations, formed through his acquisition of the lands of a large number (c.30) of different small landholders, rather than a single antecessor [7]. Hill has noted that many of the holdings in his group of estates to the north of Lincoln had a high proportion of ploughteams in demesne, with fewer in the southern group and none at his other odd estates [8]. In one entry Kolsveinn's own use of the land is emphasised. In Brattleby he held land from the Bishop of Durham 'and cultivates it' (habet hanc terram 7 colit eam) [9]. Hill suggests that these teams in demesne near Lincoln may indicate that Kolsveinn was based in Lincoln, perhaps owing castle guard

at Lincoln as his descendants did [10]. Further analysis suggests that the proportion of his ploughs held in demesne was exceptional. On his holdings in 19 villages north of Lincoln, 59% of the ploughs were in demesne, compared with only 24% of the other ploughs in these same villages [11]. This concentration of demesne land near Lincoln may have resulted from his use of Lincoln as his base, whereas most of the other tenants-in-chief regarded their Lincoln holding as of no special significance, with 'bases' elsewhere.

Alfred of Lincoln, given his by-name, was another 1086 tenant-in-chief with possible Lincoln associations. Hill suggests that Alfred *nepos Turoldi* was Alfred of Lincoln, with Thorald a sometime sheriff of Lincoln, providing the reason for the by-name [12]. If Alfred also held office in Lincoln, then his lands show little association with the city. These were concentrated some 12 to 30 miles north-east of Lincoln, and in a cluster running south from Lincoln to Stamford but being particularly concentrated around Stamford (see map 9). He may have held 9 *mansiones* in Stamford and overall he appears to have close landholding links with Stamford, but not really with Lincoln [13].

Whilst it might be argued that the disruption following the Conquest obscured earlier links between the surrounding area and Lincoln, initial study of Domesday Book argues against this. The holdings of Toki, Earl Morcar and Stori can be mapped with some certainty and reveal no particular association with Lincoln (see maps 2, 10 and 14). Whilst the landholding patterns in 1066 are less clear there is no indication that the Conquest disrupted an earlier relationship between the land around Lincoln and property

holdings in the town.

The Norman Conquest and its aftermath largely removed major English landholders, but lesser men, such as the Lincoln lawmen, seem from Domesday Book to have been much less disrupted, with their pattern of landholding little changed from the pre-conquest period. The lawmen had a far closer tenurial relationship with Lincoln's rural environs than the tenants-in-chief. The lawman with the most extensive holdings was Svartbrandr, son of Ulfr. He held land in 5 different villages, all of which were within 10 miles, and all but one within 5 miles, of Lincoln (see map 9). Most of the lawmen held less land than this and, unlike Svartbrandr, they were mostly not tenants-in-chief [14]. In general land held by the lawmen was to be found in the fields of Lincoln, or in one of the manors close by. Valhrafn, for instance, held three carucates of land in Canwick, little over a mile from Lincoln [15]. Guthrothr, another lawman TRE, held a house (*domus*) in Lincoln and land in pledge from Agmundr in Middle Carlton, less than 5 miles from Lincoln [16]. The land of Guthrothr only appears because Jocelyn, son of Lambert, claimed it, so it seems possible that other lawmen held land in some form of subtenancy in 1066 but were omitted by Domesday Book.

The broad similarity in status and holdings of most of the lawmen is illustrated by Peter of Valognes one of the two Normans who acquired this office, and was an exception to the pattern. Peter of Valognes replaced Godric son of Eadgifu as lawman. At first glance he appears similar to his predecessor, with his holdings in the county amounting to only two carucates of land in Burton, near to the town, and a carucate of land in the fields of

Lincoln [17]. This however formed but a small part of his estates that extended over six counties and centred on Hertfordshire, where he also held the office of sheriff [18]. It is likely that Peter of Valognes and Norman Crassus acquired this office in connection with the lands of previous lawmen, although it is difficult to say whether the land or the lawmanry were acquired first [19]. Certainly in the case of Peter his interest in Lincoln and its rural environs was peripheral to his main interests unlike most lawmen who were probably based either in the city or on estates close by.

So far our attention has focused on the landholding of those known to be associated with Lincoln. This approach is limited by the fact that our list of landholders with Lincoln interests is likely to be far from complete. The rest of this chapter will adopt an alternative approach, that takes the rural hinterland as its starting point rather than the town. This will focus on the values, landholding pattern and population of the area within 12 miles of Lincoln. The purpose will be an explanation of potential differences within the area and also between this and a control area, followed by a consideration of Lincoln's role in contributing to such differences [20].

Information was taken from Domesday Book relating to various aspects of the villages within 12 miles of Lincoln, and collated so as to identify any signs of Lincoln's influence on the surrounding countryside. The information was analysed using a spreadsheet that included the distance of each village from Lincoln, the Tenants-in-Chief, the holder in 1066, the number of ploughs and inhabitants, and the value in 1066 and 1086. An additional area was required for comparison, in order to test

whether the area around Lincoln exhibited unusual characteristics. For this purpose a control area in the far north of the original county was chosen, for reasons outlined in the methodology section. (see Appendix 4)

The first objective of the investigation was to identify the main landholders within 12 miles of Lincoln in 1066. This resulted in an initial list of 119 holders (See Table 11), counting land held jointly by two or more individuals as a single holder. Some were landholders of national standing such as King Edward, Harold, and Earl Morcar, but most appear to be holders of very little land, such as Deincora and Sotr, who each had only a single holding in Lincolnshire, and none anywhere else. Those with holdings in the highest number of different villages in the Lincoln area were Godric, Agmundr, Thorgautr and Ulf Fenman, although in at least two of these cases it is not known whether these names represent more than one individual. This is a problem that confronts any analysis of holders in 1066, as the lack of by-names means that some names may represent several individuals. Thus before further progress could be made it was necessary to revise the landholder list, by plotting the holding in Lincolnshire of each name entered. This was undertaken both to identify instances where a single name represented several individuals, and also where the same individual appeared more than once in the original list.

The complexity of this can be illustrated by looking at Siward, whose name appears four times on the list, once singularly and once each in combination with Rothulfr, with Tonni, and with Alnoth. From Map 15 it can be seen that a Siward

held land in 21 of the 33 wapentakes. The geographical spread of these holdings makes it unlikely that they were all the property of a single individual; indeed Lincolnshire Domesday Book gives three different by-names for men called Siward; namely Rufus, Barn and Buss. From Map 15 it is apparent that none of the by-named Siwards held land near Lincoln; indeed the holdings of Siward Buss and Siward Rufus are both geographically removed from other holdings of a Siward. There are two Siwards mentioned in the list of those with sake and soke, and toll and team in Lincolnshire; Siward Barn and Siward, father of Aki and Vigleiker [21]. Aki and Vigleiker held over a wide area of the South Riding, including two villages where land was also held by Siward [22]. This suggests that much of the land held in the South Riding by Siward, was Siward the father of Aki and Vigleikr. Geographical proximity also suggests that in cases where land was held by Siward and Tonni, the Siward in question was the father of Aki. Despite further work it was not possible to identify the Siward who held with Rothulfr and with Alnoth. The study of others however produced more useful information. Rothulfr, for instance, was probably a single individual, including the one who held with Siward, because of the geographical concentration of his holding (see map 6). Also the way in which quite disparate holdings within the geographical concentration were held by the same tenant-in-chief argues against there being two or more Rothulfrs. For instance the Bishop of Lincoln succeeded to two holdings through Rothulfr. These were at the eastern and western fringes of Rothulfr's holding [23]. This Rothulfr may have been the son of Skaldvar, who held the privileges of sake and soke and toll and team in Lincolnshire, but was not mentioned by this name

elsewhere in Lincolnshire Domesday Book [24].

The revised list of landholders, after further analysis is presented in Table 12. From this it seems there were about 105 different landholders within 12 miles of Lincoln. These revised figures may still exaggerate the landholding complexity, as some holders can be identified as members of a single family or kin group. For instance, as we have seen, Siward and his sons Aki and Vigleiker all held land in their own right, yet their holdings could be regarded as a single family holding. The way in which the information about familial relationships is given suggests that it was not a primary concern of the commissioners, and therefore seems likely that many of the holders in 1066 were linked to other Lincolnshire landholders by family and kin. A further family group can be identified using Domesday Book and Hugh Candidus; namely Topi and Eadgifu and their sons Ulf and Halfdan [25].

The holdings of others raise the possibility of further links. A mapping of the holdings of Alnoth and Asketill in Lincolnshire suggests a degree of linkage, although both names may represent more than one individual (see map 18). As well as a geographical proximity their holdings shared many of the same tenants-in-chief in 1086. An Alnoth was the *antecessor* to 11 different tenants-in-chief, 7 of these also held land that had formerly been held by an Asketill [26]. Some of the linkage may have resulted from the holdings of four brothers, Sighvatr, Alnoth, Fenkell and Asketill. This accounts for the concurrence of holdings in Bolingbroke and Candleshoe wapentakes (see map 19). One of the two references to the four brothers mention

Godwine as an alternative to Sighvatr [27]. It is suggested that the scribe may have mis-read the original return which gave Godwine as the father. This contention finds further support from map 20, with Godwine holding land in precisely this area. It is not clear however whether the brothers Alnoth and Asketill hold land elsewhere in Lincolnshire. In the *clamores* of the West Riding reference is made to manors held by Asketill on lease from his brother Brandr, Abbot of Peterborough [28]. These form part of the concentration of holdings, situated to the north of Lincoln, held by Alnoth and Asketill, with land held in Scotter (Cr2) by both TRE, that had gone to Peterborough by 1086. It seems likely that the group of manors held north of Lincoln were held by a different Alnoth and Asketill, brother of Brandr, who were linked in an unknown way. These landholding linkages probably only scratch the surface of those existing in 1066, with most remaining hidden from view, nonetheless some account needs to be made of their existence.

The high number of landholders around Lincoln, whatever their kin or family linkages, was not an aspect unique to this area. In the control area the original list contained 96 holders, which after revision numbered between 80 and 85 (see tables 13 and 14). Whether the slightly higher number of different landholders around Lincoln owes anything to the influence of the town is a subject to which we shall return.

Considerable debate has centred around 1066 landholders, and whether a 'tenurial revolution' took place after the Conquest. Sawyer argues that most of the TRE landholders given in Domesday Book are not the chief tenant, but are sub-tenants [29]. Some of our listed holders were clearly sub-tenants. However in the case

of Rothulfr, or Siward father of Aki and Vigleikr, the size of their holdings argues that they were chief tenants even though their lands were dispersed between several holders TRW. Whilst it is possible that such holdings could have been accumulated on a sub-tenancy basis, this seems unlikely. Particularly as both Rothulfr and Siward probably appeared in the list of Lincolnshire landholders with sake and soke and toll and team, which may be broadly comparable with tenant-in-chief list in 1086. If these two were chief tenants in 1066, then Lincolnshire does provide some evidence of a 'tenurial revolution'.

Following analysis of the TRE landholding list, the four landholders with land in the most villages around Lincoln can be further clarified. The holdings of Godric are likely to be held by at least two individuals, although given the way in which his land near Lincoln is concentrated in the quadrant North and East of Lincoln, most near Lincoln was probably held by a single individual (see map 21). The majority of Ulf's holdings around Lincoln should be attributed to Ulf Fenman, although one was held by Ulf father of Svartbrandr, and three remain simply the holding of an Ulf (see map 22). In terms of their land around Lincoln, Thorgautr and Thorgautr Lagr were probably one and the same individual. Finally in the Lincoln area all but two or three of the villages held by Agmundr, were probably held by the same man (see Map 23). Whilst these had the most numerous holdings, in terms of those with the most valuable holdings, none of these feature in the top six. The most valuable holdings were those of Harold and Earl Morcar, who each accounted for almost 15% of the total value of the area, followed by Queen Edith with 7%.

Harold's holding was the most valuable yet he only held land in three villages around Lincoln, in contrast to others whose three village holdings might be worth 1/30th of those of Harold [30]. About 25% of the value was held by a large number of individuals whose holding in the area was valued at less than 100s (See Table 12). Overall the six wealthiest landholders around Lincoln accounted for 48% of the total value of this area. The pronounced dominance of two landholders meant that the Lincoln area differed considerable from the control area. There the three wealthiest landholders, Ulf Fenman, Harold and Rothulfr, each have holdings worth just over 500s, with another 6 holders with holdings worth more than 400s. The percentage of the total value held by those with holdings in the control area worth less than 100s was very similar to that around Lincoln (22%). But in the control area the top six only hold 29% of the total value of the area.

It may be politically significant that the most valuable holdings belong to Harold, Morcar and Queen Edith. It is possible to regard these holdings as being linked to the strategic protection and perhaps administration of Lincoln. Edith's holdings in Rutland were in a similar concentration around Stamford. From maps 13 and 14 it is however clear that the holdings of Morcar and Harold have no particular associations with Lincoln. The association of important people and estates near towns may indicate a feature that belongs to the very earliest phases of urban development, which had by 1066 been subsumed by the growth of urban elites and the power of the sheriffs.

To further investigate whether the concentration of value in

fewer hands in the Lincoln area should be attributed to the town, the values for 1086 were considered. In 1086 almost a quarter of the entire value of the area within 12 miles of Lincoln rested with the King. He was followed in the ranking by the Bishop of Lincoln with about 9% of the total value, followed by Walter Aincourt, Kolsveinn and Earl Hugh, all with more than 5% (see table 15). Together these five accounted for 50% of the total value. From this it is clear that the concentration of value in few hands was an aspect of the Lincoln area both before and after the Conquest. The evidence from the control area however argues against this being caused by the proximity of Lincoln. In the control area in 1086 the King held a little less than one quarter of the value (22%), with the next four ranked tenants-in-chief each holding between six and seven percent of the total value [31]. Overall the top five landholders in this area, have 48% of the total value in their hands, which suggests that the concentration of value in a few hands around Lincoln was not unusual [32].

There does seem to be a greater prevalence for the values per holding in the Lincoln area to be further removed from the average, either being much lower, or much higher than this average figure [33]. It may be that the existence of Lincoln had influenced this value pattern, however this will be discussed further once other aspects of the landholding pattern have been considered.

The landholding pattern around Lincoln was further considered in order to investigate a number of potential forms of complexity. Some 'villages' were split between a number of

different tenants-in-chief, such as Canwick which was split between seven or eight of them in 1086, and at least five in 1066 [34]. The close proximity of this village to Lincoln raises the possibility that villages were more prone to multiple lordship near a town. Study suggests that, where information is available, villages held by multiple lords in 1066, were similarly split in 1086. In view of this, and the tendency for some holdings to lack named holders in 1066, study was confined to the holders in 1086 [35]. In 1086 the average number of landholders per village fell as one moved away from Lincoln. In the area within 5 miles of Lincoln there were 2.52 landholders per village, whereas in the 10-12 mile area the figure was 1.86 (see table 17). Comparison with the control area reveals a similar range of 2.7 to 1.9 landholders per village, which rather puzzlingly mirrors almost exactly the pattern around Lincoln, with the number decreasing from the centre outwards. The figures for Epworth wapentake in the control area were then removed from this part of the calculations, as unusually this wapentake was largely under a single lord: Geoffrey of La Guerche. Whilst the variation between the area bands is reduced, the pattern remains. The average number of landholders per village is at its greatest in the centre of the non-urban control area, rather than in the area nearest Lincoln. To check this was not just a quirk of 1086, the number of landholders per village in both 'within five miles' sections in 1066 were calculated. Despite assuming that three unknown holders in 1066 were different from those already named as already holding land in that village, the average fell slightly in 1066 to 2.42 for the area near Lincoln. In this part of the control area TRE holders are given for every holding, and

the average increased to 2.75 landholders per village. Nor was the numerical spread of landholder numbers significantly different in the two areas (see table 18). Whatever lay behind this aspect of increased complexity nearest Lincoln, it seems clear that it was not the town, as no urban centre lay at the heart of the control area.

It has been suggested that royal holdings distorted this aspect of 'complexity' by dominating villages, such that the king was often the sole holder. This hypothesis was investigated using the 'within 5 miles' section of both areas. Around Lincoln only two of the 21 villages had royal holdings, in which there were two and four holders respectively. In the control area villages were quite evenly split between those with royal and without royal holdings. In the royal villages there were an average of 2.9 holders per village, compared with 2.43 in those without royal holdings [36]. This suggests that royal holdings do not appear to reduce land holding complexity here.

A further aspect of the landholding complexity near Lincoln, does perhaps suggest the influence of the town. There were a large number of different tenants-in-chief holding land within 12 miles of Lincoln, which exceed the number who hold in the control area (see table 19). There are 55 different principal landholders around Lincoln compared with only 41 in the control area. There are 69 Tenants-in-Chief named at the beginning of the Lincolnshire folios of Domesday Book and exactly two-thirds of these held land within 12 miles of Lincoln, compared with half in the control area. This is quite impressive given the small proportion of Lincolnshire which is covered by the area around

Lincoln [37]. The differences between the Lincoln and Control areas are to be found in all the distance bands. In the central five mile area the 26 principal landholders near Lincoln easily exceed the 17 in the control area. Most pronounced of all are the differences within 3 miles of Lincoln, where there were 18 different landholders compared with only 11 in the control area [38]. Furthermore the Domesday Book account of Lincoln refers to several holdings outside the city, in the fields, which along with the town itself must have occupied a significant part of this 3 mile area. For instance 8 carucates were held by the King and Earl, in this case Earl Hugh, although he held no other land in this area [39]. So less land was available for division here than in the area within 3 miles of the centre of the control area, yet the Lincoln 3 mile area still had over 60% more landholders.

A number of potential explanations may be offered for the greater number of different landholders near Lincoln. The first of these is derived from the geographical position of Lincoln and the earlier political development of the area. In the period before the development of the shires, Lindsey had once been a separate kingdom, whereas the area of Kesteven and Holland had probably become part of Mercia much earlier [40]. Lincoln stood at the southern edge of Domesday Lindsey, although the boundaries of the earlier kingdom are by no means established [41]. The area contained within the 12 mile radius of Lincoln included parts of both Lindsey and Kesteven as well as Nottinghamshire. If there were Lindsey landholders and then a largely different group of Kesteven landholders, this would have had the effect of increasing the total number of different tenants-in-chief.

To test the impact of the earlier political division of this area, the area(s) in which each landlord held land were investigated. Particular problems beset this type of analysis of TRE landholders, as one of the principal criteria employed to investigate whether one name represented one or several different individuals was the geographical spread of the land held by the name in question. Thus for example a 'landholder' with several manors in the north of the county and one or a few isolated manors in the south would tend to be regarded as two separate individuals, unless some link could be found between the two separate geographical groups, such as the same tenant in chief in 1086. Some provisional analysis can however be undertaken if attention is confined to those TRE landholders with a particularly strong case for being single individuals, and who had at least five holdings. These criteria provided a list of thirty landholders (see Table 20). Not surprisingly, given the criteria, the list includes many landholders of national or regional significance. These tend to hold land in 'clumps' around Lincolnshire. Most of these hold land in both Lindsey and Kesteven, but even so there are no incidence of clumps which straddle the border, manors are either in Kesteven or Lindsey [42]. More interesting are the holdings of less prominent people such as Stori, Klakkr, Sjundi, Hemingr and Jaulfr. Each has all of their holding confined to Lindsey, or Kesteven in the case of Hemingr [43]. Apart from the most important landholders, the holdings of many individuals were mostly confined either to Lindsey, or to Holland and Kesteven. This observation is however derived from a highly selected sample.

Whilst the changeover of landholders by 1086 had probably further obscured earlier landholding patterns, they can be studied as a whole rather than as a sample. The data is presented in Table 21. This includes totals for each area, and the number of holdings which are 'unique', that is confined to a single area. There are many holdings that were unique, particularly in Lindsey, where over half of the landholders held land in no other part of the 12 mile radius area. Without some means of comparison however, it is difficult to be sure that this was in any way unusual.

To enable comparison the control area was therefore split into three areas with Yarborough and Manley wapentakes forming one area; Aslacoe, Corringham and Walshcroft forming a second; with the third smaller group made up of Epworth wapentake and a small part of Nottinghamshire (see map 28). The control area groupings strongly contrasted with those around Lincoln in terms of their respective administrative/political make-ups as they ignored the boundaries between the ridings of Lindsey, combining wapentakes from both West and North Ridings in both the larger groups. Differences did emerge between the control and Lincoln area groups in terms of their respective landholding patterns. Around Lincoln, 49% of all holdings groups are confined to a single area, compared with only 36% in the control area [44]. Or, considered from another angle, both areas have 18 landholders who are in possession of land in more than one area grouping, which in the control area represents 44% of all landholders whereas in the Lincoln area this represents only 33%. On balance, whilst the division of the Lincoln area between Lindsey and Kesteven may have slightly exaggerated the landholding

complexity, there still seems to be a greater number of landholders in the Lincoln area than can be explained simply by this. Especially as there are 42 different landholders in the Lindsey section alone, more than were present in the whole of the control area.

Other potential explanations attribute the holding of land by more individuals directly or indirectly to Lincoln. It is possible that the landholding pattern around Lincoln owes much to an earlier phase in the history of the region. Whilst tenants-in-chief changed, it could be argued that many holdings were passed on 'en bloc', rather than being split between several new lords. Whilst this was probably not the case during the years after the Conquest it may have been far more usual in the rest of the tenth- and eleventh-centuries. Thus the landholding pattern around Lincoln, as presented in Domesday Book for 1066, may reflect that of an earlier period, associated with Maitland's garrison theory. Maitland argued that plots within towns were granted, for the purposes of defence, to landholders in that 'county', although in the case of Lincoln it is unclear whether the associated county would be Lincolnshire or Lindsey. If Lincolnshire, it is possible that, given the size of the county, lords were also granted some holdings close to Lincoln in order to support their urban holding. If so this would account for the greater number of tenants-in-chief, which would earlier have represented all the major landlords in the county.

The possibility that Lincoln and the surrounding area was linked to Lindsey rather than the whole of Lincolnshire can be investigated. Whilst two-thirds of all Lincolnshire tenants-in-

chief held land within 12 miles of Lincoln, it is possible that this figure would be higher if those with landholding interests only in Kesteven and Holland were omitted. To investigate this further, the holdings of the 23 tenants-in-chief not holding land within 12 miles of Lincoln were mapped (see map 29). From this it is clear that many had holdings that were largely confined to Kesteven and Holland. There were however a number of exceptions to this pattern, most of which were major landholders, which tends to distort the pattern [45]. Whilst some of the exceptions can be explained, overall tenants-in-chief in Lincolnshire, and presumably elsewhere, tend to hold land in geographical blocks rather than being evenly spread over a wide area. Those with only a little land tend to hold it as a single small cluster and those with more extensive holdings tend to hold this in one or more geographical concentrations. Hence most holdings that consist of only a little land will tend to be confined to either Lindsey or Kesteven and Holland, whilst those with larger holdings may hold in either or both. Furthermore the boundary between Lindsey and Kesteven was mostly formed by the Witham, which at this time flowed within a wide marshy valley. It is therefore not surprising that estates did not straddle this, regardless of whether it marked the boundary between earlier kingdoms or later administrative districts. Preliminary analysis suggests that there were, by 1086, no clear tenurial relationships between Lincoln and Lindsey, although it is impossible to say whether this was because they had been obscured by landholding changes that had occurred in the several centuries since the end of the kingdom of Lindsey. Domesday Book enables us to identify one small stage in the process of change through

the holdings of a number of tenants-in-chief. For instance the Lincolnshire holdings of Earl Hugh combined some from Earl Harold with others from Godric and Lambarkarl, similarly Gilbert of Ghent received land from Ulfr Fenman, Tonni and Siward [46]. The combining of the estates of different men under a single lord, and also the splitting of single holdings between several tenants-in-chief, may have been the final stage in a process that obliterated any signs of earlier tenurial relationships.

The complexity of landholding patterns near Lincoln may instead reflect a combination of more recent economic and political concerns. If it is accepted that a growth in the size and number of towns occurred during the later Anglo-Saxon period, then it is conceivable that the areas around them became more sought after. Indeed this section as a whole aims to assess such a premise. Land near Lincoln would be attractive as it would enable Lincoln property holders to more easily provision their urban holding, and more debatably enable them to take advantage of the 'market opportunities' that Lincoln offered for agricultural surplus. If the land around Lincoln was in greater demand, one means for a king to satisfy such demand would have been to allocate such estates more thinly to more holders. This would also have the political benefit for kings of diluting power around Lincoln, a centre of no little strategic importance, and so reduce the danger of individuals coming to dominate a politically sensitive area. More importantly, given the methods that lead to land transfer after the Conquest, more competition between lords probably led to greater division.

In order to investigate this hypothesis the status of

landholders in the Lincoln area were compared with those in the control area. To facilitate this each landholder was categorised using the amount and distribution of the land they held. For 1066 the categorisation was based on the amount of land each held in Lincolnshire, due to the problems of identifying individuals without by-names in other counties, and followed the same A-F categorisation that was employed earlier [47]. Those holding the parts of the Lincoln or Control areas that lay in Nottinghamshire were omitted from this categorisation. Whilst some others proved impossible to categorise this ranking exercise still involved about 75% of the landholders in each area in 1066. The results of this are presented in Table 23, from which it is clear that the landholder profiles are very similar for each area. In the Lincoln area 74% of the categorised landholders held less than 500s and 49% hold less than 100s. This compares with the Control area where the figures were 78% and 53% respectively.

The 1086 landholders were also ranked, using the 0-6 categorisation employed earlier in this section [48]. The results of this are presented in Table 24, with each landholder and their category shown in Appendix 5. From these it is clear that once again the landholder profile for the two areas were very similar [49]. Nor do any pronounced differences emerge when the number of holdings held by each category are calculated. The only real difference appears in the average number of holdings of the category 3 group around Lincoln, which is lower than its control counterpart. This category lacks a landholder with a large number (ie 12 or more) of holdings. It is difficult to explain this, and it may just be a statistical quirk. A discrepancy also emerges when the value of the holdings was taken

into account. The average value of the holdings in each of these categories was very similar to the value of the same category in the control area, with a single exception, category 3. Here the Lincoln average value of 148s was easily exceeded by the 234s average in the control area (see table 24). Whilst that of categories 0-1, 5 and 6 are almost identical, there is some variation in categories 2,3 and 4, with category 3 holders around Lincoln holding only about two-thirds of that in the control area. On a more general level the average value increases with each category of landholder, apart from category 3 of the control. This implies that the value of each groups holding was closely linked to their overall status as landholders.

In summary the close similarity between the control area and Lincoln strongly argues that Lincoln had little influence on the type of landholders holding land around the town. The tenants-in-chief around Lincoln in 1086, and the holders in 1066, were mostly determined by the factors that shaped landholding everywhere, rather than by factors unique to urban centres. Thus whatever reasons lay behind the extra landholders around Lincoln, it had an equal effect on each category. Hence explanations that attribute the additional landholders to the particular attractiveness of Lincoln, need to be able to explain why those individuals with the greatest power and influence do not predominate at the expense of the weaker and less influential.

Any consideration of the 'attractiveness of the land around Lincoln' requires an investigation of the value of the land in this area. This was investigated in two ways; firstly by

dividing up the area into three sections relative to their distance from Lincoln. Secondly by comparing the area around Lincoln, and any differences that emerged here, with the control area.

The total value of the area around Lincoln, including both estimated and actual values, was calculated for both 1066 and 1086. This gave total values of 12484 shillings in 1066 and 11206 or 12403 shillings including exactions (*taille*) in 1086 (see table 25). To present the values of each section in comparable form, each section's value was divided by its area to give a value per square mile figure [50]. From Table 26 an interesting pattern of values emerge, with the section nearest to Lincoln having a greater value in 1066, and in 1086, particularly when the exactions are added. The section nearest to Lincoln was valued at some 25% more per square mile than that of the surrounding outer sections. Whilst in itself this is not fully conclusive, it clearly points to an area requiring further investigation.

To do this the spreadsheet information was split into these three area sections, and the results tabulated (see table 27). From this it seems that the additional value attached to the area nearest Lincoln was not accompanied by increased population or actual ploughs, which are basically the same per square mile as those in the 5-10 mile section, with the outermost section about 5% less. A 10% difference between the 'land for x ploughs' figures of the section within 5 mile section and the 5-10 mile section, perhaps provides a little further evidence for extra value, as S Harvey regards this figure as part of the tax assessment process [51].

So, having discovered that the value per square mile was at its highest near to Lincoln, these values were compared with the control area to test the significance of the differences in value between the sections. The total calculable value of the control area was 80% of that calculated for the Lincoln area in 1066, and 87%, or 91% if exactions were taken into account, in 1086 (see table 28). Thus, particularly in 1066 the Lincoln area was significantly more valuable than the control. It might have been expected that the extra value of the Lincoln area was derived from the area closest to Lincoln. However from Table 26 it is clear that the control area, when broken into component sections was puzzlingly similar to Lincoln. In 1066 the central section of the control was over 50% more valuable per square mile than the rest of the area. The settlement gaps, particularly in Epworth wapentake may have reduced the figures for the outer sections, but not sufficiently to explain this. It was considered possible that the central zone contained a disproportionate number of settlements. This explanation however proved groundless as the central area of the control had 18% of the settlements on 17% of the total area. One interesting difference was that here the extra value was also reflected in extra ploughs and population per square mile. Thus the extra value may be attributable to agricultural factors such as soil quality, or at least land that was particularly suited to Anglo-Saxon agriculture. Map 30, taken from Darby, does show an area with a high population within this section. The difference between the two areas was perhaps not so much one of value, although Lincoln was more 'valuable'. Instead the importance

relates to the fact that around Lincoln the extra value was not reflected in extra ploughs or people.

Further analysis suggested that the extra value at the centre of both the Lincoln and the Control area could be attributed to the high percentage of royal holdings there. In the 'within 5 mile' section of the control area 31% of the value came from royal holdings, compared with 16% and 21% in the other sections. However these holdings had undergone a pronounced increase in value since the Conquest [52]. The royal holdings in the 'within 5 miles' section of the Control area that were valued at 700s in 1086, had only been worth 200s in 1066. Hence the high percentage of value in royal hands was a development of the post-conquest period, yet the higher value of this area was clearly a pre-conquest phenomenon. Overall the control area serves as a warning that values varied quite markedly between adjacent areas regardless of urban centres, and that the value of individual holdings, especially those of the highest elite, were quite volatile in terms of the value information given in Domesday Book.

Reference to exactions (*taille*) is a very common aspect of Lincolnshire entries in Domesday Book. However there are only two references outside Lincolnshire to this [53]. This sum was often large, but study of its incidence has failed to identify any patterns in terms of tenurial or geographical links within the county. It is not clear whether exactions are an unwritten part of the value of Lincolnshire vills that do not mention it, or that for some reason it was only 'paid' in certain vills. In the Lincoln area exactions, if added to the 1086 figure give total value figures similar to those of 1066, perhaps suggesting

that exactions formed an unstated part of the 1066 figures. However in the Control area the value figures are similar without exactions, which have the effect of making the values for 1086 greater. It is clear at least that exactions have no relationship with Lincoln, being similar in both areas.

The question mark that the control area figures placed over the higher value figures around Lincoln led to further investigation of the area nearest Lincoln. The 'within 5 mile' section around Lincoln was split into its component wapentakes. This reveals that it was not so much the area near Lincoln, as Lawress wapentake near Lincoln that provides the extra value. Indeed the non-Lawress part of the 'within 5 miles of Lincoln' section had an average value per square mile of less than that of the 5-10 and 10-12 mile sections. The part of Lawress wapentake within 5 miles of Lincoln accounted for 72% of the value of the whole 'within 5 miles' section, 64% of ploughs and settlements and 60% of the population - all on about 40% of the total area. In terms of value per square mile it gives figures of 50s or 56s with exactions compared with 14s and 16s for the non-Lawress part of this section. This part of Lawress was then compared with the other half of the wapentake which was further from Lincoln (see table 29). There was little to choose between the areas in terms of the number of settlements and the number of ploughs, but the differences in value were more pronounced. Whilst in 1086 the outer part of this wapentake was valued at between 25 and 30 shillings per sq mile, the inner section had an average value of 51s per sq mile. Whilst the Lincoln area as a whole had broadly similar values for 1066 and 1086 with exactions, Lawress

wapentake underwent an increase in value of 33%. However this does not account for the extra value of Lawress wapentake near Lincoln as the outer part of the wapentake increased by 29%. So the differences in value were exaggerated by the Norman Conquest but cannot be described as a purely post-conquest development. As the extra value does not appear to be mirrored by higher numbers of ploughs or people, it may indicate that the sources of value were not directly linked to arable agriculture. The additional wealth may have been linked to the provision of raw materials for Lincoln, such as wool. Certainly Darby describes much of this area prior to more recent improvements as 'a zone of heaths, sheep walks and rabbit warrens' [54].

Moving from value to population composition, table 31 shows that overall the percentage of sokemen within 12 miles of Lincoln was slightly less, and that of villeins slightly greater than found in Darby's average for Lincolnshire as a whole [55]. The figures for the two outer sections, are not so far removed from those of the whole county, but those of the inner section are very different [56]. Near Lincoln the percentages of bordars and particularly villeins were higher at the expense of sokemen. Whilst differences between counties in terms of population composition can often be partly attributed to terminological confusion, this provides less of an explanation for areas in close proximity not separated by administrative boundaries. The difference was most acute in the southern half of the 'within 5 mile' section, where only 23% of the population are sokemen, compared with a county average of 51%, although admittedly the actual recorded population figure of 212 means that the figures at this level of breakdown are quite small. This section

consists of land in Graffoe, Boothby and Langoe wapentakes. In order to discover whether the low proportion of sokemen was a feature of these wapentakes, their populations within 12 miles of Lincoln were investigated. Overall their population composition was quite close to the county average, with 46% sokemen, suggesting that the lack of sokemen was in some way linked to Lincoln. The same was true of Lawress wapentake, where the percentage of sokemen in the part of the wapentake nearest Lincoln was considerably less than in the rest of the wapentake [57].

The significance of this lack of sokemen is not however clear. Stenton suggests that sokemen were most numerous on estates of a particular type - consisting of a central manor with many appurtenant members, and it was on these appurtenant 'sokes' scattered over a wide area, that large numbers of sokemen were particularly to be found [58]. This however describes only part of the picture. The 'free peasantry', as well as being in part a remnant from the break-up of the great estates, may also in some cases have been settlers on newly cleared land, especially in areas lacking tight landlord control [59]. High percentages of sokemen have also been linked to a vigorous land market and the consequent break-up of old estates [60]. A comparative lack of sokemen may indicate that close landholding control was being exercised, perhaps by local tenants-in-chief such as Kolsveinn, and perhaps by local representatives of regional and national landholders with holdings in Lincoln. However this receives only limited support from a preliminary analysis of the population composition on various holdings. On the estates of Kolsveinn the

percentage of sokemen was 41%, on those of Svartbrandr 23%. However on the lands of the Bishop of Lincoln near to Lincoln where one might have expected close control 64% of the population were sokemen (see table 32). Similarly the close landholding control of monasteries is well attested, yet the percentage of sokeman on the land of St Peter's Peterborough around Lincoln was similar to that of the county average, although admittedly all of the sokeman were to be found in one village, Scothern.

In the West Midlands J D Hamshere suggested that population composition was affected by the estate holders, although the absence of sokemen there does not enable direct comparison [61]. Overall the small size of most of the population counts makes it particularly risky to lay much stress on these individual composition estimates. Nonetheless the area around Lincoln exhibits a distinct lack of sokemen. Furthermore the lack of sokemen was a feature of the holdings of most landlords near Lincoln. Of the 24 TRW landholders whose holdings within 5 miles of Lincoln mention population, only three have sokemen constituting a majority of the population. This compares with 18 out of 31 in the area between 10 and 12 miles of Lincoln. Thus whatever the reason for a lack of sokemen near Lincoln it effected landholders in general rather than particular groups such as ecclesiastical or royal holdings.

The lack of sokemen around Lincoln raises the possibility that this area had progressed further on the process of manorialisation, which has been associated with this period. The progress of this may be identified in Domesday Book by considering the proportion of ploughs that are operating on the demesne. High numbers of demesne ploughs in an area suggest this

process had advanced further than in areas where they were less numerous, although other factors complicate this. The creation of a manorial system led to a more effective use of ploughs, through the formation of open fields, with the increased efficiency likely to have an impact on the economy as a whole. Some villages near to Lincoln had relatively high numbers of demesne ploughs, such as Riseholme where four of the five ploughs in the village were demesne ploughs [62]. After further analysis of the number of demesne ploughs it is apparent that there is no evidence to support the contention that Lincoln was a positive local influence on the development of manorialisation (see Table 33). The number of demesne ploughs expressed as a percentage of actual ploughs was greater throughout the Control area than in the area around Lincoln. Nor was the extra value identified in the Lawress wapentake attributable to higher numbers of demesne ploughs. The section of this wapentake within 5 miles of Lincoln contained only 24% demesne ploughs, whereas in the outer half of that wapentake, where the value per square mile was less, 30% were demesne ploughs. Thus the reasons for a lack of sokemen around Lincoln remain unclear. The increased commercial possibilities offered by proximity to Lincoln may have influenced this but it is difficult to understand how such a change took place.

As a result of this study a number of general observations can be made about property in Lincoln and the town's rural hinterland. Firstly there are few signs of Lincoln property holders having particular landholding interests near to Lincoln. As far as the property itself is concerned the holding of

mansiones appears to be largely confined to major landholders in both 1066 and 1086, who were probably rarely if ever resident there. Indeed, for the most part, named property holders had little other signs of association with Lincoln. Among the most notable exceptions were probably Kolsveinn, Svartbrandr, and some of the other lawmen in 1066 and 1086. Ertald and Ralph of Baupame may also be included, as they were not known to have held land or property elsewhere.

Analysis of the area within 12 miles of Lincoln indicates that studies, such as those of Darby, which consider Lincolnshire by wapentake or groups of these, conceal quite wide variations within wapentakes, or between adjacent wapentakes. Detailed study has uncovered wide variations in the area around Lincoln. Initially these were attributed to Lincoln, but further study indicates that many of these variations were also present in the non-urban control area. This left a small number of differences in Lincoln rural hinterland which may be attributable to urban influence. Firstly there appears to be a wider variation in the value of holdings close to Lincoln, than at the centre of the control area. More significantly perhaps, there were a greater number of different landholders found around Lincoln than in the control area. This is not because villages were split between a greater number of lords, but because the average number of holdings per lord was less. The lower average number of holding was however partly compensated for by the fact that the value of each holding was on average higher. The greater value may have lead to increased competition for land ensuring that smaller holdings were distributed to more people, particularly in the aftermath of the Conquest. This finds support from the control

area, which shares with the Lincoln area a correlation between increases in value per square mile and increases in the number of landholders per village. Whilst the Lincoln area had a greater number of different landholders, they were, as a group, very similar to those in the control area, apart from there being slightly less holdings and value in the hands of 'regional' landholders around Lincoln in 1086.

The social composition of the population in the area closest to Lincoln differed markedly from the rest of the surrounding area, and the county as a whole, by having a much lower proportion of sokemen. A lack of sokeman was found on the holdings of all types of tenant-in-chief. Their absence does not appear to have been caused by advanced manorialisation, as the Lincoln area has lower percentages of demesne ploughs than the control area. The other major difference is that of higher value in some areas close to Lincoln, especially in Lawress wapentake. It does not appear that the last of these two distinctions were linked, as whilst the area to the north of Lincoln was of very high value that to the south was not, and yet both areas have below average percentages of sokemen.

Finally despite the various differences it is important to stress that overall the area around Lincoln was not so different from that of Lincolnshire as a whole. This is apparent for instance from the similarity of the landholder profiles of this area and the control both in 1066 and 1086. The structure of villages, in terms of their movement towards manorialisation near Lincoln, differ little from those in the control area. The slightly higher demesne plough figures for the Control area

result from variations between regions of Lincolnshire. Lincoln has slightly fewer demesne ploughs because that area includes part of Kesteven where the number of demesne ploughs was 8% less than for Lindsey [63]. These variations result from factors affecting whole regions, rather than reflecting the narrow influence of Lincoln. Despite the influences of the town much remained unchanged in the rural hinterland of Lincoln. Whatever the size and population of Lincoln, one must not forget that towns were but a small part of the Anglo-Saxon economy in Lincolnshire, as elsewhere. It is clear that in terms of tenurial and economic relationships the town had not transformed this part of Lincolnshire. Even the villages within two or three miles of Lincoln appear very much as rural settlements, rather than urban satellites. The control area demonstrates that rural values varied quite considerably and often inexplicably without the influence of towns. Indeed in many ways the influence worked the other way, with towns being strongly influenced by rural realities. Landholding appears to have been hierarchical, just as in the countryside, and those with potential bases in or near Lincoln are apparent from the text of Domesday Book because of their concentrations of rural rather than urban property. Mostly those who held amounts of property in Lincoln held substantial rural holdings. As well as seeking urban property rural elites also sought less tangible urban benefits such as the sake and soke of burgesses. The interaction between town and countryside was a two-way process, but from Domesday Book there is little sign that Lincoln had brought about a transformation of its rural hinterland.

Chapter Seven: notes

1. Domesday Book (Phillimore county editions) Lincolnshire folios 336a and 336b

2. Domesday Book Nottinghamshire, folio 280a

3. See Map 5 and J W F Hill, Medieval Lincoln (Stamford, 1990 reprint), p.47

4. See Map 6, also see Map 11 showing Earl Hugh's national holdings. Earl Hugh d'Avranches was one of the top 10 wealthiest landholders in 1086. R Fleming, Kings and Lords in Conquest England, Cambridge Studies in Medieval Life and Thought (Cambridge, 1991), p.219. For Harold's Lincolnshire holdings see Map 13. Merlesveinn for instance held property in Exeter, and Ulf Fenman had property in Wallingford. R Fleming, 'Rural Elites and Urban Communities in Late Saxon England', Past and Present, 141 (1993), p.7

5 Domesday Book Lincolnshire folio 336c, and also Map 7

6 Ibid., folio 336a

7 In this he was not unique, many appear to have acquired land from a whole host of TRE holders. Some did acquire much of their land from a single holder, such as Gilbert of Ghent from Ulfr Fenman. R Fleming Kings and Lords in Conquest England, op.cit., proposes a much more variable means of transfer which tends to fit with the variety of relationship between TRE and TRW holdings in Lincolnshire. See especially Ibid., chapter 4 pp.107-144. Whilst there is an element of truth in Sawyer contention that many of the TRE holders were in fact sub-tenants, the way in which the holdings of men such as Rothulfr are split between numerous TRW holders supports the idea of a tenurial revolution.

8 J W F Hill, op.cit., p.48 and fig 4 p.49

9 Domesday Book Lincolnshire folio 340c. This is one of the entries with Kolsveinn as a sub-tenant that the translators of Lincolnshire Domesday Book do not regard as being the same as Kolsveinn the tenant-in-chief. However the land held by Kolsveinn the tenant in chief is mostly in this area, and as there is no other Kolsveinn mentioned in Domesday Book Lincolnshire it seems likely that he is one and the same man.

10 J W F Hill, op.cit., pp.48-50

11 19 villages = Cold Hanworth, Coates, Kexby, Fillingham, Spridlington, Owmby by Spital, Cammeringham, Hackthorn, Faldingworth, Snarford, Brattleby, South Carlton, Scothern, Sudbrooke, Holme, Ingleby, Riseholme, Reepham and Barlings.

32.5 out of a total of 54.75, compared with 18.75 out of 76.72. Information taken from Spreadsheet, see below.

12 J W F Hill, op.cit., p.50

13 Domesday Book Lincolnshire folios 358b and 336d. *Leduin* and *Leuuin* are not necessarily the same, as Domesday Book often appears to distinguish between them. Nonetheless the incidence of nine burgesses and nine mansiones tends to suggest a link with Alfred of Lincoln here.

14 Svartbrandr is classed as a tenant-in-chief because he is given his own chapter in Domesday Book. This need not necessarily imply greater importance than those not so classified.

15 Domesday Book Lincolnshire, 7,51 and 33,2, folios 344d and 362a

16 Ibid., C21 and CW3; folios 336c and 376b

17 Ibid., 60,1 and C15; folios 368d and 336b

18 J W F Hill op.cit., p 52. See also Map 12 - the source of this information Phillimore Domesday Book, vol 37, Index of Persons, J McN Dodgson and J J N Palmer (Chichester, 1992)

19 Discussed in Lincoln's Urban Populace see pp.348-9

20 This discussion and conclusions are based on a spreadsheet containing data taken from Domesday Book. The methodology, problems and assumptions that underlie this are described in Appendix 4 Domesday Book Spreadsheet: Methodology, Problems and Calculations.

21 Domesday Book Lincolnshire, T5, folio 337a

22 Ludford and Coningsby

23 Lu2 and M32 on map 16

24 Domesday Book Lincolnshire, T5, folio 337a

25 See for instance Ibid., CN27, folio 376a and CK45 folio 377b and the accompanying notes in Domesday Book Lincolnshire. Their holdings were concentrated in the north of the county (see Map 17).

26 Bishop of Durham, Bishop of Bayeux, Count Alan, Roger of Poitou, Kolsveinn and Jocelyn son of Lambert.

27 Domesday Book Lincolnshire, CN30, folio 376a

28 Ibid., CW16 folio 376c on maps Cr2, Cr7, M30, M35

29 P H Sawyer, 'A tenurial revolution', in Domesday Book: a reassessment, ed., P H Sawyer (London, 1985), pp.71-85

30 For instance Gunnhvatr. Harold held land in Waddington with an outlier in Metheringham and a soke in Harmston. The manor was valued at £96, which does seem high, especially given that the value in 1086 was only £20. It may be that the 1066 manor of Waddington consisted of land in more than the four villages named in 1086. There is a strong possibility that the pre-eminence of Harold was the result of Domesday Book omitting some villages that formed part of the manor of Waddington.

31 The 2nd -5th in the ranking being Ivo Tallboys; Bishop of Lincoln; St Peter's Peterborough and Geoffrey of La Guerche.

32 4675 divided by 9739. See table 16

33 Ignoring those with only one or two holdings the average value varied from Rainer of Brimeux at 5s per holding to Walter Aincourt with 83 and the king with each holding valued at 152s. In the control area the average value per holding was 34s, and again there was considerable variation from 5s per holding of Heppo the Crossbowman, to 90s for those of Gilbert of Ghent.

34 See Canwick in Spreadsheet extracts in Appendix 4

35 This also avoided the problems of whether to count as one or several holders that land which was held in 1066 by two or more holders together.

36 29 holders in 10 villages with a royal holding, compared 34 holders in the 14 villages with no royal holding.

37 This area contains (135-18 =) 117 out of 766 settlements mentioned in Lincolnshire Domesday Book. This equals 15%

38 Also there are six landholders who hold land within 3 miles of Lincoln, but not elsewhere within 12 miles of Lincoln, compared to two in the control area. The six being: Bishop of Coutances; Church of St Michael ; Cwenthryth the Nun; Kolgrimr; Norman Crassus and Peter of Valognes.

39 Domesday Book Lincolnshire, folios 336a - 336c

40 For further detail see for instance F Stenton, Preparatory to Anglo-Saxon England (Oxford, 1970), pp.127-35 and B Eagles, 'Lindsey', The Origins of the Anglo-Saxon Kingdoms: Studies in the Early History of Britain ed., S Basset (Leicester, 1989) especially p.211

41 For the most recent hypothesis on the early boundaries of Lindsey see B Yorke, 'Lindsey. The lost kingdom found?' in Pre Viking Lindsey Lincoln Archaeological Studies No.1, ed., A Vince (Lincoln, 1993), pp.141-150. In this she argues that the boundaries of Domesday Lindsey may not be the same as those of the earlier kingdom. Yorke for

instance suggests that the kingdom of Lindsey may have included the northern parts of what is now Kesteven. op.cit., pp.147-8.
Cyril Hart suggests that Lincolnshire in its modern form may not have come into being until after the Norman Conquest. C Hart, 'The Origins of Lincolnshire' in The Danelaw, C Hart (London, 1992), pp.177-203 especially pp.185-6 and p.194

42 See for instance Maps 13, 14, 22 (Ulfr Fenman), 24

43 See Maps 10, 25, 26(Klakkr and Sjundi) and 27 (Hemingr). In the case of Stori he is named for one isolated holding in Kesteven (Lv15), but it seems unlikely that they were held by the same Stori.

44 See Table 22 'unique' divided by 'Total'

45 Domesday Book Lincolnshire, 11,9 folio 346d; and J W F Hill, op.cit., p.96. Some exceptions are easy to explain. For instance whilst Guy of Craon held land in 10 villages in Lindsey, his holdings in Holland and Kesteven numbered more than four times this figure. This is also true of the Lindsey holdings of Geoffrey Alselin. Other exceptions result from later additions to holdings that were initially confined to Kesteven and Holland. For instance St Guthlac's Abbey, Crowland, acquired Bucknall in Lindsey, from Thoraldr the sheriff, 'for his soul'. Thoraldr was active between 1072 and 1079, so this was a later Lindsey addition to St Guthlac's holdings which had previously been confined to Holland and Kesteven. Other exceptions are however not so easy to explain, particularly the extensive holdings of Hugh, son of Baldric and Geoffrey of la Guerche, who together account for about two-thirds of the Lindsey holdings of lords not holding land within 12 miles of Lincoln. In the case of Hugh it is known that he had property in Lincoln, as he had failed to pay tax on two plots there Domesday Book Lincolnshire C20, folio 336b. It is possible to attribute some of these exceptions to the arbitrariness of a radius of 12 miles, as both Hugh son of Baldric and Geoffrey Alselin held land less than 12.5 miles from Lincoln, and Geoffrey of La Guerche held land just a little further away. See Map A in methodology section. Bucknall (Ga 17) - Hugh son of Baldric. Rowston (F 1) - Geoffrey Alselin. Yawthorpe (Cr 16) - Geoffrey of La Guerche

46 See Maps 4 and 6 R Fleming suggests this Siward, whom Gilbert received his holding in Lincoln from, was Siward Barn. R Fleming, 'Rural Elites and Urban Communities in Late Saxon England', Past and Present, 141 (1993), p.7. But there seems little to support this and the father of Aki and Vigleiker seems more likely on the grounds of geographical proximity.

47 See above p.286

48 See above pp.286-87

49 In both areas the most numerous group are category 3 landholders, comprising 31% of all landholders around Lincoln and 34% in the control area. Also the categories 2,3 and 4 contain the most landholders, and account for the vast majority of landholders: 73% in the Control area and 75% in the Lincoln area.

50 Area within 5 miles = 3.14×5^2 = 78.5 square miles
Area within 5 to 10 miles = $(3.14 \times 10^2) - 78.5$ = 235.6sq m
Area within 10 to 12 miles = $3.14 \times 12^2 - (235.6 + 78.5)$
= 138.3 square miles

51 S Harvey, 'Taxation and the Ploughland in Domesday Book' in Domesday Book: a reassessment, ed., P H Sawyer (London, 1985), pp.86-103

52 854s to 2164s by 1086

53 One in Nottinghamshire (9,74, folio 285d) and one in Yorkshire (12W28, folio 321a). J D Foy, ed., Index of Subjects, Domesday Book 38, (Chichester, 1992), p.56

54 H C Darby, The Domesday Geography of Eastern England (Cambridge, 3rd edition 1971), p.91

55 Ibid., p.379.

56 See Table 31

57 See Table 29

58 F M Stenton, The Free Peasantry of the Northern Danelaw (Oxford, 1969), p.9

59 P A Stafford, The East Midlands in the Early Middle Ages (Leicester, 1985), p.160

60 Ibid., p.21

61 J D Hamshere, 'Domesday Book: Estate studies in the West Midlands' in Domesday Studies, ed., J C Holt (Woodbridge, 1987), pp.155-182

62 Domesday Book Lincolnshire, (24,2) 354c; (26,2), 356d; (4,80), 343c; (6,1), 343d; (7,51), 344d; (16,47), 352c; (33,2), 362a; (67,26), 370c

63 H C Darby, op.cit., p.39. In Kesteven there are 19% of ploughs in demesne, and 27% in Lindsey overall, varying between 22% in the South Riding and 31% in the North and West Ridings.

CHAPTER EIGHT

Lincoln and its Urban Populace

The size and more particularly the social structure of urban populations remain one of the most elusive aspects of the early medieval town. Yet amongst the defining urban characteristics, outlined earlier, were 'a more dense concentration of population and an occupational structure which is largely dependent on non-agrarian pursuits'. Thus questions relating to the urban populace are central to the defining criteria that underpin this study. The size and social structure of Lincoln's urban populace also has importance beyond that of definition. If an understanding of Lincoln in this period is to be obtained it is essential to acquire an impression, however tentative, of the number and type of people that inhabited the town.

To begin with population size, there are no sources that give detailed urban population figures until several centuries after our period. Attempts that have been made to quantify the number of people living in the various towns of early medieval England rely on the figures given in Domesday Book. From the outset it must be recognised that Domesday Book was not intended as a census, and any figures extrapolated from it need to be treated with the utmost care. Most historians of the early medieval economy or town have devoted some attention to urban population estimates. A cursory glance at these indicates a wide degree of consensus. Typical are those of McDonald and Snooks, which suggest that the most populous places in 1086 were London with more than 10,000 and possibly more than 12,000; followed by York with around 8,000; Winchester, Norwich and Lincoln with more

than 6,000; and Oxford and Thetford with around 5,000 [1]. The degree of consensus is not however surprising as H C Darby's Domesday Geographies provide the basis for most modern estimates including those of McDonald and Snooks [2], and these in turn are very close to those of earlier historians, such as Tait [3]. The regular citing of these estimates tends to give them an authority that may be ill-deserved.

Often the presentation of these estimates implies that Domesday Book provided comparable information on urban population. This was mostly not however the case, as consideration of the 'seven most populous towns' shows. London and Winchester are omitted from Domesday Book, so the estimate for London is, as Darby points out, 'a guess' [4]. The population estimate for Winchester is based on two surveys of the city dating from 1110 and 1148 [5]. The other five are covered in Domesday Book but not in necessarily comparable forms. The population figure for York is calculated from the number of *mansiones* (a property classification) which are described in a variety of forms; for Norwich numbers of *burgenses* and *bordarii pauperes* are given; in Lincoln the number of *mansiones*; in Thetford the number of *burgenses*; and in Oxford the numbers of *mansiones* and *domus* (a further property classification) are used to arrive at population estimates [6]. Thus estimates are derived either from the number of properties or the number of *burgenses*, who for the purposes of population estimate are taken as heads of household. In both cases these figures are then multiplied by a household multiplier - Darby uses a figure of around 5, as did Tait - to arrive at the quoted estimates of

urban population.

Beginning with those estimates derived from *burgenses*, it seems highly unlikely that this term refers simply to a town dweller. At Derby there were 100 *burgenses* and 40 lesser *(burgenses)* [7]. Instead it seems likely that these *burgenses* were a particular group within towns, probably the head of fully contributing households, but as Reynolds notes 'how many that omitted, especially in the bigger towns, is anyone's guess' [8]. At Norwich, reference is made to '480 *bordarii pauperes*', who because of their poverty pay no customary dues'. Such indigence is rarely mentioned in Domesday Book, yet these bordarii are perhaps the tip of an urban iceberg, with many others, who paid nothing, remaining in obscurity. Furthermore calculations suggest that at Norwich these *bordarii* were classed as *burgenses* in 1066 [9].

More important for our study of Lincoln's population, is the alternative estimating method, which counts 'properties' and then multiplies them by a household multiplier. Many of the problems of this approach stem from the wide variety of terms that are used for urban properties in Domesday Book. Indeed such variety is symptomatic of Domesday Books' whole approach to towns. At Exeter for instance there are '399 *domus*', at Windsor there are '95 *hagae*', and at Cambridge there are '324 *mansurae*' [10]. What differences, if any, existed between each of these terms remains obscure, but for the purposes of population estimates they are assumed to be similar, even though a town such as Oxford had *mansiones, domus*, and *hagae*. The account of Nottingham refers to *iii mansiones in quibus sedunt xi domus*, which suggests that a *domus* was a subdivision of a *mansio*, although this may only be

true of Nottingham [11]. Overall these terms appear to lack any consistency of meaning, even within the different Domesday Book circuits, and sometimes even within the same county.

This terminological confusion has not however prevented historians from using property figures as the basis for comparison. M Biddle, for instance, ranks Winchester as the fourth largest town in terms of tenements in 1066 with about 1130; behind London, for which no figures are available; York, whose 1890 tenements consist of '*mansiones*'; Norwich, where the 1320 tenements are actually '*burgenses*', the assumption being that a '*burgensis*' = a tenement; and about even with Lincoln whose 1150 tenements are '*mansiones*' [12]. Whilst some of these terms may refer to houses occupied by a single family others may refer to a larger plot containing a number of houses and families, such as those described in the account of Nottingham. Thus to simply multiply these different property classifications by a single household multiplier runs a very real risk of inaccuracy.

Any inaccuracies may be further compounded by the household multiplier, usually five, which is basically a guess of how many people lived in a single household. Recent research has suggested that five may be a reasonable family size figure for Anglo-Normán baronial families, but a figure of about 4.5 may be more appropriate to families as an average [13]. It is far from clear how this relates to the urban populace as a whole. It seems likely that increases in the urban population were achieved as a result of immigration from the countryside, as demographers have suggested that the death rate in the pre-modern city usually

exceeded the birth rate. Most immigrants were probably single people; some of whom found their way into apprenticeships, and so added one to the household size of some craft households. The family in this period probably often consisted of two parents, with the possible addition of one grandparent, and normally one-three children. It seems likely that urban families conformed to this basic structure. However the larger number of young and single people make household estimates particularly problematical as they may have created many single person households or have added one to the average family size.

The underlying assumption of much population estimate work is that the compilers of Domesday Book were interested in total urban population and property figures. However as S Reynolds suggests, the purpose of the more complex urban entries were

> 'not to give total numbers of burgesses or even of sums received, but to account for unpaid dues and give as good an idea as possible of what the king ought - in his servants' opinion - to be getting' [14].

Population totals were of interest only so far as total numbers of *burgenses* or *mansiones* provided a guide to the amount to be expected from dues. This may have ignored significant numbers of smaller properties or population too poor to pay dues, such as those *bordarii pauperes* in Norwich. It is impossible to know whether a significant proportion of the urban populace were already classed as *bordarii pauperes* or similar in 1066 and hence had no reason to be counted by Domesday commissioners primarily concerned with what the king ought to be getting, based on what he had previously received. Were this so it would mean that population estimates based on the number of *burgenses* would tend to be on the low side.

Before leaving this review of population estimates, it is important to add that despite its limitations there is little else to work with apart from Domesday Book. Despite their weaknesses, such estimates tend to provide rankings of towns that are quite similar to those provided by other means of comparison, such as mint outputs, amounts paid by each town to the king in Domesday Book, or the number of parish churches [15]. The fact that the same towns tend to appear in similar positions in each of these suggest that population estimates are at least in the right sort of order, whether or not the actual figures are particularly accurate.

Estimates for Lincoln put the population at around 5-6,000. These are derived from the Domesday information that there were 970 occupied *mansiones TRE* (reckoned by the English method where 100 = 120, Hence 970= 9x120 + 70 = 1150) that is 1150, and by the same reckoning 760, that is 900, in 1086 [16]. Multiplying these by five gives population figures of 5,750 in 1066 and 4,500 some twenty years later. Hill estimates a slightly higher figure for 1066, (6,350) because he adds a further 120 households who pay custom to various lords rather than to the king [17]. There however seems little to recommend this, as it is more likely that the total of 1150 *mansiones* includes these. *Mansiones* which did not pay dues to the king were probably listed to enable a clearer picture of how much the king should expect to emerge.

Domesday Book also provides details that enable some calculation of population, or more accurately, property density. Of the 240 unoccupied *mansiones* in 1086, 166 were destroyed as a consequence of the construction of the castle [18]. The area

that was cleared for the castle was greater than simply that marked by the castle walls, as it also included ditches, which all taken together, Hill estimates, covered almost 14 acres [19]. Although some of this may have lain outside the upper city, Hill nonetheless calculates that the castle affected about a third of the area of the upper city (41 acres). If this were typical of the population density of the upper city, then it would have contained about 500 mansiones (3 x 166) in 1066, giving an average plot size of 400 sq. yards, for example 30ft x 120ft. This was quite similar to some slightly later figures for Winchester, where, in the more densely populated areas of the town, the average tenement had a frontage of 30-40 feet and a depth of 100-150 feet [20].

If there were 500 *mansiones* in the upper city this would have left the lower city with 650. The lower city covers 56 acres, giving an average plot size of 417 sq yards, which is very similar to that of the upper city. Each of the remaining 650 *mansiones* are however unlikely to be found within the walled area. Indeed the Domesday Book account of Lincoln gives an instance which is clearly contrary to this hypothesis. Geoffrey Alselin is said to have held a *mansio* outside the walls, from which he has *land-gable* [21]. Thus, not only were *mansiones* to be found outside the walls, but they probably paid the same *land-gable* of a 1d to the king as those within the walls. Hence the average plot size in the lower city and suburbs was likely to be a good deal bigger than 400 sq. yards. This finds further support from a reference in the Registrum Antiquissimum to the building of the Bishop's palace in 1157. That required the clearance of about 10,000 sq. yards in the north-east corner of

the lower city, which, according to a reduction in the *land-gable*, had contained 13 *mansiones* [22]. This would give an average plot size of about 770 sq. yards. Hill suggests that population densities were at their highest in the walled area, especially in the upper city, with areas away from main street frontages, such as on the site of the Bishop's Palace, being less intensively occupied. Also until very recently there were many large gardens within the walled area which would inflate the average plot sizes figure as would a lack of provision for the area covered by roads and churches.

Archaeological investigation at Flaxengate provides the opportunity for further consideration of population questions. It has been argued that the site excavated here between 1972 and 1976 was under single ownership, largely because of the apparently coordinated programme of rebuilding. The southern and eastern boundaries were no doubt provided by Flaxengate and Grantham Street, but the northern and western boundaries are more problematical [23]. In period VII, which probably coincided with the Domesday Survey, this plot contained several buildings. Structure 23 was 4.5m wide by over 11m long; structure 24 was 12.5 x 4.4m; structure 25, which may either have formed part of structure 24, or have been attached to it, was probably about 4.4m wide and of indeterminate length; structure 26 was over 4.5m wide and over 6m long; also there was a possible structure to the north of structure 24 [24]. The area may well have contained three separate households, each occupying one of the larger buildings and utilising one of the two associated smaller structures. If one takes the, admittedly highly speculative, step

of using this to calculate the population of the lower town it gives a figure not too far removed from that of our other population estimates, assuming 5 people to a household, and a plot size of 885 sq.yds [25]. The 56 acres of the lower city would have contained 306 plots of this size. If 10% was deducted for streets and churches, this leaves 275 plots. If this is multiplied by 15, given that this plot may have contained three households, it gives a population of just over 4,000 for the lower city. Whilst this is highly speculative it perhaps gives figures of around 7,000 to 8,000 for Lincoln including the suburbs. The excavated plot may serve as an acceptable average for Lincoln as a whole, as the plot was not on the High Street/ Strait where population was likely to have been at its most concentrated, nor in areas such as the western third of the lower city which never appears to have been particularly developed.

It is difficult to tie in the information from this plot with Domesday Book. Should this plot be regarded as consisting of a single *mansio*, even though it may well have contained three or more households? If so then the number of Domesday *mansiones* should be multiplied by 15 rather than 5 to give an estimate of population size, giving population figures of around 20,000 which seems unlikely. Alternatively each household here may represent a *mansio*, even though the whole plot was probably under single ownership. If this small plot contained three *mansiones*, then a good deal of Lincoln, even at the end of the eleventh century, must have been covered by gardens, with *mansiones* only in part of the walled area. In which case some of the Lincoln tofts and crofts in Domesday Book may have been within the walled area, such as in the western part of the lower town.

Whilst questions relating to the size of the urban populace are hampered by a lack of definite evidence, when it comes to social structure there is even less to go on. Attention has mostly, by necessity, focused on what might loosely be termed the urban elite. This approach will be adopted here, although some attempt will be made to take account of the rest of the urban populace.

Some information on those holding property in Lincoln in the later eleventh-century can be gleaned from Domesday Book. There were fourteen different holders named TRE and 23 TRW [26]. These account for only a small percentage of the property in Lincoln, and are probably not a representative sample, given that they are mostly mentioned because their holding had special privileges attached to it.

The largest urban holding in 1066 was that of Toki son of Auti. Whereas most Lincoln property holders are mentioned in connection with two or three mansiones at most, he held 30 mansiones, a hall and 2½ churches [27]. He was a landholder of considerable regional importance, with land in six counties, and was one of the 34 named as having sake and soke and toll and team in Lincolnshire [28]. He held land south of Lincoln and in the north of the county, worth at least £50 [29]. His interest in his property in Lincoln was financial, as he was receiving rent (*locationem*) from the mansiones as well as the *landgable*, rather than residential.

The small size of other urban holdings in 1066 makes it more difficult to categorise their purpose and the relevance of their holder to Lincoln's urban populace. The single *mansio* held by

Earl Morcar and by Merlesveinn the sheriff probably served as residences when these men were in Lincoln, but were mostly occupied by their servants and/or their local representatives. The three *mansiones* held by Harold probably served much the same purpose.

Other holders of property in Lincoln TRE were perhaps more involved in the town's hierarchy. Further study suggests that the remaining ten can be split into two distinct groups. Some appear very important, such as Stori, who held lands centred on Belchford and Bolingbroke (Lincs), together valued at £45, and also had sake and soke, toll and team [30]. The holdings of Sveinn, son of Svafi, are less easy to identify as there are a number of different Sveinns in Lincolnshire Domesday Book. Nonetheless he had sake and soke and toll and team, and by 1086 Roger de Busli held his *mansio* in Lincoln. In view of this it seems likely that the Sveinn, who jointly held one carucate of land in Hardwick, that was split between the Bishop of Lincoln and Roger de Busli, was the son of Svafi. It is also probable that the same Sveinn held 3 carucates in Greetwell valued at £8 which were later held by Roger de Busli [31]. He may also have held further land in Lincolnshire but this is so far unidentified.

With the exception of Ulf the lawman none of the other holders appear as important as the aforementioned. For instance Sibbi's 3 tofts is the only reference to him in Lincolnshire Domesday Book [32]. Guthrothr, the lawman, had held a house on pledge of 3½ marks. He also held some land in Middle Carlton with two others in pledge from Agmundr [33]. Apart from this there is no other mention of landholding by him in Lincolnshire.

More problematical are the identification of Godric and Godric, son of Garwine, who both held a carucate of land in the fields of Lincoln. The former was presumably Godric son of Eadgifu who was succeeded as lawman by Peter of Valognes who also succeeded to the carucate in the fields. The same Godric presumably held the two carucates in Burton worth 15s, the only other land later held by Peter in Lincolnshire [34]. Cola is described as the 'nepos' of Kolsveinn, although his holding seems only to have amounted to 6 bovates in Barlings worth 10s [35].

People such as Cola, Sibbi and Guthrothr probably occupied some of the property which they held in Lincoln. Guthrothr and some of the others may also have held land outside Lincoln as sub-tenants. These can be contrasted with Sveinn son of Svafi and Stori, who held major holdings in the county valued in pounds rather than shillings.

A further distinction emerges from a consideration of the type of urban holdings of these two groups. *Mansiones*, as well as being held by national figures such as Harold were held by regional landholders such as Ulfr Fenman and Toki, son of Auti, and important Lincolnshire landholders such as Stori. Whereas, with the possible exception of Athelstan, minor property holders held only *domus*, crofts or tofts.

