

Towns in Transition in the First Millennium AD :

## York as a Case Study

Archaeological approaches to understanding change in  
a historic urban settlement

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Historic England project: 3437



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## Foreword

This report is derived from Historic England funded project 3437 *Towns in Transition in the First Millennium AD: York as a Case Study*. The project had its origins in a 2002 workshop in York involving York Archaeological Trust, English Heritage and several eminent archaeologists then studying Roman and early-medieval Britain. The intention of the meeting was to consider routes forward for the analysis and publication of a number of important excavations of sites in York from the first millennium AD, mostly undertaken in the 1980s, before the introduction of PPG16.

After an extended project design period, project 3437 was commissioned from York Archaeological Trust by English Heritage in March 2008, with an intended completion date of June 2009. The aim of the project was to provide an assessment of the archaeological resource and recommendations for future analysis. The project was subject to a number of delays, but a draft assessment report and updated project design was submitted in June 2011. A phase of revision followed, and a final draft manuscript was produced in February 2014.

The intention was to publish a hard copy monograph from the draft manuscript, and funding avenues for this had been explored prior to the 2014 submission. However, a publication was not achieved at this time and for various reasons, primarily organisational change at both institutions, the project stalled: now in 2020, it is no longer feasible to pursue the original aim of a monograph publication. However, both Historic England and York Archaeological Trust consider that the project generated original research that merits publication in draft form.

What is published below is the February 2014 draft manuscript (Assessment Report and Updated Project Design v.4.0, 14 February 2014). Version 4.0 was a final draft which had taken account of internal review by English Heritage, but had not been subject to external peer review. The text below is unaltered from version 4.0 except for the removal of personnel details and recommendations for specialist work which are no longer relevant. The figure and section numbering is not finalised, although the cross-referencing within the text is internally consistent.

The content has not been updated to reflect subsequent scholarship or investigation, and the reader should thus be aware that it will have been superseded in places. The publication of this document should not be considered as an indicator of the current research or policy aims of either York Archaeological Trust or Historic England: it is provided as a legacy document only, to place in the public domain results of research undertaken between 2008–2014.

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# Chapter 1 Introduction

## 1.1 Overview

1.1.1 This report presents a series of project proposals for the investigation of aspects of the archaeology of the 1<sup>st</sup> millennium AD in (and in one case around) the historic urban area of the city of York, with reference to the changing form, functions and social and economic roles of urban settlement on the site across 1,000 years. These proposals, developed largely with reference to potential analyses of existing information, held in archive from field investigations which have already taken place, seek to

- investigate aspects of the archaeology of the city across this period which have previously received less attention than they merit ( Chapters 2 and 3)
- develop new approaches to the study of stratified archaeological sequences and the artefacts, ecofacts and structures they contain in already well-studied periods (Chapters 4, 5, 6 and 8)
- seek new ways to identify the fugitive structures, stratigraphy and artefacts of the 5<sup>th</sup> century AD ( Chapter 7)

and

- develop the potential of ceramic evidence to investigate the sources and mechanisms of supply of utilitarian (i.e. non-fine ware) pottery – and by extension, it is argued, other staples essential to urban life – encompassing the entire millennium ( Chapters 2, 7 and 9).

1.1.2 In each chapter the intention has been to define studies which have the potential to move understanding forward in tangible ways with reference to defined objectives. In one instance (Chapter 3) this involves a programme of research designed to investigate a quite specific social, settlement and land-use model through a single category of data, one which is both presently available and suited to the task. In the other chapters it is more a matter of seeking patterning in the archaeological data which, when identified, has the potential to indicate significant differences in how the urban settlement functioned and was sustained, and how it related to its wider social and material landscape, across different periods within the 1<sup>st</sup> millennium AD.

1.1.3 In several cases, however, possible interpretations of the evidence which have been identified in the course of assessment, or are hinted at in the existing literature, have been outlined. These are not fully developed models, but observations which indicate the possibility of new and hopefully interesting approaches to the archaeology of pre-modern York, and serve to indicate the potential of the data, and the possible nature and implications of the results which might be anticipated (chapters 2, 5, 8 and 9). Most of the chapters involve approaches to York datasets which have not been attempted before, at least not in the specific ways proposed, and in several cases do not appear to have been attempted, at least in any systematic way, with reference to archaeological evidence from *any* historic urban centre in England (cf. chapters 3, 4, 6, 7 and 9).

1.1.4 The programme of assessment which led to the preparation of this volume has served to emphasise, if such emphasis was necessary, that in addressing issues of historic urban change through assemblages of various kinds, attention to the *context* of these assemblages and their components is often of critical importance. Consequently, the research proposed in several of the chapters necessarily involves consideration, and integration within proposed analyses, of the structural and stratigraphic contexts from which artefact and ecofact assemblages have been recovered. This is very much in line with the arguments forcefully stated in the volume *Britons and Romans : advancing an archaeological*

*agenda* (James & Millett 2001) by Burnham *et al* (2001, 70; 74) and by Millett (2001, 65-6) in discussion of archaeological approaches to Romano-British urban centres, arguments which are equally valid for the archaeology of the entire 1<sup>st</sup> millennium AD.

1.1.5 This volume is in the first instance concerned with the characteristics of archaeological strata and assemblages specific to York. In some instances the research questions and proposed analyses are framed with direct reference to the city's geographical location, landscape setting, and particular configurations of archaeological strata. There are nevertheless direct parallels with these in other historic urban centres in England, and the majority of the proposed approaches and research methods should be applicable elsewhere. Should it prove possible to implement these research proposals in York, future comparanda from other urban settlements of the 1<sup>st</sup> millennium AD in England would be extremely interesting. The depth of archaeological strata, up to 7-8 m deep in places, and the high degree of organic preservation in a significant percentage of them, amounts to a first-rank resource for the understanding of the development of the historic city across the period in question.

## **1.2 Introduction and background** (Figs 1.A, 1.B)

1.2.1 The archaeology of York in the 1<sup>st</sup> millennium AD is amongst the most extensively and productively studied in the UK. Thirty years of excavation, research and publication by York Archaeological Trust (Y.A.T.) has built on the legacy of earlier researchers, and is now being augmented by the Trust's own ongoing work and that of a number of other archaeological units currently active in the city.

1.2.2 Since the formation of Y.A.T. thirty years ago, archaeological understanding of York between the Roman and Norman conquests has been transformed. The results of excavations, many sufficiently resourced to allow work on a scale and with a level of detail denied to earlier researchers, have illuminated numerous aspects of the material world of the city's inhabitants across that millennium. The evidence of their buildings and foodstuffs, the hardware and accoutrements of their daily lives, their mortal remains – all have been recorded, studied and published with a painstaking attention to detail in the fascicule series *The Archaeology of York*.