This is suggestive of an urban hierarchy in which major property units (*mansiones*) were confined to national, regional and Lincolnshire elites; whereas the holders of *domus* were probably more involved in Lincoln society because their interests were solely or largely confined to the town. The latter probably occupied a position towards the upper end of the burgess group.

The list of those holding property in Lincoln in 1086 is likely to be even less representative than 1066, as the account concentrates on those with privileged holdings, who are likely to be men of particular importance. The holders of Lincoln property have been categorised elsewhere in terms of their total landholding [36]. The majority were figures of at least regional importance, whose *domus* or *mansiones* in Lincoln were of little significance for them. Some probably served as bases for them or their representatives when they were in the locality. Others may have split their *mansiones* into separate properties and rented these out. Some property holders, such as Ertald or Ralph of Baupame who were not referred to anywhere else in Domesday Book, were probably based in Lincoln, and thegns whose holdings were confined to Lincolnshire probably made regular use of their Lincoln holdings.

An analysis of the types of urban holding and their holders in 1086 reveals a similar pattern to that of 1066. Ownership of mansiones was again confined to lords of at least regional status, with the possible exception of Earnwine the priest. He is difficult to categorise, not least because of the possibility that there were two or more different priests called Earnwin(e) mentioned in Domesday Book [37]. *Domus* were held by six different lords. Of these, two, Ertald and Ralph of Bapaume, do not appear to hold land elsewhere, and Gilbert cannot be identified due to his lack of by-name. The other three were either regional landholders, or in the case of Kolsveinn, a major Lincolnshire landholder. Whilst these three cannot be regarded as unimportant, the group as a whole appears less so than those holding *mansiones*. Although the information is very limited it

does fit in with that from 1066, and supports the possibility of an urban landholding hierarchy that was closely linked to the more general land hierarchy.

Whilst some of the most important men in the kingdom held land in Lincoln, it seems likely that this group had little association with the city's urban elite. In Lincoln there are however perhaps three exceptions to be found amongst the Lincolnshire tenants-in-chief, excluding possible sheriffs; namely Kolsveinn, Svartbrandr and Remigius Bishop of Lincoln. These, unlike the other tenants-in-chief, may have been normally resident in, or near to Lincoln: a necessity for any member of an urban elite. The possibility that Kolsveinn had land in the city, and perhaps owed castle-guard has been discussed elsewhere [38]. The close association of Svartbrandr with Lincoln was illustrated by his landholding close to the city, but also more importantly by his position as a Lincoln lawman, determined by the reference to him as Svartbrandr son of Ulf in the Lindsey survey [39].

The Bishop of Lincoln, at first glance, could also have formed part of an urban elite. This was not however applicable before 1072-3 when the see was moved from Dorchester to Lincoln [40]. Even then the new church was not completed until 1092, and the dispute with the Archbishop of York over control of Lindsey rumbled on until 1093. Whilst Bishop Remigius was given land in the area to add to that of St Marys of Lincoln, it seems unlikely that he moved here until the church was near to completion. Hence in 1086 whilst he had a considerable amount of property in Lincoln he was probably not 'on the spot'. Furthermore there is

little evidence from other towns of bishops serving directly as part of an urban elite. Indeed later, when evidence becomes more plentiful, there are signs of conflict between resident ecclesiastical authority and emerging urban elites. All of this, and his diverse landholding interests, suggest that he had little or no role in Lincoln's urban elite.

The principal royal representative in Lincolnshire by the time of Domesday Book was the sheriff. Sheriffs were involved in geld collection and the shire court, as well as serving royal interest in other ways in the localities. It is likely that the sheriffs of Lincolnshire spent a good deal of the time in Lincoln, although it is difficult to ascertain his level of influence on the town. Britnell considers that by the late-eleventh century the sheriff governed the main English towns in the joint interests of the king and the earl [41].

Merlesveinn the sheriff (*vicecomes*), who rebelled in 1069, had received forfeit land from Grimketill in 1066 [42]. The same Merlesveinn held a *mansio* exempt from every customary due in Lincoln, witnessed a charter of William I to Peterborough Abbey, and was described by Hill as 'King Harold's representative in the north at the time of the battle of Hastings' [43]. He held extensive estates in Lincolnshire, Yorkshire and also in Devon and Somerset, as well as land in Northamptonshire and Gloucestershire. His links with Lincoln, apart from his *mansio*, are not however clear. His lands were spread around Lincolnshire, but only his two carucates in Dunholme were near to Lincoln [44]. Domesday Book also refers to Thoraldr the sheriff, who gave land at Bucknall to St Guthlac's of Crowland for his soul and probably witnessed the writ transferring the see from

Dorchester to Lincoln, as T. the sheriff [45]. There was also a reference to H. the sheriff which might be Hugh de Port, sheriff of Nottinghamshire or Hugh son of Baldric, sheriff of Yorkshire. J Green also raises the possibility that Norman Crassus may have been sheriff [46]. Domesday Book also suggests Ivo Taillebois was a sheriff of Lincoln during the reign of William I, as well as of Bedford.

The Norman sheriffs may also have been involved in a urban elite of possibly longer standing; namely the 12 lawmen (*lageman*) found in Domesday Book. The commissioners attempted to explain a term with which they were unfamiliar by describing them as 'those having *sake* and *soke*', with one of their number also having *toll* and *team* [47]. This description is not without its difficulties, partly because our understanding of sake and soke is less than perfect. Stenton, and many historians since, including the translators of Lincolnshire Domesday Book have regarded this as meaning 'a right of jurisdiction' [48], although there remains considerable uncertainty about the nature of the jurisdiction involved. Stenton suggested that here sake and soke gave the 'right to take amercements of one's men, .. and was coming to mean the right to hold a private court' [49]. It may well in general have included both the right to collect fines and also to preside, although in the case of the Lincoln lawmen it is unlikely that those with sake and soke each had their own separate court. C A Joy also considers it likely that sake and soke could also apply to services rendered to the king as part of the royal farm, which could be granted by the king to others [50]. In the context of Lincolnshire Domesday Book it is likely

that each of those with sokeright had the profits of justice from their tenants and perhaps also some services related to the king's farm. This fits in both with the view that Domesday sought to assess the amount the king ought to be getting from the towns, and with the account of Stamford, whose lawmen were similarly privileged. They had sake and soke 'within their houses (*domus*) and over their own men, except for geld, heriot, forfeiture involving their bodies at 40 ora of silver, and robbery' [51].

Whatever this privilege entailed, it was not one confined in Lincoln to lawmen. For instance Earnwine the priest had one *mansio* of Earl Morcar, with sake and soke as did Earl Hugh on a *mansio* that had belonged to Earl Harold [52]. Nor was this privilege confined only to residences of the most important men TRE Whilst all of the Lincoln lawmen had sake and soke it was not this that distinguished them. Twelve lawmen were not unique to Lincoln, there were also twelve at Stamford, although only nine in 1086, and twelve *judices* at Chester, and four *judices* at York. Stenton considered there were two main aspects to lawmen. Firstly he regards them as a group of privileged burgesses with particular independence over their own household, in the form of sake and soke [53]. In this they were little different from the sokemen who had 77 *mansiones* in Stamford, who owed the king nothing except for a fine for their forfeiture, heriot and toll [54]. In addition he suggests that in the tenth-century lawmen were expert doomsmen, although he accepts that this was less likely to be the case in 1086 [55]. Roffe agrees and argues that Domesday Book's concern with them was related to their holding of non-customary land with the privilege of sake and soke, and its

subsequent loss to royal income [56].

There may however be more to the Lincoln lawmen than this. They may instead be regarded as part of a largely hereditary elite, that perhaps evolved into the civic government that developed in the twelfth century. The lawmen at Lincoln and Stamford, along with the judices at Chester and York may be particular forms of 'good men', '*scabini*' or 'judgment finders' which were a widespread phenomenon in early medieval Europe [57]. At Canterbury Brooks has noted a reference to 'many good men both within and without the borough' as witnesses to a property transaction within the town [58]. These may also appear in another guise in the *cnihtengild* in London, whose members, like Ulf the lawman, had the privilege of toll and team [59]. The role of 'good men' probably extended beyond justice, partly because the assemblies that dealt with justice also considered matters of a more administrative or political nature. They may have formed an urban elite, perhaps with responsibility to the crown for matters wider than local justice.

To consider this view of eleventh-century lawmen other aspects of this group need to be investigated. It is not known whether lawmen were major landholders in Lincoln, but in Stamford nine lawmen held about one-eighth of the *mansiones* in 1086 [60]. About two-thirds of these were held by two lawmen, with the other seven all holding five *mansiones* or less, indicating a lack of property equality amongst Stamford lawmen. The only holdings of lawmen in Lincoln mentioned were a house held in pledge by Guthrothr [61]. Apart from this, lawmen have holdings in the town fields, where 1 carucate is held by Ulf, and by Godric, and

½ carucate by Siward the priest [62].

From the earlier study of landholding around Lincoln it is possible to establish that some lawmen held land locally, and others perhaps held as hidden mortgagees or sub-tenants. The latter supposition comes from a reference to land held by three *burgenses* (including Guthrothr and Leofwine, possibly lawmen in 1066) in pledge (*invadiaverunt*) from (*de*) Agmundr in Middle Carlton [63]. This information only came to light because the land was claimed by Jocelyn son of Lambert from Norman Crassus. Norman Crassus replaced Guthrothr as lawman, and had probably claimed this land through him, whereas Agmundr was a principal antecessor of Jocelyn. Whilst this holding may have been in the form of subtenancy, pledge was a thing given by way of security, and was earlier reserved for suretyship [64]. There are references to pledging in many counties, sometimes these have the meaning of legal surety, but other references suggest the mortgaging of land [65]. Pledging seems to occur in connection with lawmen in a number of instances [66]. Overall this was perhaps because lawmen had sufficient authority to be involved in this process, although it may also have been one of their original functions. From the earlier consideration of landholding it emerged that the most important in 1066 was Ulfr (or Svartbrandr), who was also alone in having the additional privilege of toll and team [67].

To investigate whether lawmen had functions wider than simply judicial, we can draw upon the evidence of moneyers names provided by the coins. At first glance there appears to be little connection between moneyers and lawmen in 1066. Of the 11 moneyers who struck the issue current in 1066 only Ulf, who

minted from the beginning of Edward's reign until 1066, can be identified as possibly both moneyer and lawman [68]. However moneying should not be seen as an activity, which once commenced, was undertaken until death intervened. Moneying careers could be curtailed as a result of changes sometimes wrought by an external authority. The end to a moneying career need not mean that a moneyer had breathed his last. Indeed if it had then the number of single type moneyers would imply that moneying was an activity particularly injurious to health.

Considering Edward the Confessor's reign as a whole, about half of the Lincoln lawmen could have served as moneyers, although in some cases lawman and moneyer were unlikely to have been the same person. For instance Swertinc was a moneyer for the issues from 1023/9 until 1044/6, that is his minting activity would have ended some 20 years before he was named as a lawman, and most damaging of all he was still serving as a lawman in 1086. Doubt may also be raised as to whether the name Godric refers to a man who was both a moneyer and lawman, partly because of the 'commonness' of the name [69]. One or more Godrics minted coins at Lincoln from 1017/23 until 1062/5, and for much of the reign of Edward the Confessor Godric was the major moneyer. Whilst there are no coins of Godric from 1066, this issue was relatively rare.

Comparison between moneyers and lawmen TRE may be further complicated by the fact that the list of lawmen may not be entirely accurate for 1066. Walraven minted coins from 1029/35 to 1042/4. He was a lawman TRE, and was succeeded by his son Agemund, who may also have been a moneyer from 1062/5 to 1068/71

[70]. Thus 20 years may have elapsed between the careers of Walraven and his son as moneyers. Also Agemund began minting whilst his father was still classed as a lawman. It may be that the TRE list was compiled from a list written earlier in the reign than 1066. Domesday Book certainly used out-of-date information as evidenced by the TRE holdings of Godwine in Sussex. Alternatively moneyers such as Walraven may have ceased minting relatively early in their careers, perhaps as a result of a shake-up at the mint. At Lincoln moneyer numbers were reduced from 18, to 13 and then to 11 during the first three issues of the reign of Edward the Confessor [71].

Whilst there were no moneyers named Wulfbert operating from Lincoln, there was a moneyer named Wulfbeorn active here from 1056/9 to 1062/5 [72]. If these were one and the same, then Wulfbert was still a lawman over twenty years after he ceased to mint coin. Of the remaining TRE lawmen, three were priests, one of which, Leofwine, may also have been a moneyer. Two Lincoln moneyers in this period were called Leofwine, the more likely was a single type moneyer from 1065/6, although it seems unlikely that men served as priests, lawmen and moneyers [73]. Overall seven of the lawmen TRE could have been moneyers in Lincoln. Whilst some, such as Leofwine, were probably not the same individual, at least two or three of the lawmen had probably also been moneyers.

Potential links between moneyers and lawmen in 1086 are more difficult to determine due to the lack of coin finds of William I and William II, which mean the Lincoln moneyer complement is less likely to be complete. In general the evidence suggests little association between moneyers and lawmen in 1086. Of the 25

identified moneyers of Harold, William I and William II, only two share the same names as lawmen in 1086 [74]. Agemund began minting during the Facing Bust issue (1062-5), and after the first two issues of William I's reign (1068-71) no further coins appeared to have been minted by him, although a 15 year gap between minting and an appearance as a lawman need not rule him out. The only other possible lawman/moneyer in 1086, was Leodwine. It seems that the Lincoln mint underwent a re-organisation prior to the third issue of William II (1092-5), with only one of the seven moneyers for this issue known to have minted the previous issue. One of these new moneyers was Lefwine. However Le(o)fwine and Leodwine are not synonymous, and Domesday Book clearly distinguishes between them. In view of this, the relative frequency of occurrence of the name, and the fact that his minting does not commence until several years after he appears as a lawman, it seems likely in this case that lawman and moneyer are different individuals. Thus the connections between lawmen and moneyers in 1086 are probably confined to Agmund. He may be an example of an individual who succeeded to both offices, just as his father Walraven had. The absence of other lawmen/moneyers in 1086 may be a consequence of the lack of coin evidence for William, although it could plausibly signify changes in either of these offices.

Moneying and lawmanry on the other hand could be totally separate, with all similarities of name were being pure coincidence. Whilst it is not possible to categorically refute this, comparative work can be used to investigate the likelihood of this. At Lincoln up to seven of the twelve lawmen TRE can be

counted amongst the forty moneyers named here during the reign of Edward the Confessor [75]. To test whether this was likely to be explicable simply as coincidence, the lawmen can be compared with the names provided by moneyers elsewhere. This comparison was confined to the East Midlands, as mints further from Lincoln are more likely to have different groups of regionally common names [76]. Two of the 23 Stamford moneyers active during the reign of Edward the Confessor had names that coincide with the names of Lincoln lawman TRE (Leofwine and Godric); at Leicester one of the eleven moneyers coincided (Godric), and one of the ten moneyers at Nottingham (Aldene) had the same name as a Lincoln lawman [77]. Overall taking Leicester, Stamford and Nottingham together, a coincidence figure of about 10% is likely, due to the inclusion of common names such as Godric and Leofwine in the list of Lincoln lawman TRE. Thus at Lincoln one might expect four, ie 10%, of the 40 moneyers to have the same names as lawmen TRE, instead seven do. The higher figure at Lincoln suggests that some of the moneyers were lawmen, unless name-giving patterns were very highly localised.

As some men were probably both lawmen and moneyers in Lincoln some assessment of the relationship between these two offices is required. Freeman suggests of lawmen, that 'those concerned with administration would have sought if they could for control of the mint' [78]. Most of the lawmen who were also moneyers however appear to have begun and often have ceased coin production before they were named as lawmen. This may suggest not that the office of lawman presented an opportunity to control the mint but that moneyers were a secondary stage in the urban elite. That is, serving as a moneyer may have opened up the

possibility of acquiring the office of lawman when a vacancy became available.

Overall the lawmen TRE may comprise several composite elites. Some of the lawmen were probably moneyers, or former moneyers perhaps with mercantile interests, a further group were priests probably representing ecclesiastical elites, with the remainder still something of a mystery. Men such as Ulf probably derived their influence from both landed and mercantile interests, but the source and extent of the influence of many others is impossible to identify.

There was a large degree of continuity within this group despite the Norman Conquest. Three of the lawmen TRE were still holding the office TRW, five others had been succeeded by their sons. Of the four that had undergone a change of family, one involved the replacement of Siward the priest by Wulfnoth the priest. Siward had a son Norman, who held ½ carucate of his father's in the fields. Wulfnoth the priest seized this, along with Siward's wife, whilst the land was held by the king because of a fine of 40s which the king had imposed on Siward [79]. It is not clear whether Wulfnoth had seized the land because he succeeded Siward to the lawmanry, or whether the office of lawman came with his seizure of the land.

Two of the remaining three changes involved Normans acquiring this position; namely Peter of Valognes and Norman Crassus. Peter of Valognes held just 2 carucates of land in Lincolnshire, at Burton near Lincoln, and 1 carucate in the fields of the town; both were held by Godric TRE [80]. Godric was also succeeded as lawman by Peter of Valognes, which rather

suggests that by 1086 the land and the lawmanry were linked, at least in Norman eyes. The other Norman lawman was Norman Crassus who replaced Guthrothr. He also succeeded Guthrothr to Middle Carlton, although this had been held in pledge with two other burgesses by Guthrothr from Agmund TRE [81]. Norman Crassus also claimed a house, which his predecessor Guthrothr had held in Lincoln. His landholding was also partly derived from Walraven a lawman in 1066 and possibly Agemund a lawman in 1086. Norman appears to be a man of considerable power given that he was at the king's court in 1085 to witness the grant of the church of Spalding to the abbey of St Nicholas of Angers by Ivo Taillebois [82].

The most obvious breaks in the hereditary transfer of lawmanships are Norman acquisitions. It is unclear whether they succeeded to land or to the lawmanry first. In other words did the land go with the lawmanry or vice versa. If Norman Crassus was a sheriff of Lincoln this would have placed in an advantageous position had this office become vacant. It is likely that the profits that might have accrued from such an office attracted the sheriff more than the small amounts of land that may have been associated with Guthrothr or the office. The reputation for acquisitiveness of Norman sheriffs is well known, and Norman Crassus position as lawman in 1086 may be a further example of this.

There is nothing to prove that lawmen were important, but the acquisition of this office by two Norman sheriffs is suggestive. So too is its mention in the Domesday accounts of Stamford and Lincoln. The holders of this office TRE and TRW and how these were connected is the sole concern of the second and

third entries of the Domesday account of Lincoln. If this were an anachronistic office of little worth one would not expect it to feature so early and at such length in Lincolnshire Domesday Book.

Moneyers in addition to their possible links with lawmen can be considered as part of an elite in their own right. The name on the coins may refer simply to a craftsman employed in a workshop that contained several moneyers, in which case these moneyers should perhaps not be considered as part of an elite. Jonsson has suggested that the above may accurately describe minting arrangements in York given the number of dies that are used by more than one moneyer [83]. In Lincoln however there is little sign of the sharing and inter-linking of dies, which suggests that the Lincoln mint consisted of a number of separate workshops. This would also suggest that moneyers were men of considerable status.

It is difficult to quantify the size of the elite, perhaps formed by the lawmen, some moneyers and probably other groups including ecclesiastics and traders and perhaps the sheriff. In twelfth-century Winchester Biddle and Keene placed magnates, barons and royal officials at the head of the social ladder, followed by clergy, with moneyers and merchants at the head of the tradesmen group [84]. Together these six groups perhaps accounted for about 5% of urban households. It seems that magnates and barons were rarely resident, and the clergy probably occupied a variety of social positions. If the elite consisted of royal officials, moneyers and merchants, which incidentally are the three groups with above average rent balances [85], then

these numbered 26, accounting for less than 2% of all Winchester households.

The identification of elite groups has an importance that goes beyond simply classifying strata within the urban populace. The existence of resident elite groups in urban centres may imply that these groups were involved in 'community' action. Such action is clearly identifiable by the twelfth century, but it can be shown to have existed earlier. During the early tenth century a response by the elite in London to Athelstan became encapsulated in VI Athelstan. It is not known whether other towns, including Lincoln, were also required to make similar submissions, but it strongly suggests that urban collective action was a reality by this time, at least in London. Around the same date as this the St Martins coinage was probably being minted in Lincoln, perhaps at the instigation of some nascent community action [86]. If this were the case, perhaps the elite grouping which was able to take advantage of the political vacuum of the 920's to produce coin in Lincoln, were also able to set up structures, such as lawmen, that were able to take collective action even when southern control became tighter. It is perhaps no coincidence that judices and lawmen were to be found in towns that were on the periphery of West Saxon control during the first half of the tenth century.

Whilst at Lincoln some outline of an urban elite can be identified, most of the populace are almost totally obscured from our view. It seems certain that most of the Domesday *mansiones* were not occupied by elite groupings such as moneyers and lawmen. Elsewhere the occupants of towns were mostly referred to as *burgenses*. At Lincoln there is no reference to the number of

burgenses but references are made to them collectively, perhaps suggesting that the commissioners regarded them as consisting of most town dwellers [87].

Whilst all heads of urban households were probably not *burgenses* this term undoubtedly applied to a wide variety of people. The urban economy was marked by a greater complexity in terms of both products produced and services and imports available, so it seems inevitable that this complexity should also be reflected in the social structure. Most of the urban populace probably made their living in productive or service 'industries'. Medieval urban society has generally been divided into three broad classes: merchants; craftsmen; servants and employees [88]. Whilst some merchants acquired thegnly status from three journeys across the sea, the majority probably dealt in local commodities and had a lifestyle and status similar to that of craftsmen [89]. As well as a wide range of small traders Lincoln's urban populace probably consisted of craftsmen and wage labourers. Distinctions can perhaps be drawn between what might be termed sole traders and waged labour. It is likely that many of the products found in Lincoln were manufactured by craftsmen that one might term sole traders. For instance the processes involved in the production of antler combs could easily have been undertaken by one man. The limited evidence so far available suggests that most craftsmen worked on their own, rather than having a staff of several.

A large section of the urban populace were probably labourers paid on a day to day basis, involving activities such as the transportation of goods. Such an example is provided by a

thirteenth-century version of the lay of Havelock. In this the hero waited for two days among the porters at the bridge in Lincoln, before being hired to carry food from the market to the castle [90]. Such men probably made up a significant proportion of the urban populace, and at best perhaps occupied a room in a *domus*.

In conclusion the aspects of Lincoln's urban populace that have emerged here confirm its urban status. Despite the problems associated with population estimates it seems that a figure of c.7,000 was not so far from the mark in 1066. The number of *mansiones* may underestimate the number of houses, with several houses on some mansiones likely, although a few may have consisted solely of gardens. Attention has focused on the moneyers and lawmen who together with leading priests and traders perhaps accounted for a small percentage of Lincoln households. These elites owed their position to a variety of different power and wealth sources. Some such as Kolsveinn owned a good deal of land, others, such as the sheriff, held offices directly from the king. The influence of others may have come from offices such as moneyer or lawman, although these offices may have been as much a recognition of wealth and power as the source of it. The multi-faceted nature of this elite can be shown through the careers of Ulf and his son Svartbrandr. Ulf was a lawman, with the additional privilege of toll and team, perhaps suggesting some trading activity. This would tie in well with his possible activity as a moneyer for most coin issues of Edward the Confessor. He also held one carucate of land in the fields of Lincoln and had given a pledge of 1 mark for 140 acres in Canwick [91]. Svartbrandr successfully claimed these two pieces of land,

but also held further land, sufficient for him to appear in the rubric of Domesday Book as a tenant-in-chief. None of the lands in this section of Domesday Book were inherited from his father [92]. It seems that Svartbrandr was able to acquire additional land and retain the position of lawman although perhaps without the additional privilege of toll and team. Unlike his father he does not however appear to have been a moneyer. This illustrates both the hereditary nature of urban elites, and the various inter-linked power bases of this father and son.

Of the remaining 1300 plus households little is known. These for the most part probably comprised craftsmen, petty traders, labourers and servants. Within these there were marked gradations, from craftsmen such as goldsmiths who were clearly *burgenses* to unskilled labourers employed by the day, who may have slipped into the largely unmentioned *bordarii pauperes* category. Even within the same trades there were likely to have been variations in wealth and status. Unfortunately this remains beyond the scope of our knowledge at Lincoln or indeed for anywhere else before the end of the eleventh century.

Chapter Eight: notes

1. J McDonald and G D Snooks, Domesday Economy: A new approach to Anglo-Norman History (Oxford, 1986), p.18. Other instances include S Reynolds, An Introduction to the History of English Medieval Towns (Oxford, 1977) p.36

2. Summarised in H C Darby, Domesday England (Cambridge, 1977) pp.304-6

3 J Tait, The Medieval English Borough: Studies on its origins and constitutional history (Manchester 1936), p.76. He estimates the population of York as 8,000; Norwich 6,600; Lincoln 5,750 but probably nearer to that of Norwich; Thetford 4,750.

4 H C Darby, op.cit., p.303

5 The method for this is described in M Biddle and D J Keene, 'The Late Saxon Burh' in Winchester in the Early Middle Ages: Winchester Studies vol 1, ed., M Biddle (Oxford, 1976) pp.467-8

6 H C Darby, op.cit., Appendix 16 - 'Statistical summary of boroughs' pp.364-368

7 Domesday Book, Derbyshire , B2 folio 280b

8 S Reynolds, 'Towns in Domesday Book', Domesday Studies ed., J C Holt (Woodbridge, 1987), p.306

9. Domesday Book, Norfolk, 1,61 folio 116b

10 H C Darby, op.cit., 'Appendix 16 - Statistical summary of boroughs' pp.364-368

11 Domesday Book, Nottinghamshire, B8, folio 280a . For instance in the 1110 survey of Winchester *domus* tends to be associated with larger properties whereas *mansurae* tend to be smaller M Biddle and D J Keene, 'Winchester in the eleventh and twelfth centuries', in M Biddle ed. op.cit., pp.337-8. However in Lincoln this study suggests that mansiones were the larger unit.

12 M Biddle and D J Keene, 'The Late Saxon burh', op.cit., p.468

13 J S Moore, 'The Anglo-Norman Family: Size and Structure', Anglo-Norman Studies, 14, ed., M Chibnall (Woodbridge, 1992), pp.153-196

14 S Reynolds, 'Towns in Domesday Book', op.cit., p.304

15 See Table 1 and Table 36

16 Domesday Book, Lincolnshire , C1, folio 336a; and C19, folio 336b

17 J W F Hill, Medieval Lincoln (Cambridge 1948; 1990 reprint), p.54

18 Domesday Book, Lincolnshire, C26, folio 336c

19 J W F Hill, op.cit., p.55

20 M Biddle and D J Keene, 'Winchester in the eleventh and twelfth centuries' in M Biddle ed., op.cit., p.378

21 Domesday Book, Lincolnshire, C4, folio 336a

22 J W F Hill, op.cit., p.56. Registrum Antiquisimum of the Cathedral Church of Lincoln I, Lincoln Record Society, 27 (1931) 104, 270-2

23 Discussed in Chapter Six, pp.246-48

24 D Perring, Early Medieval Occupation at Flaxengate Lincoln, The Archaeology of Lincoln, 9-1, pp.18-21 and fig 34

25 For population purposes the western boundary of the plot was taken as the edge of excavated area, as whilst the plot may have extended further west, it may also have then contained further property. So here this plot is taken as 37m x 20m (40 x 22yds)

26 See Table 8

27 Domesday Book, Lincolnshire, C4, folio 336a

28 J W F Hill, op.cit., p.45 and Ibid., T5, folio 337a

29 Domesday Book, Lincolnshire, 64,1;15;18 folios 369c-370a

30 Ibid., 14,46;66, folios 350d-351c

31 Ibid., 17,1 folio 352d

32 Ibid., C20, folio 336c (all dues except monetagium)

33 Ibid., CW3, folio 376b

34 Ibid., 60,1, folio 368d. See also map 21

35 Ibid., 24,7, folio 356d

36 Chapter Seven pp.285-7

37 Hill suggests that he was one of King Edward's priests, who at first did not submit to William. As a result he lost heavily, losing among other things a large holding in Stamford, although he was also given the *mansio* in Lincoln,

16 Domesday Book, Lincolnshire , C1, folio 336a; and C19, folio 336b

17 J W F Hill, Medieval Lincoln (Cambridge 1948; 1990 reprint), p.54

18 Domesday Book, Lincolnshire, C26, folio 336c

19 J W F Hill, op.cit., p.55

20 M Biddle and D J Keene, 'Winchester in the eleventh and twelfth centuries' in M Biddle ed., op.cit., p.378

21 Domesday Book, Lincolnshire, C4, folio 336a

22 J W F Hill, op.cit., p.56. Registrum Antiquisimum of the Cathedral Church of Lincoln I, Lincoln Record Society, 27 (1931) 104, 270-2

23 Discussed in Chapter Six, pp.246-48

24 D Perring, Early Medieval Occupation at Flaxengate Lincoln, The Archaeology of Lincoln, 9-1, pp.18-21 and fig 34

25 For population purposes the western boundary of the plot was taken as the edge of excavated area, as whilst the plot may have extended further west, it may also have then contained further property. So here this plot is taken as 37m x 20m (40 x 22yds)

26 See Table 8

27 Domesday Book, Lincolnshire, C4, folio 336a

28 J W F Hill, op.cit., p.45 and Ibid., T5, folio 337a

29 Domesday Book, Lincolnshire, 64,1;15;18 folios 369c-370a

30 Ibid., 14,46;66, folios 350d-351c

31 Ibid., 17,1 folio 352d

32 Ibid., C20, folio 336c (all dues except monetagium)

33 Ibid., CW3, folio 376b

34 Ibid., 60,1, folio 368d. See also map 21

35 Ibid., 24,7, folio 356d

36 Chapter Seven pp.285-7

37 Hill suggests that he was one of King Edward's priests, who at first did not submit to William. As a result he lost heavily, losing among other things a large holding in Stamford, although he was also given the *mansio* in Lincoln,

Hill suggests, to dissuade him from rebellion. J W F Hill, op.cit., p.46. See also Domesday Book, Lincolnshire, 12,29, folio 347c

38 Chapter Seven pp.288-9

39 Lindsey Survey, trans., and ed., C W Foster and T Longley, Lincoln Record Society, 19 (1924), 3,20

40 J W F Hill, op.cit., p.65

41 R H Britnell, The Commercialisation of English society, 1000-1500 (Cambridge, 1993), p.72

42 Domesday Book, Lincolnshire, CW12, folio 376b

43 Ibid., C5 folio 336a. and J W F Hill, op.cit., p.43

44 Domesday Book, Lincolnshire, 35.3, folio 362d

45 Ibid., 11.9, folio 346d

46 J Green, English Sheriffs to 1154 (London, 1990), p.54

47 Domesday Book, Lincolnshire, C2-3, folio 336a

48 F M Stenton, Anglo-Saxon England (Oxford, 3rd edn. 1971) pp.487-90

49 F M Stenton, 'Introduction' in Foster and Longley op.cit., p.xxix

50 C A Joy, 'Sokeright' unpublished Leeds University Ph.D. (1974), p.19

51 Domesday Book, Lincolnshire, S5, folio 336d

52 Domesday Book, Lincolnshire, C6 and C8, folio 336a

53 F M Stenton, 'Introduction', C W Foster and T Longley, ed. and trans., ibid., p.xxix-xxx

54 Domesday Book, Lincolnshire, S4, folio 336d

55 F M Stenton, 'Introduction', op.cit., pp. xxix

56 D Roffe, 'An introduction to Lincolnshire Domesday Book', Alecto Lincolnshire Domesday Book (London, 1992), p.26

57 S Reynolds, Kingdoms and Communities in Western Europe, 900-1300 (Oxford, 1984), pp.23-34

58 N P Brooks, The Early History of the Church of Canterbury (Leicester, 1984), p.32

59 C Johnson and H A Cronne, eds., Regesta Regum Anglo-Normannorum II - Regesta Henrici Primi (Oxford, 1956), no.

1467

60 Domesday Book, Lincolnshire, S1-S16, folio 336d

61 Ibid., C21, folio 336b and 336c

62 Ibid., C13-15, folio 336b

63 Ibid., CW3, folio 376b

64 F Pollock and F W Maitland, The History of English Law, vol 2 (Cambridge, 2nd edn. reissued, 1968), p.185

65 For example of pledging to redeem holder from captivity Domesday Book, Norfolk, 17,18 folio 217a

66 Domesday Book, Lincolnshire See for example C21 (336c), CW3 (376b), CW4 (376b), CK18 (377a)

67 A discussion of Svartbrandr and Ulf can be found in Appendix 6. Overall this concludes that Ulf son of Svartbrandr was the lawman in the reign of Edward the Confessor and Svartbrandr, son of Ulf the lawman, was the lawman in 1086.

68 A Freeman, The Moneyer and the Mint in the reign of Edward the Confessor, 1042-1066, BAR Brit series 145 (Oxford, 1985), pp.108-12 and H R Mossop, op.cit., chart inside the back cover and Domesday Book, Lincolnshire, C2 folio 336a

69 In the Domesday account of Lincoln a Godric, son of Garwine, apears in addition to Godric the lawman and son of Eadgifu. Domesday Book, Lincolnshire, C16, folio 336b

70 A Freeman, op.cit., p.32

71 Ibid., p.106

72 H R Mossop, op.cit., p.32

73 Ibid., p.110

74 See Table 35

75 Suartin, Ulf?, Walraven, Brictric, Wulfbert, Godric, Lewine

76 Thus it is perhaps of little significance that only two Winchester moneyers in Edward's reign had the same names as Lincoln lawmen (Leofwine and Godric). A Freeman op.cit., pp.129-133

77 Ibid., pp.121-3, 300-1 and 310

78 A Freeman, op.cit., p.118

79 Domesday Book, Lincolnshire C14, folio 336b

80 Domesday Book, Lincolnshire 60,1 folio 368d, C15 folio 336b

81 Ibid., 33,1 folio 362a, and CW3 folio 376b

82 H W C Davis, Regesta Regum Anglo-Normannorum I, 1066-1100, (Oxford, 1913) no. 288a

83 K Jonsson, The New Era. The reformation of the Late Anglo-Saxon Coinage

84 M Biddle and D J Keene, 'Winchester in the eleventh and twelfth centuries', M Biddle et. al. eds., op.cit., pp.440-443

85 Ibid., p.443, table 32

86 See Chapter Two pp.58-62 and pp.72-4

87 Domesday Book, Lincolnshire op.cit., for example C11 336a, C18 336b

88 S Reynolds, An introduction to the History of English Medieval Towns (Oxford, 1977) p.74

89 D Whitelock, The Beginnings of English Society (London, 1956), p.125

90 S Reynolds, An introduction to the History of English Medieval Towns, op.cit., p.79

91 Domesday Book, Lincolnshire, CK18 folio 377a

92 Instead they were held by Alnoth, Gunnvatr and Ragnald. Domesday Book, Lincolnshire, 68,1-4 folio 370d

CHAPTER NINE

CONCLUSION

The diverse types of evidence discussed in the thesis have enabled a picture of the multi-faceted nature of the early medieval town to emerge. The origins of Lincoln, and the nature and causes of its development are the issues that lay at the heart of this study. These fundamental questions about Lincoln c.850-1100 can only be tackled by bringing together the evidence assembled here.

Lincoln's development began in the Roman period, and it soon became one of the principal towns of Roman Britain. The Roman legacy clearly made some contribution to the later development of a thriving town at Lincoln. Its strategic location, benefiting from Roman roads, water communications and an excellent defensive position, were undoubtedly also attractive to those who wished to control the area later. Whilst the defences, and perhaps also the extra-mural roads, owed much to the Romans, the Anglo-Saxon town was far more than Roman Lincoln repaired. The Roman street plan was probably obscured and disregarded by the inhabitants of ninth-century Lincoln, and even the defences were unlikely to have been utilised in their entirety due to the length of the defensive circuit.

What actually happened to Lincoln from the end of the Roman period to the late ninth-century is only vaguely understood. A brief moment of illumination is provided by Bede's description of the conversion of Blaecca the *praefectus* of Lincoln by Paulinus c.630, which suggests that by the seventh-century Lincoln was an elite centre. It may have served as the base for the Bishop of

Lindsey from the late seventh century, as well as for possible 'under kings' which ruled the area under Northumbrian and then Mercian overlordship [1].

Analogy with other centres has been used to suggest that a wic developed in the Lincoln area, associated with an elite centre. Middle Saxon Lincoln may thus have had a trading emporium and mint near to a bishop inhabited elite centre, as found at York, London and possibly Canterbury in this period. There are however problems with this. Firstly it is far from established that the Bishop of Lindsey was based in Lincoln, or indeed for that matter that he was based anywhere in this period, instead perhaps having a peripatetic lifestyle. Secondly negative evidence for a Middle Saxon wic in the vicinity grows increasingly strong.

The absence of coin finds from Lincoln before c.870 has repercussions for both the elite centre and the wic. Elsewhere wic or elite occupation has been accompanied by coin loss. In York, for instance 39 Middle Saxon coins have been found from recent excavations to compare with 29 from the Late Saxon period. Many of the Middle Saxon coins came from Coppergate and Aldwark, but coins have also been found on nine other sites around the town, whereas all but four of the later coins were from Coppergate [2]. In Lincoln the late ninth-century coins from the Bail have been regarded as evidence for a pre-Viking Mercian presence there [3], but they are more likely to be associated with the arrival of Vikings in Lincoln. Any elite base in Lincoln appears to have used little or no coin. This is perhaps especially significant given the number of single coin finds from

the rest of the county, which in the two centuries prior to 870 are at least as numerous as those found in the two centuries after. At Lincoln however there were only a couple of coins found in the surrounding area before 870, compared with 38 between then and 1100. Part of the dichotomy is related to Flaxengate, where excavations have produced almost half of the coins found in Lincoln. If the Flaxengate area was not inhabited until c.870, a lack of earlier coins from here would not be surprising. However the remainder of the coins were from a number of sites spread around Lincoln such as St Paul in the Bail, where one might have expected to find earlier coin. Nor is there evidence to support the contention that Lincoln was producing sceatta coins in the seventh and eighth century. The absence of a mint and the lack of coin in the surrounding area also argues against the existence of an eighth- and ninth-century 'wic' at Lincoln.

It may be that Lincoln was associated with a more distant wic, as in the case of Hamwih and Winchester and perhaps Ipswich and Rendlesham. Possible wics have been suggested at sites on the south bank of the Humber including Winteringham, or on the North Sea littoral. Coin finds of this period, and also finds of Ipswich ware in these areas may support this suggestion. However if such a 'wic' or 'wics' existed, the distances from Lincoln of these are likely to have ensured that such centres would have had little effect upon the town, and probably instead served elites based nearer than Lincoln.

The apparent lack of economic activity in the first half of the ninth century in Lincoln itself does not mean that the 'Lincolnshire' area was economically backward. There are

numerous single finds from the county of the eighth and ninth century, including a significant amount of Northumbrian 'styca' and southern 'Lunette' pennies from the mid ninth century. This can be contrasted with southern England where single finds are rare after c.840 [4]. Ipswich ware has also been found at sites in Lincolnshire, mostly on the coast or in the Wolds [5].

In contrast there is a general lack of evidence for significant occupation within Lincoln prior to the late ninth century. This may also be supported by the 'dark earth' deposits found at a number of sites, although recently some of these have been regarded as possibly deliberate dumps at the end of the Roman period [6]. Some Middle Saxon pottery has been found, but amounts are small, sites few and do not include Ipswich ware, which one would expect to find at a trading or elite centre linked to east coast trade [7]. Most of the limited early pottery found in Lincoln is instead of a shelly Maxey-type ware. The indications are that the wealth of seventh and eighth-century 'Lincolnshire' was to be found in the north and east of the original county, rather than in the area around Lincoln. Overall the pottery and coin evidence discount the idea that the origins of Lincoln lay in a 'wic', and question the importance of Lincoln as a Middle Saxon elite centre. Lincoln probably contained some elite inhabitants, but so did many other sites, such as Flixborough, that never came close to urban status.

Our attention should perhaps instead focus on the fourth strand of postulated origins, that of fortification, either in the late eighth century or in the late ninth/ early tenth century. If Offa had a wide-ranging scheme for the defence of

Mercia, it is likely, given its strategic position, that Lincoln formed a part of this. At Lincoln there is no evidence of a Mercian garrison, to add to the meagre evidence found elsewhere.

On historically firmer ground are the fortifications undertaken in the late ninth and early tenth century. Alfred built burhs to defend Wessex against the Vikings but whether the Vikings followed a similar policy against the northern advance of the West Saxons in the tenth century is far less clear. In the first place it seems doubtful whether Danish occupied areas constitute a kingdom in the same way as Alfred's Wessex. This can be seen by the way in which defence was organised. In the Danelaw the onus seems to have been on individual burhs, which Edward and Æthelflæd captured one by one. This has important implications for Lincoln. Lincoln should not be regarded as being under the control of Vikings kings in the same way as Winchester was under the control of Alfred. This is because Alfredian Wessex was an unusually centralised kingdom. Defensive measures in Lincoln and elsewhere in the Danelaw were probably carried out by a local militia or settlers. In these circumstances any refurbishment of the defences was likely to have been on a small scale.

Overall the full Roman circuit at Lincoln was too large to have been effectively defended, and any defensive area probably incorporated only part of the defences, although there is no evidence from parish boundaries or archaeology to indicate any such smaller defended area. If a late-ninth-century defended area existed, the upper town was the most likely site of this. Archaeology has shown that the walls survived to a considerable height in several parts of the upper town and also here the

parish boundaries respect the line of the walls unlike in the lower town. Furthermore the purpose of any tenth-century Viking stronghold would have been to withstand attack; whereas Offa's postulated scheme would, to fulfil its purpose, have needed to control the river, which would have made the lower town more strategically attractive. The lack of evidence for any defensive refurbishment of the Roman walls need not rule out their existence, as such work is difficult to find even in Winchester.

If Edward the Elder's northern advance reached Lincoln it seems likely that he would have built a southern burh in Wigford. The failure of parish, church and archaeological investigation to find a burh in Wigford, along with the St Martin coins strongly suggests that Edward never received a formal submission from Lincoln. The initial Viking takeover of the north-east Midlands appears from our admittedly southern-based sources to have been quickly achieved, perhaps indicating that little defensive work had been undertaken by Mercian kings. In contrast the West Saxon northern advance was a far more prolonged affair, perhaps due to the defensive work undertaken in the intervening decades. The principal importance of such activity would have been that it served to concentrate population on these sites.

Before accepting that the origins of Lincoln's later development lay with Viking fortification, it is important to recognise that a convincing context may not exist for fortification activity by them, at least in the ninth century. Following the Viking takeover of Northumbria, and Mercia including Lindsey, it is assumed that the Vikings undertook defensive work. It is not clear why they would have immediately

constructed defences at Lincoln. Alfred's defensive scheme was in response to a real external threat. The Vikings did not face such a threat in the late ninth century nor in the first decade of the tenth as far north as Lincoln unless it was posed by the Norse of York. It was probably not until after about 910 that the Vikings in Lincoln could have considered the necessity of defences to combat the West Saxon advance, which would have been too late to have served as the origins of Lincoln's development, which, it will be argued below, was probably already underway.

The chronology, nature and causes of Lincoln's urban development are closely entwined and difficult to consider separately. For instance if development at Lincoln began in the late ninth century then the Vikings are likely to have been highly influential, whereas if urban development began later, different factors would have been at work.

In general the evidence suggests that development was underway before c.900. Of particular significance is the pottery, which provides the basis for site dating in Anglo-Saxon Lincoln. Some Lincoln wares have been attributed to the late ninth century. Whilst such dating relies on a number of related factors, it has received potential confirmation from the Lincoln pottery found at Repton in excavations probably associated with the Viking base here in 874. The Lincoln produced pottery at Repton obviously suggest that production of LKT and LSLS was underway by 874. If so pottery would be unlikely to be the only craft activity in Lincoln before 900 although other industrial debris cannot usually be so closely dated.

The beginnings of the Lincoln pottery industry may possibly be attributed to the arrival here of potters brought by the

Vikings. An external stimulus does seem likely as the pottery has few links with local Middle Saxon pottery. Whilst external influence could have come simply from imported pottery, the absence of experimental pots, which one might have expected if craftsmen were attempting to copy foreign pots in locally available materials, raise doubts about this. Instead the Lincoln potters seem from the outset to have been masters of their technology. The notion of foreign craftsmen in Lincoln finds additional support from the continental named moneyers found on the St Edmund Memorial coinage, and perhaps also the Lincoln monogram coins. If moneyers were brought in from the continent to replace a skill lost by local craftsmen there seems no reason to doubt that the same could be true of foreign potters, although the mechanism by which such craftsmen were introduced requires some consideration.

Pottery was not produced in the Viking homeland, so it may seem strange that a Viking army would have felt potters were an essential part of their retinue. If they were recruited later, after Viking rule had been established, it would indicate a considerable degree of economic planning on the part of Viking rulers. There is however hardly any time for later recruitment if Lincoln pottery was at Repton by 874. It is not impossible that the Viking Great Army had a range of craftsmen which followed it around, including perhaps potters who had followed it from Frankia. The Vikings may have had a key role in that they facilitated the spread of pottery and its improved technology around the country. The Vikings may also have created an enlarged market for pottery through their settlement.

R Hodges regards the urban and economic development in places such as Lincoln as a copying by the Vikings of policies pursued by Alfred. Indeed the idea of centrally propagated economic and urban development dominates the explanation of urban 'take-off' in this period. Recently S R H Jones has ascribed to the Vikings a more indirect role in the origins of urban growth through trade.

> 'The Viking invaders .... (provided) the need to generate and monetize surplus, either to buy off the Vikings or wage war against them, forced the Anglo-Saxons to enter the market and trade whether they wanted to or not [8].

Whether this can explain urban development at Lincoln is far from established. In part this is because we are ignorant of the Viking's actions once they had conquered Mercia including Lincoln. If they levied, and continued to levy heavy tributes this would, as Jones suggests, have over a period of time assisted a movement towards trade in order to acquire cash. The Anglo-Saxon Chronicle suggests that Danes of the Five Boroughs were

> 'previously subjected by force under the Norsemen, for a long time in bonds of captivity to the heathens until.... King Edmund redeemed them, to his glory' [9].

Whether the Danes in turn oppressed the 'English' people of the Danelaw is less clear. If the Vikings had heavily oppressed the men of Lincolnshire it is difficult to explain the Danish sympathies of this area throughout the rest of our period, unless Scandinavian settlement levels were very high. Instead the Viking takeover should perhaps be seen as giving the area increased local 'freedom' where Viking warriors and settlers rapidly came to an understanding which did not rely on the

oppression of one by the other, with instead both facing a common threat first from the north and later from the south.

The arrival of the Great Army must in the short term have disrupted and oppressed the countryside and curtailed economic activity. It is hard to accept that the demands of a Viking army on their doorstep fostered economic activity by forcing people into the market place as Jones argues, to such an extent that it out-weighed the initial destruction. In a society which functioned on low, although perhaps increasing, levels of surplus, the destruction caused by even the short-lived presence of the Great Army is likely to have taken a time to recover from.

The key positive contribution of the Vikings occurs once they shift from being plunderers to being settlers. Such settlement, particularly when it involved the arrival of family groups from Scandinavia would have created a demand for goods that settlers could not bring with them and perhaps also some services [10]. Place name evidence suggests Scandinavian settlement brought additional land under cultivation in Lincolnshire, leading to an increase in rural economic activity which was central to the development of Lincoln. The urban impact of this was perhaps increased by the political organisation of the area which seems to have involved military groupings based around defended centres. Lincoln probably served as a base for a Viking army, which would then tend to accumulate other functions, including possible administrative ones as well as trade and craft production. These new functions are evidenced at Lincoln by the production of pottery and later coin in Lincoln. Such functions enabled Lincoln to tap any economic growth occurring in the countryside, by providing products for

sale to the rural populace that came to Lincoln for fiscal, administrative or defensive purposes.

By the 920's a majority of the 'Danes' in the Lincoln area had probably been born in England. This period of localised independence probably saw the establishment of the office of lawman in Lincoln along with the issue of coinage in the name of St Martin. Whilst there is little overtly Danish about lawmen, it seems from Domesday Book that they are to be found only in areas of England that had been under Viking control. The degree of political autonomy suggested as a feature of Lincoln in this period makes it likely that both economic and topographical developments were unlikely to have been of the master-plan variety.

Our discussion of the origins of Lincoln should bear in mind that the levels of coin finds in the mid ninth century suggest some significant economic activity was underway, although perhaps without the urban focus of Lincoln. In the short term the Vikings disrupted this but in the longer term they provided a central focus, and an increased market for this.

Closely linked to the question of urban origin is the date from which Lincoln can be considered urban. Following our initial discussion of urban definition we are looking for evidence of trade and industry, some civil functions, and a permanent population occupied in a range of activities. The pottery evidence suggests that by c.870 this was being produced by an industry situated within Lincoln. This pottery, given that it was characterised by a technological leap, was unlikely to have been produced simply to meet the needs of a kin group. This

type of pottery was also widely distributed in the county, although we cannot be sure when this occurred given the long production run of LKT. LG was confined to the late ninth century, and its production is far less widely distributed.

There is little other evidence of trade and industry so early at Lincoln, but pottery is unlikely to have been the only craft. Copperworking seems to have been taking place early in the tenth century at Flaxengate, and perhaps in the mid to late ninth century elsewhere in Lincoln [11]. It is possible that some craftsmen were itinerant in late-ninth-century Lincoln, such as those producing antler combs. Here we come across the problem of assessing how much industrial activity the finds represent. It is doubtful whether archaeology can accurately distinguish between debris from an itinerant jeweller producing goods in Lincoln for a brief period each year, and several full-time craftsmen producing at a single site for a lifetime. Until we can be sure of this, the archaeological evidence for non-ceramic industry needs to be used with the utmost caution. For instance finds of a range of metallic waste could indicate a whole host of different industrial scenarios.

The production of coin in Lincoln is unlikely to have begun as early as c.870, and probably started in the 890's with the minting of Alfredian imitations and perhaps some St Edmund Memorial pennies. The lack of coin production does not however mean that little trade took place. Given the high value of the penny, coinless trade probably accounted for a significant amount of trade throughout the early middle ages. Coin production probably reflected the fact that economic activity was such that coin would be useful, and overall from an economic perspective

points to Lincoln's having reached urban status from at least 900. A lack of topographical development does however raise some doubts about this. There is little evidence of widespread topographical change in Lincoln. Flaxengate was laid out c.900, but whether it formed part of a more wide ranging street system is not known. Silver Street also existed by then, but its diagonal course perhaps suggest organic development in the pre-Viking period. The inhabitants of late-ninth-century Lincoln remain something of a mystery. Archaeology shows that Lincoln was more than a walled agricultural area, but at least initially agriculture probably took place within the walls and many of the inhabitants probably grew much of their own food. By early in the tenth century the buildings at Flaxengate suggest occupation of some density, which if repeated in other parts of the lower town would clearly constitute an urban settlement.

A population of some density, by the early tenth century, need not mean Lincoln was urban by then. The possibility has been raised that the late-ninth and early-tenth-century inhabitants were principally military. This can however be doubted on two grounds. Firstly there is a definite lack of evidence for any sort of large scale defensive refurbishment or street development. Secondly such a fortress would only have been constructed if there was a clearly perceived military threat. This is hard to find before the second decade of the tenth century, unless the Norse of York provided this.

By 927, or perhaps by 918, Lincoln had become part of the newly unified English kingdom. Initially this remained uncertain, with the takeover of the area in 940 by Anlaf from

York. The expulsion of Eric Bloodaxe from York in 954 made Lincoln's position as part of England more firmly established. During the second quarter of the tenth century Lincoln continued to exhibit a degree of independence from southern rule. Whilst the coins contained the name of Athelstan, they, unlike those even from York, did not carry the name of the mint, nor follow the designs established elsewhere. This does not reflect isolation from the minting process as output was considerable, with moneyers of this regional grouping accounting for about 30% of Athelstan's known moneyers [12]. Whilst these were probably active at a number of mints, it is likely that several of these minted coin at Lincoln during the reign of Athelstan.

Overall this raises the question of why Lincoln and Stamford were able to retain some degree of political independence. Lincoln and the surrounding area were on the periphery of political power in the tenth century, with distant southern kings and the Norse kingdom of York creating opposing political forces. The judicial separateness of this area was recognised by Edgar in one of his law codes, and such separateness is likely to have been even more important in the reign of Athelstan. Athelstan probably had little room for manoeuvre, and with an absence of royal lands in this area was probably forced to rule through those already influential in the area. This is the type of delegated rule that Jonsson argues enabled ealdormen to mint coin with a degree of independence [13]. All of this is important for any explanation of urban growth that attributes a significant role to the establishment of English royal rule in Lincoln.

From the available evidence it is clear that Lincoln underwent a profound change between 850 and 1100. The nature of

the evidence makes it far more difficult to place this development within a detailed chronological framework. During the tenth century, it seems likely that Lincoln underwent an increase in population, given that about 7,000 people probably lived here by 1066, whilst in c.850 signs of human habitation are few and far between. Such an increase was brought about by an extensive migration probably from the surrounding countryside. The pattern of such growth could have taken two possible topographical forms. Either in the form of an expansion of population outwards from a small urban nucleus, or of a settlement area whose additional population led to an increase in population density rather than settlement size.

At Lincoln a plot of finds of LG, which is a ware likely to have gone out of production before 900, suggest that the first pattern is nearer the mark. Finds of this suggest that initially the populace were to be found in the lower town, particularly in the southern and eastern part of this. Excavations in Wigford and the upper town have confirmed this pattern with little sign of development before the tenth century. Indications are that an initial urban focus in the south east of the walled area spread to include Flaxengate by about 900. There is nothing at Flaxengate to suggest increasingly dense occupation of a limited area. From Fig 28 the only sign of a growth in the number of buildings here occurs in Period VII (1060/70-1080/90), which coincides with the change in the alignment of the plot from facing onto Flaxengate to Grantham Street, which accounts for this increase. This type of expansion at Lincoln is rather suggestive of organic growth as opposed to development based on

the gradual occupation of an elite provided urban infrastructure.

As the tenth century progressed, development took place in Wigford, with many sites having tenth-century pottery mostly beginning in the middle of the century, including St Mary's Guildhall, some 800m south of the walled area. The area also seems to have experienced some reclamation activity at about this time. Finds of LSLS suggest that occupation was most pronounced in the eastern half of the lower town and in the northern half of Wigford [14].

The topographical expansion of Lincoln in the tenth-century was probably accompanied by a growing diversity of buildings, including a proliferation of urban churches. The excavations at St Marks suggest that by around the middle of the tenth century Lincoln already contained several churches, mostly small and of wooden construction. These probably owed their existence to individual members of the Lincoln community. In Lincoln the process by which the Dean and Chapter acquired parish churches in the town happened so fast that there is very little indication of the previous holders. Elsewhere in Domesday Book there are indications that burgesses had been the previous holders, such as in Norwich where 'TRE 12 burgesses held the church of Holy Trinity now Bishop (holds it)' [15]. The holding of churches by burgesses, sometimes in groups, suggests that similar people had initially founded such churches, often as early as the tenth century.

Streets are more difficult to regard as developments instigated by individuals. As streets generally separate the property of different individuals it is difficult to envisage how their creation and maintenance came about. Streets were

initially probably no more than tracks between properties whose line was determined by the easiest route between different points, such as for example the diagonal line of Silver Street. At a later stage, growth in the number of buildings would have required a more organised street layout. At Flaxengate the evidence suggest that this street was laid out in c.900, perhaps in association with the development of properties on the site. The earliest surfaces were relatively short-lived and may have been constructed on a small scale as part of some 'community action'; although the surface of the mid tenth century was a more substantial construction, possibly associated with a broader scheme of street and defensive refurbishment, linked with Anlaf's capture of the area, or the English response in the aftermath of this.

During the tenth century Lincoln shows signs of increasing economic sophistication. LKT pottery dominated finds from this period in the town, but was also found over much of Lincolnshire, probably as a result of tenth-century trade. Lincoln also provided a market for specialist pottery from Stamford, which was used in metal working. In general the pottery, whilst undergoing a decline in technical quality, appears to have been produced in a very standardised form, in large quantities, to meet the need of an expanding population. There is nothing to suggest that this industry could not cope with the increasing productive demands put on it in the tenth century, with production continuing in the town at the Silver Street site.

The other industrial evidence provides an indication that craft specialists including those working in copper alloys and

silver were present at Flaxengate during this period. Such craftsmen are likely to have been found elsewhere in Lincoln, pursuing other trades and crafts. Furthermore many of the products found appear to be designed for the mass rather than the elite market.

The mint was, by c.1000, established as one of England's top three mints and probably illustrates Lincoln's increasing economic and perhaps administrative sophistication. Its output may have been increasing throughout the century although accurate assessment is only possible after c.973. Lincoln served as the mint for Lindsey during the tenth century, and probably for a wider area also. This reflects both the economic influence of Lincoln, and its function as an 'administrative centre'. The latter developed during the tenth century, with activities such as geld collection likely to have heavily involved Lincoln. The development of this and other administrative functions are particularly important because they brought the rural populace into Lincoln. The importance of this lies in the fact that Lincoln's development depended on its ability to relieve the rural populace of surplus cash and produce. The trading of agricultural surplus provided Lincoln with essential supplies and also gave farmers cash which could be spent on goods such as LKT pots. Many of the goods found in tenth-century archaeological levels point to the importance of commerce in presumably cheap often non-essential products. This indicates a reasonable level of economic activity in which the rural populace had money available for such items.

The operation of the mint also allows a glimpse into the relationship between Lincoln and the surrounding 'towns' in the

late tenth century. At this point there appears to have been a proliferation of minting activity in Lincolnshire. The apparently new mints of Torksey, Caistor, Horncastle, and Louth appear to have been founded without drawing moneyers from Lincoln, although when some ceased to function their moneyer may have gone to work at the Lincoln mint. Lincoln did however provide almost all of the dies used by local mints when local die-cutting was permitted, as well as achieving a distribution of dies, which for some issues was only exceeded in breadth by London.

During the eleventh century Lincoln probably underwent further expansion, although it is often difficult to distinguish between tenth- and eleventh-century developments. Until the time of the Norman Conquest Lincoln maintained its relative position in terms of mint output, and much the same was probably true of Lincoln's overall development. Later its share of coin output declined although this may have more to do with a restructuring of mint provision. Lincoln also continued to provide dies both locally and further afield, which contrasts with other regional centres, such as York and Chester, whose die distributions were far more limited.

Signs of continued industrial activity can be seen at Flaxengate with finds of iron and copper waste in eleventh-century deposits. The pottery evidence indicates that a new pottery ware, LFS, was coming to predominate. The demise of LKT reduced the dominance of Lincoln products with the demand for basic pots being partly filled by Torksey ware. Also the main ware in this period, LFS, may actually have been produced outside

the town. The medieval pottery industry was at the bottom of the craft hierarchy, and this may already have been the case in the eleventh-century. If potters were deterred from producing in the town it is likely that development was such that other tradesmen could be found to take their place.

The Norman Conquest tends to dominate discussions of most aspects of eleventh-century England. Whilst the Conquest brought the castle, cathedral and bishop to Lincoln, its importance is even greater from an evidential point of view, as it enables some examination of the impact of Lincoln on its rural surroundings by using Domesday Book. From a spreadsheet analysis it seems that the detectable influence of Lincoln is relatively slight. Land held around Lincoln is slightly more valuable and distributed between more holders. There is however an area of increased value at the centre of the control area which may suggest that factors in addition to towns resulted in areas of extra value. The area around Lincoln also has a comparative lack of sokemen, particularly in the area nearest the town. It is possible that this was linked to the use of holdings near Lincoln to provision the same persons' Lincoln holdings, although Domesday Book does not provide sufficient information on Lincoln property holders to check this. In terms of value the area close to the north of Lincoln was particularly valuable, whereas the land directly to the south was not. This, and similar variations in the Control area suggest that this was not directly caused by Lincoln.

Analysis suggests that in the eleventh-century Lincoln, despite its population, wealth and economic diversity, had only a limited impact on the hinterland in tenurial terms. The factors that determined the distribution of rural holdings seemed to have

functioned largely unaffected by the presence of Lincoln. Furthermore the urban property holdings appear to have been held in a hierarchical arrangement that owed much to a hierarchy based on rural holdings, with holdings of *mansiones* confined to landholders at the top of the hierarchy.

Before the Norman Conquest Lincolnshire already contained holdings of some of the most powerful men in the country, as well as those whose power was more locally concentrated. This situation is unlikely to have been new, and was probably a feature of Lincoln at least as far back as the tenth century. The holdings in Lincoln of national figures like Harold probably created occasional demands for goods and services, but mostly such figures were hardly ever in Lincoln, and probably had little concern with local developments. Instead those with local power bases were the most influential. The prime example is Kolsveinn, with his suburban property development in the late eleventh century. His houses are unlikely to be the first to be constructed in this manner, and may therefore provide a pattern for earlier suburban development. Other local elites, including the lawmen are likely to have been equally influential in shaping both the physical and economic nature of late-eleventh-century Lincoln.

Finally the development of Lincoln over our period can most easily be identified by considering the way in which Lincoln c.1100 differed from its ninth-century counterpart. The population had undoubtedly greatly multiplied, as had the range of industry and trade. These taken together placed Lincoln in a position of local dominance, although the rise of Boston was to

make this short-lived. In c.850 Lincoln was a largely uninhabited former Roman centre on the edge of Mercia. It may have had an ecclesiastical function, although even this is not established, and evidence for other functions is slight. At the end of the period the ecclesiastical function returned to Lincoln, but only to add to its many functions. Lincoln's role as an administrative centre finds recognition in the links between the sheriff of the county and Lincoln. The castle also re-emphasised Lincoln's strategic importance, which had been a crucial factor in its initial development some two hundred years earlier.

Chapter Nine: notes

1 The location of the headquarters of the early bishopric has been much discussed, with most places in Lindsey with an early Anglo-Saxon church regarded as possible contenders. For the most recent discussion see B Yorke 'Lindsey: The Lost Kingdom Found', in Pre Viking Lindsey, ed., A Vince (Lincoln, 1993), pp.145-6

2 E J E Pirie, Post Roman Coins from York Excavations, 1971-1981, Archaeology of York 18-1 (London, 1986), pp.16-30

3 A Vince and M J Jones eds., Lincoln's Buried Archaeological Heritage, (1990) p.B5

4 M Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre Viking Lindsey, ed., A Vince (Lincoln, 1993), p.81

5 K Steane and A Vince, 'Post Roman Lincoln: Archaeological Evidence' in Pre Viking Lindsey, ed., A Vince (Lincoln, 1993), p.78

6 For example A Vince, 'Dealing with Dark Earth: Practical Proposals', Lincoln Archaeology 2, 1989-1990 (1990), pp.24-29

7 Rumbold Street and The Park

8 S R H Jones, 'Transaction costs, institutional change, and the emergence of a market economy in later Anglo-Saxon England' in Economic History Review, 96 (1993), pp.675

9 ASC, Ms C, 942, English Historical Documents, I, c.500-1042, ed., D Whitelock (London, 1979), p.221

10 The debate that has raged over the existence of Viking settlement remains very much a live issue. I accept that the case for settlement is not fully established. Nonetheless I find the place-name evidence hard to explain in any other way.

11 J Cowgill, 'Metalworking at Flaxengate', Unpublished manuscript, p.3

12 Calculated from C E Blunt, 'The coinage of Athelstan, 924-939',British Numismatic Journal, 42 (1974), pp.62-106

13 K Jonsson, The New Era. The Reformation of the Late Anglo-Saxon coinage (Stockholm, 1987)

14 Lincoln Archaeology 3, 1990-91, p.23

15 Domesday Book, Norfolk, 1,61 folio 116b. In Norwich 15

churches are known to have been held by burgesses in 1066.

TABLES

TABLE 1

RANKING OF MINTS

D HILL Ranking based on the percentage of total known moneyers for each reign. Then added and averaged out. 973-1066 Information from An Atlas of Anglo-Saxon England, p.130 (Percentages are approximate)	1.	London	10.5%	
	2.	Lincoln	7.3%	
	3.	York	6.5%	
	4.	Winchester	5.3%	
	5.	Chester	4.5%	
	6.	Thetford	4.3%	
	7.	Exeter	3.6%	
	8.	Stamford	3.4%	
	9.	Canterbury	2.6%	
	10.	Norwich	2.3%	
D M METCALF Ranking based on the estimated mint output, as a percentage of the total output for each type from 1017 to 1046, averaged out Calculated from Appendix V, 'Continuity and Change in English Monetary History', BNJ (1981) pp. 72-79 ( ) = % 973-?1016	1.	London	24%	(23)
	2.	Lincoln	12%	(6.6)
	3.	York	10.4%	(8.1)
	4.	Winchester	5%	(8.7)
	5.	Stamford	4.9%	(3.6)
	6.	Thetford	3.3%	(3.1)
	7.	Chester	2.9%	(2.5)
	8.	Canterbury	2.6%	(4.0)
	9.	Norwich	2.5%	(2.8)
	10.	Oxford	2.2%	(1.5)
A FREEMAN Ranking based on the number of known moneyers for each type of Edward the Confessor divided by the 'Adjusted total' of moneyers ie 2038 Calculated from The Moneyer and the Mint in the reign of Edward the Confessor, Appendices 1 & 2 pp. 527-30	1.	London	14.3%	
	2.	York	7.4%	
	3.	Lincoln	5.7%	
	4.	Winchester	5.1%	
	5.	Stamford	4.2%	
	6.	Chester	3.4%	
	7.	Gloucester	3.3%	
	8.	Canterbury	3.2%	
	9.	Oxford	3.1%	
	10.=	Thetford	2.8%	
	10.=	Hereford	2.8%	
H B A PETERSSON Ranking based on the whole coins in most Scandinavian collections 973-1066. (75% are from the reigns of Ethelred or Cnut) 'Coins and weights, Late Anglo-Saxon pennies and mints', in Studies in Late Anglo-Saxon Coinage, ed K Jonsson p. 213	1.	London	22.6%	
	2.	York	10.9%	
	3.	Lincoln	9.8%	
	4.	Winchester	6.6%	
	5.	Stamford	4.0%	
	6.	Chester	3.6%	
	7.	Thetford	3.4%	
	8.	Exeter	3.0%	
	9.	Canterbury	2.9%	
	10.	Norwich	2.5%	

Table 2

Mint	Monetagium (£)	Coins of Paxs type in Beauworth Hoard
Lincoln	75	171
Thetford	40	123
Colchester (and Maldon)	20	96 + 10
Gloucester	20	68
Ipswich	20	78
Leicester	20	19
Nottingham	10	17
Oxford	10 + 20	145
Lewes	5 and 12s	77
Bath	5	17
Malmesbury	5	8
Taunton	2 and 10s	25
Pevensey	1 (plus Ct Mortain share of payment)	7

Information from P Grierson, 'Domesday Book, the geld de moneta and Monetagium: A forgotten minting reform', BNJ 55, (1985) p.89

Table 3

	COIN FINDS 973-1066		
	Coins found in Lincoln	Coins found in the rest of Lincolnshire (1066-1100)	
Lincoln	9	20	(4)
Stamford	2	3	(0)
York	1	8	(0)
Other mints	2	8	(5)
Uncertain	5	2	(2)

Table 4, Numbers of Moneyers 973-1017

	C2,A,A1	B1	C	D	E	A3
Lincoln	10	11	19	17	21	36
Canterbury	5	7	9	9	6	9
Chester	5	6	6	9	8	12
London	9	33	47	31	38	64
Norwich	6	5	7	6	6	12
Oxford	3	3	6	7	6	5
Stamford	15	8	12	15	9	17
Winchester	12	19	17	11	11	25

C2 Edgar's Reform Small Cross c.973-5
A Edward the Martyr Normal Small Cross 975-8
A1 Ethelred First Small Cross c.978-9
B1 Ethelred First Hand c.979-85
C Ethelred Crux c.991-7
D Ethelred Long Cross c.997-1003
E Ethelred Helmet c.1003-9
A3 Last Small Cross c.1009-17

Calculated from K Jonsson and G van der Meer, 'Mints and Moneyers, 973-1066', in Studies in Late Anglo-Saxon Coinage

Table 5 English Coins in Denmark, 870-1089

870-929	5
930-939	10
940-949	15
950-959	1
960-969	0
970-979	6
980-989	6
990-999	1919
1000-1009	2607
1010-1019	341
1020-1029	2361
1030-1039	449
1040-1049	4963
1050-1059	1061
1060-1069	75
1070-1079	1
1080-1089	45

Source: K Jonsson, Viking Age Hoards and Late Anglo-Saxon Coins (Stockholm, 1986) p.14 and p.31

Table 6 The Sources of the coins found at Tetney

Ruler	York and York related moneyers		Moneyers assoc with Lincoln die cutting		Moneyers not associated with Lincoln or York	
Eadred						
	Heriger	7			Agulf	1
	Hunred	34				
	Ingelgar	1				
	Theodmaer	3				
Eadwig						
	Heriger	46	Adelwerd	2	Herewig*	1
	Æsculf	4	Ive	3	Agulf	1
			Levinc	3	Anolf	2
			Litelman	2	Oge	1
			Manna	3	Wine?	1
Edgar						
	Æsculf	7	Adelaver	17	Ætferd	1
	Benethiht	13	Albutic	7	Agulf	1
	Durand	15	Eanulf	20	Asmin	1
	Fastolf	1	Farthen	13	Bernferth	1
	Heriger	100	Grid	7	Copman	2
			Hunbein	8	Æthelwine	1
			Ingolf	7	Haculf	1
			Isembert	10	Herebert	1
			Ive	4	Herman	1
			Levinc	4	Ingere	1
			Manna	22	Macus	1
					Mamolet	2
					Manning	2
					Morgnan	1
					Sedem	1
					Winem	1
					Wieferth	3
Total		231		130		29

Table 7 (key to figs 25, 27 and 28)

Churches within the walled area

No. on Figures	Church	First Doc. Ref	Doc Source	Other Evidence
1	St Clement	1202	Reg. Ant. 2615	
2	All Saints in the Bail	1087	Domesday Book	
3	St Paul in the Bail	1200	Reg. Ant	Arch.
4	St Michael on the Mount	1087or1137	D.B.? Reg Ant 87	
5	St John the Poor	1146	Reg. Ant.	
6	St Peter Stanthaket	1146	Reg. Ant.262	Arch.
7	St Andrew	1155	Reg. Ant.137	
8	St Cuthbert	1200	Reg. Ant.2265	
9	St George	1146	Reg. Ant.262	
10	St Lawrence	1072	Reg. Ant.2	
11	Holy Trinity (Silver Street)	1146	Reg. Ant.262	
12	St Edmund	1146	Reg. Ant.262	
13	St Peter Pleas	1087	Domesday Book	
14	St Peter Mootstone	1087or1180	D.B.? Reg. Ant.2239	
15	All Saints, Hungate	1115	Reg. Ant.67	
16	St Mary Crackpole	1216-25	Reg. Ant.2349	
17	St Swithin	1146	Reg. Ant.262	
18	St Martin	1072	Reg. Ant.2	Coins?

Additional churches on Fig 28

a	Holy Trinity Stairfoot	1146	Reg. Ant.262	
b	St Clement	1207	Reg. Ant.2957	
c	St Bavo	1146	Reg. Ant.262	

Table 8

Landholders in 1086	Holder TRE	Holding
Geoffrey Alselin	Toki, son of Auti	1 mansio extra mural
,,		1 Hall
,,		2 tofts
Bishop Remigius	Toki, son of Auti	30 mansiones
,,	?	81 mansiones & 2 churches
,,		land at St Lawrences
Ralph Pagnell	Merlesveinn	1 mansio
Earnwine the Priest	Earl Morcar	1 mansio
Gilbert of Ghent	Ulf, Siward	3 mansiones
Earl Hugh	Earl Harold	3 mansiones
Roger of Bully	Sveinn son of Svafi	1 mansio
Countess Judith *	Stori	1 mansio
St Mary's		land in High Street
Abbot of Peterborough**	Guthrothr ?	1 domus & 3 tofts
,, ***	Godric son ofGarwine	1 carucate in fields
,, ***	,,	12 tofts & 4 crofts
Thorald of Greetwell		land
Ketilbjorn		land
Losoard		land
Hugh, son of Baldric		2 tofts
,,		2 tofts ****
Gilbert		3 domus
Peter of Valognes		1 domus
,,	Godric	1 carucate in fields
Ralph of Bapaume		1 domus
Ertald		1 domus
Kolsveinn	Cola	4 tofts
,,	outside city	36 dom & 2 churches
Alfred, Thorald's nephew	Sibbi	3 tofts
Abbot of Ely	Aethelstan	half a mansio
King and Earl		8 carucates fields
Svartbrand, son of Ulf	Ulf	1 carucate in fields
Lincoln		
churches &burgesses of Lincoln		36 crofts
St Mary's Lincoln		½ carucate in fields

* claimed by Ivo Tallboys
** claimed by Norman Crassus as part of the kings holding
*** claimed by Earnwine the Priest by inheritance from Godric
**** given to him by King, may be same as those listed above

domus translated as house
mansio translated as residence

Table 9 - 1066

CATEGORIES

F	E	D	C	B	A
Guthfrithr**					
Cola					
Sibbi					
	Ulf, son of Svartbrandr				
	Athelstan*				
			Toki, son of Auti*		
			Sveinn, son Svafi*		
			Stori*		
			Merlesveinn		
			Ulf Fenman		
					King
					Harold*
					Morcar*
F	E	D	C	B	A

Table 10 - 1086

CATEGORIES

0	1	2	3	4	5	6
Ralph of Baupame**						
?Ertald **						
	Thorald of Greetwell					
		Svartbrandr				
		Ketilbjorn				
		Losoard?				
		Kolsveinn**				
			Earnwine the priest?*			
			Geoffrey Alselin*			
			Roger of Bully*			
			St Peter's Peterborough**			
			Peter of Valognes **			
			Abbot of Ely*			
				Ralph Pagnell*		
				Bishop of Lincoln*		
				Countess Judith*		
				Hugh son of Baldric		
					Gilbert Ghent*	
					Earl Hugh*	
						King
0	1	2	3	4	5	6

* Mansio
**Domus

Table 11

Landholders within 12 miles of Lincoln in 1066

Aelfric
Aelfric son of Mergeat
Aelfric, Dena
Agemund
Agmundr
Agmundr the priest
Alfwy
Alnoth
Alnoth and Aslakr
Alsige
Alsige the deacon
Alwige
Alwige and Asketill
Alwine and Auti
Arnketill
Arnketill Barn
Asgautr
Asketill
Aslakr
Aslakr and Earnwine
Asulfr
Atsurr
Authunn
Auti and Asketill
Bergthorr
Bergthorr and Thorulfr
Bothildr
Cola
Countess Godiva
Countess Judith
Deincora
Dena
Eadgifu
Ealdormann
Earl Edwin
Earl Harold
Earl Morcar
Earl Waltheof
Earnwine
Ebrard and two brothers
Esbjorn
Fran
Frani
Frani Alnoth etc
Frani and Sumarlithi
Gamall
Godric
Godric the deacon
Godric and Thorulfr
Godwin
Godwine
Grimketill
Gunnhvatr
Gunnhvatr and Godric
Gunnketill
Guthfrithr
Hakon
Halfdan
Halfdan and brother
Hardwulf
Jaulfr
Josteinn
Ketill
Ketill and Ulfketill
King Edward
Klakkr and Sjundi
Knutr
Knutr, Alnoth etc
Koddi
Kofsi
Lambakarl
Lambi
Leofsige
Merlesveinn
Morcar
Osmund
Oudgrim
Queen Edith
Ragnaldr
Ralph the constable
Rothulfr
Rothulfr and Siward
Sigketill and Beorhtgifu
Siward
Siward and Tonni
Siward and Alnoth
Skuli
Sotr
St Mary's Stow
St Peter, Peterborough
Steingrimr and Gunnhvatr
Steinn
Stjupi
Stori
Strui
Sveinn
Sveinn or Godric
Thorfrothr
Thorgautr
Thorgautr Lagr
Thorr
Thorulfr
Thurgot and Haldane
Tonni
Tosti, Thorfrothr, Earnwine
Ulfketill etc.
Ulfketill
Ulfr
Ulfr Fenman
Ulfr and Asulfr
Valrafn
Vigleikr
William
Wulfgeat
Wulfgifu
Wulfric
Wulfsi
Harold
Hemingr

Table 12 part 1

Landholders within 12 miles of Lincoln in 1066

		value	to/te/sa/so	ranking
Aelfric		67		d?
Aelfric son of Mergeat		400	*	b
Aelfric, Dena		40		
Agmundr the lawman		35		e
Agmundr		51		d
Agmundr the priest		10		f
Alfwy		30		
Alnoth		94		d?
Alsige	*	15		d?
Alsige the deacon		0		
Alwige		45		
Alwine and Auti		60		
Arnketill		80		
Arnketill Barn		20		f
Asgautr		30		e
Asketill (son of Topi?)		140		c
Aslakr	*	60		e?
Asulfr		80		e
Atsurr		10	?	e
Authunn		5		e
Auti		25		d?
Bergthorr		35		e
Bothildr		20		f
Cola		10		f
Countess Godiva		105		
Countess Judith		158		b
Deincora		20		f
Dena	*	16		
Eadgifu		0		b/c
Ealdormann		11		f
Earl Edwin		57		a
Earl Harold		1893	*	a
Earl Morcar		1835	*	a
Earl Waltheof		200	*	
Earnwine	*	77		?
Ebrard and two brothers		21		f
Esbjorn		25		d
Frani		116		d
Gamall		13		d/c
Godric	*	326	probably inc	c?
Godric the deacon		4		e
Godwin		40		?
Godwine	*	320		?
Grimketill		3		c or e
Gunnhvatr		60		d
Gunnketill		10		e
Guthfrithr		30		f
Hakon		40		e
Halfdan		20		?
Halfdan and brother		60		?
Halfdan and Osfirth		30		?
Hardwulf		16		
Harold		20		d
Hemingr		392	*	c

Table 12 part 2

Landholders within 12 miles of Lincoln in 1066 -2

	value	to/te/sa/so	ranking
Jaulfr	20		d
Josteinn	5		f
Ketill	55		d
King Edward	165		a
Klakkr and Sjundi	7		e & e
Knutr	50		e
Koddi	60		e
Kofsi	40		e
Lambakarl	96		d
Leofsige	36		e/d?
Merlesveinn	90	*	b
Osmund	13		e/d
Oudgrim	40		
Queen Edith	895	*	a
Ragnaldr	40		e
Ralph the constable	0		check b/c
Rothulfr	48	*?	c
Sigketill and Beorhtgifu	60		e & e
Siward *	146		?
Skuli	0		f
Sotr	20		f
St Mary's Stow	142		check d?
St Peter, Peterborough	460	*	b
Steingrimr	20		e
Steinn	15		f
Stjupi	3		f
Stori	31		check b or c
Strui	30		f
Sumarlithi	25		e
Sveinn *	503	*?	c?
Thorfrothr	48		?
Thorgautr Lagr	444	*	b or c
Thorr	10		e
Thorulfr	60		d
Tonni	19		e or c
Tosti	8		d?
Ulfketill etc.	140		
Ulfketill	40		d
Ulfr, son Svartbrandr	60		?
Ulfr Fenman	256	*	b
Ulfr and Asulfr	120		
Valrafn	80		e
Vigleikr	40	*	d
William	0		d
Wulfgeat	30		
Wulfgifu	60		f
Wulfric	40		
Wulfsi	80		
Unknown	484		

Table 13

Landholders in Control Area 1066

Agmundr
Agmundr and Sigeketill
Agmundr, Brunhigse and Skuli
Alnoth
Alnoth and Asketill
Alwine
Arnketill
Asketill Barn
Aslakr
Athelstan and Othenkarl
Athelstan and Wulfmær
Auti
Brunier
Eadgifu
Eadwine
Earl Edwin
Earl Harold
Earl Morcar
Earnwine
Earnwine the priest
Esbjorn and Grimbald
Esbjorn and Ketill
five thanes
Frani, Alnoth etc
Fulcric
Fulcric and Veggi
Fulcric. Ulfketill
Fulcric. Ulfr
Fulcric. Ulfr Fenman
Gamall
Godric
Godric the deacon
Godwine
Grimbald
Grimbald and Fulcric
Grimbald Krakr
Grimketill
Grimketill, Merdo, Halfdan etc
Grimr
Grimr, Ulfr and Finnr
Gytha
Haket
Halfdan
Halfdan, son of Topi
Harthgripr
Ingimundr
Ketilbjorn
Ketilbjorn and Gamall
King Edward
Klakkr and Leofwine
Koddi
Kofsi
Leodwine
Leofgifu
Leofric Cild
Leofwine
Merlesveinn
Ralph
Rothulfr and Siward
Salecoc
seven thanes
Siward
Siward and Thorgils
Siward Barn
Sotr
Sperrir
Sperrir, Frani and Alnoth
Steingrimr and Agmundr
Steinn
Sveinn
Thorgautr
Thorgils
Thorr
Thorulf
three brothers
Tofi
Toki
Topi
Tosti,Thorfrothr and Earnwin
Ulfketill
Ulfr
Ulfr and Alnoth
Veggi and Barthr
William
William Malet
Wulfgar
Wulfgrim
Wulfmær
Wulfmær and Halfdan

Table 14

	Landholders in Control Area 1066
Agmundr	d
Alnoth	d?
Alwine	c/d?
Arnketill	?
Asketill	c
Asketill Barn	e
Aslakr	e?
Athelstan	e
Auti	d?
Barthr	f
Brunhigse	f?
Brunier	f
Eadgifu	b/c
Eadwine	e
Earl Edwin	a
Earl Harold	a
Earl Morcar	a
Earnwine	?
Earnwine the priest	?
Esbjorn	d
Finnr	f
five thanes	
Frani,	e
Fulcric	d/c
Gamall	d/c
Godric	?
Godric the deacon	e
Godwine	?
Grimbald Krakr	d
Grimketill	e
Grimr	d/e
Gytha	f/d
Haket	f
Halfdan	f?
Halfdan, son of Topi	d
Harthgripr	f
Ingimundr	e
Ketilbjorn	d
Ketill	d
King Edward	a
Klakkr	e?
Koddi	e
Kofsi	e
Leodwine	e
Leofgifu	f
Leofric Cild	c
Leofwine	d
Merlesveinn	b
Merdo,	f
Othenkarl	f?
Ralph	e
Rothulfr	c
Salecoc	f
seven thanes	
Skuli	f?
Sigketill	e

Siward *	?
Siward Barn	?
Sotr	f
Sperrir	e
Steingrimr	e
Steinn	f
Sveinn	c?
Thorfrothr	?
Thorgautr Lagr	c
Thorgils	d
Thorr	e
Thorulf	d
three brothers	
Tofi	f
Toki	b/c
Topi	b/c
Tosti	
Ulfketill	d
Ulfr Fenman	b
Ulfr son of Topi	c?
Veggi	e
William	d
William Malet	f/c/b?
Wulfgar	f
Wulfgrim	
Wulfmær	d

Table 15

Values, in shillings, of the Holdings of the Tenants in Chief (where calculable), within a 12 mile radius of Lincoln

	Total	within 5 miles	5-10	10-12
Alfred of Lincoln	40		40	
Archbishop of York	190		73	117
Asketill	4		4	
Berengar Tosny	0		0	
Bishop of Bayeux	454	11	210	233
Bishop of Durham	67		67	
Bishop of Coutances	60	60		
Bishop of Lincoln	989	62	415	512
Church of St Michael	20	20		
Count Alan	70	20	30	20
Countess Judith	440		280	160
Cwenthryth the Nun	8	8		
Drogo of La Beuvriere	180			180
Durand Malet	59		25	34
Earl Hugh	572	179	393	
Earnwine	10		10	
Erneis of Buron	111		59	52
Eudo son of Spirewic	40		40	
Gilbert of Ghent	275	110	156	9
Halfdan the Priest	0		0	
Heppo the Crossbowman	56		31	25
Ilbert of Lacy	35	13	2	20
Ivo Tallboys	275		82	193
Jocelyn son of Lambert	189		110	79
Josteinn	0			0
King	2579	600	1406	573
Kolgrimr	15	15		
Kolsveinn	723	165	443	115
Leodwine	0			0
Martin	15		5	10
Norman of Arcy	228	20	200	8
Norman Crassus	40	40		
Odo the Crossbowman	26	0	26	
Osbern the Priest	20			20
Peter of Valognes	11	11		
Rainer of Brimeux	20		12	8
Ralph of Limesy	20			20
Ralph of Mortimer	40		40	
Ralph Pagnell	116	16	0	100
Ranulf of St Valery	26	20		6
Restold	10			10
Robert the Bursar	50		50	
Robert Malet	320			320
Robert of Stafford	36	6	30	
Robert of Tosny	410	17	353	40
Roger of Bully	326	160	52	114
Roger of Poitou	146	40	70	36
St Peter's, Peterborough	527	347		180
St Peter's, Westminster	220	60	160	
Svartbrandr	120	80	40	
Waldin the Artificer	75		75	
Walter of Aincourt	747	219	419	109
William Blunt	20			20
William of Percy	156		154	2
Wulfgeat	20		20	
TOTAL	11206	2299	5582	3325

Table 16

Values, in shillings, of the Holdings of the Tenants in Chief (where calculable), within Control Area

	Total	within 5m	5-10m	10-12	Exac
Archbishop of York	10		10		0
Asketill	4			4	0
Auti	2	2			0
Bishop of Bayeux	489	60	293	136	20
Bishop of Durham	30		30		0
Bishop of Lincoln	624	55	387	182	65
Count Alan	126		100	26	4
Drogo of La Beuvriere	50		30	20	0
Durand Malet	154	18	56	80	15
Earl Hugh	389		341	48	195
Elfin	20		20		0
Erneis of Buron	334	60	233	41	66
Geoffrey Alselin	120		120		20
Geoffrey of La Guerche	591		208	383	150
Gilbert of Ghent	450		160	290	120
Gilbert Tison	160			160	0
Guy of Craon	85	4	81		45
Halfdan	25	20	5		0
Henry of Ferrers	0		0		0
Heppo the Crossbowman	20	4	16		10
Hugh son of Baldric	300		190	110	40
Ivo Tallboys	685	215	257	213	150
Jocelyn son of Lambert	303	160	133	10	67
Ketilbjorn	20		20		0
King	2164	709	1023	432	0
Kolsveinn	120	20		100	45
Leofgifu	5			5	0
Martin	30		30		0
Norman of Arcy	286		253	33	72
Odo the Crossbowman	85	25	60		65
Osbern of Arques	25	25			5
Ralph of Mortimer	254		20	234	76
Ralph Pagnell	360	280	80		30
Restold	10			10	0
Robert of Tosny	30		30		0
Roger of Bully	238		200	38	60
Roger of Poitou	335	63	162	110	30
Siward the Priest	25		25		0
St Peter's, Peterborough	611	550	21	40	120
Waldin the Artificer	60		60		20
William of Percy	110		110		30
TOTAL	9739	2270	4774	2695	1520

Table 17

Lincoln Area 1086

	Villages	No. of different landholdings	Average no. of T-in-C per village
Within 5 miles	22	56	2.55
5-10 miles	69	148	2.14
10-12 miles	44	82	1.86
Lincoln area average			2.12
(Within 5 miles TRE)	21	51	2.43

Control Area 1086

	Villages	No. of different landholdings	Average no. of T-in-C per village
within 5	24	63	2.63
5-10 miles	68	160	2.35
" " "(excl Epworth)	(59)	(151)	(2.56)
10-12 miles	34	66	1.94
" " (excl Epworth)	(26)	(58)	(2.33)
Control area Average			2.29
Control area excluding Epworth			(2.49)
(within 5 miles TRE)	24	66	2.75

Table 18
The number of different landholders in the villages of the within 5 and 5-10 mile sections of both areas

	1	2	3	4	5	6	7	8
Lincoln Area	37	25	16	4	5	2	2	0
Control Area	37	16	22	8	3	3	1	2

Table 19

Number of different Landholders 1086

	Lincoln	Control Area
within 5 miles section	26	17
5-10 miles section	39	33
10-12 miles section	33	23
within 5 miles only	6	2
within 3 miles	18	11
within 3-5 miles	18	14
Total in whole area	55	41

Table 20

Select sample of holders TRE around Lincoln

Aelfric, son of Mergeat	K?	Sjundi	L
Agmundr	L	Lambakarl	L
Alnoth	L?	Leofsige	KL?
Countess Judith	L	Merlesveinn	KL
Eadgifu	L?	Ralph the constable	KL
Earl Harold	KL	Rothulfr	L
Earl Morcar	KL	St Peters Peterboro	KL
Esbjorn	L	Stori	L?
Grimketill	L	Thorgautr Lagr	KL
Gunnvatr	L	Thorulfr	L
Hemingr	K	Tonni	KL
Jaulfr	L	Ulfketill	KL
Ketill	L	Ulfr Fenman	KL
Klakkr	L	Wulfmaer	L

K Kesteven
L Lindsey

Table 21 Tenants in Chief and landholding complexity -Lincoln

Tenant in Chief	LINDSEY	KESTEVEN	NOTTS
Alfred of Lincoln		*	
Archbishop of York	*		*
Asketill	*		
Berengar of Tosny			*
Bishop of Bayeux	*	*	
Bishop of Durham	*		
Bishop Geoffrey of Coutances		*	
Bishop of Lincoln	*	*	*
Church St Michael, Lincoln	*		
Count Alan	*	*	
Countess Judith		*	
Cwenthryth the Nun		*	
Drogo of la Beuvriere		*	
Durand Malet	*	*	
Earl Hugh	*	*	
Earnwine	*		
Erneis of Buron	*		
Eudo, son of Spirewic	*		
Gilbert of Ghent	*		
Halfdan the Priest	*		
Heppo the Crossbowman		*	
Ilbert of Lacy	*		
Ivo Tallboys	*		
Jocelyn son of Lambert	*		
Josteinn	*		
The King	*	*	*
Kolgrimr		*	
Kolsveinn	*	*	
Leodwine	*		
Martin	*		
Norman of Arcy	*	*	
Norman Crassus	*	*	
Odo the Crossbowman	*	*	
Osbern the Priest	*		
Peter of Valognes	*		
Rainer of Brimeux	*		
Ralph of Limesy			*
Ralph of Mortimer	*	*	
Ralph Pagnell	*	*	
Ranulf of St Valery	*		
Restold	*		
Robert the Bursar	*		
Robert Malet		*	
Robert of Stafford		*	
Robert of Tosny	*	*	
Roger of Bully	*		*
Roger of Poitou	*	*	
St Peter's, Peterborough	*		*
St Peter's, Westminster		*	
Svartbrandr	*	*	
Waldin the Artificer	*		
Walter of Aincourt		*	
William Blunt	*		
William of Percy	*		
Wulfgeat	*		
TOTALS	42	26	7
UNIQUE	24	11	2

Table 22 Landholding Complexity - Control Area

Tenant in Chief	Manley & Yarborough	Walshcroft, Corringham & Aslasoe	Notts & Epworth
Archbishop of York		*	
Asketill		*	
Auti	*		
Bishop of Bayeux	*	*	
Bishop of Durham		*	
Bishop of Lincoln	*	*	
Count Alan	*	*	
Drogo la Beuvriere	*		
Durand Malet	*		
Earl Hugh	*		
Elfin	*		
Erneis of Buron	*	*	
Geoffrey Alselin	*		
Geoffrey of La Guerche		*	*
Gilbert of Ghent	*		
Gilbert Tison	*		
Guy of Craon	*	*	
Halfdan	*	*	
Henry of Ferrers	*		
Heppo the Crossbowman	*	*	
Hugh son of Baldric	*		
Ivo Tallboys	*	*	
Jocelyn son of Lambert	*	*	
Ketilbjorn	*		
The King	*	*	*
Kolsveinn	*	*	
Leofgifu	*		
Martin		*	
Norman of Arcy	*	*	
Odo the Crossbowman	*	*	
Osbern of Arques	*		
Ralph of Mortimer	*		
Ralph Pagnell	*		
Restold		*	
Robert of Tosny		*	
Roger of Bully	*		*
Roger of Poitou	*	*	
Siward the priest	*	*	
St Peter's of Peterborough	*	*	
Waldin the Artificer		*	
William of Percy	*	*	
TOTAL	33	25	3
UNIQUE	15	7	0

Table 23
Landholder profile TRE

Category	a	b	b/c	c	c/d	d	d/e	e	f
Lincoln	5	5	1	8	1	17	2	23	15
Control	3	2	3	7	4	18	0	15	16

Table 24 Landholder profile comparison

Lincoln

Category	No of landholders	Av. no. of holdings	Av. value holdings in this category	% of value held by this cat.
0	3	1	9	0
1	5	1.6	8	0
2	12	5.6	127	14
3	17	4.2	148	23
4	12	6.9	237	26
5	5	10	316	14
6	1	18	2579	23

Control

Category	No. of landholders	Av. no. of holdings	Av. value holdings in this category	% of value held by this cat.
0	2	1	3	0
1	4	1.5	14	1
2	7	5.1	117	8
3	14	7.8	234	34
4	9	7.2	230	21
5	4	8.3	332	14
6	1	46	2164	22

Table 25
Spreadsheet statistical summary

	demesne ploughs	actual ploughs	Land for ploughs	TRW Value	Exactions	TRE Value	Popn
Lincoln area	203.5	800.3	781.3	11206	1197	12484	2985
Control area	220.0	729.3	-	9947	1520	9745	3376

Table 26

	TRE	1086	with exactions
LINCOLN			
Value per sq mile in shillings			
within 5 miles of Lincoln	33.2	29.5	33.2
between 5 and 10 miles	27	23.6	26.2
between 10 and 12 miles	25.4	24	26.2
within 5:			
Lawress wapentake	41.3	50	56.5
Langoe Boothby and Graffoe	27.3	14.2	16.3
CONTROL			
within 5 miles	31	28.9	32
between 5 and 10 miles	19.9	20.2	23.9
between 10 and 12 miles	20.5	19.5	22.5

Table 27
Summary of spreadsheet split into distance from Lincoln sections

Distance from Lincoln		within 5 miles	5-10 miles	10-12 miles
Area in sq miles		78.5	235.6	138.3
Number of ploughs		141	419.8	239.5
Land for x ploughs		143.3	391.7	246.3
Value 1086 (in shillings)		2299	5582	3325
Exactions (in shillings)		311	583	303
Value TRE		2605	6365	3514
Popn	bordari	113	241	135
	sokeman	162	734	450
	villeins	247	574	282
	others	12	27	8

Table 28
Value comparison (shillings)

	Value TRE	Value TRW	Value TRW + Exactions
Lincoln Area	12484	11206	12403
Control Area	9947	9739	11259

Table 29
Summary of Lawress wapentake

	Distance from Lincoln			
	Within 5 miles		between 5 and 12 miles	
Number of villages	14		13	
Actual ploughs	90.4		80.5	
Land for x ploughs	85.6		80.1	
Value 1086	1672		915	
Exactions	212		206	
Value TRE	1377		871	
Population				
bordari	57	(18%)	35	(12%)
sokemen	116	(36%)	165	(59%)
villeins	139	(44%)	80	(29%)
others	7	(2%)	1	(0%)

Table 30
Aspects of Lincoln sections- per square mile

	Actual Ploughs	Population	Land for plo
within 5 miles of Lincoln	1.8	6.7	1.83
5-10 miles " "	1.8	6.7	1.66
10-12 miles " "	1.72	6.3	1.78
within 5 miles:			
Lawress wapentake	2.74	9.7	2.59
non Lawress wapentake	1.1	2.7	1.27

Table 31

Population Composition

	(Total)	bordars	sokemen	villeins	other
within 5 miles	(534)	21%	31%	46%	2%
5-10 miles	(1571)	15%	46%	37%	2%
10-12 miles	(874)	15%	52%	32%	1%
Whole 12 m section		16%	45%	37%	1%
Lincolnshire	(Darby)	15.8%	50.7%	32.7%	0.8%

Table 32

	Population Composition			
	bordars	sokemen	villeins	Total Popn
Kolsveinn	11%	41%	48%	207
Svartbrandr	25%	23%	43%	56
St Peter's Peterborough	20%	51%	28%	136
Bishop of Lincoln	12%	64%	24%	218
Walter of Aincourt	24%	36%	39%	248
King	16%	41%	42%	266
Gilbert of Ghent	19%	47%	32%	146
Bishop of Bayeux	15%	43%	42%	130

Table 33
Demesne ploughs

		demesne ploughs	total no. actual ploughs	demesne ploughs as % actual plo
Lincoln	within 5 miles	38.5	141	27%
	5-10 miles	111.4	419.8	27%
	10-12 miles	53.6	239.5	22%
Control	within 5 miles	53.3	158.3	34%
	5-10 miles	111.6	389.1	29%
	10-12 miles	55.2	181.9	30%

Table 34

LAWMEN AT LINCOLN

TRE	TRW
Harthaknut	Suardinc, in place father H
Suartin, son of Griboldi	Suartinc
Ulf's son Sortebrand ?	Sortebrand in place father U
Walraven	Agemund in place of father W
Alwold	Alwold
Britric	Godwin son of Britric
Guret (Guthrothr)	Norman Crassus in place Guret
Wulfbert	Wulfbert, Ulf's brother still alive
Godric, son of Eddeve	Peter of Valonges in place of G
Siward, the priest	Wulfnoth the priest in place of S
Lewine, (Leofwine) the priest	Burwolt in place father L now monk
Aldene, (Halfdan) the priest	Ledwin son of Reuene in place A

Source: Domesday Book Lincolnshire, foilio 336a

Table 35

LINCOLN MONEYERS, Harold - William II

	Harold	Willaim I								William II			
Issue	i	i	ii	iii	iv	v	vi	vii	viii	i	ii	iii	iv
Ælfgeat	x												
Agamund *	x	x	x										
Calmer	x	x	x										
German	x	x											
Outhgrim	x		x										
Ulf	x				x	x	x	x	x	x	x		
Wulmær	x												
Givel		x	x	x									
Osberan		x											
Sifferth			x	x	x	x	x		x				
Wulsi			x										
Ælfnot				x									
Thurstan					x	x				x	x	x	
Unspac					x	x	x						
Wulfstan					x						x		
Sigverith					x	x							
Wihtric					x	x							
,....ind											x		
Acil												x	x
Alfnoth												x	x
Folciered												x	
Lefwine *												x	x
Osbern												x	
,..irman												x	
Arnc....													x

lawman? = *

Source: H R Mossop, The Lincoln Mint, plates lxxx - lxxxv

Table 36 Other Rankings - Top Ten

Population c.1066

Source: H C Darby
The Domesday Geography of England, 5 vols (Cambridge, 1954-67)

London	10,000+
York	8,000
Lincoln	6,000
Norwich	6,000
Winchester	5,500
Oxford	5,000
Thetford	5,000
Stamford	3,000
Wallingford	3,000
Canterbury	3,000

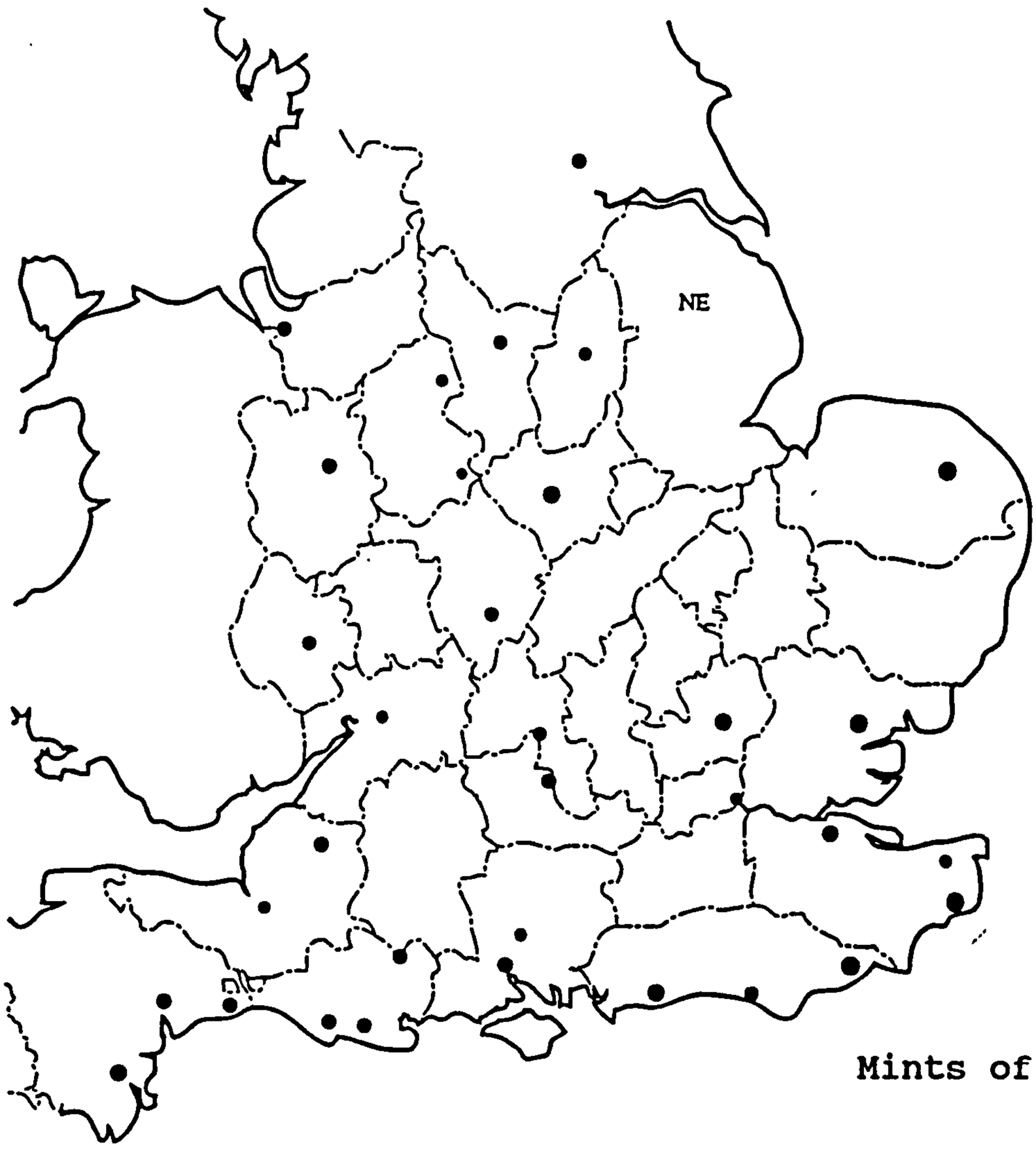
Approximate numbers of Churches in the Later Twelfth-Century

Source: R Morris, Churches in the Landscape,(London 1989), pp.168-226

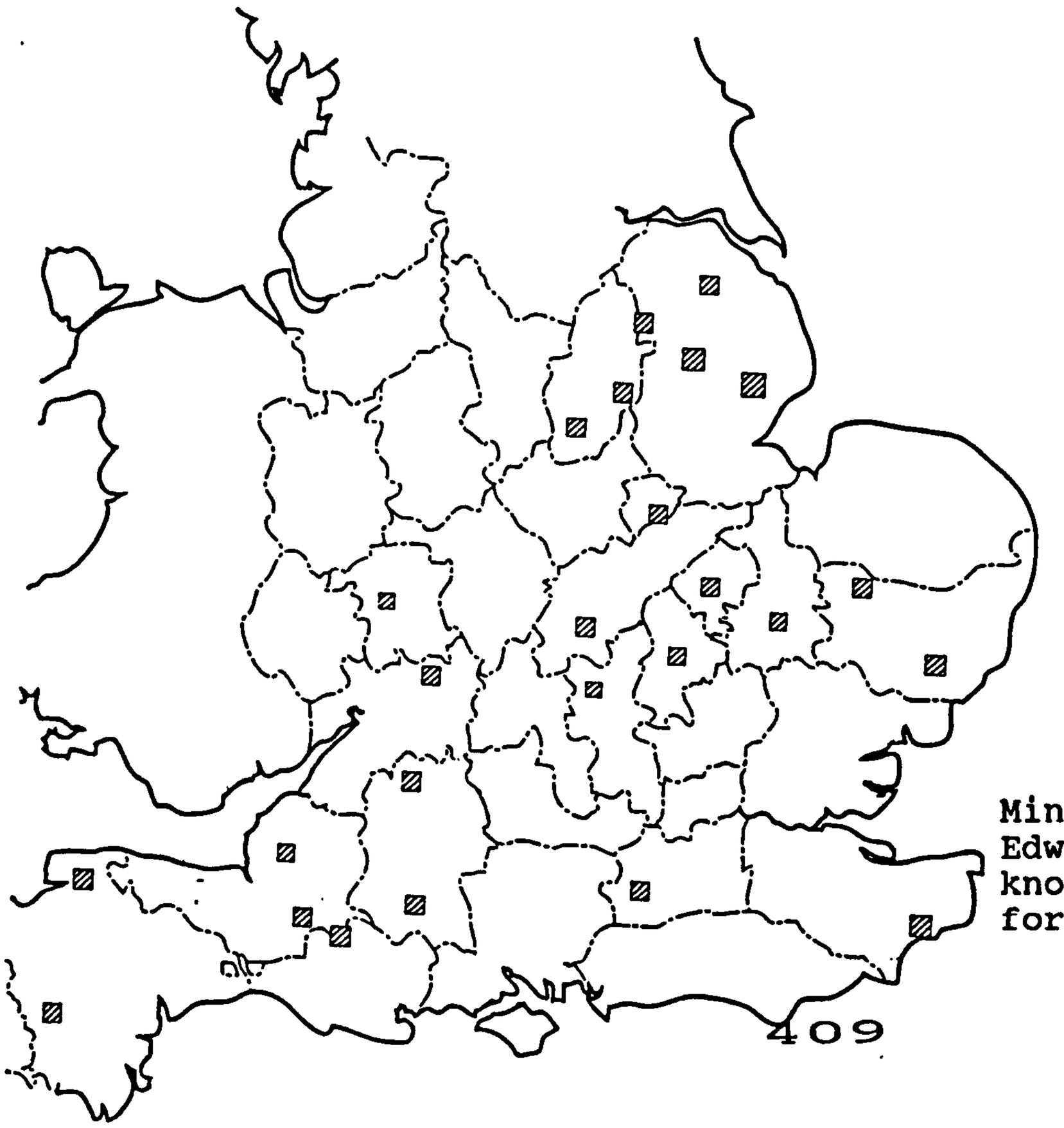
London	100
Winchester	57
Norwich	57
Lincoln	48
York	40
Canterbury	20
Exeter	20
Oxford	20
Thetford	20
Stamford	14

FIGURES

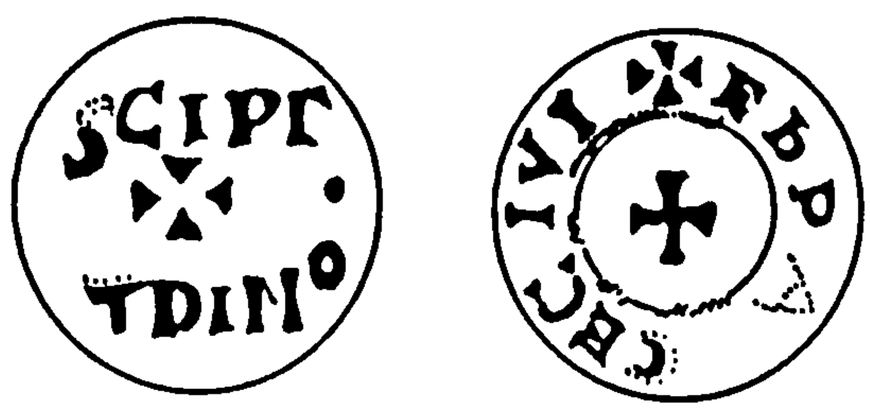
Fig 1



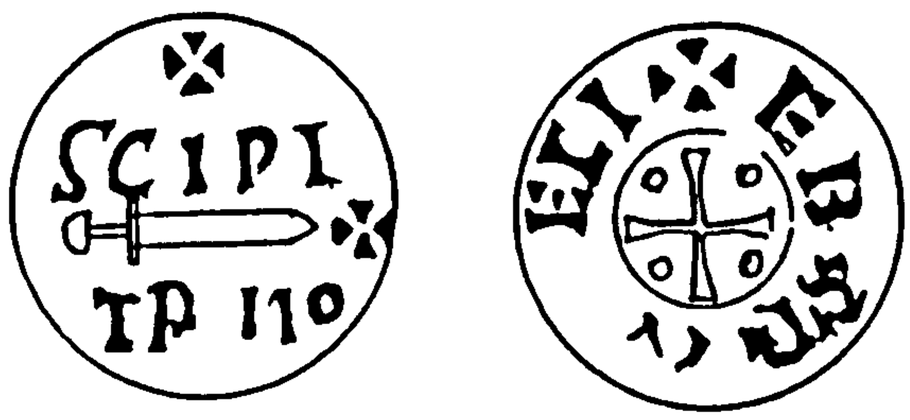
Mints of Athelstan, 924-39



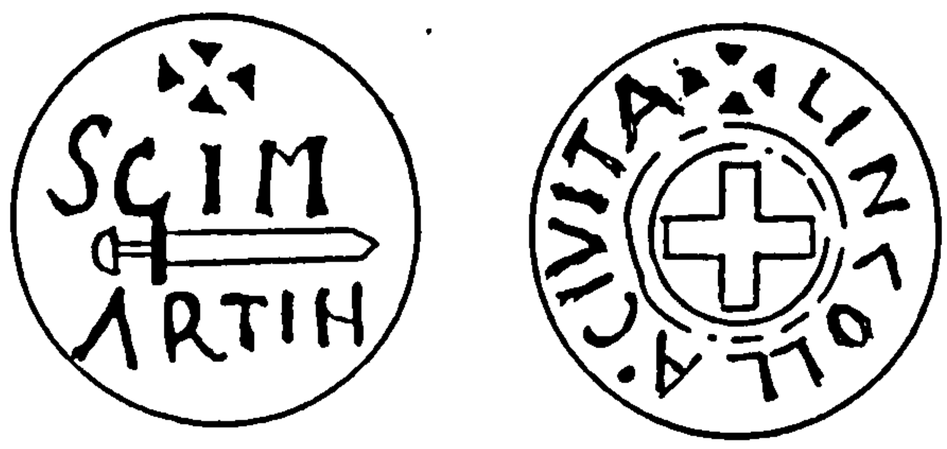
Mints of Edgar and Edward the Martyr not known to have operated for Athelstan



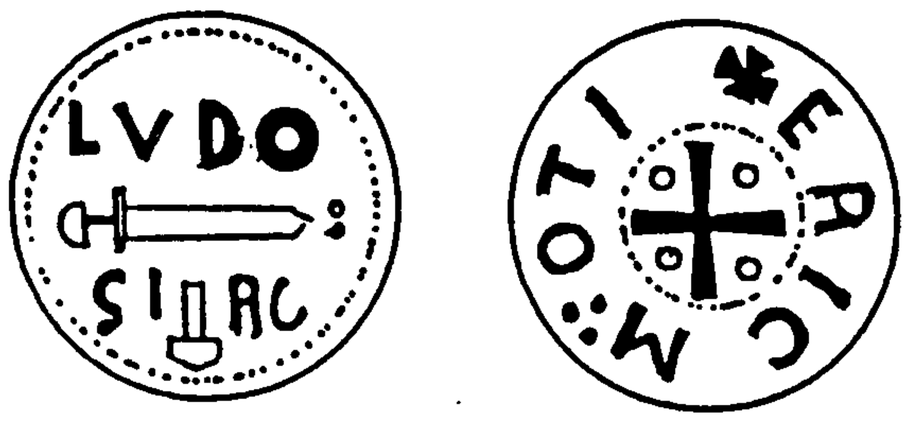
Swordless St Peter



Sword St Peter



St Martin

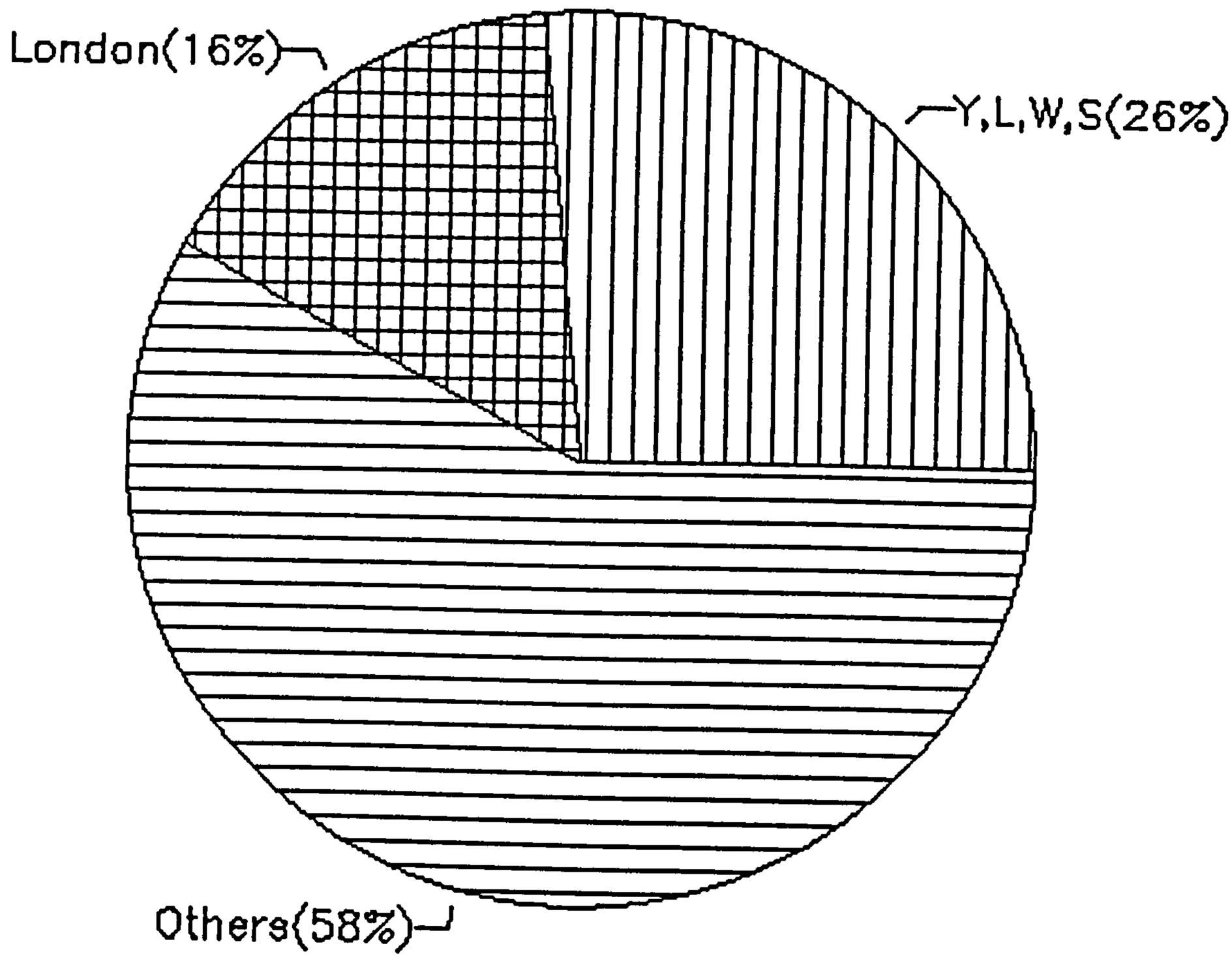


Sihtric Coach

FIG 2 'Viking' coins of the early tenth-century

Fig 3

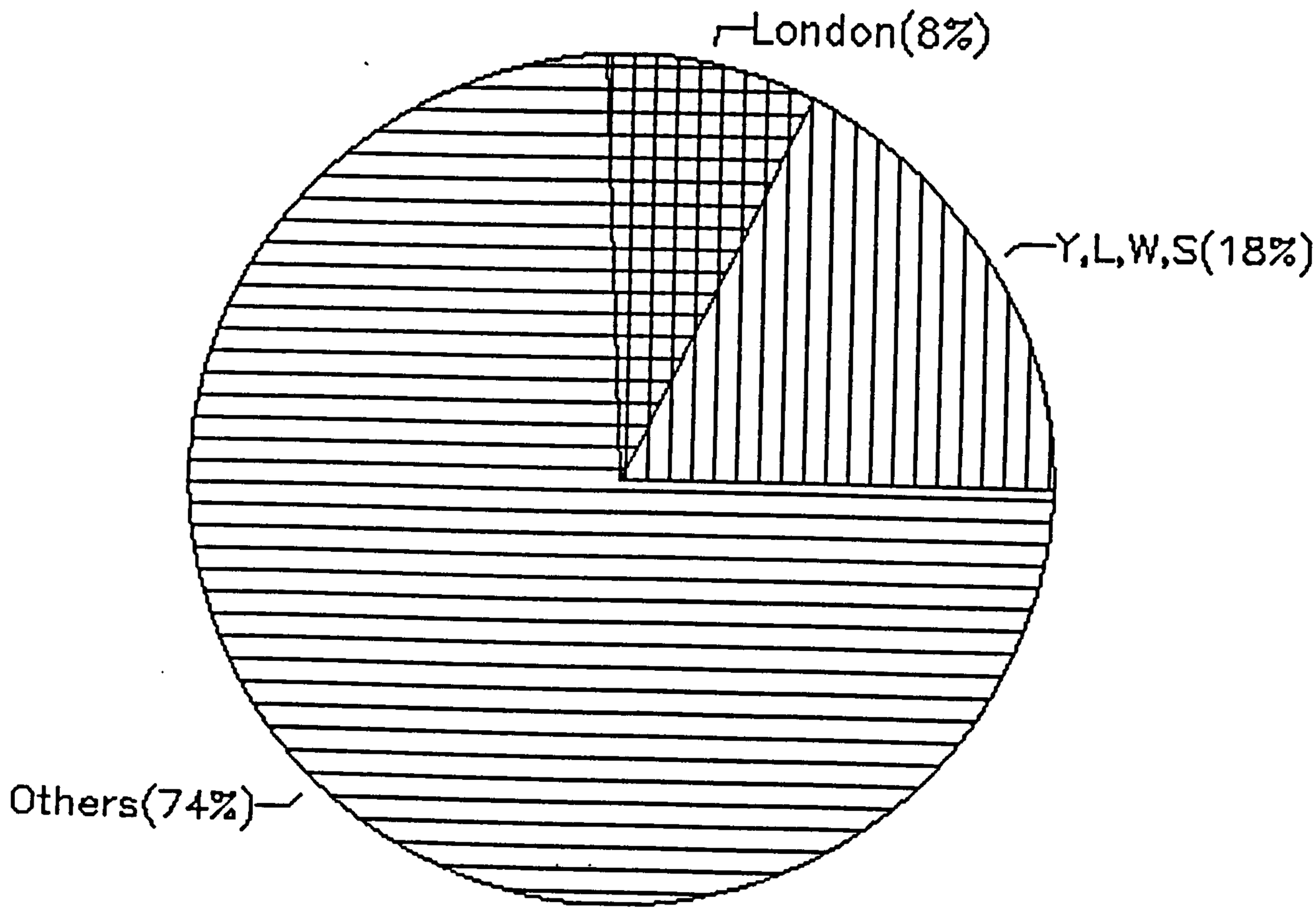
Likely Number of Moneyers Active During Pacx (1042-44)



Y,L,W,S York Lincoln Winchester and Stamford

Fig 4

Likely Number of Moneyers Active During Hammer Cross



Y,L,W,S York Lincoln Winchester and Stamford

Fig 5

Sources of Lincoln Coin from the reign of Edward the Confessor

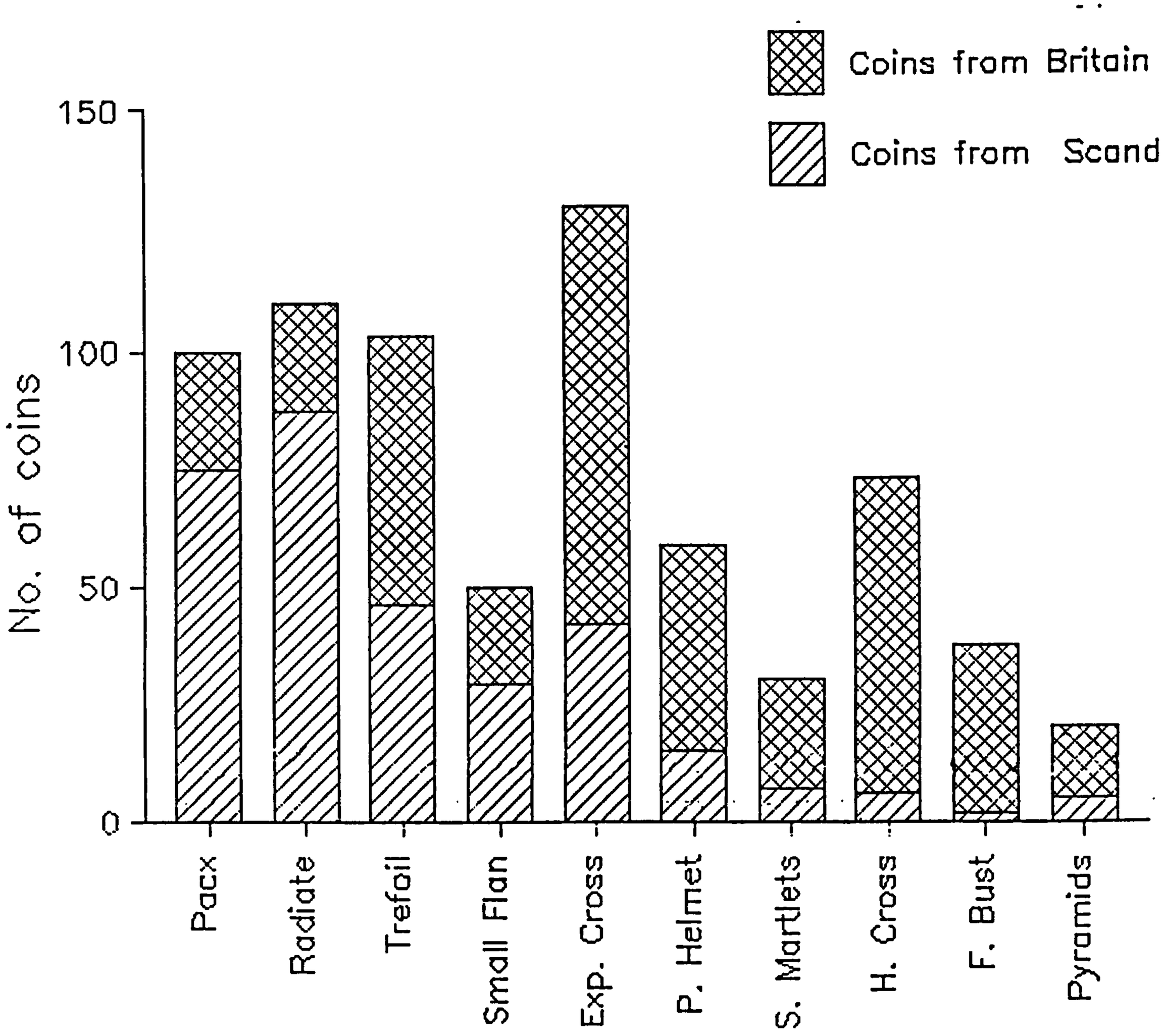


Fig 6

Sources of all Coin from the reign of Edward the Confessor

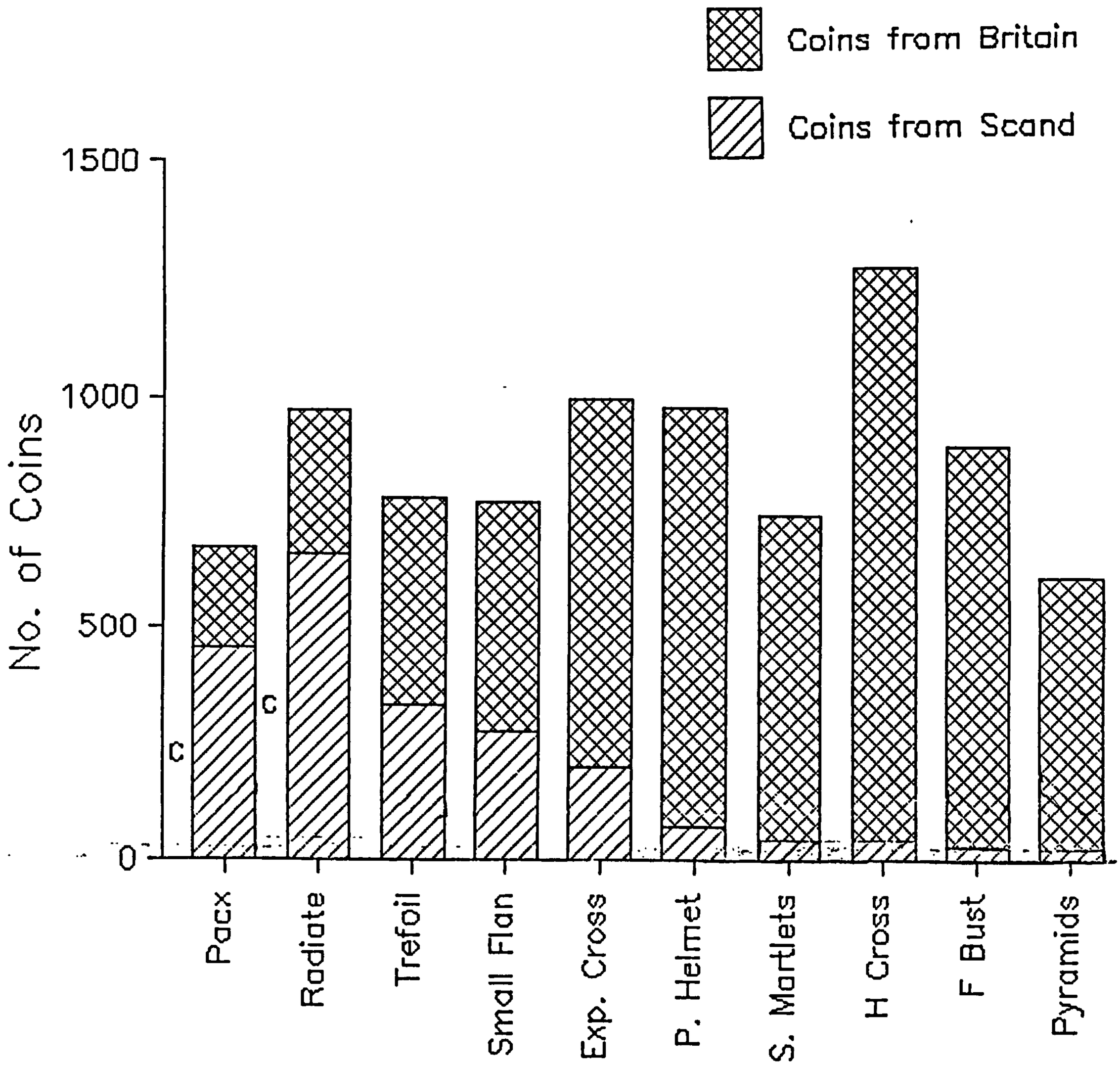


Fig 7

Sources of Coin from Western Mints in the reign of Edward

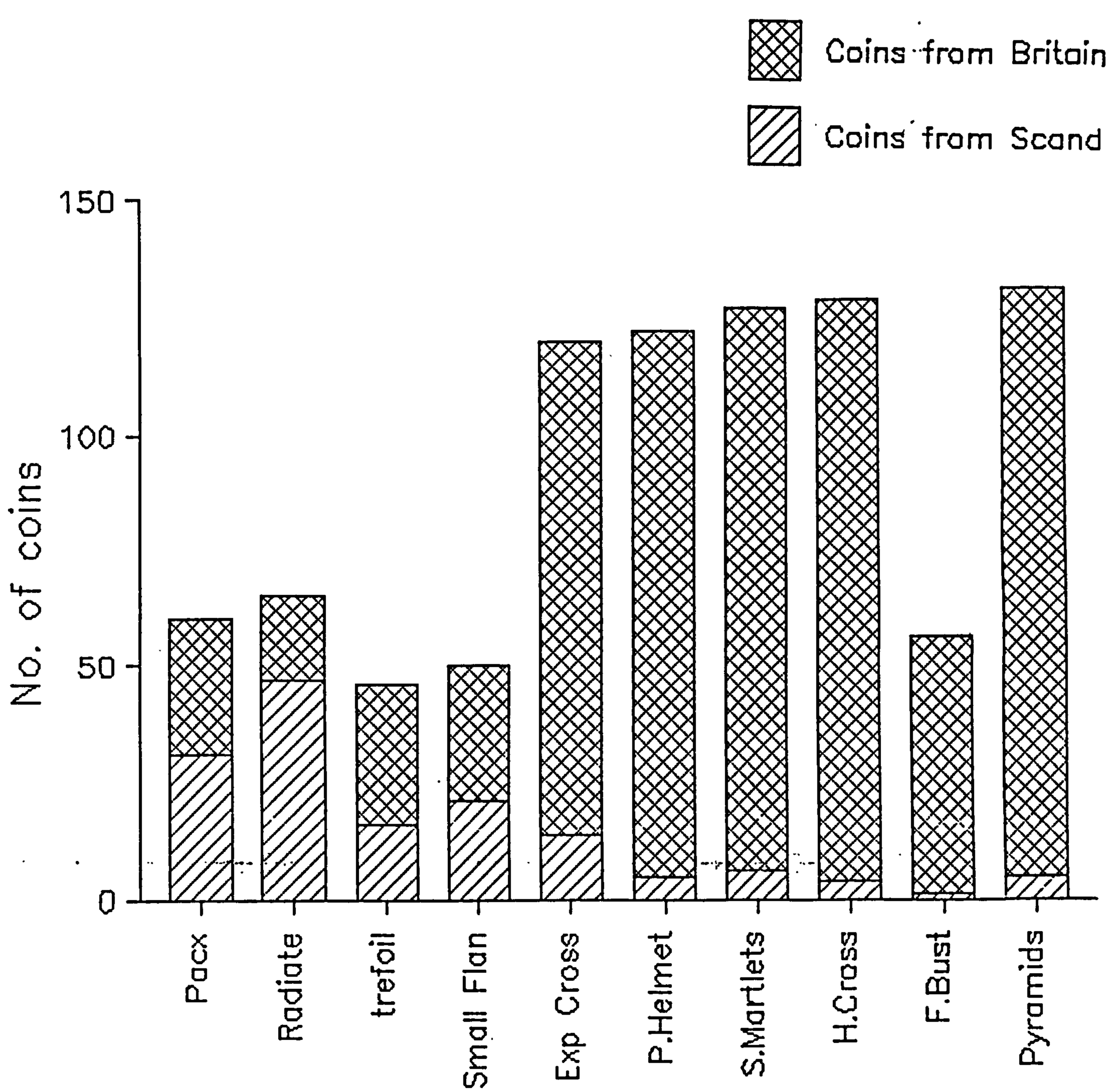
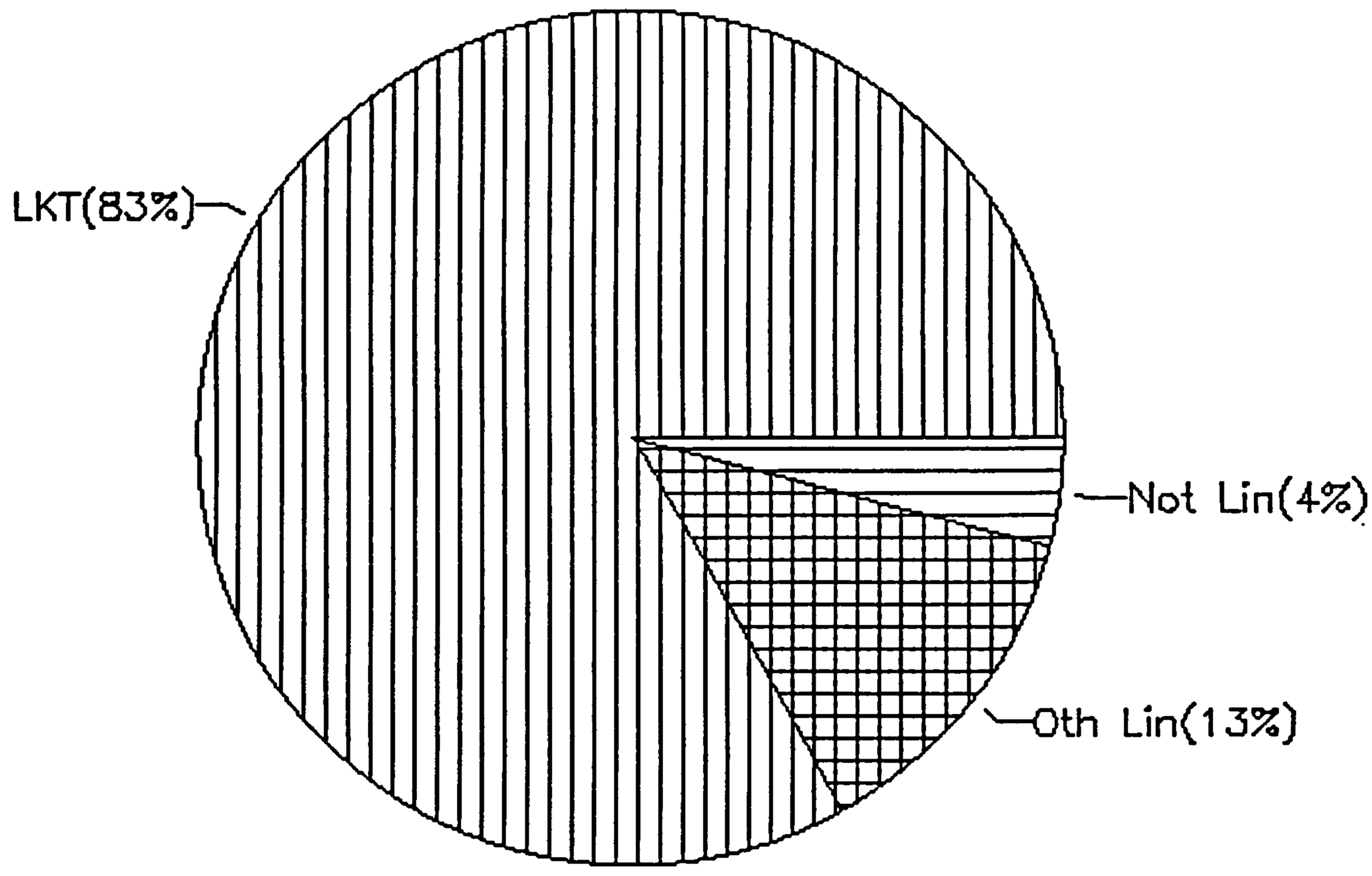