1.2.3 This fieldwork and research has provided a platform for a range of synthetic and interpretative publications, both within the fascicule series and in separate publications, which have offered interpretative overviews of the city's development in the Roman, Anglian and Anglo-Scandinavian periods (e.g. Ottaway 1993, Tweddle and Moulden 1999, Hall 1994). These have traced the changing topography of the settlement at York, and the activities and functions attested within it, drawing on a broad range of archaeological, epigraphic, cartographic and documentary sources, and offer descriptive overviews of the results of the sustained campaign of archaeological research conducted by Y.A.T. and its precursors over a period of more than a century.

1.2.4 Set against this there are three issues concerning research into the archaeology of York, and in particular the publication of the results of that research, which need to be addressed. Firstly, the policy of publication in the form of 'fascicules', separate folios of a series of nineteen volumes covering a range of chronological periods, areas of the city and its environs, material types and approaches to analysis (cf. Addyman 1972), whilst adopted to circumvent delay in the process of publication of large and complex urban excavations, has arguably served to fragment understanding and even comprehensibility of the results of such projects. This leads on to the second point; that a number of major excavations undertaken in York in the course of the 1980s and early 1990s, particularly though not exclusively in the clearly important Romano-British settlement on the south-western bank of the river Ouse, remain, due to a variety of circumstances, unpublished, and in some cases and aspects, unresearched.

1.2.5 The third point arises out of the first two; namely that the policy of publication in fascicules, as well as fragmenting the evidence from particular excavations, discourages both the integration of the analysis of different categories of data with reference to broader research questions, and as a result the very *framing* and *asking* of those questions in relation to archaeological evidence from York. As a consequence the archaeology of the city in the 1<sup>st</sup> millennium AD often does not perhaps feature as prominently and as close to the cutting-edge of academic discussion as its research potential merits, notwithstanding the sequence of major catalogues and syntheses of the remarkable artefactual and palaeoenvironmental evidence from the iconic excavations of Anglo-Scandinavian levels at 16-22 Coppergate, recently concluded by the publication of the astonishingly well-preserved 10<sup>th</sup>-century timber buildings from that site (Hall & Mainman 2014). Redressing this situation to some degree is no small task, but it is hoped that the lines of research identified in this report, and the specific recommendations for their investigation, represent a first step in doing so.

### 1.3 Project rationale

1.3.1 It is axiomatic in archaeology, as in any research discipline, that no synthesis or hypothesis is definitive. Rather, these provide at once the culmination of a given stage of investigation, and the impetus for the formulation of new research goals and the initiation of programmes designed to attain them. It is suggested here that the point has been reached, in York and in other historic towns in England, where available data offers a platform for new research possibilities, allowing investigation to move beyond preoccupation with urban form and topography, and emphasis on the retrieval and comprehensive publication of basic datasets. Whilst acknowledging that there is still much significant work to be done in these areas, and that where such opportunities occur they should be taken, there are compelling reasons for a change of approach.

1.3.2 The first is the significant change in the professional and economic environment within which archaeology in York is now carried out. With the introduction of PPG 16, and, in York, the City Council's adoption of an archaeological policy based on the presumption of preservation *in situ*, opportunities to conduct large scale, deep excavations of the type undertaken in the 1970s and 1980s have become fewer and fewer, although in York the recent Hungate Project, involving the five year-long excavation of a large swathe of that neighbourhood (Connelly 2012), shows that such opportunities still can and do occur. Nevertheless, in general terms this situation seems set to be the exception rather than the norm for the foreseeable future. Within such constraints the practical obstacles to characterising and understanding 'representative' areas of the city, and revealing its changing topography through large open-area excavation (one of the stated founding aims of York Archaeological Trust when it was set up in 1972), seem, for the most part, insurmountable.

1.3.3 The second reason is not the direct result of changes in the practice and professional context of archaeological research, but concerns the intellectual agenda which the discipline, in its particular application in the study of those settlement types of the 1<sup>st</sup> century AD routinely classed as 'urban', is (or should be) pursuing. At its most basic this may be presented as three straightforward, closely linked questions;

- why did distinctive settlements of Roman, Anglian and Anglo-Scandinavian date, which are generically classified as 'towns' come into being across the 1<sup>st</sup> millennium AD?
- what role(s) did these settlements play in their wider landscapes and societies, and how did these differ one from the other?

- what changes and processes were involved in the successive transformations of the variants of urban form which we loosely term 'Roman', 'Anglian' and 'Anglo-Scandinavian', one into another?

1.3.4 An agenda based on these questions shifts research away from issues such as what these towns looked like, what went on in them, and how their form changed, to asking *why* they were like they were in these different periods, and the reasons for and significance of their similarities and differences. Cultural labels such as 'Roman', 'Anglian', 'Anglo-Scandinavian' are all too often offered as an explanation in themselves; 'different cultures did things in different ways', end of story. This is surely unsatisfactory. The range of archaeological evidence now available from York should begin to allow issues of the development and changing character of 'urban' settlements in the course of the 1<sup>st</sup> millennium AD to be addressed at the more fundamental level of the different social practices for which these culture-historical categories serve as a shorthand, and the reasons behind such differences.

1.3.5 This type of approach has been strongly encouraged by English Heritage. Their archaeological strategy document *Exploring our Past 1998 (EoP98)* emphasises the significance of what it terms 'Processes of Change' in defining research agendas, particularly in respect of the potential of 'supposed periods of transition' to provide insights into 'periods of apparent stability' (*EoP98*). Specifically, it offered four observations relevant to the nature and scope of this project

'Hypotheses based on pre-existing work will always be needed to form a background against which developments or changes are set'

'an understanding of change and continuity in social practice may come through contrasting hypothesis (*sic.*) developed from examining systems from before and after the supposed period of transition, rather than the period itself'

'there is a pressing need to move away from the site-based approach and tackle these issues on a broader, synthetic scale'

'It is likely that attempts to focus on specific aspects of society and economy, which may vary over time, will be the most profitable. Artefact and environmentally driven projects will be relevant here...'

*Exploring our Past 1998*

1.3.6 The first three statements emphasise that the research process should proceed from some model, or models, of the transformation of (in this case) York as an urban settlement in the course of the 1<sup>st</sup> millennium AD before commencing with empirical research. They also have implications for the research *methodologies* likely to be appropriate, an aspect developed further in the final point, which refers specifically to the types of data likely to be most useful in addressing these questions. Both aspects will be returned to below. Firstly, however, brief consideration of the definition of the term 'urban', and ways in which settlements categorised as such in different periods might be understood in terms of their similarities and differences, is necessary.