Fig 8: Source of Flaxengate Pottery Finds c.870–940



Flaxengate Terminology Ware Type		Sub Group	Fabric Code	New Terminology	New Code
Lincoln		a	C/5/m/1	Lincoln Late Saxon Shelly group E	LSh E
Early		b	C/5/p/20	Lincoln Late Saxon Shelly group E	LSh E
Shelly	LES	c	QC/8/p/2	Lincoln Late Saxon Shelly group C	LSh C
		c	QC/8/p/2	Lincoln Late Saxon Shelly group C	LSh C
Lincoln Kiln Type LKT			C/1/p/3	Unchanged	LKT
			C/5/p/14	Unchanged	LKT
Lincoln Saxo-		A	C/5/m/3	Lincoln Late Saxon Shelly group A	LSh A
Norman Shelly	LSNS	A	C/5/m/4	Lincoln Late Saxon Shelly group A	LSh A
		A	C/7/p/2	Lincoln Late Saxon Shelly group A	LSh A
		A	C/7/p/3	Lincoln Late Saxon Shelly group A	LSh A
		B	C/7/m/2	Lincoln Late Saxon Shelly group B	LSh B
		B	C/7/p/4	Lincoln Late Saxon Shelly group B	LSh B
		B	C/7/p/5	Lincoln Late Saxon Shelly group B	LSh B
		C	QC/6/m/1	Lincoln Late Saxon Shelly group C	LSh C
		C	QC/8/p/3	Lincoln Late Saxon Shelly group C	LSh C
Lincoln Gritty	LG		Q/15/m/1	All Unchanged	LG
			Q/15/m/2		
			Q/15/m/3		
			Q/15/p/1		
			Q/15/p/2		
			Q/15/p/3		
Lincoln Sandy	LS	1	Q/6/m/1	Late Saxon Lincoln Sandy group A	LSLS A
		1	Q/6/m/2	Split between LSLS A and SNLS A&B	
		1	Q/6/m/11	Late Saxon Lincoln Sandy group A	LSLS A
		1	Q/6/m/12	Late Saxon Lincoln Sandy group A	LSLS A
		1	Q/8/m/1	Split between LSLS A and SNLS A&B	
		1	Q/8/m/2	Saxo-Norman Lincoln Sandy group B	SNLS B
		2	Q/8/m/3	Split between LSLS B and SNLS A	
		2	Q/10/m/1	Split between SNLS A & B	
		2	Q/10/p/9	Late Saxon Lincoln Sandy group B	LSLS B
		2	Q/11/m/1	Late Saxon Lincoln Sandy group B	LSLS B
		3	Q/4/m/1	Early Lincoln Sandy Ware group C	ELSW C
		3	Q/6/m/3	Early Lincoln Sandy Ware group C	ELSW C
		3	Q/6/m/4	Early Lincoln Sandy Ware group C	ELSW C
		3	QC/8/m/1	Lincoln Late Saxon Shelly group C	LSh C
		4	Q/6/m/5	Split between ELSW A & B	
		5	Q/10/m/2	Split between ELSW A and SNLS A & B	

Fig 9 Revised Lincoln Pottery Terminology

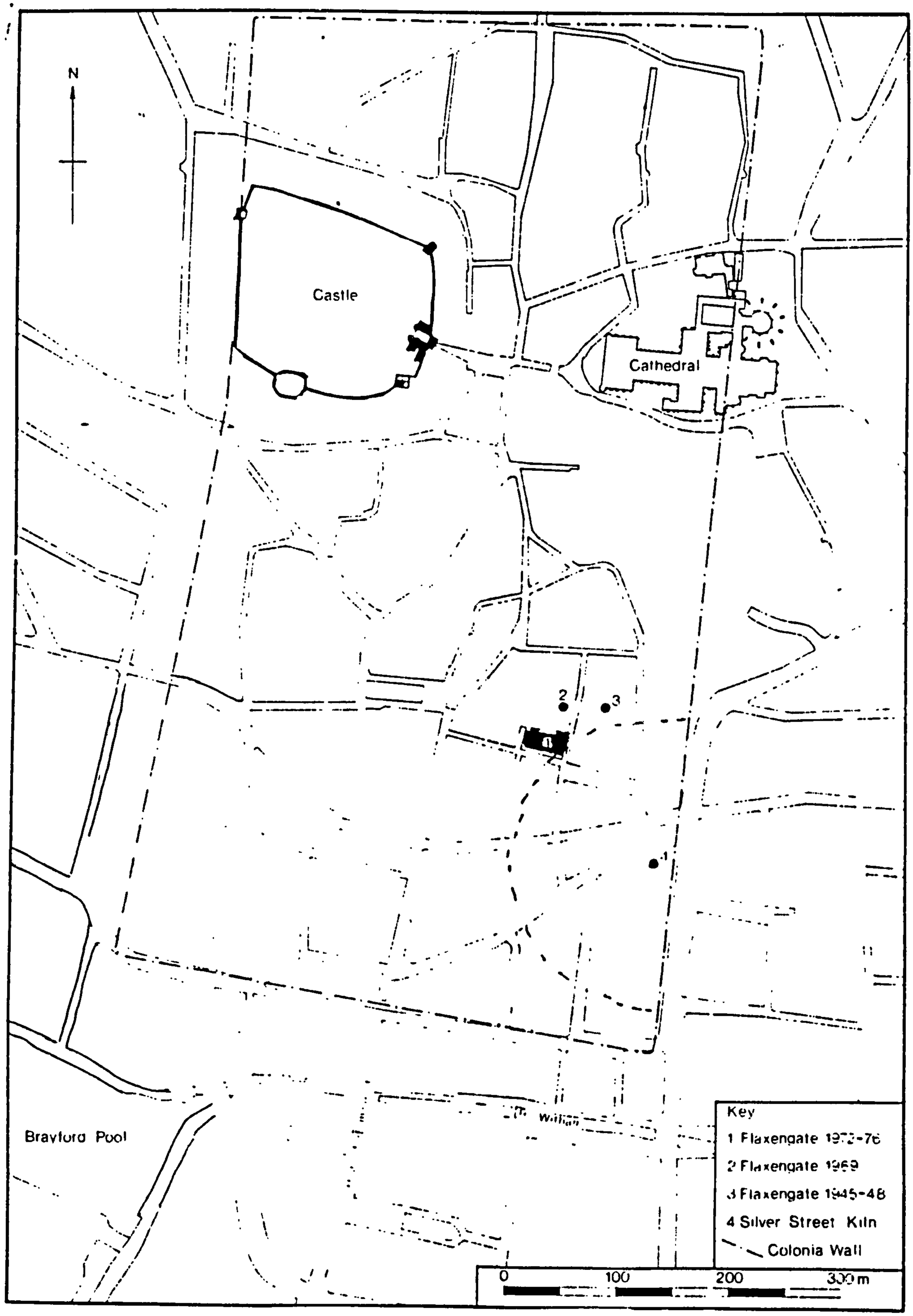


Fig 10 Excavations at Flaxengate

Fig 11

Pottery Finds from Flaxengate (Obsolete Data)

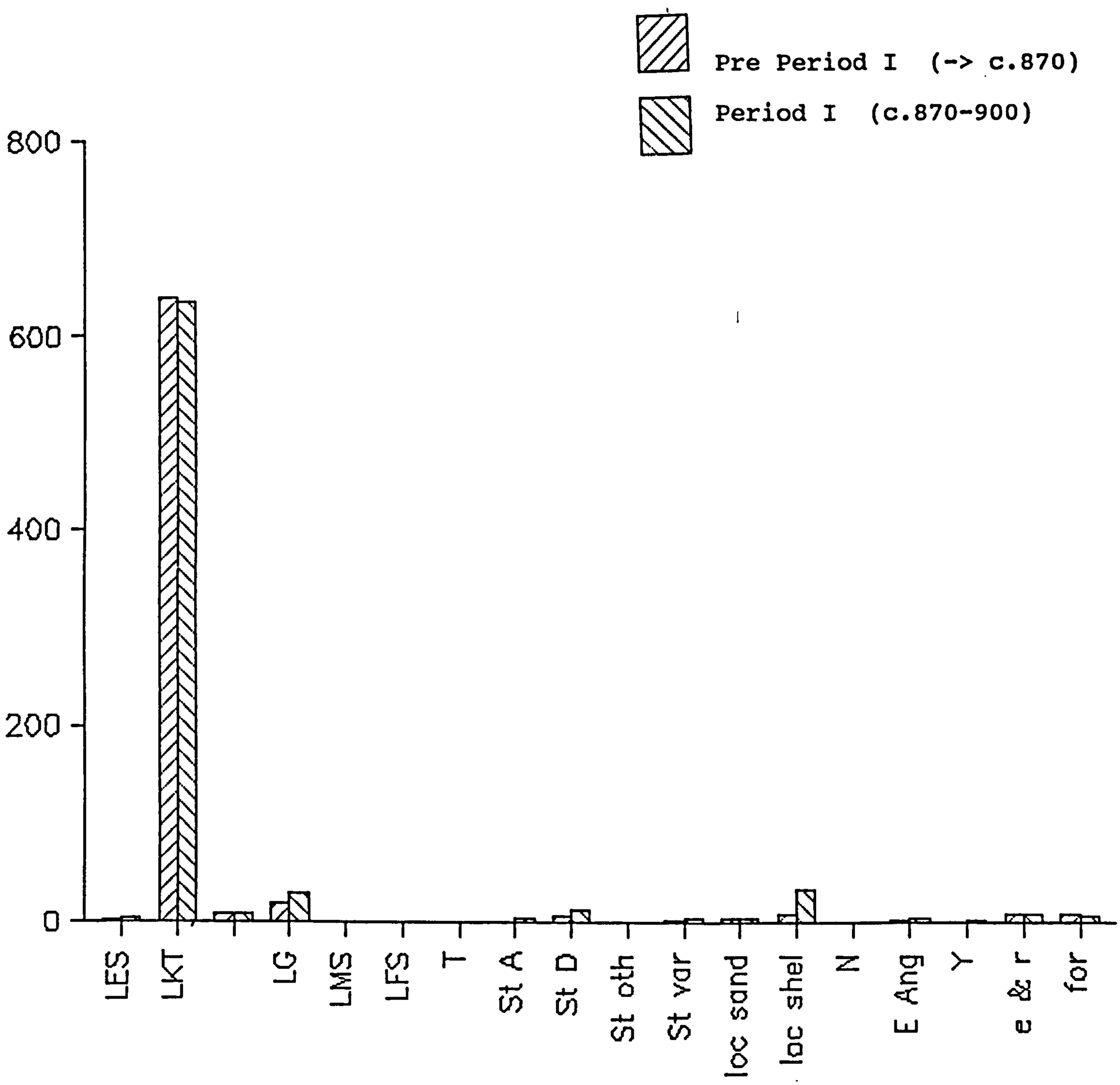


Fig 12 Flaxengate Pottery Finds c.1000–70

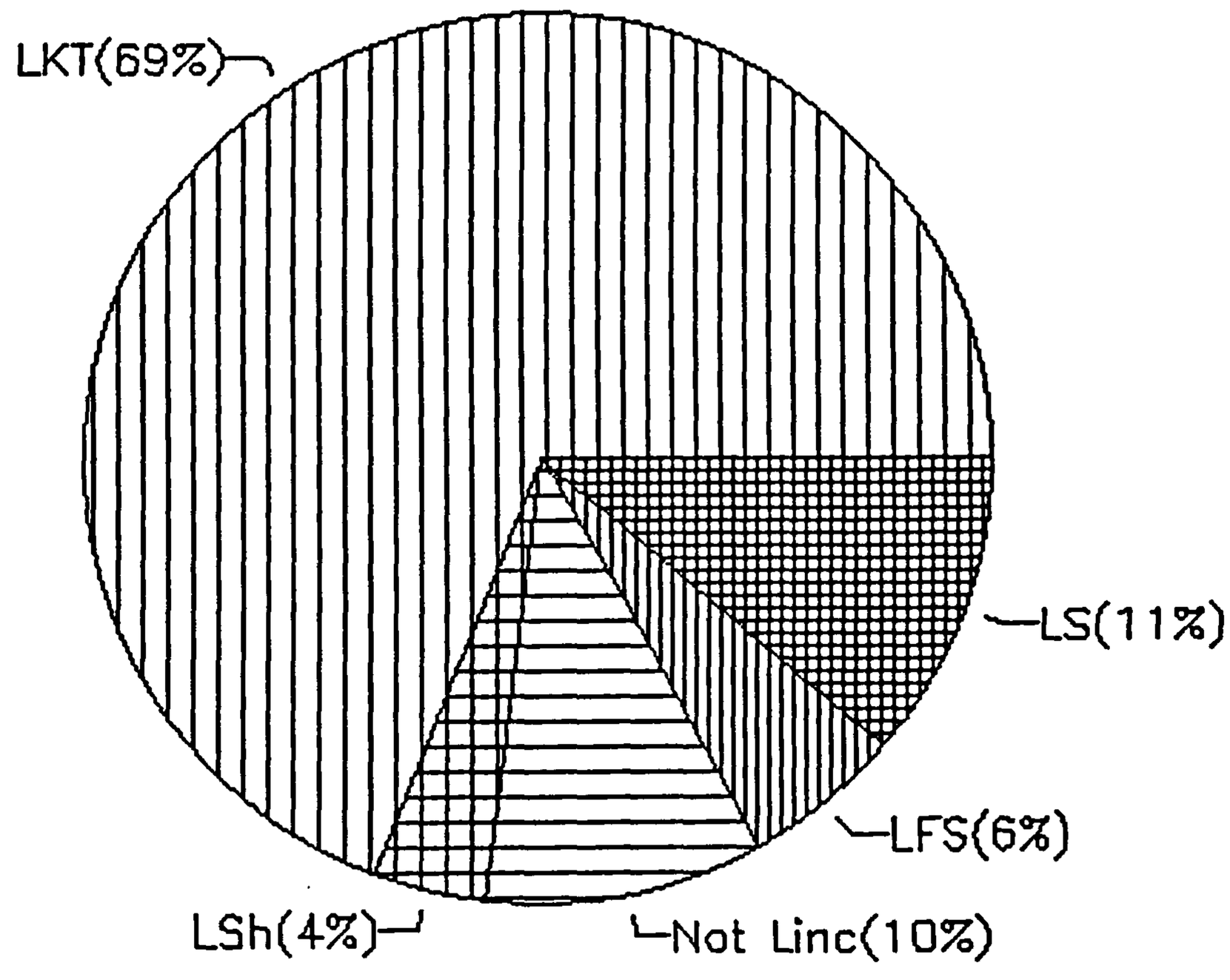


Fig 13

Pottery in Lincoln c.870-1100

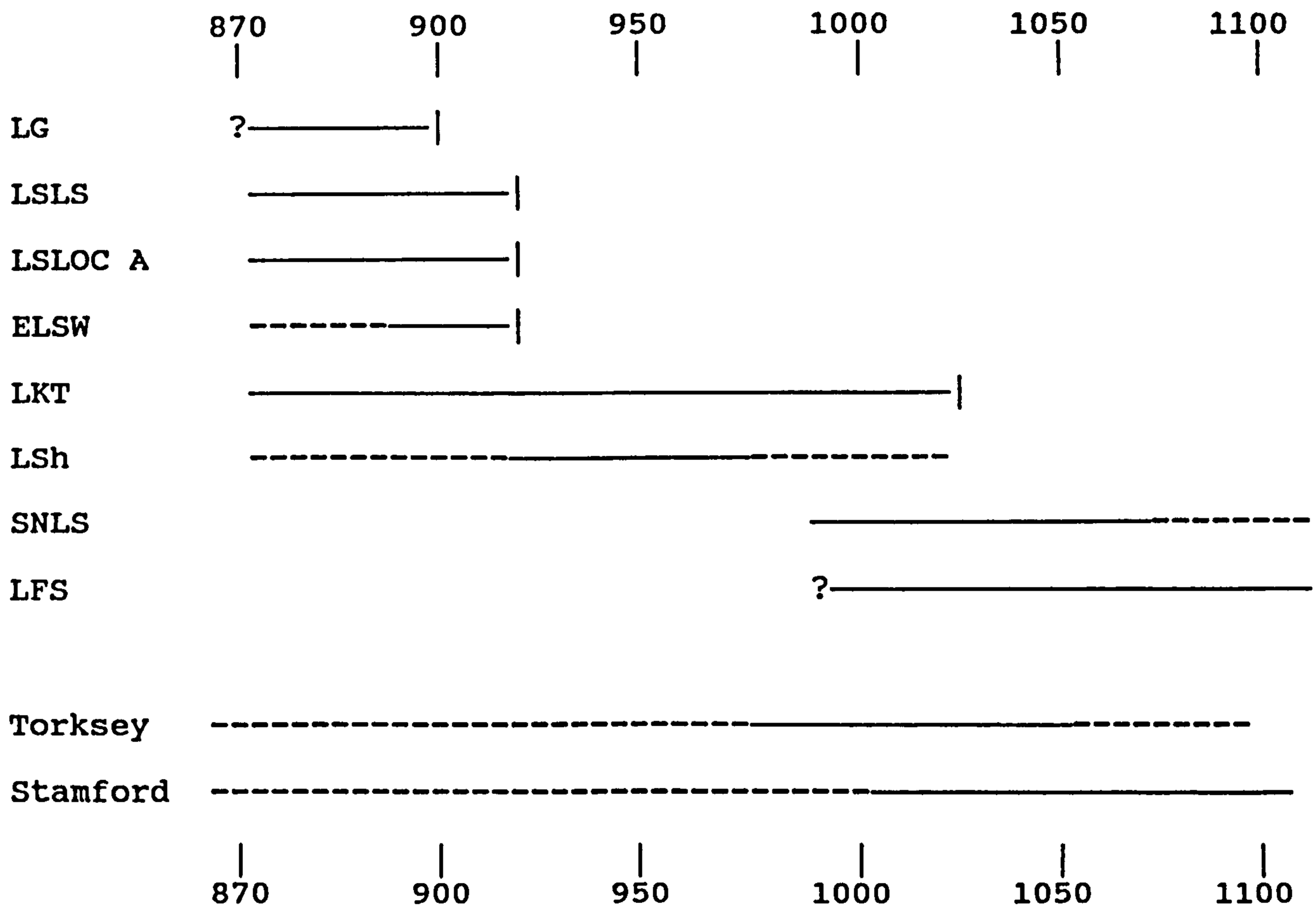


Fig 14: Non Lincoln Pottery found at Flaxengate, c.1000-70

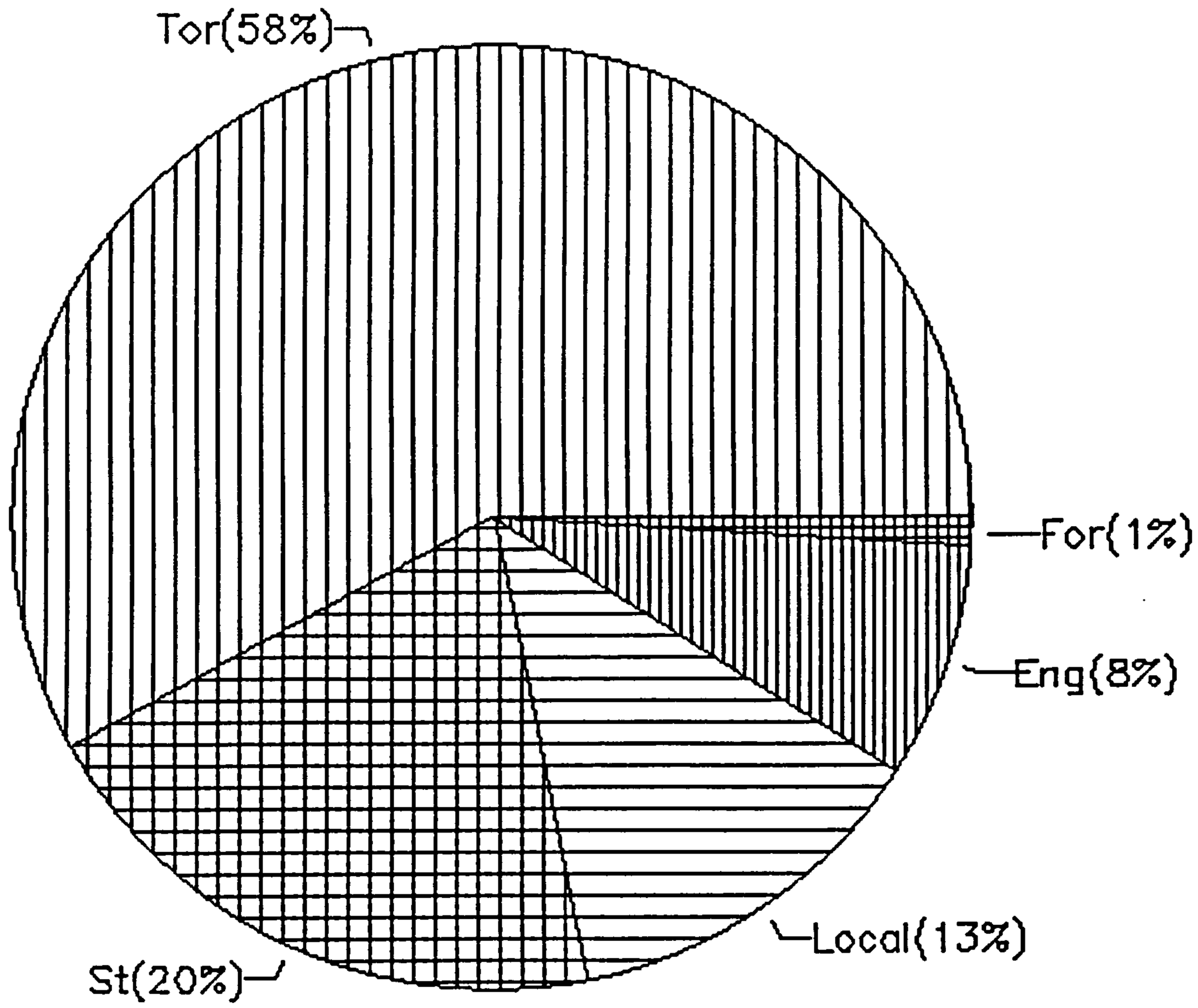
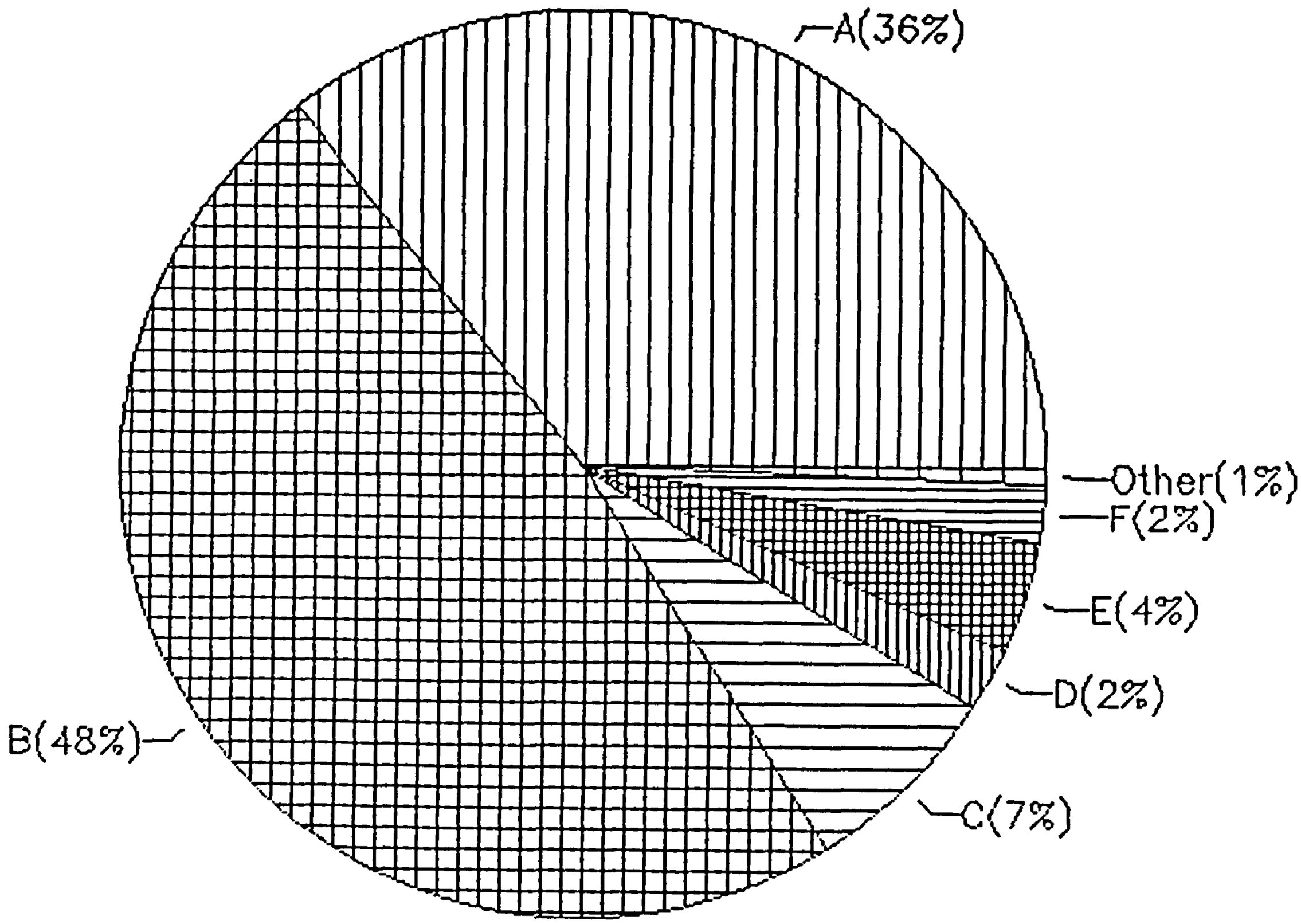


Fig 15

Pottery from Goltho, c.800-1100



Key

A	Shell Tempered Ware
B	Harsh Shell Tempered Ware
C	Grey Sandy Ware
D	Torksey Ware
E	Stamford Ware
F	Splash Glazed Ware

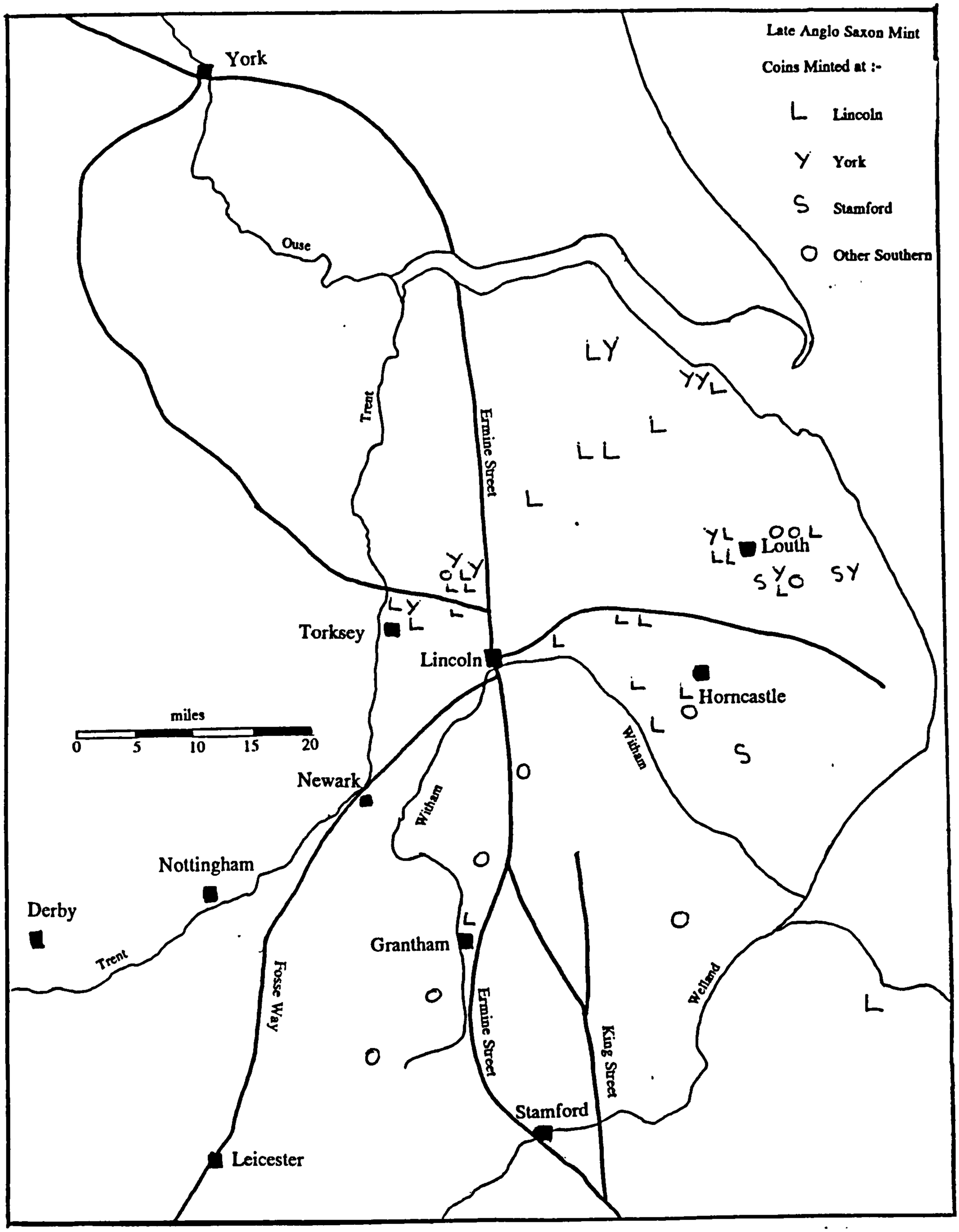


Fig 16 The mints of Lincolnshire Coin Finds 973-1100

Fig 17 Mint of Single Finds from Lincoln

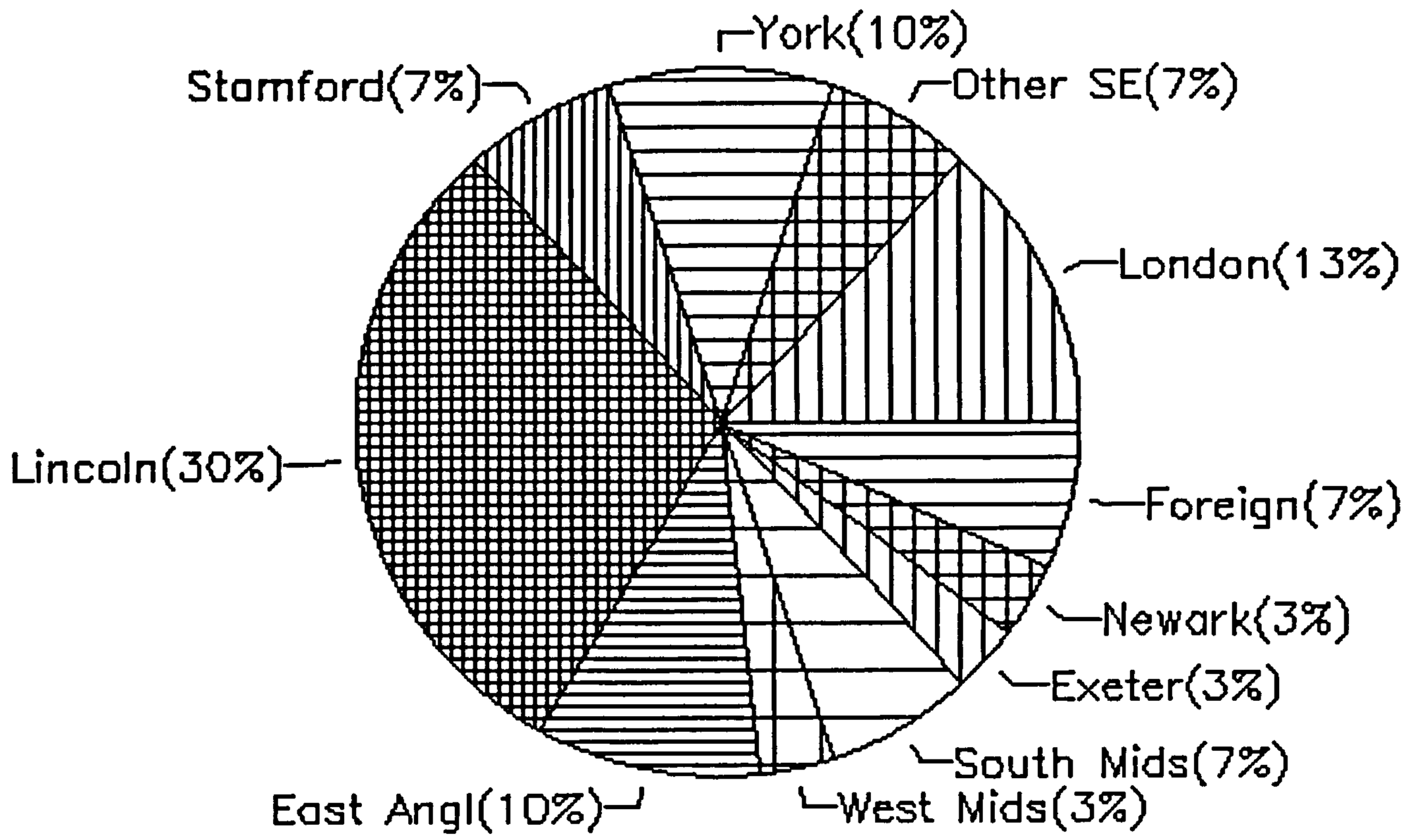


Fig 18 Mint of Single Finds from Lincolnshire (excl Lincoln)

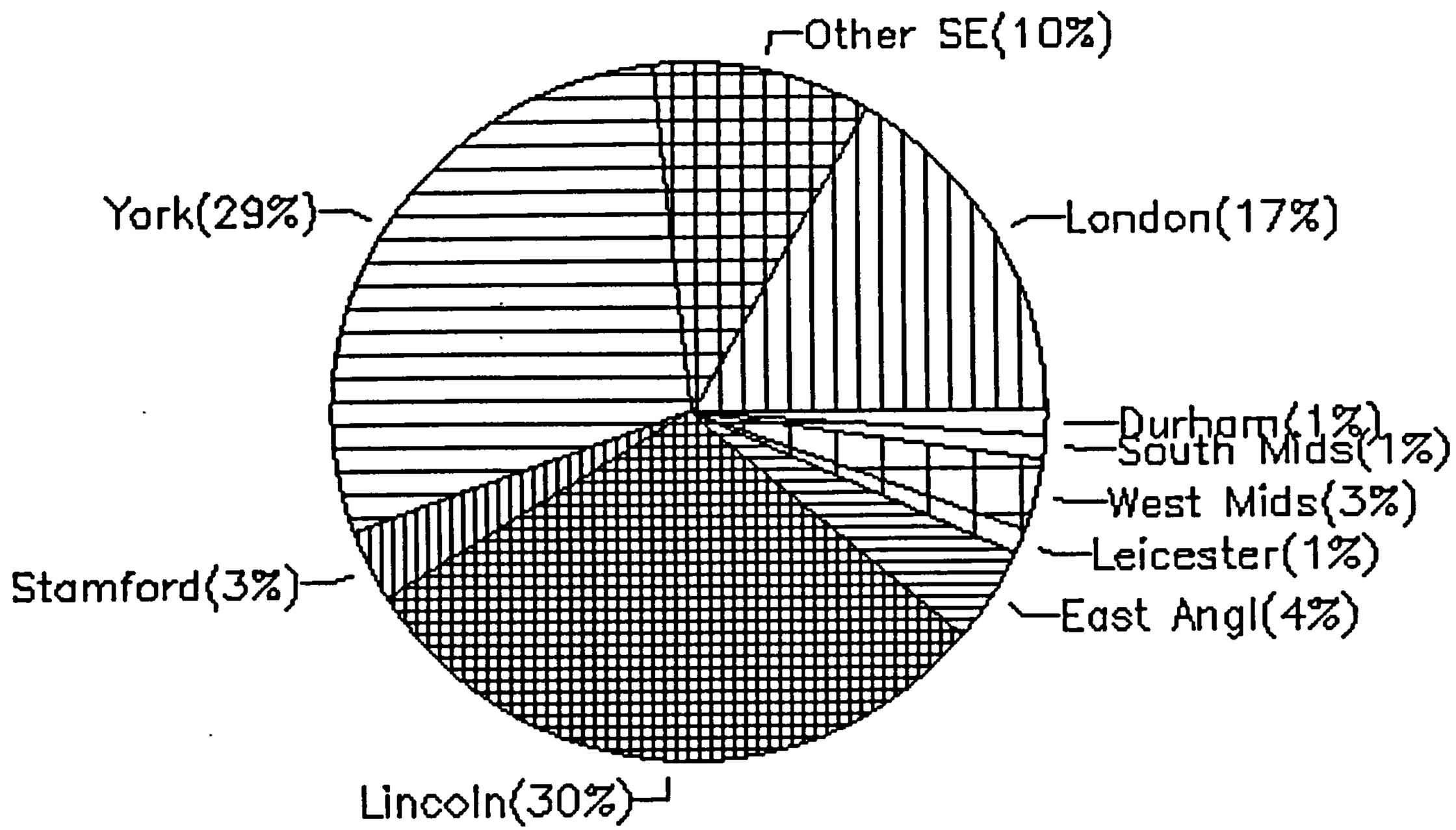


Fig 19 Mint of Single Finds from Lincolnshire(exc Lincoln) c.870-1100

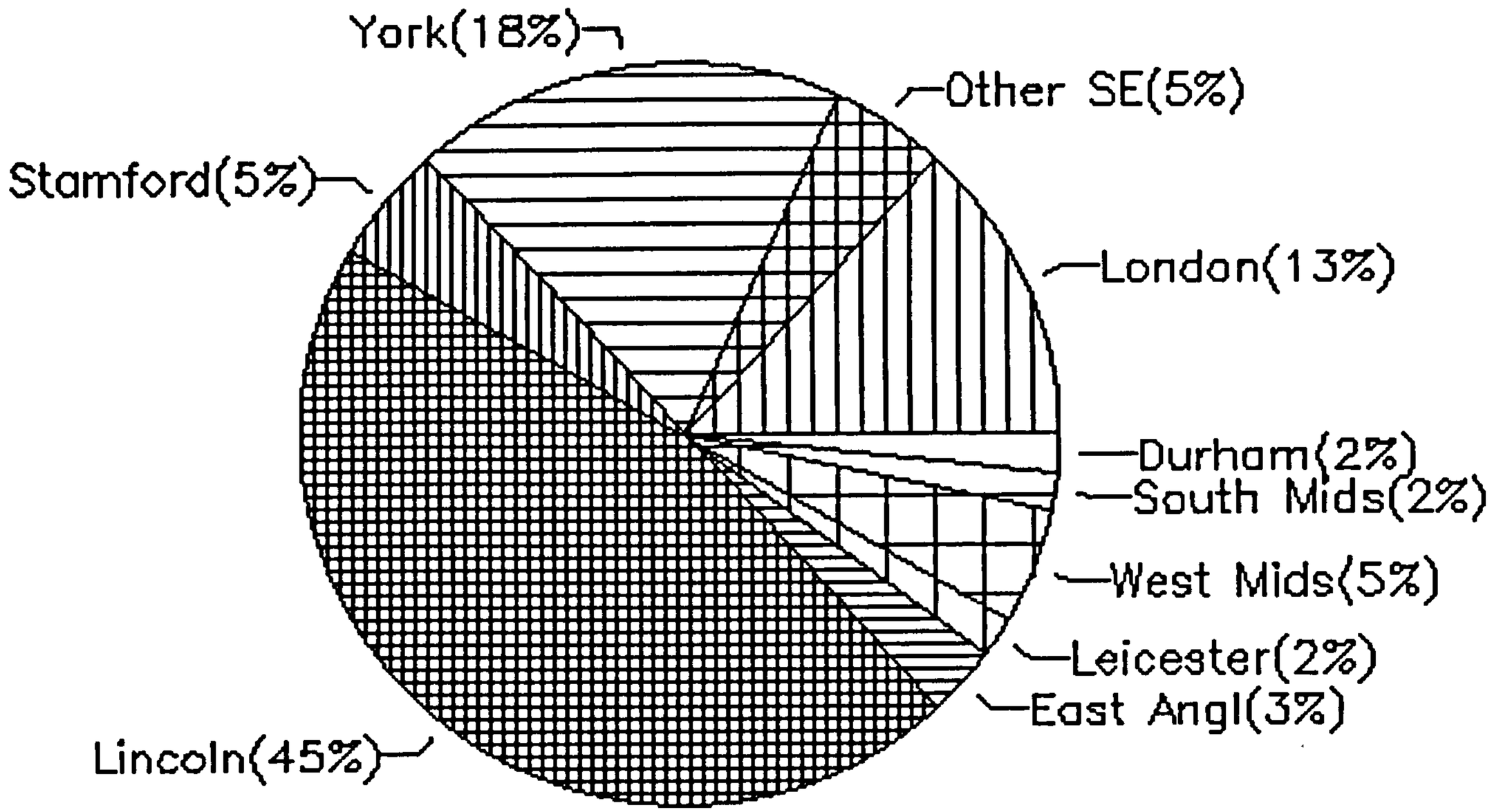


Fig 20 Mint of Lincolnshire Single Coin Finds 800–1100

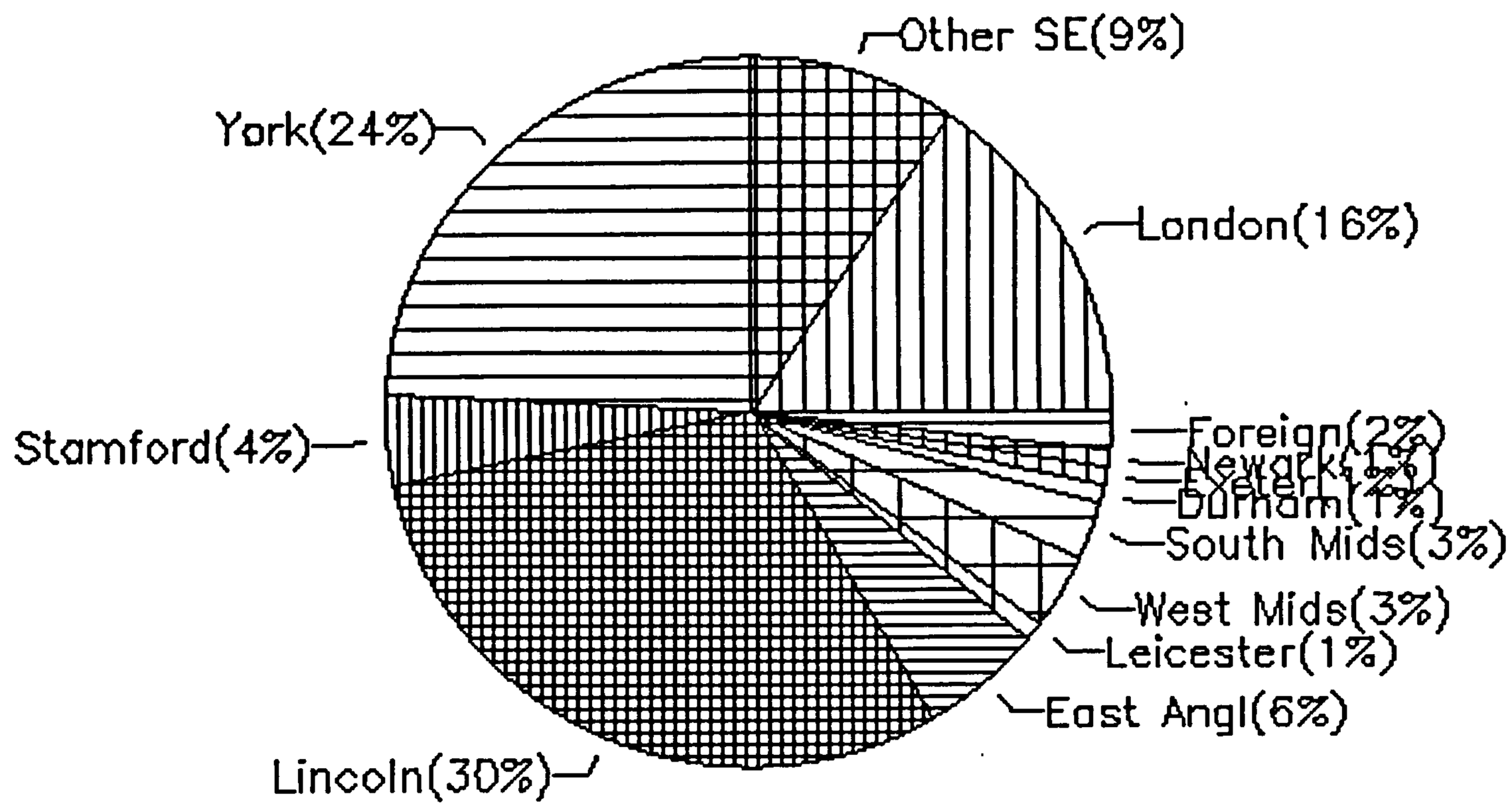
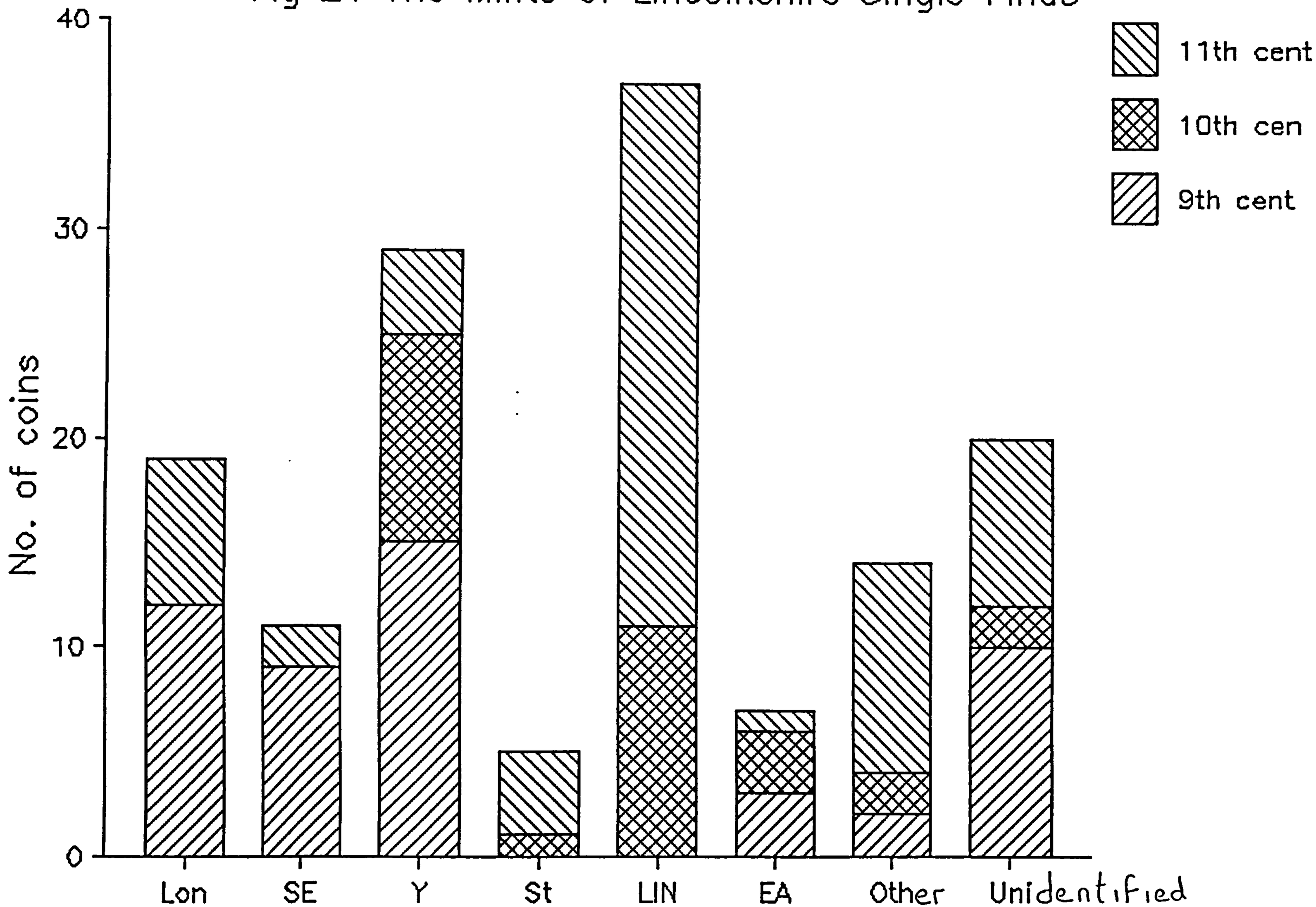


Fig 21 The Mints of Lincolnshire Single Finds



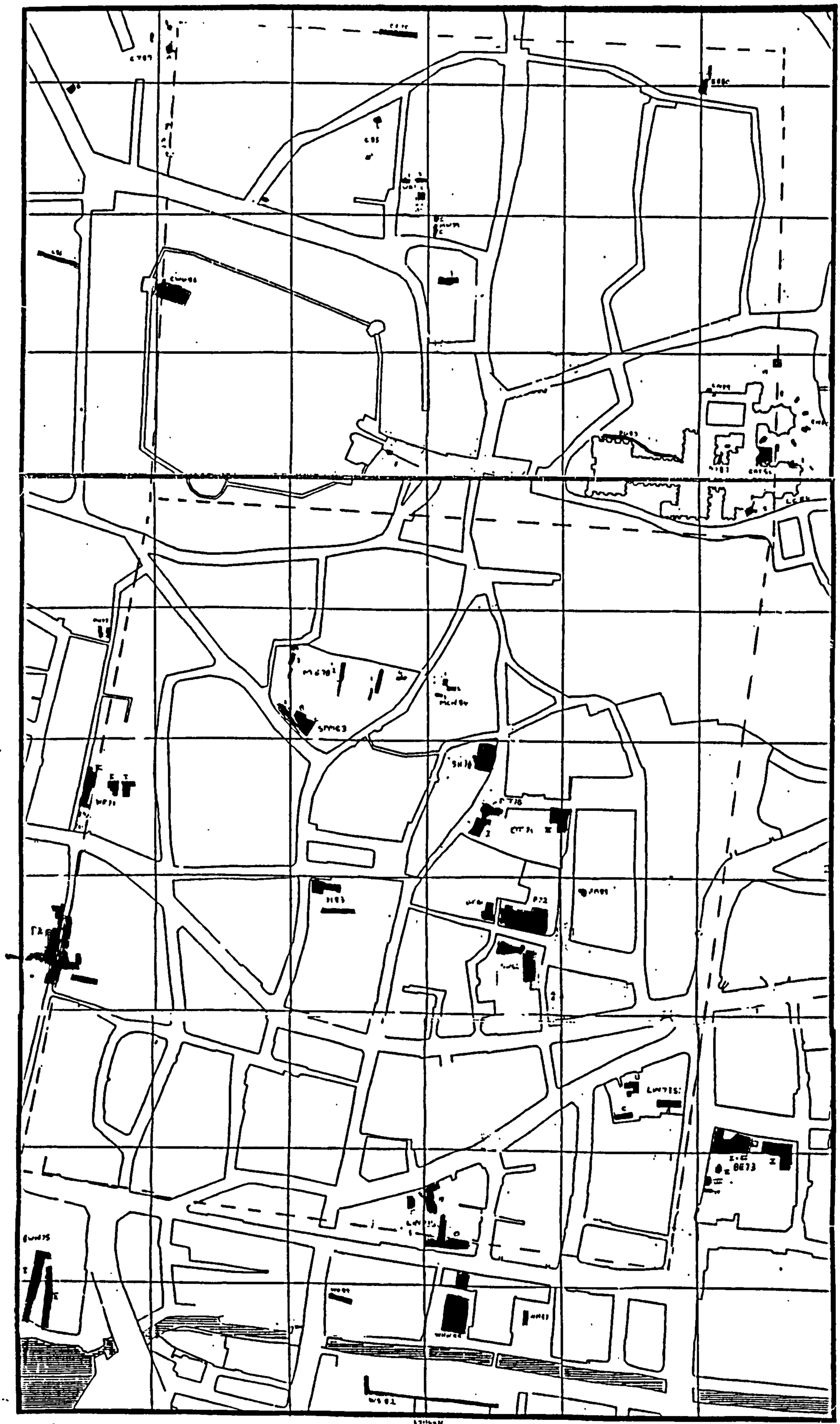


Fig 22 Excavated Areas of Lincoln

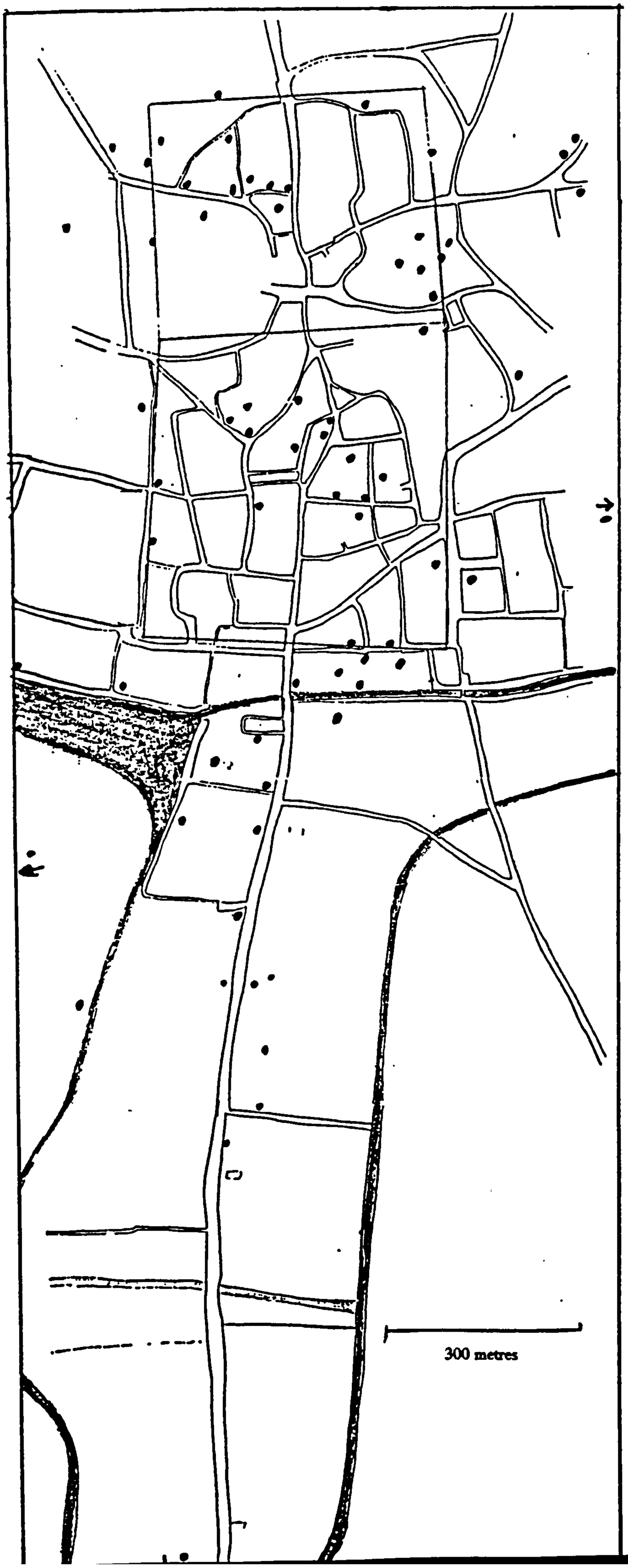


Fig 23

The Location of Archaeological Sites in Lincoln

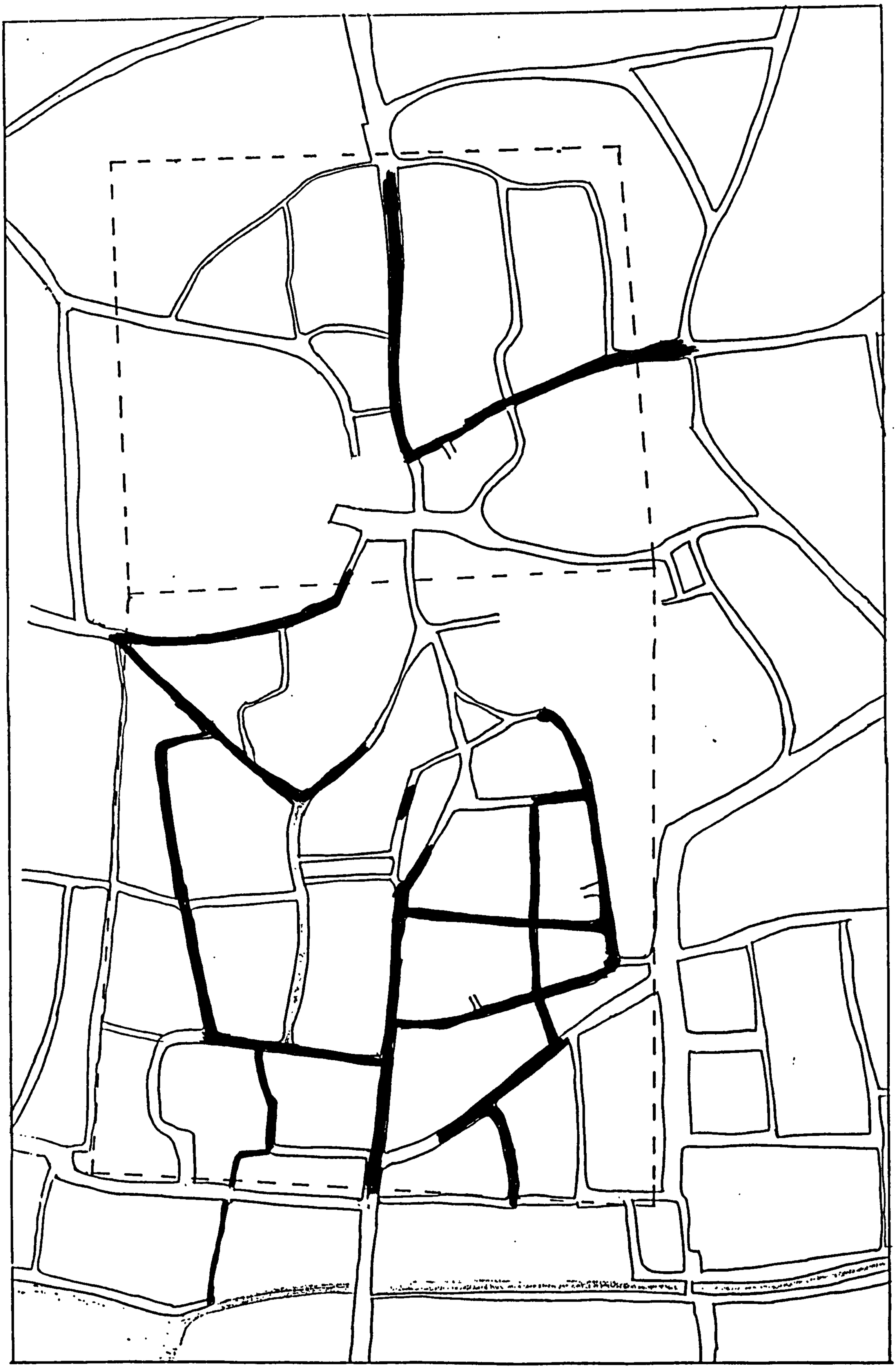


Fig 24 Lincoln Earliest Streets:
As suggested by parish boundary and/or street name evidence.

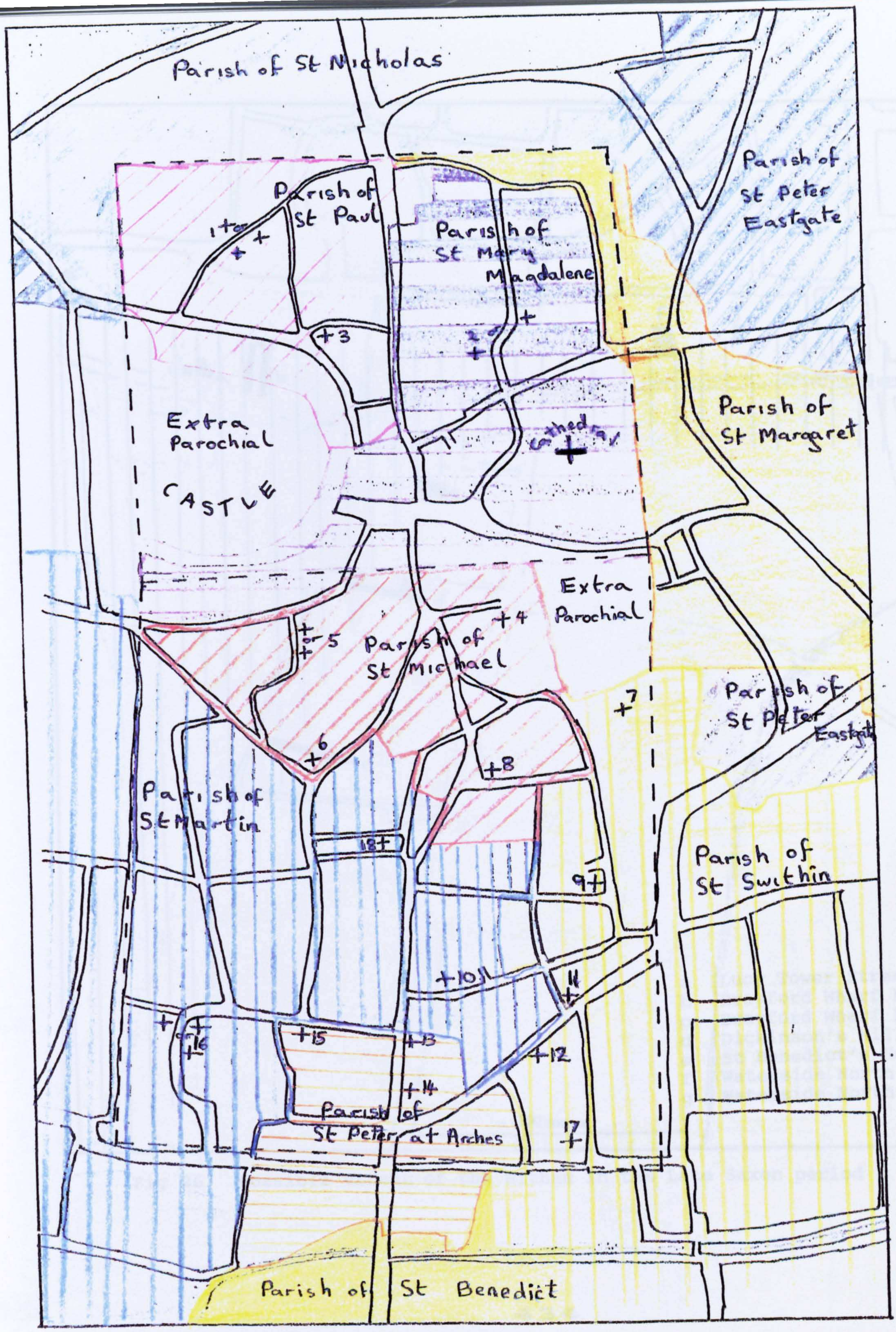


Fig 25 Lincoln: Intra Mural Churches and Early Modern Parishes

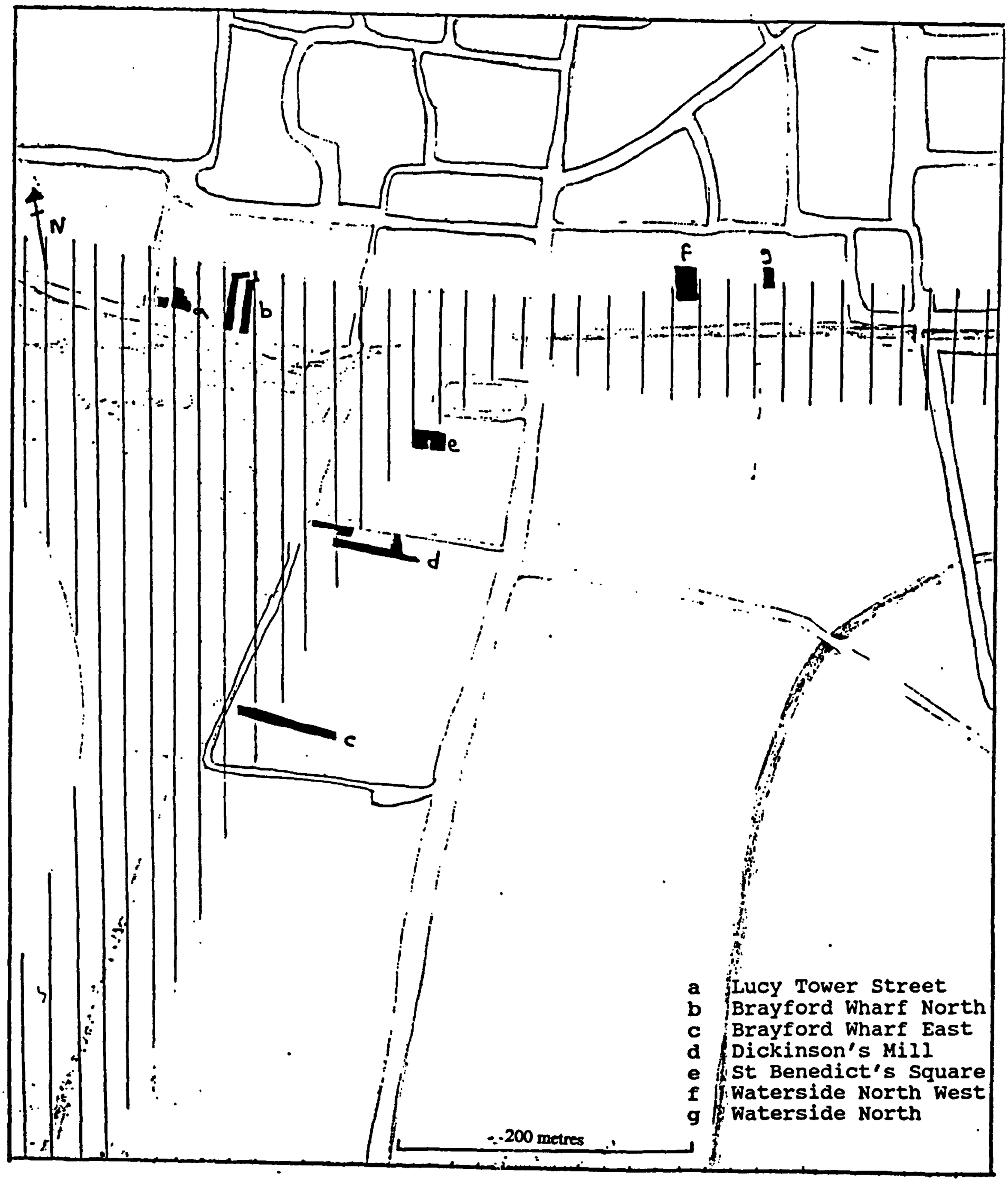


Fig 26 Possible extent of the Witham in the Late Saxon period

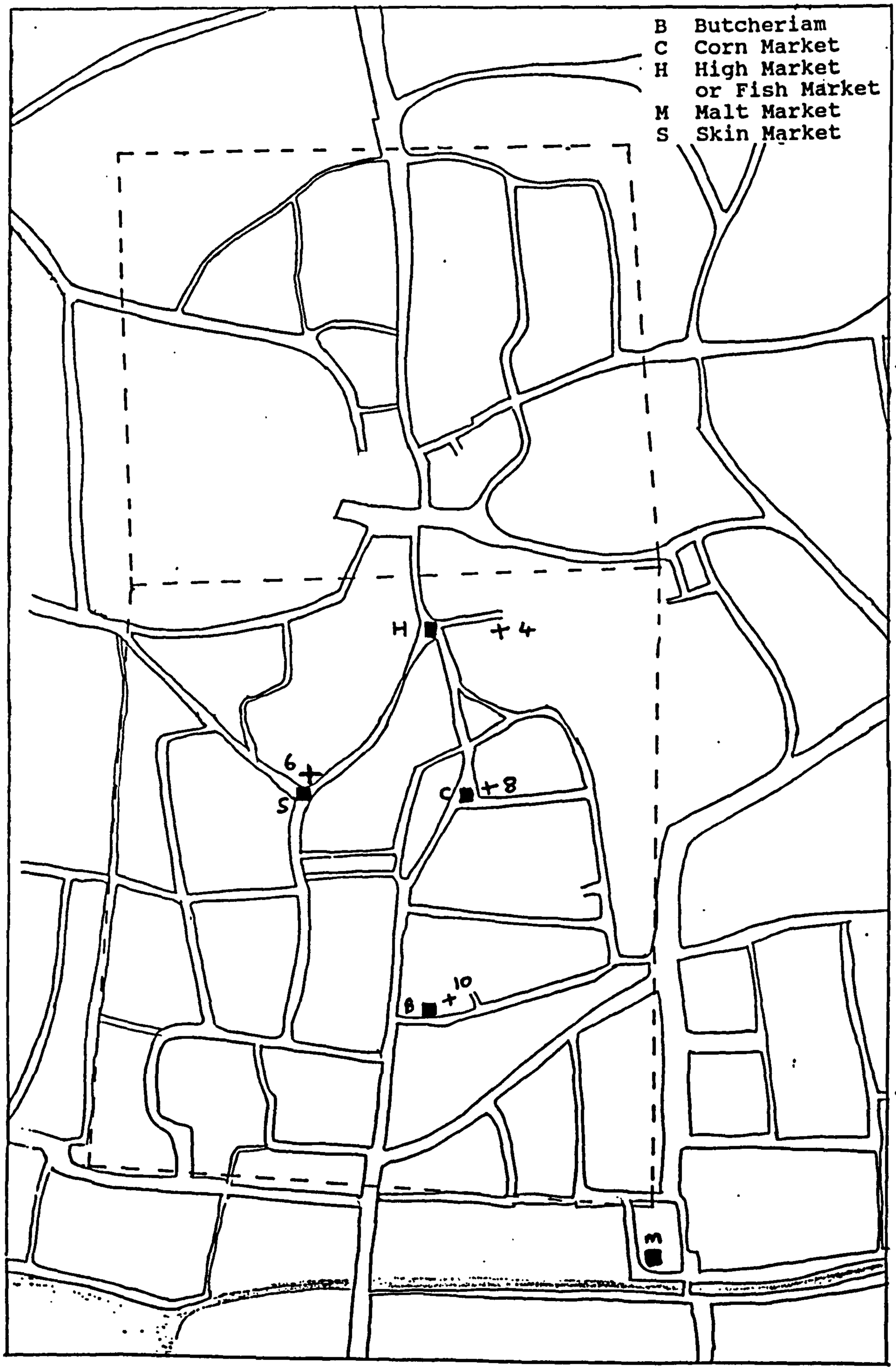
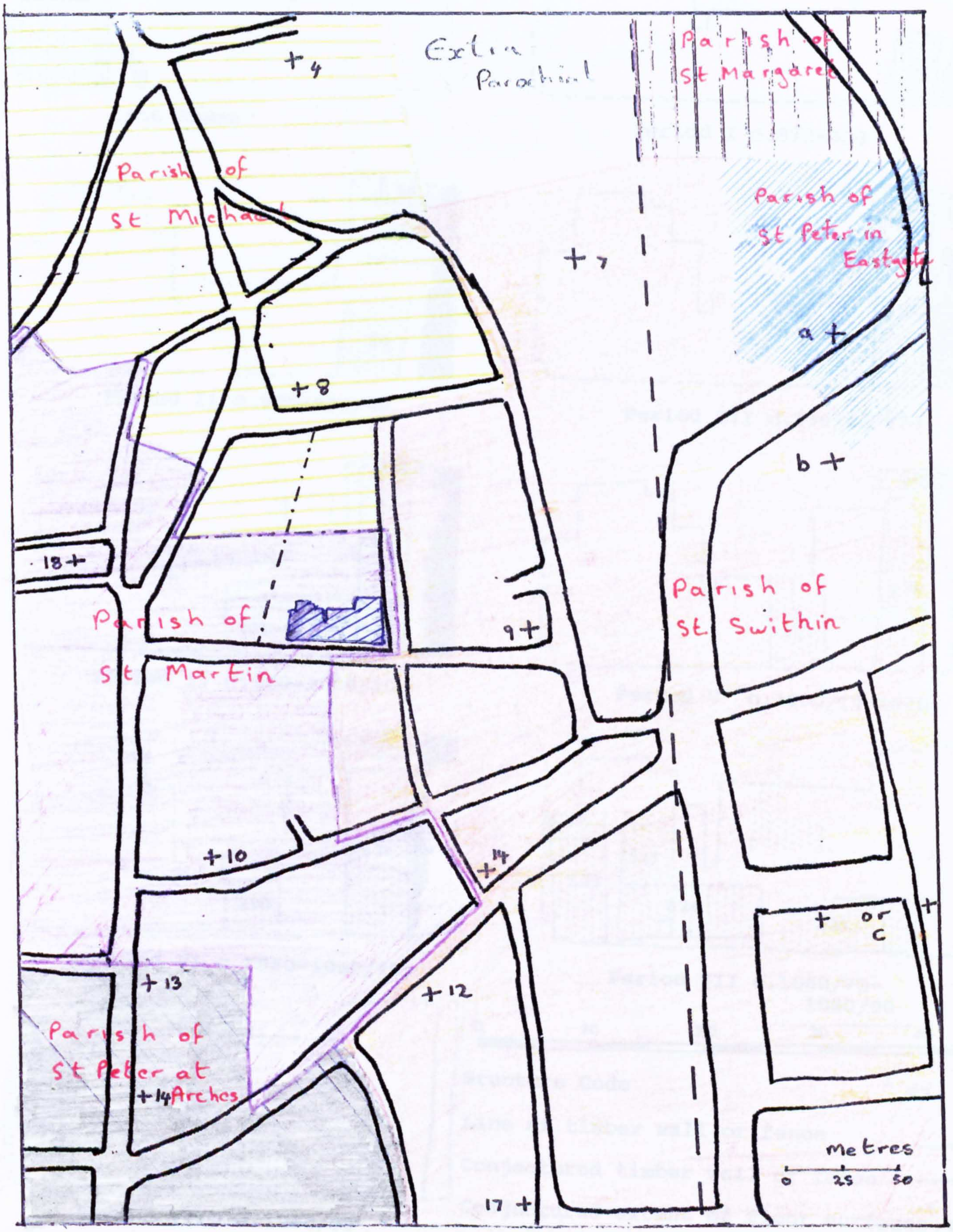


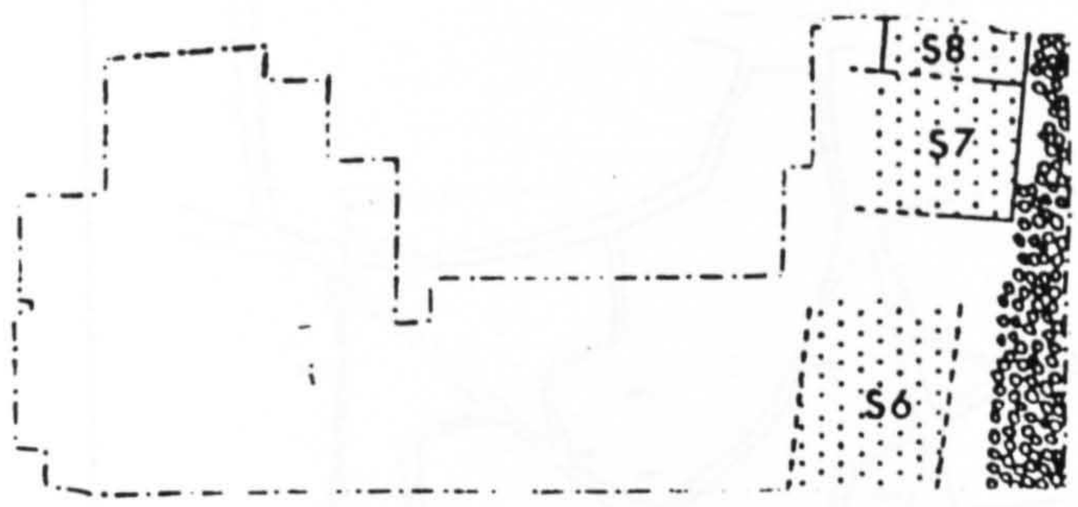
Fig 27 Churches and Market Areas in Early Medieval Lincoln

Fig 28 Churches and Parishes in the vicinity of Flaxengate

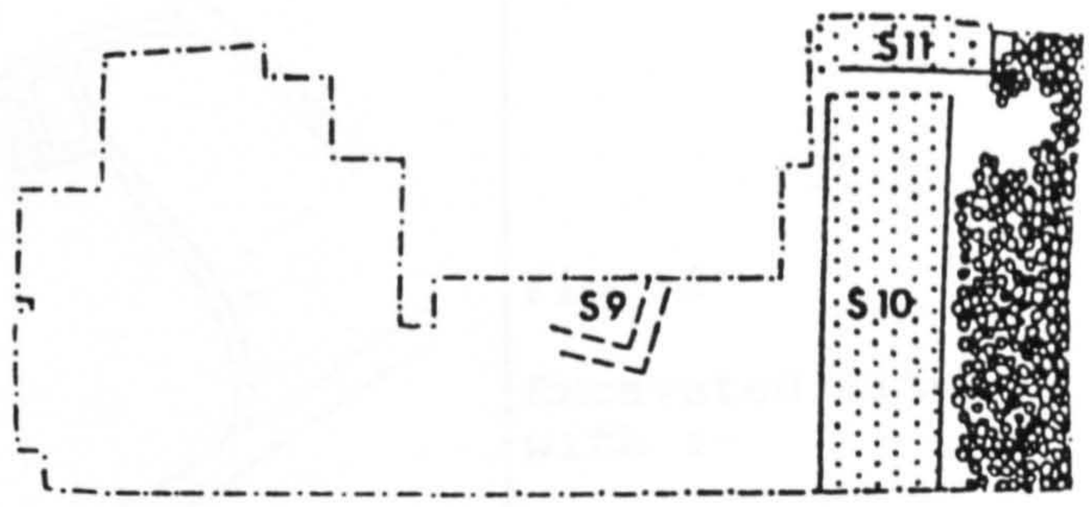


Late Roman

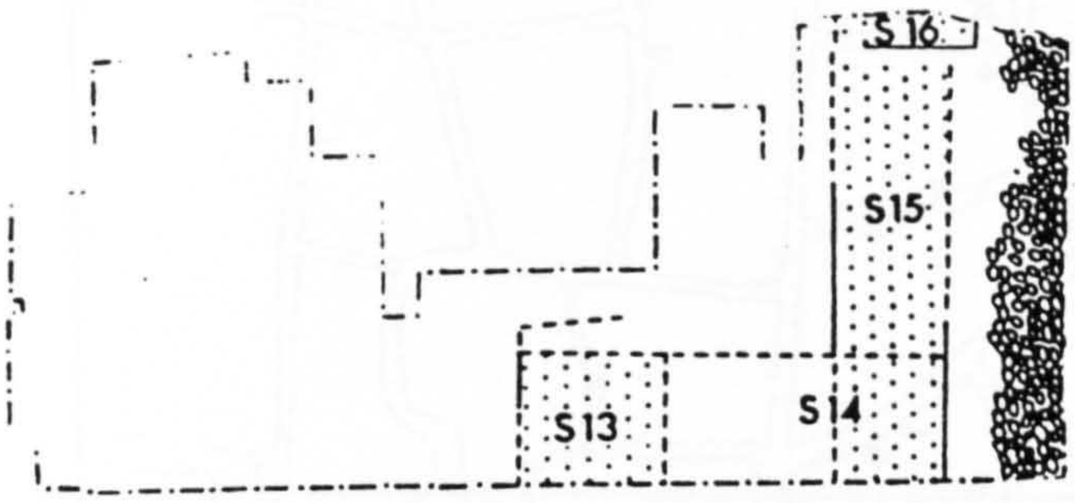
Period I c.870-900



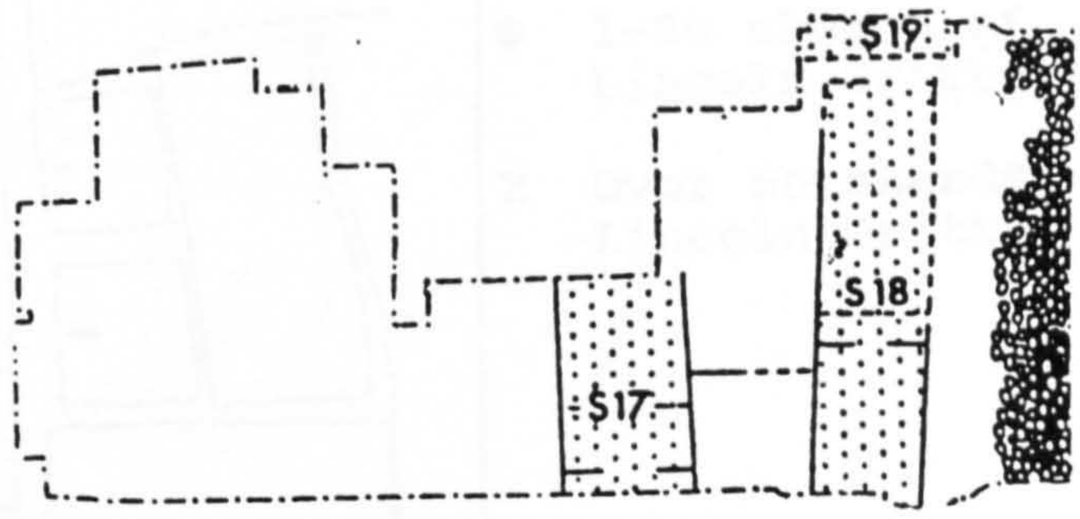
Period II c.900-930/40



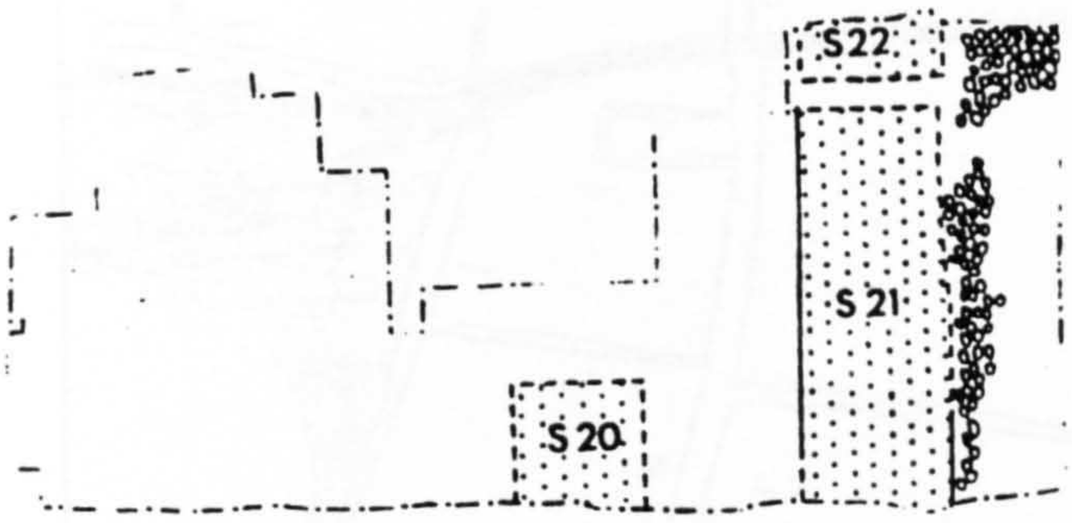
Period III c.930/40-970



Period IV c.970-1000/10



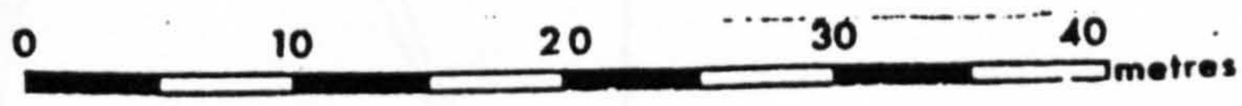
Period V c.1000/10-1040



Period VI c.1040-1060/70

Period VII c.1060/70-1080/90

Period VIII c.1080/90 1100-1110



Sructure Code S3

Line of timber wall or fence

Conjectured timber wall or fence

Conjectured extent of floor surfaces

Road Surface

Fig 29 Buildings at Flaxengate (after Perring)

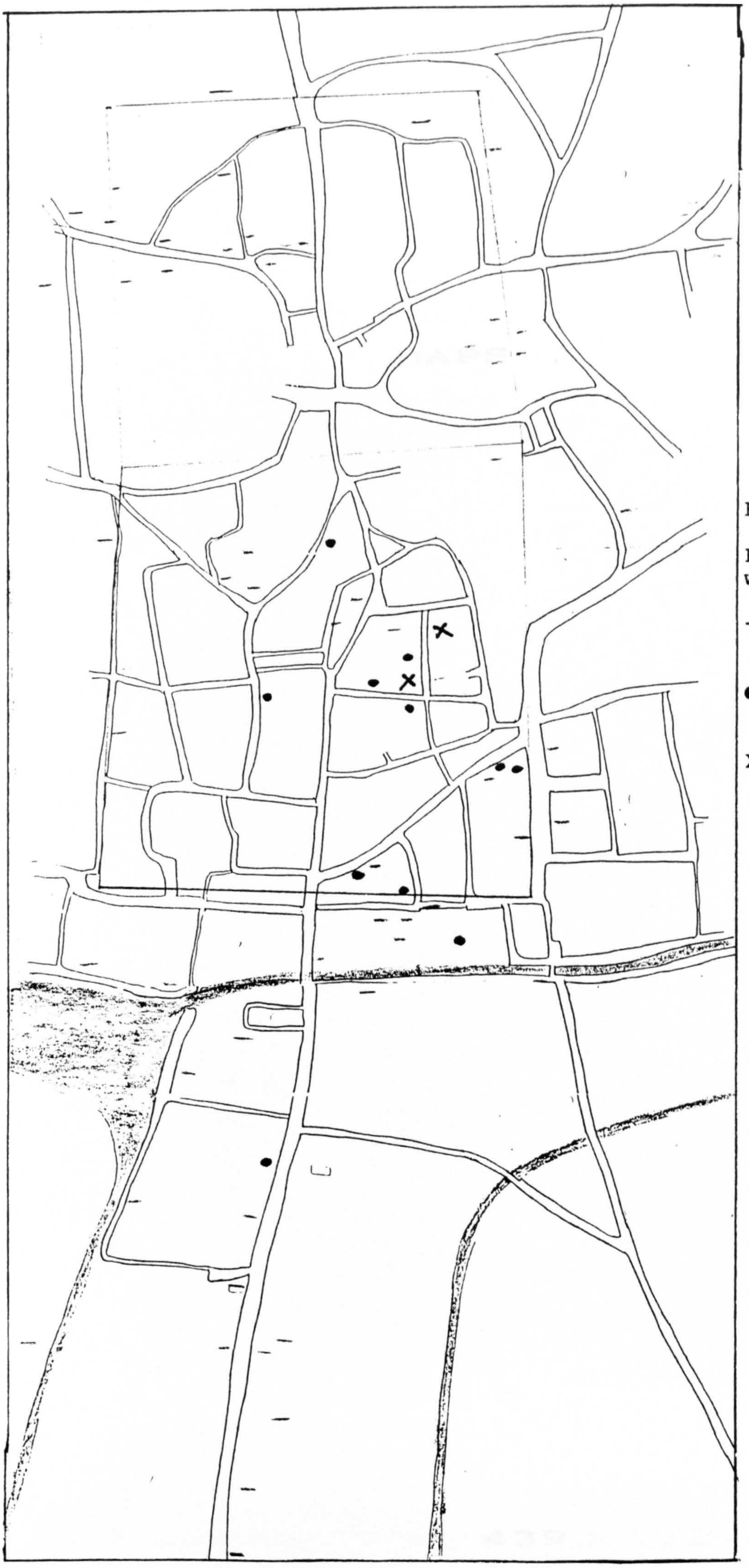


Fig 30

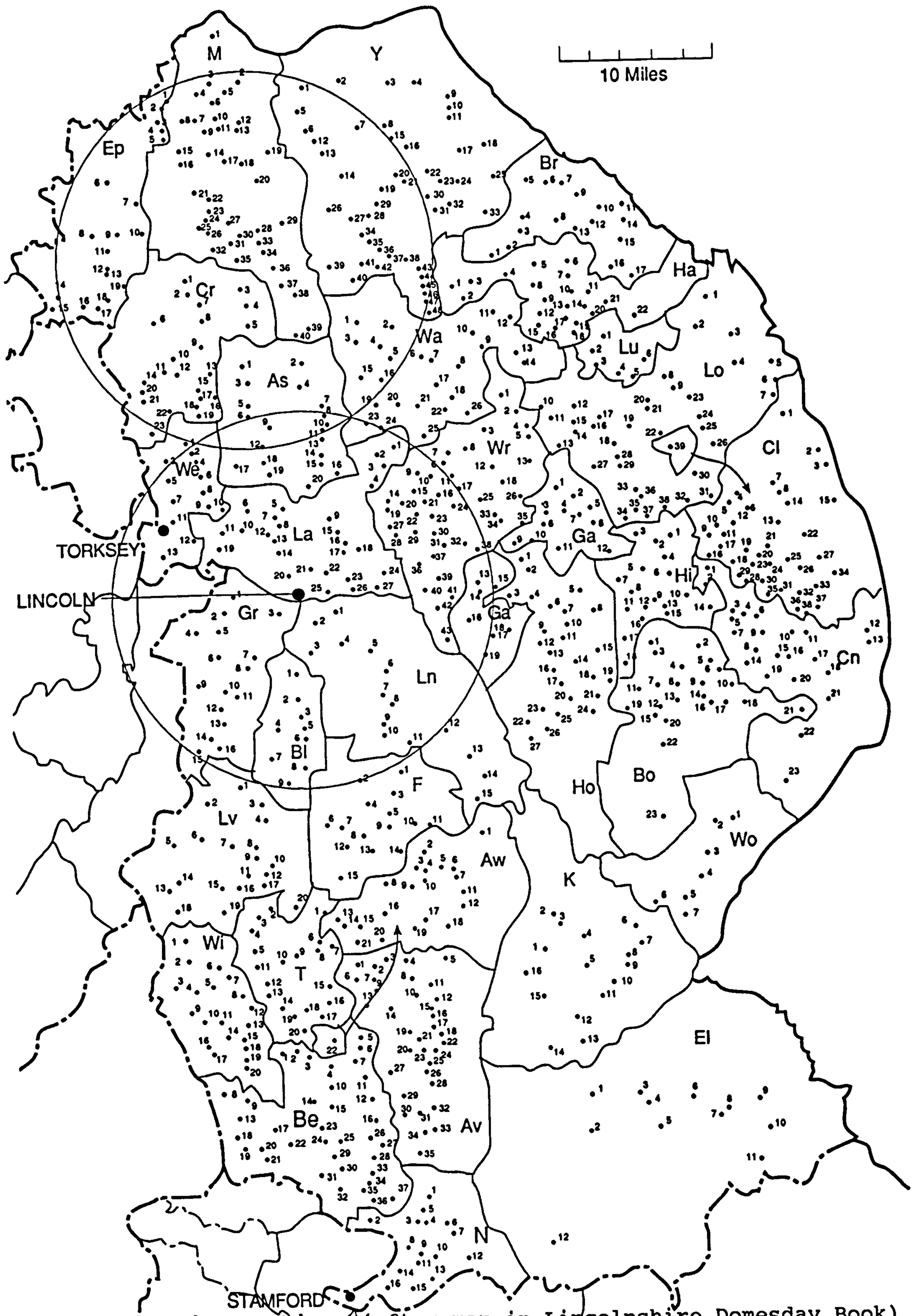
Excavated Sites with :-

— No sherds of Lincoln Gritty

● 1-50 sherds of Lincoln Gritty

X Over 50 sherds Lincoln Gritty

MAPS



Map A Lincolnshire (after map in Lincolnshire Domesday Book)

Key to Map A

LINDSEY

WEST RIDING

Epworth (Ep)

1 Garthorpe
2 Waterton
3 Luddington
4 'The Marshes'
5 Amcotts
6 Crowle
7 Althorpe
8 Belton
9 Beltoft
10 (West) Butterwick
11 Epworth
12 (Low) Burnham
13 (High) Burnham
14 Upperthorpe
15 Westwood (Side)
16 Haxey
17 (Graize) Lound
18 (East) Lound
19 Owston (Ferry)

Manley (Ma)

1 Whitton
2 Winteringham
3 Alkborough
4 Walcott
5 (West) Halton
6 Coleby
7 Derby
8 Burton (upon Stather)
9 Normanby
10 'Haythby'
11 Thealby
12 Winterton
13 Roxby
14 (Great) 'Conesby'
15 Flixborough
16 (Little) 'Conesby'
17 'Sawcliffe'
18 Risby
19 Appleby
20 Santon
21 Crosby
22 Scunthorpe
23 Brumby
24 Ashby
25 Yaddlethorpe
26 Bottesford
27 'Manby'
28 Broughton
29 Castlethorpe
30 'Raventhorpe'
31 Holme
32 Messingham
33 Scawby
34 Sturton
35 Manton
36 Hibaldstow
37 'Gainsthorpe'
38 Redbourne
39 Waddingham
40 'Stainton'

Corringham (Cr)

1 Scotterthorpe
2 Scotter
3 Cleatham
4 Kirton (in Lindsey)
5 Grayingham
6 Laughton
7 Scotton
8 (Nor)thorpe
9 '(Sou)thorpe'
10 Blyton
11 Wharton
12 Pilham
13 'Dunstall'
14 'Thonock'
15 Aisby
16 Yawthorpe
17 Corringham
18 Springthorpe
19 Heapham
20 Morton
21 Gainsborough
22 Somerby
23 Lea

Aslacoe (As)

1 Blyborough
2 Snitterby
3 Willoughton
4 (Bishop) Norton
5 Hemswell
6 Harpswell
7 Glentham
8 Caenby
9 Glentworth
10 Normandy (by Spital)
11 Owmby (by Spital)
12 Fillingham
13 Saxby
14 Firsby
15 Spridlington
16 (Cold) Hanworth
17 Coates
18 Ingham
19 Cammeringham
20 Hackthorn

Well (We)

1 Upton
2 Kexby
3 Knaith
4 Willingham (by Stow)
5 (Gate) Burton
6 Normanby (by Stow)
7 Marton
8 Stow St Mary
9 Sturton (by Stow)
10 Bransby
11 Brampton
12 Hardwick
13 Newton (on Trent)

Lawress (La)

1 Buslingthorpe
2 Faldingthorpe
3 Friesthorpe
4 Snarford
5 Brattleby
6 Thorpe (le Fallows)

Lawress (Cont'd)

7 Aisthorpe
8 Scampton
9 Welton
10 Broxholme
11 Ingleby
12 North Carlton
13 (Middle) 'Carlton'
14 (South) Carlton
15 Dunholme
16 Scothern
17 Sudbrooke
18 'Holme'
19 Saxilby
20 Burton
21 Riseholme
22 Nettleham
23 Reepham
24 Barlings
25 'Greetwell'
26 (Cherry) Willingham
27 Fiskerton

NORTH RIDING

Yarborough (Y)

1 (South) Ferriby
2 Barton (on Humber)
3 Barrow (on Humber)
4 Goxhill
5 Horkstow
6 Saxby (All Saints)
7 Burnham
8 Thornton (Curtis)
9 (East) Halton
10 Lobingeham
11 Killingholme
12 Bonby
13 Worlaby
14 Elsham
15 Wootton
16 Ulceby
17 Habrough
18 Immingham
19 Melton (Ross)
20 Croxton
21 Kirmington
22 Newsham
23 Brocklesby
24 'Coton'
25 Stallingborough
26 Wrawby
27 'Kettleby'
28 (Kettleby)'Thorpe'
29 Barnetby (le Wold)
30 (Little) Limber
31 Great Limber
32 Keelby
33 Riby
34 Bigby
35 Somerby
36 Searby
37 Grasby
38 Clixby
39 Cadney
40 North Kelsey
41 Howsham
42 Owmby
43 Audleby
44 Fonaby
45 Hundon
46 Caistor
47 Nettleton
48 Wykeham

Bradley (Br)

1 Swallow
2 Irby (upon Humber)
3 Laceby
4 Aylesby
5 Healing
6 (Great) Coates
7 South Coates
8 Bradley
9 (Great) Grimsby
10 Clee
11 Itterby
12 Weelsby
13 Scartho
14 Thrunscoe
15 Humberstone
16 Holton (le Clay)
17 Tetney

Haverstoe (Ha)

1 Cabourn
2 Rothwell
3 Cuxwold
4 Beelsby
5 Barnoldby (le Beck)
6 Waltham
7 Brigsley
8 Hatcliffe
9 Ravendale
10 Ashby
11 Waithe
12 Gunnerby
13 Fenby
14 Grainsby
15 Swinhope
16 (Wold) Newton
17 Hawerby
18 (North) Cadeby
19 Beesby
20 'Audby'
21 (North) Thoresby
22 Fulstow

Walshcroft (Wa)

1 (South) Kelsey
2 Holton (le Moor)
3 Winghale
4 Thornton (le Moor)
5 Owersby
6 Claxby
7 Normanby (le Wold)
8 Otby
9 Stainton (le Vale)
10 Thoresway
11 Croxby
12 Thorganby
13 'Orford'
14 Binbrook
15 Kingerby
16 Osgodby
17 Walesby
18 Risby
19 (West) Rasen
20 (Middle) Rasen
21 (Market) Rasen

Walshcroft cont'd
22 Tealby
23 Toft (next Newton)
24 Newton (by Toft)
25 Linwood
26 (North) Willingham

Ludborough (Lu)

1 Ludborough
2 Wyham
3 (North) Ormsby
4 Fotherby
5 (Little) Grimsby
6 Covenham

SOUTH RIDING

Wraggoe (Wr)

1 Kirmond (le Mire)
2 Ludford
3 Sixhills
4 Girsby
5 Burgh (on Bain)
6 Bleasby
7 Legsby
8 Holtham
9 Lissington
10 'Calcote'
11 Torrington
12 Hainton
13 Biscathorpe
14 Swinthorpe
15 Wickenby
16 Holton (cum Beckering)
17 (West) Torrington
18 (South) Willingham
19 Reasby
20 Snelland
21 'Westlaby'
22 Fulnetby
23 Rand
24 Beckering
25 Barkwith
26 Benniworth
27 Stainton (by Langworth)
28 Newball
29 Bullington
30 Wragby
31 Langton (by Wragby)
32 Strubby
33 'Hardwick'
34 Panton
35 Sotby
36 Apley
37 Kingthorpe
38 Hatton
39 'Osgodby
40 Stainfield
41 'Butyate'
42 Bardney
43 Southrey

Louthesk (Lo)

1 'Swine'
2 Grainthorpe
3 Somercotes
4 Skidbrooke
5 'Mare'
6 'Saltfleet'
7 Saltfleetby
8 Yarburgh
9 Alvingham
10 (West) 'Wykeham'
11 (East) 'Wykeham'
12 Kelstern
13 Gayton (le Wold)
14 (South) 'Cadeby'
15 (Calce) thorpe
16 Welton (le Wold)
17 Elkington
18 Hallington
19 Louth
20 Brackenborough
21 Keddington
22 Stewton
23 Cockerington
24 Grimoldby
25 Manby
26 (Little) Carlton
27 Withcall
28 Raithby
29 Maltby
30 (North) Reston
31 Authorpe
32 Muckton
33 Tathwell
34 Farforth
35 (Maiden) well
36 Haugham
37 Ruckland
38 Burwell

Gartree (Ga)

1 Donnington (on Bain)
2 Stenigot
3 (Market) Stainton
4 Goulceby
5 Cawkwell
6 Ranby
7 Asterby
8 Scamblesby
9 'Sudtone'
10 (Great) Sturton
11 Hemingby
12 Belchford
13 'Thorley'
14 (Little) Minting
15 Minting
16 'Burreth'
17 Bucknall
18 Horsington
19 Stixwould

Hill (Hi)

1 Walmsgate
2 Worlaby
3 Oxcombe
4 Ketsby
5 Tetford
6 (South) Ormsby
7 Fulletby
8 Salmonby
9 Somersby
10 Brinkhill
11 Greetham
12 Ashby (Puerorum)
13 (Bag) Enderby
14 Langton
15 Hagworthingham
16 Winceby
17 Hameringham
18 Claxby (Pluckacre)

Calcewath (Ca)

1 Theddlethorpe
2 Mablethorpe
3 Trusthorpe
4 Withern
5 Tothill
6 (Wood) thorpe
7 Strubby
8 Maltby (le Marsh)
9 Swaby
10 Belleau
11 Aby
12 Claythorpe
13 Saleby
14 Beesby
15 Sutton (le Marsh)
16 Calceby
17 (South) Thoresby
18 Haugh
19 Ailby
20 Tothby
21 Thoresby
22 Markby
23 Rigsby
24 Alford
25 Bilsby
26 Thurlby
27 Huttoft
28 Ulceby
29 'Tatebi'
30 Well
31 Willoughby
32 Bonthorpe
33 Cumberworth
34 Mumby
35 Claxby
36 Hanby
37 Sloothby
38 Hasthorpe
39 Legthorpe

Horncastle (Ho)

1 (Little) Sturton
2 Baumber
3 (West) Ashby
4 Waddingworth
5 Wispington
6 Edlington
7 Thimbleby
8 Toynton
9 Langton
10 Horncastle
11 Thornton
12 'Torp'
13 Martin
14 Scrivelsby
15 Mareham (on the Hill)
16 Roughton
17 Haltham
18 (Wood) Enderby
19 Moorby
20 Kirkby (on Bain)
21 Wilksby
22 (Tattershall) Thorpe
23 Fulsby
24 Mareham (le Fen)
25 Tumby
26 Tattershall
27 Coningsby

Bolingbroke (Bo)

1 Lusby
2 Raithby
3 Asgarby
4 (Mavis) Enderby
5 Hundleby
6 Spilsby
7 Hareby
8 Bolingbroke
9 Eresby
10 Halton (Holegate)
11 Miningsby
12 Hagnaby
13 West Keal
14 East Keal
15 (East) Kirkby
16 Toynton (All Saints)
17 Toynton (Saint Peter)
18 (Little) Steeping
19 Revesby
20 Stickford
21 Thorpe (Saint Peter)
22 Stickney
23 Sibsey

Candleshoe (Ca)

1 Driby
2 Sutterby
3 Dexthorpe
4 Fordington
5 Dalby
6 Skendleby
7 Partney
8 Scremby
9 Grebby
10 Welton (le Marsh)
11 Boothby
12 Addlethorpe
13 Ingoldmells
14 Ashby (by Partney)
15 Candlesby
16 Gunby
17 Orby
18 Burgh (le Marsh)
19 (Great) Steeping
20 Bratoft
21 Croft
22 Wainfleet
23 Friskney

KESTEVEN

Graffoe (Gr)

1 Skellingthorpe
2 Doddington
3 Boultham
4 Eagle
5 Whisby
6 Thorpe (on the Hill)
7 North Hykeham
8 (South) Hykeham
9 Swinderby
10 Haddington
11 Aubourn
12 Thurlby
13 Bassingham
14 Norton (Disney)
15 Stapleford
16 Carlton (le Moor land)

Boothby (Bt)

1 Waddington
2 Harmston
3 Coleby
4 'Somerton'
5 Boothby(Graffoe)
6 Navenby
7 Skinnand
8 Wellingore
9 Welbourn

Langoe (La)

1 Washingborough
2 Canwick
3 Bracebridge
4 Branston
5 (Potter) Hanworth
6 Nocton
7 Dunston
8 Metheringham
9 Blankney
10 Scopwick
11 Kirkby (Green)
12 Timberland
13 Walcot
14 Billinghay
15 North Kyme

Lovenden (Lv)

1 (Brant) Broughton
2 'Holme'
3 Leadenham
4 Fulbeck
5 Claypole
6 Stubton
7 Brandon
8 Caythorpe
9 Frieston
10 (Dry) Doddington
11 Hough (on the Hill)
12 Normanton
13 (Long) Bennington
14 Westborough
15 Hougham
16 Gelston
17 Carlton (Scroop)
18 Foston
19 Marston
20 (West) Willoughby

Flaxwell (F)

1 Rowston
2 Ashby (de la Launde)
3 Digby
4 Bloxholm
5 Dorrington
6 Brauncewell
7 'Dunsby'
8 'Roxholm'
9 Ruskington
10 'Coteland'
11 Anwick
12 Cranwell
13 Leasingham
14 Evedon
15 (North and South) Rauceby
16 (New) Sleaford

Aswardhurn (Aw)

1 (South) Kyme
2 Evedon
3 (Old) Sleaford
4 Kirkby (la Thorpe)
5 Ewerby
6 East Thorpe
7 Howell
8 Quarrington
9 (Cold) 'Mareham'
10 'Laythorpe'
11 Heckington
12 Hale
13 Kelby
14 (Culver) thorpe
15 Swarby
16 (Silk) Willoughby
17 Burton (Pedwardine)
18 Helpringham
19 Scredington
20 Aswarby
21 Aunsby
22 Ingoldsby

Winnibriggs (Wi)

1 Allington
2 Sedgebrook
3 Stenwith
4 'Casthorpe'
5 Barrowby
6 Gonerby
7 (Little) Gonerby
8 Grantham
9 Woolsthorpe
10 Denton
11 Harlaxton
12 'Houghton'
13 Little Ponton
14 Stroxton
15 Great Ponton
16 Hungerton
17 Wyville
18 'Ganthorpe'
19 North Stoke
20 South Stoke

Threo (T)

1 Wilsford
2 Honington
3 Barkston
4 Syston
5 Belton
6 Heydour
7 Aisby
8 Oasby
9 Welby
10 Londonthorpe
11 'Towthorpe'
12 Harrowby
13 'Dunsthorpe'
14 Westhorpe
15 Braceby
16 Sapperton
17 Humby
18 Ropsley
19 (Old) Somerby
20 Boothby (Pagnell)

Aveland (Av)

1 Dembleby
2 (Scott) Willoughby
3 Osbournby

Aveland cont'd
4 Spanby
5 Swaton
6 Haceby
7 Newton
8 Threekingham
9 Walcot
10 'Stow'
11 Horbling
12 Billingborough
13 Pickworth
14 Folkingham
15 'Ouseby'
16 Birthorpe
17 'Sempringham'
18 Pointon
19 Laughton
20 'Avethorpe'
21 Aslackby
22 Dowsby
23 (East) Graby
24 (West) Graby
25 'Ringstone'
26 Rippingale
27 Kirkby (Underwood)
28 Dunsby
29 Haconby
30 Stainfield
31 Hanthorpe
32 Morton
33 Dyke
34 Cawthorpe
35 Bourne

Beltisloe (Be)

1 (Bassing) thorpe
2 Westby
3 Bitchfield
4 Osgodby
5 'Little Lavington'
6 Lenton/ 'Lavington'
7 Keisby
8 Skillington
9 Easton
10 Irnham
11 Hawthorpe
12 Bulby
13 Colsterworth
14 Burton (Coggles)
15 Corby (Glen)
16 Southorpe
17 'Twyford'
18 Stainby
19 Gunby
20 North Witham
21 (South) Witham
22 Lobthorpe
23 'Suduuelle'
24 Swayfield
25 Swinstead
26 Elsthorpe
27 Edenham
28 Scottlethorpe
29 'Counthorpe'
30 Creeton
31 West Bytham
32 Bytham
33 Lound
34 Toft
35 Witham (on the Hill)
36 'Adewelle'
37 Manthorpe

Ness (N)

1 Thurlby
2 Carlby
3 Braceborough
4 Wilsthorpe
5 Obthorpe
6 Baston
7 Langtoft
8 'Banthorpe'
9 Greatford
10 'Stowe'
11 Barholm
12 East Deeping
13 West Deeping
14 Casewick
15 Tallington
16 Uffington

HOLLAND

Wolmersty (Wo)

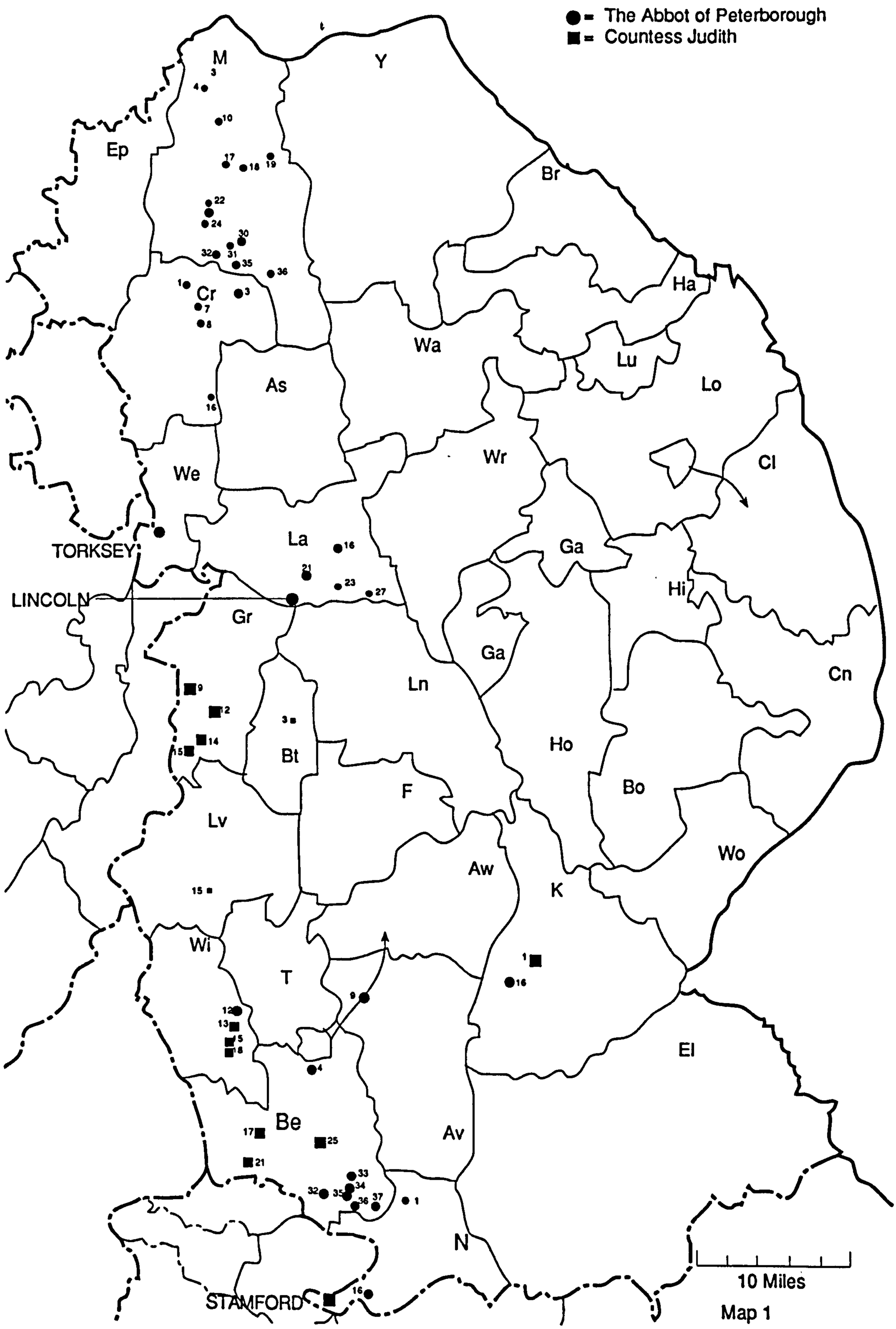
1 Wrangle
2 Leake
3 Leverton
4 Butterwick
5 Frieston
6 Skirbeck
7 (Fish) toft

Kirton (K)

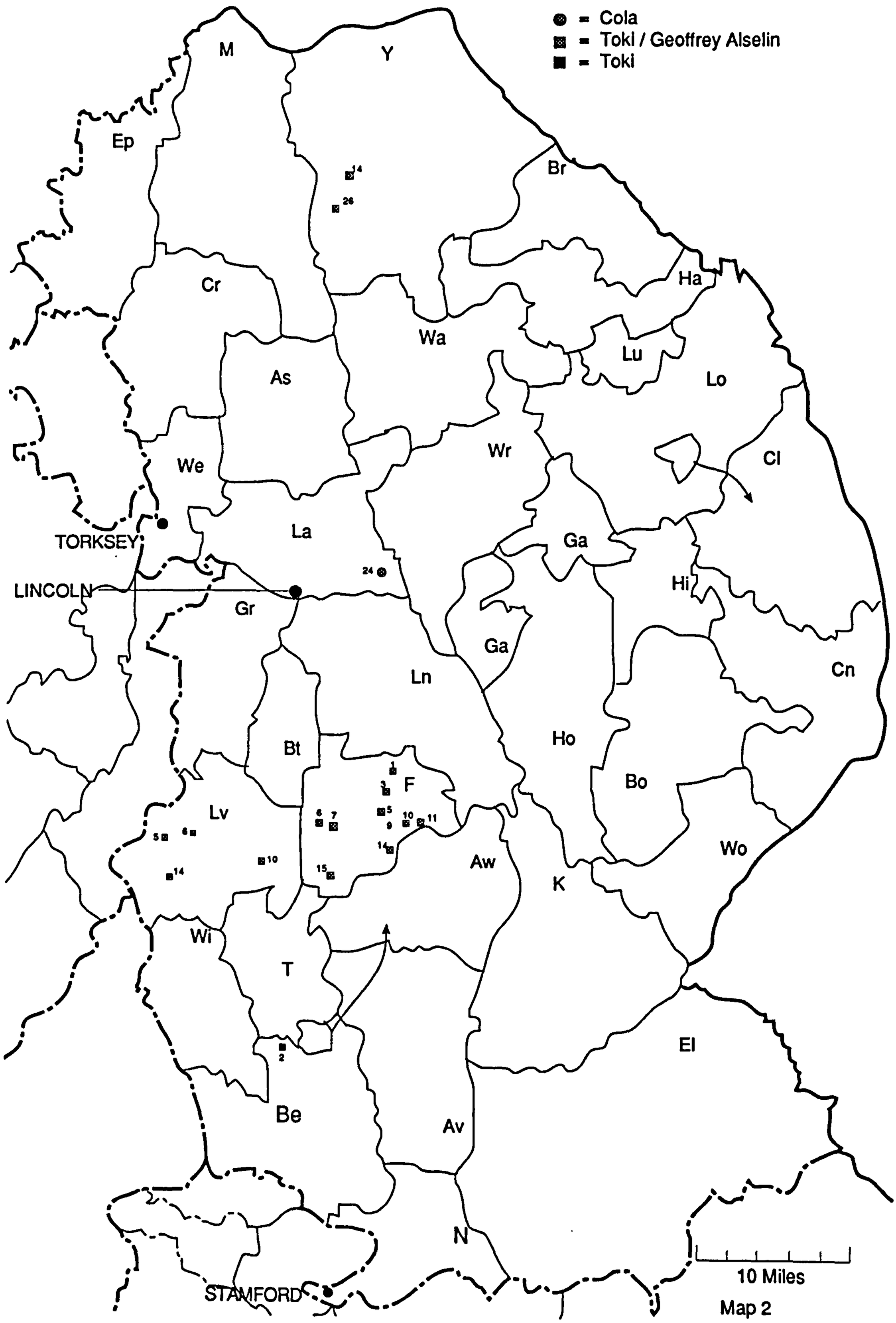
1 Bicker
2 'Stenning'
3 Drayton
4 'Riche'
5 Burtoft
6 Wyberton
7 Frampton
8 Kirton
9 'Riskenton'
10 Algar (kirk)
11 Dowdyke
12 Gosberton
13 Surfleet
14 Cheal
15 Quadring
16 Donington

Elloe (El)

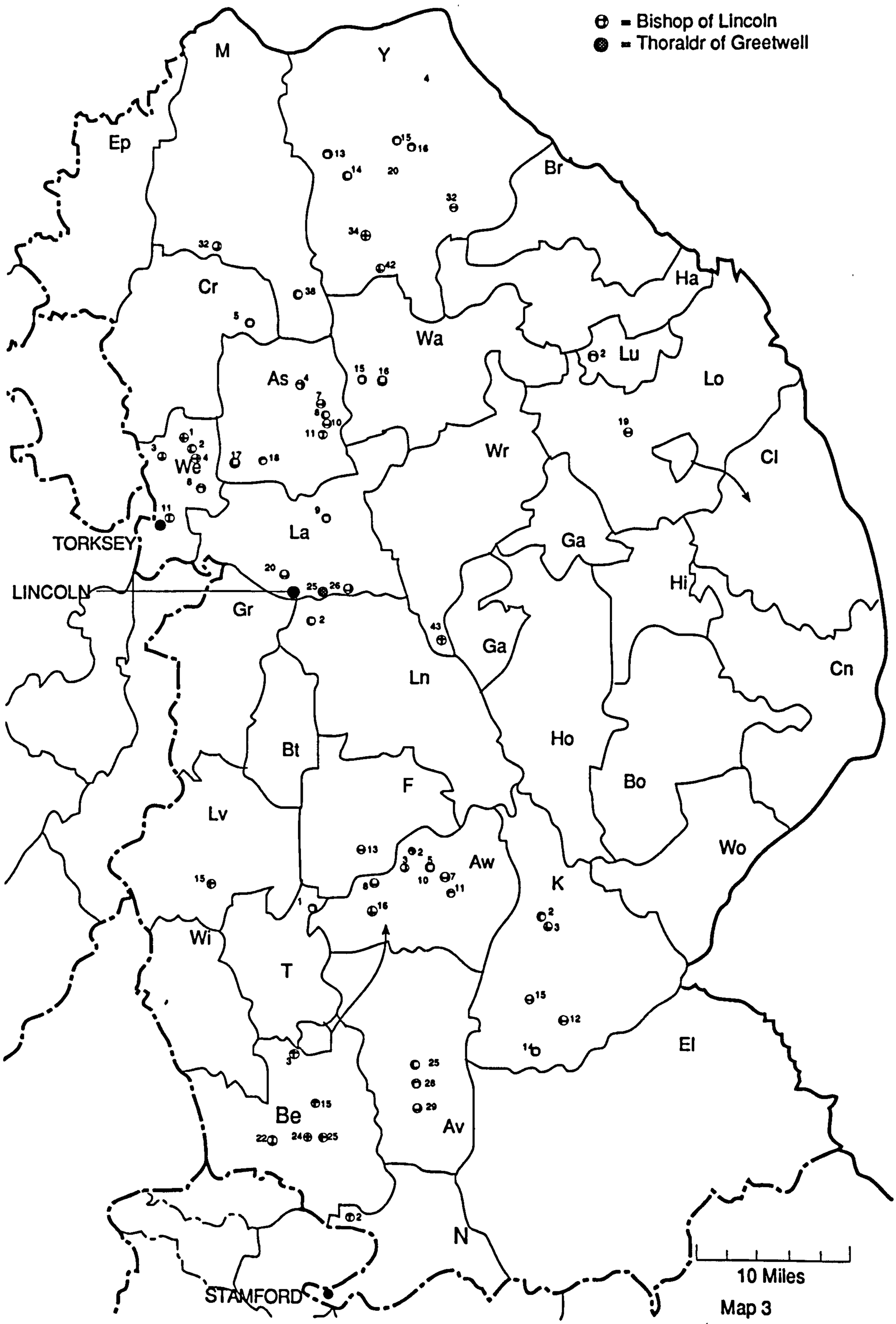
1 Pinchbeck
2 Spalding
3 Weston
4 Moulton
5 Whaplode
6 Holbeach
7 Fleet
8 Gedney
9 Lutton
10 (Long) Sutton
11 Tydd (St. Mary)
12 Crowland


● = The Abbot of Peterborough
■ = Countess Judith
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
We
Cl
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

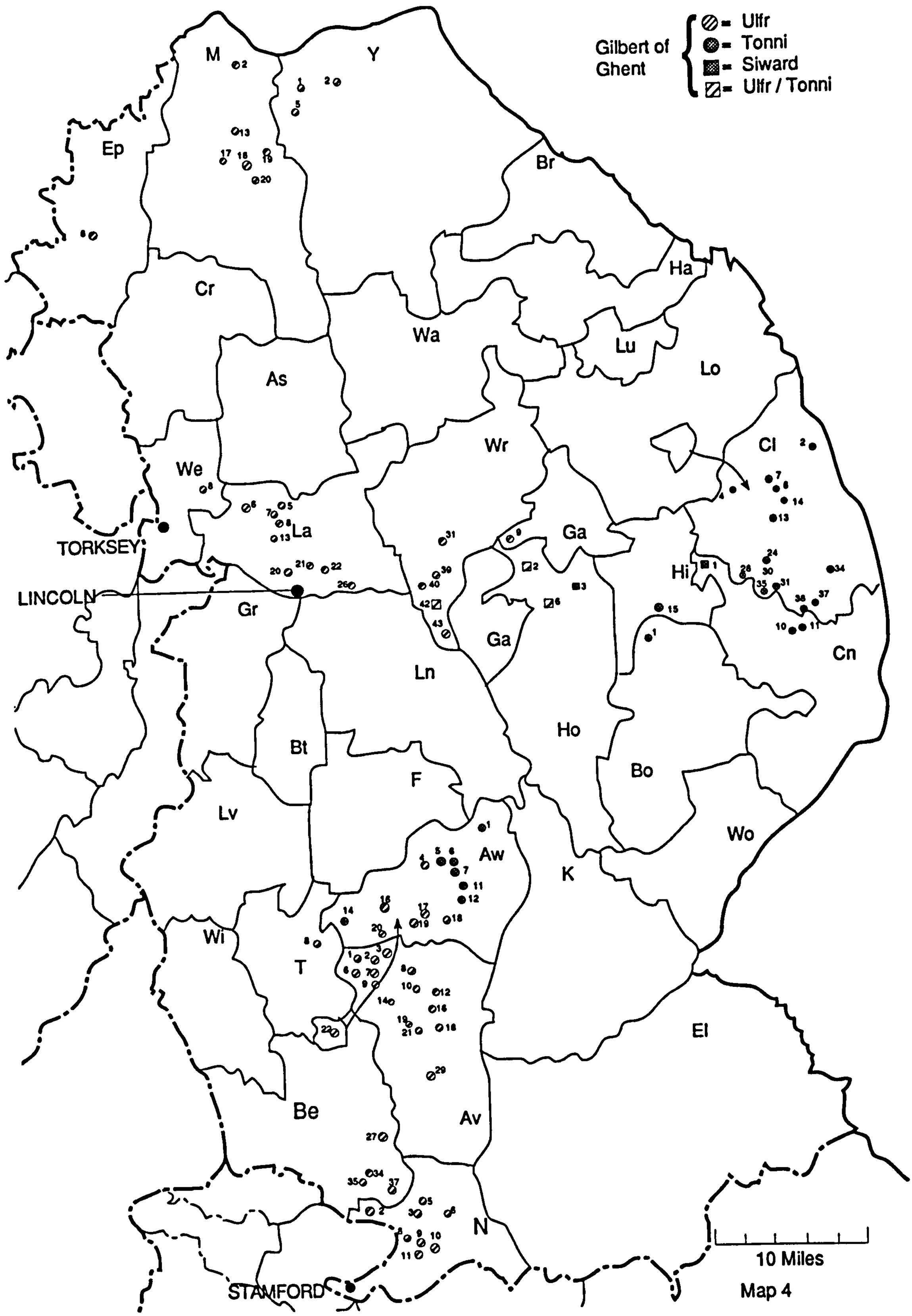
Map 1


= Cola
= Toki / Geoffrey Alselin
= Toki
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
We
Cl
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 2

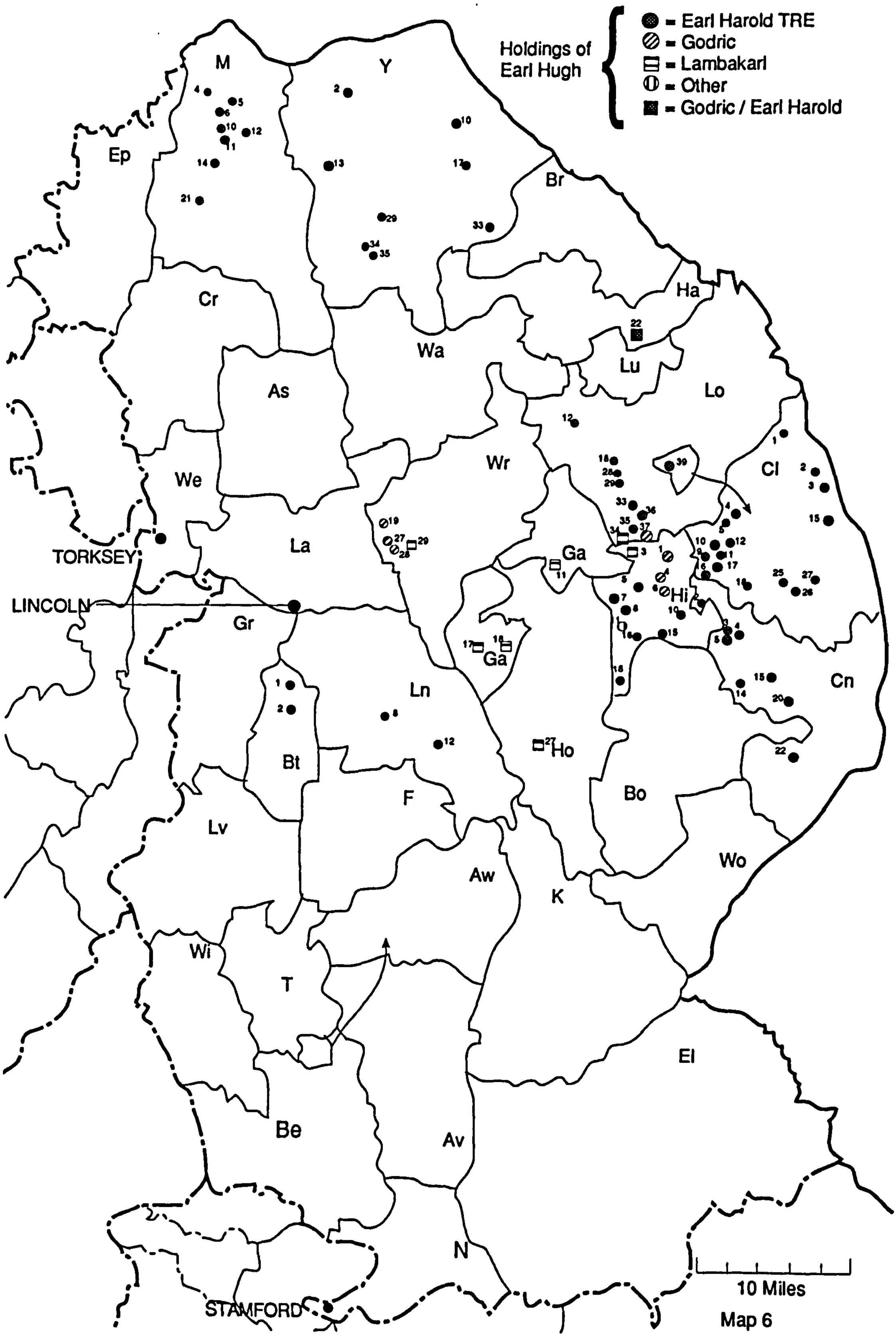

= Bishop of Lincoln
= Thoraldr of Greetwell
M
Y
Ep
Br
Cr
Ha
Wa
Lu
Lo
As
Wr
Cl
We
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 3

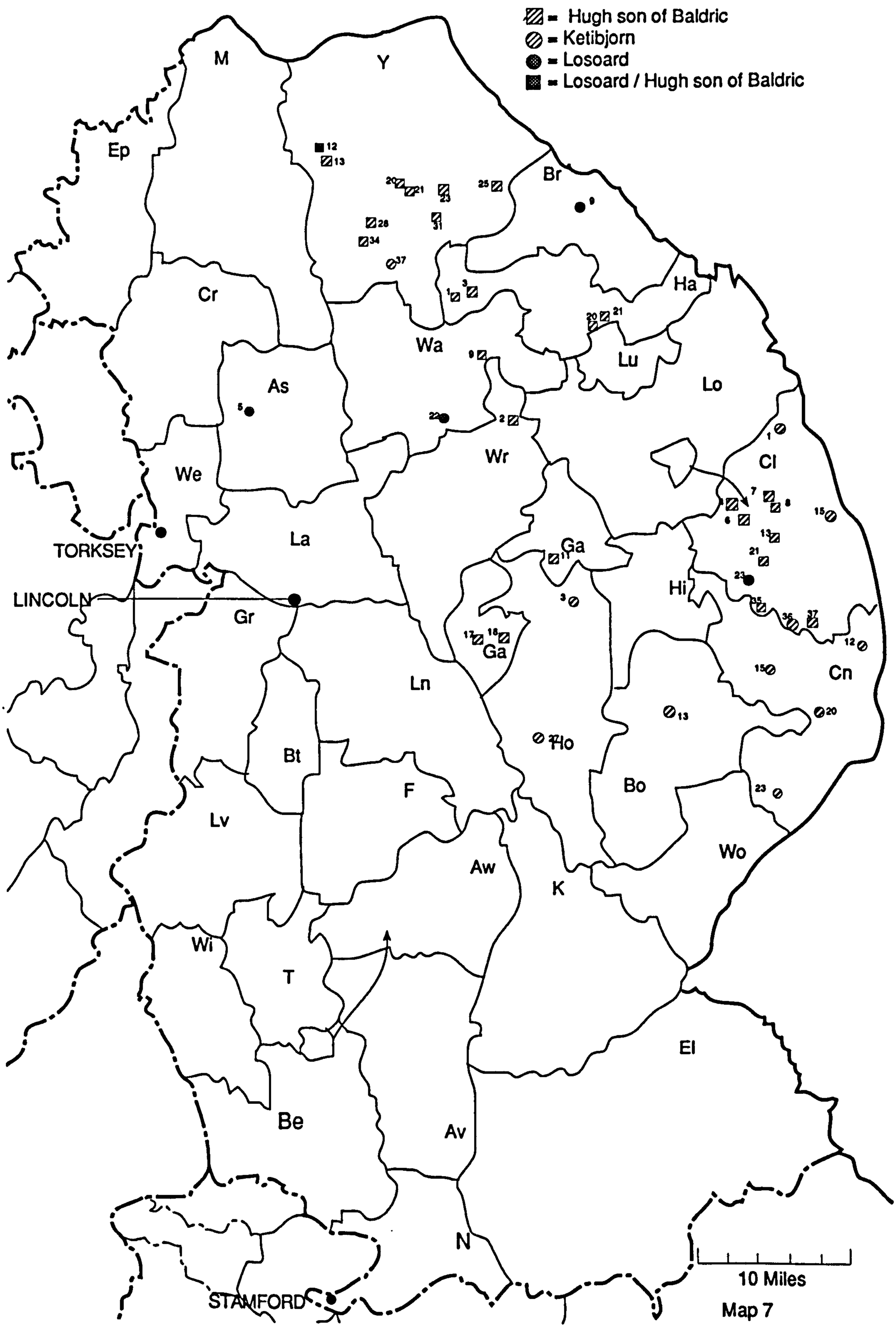

Gilbert of Ghent
Ulfr
Tonni
Siward
Ulfr / Tonni
M
Y
Ep
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
La
Ga
TORKSEY
Hi
LINCOLN
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles
Map 4

= Roger of Bully
M
Y
Ep
17
18
19
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
TORKSEY
12
La
Ga
LINCOLN
25
Hi
Gr
Ga
Cn
Ln
Ho
Bt
F
Bo
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

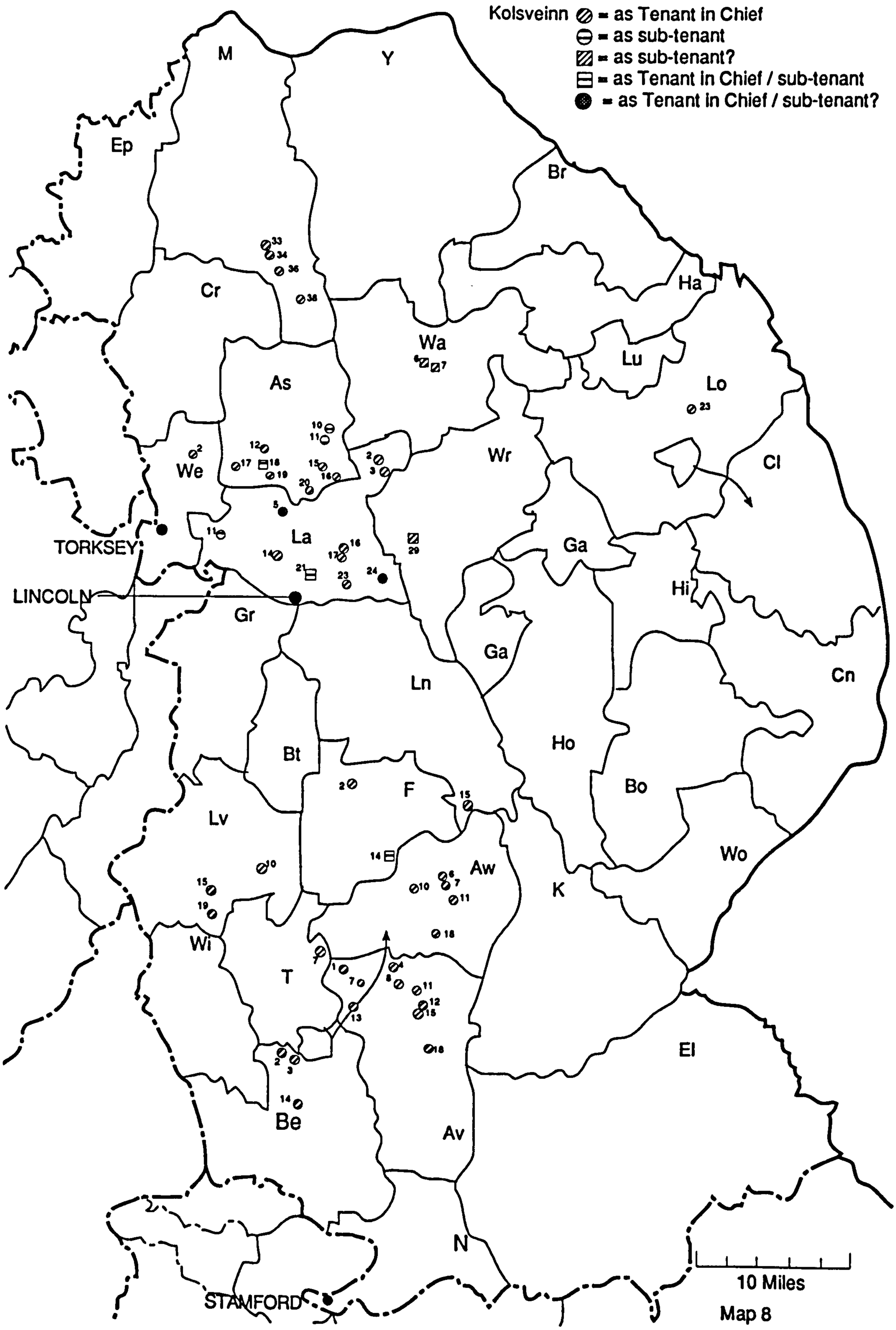
Map 5


Holdings of Earl Hugh
= Earl Harold TRE
= Godric
= Lambakarl
= Other
= Godric / Earl Harold
M
Y
Ep
Br
Ha
Cr
Wa
Lu
As
Lo
Wr
We
Cl
TORKSEY
La
Ga
LINCOLN
Gr
Hi
Ga
Ln
Cn
Bt
Ho
F
Bo
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