## 1.4 Urban definition and comparison

1.4.1 The successive settlements on the site of modern York were clearly different from each other in important respects, their ultimate 'common denominator' being that they were inhabited by - in contemporary terms - a large population, of which a significant proportion was not primarily engaged in its own subsistence production. (These, it is acknowledged, are traits which may be recognised in other settlement forms or types than those which would conventionally be classed as 'towns'; this is not,

however, an issue which needs to be pursued further here.) In the first instance categories of the characteristics of urban settlements need to be defined within which similarities and differences can be identified, and which may be linked to broader debates and discussion regarding social dynamics across the periods in question, following which their archaeological correlates can be sought. Key aspects, in no particular order of priority, might be;

- the manner in which social relations within the settlement were structured and expressed
- the organisation and definition of space and structures
- the character, range and distribution of productive & manufacturing activities, consumption and discard
- the manner and mechanisms through which the settlement interacted with its local and regional social and landscape setting

1.4.2 Three comments need to be made about these categories;

- as a starting point they acknowledge what urban settlements have in common – density of population, a measure at least of social heterogeneity and structural complexity, and inevitable impact on locality and region – but do not commence with generalised abstractions ('trade', 'religion', 'feudalism', 'the town') or period-specific phenomena ('Christianity', 'the Roman army', 'wics'). Any of these, and of course many others, can be accommodated within the terms of debate and comparison defined by these categories, but by the same token their definition and relevance to the research will need to be made explicit, and their archaeological representation defined
- they are not, in the last analysis, wholly separable from one another; each will have affected and been responsive to the other
- their characterisation in the specified chronological periods will require reference to and involvement in debates about broader aspects of contemporary society – the proposed emphasis is (and, given the subject of 'transitions', has to be) on the specific role of urban settlements in their wider social contexts, rather than identifying a pre-defined entity, 'the town', in different period costumes

## 1.5 Urban settlement at York in the 1<sup>st</sup> millennium AD

The characteristics and chronology of urban settlement at York over the 1st millennium AD may be summarised, in outline, as follows.

1.5.1 York is located in the centre of its eponymous Vale, the broad lowland plain bounded to the east by the chalk uplands of the Yorkshire Wolds, the oolitic limestone Howardian Hills, and the sandstones of the Hambleton Hills, and to the west by the magnesian limestone belt of the lower Pennine foothills. The floor of the Vale itself is formed by Quaternary drift deposits, overlying Triassic sandstones and mudstones.

1.5.2 The city is situated at the point where a glacial frontal moraine extending across the Vale from west to east is breached by the river Ouse, flowing from north-west to south-east, and where the Ouse is joined by its tributary, the river Foss, flowing from north to south. The frontal moraine was deposited

by a retreating glacier at the end of the Devensian glaciation in the late Pleistocene, c.11,000 BP (c.9,000 BC). Composed of till / boulder clay, it rises to a height of c.25 m in the vicinity of York, up to c.20 m above its surrounding landscape. The present course of the river valley of the Ouse may have been established by c.10,000 BP (c.8,000 BP), although the date at which it breached the accumulated glacial and peri-glacial sediments behind the moraine to flow southwards is at present uncertain.

1.5.3 A Roman legionary fortress (a substantial settlement which itself had obvious urban characteristics as identified in the previous section) was established on the north-east bank of the river Ouse in AD 71, in a locality inhabited by an indigenous LpRIA population in small, dispersed settlements apparently lacking any higher-order central places. The presence of the fortress was followed, over the next 150 years, by further settlement, initially on the north-east and later on the south-west bank of the Ouse. By the middle of the 3rd century AD this settlement had been granted the status of *colonia*, and in the course of that century witnessed the construction in stone, in one or more campaigns, of a number of substantial building complexes, town houses, and a town wall. Over the same period the fortress itself was also walled in stone, and its buildings rebuilt in the same material. Fortress and urban settlement continued to be occupied throughout the 4th century.

1.5.4 The chronology - whether early in the 5th century or later - and processes of the demise of the Roman town at York are, as elsewhere, problematic. What is generally accepted is that by the end of the 5th century any settlement which may have continued within town or fortress was on a vastly reduced scale to that recognisable in the 3rd and 4th. Two localities where a case has been made for settlement well into the 5th century are the area of the Roman *principia* on the site of York Minster, and at Wellington Row on the south-west bank of the Ouse, close to the site of the Roman bridging point of the river (Ottaway 1993; Whyman 2001). There is as yet no firm evidence for Anglian settlement on the sites of either fortress or *colonia* in the 5th or 6th centuries AD, notwithstanding the existence of two Anglo-Saxon cremation cemeteries of this date in what are now suburban areas to the south and north of the city.

1.5.5 Documentary sources attest to a royal and ecclesiastical presence in York from the first half of the 7th century (Rollason 1998), but the earliest archaeologically-testified settlement at present is of the early 8th century, a candidate for a 'wic' site excavated over an extensive area close to the confluence of the rivers Ouse and Foss (Kemp 1996), and in more limited interventions within the area of the former Roman fortress and civilian settlement. Intensive street frontage development alongside the rivers and main routeways from the later 9th and early 10th centuries has been demonstrated on both banks of the Ouse. This development follows the documented Viking conquest and settlement of the region from the 860s and it is usually acknowledged that this Anglo-Scandinavian settlement constitutes the direct lineal predecessor of the later medieval town. Documentary sources and limited archaeological evidence permit the inference that the area of the former Roman legionary fortress was significant as a royal and ecclesiastical focus in both Anglian and Anglo-Scandinavian periods, but as yet no opportunity has arisen to allow the character of settlement in this locality to be demonstrated archaeologically.

## **1.6 Understanding urban change in the 1st millennium AD : recent approaches and their implications for York**

1.6.1 This descriptive overview of the character of settlement at York in the 1st millennium AD is so generalised as to be largely uncontroversial. There are, however, important areas of wider academic debate and discussion at a national, and indeed European level, regarding the origins and role of these distinctive forms of settlement. As currently understood, York appears to fit within a broad outline of urban settlement history in the 1st millennium recognised across large areas of southern Britain; Roman military conquest followed, over three centuries, by the growth and eventual *floruit* of a civilian settlement; a comprehensive breakdown of urban infrastructure in the course of the 5th century, followed by evidence (although in the case of York it is sparse) for Anglo-Saxon settlement in the vicinity; the emergence in the

later 7th or early 8th centuries of a 'wic' site, very probably linked with aristocratic enclaves (ecclesiastical and ?royal) located within the area of the former legionary fortress and *colonia*; the development from the later 9th century of a settlement whose topography, structures and functions foreshadowed and provided the basis for the development of the medieval city.