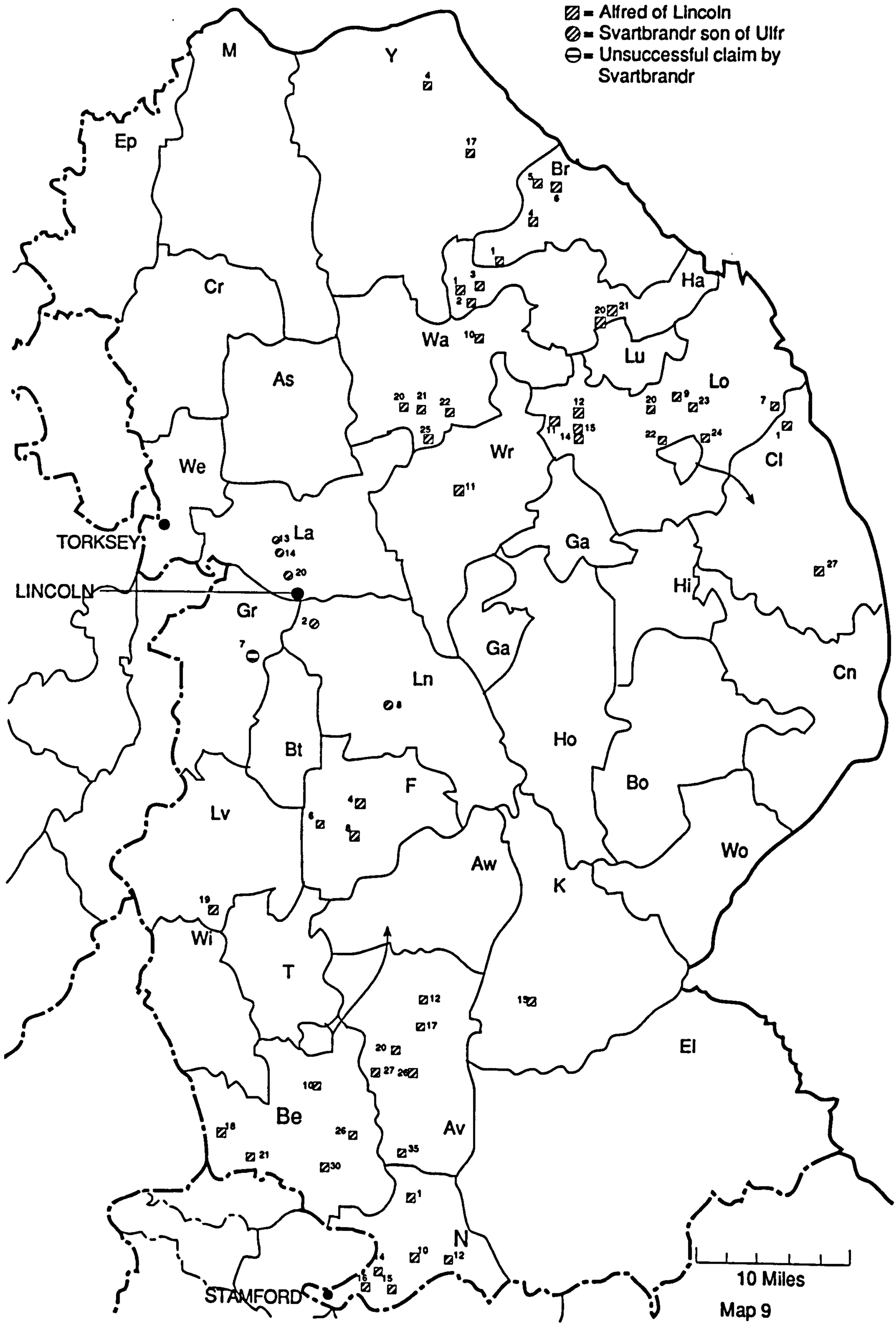
Map 6


Hugh son of Baldric
Ketibjorn
Losoard
Losoard / Hugh son of Baldric
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
La
TORKSEY
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

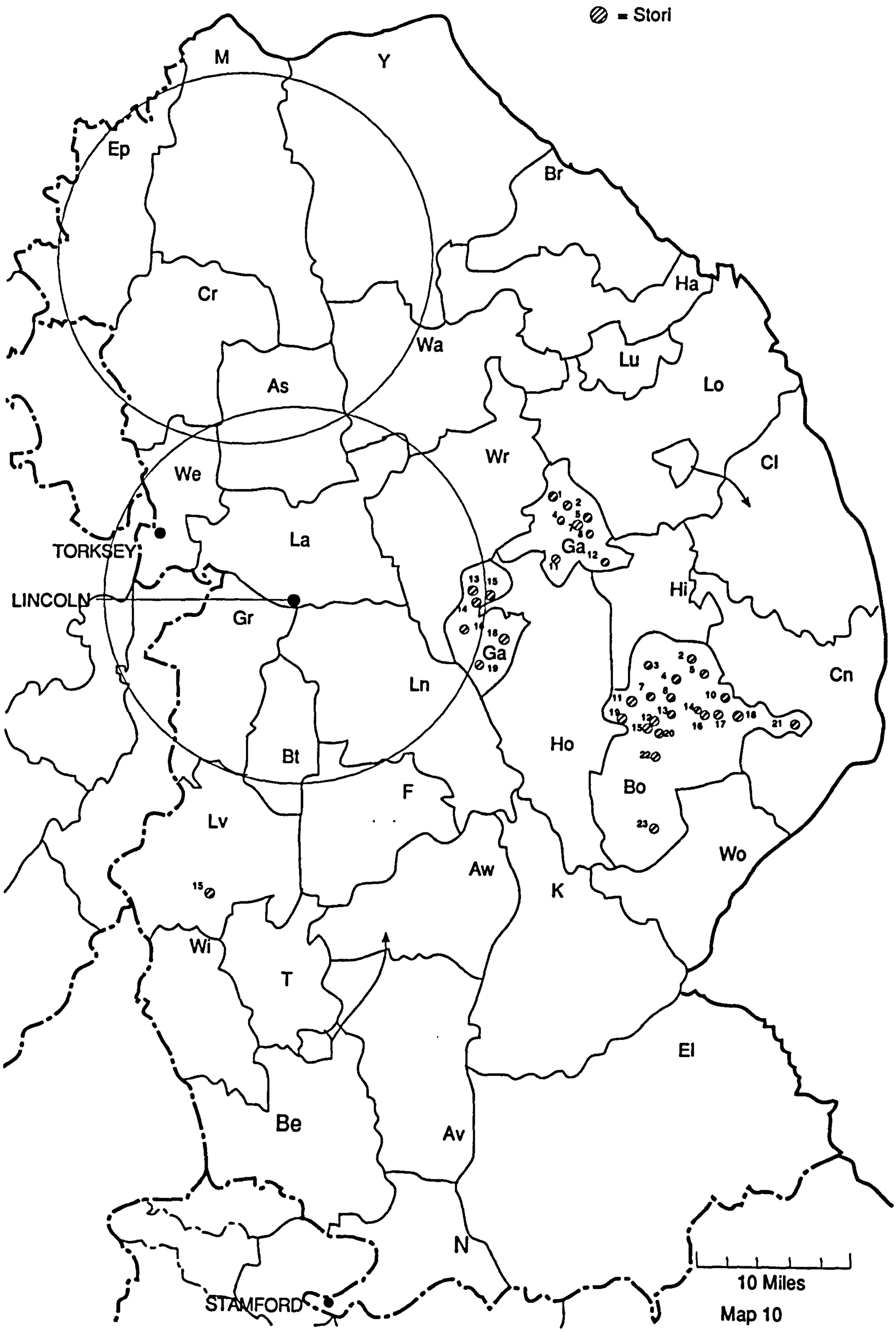
Map 7


Kolsveinn
= as Tenant in Chief
= as sub-tenant
= as sub-tenant?
= as Tenant in Chief / sub-tenant
= as Tenant in Chief / sub-tenant?
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
La
TORKSEY
Ga
LINCOLN
Hi
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 8


= Alfred of Lincoln
= Svartbrandr son of Ulfr
= Unsuccessful claim by Svartbrandr
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
We
Cl
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

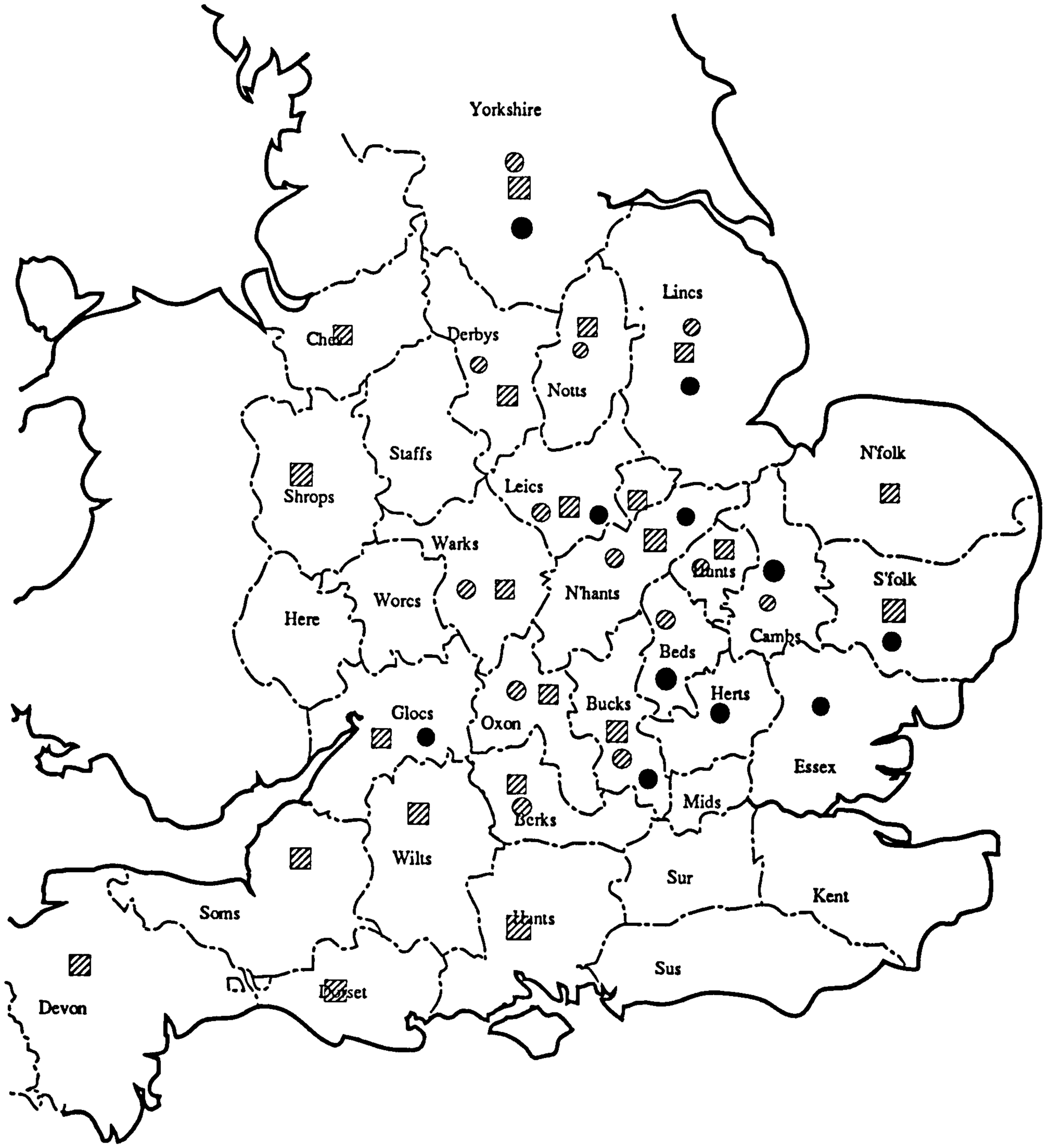
Map 9


= Stori
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 10

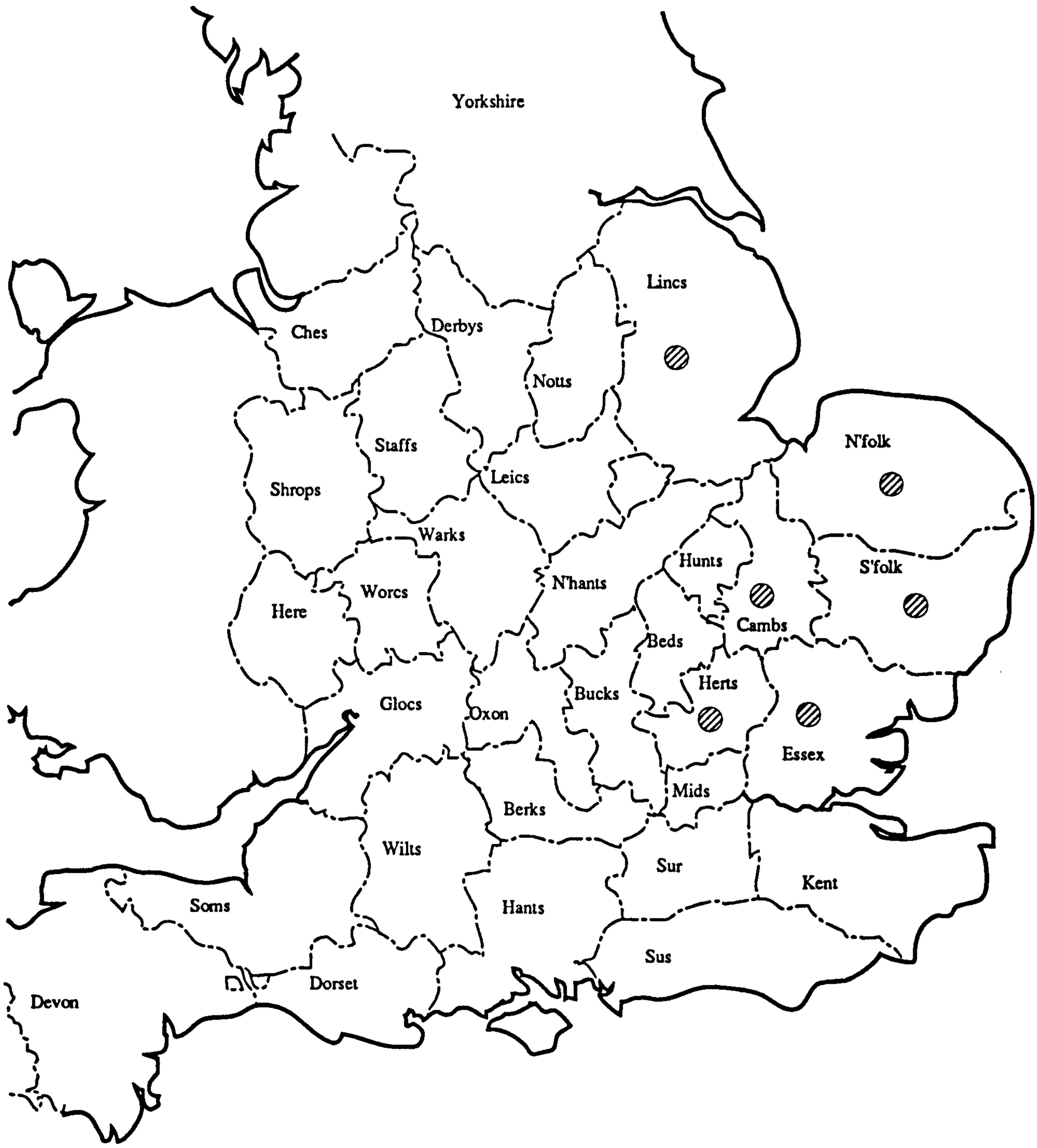
Counties in which the folowing Lords hold lands as Tenants in Chief:

- Gilbert of Ghent
- Earl Hugh
- Robert of Tosney

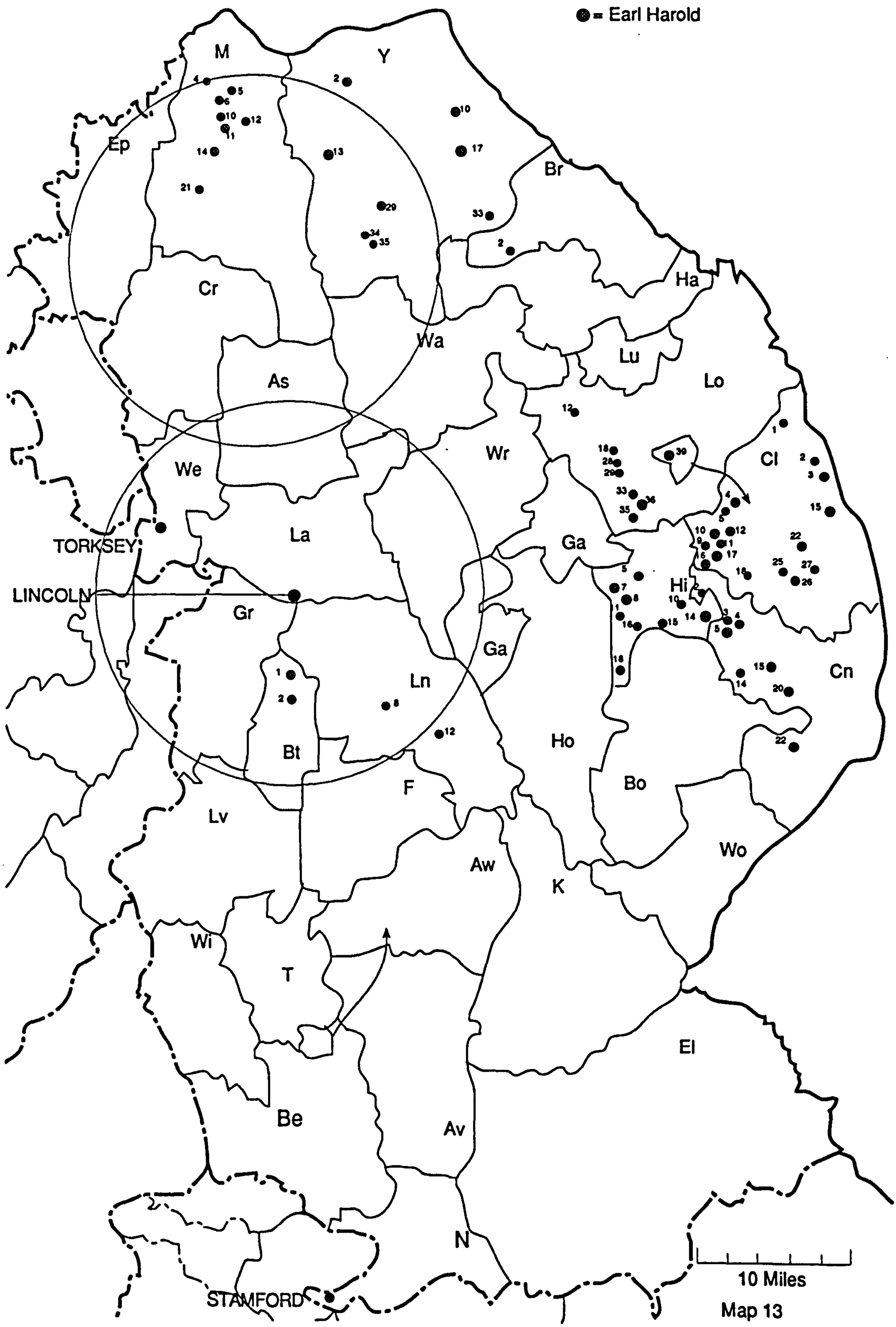


Map 11

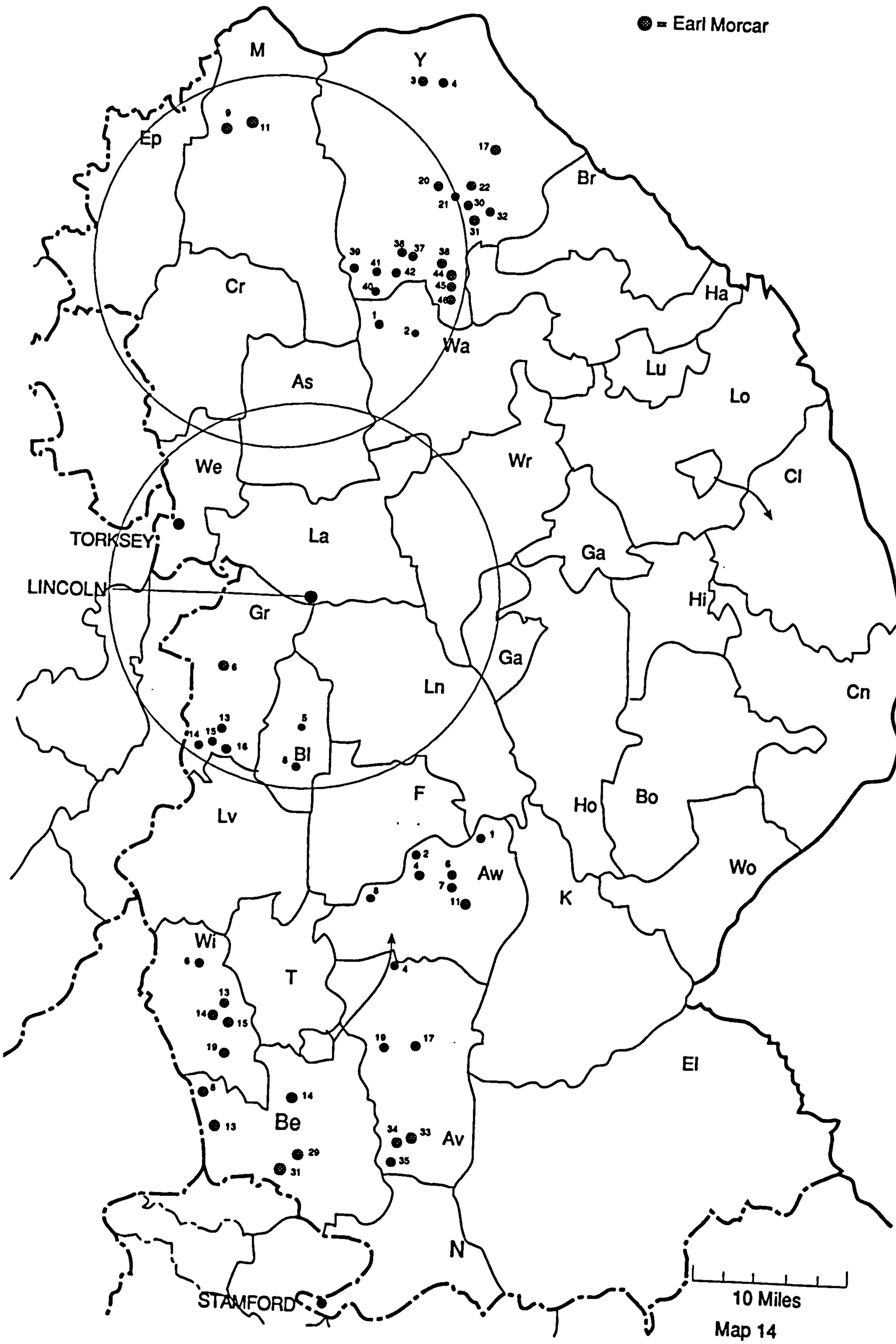
Holdings of Peter of Valognes



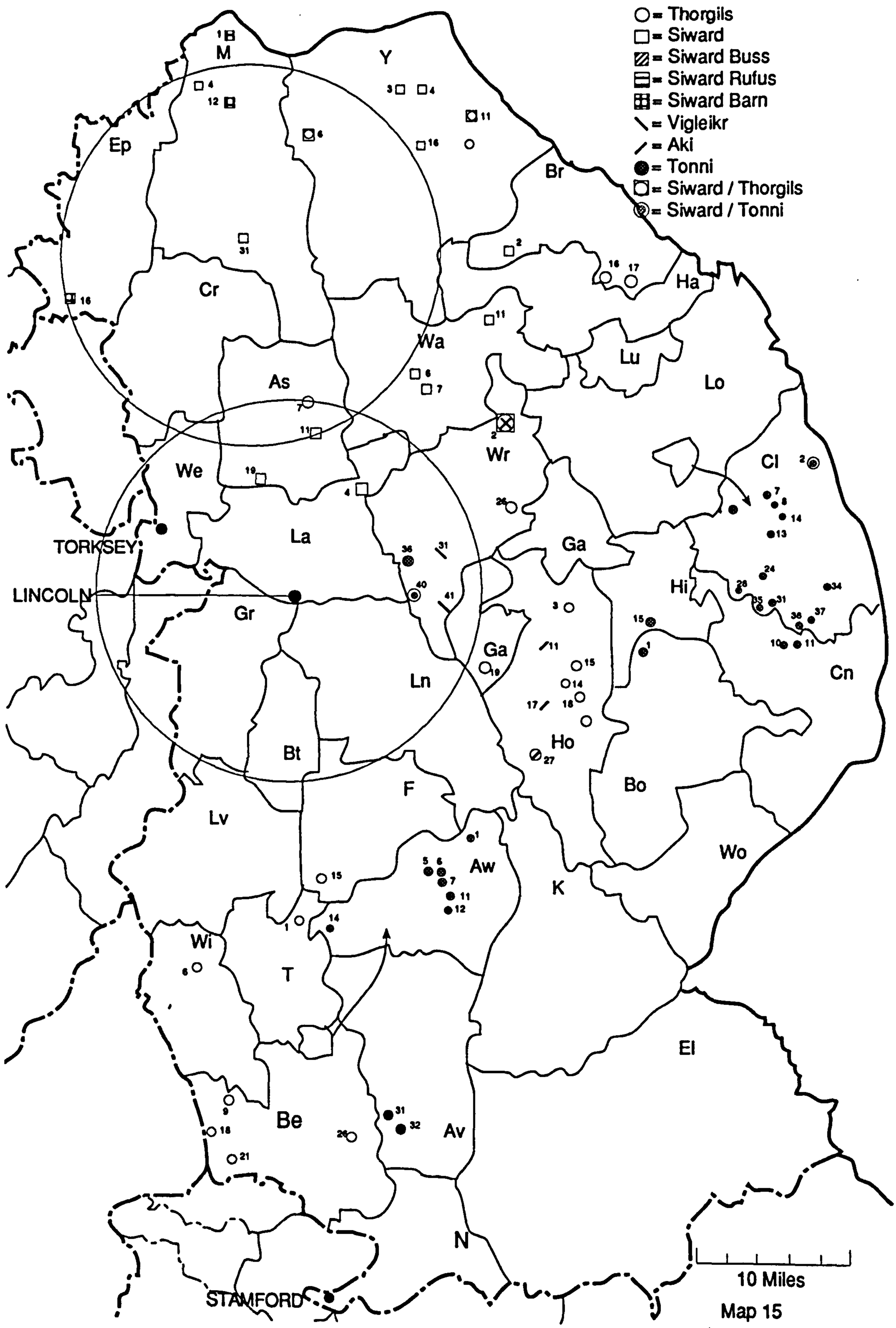
Map 12


● = Earl Harold
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
We
Cl
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

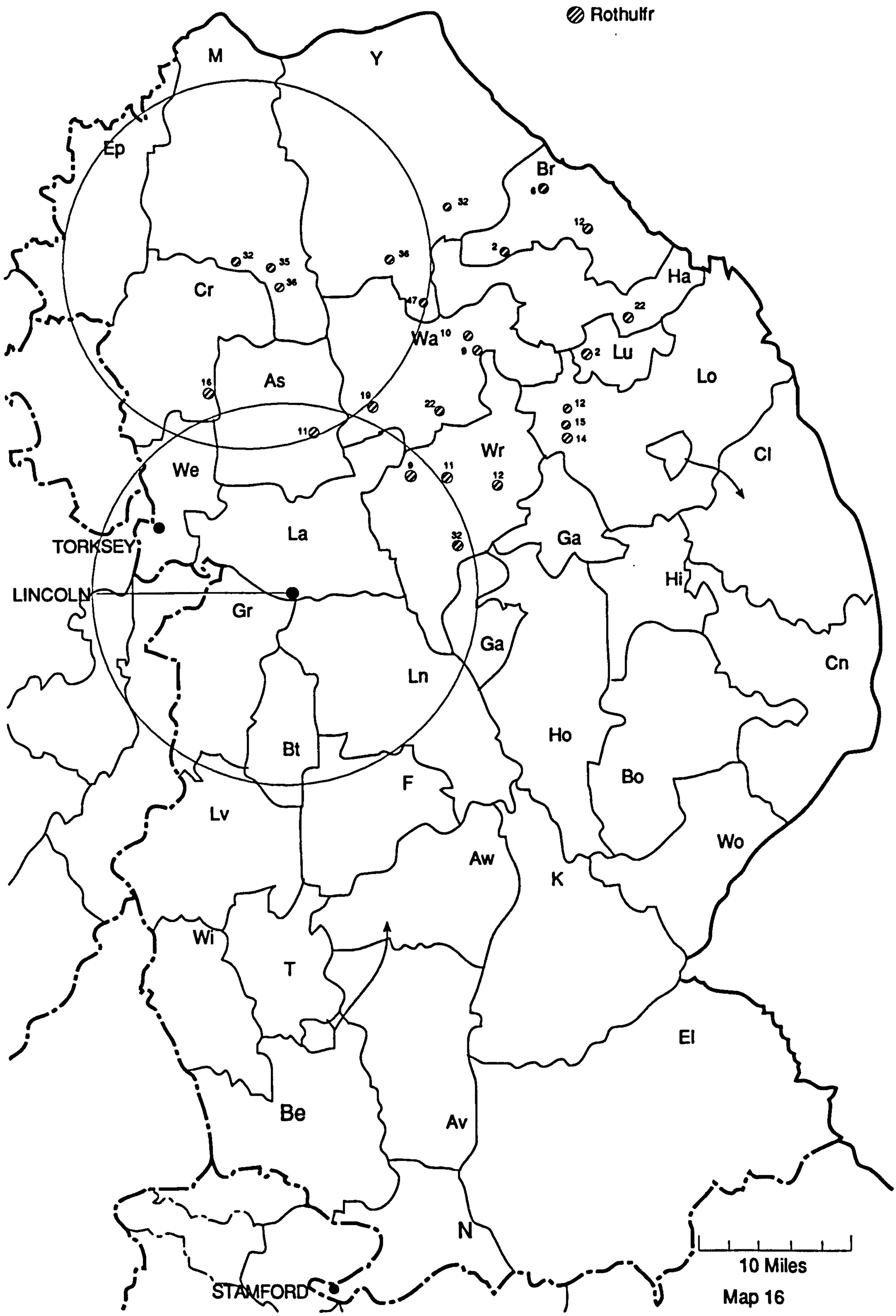
Map 13


● = Earl Morcar
M
Y
Ep
Br
Cr
Ha
Wa
As
Lu
Lo
We
Wr
Cl
TORKSEY
La
Ga
LINCOLN
Gr
Hi
Ga
Ln
Cn
Bl
F
Ho
Bo
Lv
Aw
Wo
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

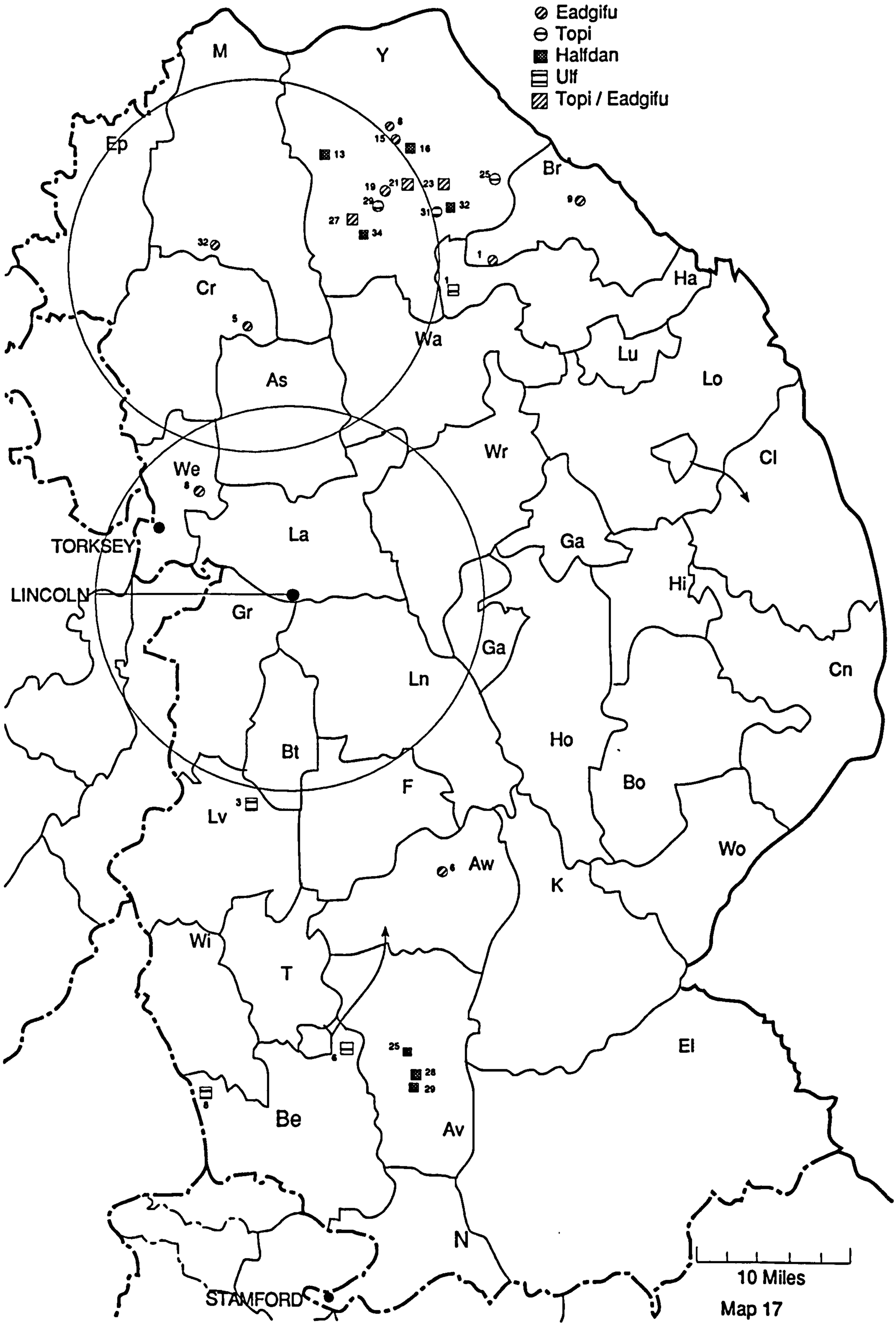
Map 14


= Thorgils
= Siward
= Siward Buss
= Siward Rufus
= Siward Barn
= Vigleikr
= Aki
= Tonni
= Siward / Thorgils
= Siward / Tonni
M
Y
Ep
Br
Cr
Ha
Wa
Lu
Lo
As
Wr
We
Cl
La
TORKSEY
Ga
LINCOLN
Gr
Hi
Ga
Ln
Cn
Bt
Ho
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

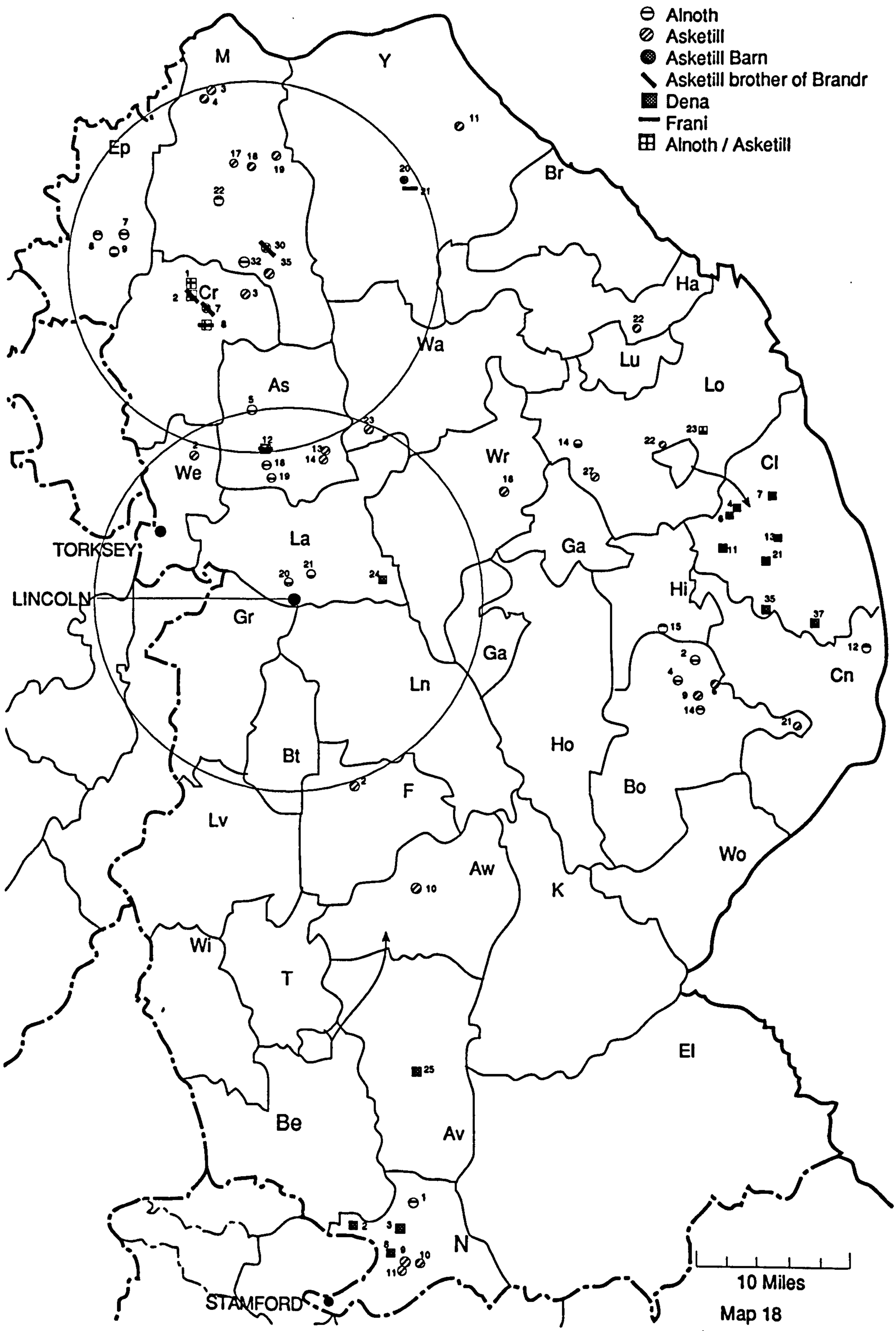
Map 15


Rothulfr
M
Y
Ep
Br
Cr
Ha
Wa
Lu
Lo
As
Wr
Cl
We
La
TORKSEY
Ga
Hi
LINCOLN
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

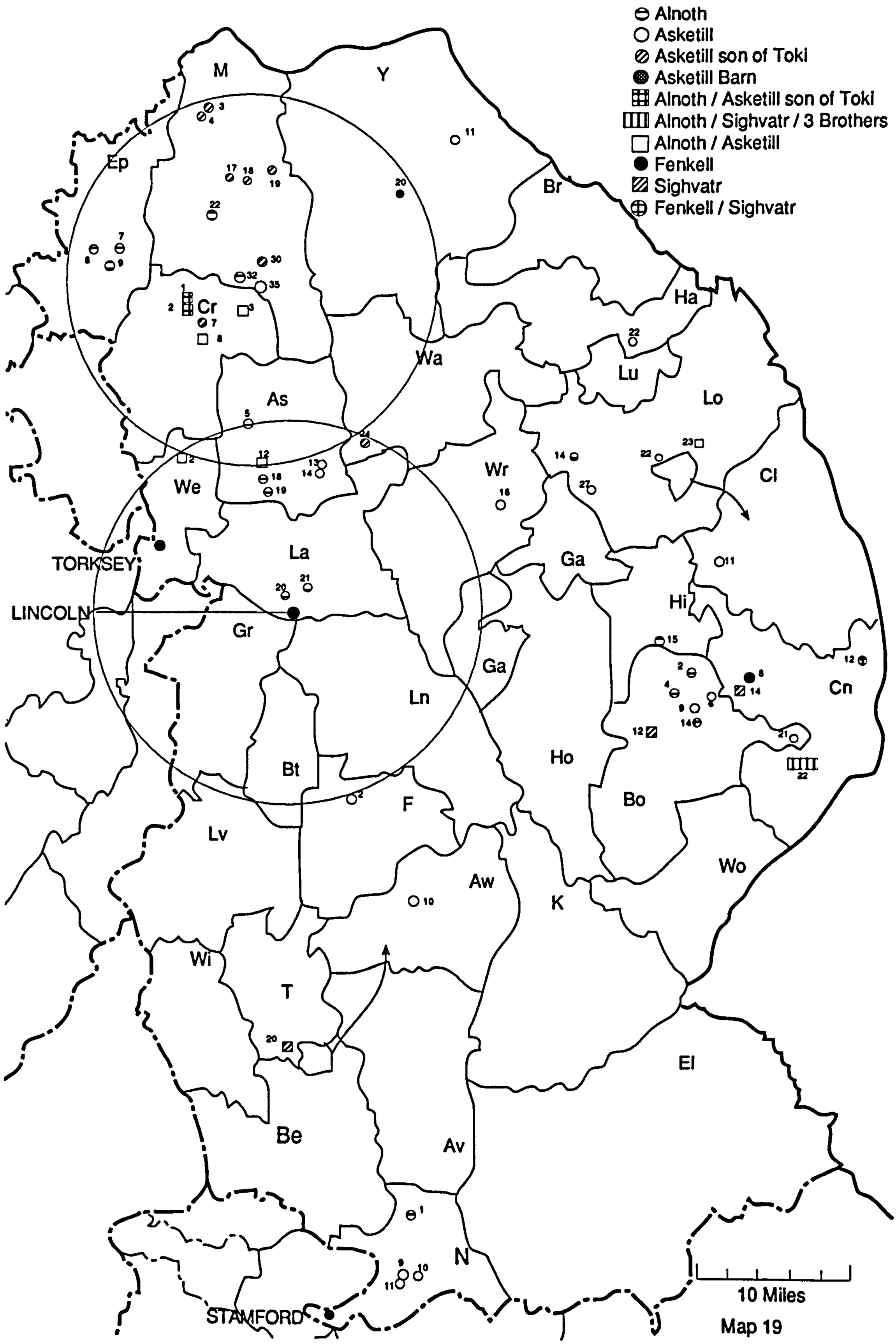
Map 16


Eadgifu
Topi
Halfdan
Ulf
Topi / Eadgifu
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
La
TORKSEY
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

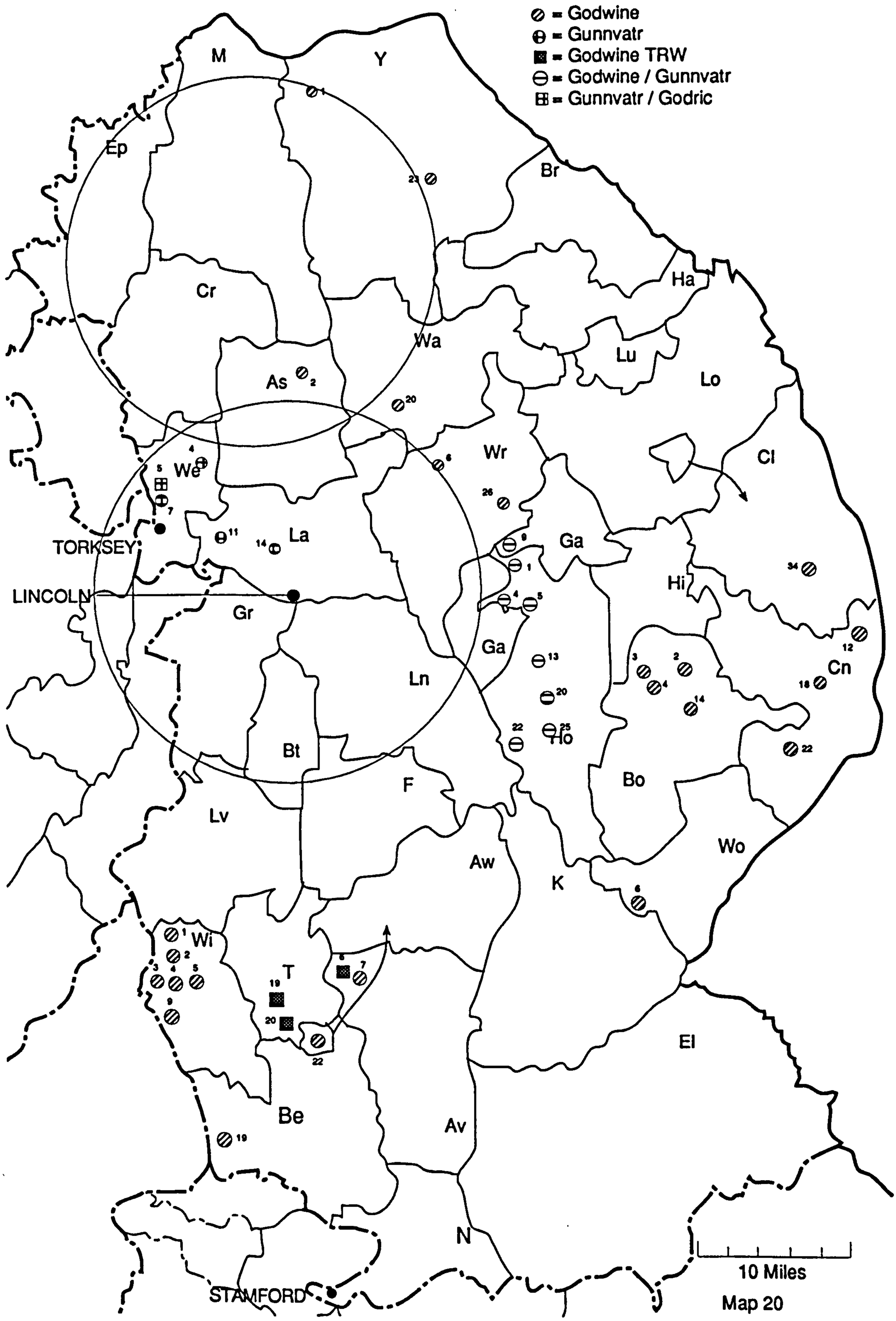
Map 17


Alnoth
Asketill
Asketill Barn
Asketill brother of Brandr
Dena
Frani
Alnoth / Asketill
M
Y
Ep
Br
Ha
Cr
Wa
Lu
As
Lo
Wr
Cl
We
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

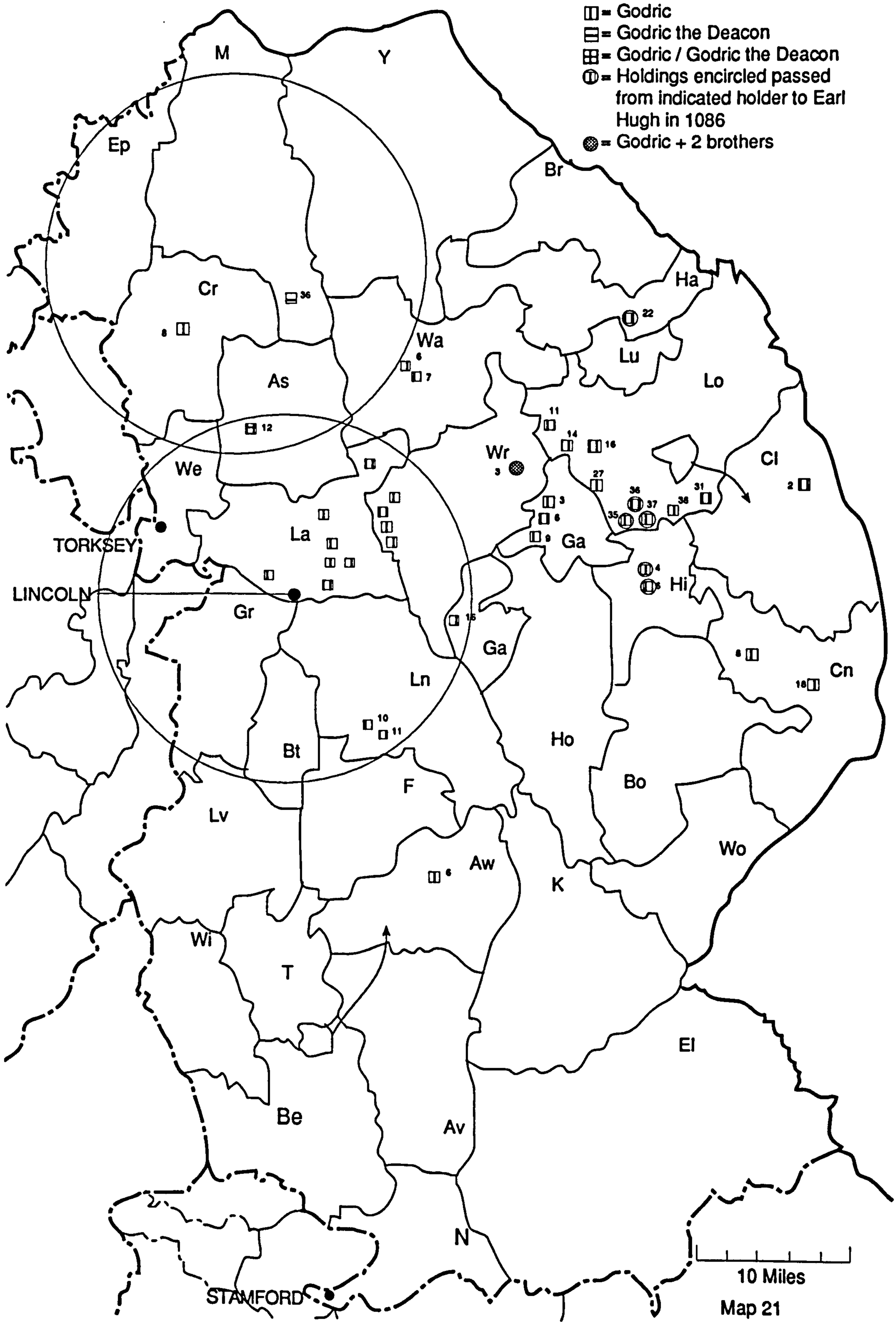
Map 18


Alnoth
Asketill
Asketill son of Toki
Asketill Barn
Alnoth / Asketill son of Toki
Alnoth / Sighvatr / 3 Brothers
Alnoth / Asketill
Fenkell
Sighvatr
Fenkell / Sighvatr
M
Y
Ep
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
TORKSEY
La
Ga
Hi
LINCOLN
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

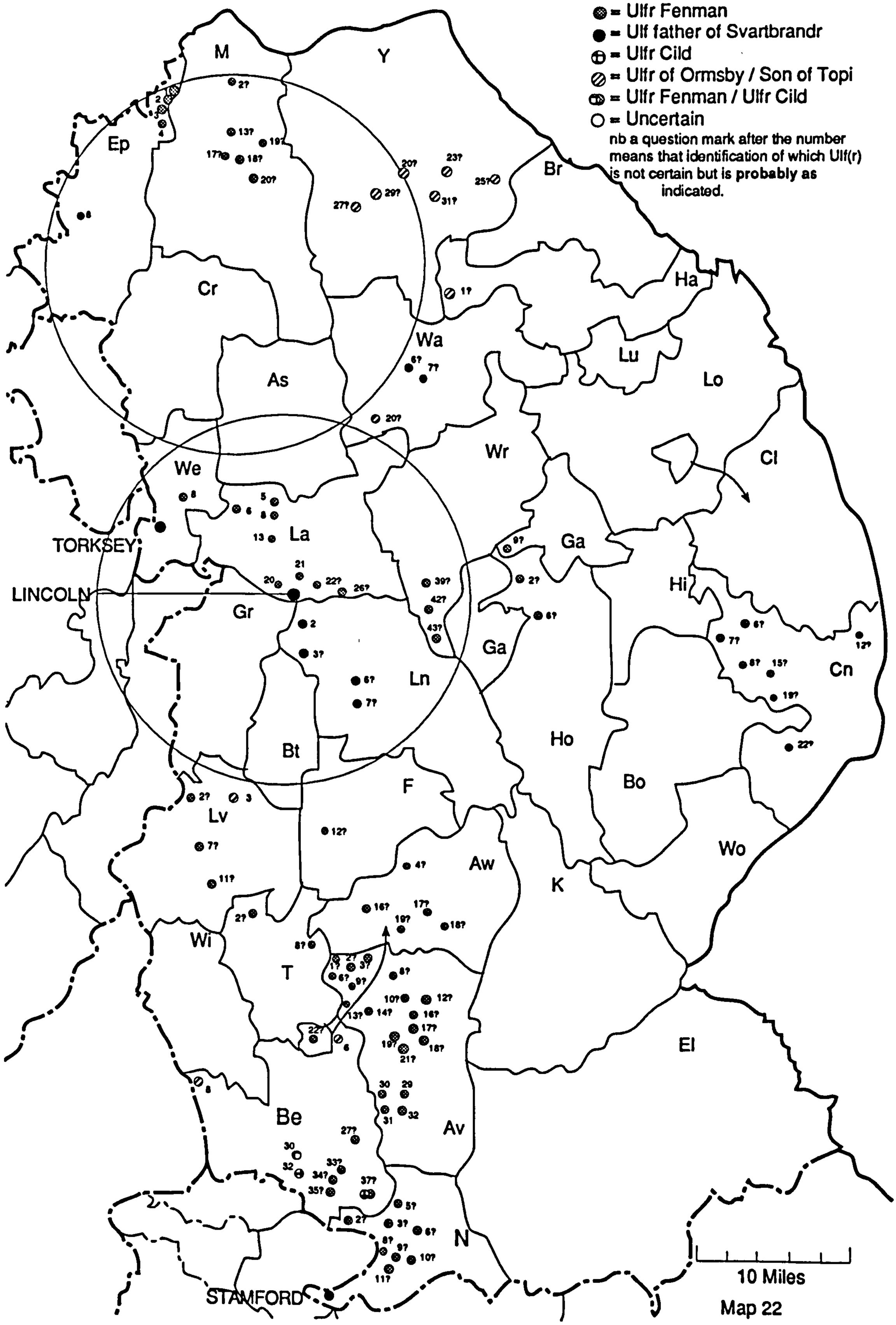
Map 19


= Godwine
= Gunnvatr
= Godwine TRW
= Godwine / Gunnvatr
= Gunnvatr / Godric
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
TORKSEY
La
Ga
Hi
LINCOLN
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

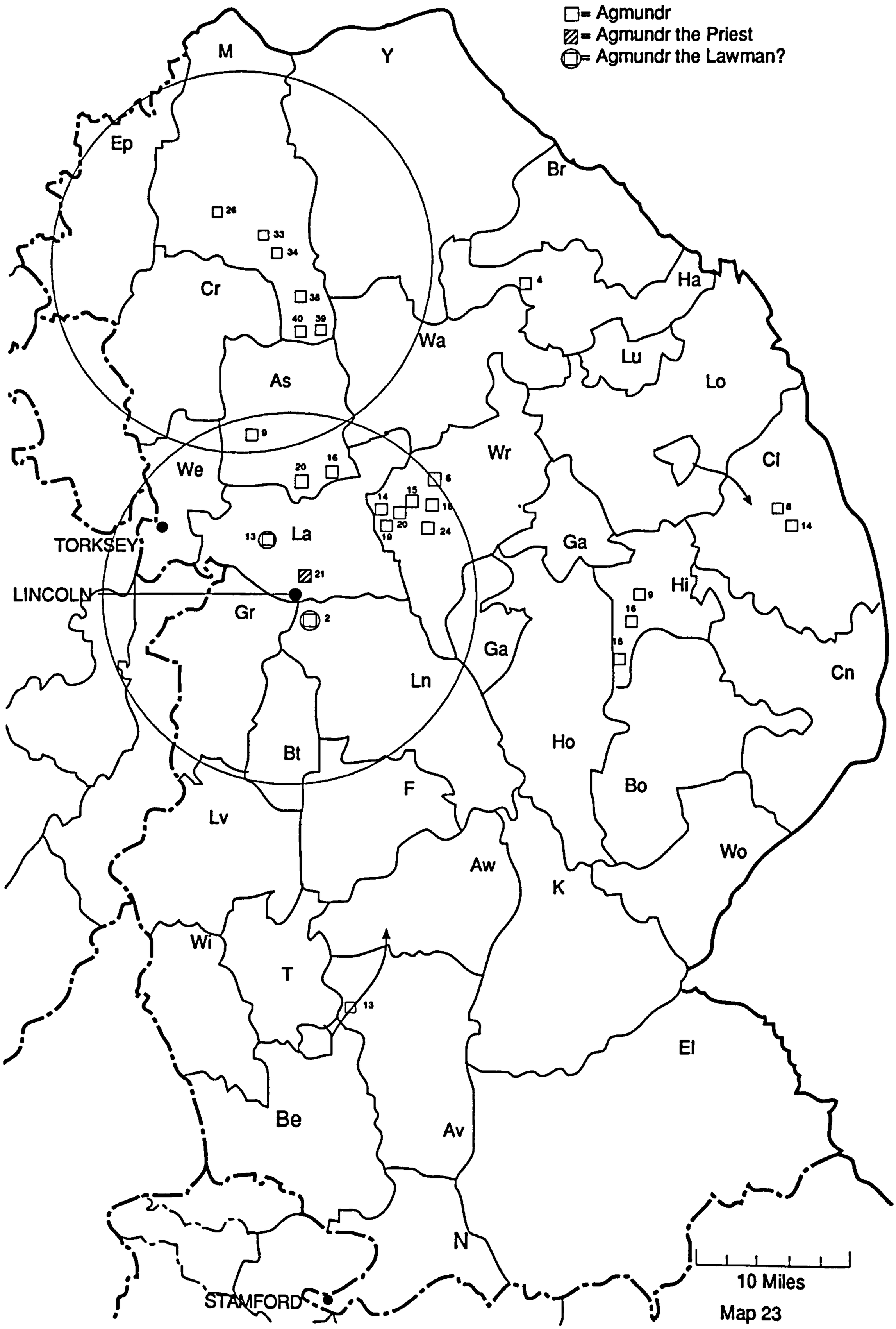
Map 20


= Godric
= Godric the Deacon
= Godric / Godric the Deacon
= Holdings encircled passed from indicated holder to Earl Hugh in 1086
= Godric + 2 brothers
M
Y
Ep
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
Ga
TORKSEY
La
Hi
LINCOLN
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

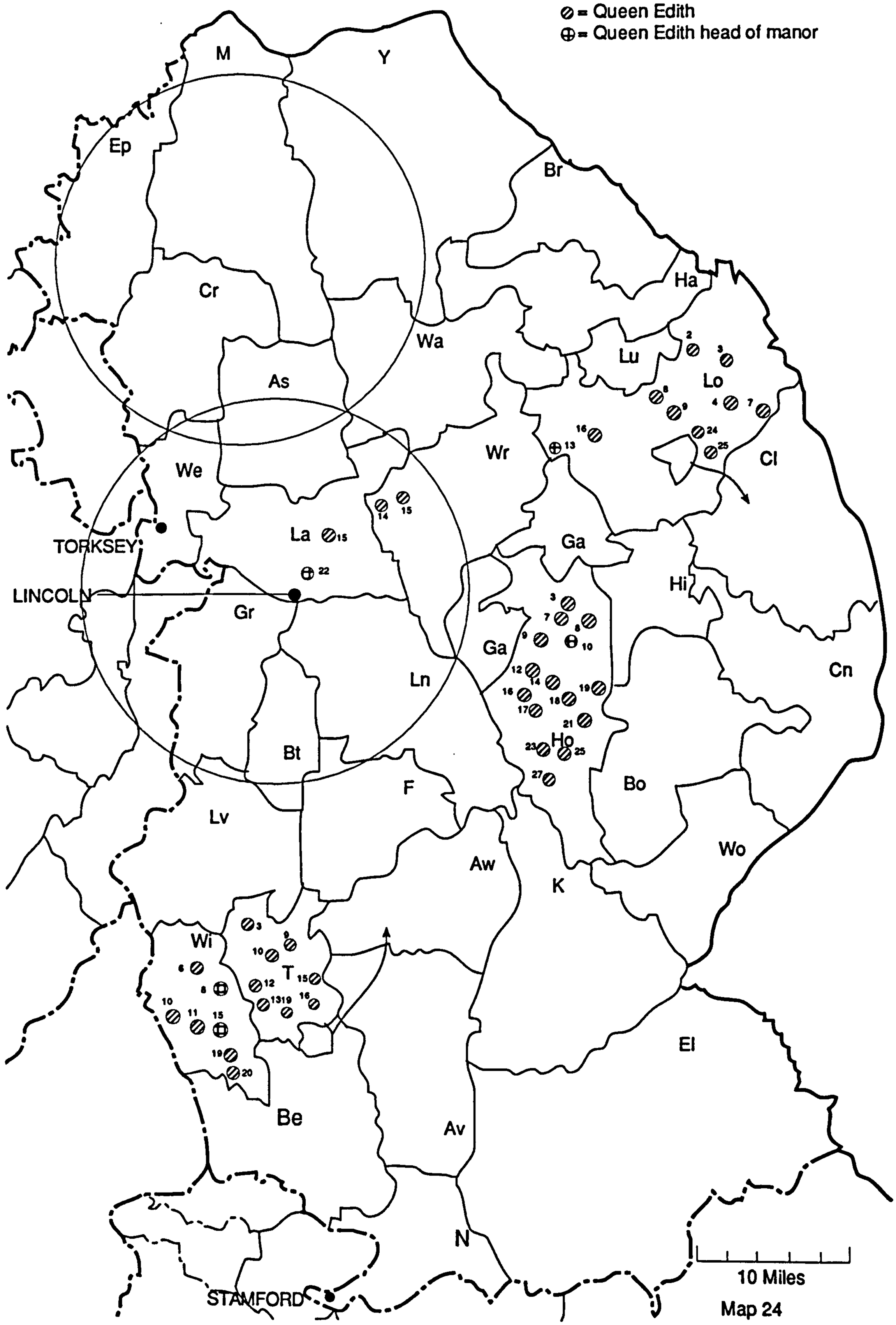
Map 21


= Ulfr Fenman
= Ulf father of Svartbrandr
= Ulfr Cild
= Ulfr of Ormsby / Son of Topi
= Ulfr Fenman / Ulfr Cild
= Uncertain
nb a question mark after the number means that identification of which Ulf(r) is not certain but is probably as indicated.
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

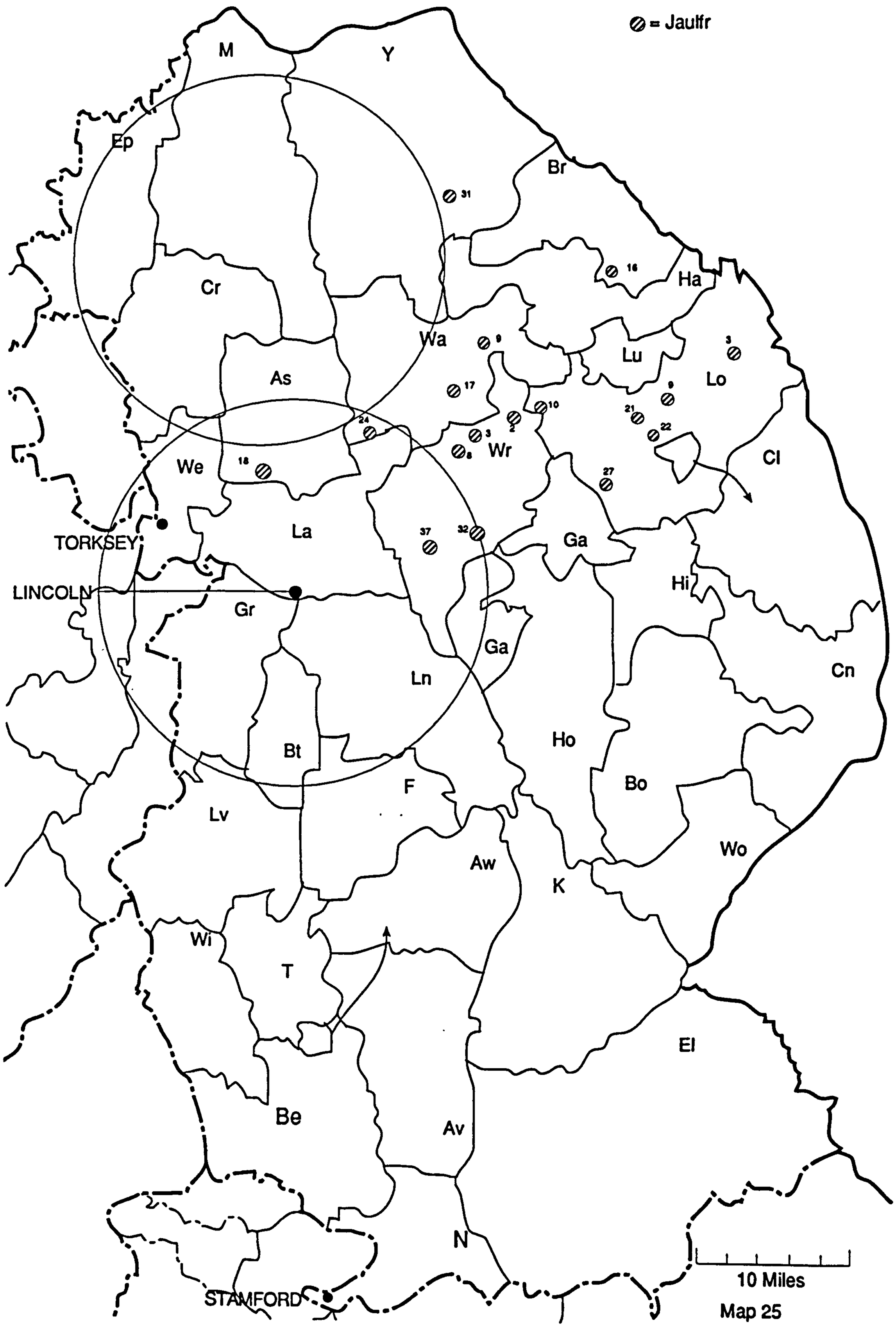
Map 22


= Agmundr
= Agmundr the Priest
= Agmundr the Lawman?
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
We
Wr
Cl
La
Ga
TORKSEY
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