1.6.2 These distinctive forms of urban settlement occur individually across southern Britain, although rarely within a single closely defined locality, as at York. The *reasons* behind the rise and demise of each form have been the subject of debate. Data from York has not figured as prominently in such discussions as the quality and range of archaeological evidence from the city might allow. One of the intentions of the project proposed here is to remedy this situation, and to take research a stage further by offering a model for the detailed integration of analyses of archaeological data within a problem-oriented research agenda constructed with reference to current theories of urban growth and decline across this period. Recognising that the implications of these theories - and their detailed application - in the case of York have in a number of cases yet to be fully worked through, it is necessary to outline prevailing interpretative frameworks (and their alternatives) for the understanding of urban settlements in the 1st millennium AD.

1.6.3 The dynamic behind the growth of Roman civilian settlements was for a long period seen as essentially the product of the demand for goods and services introduced by the establishment of Roman military installations and the troops they housed. Such demand opened up commercial opportunities for native populations which took concrete form in the creation of *vici*, which frequently, although by no means universally, grew into prosperous and conspicuously well-appointed settlements, frequently outlasting and extending over the sites of the military forts and fortresses which had originally brought them into being (cf. Webster 1988). A more recently favoured view sees the creation of Romano-British towns as deliberate, conscious acts on the part of indigenous elites determined to display their social status in a way which indicated their association with and participation in their new imperial authority and its culture (cf. Millett 1990). A related but distinct position would see Romano-British towns as essential to both imperial authorities *and* local elites in the creation, identification and consolidation of a ruling class; necessary to serve as nodes for the collection of taxation on which the Roman state relied, and to cement the position of previously tribal elites within that state structure (cf. Whyman 2001; Wickham 1984). In the specific case of York, Roskams (1990) has pointed out that these alternative scenarios have different implications for the chronology and character of 'Romanisation' within the region, and that it is the task of the archaeologist researching the issue to identify archaeological correlates which allow the different models to be tested against data. Of particular significance here is the pre-Roman pattern of settlement and social organisation within the locality of York (and indeed within the wider region), and the similarities and differences in the provisioning, settlement organisation and personal display witnessed in the course of the first two centuries AD.

1.6.4 The later 2nd and early 3rd centuries in York appear to witness substantial investment in the fabric of both the fortress and the settlement to the south-west of the Ouse. Again, the extent to which this development represents the fruits of increasing wealth founded on commercial growth - one example of a phenomenon argued as being recognisable across the province of Roman Britain - or a deliberate policy of either regional or even imperial authorities (or, perhaps, how these explanations articulate with one another) is a contested issue. Detailed investigation of the divergence / convergence of strategies for provisioning the settlements on the opposite banks of the Ouse, and the means of social display employed (architectural, spatial, personal), may allow these different models to be evaluated.

1.6.5 In considering Romano-British towns in the later 3rd and 4th centuries AD, recent scholarship has sought to emphasise their difference from their predecessors. The view that they were in terminal decline from the middle of the 3rd century (cf. Reece 1980) has been countered by examples indicative of significant economic activity in the late decades of the 4th century (e.g. Dobney *et al* 1998). In reconciling such different characterisations, and recognising in either instance substantial contrasts between towns of the late 3rd and 4th centuries from their 2nd- and early-3rd century predecessors, Neil Faulkner has coined

the phrase 'post-classical urbanism'. He argues that late Roman towns were essentially state-dominated tax-collection centres, within which lived all-powerful state functionaries with their large, if often downtrodden and dishevelled, retinues (Faulkner 1994), publishing detailed studies of Colchester and Verulamium using this model. No attempt has as yet been made to apply his model to the evidence from York, and it may indeed be argued that it is an approach whose reliance primarily on extensive availability of the evidence of building construction makes it difficult to apply. It could, indeed, be suggested that that very reliance is a shortcoming, as it does not take account of the potential of major classes of artefact and ecofact to characterise the actual *nature* of the suggested distinctive 'post-classical' urban forms. However, what Faulkner's approach *does* do is to emphasise the distinctness of later Romano-British towns, and his arguments as to their social organisation and the character of settlement within them provide a ready-made agenda to be tested with reference to artefact and ecofact assemblages, as well as the characteristics of buildings, in York.

1.6.6 Identifying the reasons behind the demise of Romano-British towns in the course of the 5th century depends to a large degree on the dynamics behind the changes witnessed during the 4th. Explanations favoured to date have invoked a collapse of manufacturing and commerce in the early 5th century, with the withdrawal of army units from Britain to continental Europe seen as a key event precipitating a crash in demand and the breakdown of production (e.g. Esmonde-Cleary 1989; Higham 1992). Alternatively (e.g. Millett 1990), or sometimes in combination with this (cf. Esmonde-Cleary 1989), widespread disaffection with Roman rule by local elites subject to increasing levels of taxation saw a rejection of Roman culture, values and forms of display, leading to a re-drawing of group identities and dynamics which ultimately resulted in 'Germanisation', as new tribal groupings adopted the customs and personal accoutrements of settlers from across the North Sea (cf. Millett 1990). It can be seen that these explanations for 'the end' of Romano-British towns are closely bound up with the reasons favoured for explaining their beginnings. Similarly, Whyman (2001), in a study specific to York and Yorkshire, draws on the work of Wickham (1984), interpreting the disintegration of late Romano-British social (and urban) structure in terms of a transformation of class relations resulting from the material contradictions inherent in the form of those relations in the later 4th century. This study also proposed that a combination of stratigraphic, structural and ceramic evidence from the Wellington Row site in York offers evidence for continued rebuilding and occupation of structures in the heart of the *colonia* well into the 5th century, opening the way to seek evidence for change across this period in other classes of artefactual and ecofactual data from that site, and possibly from other sites elsewhere in the city. Set against all of these interpretations, Dark has claimed that, to all intents and purposes, late-Romano-British society and its towns continued to flourish, or at least to exist, as late as the 7th century, notwithstanding that archaeological evidence to support this claim is, at present at least, almost impossible to identify. His is the view that 'post-Roman' artefacts continued in use after the conventional end-date of Roman Britain in the early-5th century, but are indistinguishable from their late-Roman equivalents, taken to its extreme.

1.6.7 Anglo-Saxon settlement of the 5th and 6th centuries has been identified within former Romano-British towns such as Canterbury and Dorchester-on-Thames, and interpretation of its chronology and significance has generated much debate (e.g. Brooks 1984). This will not be reviewed further here, since in the case of York there is at present no unambiguous evidence for settlement of this date within the area of the former Roman town, although (seemingly early, that is 5th-century) Anglo-Saxon cremation cemeteries are known from The Mount (amidst a massive Roman necropolis to the south of the urban area) and Heworth, overlooking the floodplain of the river Foss to its north. It should be noted, however, that this absence may be in part the result of the indistinguishability of pottery which may date from the 5th and 6th centuries from that of the 7th and 8th (Mainman 1993, 557); some of the small quantity of Anglian ceramics recovered from various locations within the city (*ibid.*, fig.237, p.558) might have derived from localised settlement sites of this date.

1.6.8 Since 1985 it has been known that a settlement of the 8th century, of the type usually classed as *wics* or 'emporia', was located close to the confluence of the rivers Ouse and Foss (Kemp 1996). The role

of settlements of this type, and their supposed significance as the point of origin of a generic 'English town', has been contested since Hodges (1982) first identified them as 'ports of trade' under direct royal control which, once established, sowed the seeds of a late-1st millennium 'commercial revolution', leading to the emergence of a network of urban markets, and the beginnings of an autonomous market-based system of trade and exchange in the course of the subsequent two centuries. This model has subsequently been questioned from a range of perspectives, notably by Astill, who has argued that it overestimates the significance of royal control and international exchange at the expense of aristocratic power (a point confirmed and extended by Scull) and the interaction between insular polities, and by Saunders (1992), who insists that the role of circulation and exchange of goods in this period, rather than being the motor which drove economic development, was simply an (archaeologically visible) facet of a social structure underpinned by land and tribute, wherein the underlying dynamic of the development of *wic* sites should be sought. O'Connor (1991) has used the animal bone assemblages from the York *wic* site at 46-54 Fishergate to identify important and widely-quoted distinctions in the pattern of exploitation of animal resources recognisable at sites such as Fishergate itself and middle-Saxon Southampton ('Hamwic'), compared with known contemporary monastic sites, rural settlements of high and low status, and the early 11th century assemblage from Coppergate in York, pointing to the distinct characteristics and roles of these different types of settlement.

1.6.9 A degree of consensus currently exists about the basic function and status of '*wic*' sites, namely that they represent enclaves within which royal and/or aristocratic control was exercised over the exchange and specific aspects of the manufacture of prestige goods, and which provided enclosed arenas for the exchange of goods between representatives of insular and continental élites. The character of their provisioning appears to reinforce this interpretation, O'Connor suggesting it to be consistent with a regional food rent (*ibid.*, 282). Recently, however, increasing attention is being paid to the *distinctions* between the archaeological signatures of the sites usually accepted as '*wics*' ('Hamwic', Ipswich, London, the Fishergate site in York). These distinctions appear to be recognisable in animal bone assemblages (cf. *ibid.* fig.41, p.281; Rackham 1996), and also in other classes of data, notably ceramic production and supply (Blinkhorn 1998; Hodges 1981). Study of these distinctions may lead to a more detailed understanding of how the social structure of insular middle Saxon polities *differed* from one another. Any such research obviously needs to be framed with reference to wider patterns of mid-Saxon settlement forms. This task was for a long time hampered by a lack of comparability and consistency in the data recorded from settlements of the 7<sup>th</sup> – 9<sup>th</sup> centuries (and arguably by the terminology employed to describe settlements). Major research projects such as Flixborough (Loveluck 2007) and West Heslerton (Powlesland 2005) have, however, provided opportunities to develop such approaches. Furthermore, the expansion and reporting of metal-detected finds over the past 20 years or so has led to the identification of so-called 'productive sites', locations where coins and metal objects of this period proliferate, and these have been understood in terms of local and regional market centres articulating, ultimately, with the *wic* / emporia sites (Pestell & Ulmschneider 2003). To a degree the discovery of sites of this nature fulfil the prediction made by Astill regarding the existence of (then) as yet undiscovered lower-order centres of exchange which, he argued, would have had a major role to play and therefore required that the attention and interpretation of *wic* sites should focus less exclusively on solely royal control and initiation of exchange and 'trade' (Astill 19\*\*). The presence of coins on these sites in very large quantities has led to their interpretation, contrasting with that of the *wics*, of more-or-less spontaneously developing markets, free from royal and perhaps even from aristocratic control (Pestell & Ulmschneider 2003). It should be noted, however, that the very existence of coinage in this period, the manufacture of which royal authorities sought to keep under their own tight control, is best understood in terms of its use as a medium for the taking of tribute and taxation from a wider populace. It is against this context – of royal and aristocratic authority, power and the taking of surplus – that these middle-Saxon 'market' centres need to be understood.

1.6.10 In the case of York itself, the Fishergate settlement is currently interpreted as one of a number of discrete areas of habitation within a 'polyfocal' settlement (cf. Kemp 1996). It has been proposed that the other foci probably comprised royal, episcopal and monastic *enceintes* within and around the area of the

former Roman fortress and *colonia* (*ibid.*; Palliser 1984; Morris 1986; Rollason 1998), indicated by concentrations of Anglian sculpture and a range of other finds of this period from locations therein (Tweddle and Moulden 1999; Mainman 1993). The picture is comparable to the model of 'intra-mural estates' within a former Roman town as proposed for Winchester in the middle Saxon period. It is worth noting in this context Rollason's recent argument that, after the death of Edwin of Deira in AD 633, there is little or no documentary evidence for York having been a centre of royal power in this period (Rollason 1998, 139), and that its role as an episcopal centre, established in AD 669 x 771 and extended to archiepiscopal status in AD 735 (*ibid.*, 127), was the basis of its political and economic significance. There is unequivocal documentary evidence for the existence of at least one monastic community at York from the later 7<sup>th</sup> century, whether or not it was an adjunct of the episcopal see (Rollason 1998, 154), and Rollason acknowledges the possibility of a royal palace site within the vicinity of York, identifying Earlsborough (the site of St Mary's Abbey from the later 11<sup>th</sup> century) as a possible candidate (*idem.* 1999, 135).

1.6.11 A measure of concordance may be identified between the documentary indications of élite communities organised along distinct secular and ecclesiastical lines, and the archaeological suggestions of discrete enclaves and concentrations of settlement within and around the area of the former Roman fortress and *colonia* (*cf.* Tweddle *et al* 1999, 208-10). The latter observation should be tempered with an awareness of the uneven distribution of archaeological interventions across the city, but remains the most convincing hypothesis given presently available evidence. The extent to which we can anticipate clear-cut archaeological correlates for distinctive episcopal, monastic and secular settlements is uncertain (except, perhaps, in the cases of sculpture and certain highly specialised votive Christian artefacts - and even here this distinction seems to be increasingly called into doubt, *cf.* Loveluck 1998). However, David Hinton has pointed out possible distinctions between the artefact assemblages from, for example, York and 'Hamwic', and has tentatively proposed that these might be explained in such terms (Hinton 1996, 102). Since there *do* seem to be indications that discrimination between documented monastic sites and other classes of contemporary settlement, including 'wics', may be achieved through animal bone assemblages (*cf.* O'Connor 1991, fig.41 p.281), this is an approach which may be worth pursuing in the case of other classes of data in York.