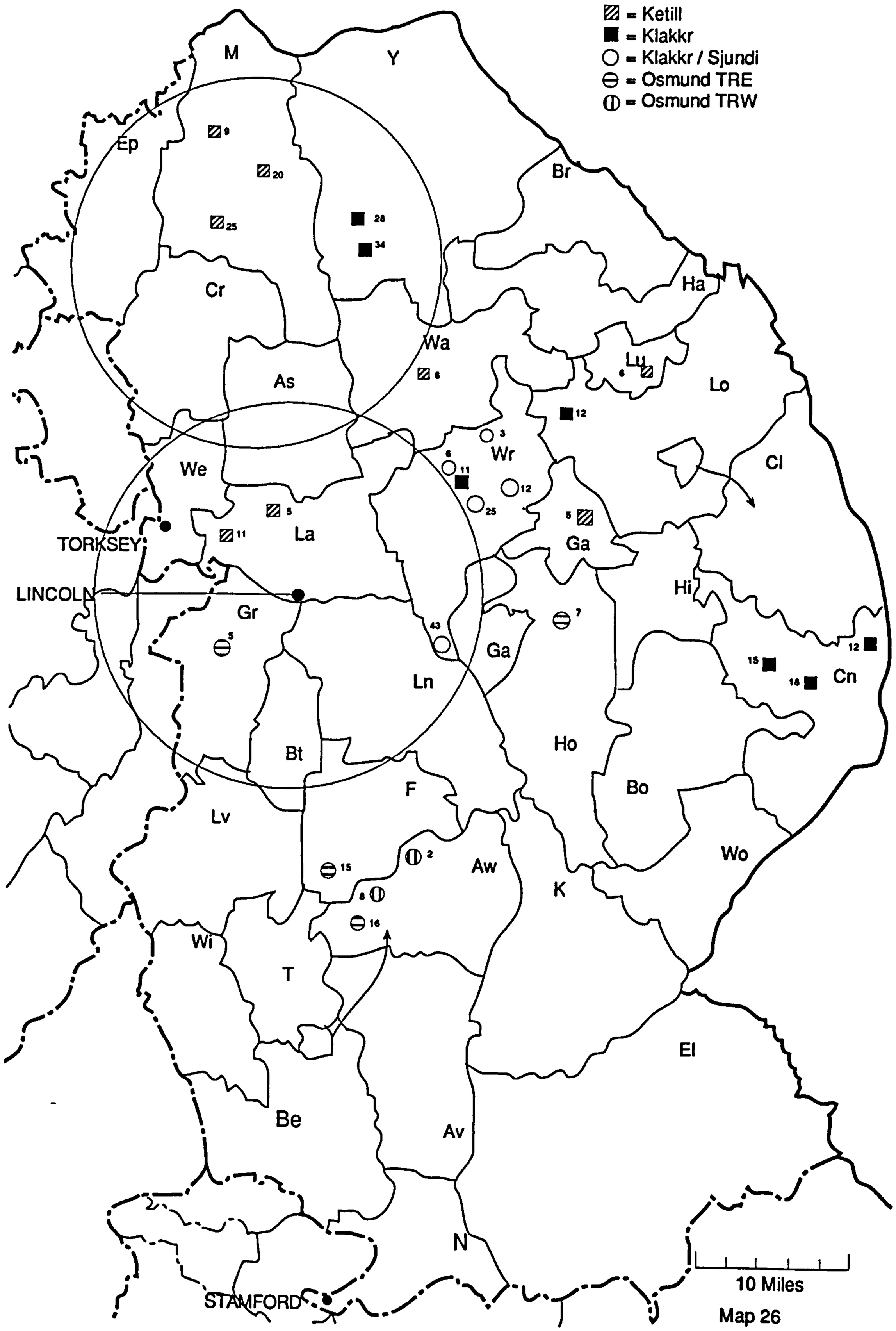
Map 23


⊘ = Queen Edith
⊕ = Queen Edith head of manor
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
La
Ga
TORKSEY
LINCOLN
Hi
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

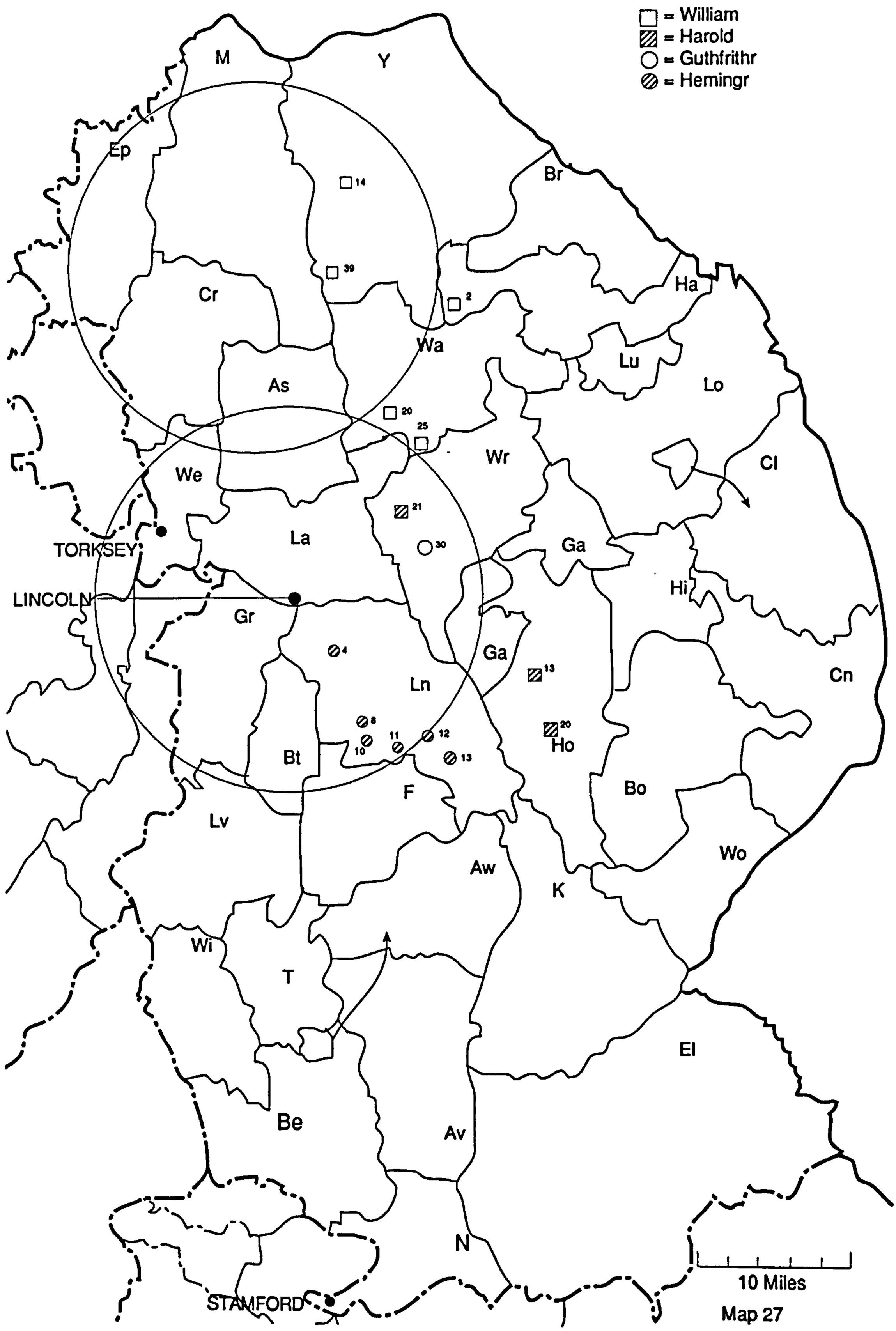
Map 24


= Jaulfr
M
Y
Ep
Br
Cr
Ha
Wa
Lu
Lo
As
Wr
Cl
We
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

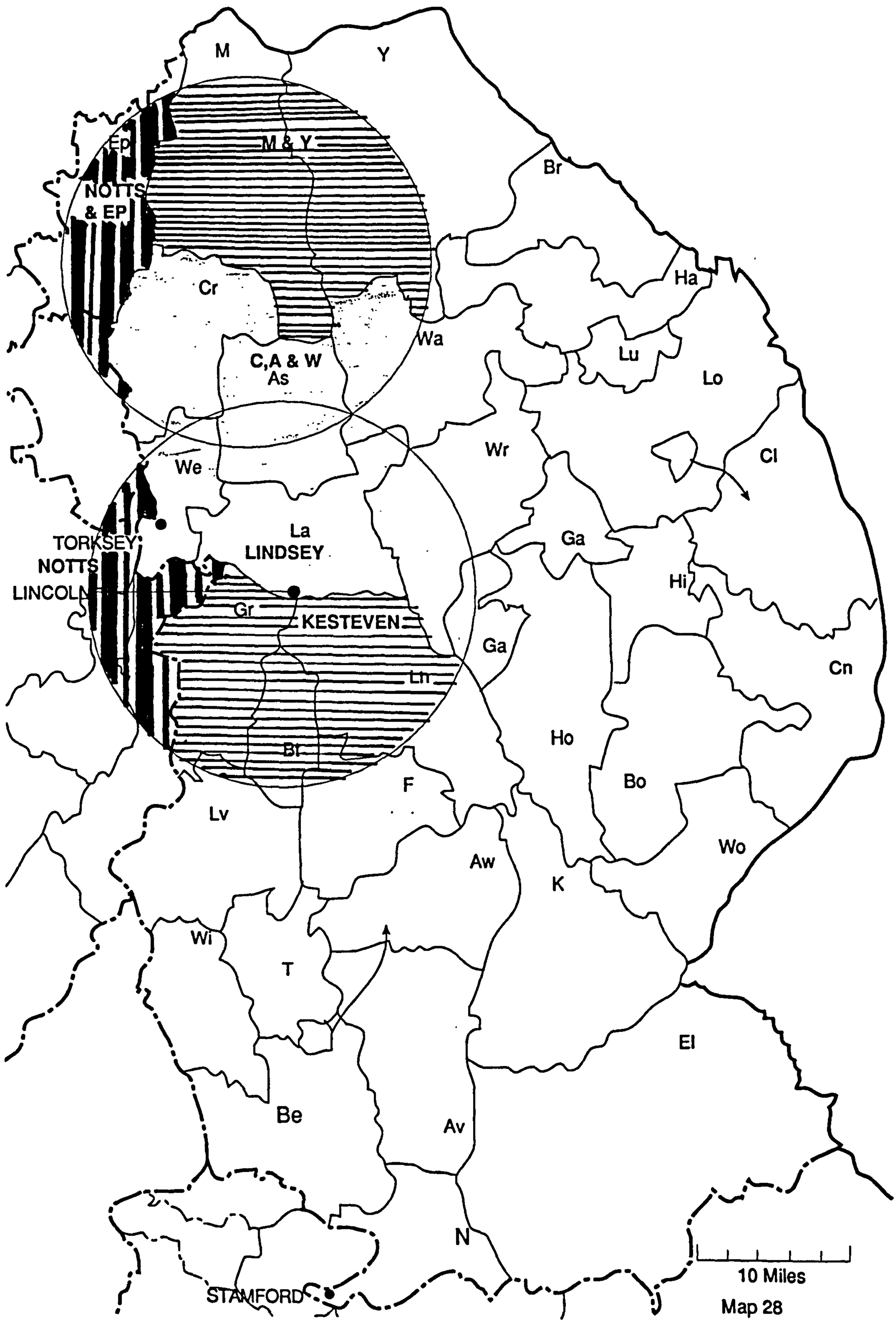
Map 25


= Ketill
= Klakkr
= Klakkr / Sjundi
= Osmund TRE
= Osmund TRW
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
We
Wr
Cl
TORKSEY
La
Ga
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Aw
Wo
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

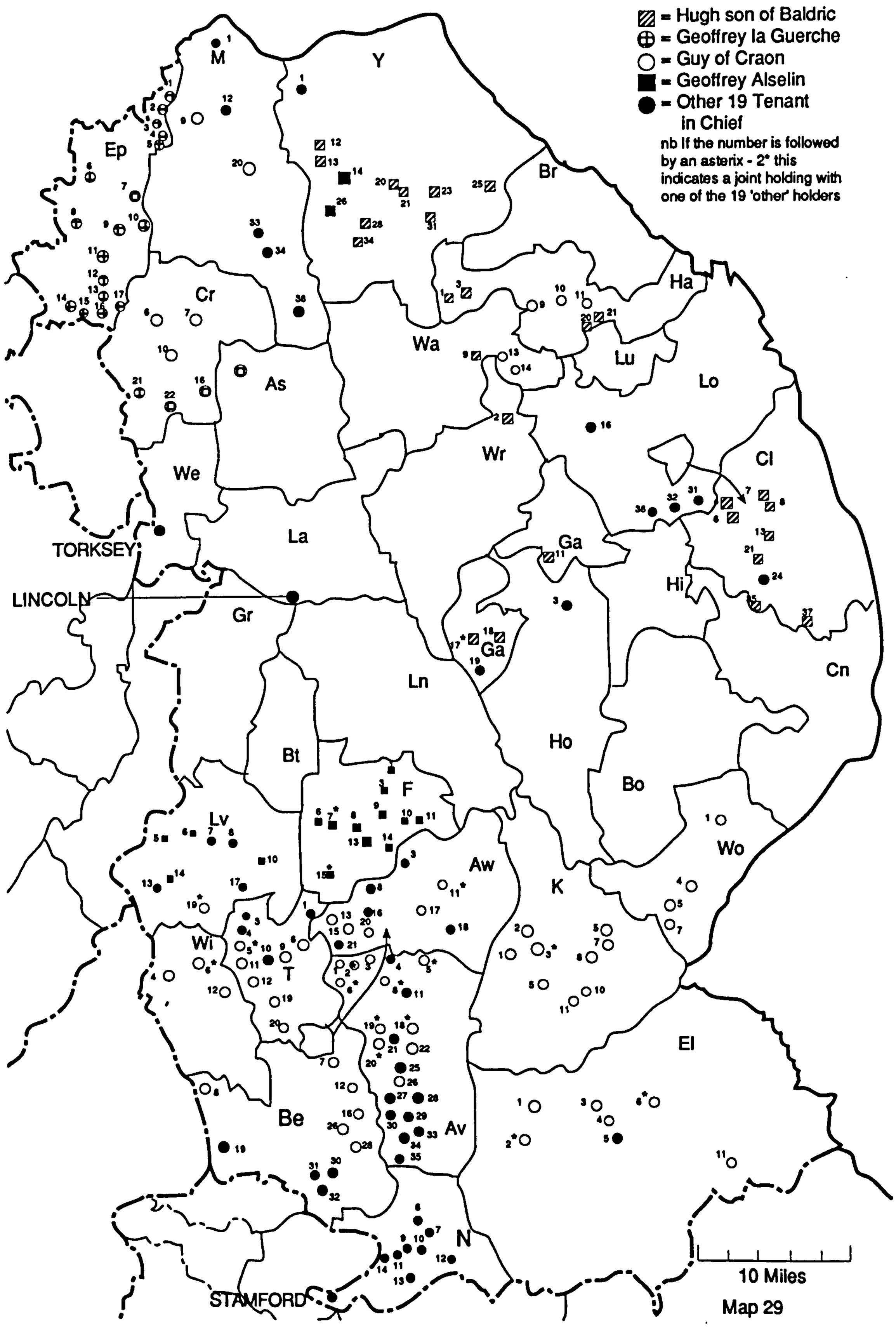
Map 26


= William
= Harold
= Guthfrithr
= Hemingr
M
Y
Ep
Br
Cr
Ha
Wa
Lu
As
Lo
Wr
Cl
We
La
Ga
TORKSEY
LINCOLN
Hi
Gr
Ga
Ln
Cn
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

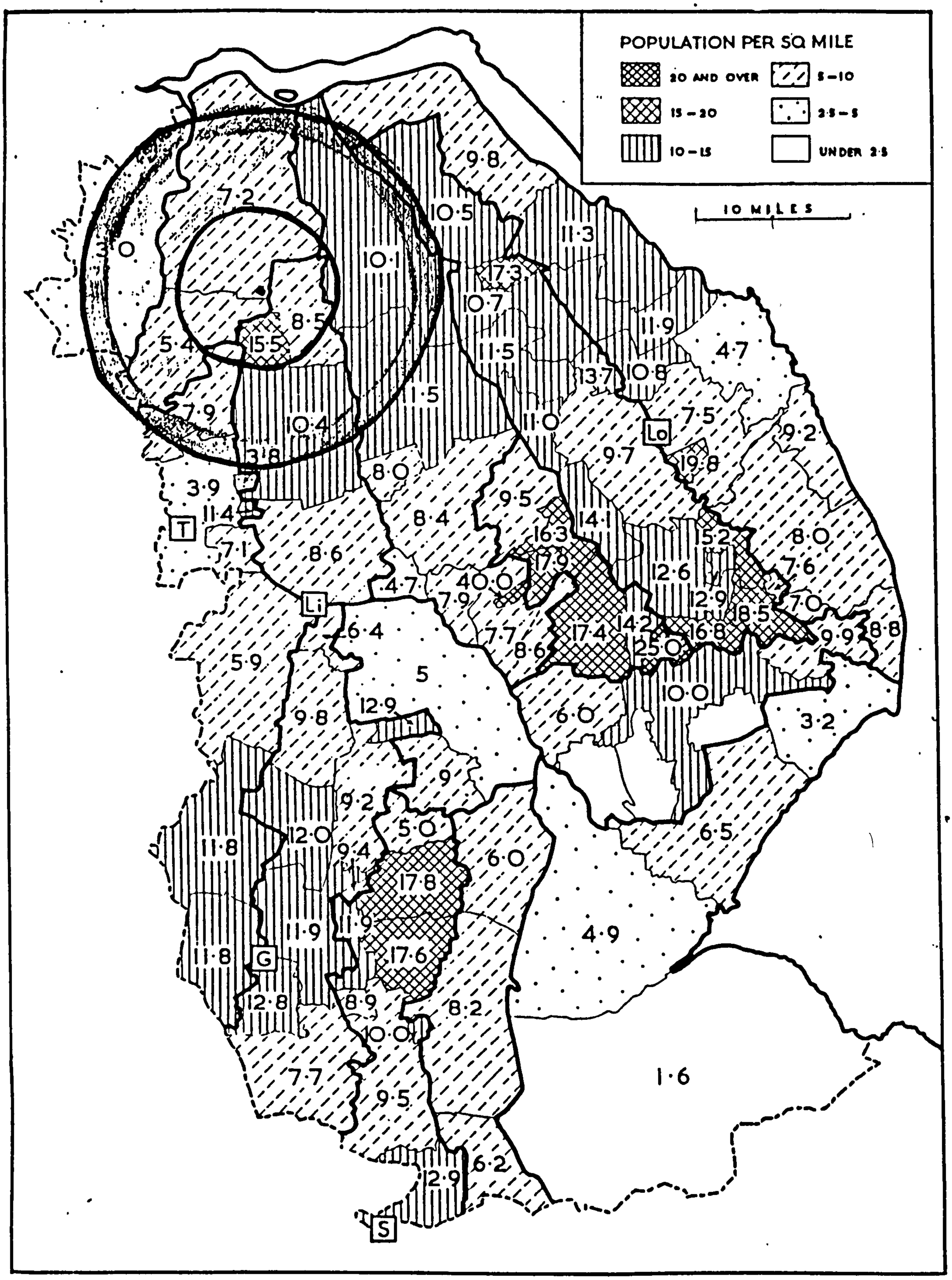
Map 27


M
Y
M & Y
Ep
NOTTS
& EP
Br
Cr
Ha
Wa
C,A & W
As
Lu
Lo
Wr
We
Cl
TORKSEY
La
LINDSEY
Ga
NOTTS
LINCOLN
Hi
Gr
KESTEVEN
Ga
Cn
Ln
Ho
Bl
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 28

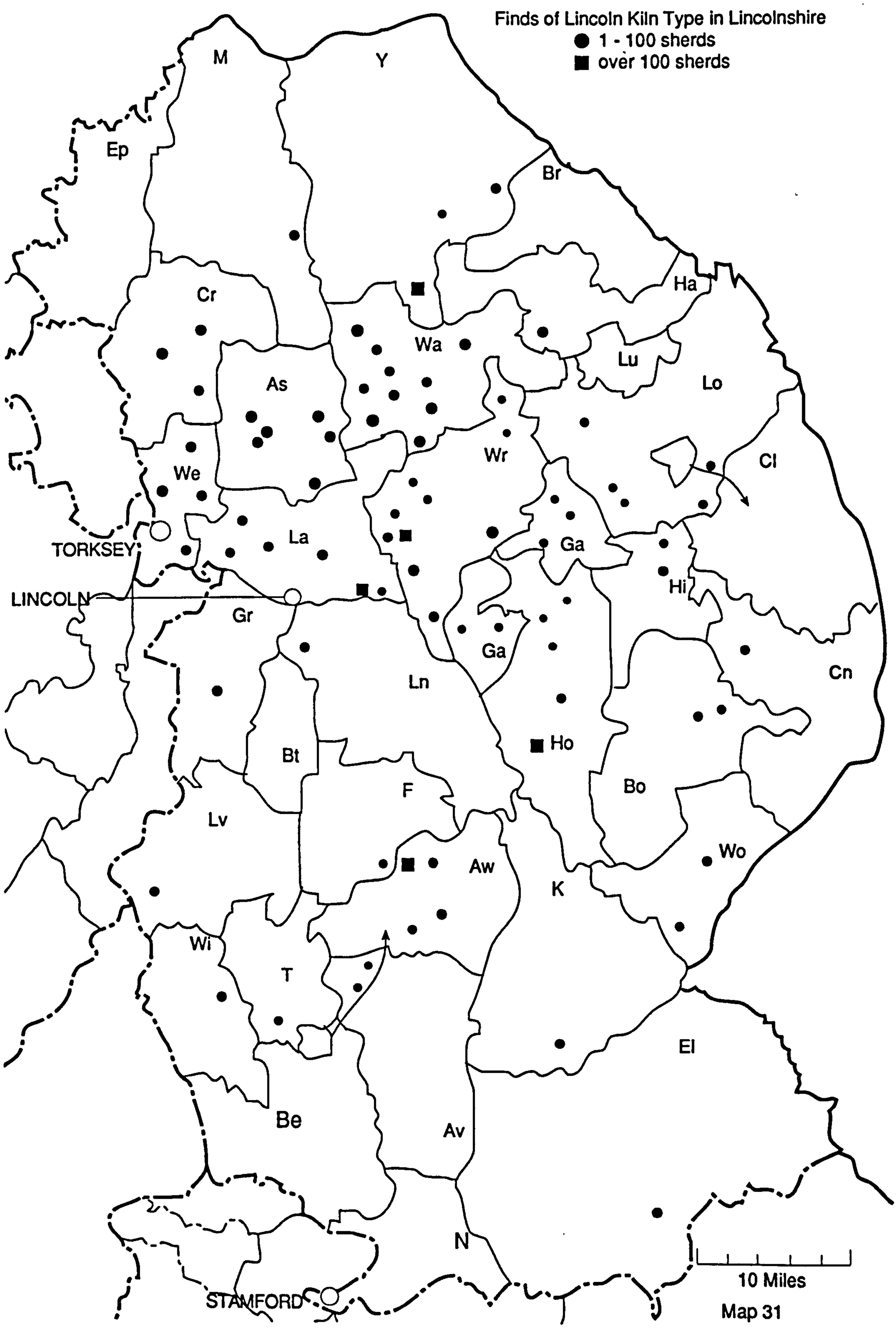

= Hugh son of Baldric
= Geoffrey la Guerche
= Guy of Craon
= Geoffrey Alselin
= Other 19 Tenant in Chief
nb If the number is followed by an asterix - 2* this indicates a joint holding with one of the 19 'other' holders
M
Y
Ep
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
La
Ga
Hi
TORKSEY
LINCOLN
Gr
Ln
Cn
Ho
Bt
F
Bo
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 29



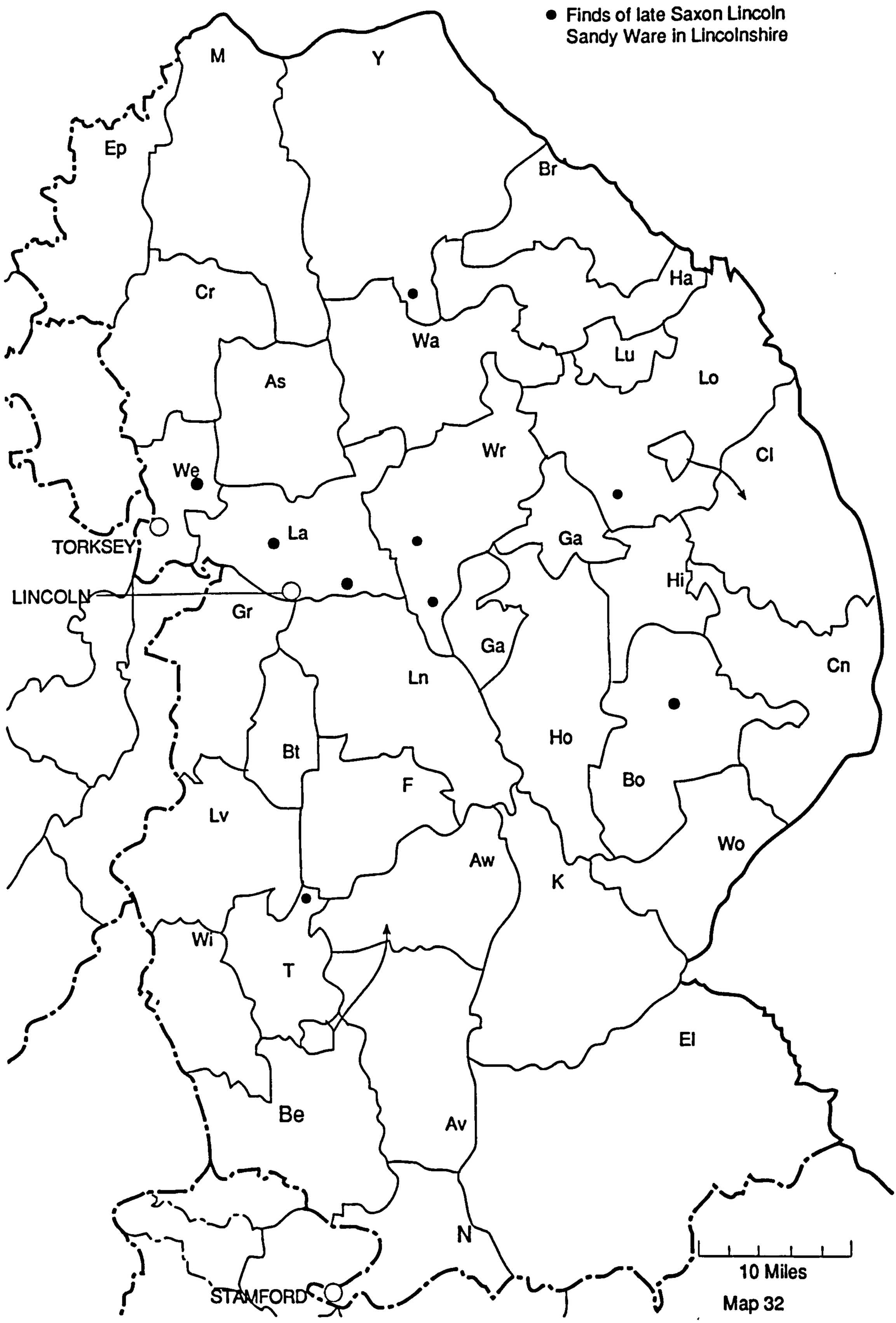
Map 30

Lincolnshire Domesday Population (after Darby) and Control Area



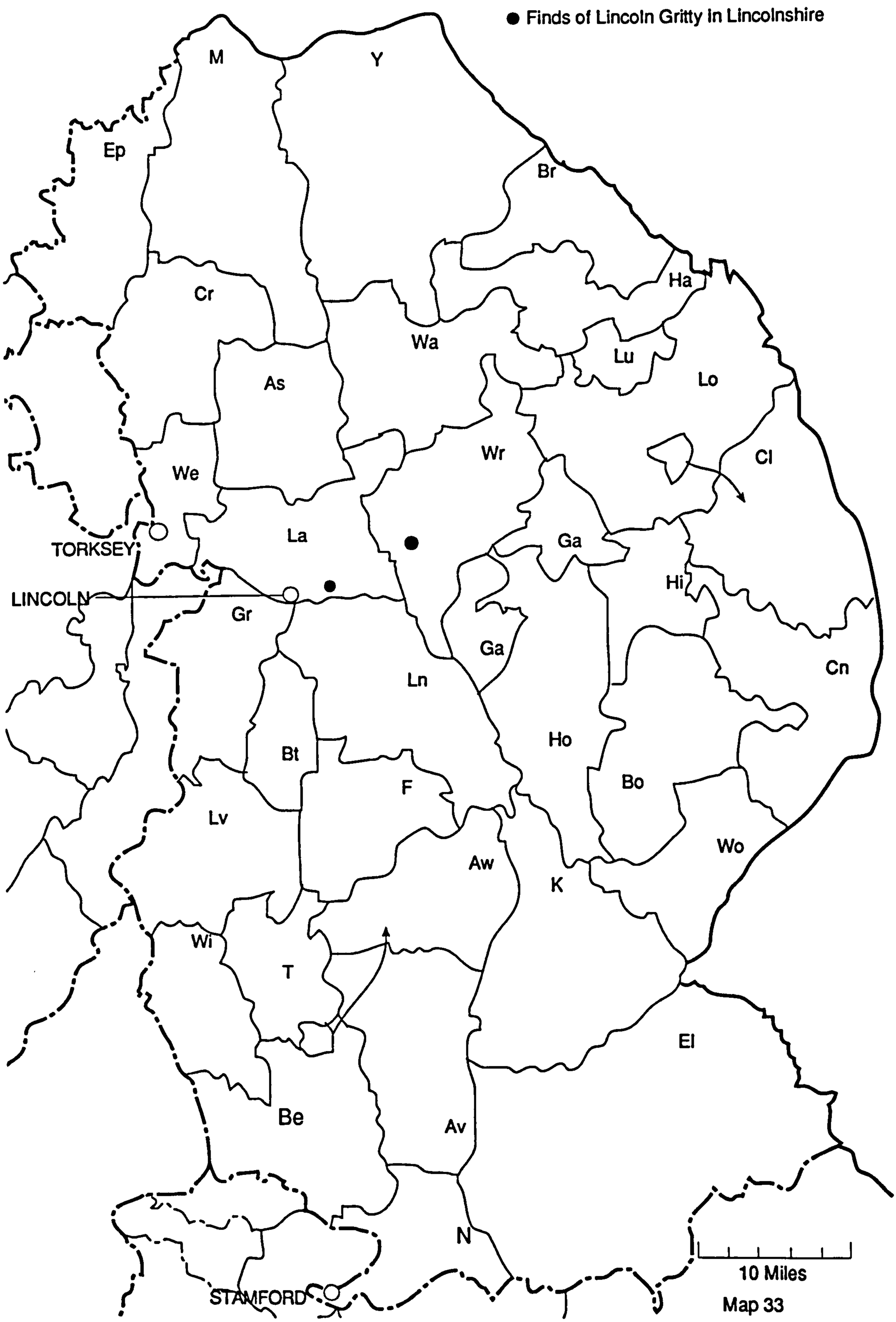
Map 31

Information from the City of Lincoln Archaeological Unit



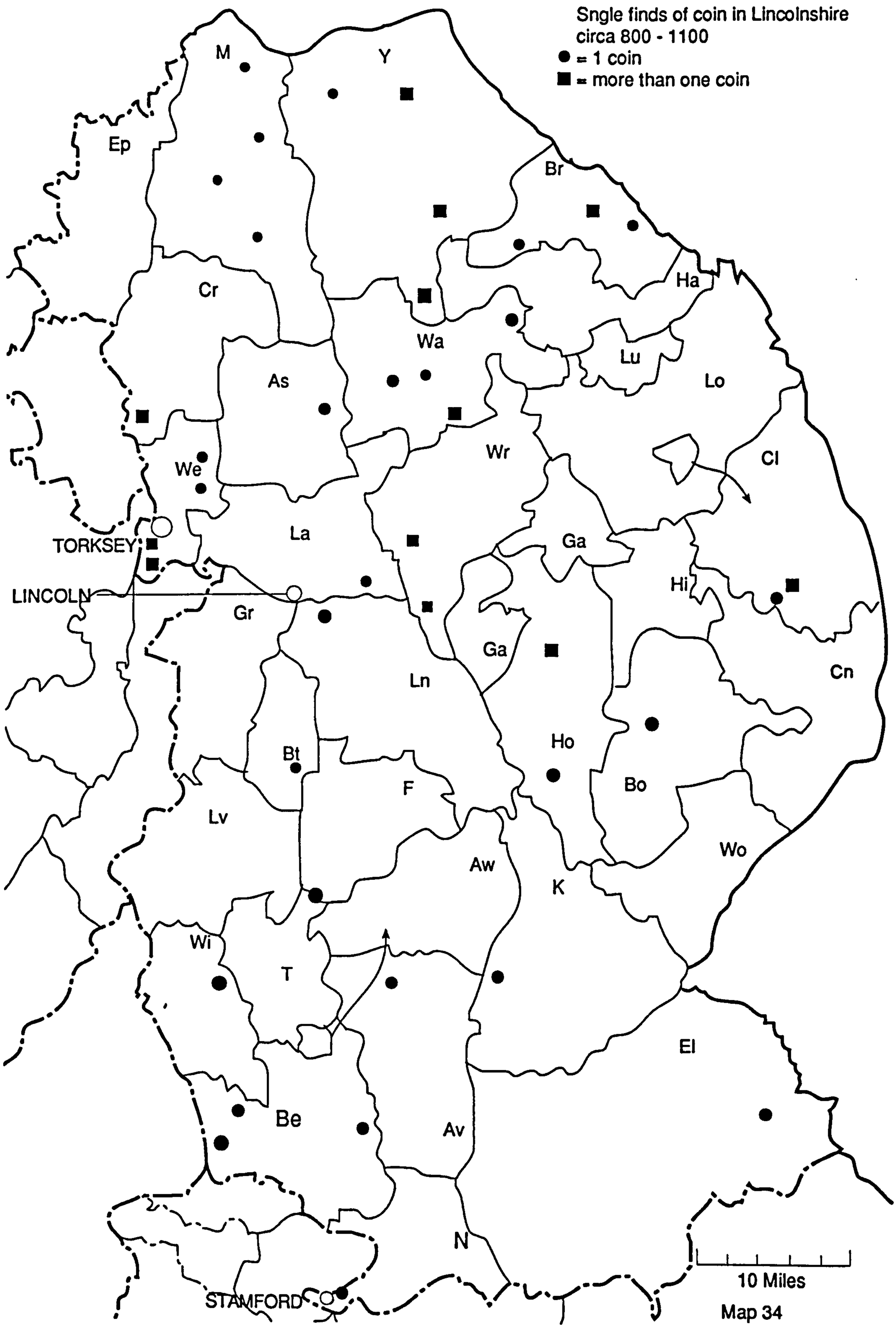
Map 32

Information from the City of Lincoln Archaeological Unit



Map 33

Information from the City of Lincoln Archaeological Unit


Sngle finds of coin in Lincolnshire
circa 800 - 1100
● = 1 coin
■ = more than one coin
M
Y
Ep
Br
Ha
Cr
Wa
Lu
Lo
As
Wr
Cl
We
La
Ga
TORKSEY
LINCOLN
Hi
Gr
Ga
Cn
Ln
Ho
Bt
Bo
F
Lv
Wo
Aw
K
Wi
T
El
Be
Av
N
STAMFORD
10 Miles

Map 34

APPENDICES

APPENDIX 1 SINGLE FINDS IN LINCOLNSHIRE (excluding Lincoln)

KEY

EMC	M Blackburn, M., Colyer, C., Dolley, M., Early Medieval Coins from Lincoln and its shire, 770-1100, Archaeology of Lincoln, Vol. VI-1, (London, 1983)
SF1	M A S Blackburn and M Bonser, 'Single finds of Anglo Saxon and Anglo Norman Coins I', BNJ, 54 (1985 for 1984), pp.63-73;
SF2	M A S Blackburn and M Bonser, 'Single finds of Anglo Saxon and Anglo Norman CoinsII, BNJ, 55 (1986 for 1985), pp.55-78;
SF3	M A S Blackburn and M Bonser, 'Single finds of Anglo Saxon and Anglo Norman Coins III BNJ, 56 (1987 for 1986), pp.64-101
SF4	M A S Blackburn, M Bonser and D Chick, 'Single finds of Anglo Saxon and Anglo Norman Coins IV', in Anglo Saxon Productive Sites, eds., M A S Blackburn and D M Metcalf (BAR forthcoming)
CReg1	'Coin Register 1', BNJ, 57 (1988 for 1987), pp.122-52
CReg2	'Coin Register 2', BNJ, 58 (1989 for 1988), pp.138-64
CReg3	'Coin Register 3', BNJ, 59 (1990 for 1989), pp.221-33
PVL	M Blackburn, 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, ed., A. Vince, (Lincoln, 1993), pp.87-89

Also searched 'Coin Register 4', BNJ, 60 (1991), pp.143-63 and 'Coin Register 5', BNJ, 61 (1992), pp.141-55

APPENDIX 1 SINGLE FINDS IN LINCOLNSHIRE (excluding Lincoln)

Authority	Type	Issue	Date	Mint	Moneyer	Find Site	Ref
Abp Eanbald II	'styca'	796	-830	-	Eadwulf	Torksey region	PVL
Coenwulf	Tribrach	798	-804	London	Wighard	Alford	PVL
Coenwulf	Tribrach	798	-804	London	Eansa	Torksey	SF4
Coenwulf	Tribrach	798	-804	London	Ludoman	Torksey	PVL
Ceonwulf	Cross Moline	810		Rochester ?	Ealhstan	Washingborough	EMC
Abp Wulfred	Trans Monogram	810		Canterbury	Swefherd	south of Louth	CReg1
Coenwulf	Cross Fourchee	810	-821	Canterbury	Swefherd	Caistor	SF4
Abp Wulfred	Monogram	817	-822	Canterbury	Saeberht	(Great) Limber	EMC
Ceolwulf I	Quatrefiol	821	-823	East Anglia	Fotred	North Lincs	EMC
Coelwulf I	Three Lines	821	-823	East Anglia	Hereherht	Swinderby	SF4
Ecgberht Wessex	C type	829	-838	Canterbury	Tidhearht	Keelby	SF4
Eanred	'styca'	830		York	Cynewulf	Winteringham	EMC
Eanred	'styca'	835		York	Wilheah	Kirmington	EMC
Eanred	'styca'	835		-	Monne	Torksey region	PVL
Abp Wigmund	'styca'	837	-854	York	Coenraed	Torksey	PVL
Abp Wigmund	'styca'	837	-854	York	Aethelweard	Torksey	PVL
Abp Wigmund	'styca'	837	-854	-	Hunlaf	Torksey region	PVL
Ethelred II	'styca'	840	-844	York	Leofdegn	Appleby	EMC
Ethelred II	'styca'	840	-844	York	Fordred	Irby upon Humber	SF1
Ethelred II	'styca'	840	-844	York	Eanred	Grimesthorpe	EMC
Ethelred II	'styca'	840	-844	York	Monne	N E Lincs	SF1
Ethelred II	'styca'	840	-848	York	Monne	Gainsborough	PVL
Ethelred II	'styca'	840	-848	-	Brother	Torksey region	PVL
Ethelred II	'styca'	840	-844	York	Fordread	Torksey	PVL
Berhtwulf	Potrait/Cross	841	-843	London	Oswulf	Scawby	EMC
Ethelred II	'styca'	844	-848	York	Eardwulf	Keelby	PVL
Ethelred II	'styca'	844	-848	York	Eardwulf	Torksey	PVL
Redwulf	'styca'	844	-848		Brother	Torksey region	PVL
'Ethelred II'	'styca' imitat	845	-865	York	Tidwulf	Grimsby	PVL
Ethelred II	'styca'	845	-865	York	-	Keelby	PVL
	'styca' irregu	850	-865	York		Stow	PVL
Burgred	Lunette	865	-874	London/Roche	Hussa	Barrow upon Humber	EMC
Burgred	Lunette	865	-874	London/Roche	Eadwulf	Normanby le Wold	EMC
Abp Coelnoth	Lunette	866	-870	Canterbury	Hebeca	Kirmington	Creg1
Aethelred Wessex	Lunette	866	-871	-	Aethelgar?	Gainsborough	PVL

Authority	Type	Issue	Date	Mint	Moneyer	Find Site	Ref
Burgred	Lunette	870		London?	Tata	Torksey	PVL
Alfred	Lunette	871	-875	London/Roche	Dudwine	Barrow upon Humber	EMC
Alfred	Lunette	871	-875	Canterbury	Biarnred?	Torksey	CReg1
Burgred	Lunette	871	-875	London?	Tata	Torksey	PVL
Burgred	Lunette	871	-875	London?	Beagstan	Barrow upon Humber	PVL
Alfred	Two Line	880	-899			Louth	SF4
'Alfred'	Two Line imitat	885	-895	Danish E Ang	'Ida'	Lincoln region	EMC
Alfred	Two Line	890		West Mids?	Ludig	Stamford	EMC
Anon	St Edmund Mem	900		East Anglia	'Boleti	East Kirkby	EMC
Viking issue?		900				Gainsborough	SF4
Anon	St Peter Sw/Cro	920		York		south of Louth	SF3
Sihtric Caoch	Sword/Thor	921	-927	N E Mids		Threekingham	EMC
Athelstan	Circumscrip Cros	927	-939	York	Regnald	Bardney	SF4
Eadwig	Two Line	955	-957	York	Herigar	South Ferriby	SF4
Edgar	Two Line	959	-973	Lincoln	Asferth	Goltho	EMC
Edgar	Two Line	959	-973		Benedictus	Grimsby	SF4
Edgar	Two Line	959	-973	North East V	Winemaer	North Owersby	SF4
Ethelred	First Small Cro	978	-979	York	Wine(man)	Grimsby	SF1
Ethelred	First Small Cro	978	-979	York	Ascetel	Alford	SF2
Ethelred	First Small Cro	978	-979	Lincoln	Rodbert	Willingham	CReg2
Ethelred	First Small Cros	978	-979	York	Thorstan	Willingham	SF4
Ethelred	First Hand	979	-985	Lincoln	Theogild	Horncastle	EMC
Ethelred	First Hand	979	-985	York	Skaning?	Grimsby	SF3
Ethelred	First Hand	979	-985	Worcester	Manna	Willingham	SF4
Ethelred	Crux	991	-997	Lincoln	Stignbit	Long Sutton	EMC
Ethelred	Crux	991	-997	York	Ascetel	Keelby	SF4
Ethelred	Crux	991	-997	Lincoln	Colgrim	Willingham	SF4
Ethelred	Long Cross	997	-1003	Rochester	Eadwerd	Horncastle	EMC
Ethelred	Long Cross	997	-1003			Cleethorpes	SF3
Ethelred	Long Cross	997	-1003	Lincoln	Reinald	Caistor	SF3
Cnut	Quatrefoil	1017	-1023	Lincoln	Asferth	Grimsby	SF4
Cnut	Quatrefoil	1017	-1023	Lincoln	Wulfgrim	Louth	SF4
Cnut	pointed Helmet	1024	-1030	Lincoln	Wulberen	Goltho	EMC
Cnut	Short Cross	1030	-1035	Lincoln	Lifinc	Goltho	EMC
Cnut	Short Cross	1030	-1035	Lincoln	Matdan	Normanby by Stow	EMC
Cnut	Short Cross	1030	-1035	Lincoln	Aethelmaer	Caistor	SF1
Cnut	Short Cross	1030	-1035	Stamford	Morulf	Claxby by Alford	SF1
Cnut	Short Cross	1030	-1035	York	Athelwine	Willingham	CReg2

APPENDIX 1 SINGLE FINDS IN LINCOLNSHIRE (excluding Lincoln)

Authority	Type	Issue Date	Mint	Moneyer	Find Site	Ref
Harold I	Jewel Cross	1036 -1037	Lincoln	Osferth	south of Louth	SF2
Harold I	Jewel Cross	1036 -1037	Lincoln	Walraeffen	Willingham	SF4
Harold I	Fleur de Lis	1038 -1040	Lincoln	Leopurina	Louth	SF4
Harold I	Fleur de Lis	1038 -1040	York	Aelfdane	Louth	SF4
Harthacnut	Arm and Sceptre	1040 -1042	Lincoln	Brihric	Louth	SF4
Edward the Conf	Pacx	1042 -1044	Lincoln	Ulf	Witham below Lincoln	EMC
Edward the Conf	Pacx	1042 -1044	York	Grimulf	south of Louth	SF3
Edward the Conf	Pacx	1042 -1044	Stamford	Aelfeh	south of Louth	SF2
Edward the Conf	Radiate/Small Cr	1044 -1046	London	Elman	Wellingore	EMC
Edward the Conf	Radiate/Small Cr	1044 -1046	Stamford	Godric	Coningsby	CReg2
Edward the Conf	Radiate/Small Cr	1044 -1046	Northampton	Leopurine	Louth	SF4
Edward the Conf	Trefoil/Quadd	1046 -1046	Lincoln	Colgrim	Fiskerton	EMC
Edward the Conf	Small Flan	1048 -1050	Worcester	Wulfwine?	Ancaster	EMC
Edward the Conf	Expanding Cross	1050 -1053			near Lincoln	CReg1
Edward the Conf	Pointed Helmet	1053 -1056	London	Aldgar	Stoke Rochford	EMC
Edward the Conf	Pointed Helmet	1053 -1056	London	Godwig	south of Louth	SF2
Edward the Conf	Pointed Helmet	1053 -1056	Lincoln?	Godric	North Owersby	SF2
Edward the Conf	Hammer Cross	1059 -1062	Lincoln	Auti	Willingham	SF4
Edward the Conf	Pyramids	1065 -1066	Lincoln	Ulf	Keelby	SF3
Edward the Conf	Pyramids	1065 -1066	Leicester	Godric	Lincs, Nr Melton Mowbr	SF3
William I	Profile/Fleury	1066 -1068	Lincoln	Ashgran	Bardney	SF4
Olaf Kyrre		1067			near Lincoln	CReg1
William I	Profile/F/Bonnet	1068 -1070			Louth	SF4
William I	Canopy	1070 -1072	Lincoln	Thorston or	Thorganby	SF4
William I	Canopy	1070 -1072	Lincoln	Godric	Grantham	CReg3
William I	Two Stars	1074 -1077	London	Whitric	Horncastle	EMC
William I	Two Stars	1074 -1077		God...	Louth	SF4
William I	Profile/Cross	1080 -1083	Canterbury	Godric	Donington	EMC
William I	Profile/Cross	1080 -1083	London	Godwine	south of Louth	SF3
William I	Profile/Cross	1080 -1083	Lincoln	Thurstan	Keelby	CReg1
William II	Facing Bust	1089 -1092	Durham	Ordwi	Glentham	EMC

APPENDIX 2 Lincoln Streets in Documentary Sources Before 1400

(Source K Cameron, The Place Names of Lincolnshire 1, pp.47-111)

		Name Elements				
Street	Century	*stig*	*gata*	*other*	*Scand*	*English*
Aldussty	14	x				
Baggersgate	13		x			
Bargate	13(14)		x			
Baxtergate	12		x			x
Bedern Lane	13	x				x
Bishopgate [1]	13		x			
Boune Lane	13					
Bradgate	12		x			
Brauncegate	12		x		personal name	
Briggate [2]	12		x		either ON bryggja or	
Broadgate	14		x		(OE brycy)	
Clasketgate [3]	13		x		personal name	
Clifgate	13		x			
Cockplace	13					x?
Cock Row	14					x
Crookedsty	14	x				
Danesgate	12		x			
Dumans Lane [4]	13				OE pers name?	
East Bight	12					
East Gate	12		x			
Golderounsty	14	x				
Greestone Stairs/Pla	14				ME *grece*-stairs	
Halliwellgate	13		x			
Haroldsty	13	x			personal name	
Hawerby Lane	14					
High St. (Miklegate)	13		x		*mikill*	
Holgate	13		x			
Hornergate	14		x			
Hornesty	13	x				
Humber Street	13		x			x
Hungate	12		x			
Lammersty	14	x				
Lewynsty	13	x				
Lumnour Lane	14	x				x
Midhergate [5]	?13		x			
Northgate	13					x *geat*
Old Hungate(BeaumFee)	13		x			
Old Street [6]	14					x
Overgate	13(14)		x			
Parchmingate [7]	13		x			
Pauntener Street	13		x			x
Poor Alley	14					
Pottergate	12		x			
Pyting Lane	14					x
St Bartholomews Stree	13(14)					
St Giles Gate	13		x			
St Lawrence Lane	14					x
St Mary Stigh(Much La)	13	x				
St Peters Lane	13					

APPENDIX 2 Lincoln Streets in Documentary Sources Before 1400

Street	Century	*stig*	*gata*	other Scand	English
Saltergate	13		x		
Scolegate	13		x		
Scotgate	13(14)		x	8	x?
Sextongate	12		x		x? 9
Silver Street 10	14				x
Skinnergate	14		x		
Soper Lane	12		x		x 11
Spout Lane	14				x
Staingate	13		x	*steinn*-stone	
Stowegate	13		x		
Thornbridgegate	14		x		
Thorngate	12		x		
Walkergate	13		x		
Watergate	14		x		
Watergangsty	13	x			
Werkdyke	13				x
West Bight	13				
Westgate	12				x*geat*
Wingarth (James St)	13			ON*garthor* OE	*geard*
Winnowsty Lane	13	x	x		x
Wintergate	13		x		

Notes:

1 Only appears in Latin *venellam de* - , *Boune* = Middle English

2 More commonly werkdyke in earlier period, see

3 More commonly applied to nearby gate- gate of *Clackeslide*

4 Originally an area

5 Perhaps Orchard Street

6 Perhaps Ermine Street

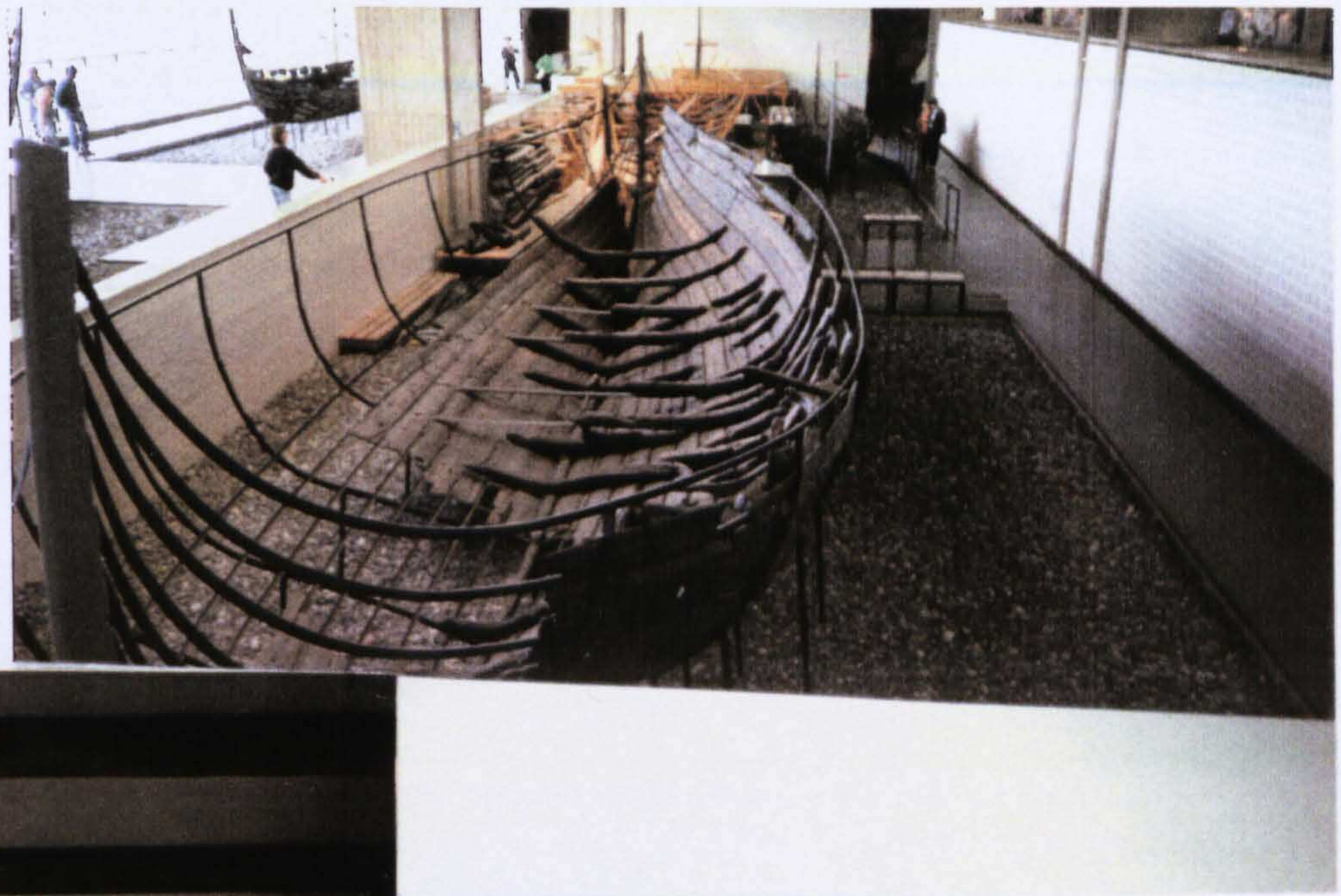
7 In 12th cent. referred to *parcamenariorum*, now Michaelgate

8 or OE*geat*

9 OE personal name *Saxstan*

10 Not likely to be existing Silver Street

11 14th cent. *Saperlane*



APPENDIX 3

↑

Roskilde Merchant Ship Wreck 1

← Roskilde Merchant Ship Wreck 3

Roskilde Merchant Ship Wreck 3

↓

Appendix 4:

Domesday Book Spreadsheet: Methodology Problems and Calculations

Domesday Book provides an essential source for any consideration of the economic, and more specifically landholding, relationship between Lincoln and the surrounding countryside. Whilst there is no comparable source for the beginning of the period, it nonetheless provides an indispensable snapshot of landholding and the agrarian economy during the late-eleventh-century. The principal concern here was to investigate whether Lincoln had an identifiable impact on the rural hinterland which surrounded it. It was considered that the information contained in Domesday Book could be more effectively utilised if it was entered onto a spreadsheet, in this case SuperCalc 4.

The first stage was to select an area around Lincoln for study. For this a circle of radius 12 miles was drawn on a map with Lincoln at its centre. The map chosen for this was the one in the Phillimore edition of Lincolnshire Domesday Book, as this also had the 'villages' in Domesday Book marked. 12 miles was chosen as this has often been regarded as the maximum distance for walking to and from market in a day, although this is admittedly a somewhat arbitrary distinction. There were 135 places within this area, mostly in Lincolnshire although there were also a number in Nottinghamshire [1]. The details of each village were entered into a SuperCalc file using all the entries in Domesday Book that referred to it [2].

These details began with a Domesday Book reference that cited the chapter and subheading number as used in the Phillimore Domesday Book county volumes. The rest of the information was

then arranged into a number of columns, each occupying the same row as their corresponding Domesday Book reference. The first of these columns listed the Wapentake, or Wapentake and county in the case of the Nottinghamshire entries, followed by the village name. Occasionally two villages share an entry. For instance in 'Canwick and Bracebridge Ulfr had 6 carucates of land taxable' [3]. In such instances an entry was made for each village, but the statistical information was then listed only under one of them, with the other containing a note to refer to the other. This was necessary to ensure that values, population etc., were not counted twice. Occasionally it was necessary to split the values etc between two villages for reasons discussed below.

The next column listed whether that village was within 5, 10, or 12 miles of Lincoln. If two or more villages shared an entry, as above, but were in different 'distance bands' it was necessary to divide the statistical information by simple division to arrive at values for each village. The current Tenant in Chief and any subtenants, along with the landholder in 1066 were then noted. If 'x' held a manor in 1066, the assumption was made that unless otherwise stated, 'x' also held any berewicks or sokes attached to this. In such cases the TRE holders name is followed by a '?'. This completed the textual part of the spreadsheet.

The statistical part of the spreadsheet began with columns containing the 'ploughs in demesne','actual number of ploughs' and 'land for x ploughs' information taken from each entry. The assertion by Maitland and Round, nearly a century ago, and followed by most historians since, that there were eight oxen to

a plough is accepted here [4]. Whilst it is clear that there were instances where numbers of oxen other than eight were pulling ploughs in Lincolnshire these were probably listed as exceptions. Also eight oxen to a plough provides a means of combining the different ways in which the information is given in Domesday Book. For instance in Cold Hanworth 'Thoraldr the priest has 1 sokeman and 2 bordarii who plough with 2 oxen' [5]. In the spreadsheet this appears as 0.25 ploughs rather than 1 plough. Similarly entries which give the 'demesne plough' and 'land for' information in terms of a number of oxen are also converted into a number of ploughs based on eight oxen to a plough, thus the 'land for 10 oxen' in Eagle is entered into the spreadsheet as land for 1.25 ploughs [6]. The number of demesne ploughs is not always clear from the Domesday Book entries for Lincolnshire. As our main purpose here has been to compare demesne plough numbers no distinction has been drawn between the ploughs in demesne of tenants-in-chief and subtenants. Thus the one plough which Kolsveinn, Gilbert's man has in Riseholme is counted as a demesne plough [7].

Plough details are followed by a number of columns relating to 'value'. Whilst there are some problems associated with the exact meaning of these values, they are nonetheless all that is available to us. The spreadsheet lists the values 1086 and 1066 where they are given, but also contains estimates of values. In many instances 'head manors' are ascribed a value and then other 'manors' are listed after this, but without being ascribed any value. From plotting some head manors values against the number of ploughs it is clear that whilst the number of ploughs relates only to that head manor the actual value figure includes the

other manors under its 'jurisdiction'. In instances where all the dependent villages are in the same area band the value has been entered under the 'head village' and then notes have been added under the dependent villages to refer them to the head village. In most cases, however, some of the manors were in different area bands, or indeed outside the 12 mile radius altogether. In these cases it has been necessary to make estimates of value. These have been based on the number of carucates in each of the villages as a proportion of the number of carucates in the whole group of villages. Historians from Round to Darby have argued that the number of carucates are a means assessment not based on economic realities. Stenton for instance noted that carucates were an assessment imposed by an Old English state that lacked the machinery to make them correspond with reality - 'there was always a large element of artificiality about an assessment imposed from above' [8]. Darby further concludes that 'value' in Domesday Book lacks a precise meaning, and has no direct economic relationship to the resources of each manor [9]. However the suggestion that Domesday Book contains a method of assessment that takes no account of economic reality is one that lacks any conviction. Recently McDonald and Snooks have shown that there were clear relationships between value and economic realities, which were undoubtedly reflected in the geld assessments [10]. Thus whilst our estimates are just that, an estimate, they are based carucation which was linked to value. As such they enable an analysis of value around Lincoln, which Darby considered 'impractible to construct' [11].

The method used can be outlined by the following example.

The Archbishop of York's manor of Lissington was valued at £7 10s. But this also included *inland* and *sokes* of Swinthorpe, Snelland, Halton cum Beckering and Beckering. As the total area of this was 6.75 carucates and the amount of this at Lissington was 4 carucates, the value ascribed to Lissington was 4 divided by 6.75, multiplied by the value of the whole manor (£7 10s), giving a value for Lissington of 89s [12]. As a general point all values, whether estimated or actual are given to the nearest whole shilling. The spreadsheet contains information as to whether each value is estimated or real so that if required estimates can be excluded from any calculations. There are also columns giving the value TRE and also exactions (*taille*) which are calculated, if necessary, in a similar way.

The final columns relate to population. These give the number of bordars, sokemen and villiens, as well as any mention of others, usually men at arms or priests. Sub-tenants are not counted here as in many cases they were probably no more a resident than the Tenant in Chief was. Where Domesday Book omits this information no attempt has been made to fill in the blanks.

In order to assess whether Lincoln made any observable impact on the surrounding area, another area of same size was required as a control. The objective was to find an area that was as similar to our original one as possible, except that it lacked a town at its centre. Finally an area was chosen that had a 12 mile radius centred on a point just to the north and east of Manton in Manley wapentake. This area had a number of similarities to recommended it. Firstly the number of villages it contained was not too far removed from the number found in the original area. Also it mostly consisted of land in Lincolnshire

but with a small amount from Nottinghamshire. A further attraction was that the area was devoid of any large urban centres. It was also considered important for the control area to have an agricultural potential similar to that of the original area. To this end the 'Agricultural Land Classification' maps were utilised to produce a land classification map of Lincolnshire. This classified land from 1-5, with 1 being the best. Areas that had undergone reclamation since Domesday Book were also noted. Both the original and control areas contained areas that whilst now category 2, were of limited use at the time of Domesday Book. That is the Middle Witham Fens [13], in the original area and the Isle of Axholme and the Ancholme valley in the control. Both areas also contain areas of land above 200ft. Finally using maps in Darby's Domesday Geography of Eastern England, both areas appear to have largely similar ploughland per square mile figures [14].

The spreadsheet of the control area was created in a format similar to the original, although some information columns were omitted, as determined by the findings of the initial spreadsheet. The spreadsheet again begins with the Domesday Book reference, followed by the wapentake and village names. After recording the distance from the central point, the tenant in chief was listed. This was followed by the holder TRE, using the same assumptions as in the original spreadsheet. In a number of cases two holders clearly held separate holdings which had been combined by 1086 [15]. In such cases the holders are separated by a full stop. The statistical information begins with the actual number of ploughs. The 'land for x ploughs' figure is

given instead on the few occasions where the former but not the latter are absent. This is followed by a population figure which combines the numbers of sokemen, bordars and villein, with any priests or censores mentioned, but does not include any sub-tenants. The final two columns give the value and exaction figures, which are preceded by column that indicates whether these were estimated (0) or actual (1). Any estimates were calculated following the rules and method explained for the original.

Appendix 4: Footnotes

1 See Map A, which served as the basis for the villages included. This also shows the control area and its villages.

2 See below pp.497-8 for a print out of part of the Lincoln area SuperCalc spreadsheet

3 Domesday Book, Lincolnshire, folio 343 d

4 J H Round, Feudal England (London, 1895), p.36 and F W Maitland, Domesday Book and Beyond (Cambridge, 1897) p.417

5 Domesday Book, Lincolnshire, folio 352c (16,50)

6 Ibid., folio 352c (16,49)

7 Ibid., folio 354c (24,2)

8 F M Stenton, 'Introduction' to Lincolnshire Domesday and Lindsey Survey ed. and trans., C W Foster and T Longley Lincoln Record Society (1924), p.xi

9 For instance H C Darby, The Domesday Geography of Eastern England (Cambridge, 3rd. edn., 1971), p.54

10 J McDonald and G D Snooks, Domesday Economy: A new approach to Anglo-Norman History (Oxford, 1986), pp.72-4 and elsewhere.

11 H C Darby, op.cit., p.54

12 Domesday Book, Lincolnshire, folio 339c and 339d (2,11-15)

13 As termed by H C Darby, The Domesday Geography of Eastern England, op.cit., p.93, where he describes this as 'a swampy area of little value'.