1.6.12 This picture of settlement in York between the later 7<sup>th</sup> and mid-9<sup>th</sup> centuries, as a small constellation of institutionally distinct *enceintes* and communities, appears to be in marked contrast with that which develops in the course of the 10<sup>th</sup> century. This period saw the development of serried tenements laid out at 90° to the arterial routeways which now ran through and around the former fortress and *colonia*. An unrivalled wealth of excavated data illustrates the range of daily activities carried out on these tenements, and the extent of their contacts with Scandinavia, Europe and still further afield in the century-and-a-half before the end of the 1<sup>st</sup> millennium AD (*cf.* Ottaway 1992, Kenward and Hall 1995, Walton Rogers 1997, MacGregor *et al* 1999, Mainman and Rogers 2000, Morris 2000). It has been noted many of the typical social, structural and economic characteristics of the later medieval town seem to emerge in this period (e.g. Palliser 1990; Morris 1989; O'Connor 1991, 278, fig.40 p.280), and that the millennium, or the Norman conquest, should not be seen as a significant boundary in the study of urban development across this period (Palliser 1990).

1.6.13 The near-coincidence of these changes in settlement form and organisation with the documented Scandinavian invasion and settlement of Yorkshire from the late 860s has led to them being causally linked with that incursion, an association supported archaeologically by the repertoire of distinctively Scandinavian art styles adorning many objects of this date found in York. Beyond attributing the transformation of the settlement at York as the result of a cultural change brought about by Scandinavian settlement, emphasis is often placed on the role of trade in prompting this change in form, with entrepreneurial craftsmen exchanging their manufactured goods with Europe and points east (and west...). A contrast is sometimes drawn between highly regulated 'trade', conducted in institutionally controlled contexts, in the preceding middle Saxon period, and greater freedom for and initiative by individual craftsmen and traders, prompted by expanding insular and continental market opportunities, in the later 9<sup>th</sup> and 10<sup>th</sup> centuries (*cf.* Hodges

1989). This is held to be reflected in the multiple parallel, individual tenements in 10<sup>th</sup> century towns such as York, and such towns are indeed seen as the first manifestation of the 'English Medieval Town', often considered unproblematically as having been underpinned by the economics of market-driven production and exchange.

1.6.14 The evident changes in the settlement form and, by extension, social structure might be more accurately understood in terms of the changes in lordship and landholding which the Scandinavian settlement of the region evidently caused, with the apparent break up of large aristocratic and monastic landholdings and their substitution by smaller, more localised power structures (as witnessed, apparently, by the shift from ecclesiastical to widespread secular patronage of contemporary sculpture in the region; Bailey, 1980). It may also be worth questioning a direct association between Scandinavian settlement and the settlement changes in York given, for example, the similarities in the animal bone assemblages from 8<sup>th</sup> century Fishergate and the later 9<sup>th</sup> century phases at Coppergate identified by O'Connor (1991, fig.40, p.280). This observation re-emphasises the need to seek mechanisms and dynamics of change in the characteristics of the archaeological record *across* historically-defined periods, and without *a priori* reference to the cultural labels derived from the historical narratives on which such periodisation is based, an issue developed below in section 6.

1.6.15 The Anglo-Scandinavian era is a chronological amalgam of distinct, historically attested phases in York's social, political and economic development. The later 9<sup>th</sup> and early 10<sup>th</sup> centuries mark a distinct political rupture in the kingship of Northumbria. Coupled with Scandinavian settlement, the period c.919-54 witnessed conflicts between competing Hiberno-Norse and southern English dynasties to establish themselves in York and Northumbria. From 954 York was part of a newly enlarged and united English state. The loss in 1016 by archbishops of York of traditional links with the see of Worcester may imply that York was by then considered to be so firmly a part of the English network as to render that inducement unnecessary. These political developments may themselves have had reflexes in terms of the characteristics identified in section 3, above, which are recognisable in the archaeological record.

## 1.7 Urban transitions in York

1.7.1 Existing periodisations thus provide one, familiar and seemingly convenient way of identifying 'urban transitions'. There is, however, an inherent danger; by accepting and utilising these traditional period boundaries, there is a tendency to reinforce the intellectual divisions which result from specialised areas of scholarship, and thus defeat the point of understanding 'transitions' in terms relevant to the situation both 'before' and 'after'. Acknowledging this ('over-rigid period categorisation will only hold back the development of these studies and results in questions becoming institutionalised...' - *EoP 98*), English Heritage identifies in its discussion of 'Processes of Change' a first millennium periodisation which seeks to *encompass* the episodes commonly understood as representing periods of change. Hence;

'Briton into Roman' (c.300 BC - AD 200)

'Empire to Kingdom' (c.AD 200 - AD 800)

'Late Saxon to medieval' (c.AD 800 - AD 1300).

1.7.2 This division seeks to place the study and understanding of processes of change at the heart of the research agenda, rather than marginalising them at the limits of traditionally-defined periods. It serves as a reminder that as well as seeking to understand processes of change *across* those traditional period boundaries, major changes in the archaeological record and the societies which created it are clearly evident *within* the confines of those periods. These must clearly also be taken account of in researching urban transitions in York across the 1st millennium AD.

1.7.3 How, acknowledging these criteria, can 'periods of transition' be identified in York, and where should the lines be drawn in what (in absolute if not practical terms) could, after all, be characterised as having in fact been a seamless continuum? Two approaches are adopted here;

- the identification of 'event horizons', short and dramatic episodes of transition, which we then seek to characterise and pursue through the relevant components of particular sequences and/or assemblages
- the identification and analysis of comparable datasets either side (chronologically) of these 'event horizons' – what *EoP98* referred to as 'so-called periods of stability', and might be termed 'stable state' comparisons

1.7.4 Current understanding of the archaeology of York and Yorkshire suggests the following 'event horizons' in terms of dramatic social change;

c.AD 70 – 120 (Roman occupation of region and creation of fortress)

c.AD 180 – 220 (the creation and construction of the colonia, on the south-west bank of the Ouse but / and probably also elsewhere in the environs of the fortress)

c.AD 230 – 270 (the 'mini-Dark Age' of Roman Britain; diagnostic artefacts scarce, and substantial differences in artefact deposition and structural characteristics to either side)

c.AD 380 - ?500 (breakdown of recognisably 'urban' structure and ?adaptation to lower intensity & more localised patterns of production consumption)

(The period c.AD 500 – 650 represents a 'so-called period of stability' in that, in York, there is next to no incontrovertible archaeological evidence for it !)

c.AD 650 – 725 (re-appearance of archaeologically-testified nucleated settlement, coin-use, more closely dateable ceramic types)

c.AD 850 – 900 (emergence of densely-occupied streetfronts along arterial routes within central area)

These are episodes for which actual interfaces, stratigraphic and artefactual, from the material evidence which we have available might be sought.

1.7.5 The alternative, and complementary approach, would be to study comparable material assemblages from the periods which intervene between these 'event horizons'. This would allow similarities and contrasts to be drawn out in the 'steady state' chronological periods separated by the suggested 'event horizons', with suggested modal points as follows;

AD 0 – AD 200

AD 175 – AD 375

AD 350 – AD 750

Here, the argument is that the settlement at York was a markedly different place at the beginning and end of these periods, that we should identify similarity and difference in defined aspects of the archaeological record, and seek the understanding and explanation of these patterns with reference to models of social dynamics across the 1<sup>st</sup> millennium as a whole.

## 1.8 Research direction

1.8.1 Having offered an overarching definition which might be applicable to any settlement likely to be considered urban in character, identified aspects of such settlements which might be directly compared, and proposed a chronological framework for the study of urban transitions in the specific case of York, attention may be turned to English Heritage's observation that, in studying processes of change, 'It is likely that attempts to focus on specific aspects of society and economy, which may vary over time, will be most profitable. Artefact and environmentally driven projects will be relevant here...'

1.8.2 It was noted in the introduction that the past ten years have seen the publication of detailed studies of a range of artefact and ecofact types from across the 1<sup>st</sup> millennium AD. The comments of Terry O'Connor, published in the conclusion of his study of animal bones from the General Accident site in 1988, are now equally applicable to many more classes of archaeological material deriving from York in the 1<sup>st</sup> millennium AD;

"As particular research themes can now be identified and specific questions asked, subsequent investigation of bones from Roman York could be made more 'problem oriented', with effort being concentrated in pursuing those lines of enquiry which will address the problems already defined...resources can now be channelled on the basis of some prior knowledge. When this project was started, it was not clear where research priorities lay, and the approach was to collect all data without targeting, allowing the important areas for study to define themselves as the job went on. Such an empirical approach was inevitable for the first delving into the economy of Roman York, but would not be defensible in subsequent investigations.

"The way forward, then, should be to examine specific questions over a wider area. The potential of such further studies is considerable...[due to the]...spatial heterogeneity in the bone debris deposited around the fortress and the area of the *colonia*. This in turn will give the researcher some real differences between phases and areas of the city on which to base firm conclusions. The prospects are most encouraging, and opportunities should be actively created, not merely passively awaited."

O'Connor 1988, 124-5

1.8.3 In the context of urban transitions in York, perhaps the key phrase in this succinct commentary concerns the 'real differences between phases and areas of the city on which to base firm conclusions'. This project aims to advance understanding of the changes in character of urban settlement at York across the 1<sup>st</sup> millennium AD. It commences from a definition of 'urban' broad enough to be applicable in all instances, and then identifies characteristics (or 'key variables') which, again, will have existed in each case, namely (reiterated from 1.4.1)

- the manner in which social relations within the settlement were structured and expressed
- the organisation and definition of space and structures

- the character, range and distribution of productive and manufacturing activities, consumption and discard
- the manner and mechanisms through which the settlement interacted with its local and regional social and landscape setting

It is in essence a *comparative* methodology, seeking to research directly comparable phenomena across time and space, to identify how successive periods of settlement at York differed in these fundamentals, and to evaluate, modify and develop models of their transformation one into another.

1.8.4 To conclude this introductory section, it is worth stating that one of the most singular characteristics of the archaeology of York – the great depth of strata and the often high level of stratigraphic and organic preservation associated with that – is at the same time its greatest asset and one of the most significant obstacles to its research. The depth to which excavation often has to extend to reach deposits of the 1<sup>st</sup> millennium AD is in very many areas of the historic city a deterrent to their archaeological investigation on any scale, an issue which is particularly acute in the time-is-money conscious 21<sup>st</sup> century. It is no coincidence that the majority of the large-scale excavations which feature heavily in the succeeding chapters were undertaken between the early 1970s and the late 1980s, and opportunities for such large-scale, long-duration investigations in the deeply-stratified heart of the city, such as took place at 16-22 Coppergate between 1976 and 1981, or at Wellington Row between 1987 and 1990, are likely to be rare in the foreseeable future. The fact that York is world-renowned for its surviving medieval city walls, churches, buildings and street is, has been and continues to be an important factor, as this has served to prevent the massive redevelopment programmes which have impacted on many other historic towns and cities in Britain over the past half-century. One response to this circumstance must surely be to maximise the evidential value of the archaeological and information *already* recovered and held in archive, both by researching it rigorously and in detail, but – and crucially – with a broad chronological and spatial frame of reference to ‘big questions’ relating to the origins, development and changing character of the early city which archaeological investigation has already done so much to reveal. The intention of this report is to suggest some significant lines of enquiry, and how they might be pursued.

## Chapter 2 Landscape, topography and hydrology of the rivers Ouse and Foss : the setting for urban settlement at York in the 1st millennium AD

### Summary

*The majority of Britain's urban settlements of the 1st millennium AD, Roman, Anglo-Saxon and Anglo-Scandinavian, are located on major rivers, and not infrequently at their confluence with minor tributaries. These riverine locations are routinely acknowledged in the archaeological literature as significant in terms of transport and communications. They invariably also have importance, however, in terms of their distinctive topographies, their role as boundaries between regions and polities and loci of interaction for their inhabitants, and, often as a result of the combination of these attributes, ritual, ideological, and by extension social significance to those communities. These characteristics can in several instances be traced back to the Late pre-Roman Iron Age (LpRIA), and were often heavily modified by the creation of a Romano-British town on the site, the effects of which had major impacts on the form and character of urban settlement later in the 1st millennium.*

*Like many of these urban sites, the rivers of York, the Ouse and the Foss, and their associated fluvio-glacial landscape, were crucially important to the successive urban settlements built on this site in the course of the 1st millennium AD. This is true in terms of both urban function and settlement disposition. Although this has been widely recognised, and reference to the rivers and their significance has frequently been made in the city's archaeological literature, there has to date been no attempt to systematically draw together the evidence for the influence of the rivers on urban development in this period provided by excavations, boreholes and the range of other potential sources of evidence which exist. Considered in combination, these can provide a much clearer picture of that influence than that which is currently available.*

*This chapter offers some indications of the full potential of such an approach. It argues that the rivers in the 1st millennium AD need to be understood in the context of their development, and that of their landscape, from their origins in the late Pleistocene / early Holocene, c.10,000 BP. Recognition and understanding of the original landforms and sediments on which the urban settlements at York were built is crucial to understanding those settlements, and opens up the possibility of a previously unrecognised significance for the site long before the construction of the Roman fortress in AD 71, possibly extending back into early prehistory.*