14 Ibid., fig 11, p.57

15 For instance Domesday Book, Lincolnshire, folio 347a (12,4)

DB ref	Wapent	village	mile from LT in C	Subtenant	Holder	act plou land	4plo	value		value	TRE	bor	sok	vil	
7,7	Well	Kexby	12 Bish Lincoln			2.2	3.33	68	0	0	73		2	7	
26,22	Well	Kexby	12 Kolsveinn	Aethelhelm	Asketill	3.5	3.44	40	1	40	40	10	3		9
68,29	Well	Kexby	12 Leodwine				.75	0	1	0					
4,4	Well	Willingham by Stow	12 Bish Bayeux		Arnketill	2	1.50	20	1	20	20			3	2
7,2	Well	Willingham by Stow	12 Bish Lincoln				1.25	23	0	0	24				
12,3	Well	Willingham by Stow	12 Ct Alan		Steingrim,Gunnhv	2	2.25	20	1	20	40			2	5
20,4	Well	Willingham by Stow	12 Ilbert Lacy		Deincora		1.50	20	1	20	20				man-at-ar
28,5(6)	Well	Willingham by Stow	12 Jocelyn s Lamb		Alaskr, Earnwine	2	5.33	34	0	0	51		1	5	
12,1	Well	(Gate) Burton	12 Bish Lincoln .cw10		Gunnvatr,Godric	4	5.00	30	1	30	60	10		10	
7,7	Well	Normanby by Stow	10 Bish Lincoln			2.1	3.33	68	0	0	73		2	7	
12,2	Well	Marton	12 Ct Alan		Gunnvatr,Godric?	0	1.00	0	0	0					
7,1	Well	Stow St Mary	10 Bish Lincoln			4.5	4.00	69	0	0	73			3	20priest
12,41	Well	Stow St Mary	10 Count Alan			.5	.50			0				2	
20,3	Well	Stow St Mary	10 Ilbert Lacy		Aelfric?		.50	2	0	0	3	1			
24,9	Well	Stow St Mary	10 Gilbert Ghent		Ulfr Fenman					0					
28,6	Well	Stow St Mary	10 Jocelyn s Lamb		Aslakr,Earnwine?	1	1.00	6	0	0	9			4	
36,5	Well	Stow St Mary	10 Ralph Mortimer		Eadgifu					0					
4,3	Well	Sturton by Stow	10 Bish Bayeux	Ilbert	Ulfketil, etc	6	8.00	80	1	80	140	40			16
18,4;5	Well	Bransby	10 Robert Tosny	Berengar	Thorgautr	2.5	2.00	33	0	0	40			3	6
7,10;12	Well	Brampton	12 Bish Lincoln		St Mary's Stow	6	4.00	142	0	0	142			1	4
T,4	Well	Hardwick	10 Roger of Bully		Sveinn or Godric										6 homines
T,4	Well	Hardwick	10 Bish Lincoln		Godric or Sveinn										6 homines
T,2-4	Well	Torksey/Hardwick	10 King		Queen Edith			600	1	600	360				
2,26	Well	Newton on Trent	10 Arch York												
7,3	Aslasoe	Caenby	12 Bish Lincoln			5	4.00	69	0	0	73		15	20	

FOR EDUCATIONAL USE ONLY

1,39-40	Aslasoe	Glentworth	12 King		Earl Edwin?	5		163	0	0	49		6	24	
4,7	Aslasoe	Glentworth	12 Bish Bayeux	Wadard	Steinn	1	10.00	41	1	41	15			6	1
28,2	Aslasoe	Glentworth	12 Jocelyn s Lamb	Asketill	Godric	1.5	1.50	20	1	20	11			4	
45,1	Aslasoe	Glentworth	12 Martin		Gamall	1	1.25	10	1	10	8			4	1
50,1	Aslasoe	Glentworth	12 Restold		Sotr	.5	1.50	10	1	10	20		1	4	
4,10	Aslasoe	Normanby-by-Spital	12 Bish Bayeux	Ilbert	Thorr	1	2.00	12	1	12	10			2	
14,18	Aslasoe	Normanby-by-Spital	12 Ivo Tallboys		Koddi	9	8.00	100	1	100	50	20		14	15priest
28,3	Aslasoe	Normanby-by-Spital	12 Jocelyn s Lamb	Kolsveinn	Agmundr	.25	.25	5	1	5	4				1
28,4	Aslasoe	Normanby-by-Spital	12 Jocelyn s Lamb			.55									
4,81	Aslasoe	Ownby-by Spital	12 Bish Bayeux	Wadard,Ilber	Rothulf,Siward	.62	.62	21	1	21	15				

4,80	Langoe	Canwick	5	Bish Bayeux	Ilbert	Skuli	2	1.50			0				1	2	
6,1	Langoe	Canwick	5	Bish Geoffrey		Ulfr	4	6.00	60	1	60	60	10	11	2	12	
7,51	Langoe	Canwick	5	Bish Lincoln	William	Valhrafn	2	2.18	20	1	20	60		3		3	
16,47	Langoe	Canwick	5	Roger Poitou	Earnwine	Strui	1.75	2.00	40	1	40	30		1	4	5	
16,48	Langoe	Canwick	5	Roger Poitou				1.00			0						
33,2	Langoe	Canwick	5	Norman Crassus		Valhrafn	1	.75	20	1	20	20					
67,26	Langoe	Canwick	5	Kolgrimr		Agmundr	1	1.00	15	1	15	15		3		2	
67,27	Langoe	Canwick	5	Cwenthryth nun				.50	8								
.ck18	Langoe	Canwick	5	Svartbrandr		Ulfr					0						
6,1	Langoe	Bracebridge	5	Bish Geoffrey	William	Valhrafn		under Canwick			0						
16,47-8	Langoe	Bracebridge	5	Roger Poitou	Earnwine	Strui		under Canwick			0						
31,11	Langoe	Branston	5	Walter Aincour		Hemingr	13	10.00	219	0	0	168		23	2	48priest	
.ck14	Langoe					Alsige deacon					0						
31,17	Langoe	Potter Hanworth	10	Walter Aincour		Halfdan & bros	14	6.00	80	1	80	60		11	9	24	2
32,32-3	Langoe	Nocton	10	Norman Arcy		Ulfr, Asulfr	14.87		133	0	0	80	27	3	26	10priest	
32,34	Langoe	Dunston	10	Norman Arcy		Ulfr	9		67	0	0	40	13	13	31	3priest	
13,35	Langoe	Metheringham	10	Earl Hugh		Earl Harold?	4	4.25	60	0	0	304	30	6		10	
31,18	Langoe	Metheringham	10	Walter Aincour	Wintrehard		8	4.25	80	1	80	60		16	10	8	
59,19	Langoe	Metheringham	10	Robert Stafford	Ehelo	Leofsige		.50	10	1	10	16					
68,4	Langoe	Metheringham	10	Svartbrandr		Ragnaldr	5	2.50	40	1	40	40		4	2	10	
31,16	Langoe	Blankney	10	Walter Aincour		Hemingr	13	13.00	140	1	140	120		4	22	10priest	
31,16	Langoe	Blankney	10	Walter Aincour		Hemingr?	1		10	1	10			2			
31,15	Langoe	Scopwick	10	Walter Aincour		Godric	7.5	4.50	40	0	0	35		1	16	4priest	
31,14	Langoe	Scopwick	10	Walter Aincour		Hemingr?	2.5	3.00	69	0	0	52		1	7		
61,6	Langoe	Scopwick	10	Heppo Crossbow		Halfdan	3.75	2.00	25	0	0	10	5	1	7	2	
61,8	Langoe	Scopwick	10	Heppo Crossbow			1	1.50	6	1	6	10			1		
31,14	Langoe	Kirkby Green	12	Walter Aincour		Hemingr?	2.5	3.00	69	0	0	52		1	7		
31,15	Langoe	Kirkby Green	12	Walter Aincour		Godric	7.5	4.50	40	0	0	35		1	16	3	

FOR EDUCATIONAL USE ONLY

4,80	Langoe	Canwick	5	Bish Bayeux	Ilbert	Skuli	2	1.50			0				1	2	
6,1	Langoe	Canwick	5	Bish Geoffrey		Ulfr	4	6.00	60	1	60	60	10	11	2	12	
7,51	Langoe	Canwick	5	Bish Lincoln	William	Valhrafn	2	2.18	20	1	20	60		3		3	
16,47	Langoe	Canwick	5	Roger Poitou	Earnwine	Strui	1.75	2.00	40	1	40	30		1	4	5	
16,48	Langoe	Canwick	5	Roger Poitou				1.00			0						
33,2	Langoe	Canwick	5	Norman Crassus		Valhrafn	1	.75	20	1	20	20					
67,26	Langoe	Canwick	5	Kolgrimr		Agmundr	1	1.00	15	1	15	15		3		2	
67,27	Langoe	Canwick	5	Cwenthryth nun				.50	8								
.ck18	Langoe	Canwick	5	Svartbrandr		Ulfr					0						
6,1	Langoe	Bracebridge	5	Bish Geoffrey	William	Valhrafn		under Canwick			0						

APPENDIX 5: Categorisation of TRW Landholders in Lincolnshire

Landholder	Category	Landholder	Category
Alfred of Lincoln	3	Archbishop of York	4
Asketill	1	Auti	1
Berengar Tosny	3	Bishop of Bayeux	5
Bishop of Durham	4	Bishop of Lincoln	4
Bishop of Coutances	5	Church of St Michael	0
Count Alan	4	Countess Judith	4
Cwenthryth the nun	0	Drogo of La Beuvriere	3
Durand Malet	3	Earl Hugh	5
Earnwine the priest	3?	Elfin	0
Erneis of Buron	3	Eudo, son of Spirewic	3
Geoffrey of Alselin	3	Geoffrey of La Guerche	3
Gilbert of Ghent	5	Gilbert Tison	3
Guy of Craon	3	Halfdan	1
Halfdan the priest	1	Henry of Ferrers	5
Heppo the crossbowman	2	Hugh, son of Baldric	4
Ilbert of Lacy	3	Ivo Tallboys	3
Jocelyn, son of Lambert	2	Josteinn	0
Ketilbjorn	2	King	6
Kolgrimr	1	Kolsveinn	2
Leodwine	1	Leofgifu	0
Martin	3	Norman of Arcy	2
Norman Crassus	2	Odo the crossbowman	3
Osbern the priest	3	Osbern of Arques	3
Peter of Valognes	3	Rainer of Brimeux	2
Ralph of Limesy	4	Ralph of Mortimer	4
Ralph Pagnell	4	Ranulf of St Valery	2
Restold	2	Robert the bursar	3
Robert Malet	4	Robert of Stafford	4
Robert Tosny	4	Roger of Bully	3
Roger of Poitou	4	Siward the priest	1
St Peters, Peterborough	3	St Peters, Westminster	5
Svartbrandr	2	Waldin the artificer	2
Walter of Aincourt	3	William Blunt	2
William of Percy	3	Wulfgeat	1

Appendix 6

Svartbrandr and Ulf

The reference to Svartbrandr or Ulf as a lawman in Domesday Book is somewhat ambiguous. In 1066 Domesday Book refers to Ulf's son Svartbrandr (Ulf *fili* Svartbrandr), and then in 1086 as Svartbrandr in place of his father Ulf. In contrast other Lincoln lawmen were referred to in the form *Suertin f. Griboldi*, meaning Svertingr son of Grimbald, which led to Svartbrandr initially, and perhaps correctly being regarded as Ulf's father [1]. Ulf may also have been a moneyer from the beginning of Edward's reign until 1066 [2]. If his career was brought to an end by death it would help to explain the rather garbled way in which Ulf's son Svartbrandr was named as a lawman. Perhaps Svartbrandr had only just become a lawman, following the death of his father, hence the list may have been changed from Ulf to Ulf's son Svartbrandr, in contrast to the usual form of Svertingr son of Grimbald.

After consideration it seems more likely however that Ulf son of Svartbrandr was the lawman in 1066, as Foster and Longley believed. That is both Ulf's son and father were called Svartbrandr. Whilst the Phillimore translators suggest that other entries state that Ulf was definitely the father of Svartbrandr, these provide no proof that Svartbrandr was the lawman in 1066, indeed one suggests the contrary. Referring to carucates in the fields of Lincoln, Domesday Book states that TRE Ulf had 1 carucate, now his son Svartbrandr has it [3]. If Ulf was holding land TRE there is every reason to accept that he was also a lawman then. Furthermore possible instances of

Svartbrandr minting coins at Lincoln are confined to the three issues of Cnut, and the first issue of Harold Harefoot which were all minted by Swertbrand [4]. As a moneyer in the 1020's and 1030's Swertbrand could have been the father of Ulf who rapidly became a moneyer too, and by 1066 a lawmen as well. Whilst Ulf's son does not appear to have been a moneyer like his father, he did succeed to the office of lawman, with the additional privilege of toll and team, and held significant amount of land around Lincoln, but only in 1086 and not in 1066.

Footnotes

1 For instance C W Foster and T Longley ed. and trans., The Lincolnshire Domesday and Lindsey Survey, Lincoln Record Society (1924) and J W F Hill, Medieval Lincoln, pp.368-9

2 H R Mossop, V Smart ed., The Lincoln Mint (Newcastle, 1970), chart inside the back cover

3 Domesday Book, Lincolnshire, C13, folio 336b

4 H R Mossop, op.cit., chart inside the back cover

BIBLIOGRAPHY

1.Printed Primary Source Material

Anglo-Saxon Charters: An Annotated List and Bibliography P.H. Sawyer (London, 1968)

Anglo-Saxon Chronicle, Trans., English Historical Documents I ed., D. Whitelock, (London, 1979): English Historical Documents II, eds., D.C. Douglas and G. Greenaway (London, 2nd. edn., 1981)

The Anglo-Saxon Chronicle according to several original authorities, Rolls Series, 2 vols., (1861)

An Anglo-Saxon Dictionary, J. Bosworth and T.N. Toller (Oxford, 1972 Reprint)

Anglo-Saxon Wills, ed. and trans., D. Whitelock (Cambridge, 1930)

Anglo-Saxon Writs, ed., F.E. Harmer (Manchester, 1952)

Bede's Ecclesiastical History of the English People, eds. and trans., B. Colgrave and R.A.B. Mynors (Oxford, 1969)

British Borough Charters, 1042-1216, ed., A. Ballard (Cambridge, 1913)

The Chronicle of Aethelweard, ed., A Campbell, (London, 1962)

Die Gesetze der Angelsachen, F. Liebermann, 3 vols., (Halle, 1903-16)

Documents Illustrative of the Social and Economic History of the Danelaw, ed., F.M. Stenton, British Academy Records of Social and Economic History, vol. 5 (Oxford, 1920)

Domesday Book (County Volumes), General Editor J. Morris, (Chichester, 1975-86)

Domesday Book, Alecto , eds., A. Wiliams and G.H. Martin (London, 1986-92)

Elenchus Fontium Historiae Urbanae, 'Select Texts on British Urban History before the mid thirteenth-century', eds., S. Reynolds and W. de Boer (Leiden, 1988)

The Laws of the Earliest English Kings ed., F.L. Attenborough, (Cambridge, 1922)

The Laws of the Kings of England from Edmund to Henry I, ed., A.J. Robertson (Cambridge, 1925)

The Life of King Edward who rests at Westminster, F. Barlow, ed.,

and trans., (London, 1962)

The Lincolnshire Domesday and Lindsey Survey, ed. and trans., C.W. Foster and T. Longley, Lincoln Record Society, 19 (1924)

The Old English Orosius, ed., J. Bately (London, 1980) For the Early English Text Society.

Regesta Regum Anglo-Normannorum I - 1066-1100, ed., H.W.C. Davis (Oxford, 1913)

Regesta Regum Anglo-Normannorum II - Regesta Henrici Primi., eds., C. Johnson and H.A. Cronne (Oxford, 1956)

Registrum Antiquissium of the Cathedral Church of Lincoln, eds., C.W. Foster and K. Major, 10 vols., Lincoln Record Society (1931-68)

Royal Charters of the City of Lincoln, ed., Walter De Gray Birch, (Cambridge, 1911)

2. Secondary Source Material: Lincolnshire

Adams, L., Medieval Pottery from Broadgate East, Achaeology of Lincoln, 17-1, (London, 1977)

Adams, L., 'Early Islamic Pottery from Flaxengate, Lincoln', Medieval Archaeology, 23 (1979), pp.218-9

Adams, L., 'Imported Pottery of the ninth- to eleventh centuries from Flaxengate, Lincoln' in Lincoln Archaeological Trust, Seventh Annual Report, (1979), pp.30-4

Adams Gilmour, L. (with K. Foley, F. MacAlister, D.F. Williams, J. Wilkinson and J. Young), Early Medieval Pottery from Flaxengate, Lincoln, The Archaeology of Lincoln, 17-2 (London, 1988)

Bassett, S., 'Beyond the edge of excavation: the topographical context of Goltho', Studies in Medieval History presented to R.H.C. Davis, ed., H. Mayr-Harting and R.I. Moore (London, 1985), pp.21-39

Bassett, S., 'Lincoln and the Anglo-Saxon see of Lindsey', Anglo-Saxon England 18 (Cambridge, 1989), pp.1-32

Bayley, J., 'Ingot moulds from Flaxengate and Holmes Grain, Lincoln, Unpublished Ancient Monuments Lab. Report 4163

Beresford, G., 'Goltho Manor, Lincolnshire: The buildings and their surrounding defences, c.850-1150' in Anglo-Norman Studies, 4 ed., R. Allen Brown, (Woodbridge, 1981), pp.13-36

Beresford, G., Goltho: The development of an early medieval manor, c.850-1150 English Heritage Archaeological Report 4 (London, 1987)

Blackburn, M., 'The Welbourn (Lincs) hoard 1980-82 of Æthelred II coins', British Numismatic Journal 55, (1985), pp.79-83

Blackburn, M., 'Coin finds and coin circulation in Lindsey, c.600-900' in Pre-Viking Lindsey, ed., A. Vince, (Lincoln, 1993), pp.80-90

Blackburn, M., Colyer, C., Dolley, M., Early Medieval Coins from Lincoln and its shire, 770-1100, Archaeology of Lincoln,6-1, (London, 1983)

Blackburn, M. and M. Bonser, 'Sceattas, a Stycas and other coin finds from a site in north east Lincolnshire', in Sceattas in England and on the Continent, eds., D. Hill and D.M. Metcalf, BAR Brit. series 128 (Oxford, 1985), pp.233-9

Blackburn, M.A.S., and M. Bonser, 'A small fused group of coins from the reign of Eadgar (959-75) found near North Owersby, Lincs', Numismatic Circular, 97 (1989) p.255

Brooks, C., and A. Mainman, 'Torskey ware viewed from the North' in Archaeological Papers from York, eds., P. Addyman and V.E. Black (York, 1984), pp.63-70

Bruce Mitford, R., 'Late Celtic Hanging Bowls in Lincolnshire and South Humberside', in Pre Viking Lindsey, ed., A. Vince (Lincoln, 1993), pp.45-70

Bryant, G.F., The Early History of Barton on Humber, (Barton, 1981)

Cameron, K., The Place Names of Lincolnshire, Part 1, English Place Name Society, volume 58 (London, 1985)

Camidge, K., 'St Mark's Station', in 'Archaeology in Lincolnshire 1985-6', Second Annual Report of Trust for Lincolnshire Archaeology, pp.25-7

Chitwood, P., 'Lincoln's Ancient Docklands: the search continues', in Third International Conference on Waterfront Archaeology eds., G.L. Goode, R.H. Jones and M.W. Ponsford, CBA Research Report 74 (London, 1991), pp.169-76

Chitwood, P., 'Brayford North', Lincoln Archaeology no.2 1989-90 (1990), pp.10-11

Chitwood, P., 'Waterside North' , Lincoln Archaeology no.1 1988-1989 (1989), pp.4-7

Chitwood, P., and L. Donel, Waterside North Project in Current Archaeology, 129 (1992), pp.371-3

Colyer, C., 'Excavations at Lincoln, First interim Report: The Roman and Medieval Defences of the lower town', Antiquaries Journal, 55, (1975), pp.241-59

Colyer, C., 'Excavations at Lincoln, 1970-2, The Western Defences of the Lower Town' in Antiquaries Journal, 55 (1975), pp.227-66

Colyer, C. and M.J. Jones, eds., 'Second Interim Report, Excavations in the Lower Town, 1972-8', in Antiquaries Journal, 59 (1979), pp.50-89

Coppack, G., 'The medieval pottery of Lincoln, Nottingham and Derby', University of Nottingham D.Phil. thesis (1980)

Coppack, G., 'Saxon and early medieval pottery' in G Beresford Goltho :The Development of an Early Medieval Manor, c.850-1150, English Heritage Archaeological Report No. 4 (London, 1987), pp.134-69

Cowgill, J., 'Flaxengate industries - The Stratigraphic Evidence' Unpublished Ms.

Cowgill, J., 'Metalworking at Flaxengate', Unpublished Ms. of

Donel, L., 'Woolworths, 1989' Lincoln Archaeology no.1, 1988-1989 (1989), pp.7-8

Donel, L., 'Waterside North', Lincoln Archaeology no.3, 1990-91, (1991), pp.18-19

Eagles, B., 'Lindsey', The Origins of the Anglo-Saxon Kingdoms: Studies in the Early History of Britain ed., S Basset (Leicester, 1989), pp.202-12

Everson, P., 'The pre-Conquest Estates of Aet Bearuwen in Studies in Late Anglo-Saxon Settlement, ed., M. Faull, (Oxford, 1984), pp.123-28

Fellows-Jenson, G., Scandinavian Personal Names in Lincolnshire and Yorkshire (Copenhagen, 1968)

Fellows-Jenson, G., Scandinavian Settlement Names in the East Midlands (Copenhagen, 1978)

Fellows-Jensen, G., 'On the identification of Domesday Tenants in Lincolnshire', in Nomina, 9, (1985), pp.31-40

Field, N., 'St. Mary's, Stow, Lincs.', in Bulletin of CBA Churches Committee, 18 (1983), pp.41-45

Field, N. and White, A., eds., A Prospect of Lincolnshire: Articles in honour of Ethel H. Rudkin, (Lincoln, 1984)

Foley, K., 'Flaxengate Glass Working', Archaeology in Lincoln, 1981-2, Tenth Annual Report of Lincoln Archaeological Trust (1982), pp.27-8

Gilmour, B.J.J., 'The Anglo-Saxon church at St. Paul-in-the-Bail' in Medieval Archaeology, 23, (1979), pp.214-17

Gilmour, B.J.J., 'St Mark's Church' in M.J. Jones ed., 'Excavations at Lincoln: 3rd interim report, Sites Outside the Walled City', Antiquaries Journal, 61 (1981), pp.92-101

Gilmour, B.J.J., 'Brayford Wharf East' Archaeology in Lincoln 1981-2, Tenth Annual Report of Lincoln Archaeological Trust, (1982), pp.20-4

Gilmour, B.J.J., and D Stocker, St Mark's Church and Cemetery, Archaeology of Lincoln, 13-1 (London, 1986)

Guy, C.J., 'St Benedicts Square', Archaeology in Lincolnshire 1985-1986: 2nd Annual Report of the Trust for Lincolnshire Archaeology, (1986), pp.23-5

Hallam, H.G., Settlement and Society: A study of the early agrarian history of South Lincs., (Cambridge, 1975)

Hayfield, C., Humberside Medieval Pottery; an illustrated

catalogue of Saxon and Medieval domestic assemblages from North Lincolnshire and its surrounding region, British Archaeological Report, British Series 140 (Oxford, 1985)

Hill, J.W.F., Medieval Lincoln, (Stamford, 1990 reprint)

Jarvis, M., '170 High Street', Lincoln Archaeology No.2, 1989-90 (1990), pp.11-12

Jarvis, M., and L.Donel, 'Waterside North: Saltergate', Lincoln Archaeology no.2 1989-90, (1990), pp.6-8

Jones, M.J., The Defences of the Upper Roman Enclosure The Archaeology of Lincoln 7-1 (London, 1980)

Jones, M.J., ed., 'Excavations at Lincoln, Third Interim Report, Sites outside the walled city', in Antiquaries Journal, 61, (1981), pp.83-114

Jones, M.J., ed., Lincoln, 21 centuries of Living History, (London, 1984)

Jones, M.J., 'New Streets for Old: The Topography of Roman Lincoln' in Romano Urban Topography in Britain and the Western Empire, CBA Research Report 59, eds., B.F. Grew and B. Hobley (London, 1985), pp.86-93

Jones, M.J., 'Archaeology in Lincoln' in 'Archaeology in Lincolnshire and South Humberside, 1987' ed., N. Field Lincolnshire History and Archaeology, 23 (1988), pp.81-88

Jones, M.J., 'City of Lincoln Archaeological Unit' in 'Archaeology in Lincolnshire and South Humberside, 1989-90' ed., N. Field Lincolnshire History and Archaeology, 25 (1990), p.47

Jones, R.H., Medieval Houses at Flaxengate, Lincoln, Archaeology of Lincoln 9-I (London, 1980)

Jones, R.H., 'Dickinson's Mill, Brayford Wharf North and Broadgate', in M.J. Jones ed., 'Excavations at Lincoln: third interim Report, Sites outside the walled city' Antiquaries Journal 61 (1981), pp.88-92 and 102-7

Jonsson, K., 'Grantham - A new Anglo-Saxon mint in Lincolnshire', British Numismatic Journal 57 (1987), pp.104-5

Kaye, D., 'Church Dedications in Lincolnshire', Unpublished M.A. Dissertation (1973)

Kilmurry, K., The Pottery Industry of Stamford, Lincs, c.850-1250, BAR Research Report 84 (Oxford, 1980),

Lyon, C.S., 'Analysis of the Material', in The Lincoln Mint, H.R. Mossop, V. Smart ed., (Newcastle, 1970), pp.11-20

Mahany, C., Burchard A., and Simpson, G., Excavations in

Stamford, Lincs, 1963-9: Medieval Archaeology Monograph Series, 9, (London, 1982)

Mahany, C., and Roffe, D., 'Stamford: The Development of an Anglo-Scandinavian Borough' in Anglo-Norman Studies 5 - Proceedings of the Battle Conference, 1982 ed., R Allen Brown (Woodbridge, 1983), pp.197-219

Magilton, J.R., and D.A. Stocker, 'St Mary's Guildhall', Archaeology in Lincoln 1981-82 , 10th Annual Report of Lincoln Archaeological Trust (1982), pp.8-16

Mann, J.E., Early Medieval Finds from Flaxengate, Archaeology of Lincoln, 14-1 (London, 1981)

Mann, J.E., 'Finds from Hungate', Archaeology in Lincolnshire, 1984-5, First Annual Report of the Trust for Lincolnshire Archaeology (1985), pp.48-50

Mann, J.E., 'Finds from Saltergate', Lincoln Archaeology no.2, 1989-90 (1990), pp.8-9

Miles, P., 'Post-excavation : The Lower Walled City in Detail- The South East area', Lincoln Archaeology no.1, 1988-89 (1989), pp.24-6

Miles, P., J. Young and J. Wacher, A Late Saxon Kiln Site at Silver Street, Lincoln The Archaeology of Lincoln, 17-3 (London, 1989)

Mossop, H.R., Smart, V. ed., The Lincoln Mint, (Newcastle, 1970)

O'Connor, T.P., Animal Bones from Flaxengate, c. 870-1500, The Archaeology of Lincoln, 18-I, (London, 1982)

Otter, M., and M.J. Jones,' St Marks Station', Archaeology in Lincolnshire 1986-1987: 3rd Annual report of the Trust for Lincolnshire Archaeology (1987), p.27

Owen, A.E.B., 'Carlton, Reston and Saint Michael: A Reconsideration', Nomina, 12 (1989), pp.105-111

Owen, D.M. 'The Norman Cathedral at Lincoln' in Anglo-Norman Studies, 6, ed., R. Allen Brown, (Woodbridge, 1984) pp.188-99

Pagan, H.E., 'One Fewer Lincoln Moneyer for Edward the Confessor', Numismatic Circular (1989), p.255

Perring, D., Early Medieval Occupation at Flaxengate, The Archaeology of Lincoln, 9-1 (London, 1981)

Rigby, S.H., 'Boston and Grimsby in the Middle Ages: An Administrative Contrast' in Journal of Medieval History, 10-1, (1984), pp.51-66

Roffe, D.R., 'The Lincolnshire Hundred', Landscape History, 3

(1981), pp.27-36

Roffe, D.R., 'Pre-Conquest Estates and Parish Boundaries: A Discussion with examples from Lincs.', in Studies in Late Anglo-Saxon Settlement, ed., M. Faull, (Oxford, 1984) pp.115-22

Roffe, D.R., 'An introduction to Lincolnshire Domesday Book', Alecto Lincolnshire Domesday Book (London, 1992)

Rogers, A., History of Lincolnshire (Chichester, 1985)

Smart, V., 'A note on the moneyers of the mint at Lincoln' in H.R. Mossop, V. Smart, ed., The Lincoln Mint, (Newcastle, 1970), pp.20-27

Snell, A.M., 'Spring Hill', Archaeolgy in Lincoln 1983-4, The Twelfth and Final Annual Report of the Lincoln Archaeological Trust, (1984), pp.9-15

Steane, K., 'Wigford from the Roman to the Late Saxon period', Lincoln Archaeology no.2 1989-90 (1990), pp.18-21

Steane, K., 'From the Kings Highway to the Brayford', Lincolnshire History and Archaeology, 25 (1990), pp.54-55

Steane, K., 'St Paul in the Bail', Current Archaeology, 129 (1992), pp.376-9

Steane, K., and A. Vince, 'Post Roman Lincoln: Archaeological evidence for activity in Lincoln from the 5th to the 9th centuries' in Pre Viking Lindsey ed., A Vince (Lincoln, 1993), pp.71-79

Stenton, F.M., Types of Manorial Structure in the Northern Danelaw, Oxford Studies in Social and Legal History, 2, (Oxford, 1910)

Stenton, F.M., 'Introduction' to Lincolnshire Domesday and the Lindsey Survey, Trans. and ed. C.W. Foster and T. Longley, Lincoln Record Society, 19, (1924), pp.ix-xlvi

Stenton, F.M., 'The Historical bearing of Place Name studies: The Danish settlement of Eastern England', Reprinted in Preparatory to Anglo-Saxon England, ed., D.M. Stenton, pp. 298-313

Stocker, D.A., 'Lincoln Castle', Archaeology in Lincoln 1982-3: 11th Annual Report of Lincoln Archaeological Trust (1983), pp.18-27

Taylor, H.M., 'St Mary le Wigford, Lincoln' and 'St Peter at Gowts, Lincoln' Archaeological Journal 131 (1974), pp.347-50

Venables, E., 'A list and brief description of the churches of Lincoln previous to the Reformation', Reports and Papers of the Associated Architectural and Archaeological Societies,

19-1 (1888), pp.326-54

Vince, A., 'Post-excavation : the results' Lincoln Archaeology no.1, 1988-89 (1989), pp.18-20

Vince, A., 'Dealing with Dark Earth: Practical Proposals', Lincoln Archaeology no.2, 1989-90, pp.24-29

Vince, A., 'Where is Lincoln's oldest church', Lincoln Archaeology no.3, 1990-91 (1991), pp.31-4

Vince, A., and M J Jones eds., Lincoln's Buried Archaeological Heritage: A guide to the Archive of the City of Lincoln Archaeology Unit (Lincoln, 1990)

Vince, A., and J. Young, 'Mapping the Saxon City', Lincoln Archaeology no.3 1990-91 (1991), pp.23-28

White, R., 'Flaxengate's Non Ferrous Metals', Archaeology in Lincoln, 1982-3, Eleventh annual report of the Lincoln Archaeological Trust (1983) pp.28-32

Whitwell, B., 'Flixborough', Current Archaeology, 126 (1991), pp.244-7

Williams, V., 'Finds from Waterside', Lincoln Archaeology no.1, 1988-9 (1989), pp.8-11

Woods, A.,'The fabric of Silver Street shelly ware', Microfiche appendix in P. Miles, J. Young and J. Wacher, A Late Saxon Kiln Site at Silver Street, Lincoln, The Archaeology of Lincoln, 17-3 (London, 1989)

Yorke, B., 'Lindsey: The lost kingdom found?' in Pre Viking Lindsey, ed., A Vince (Lincoln, 1993), pp.141-150

Young, J., 'Pottery from St Mark's East', in Archaeology in Lincolnshire 1987-8, Fourth Annual report of the Trust for Lincolnshire Archaeology, pp.29-32

Young, J., 'The distribution of Silver Street Kiln-Type pottery in Lincolnshire' in Atlas of Lincolnshire eds., N. Bennett and S. Bennett (Hull, 1993), pp.29-30

Young, J., and A Vince The East Midlands Anglo-Saxon Pottery Project- Newsletter (1991)

3.Secondary Sources : Non Lincoln

Abrams, P., 'Towns and Economic Growth: Some theories and problems', in Towns in Societies, eds., P. Abrams and E.A. Wrigley (Cambridge, 1978), pp.9-34

Allan, J., C. Henderson, and R. Higham, 'Saxon Exeter', in The Anglo-Saxon Towns of Southern England, ed., J. Haslam (Chichester, 1984), pp.385-414

Ambrosiani, B., 'Jetties in Birka and Stockholm and the changing water levels in the Mälaren area' in Third International Conference on Waterfront Archaeology in North European Towns 1983, ed., A.E. Herteig (Bergen, 1985), pp.66-8

Anon., The Viking Ship Museum in Roskilde, Museum Guide

Archibald, M., 'Coins and Currency' in Viking Artefacts: a select catalogue, ed., J. Graham-Campbell (London, 1980), pp.103-122

Archibald, M., 'A Viking copy of an Alfred London Monogram penny from Doncaster', The Yorkshire Numismatist, 1 (Leeds, 1988), pp.9-11

Astill, G.G., 'Towns and Town Hierarchies in Saxon England' The Oxford Journal of Archaeology, 10 (1991), pp.95-117

Atkin, M., 'The Anglo-Saxon urban landscape in East Anglia', Landscape History, 7 (1985), pp.27-40

Ayers, B.S., 'The Growth of a Saxon Port' in Third International Conference on Waterfront Archaeology in North European Towns 1983, ed., A. E. Herteig (Bergen, 1985), pp.46-53

Baines, A.H.J., 'The development of the borough of Buckingham, 914-1086', Records of Buckinghamshire, 27 (1985), pp.53-64

Ballard, A., The English Borough in the Twelfth Century (Cambridge, 1914)

Barley, M.W., ed., The Plans and Topography of Medieval Towns in England and Wales, CBA Research Report 14 (London, 1976)

Barley, M.W., ed., European Towns, their archaeology and early history (London, 1977)

Barley, M.W., 'The Medieval Borough of Torksey: Excavations 1963-8' Antiquaries Journal, 61 (1981), pp.264-91

Bateson, M., Medieval England, 1066-1350, (London, 1905)

Bayley, J., 'Non-ferrous metal and glass working in Anglo-Scandinavian England: An interim statement', 2nd Nordic

Conference on the Application of Scientific Methods in Archaeology, Elsinore. PACT 7 being the Journal of the European Study Group on Physical Chemical and Mathematical Techniques Applied to Archaeology (Strasbourg, 1982), pp.487-96

Bayley, J., 'Non-ferrous Metalworking: continuity and change' in Science and Archaeology - Proceedings of a Conference on the Application of Scientific Techniques to Archaeology, Glasgow 1987, eds., E.A. Slater and J.O. Tate, BAR Brit., 196, (Oxford, 1988), pp.193-208

Benton, J.F., ed., Town Origins, The evidence from Medieval England (Lexington, Massachusetts, 1968)

Biddle, M., ed., Winchester in the Early Middle Ages: An edition and discussion of the Winton Domesday, Winchester Studies I (Oxford, 1976)

Biddle, M., 'Towns' in The Archaeology of Anglo-Saxon England, ed., D.M.Wilson (London, 1976), pp.99-150

Biddle, M., 'London on the Strand' Popular Archaeology, 6 (1984), pp.23-7

Blackburn, M.A.S., ed., Anglo-Saxon Monetary History, Essays in memory of Michael Dolley (Leicester, 1986)

Blackburn, M.A.S., 'The earliest Anglo Viking coinage of the southern Danelaw (late 9th century)' in Proceedings of the 10th International Congress of Numismatics, London 1986, ed., I.A. Carradice (London, 1990), pp.341-48

Blackburn, M.A.S., 'Do Cnut the Great's first coins as King of Denmark date from before 1018?' in Sigtuna Papers: Papers of the Sigtuna Symposium on Viking Age Coinage, 1989, eds., K. Jonsson and B. Malmer (London, 1990), pp.55-69

Blackburn, M.A.S., 'The Ashdon (Essex) hoard and the currency of the southern Danelaw in the late ninth-century', British Numismatic Journal, 59 (1991 for 1989), pp.13-38

Blackburn, M.A.S., and M. Bonser, 'Single finds of Anglo-Saxon and Anglo-Norman Coins I', British Numismatic Journal, 54 (1985 for 1984), pp.63-73; II, British Numismatic Journal, 55 (1986 for 1985), pp.55-78; III British Numismatic Journal, 56 (1987 for 1986), pp.64-101

Blackburn, M.A.S., and M. Dolley, 'The Hiberno Norse element of the List hoard from Sylt', British Numismatic Journal, 49 (1979), pp.17-25

Blackburn, M.A.S., and K. Jonsson, 'The Anglo-Saxon and Anglo-Norman element of North European coin finds', in Viking Age Coinage in the Northern Lands: Sixth Oxford Symposium on Coinage and Monetary History, eds., M.A.S. Blackburn and D.M. Metcalf, BAR Int. 122 (Oxford, 1981), pp.147-255

Blackburn, M.A.S., and S. Lyon, 'Regional die production in Cnuts' Quartrefoil issue', in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.223-72

Blackburn, M.A.S., and D.M. Metcalf, 'Five finger exercises on the List Hoard', Viking Age Coinage in the Northern Lands: Sixth Oxford Sumposium on Coinage and Monetary History, eds., M.A.S. Blackburn and D.M. Metcalf, BAR Int. Series 122 (Oxford, 1981), pp.495-520

Blackburn, M.A.S., and H.E. Pagan, 'A revised checklist of coin hoards, c.500-1100' in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.291-313

Blair, C. and J. Blair, 'Copper Alloys', English Medieval Industries, eds., J.Blair and N.Ramsey (London, 1991), pp.81-106

Blair, J. and N. Ramsey, eds., English Medieval Industries : Craftsmen Techniques and Products (London, 1991)

Blunt, C.E., 'The Coinage of Athelstan, King of England 924-939', British Numismatic Journal, 42 (1974), pp.35-159

Blunt, C.E., and R.H.M. Dolley, 'The hoard evidence for the coinage of Alfred', British Numismatic Journal, 29 (1959), pp.220-247

Blunt, C.E., B.H.I.H. Stewart and C.S.S. Lyon, Coinage in Tenth Century England, from Edward the Elder to Edgar's Reform (Oxford, 1989)

Bourdillon, J., 'Countryside and Town: The animal resources of Saxon Southampton', in Anglo-Saxon Settlements, ed. D. Hooke (Oxford, 1988), pp.177-95

Bond, C.J., 'Urban defences: Anglo-Saxon and Medieval', in Urban Archaeology in Britain, CBA Res Report 61, eds., J. Schofield and R. Leech (London, 1987), pp.92-116

Britnell, R.H., The Commercialisation of English Society, 1000-1500 (Cambridge,1993)

Brooke, C.N.L., 'The missionary at home: The church in the towns, 1000-1250', in Studies in Church History, 6, The Mission of the Church and the Propagation of the Faith, ed., G.J. Cuming (Cambridge, 1970), pp.59-83

Brooks, C., Medieval and later pottery from Aldwark and other sites, Archaeology of York 16/3 (London, 1987)

Brooks, N.P., 'The development of military obligations in eighth and ninth century England' in England Before the Conquest: Studies in Primary Sources presented to D Whitelock, eds., P. Clemoes and K. Hughes (Cambridge, 1971), pp.69-84

Brooks, N.P., The Early History of the Church of Canterbury (Leicester, 1984)

Brooks, N.P., 'England in the Ninth Century: the crucible of defeat', Transactions of the Royal Historical Society, 29 (1989) pp.1-20

Brooks, N.P., 'Church, Crown and Community: Public Work and Seigneurial Responsibilities at Rochester Bridge' in Warriors and Churchmen in the High Middle Ages: Essays presented to Karl Leyser ed., T. Reuter (London, 1992), pp.1-20

Campbell, J., 'Bede's words for places', in Names, Words and Graves: Early Medieval Settlement, ed., P.H. Sawyer (Leeds, 1979) pp.34-54

Campbell, J., 'The Church in Anglo-Saxon Towns', in Studies in Church History, 16 , The Church in Town and Countryside, ed., D. Baker (Oxford, 1981), pp.119-35

Campbell, J., ed., The Anglo-Saxons (Oxford, 1982)

Campbell, J., 'Some Agents and Agencies of the Late Anglo-Saxon State', in Domesday Studies, ed., J.C. Holt (Woodbridge, 1987), pp.201-18

Campbell, M., 'Gold, Silver and Precious Stones', in English Medieval Industries, eds., J. Blair and N. Ramsey (London, 1991), pp.107-66

Carter, A., 'The Anglo-Saxon origins of Norwich: the problems and approaches', in Anglo-Saxon England, 7 (Cambridge, 1978), pp.175-204

Carver, M., Underneath English Towns: Interpreting Urban Archaeology, (London, 1987)

Cherry, J. 'Leather', in English Medieval Industries, eds., J. Blair and N Ramsey (London, 1991), pp.295-318

Clarke, H., and B. Ambrosiani, Towns in the Viking Age (Leicester, 1991)

Clarke, H. and A. Simms, 'Towards a comparative history of urban origins', in The Comparative History of Urban Origins in Non-Roman Europe, eds., H. Clarke and A. Simms, BAR Int. Series 255 (Oxford, 1985), pp.669-714

Coupland, S., 'The fortified bridges of Charles the Bald', in Journal of Medieval History, 17-1 (1991), pp.1-12

Darby, H.C., The Domesday Geography of Eastern England (Cambridge, 3rd. edition, 1971)

Darby, H.C., Domesday England (Cambridge, 1977)

Davies, W., Wales in the Early Middle Ages (1982, Leicester)

Dolley, R.H.M., ed., Anglo-Saxon Coins. Studies presented to F.M. Stenton (London, 1961)

Dolley, R.H.M., 'Coins', The Archaeology of Anglo-Saxon England, ed., D.M. Wilson (London, 1976), pp.349-372

Dolley, R.H.M., 'An introduction to the coinage of Æthelraed II' Ethelred the Unready: Papers at the Millenary Conference ed. D. Hill (Oxford, 1978), pp.115-133

Dolley, R.H.M., 'Ælfred the Great's abandonment of the concept of periodic recoinage', Studies in Numismatic Method: presented to Philip Grierson, ed. C.N.L. Brooke et. al. (Cambridge 1983), pp.153-160

Dolley, R.H.M., and T.Talvio, 'The regional pattern of die cutting exhibited by First Hand pennies of Æthelred II, preserved in the British Museum', British Numismatic Journal, 47, (1977), pp.53-65

Durham, B., 'The City of Oxford', Current Archaeology, 121, (1990), pp.28-33

Dyson, T., 'Early Harbour Regulations in London', Conference on Waterfront Archaeology in North European Towns, ed. A.E. Herteig (Bergen, 1985), pp.19-24

Dyson, T., and J. Schofield, 'Saxon London', Anglo-Saxon Towns in Southern England, ed., J. Haslam (Chichester, 1984), pp.285-313

Ellmers, D., 'Loading and unloading ships using a horse and cart standing in the water: The Archaeological Evidence', Conference on Waterfront Archaeology in North European Towns, ed. A.E. Herteig (Bergen, 1985), pp.25-30

Ellmers, D., 'The Frisian monopoly of coastal transport in the 6th-8th centuries A.D.', Maritime Celts, Frisians and Saxons CBA Research Report 71, ed., S. McGrail (CBA, 1990), pp.91-2

Ennen, E., (English translation N. Fryde), The Medieval Town (Amsterdam, 1979)

Everitt, A., 'The Primary Towns of England', Local Historian 11 (1975), pp.263-77

Farmer, D.L., 'Some price fluctuations in Angevin England', Economic History Review, 9 (1956), pp.34-43

Farmer, D.L., 'Some grain price movements in thirteenth-century England', Economic History Review, 10 (1957), pp.207-220

Farmer, D.L., 'Some Livestock price movements in thirteenth-

century England', Economic History Review, 22 (1969), pp.1-27

Fleming, R., Kings and Lords in Conquest England (Cambridge, 1991)

Fleming, R., 'Rural Elites and Urban Communities in Late Saxon England' Past and Present, 141 (1993) pp.3-37

Forbes, J.S. and D.B. Dalladay, 'Composition of English Silver Coins, 870-1300', British Numismatic Journal, 30 (1961), pp.82-7

Freeman, A., The Moneyer and the Mint in the reign of Edward the Confessor, 1042-66, BAR Brit. Series 145 (Oxford, 1985)

Geddes, Jane, 'Iron', English Medieval Industries, eds. J. Blair and N. Ramsay (London, 1991), pp.167-88

Gelling, M., W.H.F Nicolaisen and M. Richards, The Names of Towns and Cities in Britain (London, 1970)

Graham, B.J., 'The evolution of urbanisation in Medieval Ireland', Journal of Historical Geography, 5 (1979), pp.111-25

Graham, B.J., 'Urban genesis in Early Medieval Ireland', Journal of Historical Geography, 13 (1987), pp.3-16

Green, J.A., English Sheriffs to 1154. Public Record Office Handbook No. 24 (London, 1991)

Grierson, P., 'Commerce in the Dark Ages: a critique of the evidence', Transactions of Royal Historical Society, 9 (1959), pp.123-40

Grierson, P., 'Domesday Book, the *geld de moneta* and the *monetagium*: A forgotten minting reform', British Numismatic Journal, 55 (1986), pp.84-94

Grierson, P., Coins of Medieval Europe (London, 1991)

Grierson, P., and M.A.S. Blackburn, Medieval European Coinage, vol I, The Early Middle Ages (Cambridge, 1986)

Hall, A.R., and P.R. Tomlinson, 'Dye plants from Viking York', Antiquity, 58 (1984), pp.58-60

Hall, R.A., 'Tenth-Century in Coppergate, York', in Woodworking Techniques before A.D. 1500, BAR Int Series 129, ed., S. McGrail (Oxford, 1982), pp.231-44

Hall, R.A., The Excavations at York: The Viking Dig (London, 1984)

Hall, R.A., 'The Waterfronts of York', in Third International Conference on Waterfront Archaeology in North European

Towns, 1983, ed., A.E. Herteig (Bergen, 1985), pp.177-185

Hall, R.A., 'The Vikings as Town Dwellers', History Today, 36 (1986), pp.29-34

Hall, R.A., 'Urbanism in the North East Danelaw, c.400-1066, with special reference to Anglo Scandinavian York', University of Southampton Dissertation (1987)

Hall, R.A., 'The making of Domesday York', in Anglo-Saxon Settlements, ed., D. Hooke (Oxford, 1988), pp.233-47

Hall, R.A., Viking Age Archaeology in Britain and Ireland (Princes Risborough, 1990)

Hallam H.E., Rural England, 1066-1272 (Brighton, 1981)

Hamshere, J.D., 'Domesday Book: Estate Structures in the West Midlands', in Domesday Studies, ed., J.C. Holt (Woodbridge, 1987), pp.155-182

Hart, C., The Danelaw (London, 1992)

Harvey, S.P.J., 'The extent and profitability of demesne agriculture in England in the later eleventh-century', in Social Relations and Ideas: Essays in honour of R.H. Hilton, eds., T.H. Aston et. al. (Cambridge, 1983), pp.45-72

Harvey, S.P.J., 'Taxation and the Ploughland in Domesday Book' in Domesday Book: a reassessment, ed., P.H. Sawyer (London, 1985), pp.86-103

Haslam, J., 'A Middle Saxon Iron Smelting Site at Ramsbury, Wiltshire', Medieval Archaeology , 24 (1980), pp.1-68

Haslam, J., 'The Origin and Plan of Bedford', Bedfordshire Archaeological Journal, 16 (1983), pp.29-36

Haslam, J., ed., Anglo-Saxon Towns in Southern England (Chichester, 1984)

Haslam, J., 'The Topography and Development of Saxon Cambridge', Proceedings of the Cambridgeshire Antiquarian Society, 72 (1984), pp.13-29

Haslam, J., 'The Towns of Wiltshire', in Anglo-Saxon Towns in Southern England, ed., J. Haslam (Chichester, 1984), pp.87-147

Haslam, J., 'The Towns of Devon', in Anglo-Saxon Towns in Southern England, ed., J. Haslam (Chichester, 1984), pp.249-83

Haslam, J., Medieval Pottery in Britain, 6 (Princes Risborough, 1984)

Haslam, J., 'The Ecclesiastical Topography of Early Medieval

Bedford', Bedfordshire Archaeological Journal, 17 (1986), pp.41-50

Haslam, J., 'The Second Burh of Nottingham', Landscape History, 19 (1987), pp.45-51

Haslam, J., 'Market and Fortress in England in the reign of Offa', World Archaeology , 19.1 (1987), pp.76-93

Heighway, C.M., The Erosion of History (London, 1972)

Heighway, C.M., 'Gloucester to A.D. 1000', in Studies in Late Anglo-Saxon Settlement, ed., M. Faull (Oxford, 1984), pp.35-53

Heighway, C.M., 'Saxon Gloucester', in Anglo-Saxon Towns in Southern England, ed., J. Haslam (Chichester, 1984), pp.359-383

Hill, D., 'Trends in the development of towns during the reign of Ethelred II', in Ethelred the Unready: Papers from the Millenary Conference, ed. D. Hill (Oxford, 1978), pp.213-226

Hill, D., 'The Saxon period', in Urban Archaeology in Britain, CBA Research Report 61, eds., J. Schofield and R. Leech (London, 1987), pp.46-53

Hill, D., An Atlas of Anglo-Saxon England (Oxford, 1987 reprint)

Hill, D., 'Towns as Structures and Funtioning Communities Through Time: The development of central places from 600 to 1066' in Anglo-Saxon Settlement, ed., D. Hooke (Oxford, 1988), pp.197-212

Hill, D., and D.M. Metcalf, eds., Sceattas in England and on the Continent. Seventh Annual Symposium on Coinage and Monetary History, BAR Brit. Series 128 (Oxford, 1984)

Hill, D., et. al., 'Quentovic defined', Antiquity 64, no.242 (1990), pp.51-58

Hinton, D.A., 'Coins and Commercial Centres in Anglo-Saxon England', in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.11-26

Hinton, D.A., Archaeology, Economy and Society: England from the fifth to the fifteenth century (London, 1990)

Hodges, R., The Hamwih Pottery: the local and imported wares from 30 years excavations at Middle Saxon Southampton and their European context, CBA Research Report 37 (London, 1981)

Hodges, R., Dark Age Economics: The Origins of Trade and Towns, A.D. 600-1000, (London, 1982)

Hodges, R., Primitive and Peasant Markets (Oxford, 1988)

Hodges, R., 'The rebirth of towns in the early middle ages', in The Rebirth of Towns in the West, A.D. 700-1050, CBA Research Report 68, eds., R. Hodges and B. Hobley (London, 1988), pp.1-7

Hodges, R., 'Trade and Market Origins in the Ninth Century', in Charles the Bald: Court and Kingdom, eds., M.T. Gibson and J.L. Nelson (Aldershot, 1990 rev. edn.), pp.203-223

Hodges, R., 'Society, Power and the First Industrial Revolution', Medieval History no.2 (1991), pp.99-109

Holdsworth, 'Saxon Southampton' in The Anglo-Saxon Towns of Southern England, ed., J. Haslam (Chichester, 1984), pp.331-343

Homer, R. F., 'Tin, Lead and Pewter', in English Medieval Industries, eds., J. Blair and N. Ramsey (London, 1991), pp.57-80

Horsman, P., C. Milne and G. Milne, Aspects of Saxo-Norman London: Building and Street Development, London and Middlesex Archaeological Society Special Paper 11 (London, 1988)

Hurst, J.G., 'The Pottery' in The Archaeology of Anglo-Saxon England, ed., D.M. Wilson (London, 1976), pp.283-348

Jankuhn, H., 'Trade and Settlement in Central and Northern Europe up to and during the Viking Period', in Journal of the Royal Society of Antiquaries of Ireland, 92 (1982), pp.18-50

Jones, S.R.H., 'Transaction costs, institutional change, and the emergence of a market economy in later Anglo-Saxon England', Economic History Review, 96 (1993), pp.658-678

Jonsson, K., The New Era. The Reformation of the Late Anglo-Saxon Coinage (London, 1987)

Jonsson, K., Viking Age Hoards and Late Anglo-Saxon coins (Stockholm, 1987)

Jonsson, K., ed., Studies in Late Anglo-Saxon Coinage, Numismatiska Meddelanden 35 (Stockholm, 1990)

Jonsson, K., and G. van der Meer, 'Mints and moneyers, 973-1066' in Studies in Late Anglo-Saxon Coinage, Numismatiska Meddelanden 35 ed., K. Jonsson (Stockholm, 1990) pp.47-136

Jonsson, K., and B. Malmer eds., Sigtuna Papers: Proceedings of the Sigtuna Symposium on Viking Age Coinage (Stockholm, 1990)

Joy, C.A., 'Sokeright', unpublished University of Leeds Ph.D (1974)

Keen, L., 'The towns of Dorset', in Anglo-Saxon Towns in Southern

England, ed., J. Haslam (Chichester, 1984), pp.203-43

Keene, D.J., 'Suburban Growth' in European Towns, their archaeology and early history, ed., M.W. Barley (London, 1977), pp.71-80

Kelly, S., 'Trading privileges from eighth-century England', Early Medieval Europe, 1 (1992), pp.3-28

Kemp, R., 'Anglian York - the missing link', Current Archaeology, 104 (1987), pp.259-63

Lawson, M.K., 'The collection of Danegeld and Heregeld in the reigns of Ethelred II and Cnut' English Historical Review, 99 (1984), pp.721-38

Le Patourel, J., 'Potters and Pots', Medieval Ceramics, 10 (1986), pp.3-16

Loyn, H.R., 'Boroughs and Mints, A.D. 900-1066' in Anglo-Saxon Coins, ed., R.H.M. Dolley (London, 1961), pp.122-35

Loyn, H.R., 'Progress in Anglo-Saxon Monetary History', in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.1-10

Lyon, C.S., 'Historical problems of the Anglo-Saxon Coinage, 4, The Viking Age', British Numismatic Journal, 39 (1970), pp.193-204

Lyon, C.S., 'Some problems in interpreting Anglo-Saxon coinage', in Anglo-Saxon England, 5, (Cambridge, 1976), pp.173-224

Lyon, C.S., G. van der Meer and R.H.M. Dolley, 'Some Scandinavian coins in the names of Æthelred, Cnut and Harthacnut attributed by Hildebrand to English mints' British Numismatic Journal, 30 (1961), pp.235-51

McCarthy, M.R., and C.M. Brooks, Medieval Pottery in Britain A.D. 900-1600 (Leicester, 1988)

McDonald, J., and G.D. Snooks, Domesday Economy: a new approach to Anglo-Norman History (Oxford, 1986)

McDonnell, G., 'Iron and its alloys in the fifth to eleventh centuries A.D. in England', World Archaeology 20, No.3 (1989), pp.373-382

McGrail, S., Ancient Boats in North West Europe, (London, 1987)

MacGregor, A., 'Industry and Commerce in Anglo Scandinavian York', in Viking Age York and the North, CBA Research Report 27, ed., R.A. Hall (London, 1978), pp.37-57

MacGregor, A., 'Bone, Antler and Horn Industries in the Urban context', in Diet and Crafts in Towns: The evidence of animal remains from the Roman to the Post Medieval Periods,

eds., D. Sergeantson and T. Waldron, BAR Brit. Series (Oxford, 1989), pp.107-28

MacGregor, A., 'Antler, Bone and Horn', in English Medieval Industries, eds., J. Blair and N. Ramsay (London, 1991), pp.355-78

McNeil Dodgson, J. and J.J.N. Palmer, Index of Persons: Phillimore Domesday, volume 37 (Chichester, 1992)

MacKenney, R., 'Towns and Trade' in The Making of Britain: The Middle Ages, ed., L. Smith (London, 1985), pp.119-34

Maddicott, J.R., 'Trade, Industry and the Wealth of King Alfred', Past and Present, 123 (1989), pp.3-51

Mainman, A.J., Anglo Scandinavian Pottery from Coppergate, Archaeology of York, 16-5 (London, 1990)

Maitland, F.W., Domesday Book and Beyond (Cambridge, 1897)

Marshall, C., 'My Saxon Coin Hoard', Treasure Hunting, (Jan., 1987), pp.40-42

Martin, G.H., 'Domesday Book and the Boroughs', in Domesday Book: A Reassessment, ed., P.H. Sawyer (London, 1985), pp.143-63

Metcalf, D.M., 'The Ranking of the Boroughs', in Ethelred the Unready: Papers from the Millenary Conference, ed., D. Hill (Oxford, 1978), pp.159-212

Metcalf, D.M., 'Continuity and Change in English Monetary History, c.973-1086, Part 1, British Numismatic Journal, 50 (1980), pp.20-49.

Metcalf, D.M., 'Continuity and Change in English Monetary History, c.973-1086, Part 2, British Numismatic Journal, 51 (1981), pp.52-90

Metcalf, D.M., 'Estimation of the volume of the Northumbrian Coinage, c.738-88' in Sceattas in England and on the Continent, Seventh Oxford Symposium on Coinage and Monetary History, eds., D. Hill and D.M. Metcalf (Oxford, 1984), pp.113-17

Metcalf, D.M., 'The Monetary History of England in the tenth-century viewed in the prspective of the eleventh-century' in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.133-56

Metcalf, D.M., 'The Taxation of Moneyers under Edward the Confessor and in 1086', in Domesday Studies, ed., J.C. Holt (Woodbridge, 1987), pp.279-93

Metcalf, D.M., 'Introduction', Coinage in Ninth Century Northumbria, Tenth Oxford Symposium on Coinage and Monetary History, ed., D.M. Metcalf (Oxford, 1987), pp.1-10

Metcalf, D.M., 'A penny life will give you all the facts', Numismatic Chronicle, 147 (1987), pp.184-8

Metcalf, D.M., 'Were Ealdormen exercising independent control over the coinage in mid tenth-century England?' British Numismatic Journal, 57 (1987), pp.24-33

Metcalf, D.M., 'Notes on the Paxs type of William I' The Yorkshire Numismatist, 1 (1988), pp.13-26

Metcalf, D.M., 'The fall and rise of the Danelaw connection, the export of obsolete English coin to northern lands and the tributes of 991 and 994' in Sigtuna Papers: Proceedings of the Sigtuna Symposium on Viking Age Coinage, eds., K. Jonsson and B. Malmer (Stockholm, 1990), pp.213-223

Metcalf, D.M., and J.P. Northover, 'Debasement of the coinage in Southern England in the Age of King Alfred', Numismatic Chronicle, 145 (1985), pp.150-76

Metcalf, D.M., and J.P. Northover, 'Interpreting the alloy of the later Anglo-Saxon Coinage', British Numismatic Journal, 56 (1986), pp.35-63

Miller, E., and J. Hatcher, Medieval England: Rural Society and Economic Change, 1086-1348 (London, 1978)

Milne, G., 'King Alfred's Plan for London?', London Archaeologist, 6 no.8, pp.206-7

Milne, G., and D. Goodburn, 'The Early Medieval Port of London, A.D 700-1200', Antiquity, 64 (1990), pp.629-36

Milne, G., and B.Hobley, eds. Waterfront Archaeology in Britain and Northern Europe CBA Research Report 41 (London, 1981)

Moore, J.S., 'The Anglo-Norman Family: Size and Structure' Anglo-Norman Studies, 14, ed., M. Chibnall (Woodbridge, 1992), pp.153-196

Morris, C.A., 'Aspects of Anglo-Saxon and Anglo Scandinavian lathe turning' in Woodworking Techniques before A.D. 1500, ed., S. McGrail (London, 1982), pp.245-61

Morris, R., Churches in the Landscape (London, 1989)

Morton, A.D., Excavations at Hamwic, I., CBA Research Report 84 (London, 1992)

Munby, J., 'Wood', in English Medieval Industries, eds., J. Blair and N. Ramsay (London, 1991), pp.379-405

Nailor, V., 'A preliminary note on a Late Saxon ware from Nottingham' Medieval Ceramics, 8 (1984), pp.59-63

Nightingale, P., 'Some London Moneyers and Reflections on the

Organisation of English Mints in the eleventh and twelfth-centuries', Numismatic Chronicle, 142 (1982), pp.34-50

Nightingale, P., ''The King's Profit': Trends in English Mint and Monetary Policy in the Eleventh and Twelfth Centuries', in Later Medieval Mints: Organisation, Administration and Techniques, 8th Oxford Symposium on Coinage and Monetary History, eds., N.J. Mayhew and P. Spufford (Oxford, 1988), pp.61-75

Osbourne, J., Stained Glass in England (London, 1981)

Pagan, H., 'Coinage in southern England, 796-874' in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn, (Leicester, 1986), pp.45-65

Pagan, H.E., 'The coinage of Harold' in Studies in Late Anglo-Saxon Coinage ed., K. Jonsson (Stockholm, 1990), pp.177-205

Palliser, D.M., Domesday York, Borthwick Papers 78 (York, 1990)

Parsons, D., 'Stone', in English Medieval Industries, eds., J. Blair and N. Ramsay (London, 1991), pp.1-27

Peterssen, H.B.A., 'Coin weights and Late Anglo-Saxon pennies and mints, c.973-1066' in Studies in Late Anglo-Saxon Coinage Jonsson, K., ed. (Stockholm, 1990), pp.207-433

Pirenne, H., Medieval Cities- their origins and the revival of trade (Princeton Reprint, 1964)

Pirie, E.J.E., Yorkshire Museum, York; City Museum, Leeds; and the University of Leeds: Sylloge of Coins of the British Isles, 21 (London, 1975)

Pollock, F., and F.W. Maitland, The History of English Law, II (Cambridge, 1968 reissue)

Postan, M.M., and E. Miller, eds., Trade and Industry in the Middle Ages: Cambridge Economic History of Europe, II (Cambridge, 1987)

Pounds, N.J.G., An Economic History of Medieval Europe, (London, 1974)

Pritchard, F.A., 'Late Saxon Textiles from the City of London', Medieval Archaeology, 28 (1984), pp.46-76

Radford, R., 'The pre Conquest Boroughs of England', Proceedings of the British Academy, 64 (1978), pp.131-53

Reynolds, S., An Introduction to the History of English Medieval Towns (Oxford, 1977)

Reynolds, S, Kingdoms and Communities in Western Europe, 900-1300 (Oxford, 1984)

Reynolds, S., 'Towns in Domesday Book' in Domesday Studies, ed., J. Holt (Woodbridge, 1987), pp.295-309

Reynolds, S., 'Bookland, Folkland and Fiefs' in Anglo-Norman Studies, 14, ed., M. Chibnall (Woodbridge, 1992), pp.211-27

Rigold, S., and D.M. Metcalf, 'A revised checklist of English finds of Sceattas', in Sceattas in England and on the Continent, eds., D. Hill and D.M. Metcalf (Oxford, 1984), pp.245-68

Rodwell, W., 'Churches in the Landscape: Aspects of topography and planning', in Studies in Late Anglo-Saxon Settlement, ed., M. Faull (Oxford, 1984), pp.1-24

Rogers, A., 'Parish Boundaries and Urban History: Two case studies', Journal of British Archaeological Association, 35 (1972), pp.46-64

Runciman, W.G., 'Accelerating Social Mobility: The case of Anglo-Saxon England', Past and Present 104 (1984), pp.3-30

Sawyer, P.H., 'The wealth of England in the eleventh-century', Transactions of the Royal Historical Society, (1965), pp.145-66

Sawyer, P.H., Age of the Vikings (London, 1971, 2nd edn.)

Sawyer, P.H., Kings and Vikings (London, 1982)

Sawyer, P.H., 'Anglo Scandinavian trade in the Viking Age and after', in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.185-99

Sawyer, P.H., 'A Tenurial Revolution' in Domesday Book: a reassessment, ed., P.H. Sawyer (London, 1985), pp.71-85

Sawyer, P.H. and A. Thacker, 'The Cheshire Domesday - The Boroughs', in Victoria County History, Cheshire I (Oxford, 1987), pp.325-8

Sellwood, D., 'Medieval Minting Techniques', in British Numismatic Journal , 31 (1962), pp.57-65

Sjoberg, G., The Pre-Industrial City (Glencoe, Illinois, 1960)

Smart, V., Sylloge of Coins of the British Isles: Cumulative Index of volumes 1-20 28, (London, 1981)

Smart, V., 'Scandinavians, Celts and Germans', in Anglo-Saxon Monetary History, ed., M.A.S. Blackburn (Leicester, 1986), pp.171-84

Smyth, A.P., Scandinavian York and Dublin: The History and Archaeology of two related Viking Kingdoms (Dublin, 1979)

Smyth, A.P., 'The Vikings in Britain', in The Making of Britain,

The Dark Ages, ed., L.M. Smith (London, 1984), pp.105-116

Stafford, P.A., 'Historical implications of the regional production of dies under Æthelred II', in British Numismatic Journal, 48 (1978), pp.35-51

Stafford, P.A., 'The Farm of One Night and the organization of King Edward's estates in Domesday', The Economic History Review, 33 (1980), pp.491-502

Stafford, P.A., The East Midlands in the Early Middle Ages (Leicester, 1985)

Stenton, F.M., 'Types of Manorial Structure in the Northern Danelaw', in Oxford Studies in Social and Legal History II (1911), pp.3-96

Stenton, F.M., 'The historical bearing of place name studies: the Danish settlement of Eastern England' in Preparatory to Anglo-Saxon England, ed., D.M. Stenton (Oxford, 1970), pp.298-313

Stenton, F.M., The Free Peasantry of the Northern Danelaw (Oxford, 1969)

Stenton, F.M., Anglo-Saxon England (Oxford, 1971, 3rd. edn.)

Stephenson, C., Borough and Town: a study of urban origins (Cambridge, Mass., 1933)

Stewart, I., 'The St Martin coins of Lincoln', British Numismatic Journal, 36 (1967), pp.46-54

Stewart, I., 'The anonymous Anglo-Viking issue with Sword and Hammer types and the coinage of Sitric I', British Numismatic Journal, 52, (1982), pp.108-116

Stewart, I., 'The English coinage from Athelstan to Edgar', Numismatic Chronicle, 148 (1988), pp.192-214

Stewart, I., 'Coinage and recoinage after Edgar's Reform', in Studies in Late Anglo-Saxon Coinage, ed., K. Jonsson (Stockhom, 1990), pp.457-485

Tait, J., The Medieval English Borough (Manchester, 1936)

Tait, J., 'The study of early municipal history in England', reprinted in The Medieval English Borough (Manchester, 1936)

Tatton Brown, T., 'The towns of Kent' in The Anglo-Saxon Towns of Southern England, ed., J. Haslam (Chichester, 1984), pp.1-36

Tatton Brown, T., 'The topography of Anglo-Saxon London' Antiquity, 60 (1986), pp.21-28

Tatton Brown, T., 'The Anglo-Saxon towns of Kent' in The Anglo-Saxon Settlements, ed., D. Hooke (Oxford, 1988), pp.213-232

Tatton Brown, T., and N. Macpherson-Grant 'Anglo-Saxon Canterbury: Topography and Pottery', Current Archaeology, 98 (1985), pp.89-93

Thacker, A., 'Chester and Gloucester: Early ecclesiastical organisation in two Mercian burhs' Northern History 18 (1982), pp.199-211

Thompson, J.D.A., An Inventory of British Coin Hoards, 600-1500, (Oxford, 1956)

Truman, C., English Glassware to 1900, (London, 1984)

Tweddle, D., 'Craft and Industry in Anglo Scandinavian York' in Work in Towns, 850-1850, eds., P.J. Corfield and D. Keene (Leicester, 1990), pp.17-41

Unwin, T., 'The Norman aggregation of estates and settlement in eleventh-century Nottinghamshire', Landscape History, 9 (1987), pp.53-64

Vince, A., 'The medieval pottery industry in southern England: tenth to thirteenth-centuries' in Production and Distribution: a ceramic viewpoint, eds., H. Howard and E. Harris (Oxford, 1981), pp.309-22

Vince, A., 'The Aldwych: Mid Saxon London discovered', Current Archaeology, 93 (1984), pp.310-12

Vince, A., 'The Saxon and Medieval pottery of London: A Review', Medieval Archaeology, 29 (1985), pp.25-93

Vince, A., 'The study of pottery from urban excavations', in Urban Archaeology in Britain, CBA Research Report 61, eds., J. Schofield and R. Leech (London, 1987), pp.201-13

Vince, A., 'The urban economy in Mercia in the ninth and tenth centuries' in Archaeology and the Urban Economy, Festchrift to A.E. Herteig, Arkeologiske Skrifter Historisk Museum, 5 (Bergen, 1989), pp.136-59

Vince, A., Saxon London: An archaeological investigation (London, 1990)

Vince, A., 'Early Medieval London: Refining the Chronology', London Archaeologist, 6.10 (1991), pp.263-71

Walton, P., 'Textiles', in English Medieval Industries, eds., J. Blair and N. Ramsay (London, 1991), pp.319-54

Williams, J.H., 'A review of some aspects of Late Saxon Urban Origins and Development' in Studies in Late Saxon Settlement, ed., M. Faull (Oxford, 1984), pp.25-34

Wickham, C., Early Medieval Italy, Central Power and Local Society, 400-1000, (London, 1981)

Wickham, C., 'Problems of comparing rural societies in Early Medieval Western Europe', Transactions Royal Historical Society, Series 6, 2, (1992), pp.221-46

Williams, J.H., 'From Palace to Town: Northampton and urban origins' in Anglo-Saxon England 13, ed., P. Clemoes (Cambridge, 1984), pp.113-36

Wilson, D.M., 'Craft and Industry' in The Archaeology of Anglo-Saxon England, ed., D.M. Wilson (London, 1976), pp.253-81

Wilson, D.M., ed., The Archaeology of Anglo-Saxon England, (London, 1976)

Wood, I., and N. Lund., eds., People and Places in Northern Europe, 500-1600; Essays in honour of P.H. Sawyer, (Woodbridge, 1991)