*There are indications that the riverine landscape of the 1st millennium AD, in particular its floodplains and river channels, was even more dramatically different from that of today, or even from that of the early-2nd millennium AD, than has usually been supposed. This has far-reaching implications for the understanding of the disposition and character of urban settlement, particularly in the early Roman period. The fact that the Ouse and Foss were both tidal rivers at this time can also be seen to have had hitherto unappreciated effects on settlement at York, effects compounded by the building-up of river frontages and the associated claiming of land within the rivers' floodplains for urban development.*

*A GIS-based programme of mapping, interpreting and modelling the archaeological evidence for the morphology of the river valleys, terraces, floodplains and channels is proposed, combining this with aspects of the archaeology of more recent periods in the city, with cartographic and documentary sources, and with observations derived from the modern topography, including remote-sensing data (notably LiDAR). This will allow the creation of a preliminary model of the morphology and development of the riverine landscape from the early Holocene into the 1st millennium AD.*

## 2.1 The site of York (Fig.2.D)

2.1.1 The general characteristics of the location of historic settlement at York have been described in 1.5.1-2, but more detailed consideration of the geology and topography of its site is necessary to set the scene for this chapter. Firstly it is important to note, though infrequently observed, that its main focus – the site of the Roman legionary fortress and civil town / *colonia* and subsequent stages of historic urban settlement – is located on a raised ‘plateau’ of glacial sands and clays *behind* (that is to the north of) and some 10 metres *lower* at its highest elevation than the ridge of the moraine to the south-west and south-east. This plateau, dissected from north-west to south-east by the valley of the river Ouse, is connected to the western arm of the moraine, c.500 m to the south-west of the historic core, by a low ridge along the line of what is now Blossom Street, and separated from the eastern arm of the moraine, c.750 m to the south-east, by what is now the valley of the river Foss and an area of level or only gradually-rising ground in the area of Walmgate and the adjacent Cattlemarket. On the north-eastern bank of the Ouse another low ridge of glacial sediments extends north-westwards along the line of Bootham for over 1 km, and a comparable ridge originally extended in the same direction on the south-west bank of the river, but was much reduced in the course of the construction of the present railway station in the 1870s. A tapering spur of land (on which the medieval castle and its keep, Clifford’s Tower, were constructed) extends south-eastwards from the plateau on the north-eastern bank of the Ouse, and separates that river from its tributary, the Foss, above the modern confluence of the two rivers some 600 m downstream from Ouse Bridge (Fig.2.A) The composition and origin of this plateau receives further consideration below.

## 2.2 The wider research context and rationale for study

2.2.1 The importance of riverine locations for the siting of historic urban settlements in Britain has long been commented on in terms of the very evident role played by rivers in pre-modern transportation and communications, and in this York is no exception. Rather less attention has been paid, in York and elsewhere, to;

their role in influencing the selection of the specific (urban) settlement *site(s)* on a particular stretch of river, and the extent and disposition of inhabited and built-up areas, especially with reference to the hydrology, dynamics and behaviour of rivers, their channel courses, their minor tributaries and the extents of their floodplains

(a related issue) the topography of the *surrounding riverine landscape* in determining selection of specific urban settlement sites

their potential role as boundaries between regions and polities and, consequently, as loci of interaction between the inhabitants of such regions and polities

the potential ‘ritual / votive’ significance of rivers, and their social meaning, and that of their landscapes, to communities in the ancient past, particularly in association with distinctive topographies at specific locations along their courses

Rogers (2013) has noted and critiqued the purely functional, utilitarian and economic characterization of the role of rivers in relation to Romano-British towns, and in Roman studies more generally.

2.2.2 Rivers were, of course, key factors in determining the locations of urban settlements throughout the 1<sup>st</sup> millennium AD, in York as elsewhere. Anglo-Saxon *wic* / emporia sites of the 7<sup>th</sup>-9<sup>th</sup> centuries, whose York example at Fishergate / Blue Bridge Lane / George St / Dixon Lane (see 8.5, 9.5.1, below)

parallels in several respects those at *Hamwic* (Southampton), *Lundenwic* (London) and Ipswich in England, and at a range of comparable sites in northern Europe and Scandinavia, were invariably located on tidal rivers and estuaries (cf. Hodges 1982; Hill & Cowie 2001). Similarly, most if not all urban settlements of the late Saxon kingdoms of southern England (Haslam 1984), and their Anglo-Scandinavian counterparts in the Danelaw were located on rivers which had been key to the original selection of their sites and were essential to their subsequent existence.

2.2.3 In this study, however, attention will be focused on the selection and adaptation of York's riverine site in the earliest centuries of its existence as an urban settlement, with the establishment of a legionary fortress and, subsequently, adjacent town in the Roman period. It was arguably at this early stage of its development that the rivers Ouse and Foss and their adjacent topography were most dramatically altered, in ways which were to have determining and enduring effects on their development and dynamics in later periods. The *post*-Roman development of the rivers in relation to the urban site, some of which will be considered here, were heavily influenced by the transformation of the rivers, and their landscape setting, wrought between the late-1<sup>st</sup> and early-5<sup>th</sup> centuries AD.

## 2.3 Previous study of York's rivers and their significance for historic urban settlement

2.3.1 The advantages of York's location at the intersection of the river Ouse with the land route provided by the elevated east-west moraine traversing the low-lying Vale of York for communication and transportation have been invoked as the primary reason for the establishment of a Roman legionary fortress there in the late -1<sup>st</sup> century AD, and for the subsequent continuation of urban settlement in the 1<sup>st</sup> millennium AD and beyond. Aside from such all-embracing generalisation, however, there has been little attempt to develop understanding of these issues in detail, with reference to the successive archaeological periods within the 1<sup>st</sup> millennium AD.

2.3.2 Less recognition has been and is given in the archaeological literature, even in very general terms, to the significance of the rivers in defining the *site*, *extent* and *disposition* of historic urban settlement at York. At the most obvious level, of course, the rivers divide and demarcate discrete areas of that settlement. Basic factors have been uniformly recognised and acknowledged; that two thousand years of settlement on the site has led to the infilling of significant areas of the valleys of both Ouse and Foss, rendering them far less obvious in the contemporary urban landscape than they would have been in the remote past, and that the present courses of both rivers, particularly the Ouse, have been narrowed and canalised by that very infilling, as land and settlement has extended into what had previously been broader, shallower channels over the past thousand years and more. But these broad statements have yet to be investigated and refined through detailed examination of the archaeological data available from the city, viewed and understood with reference to other sources of information which amplify and contextualise it.

2.3.3 The issue of river levels in the remote past, obviously a crucial influence on urban settlement at York, has frequently been alluded to in the city's archaeological literature (cf. Kenward *et al* 1978. 68-70; Hall & Kenward 2004, 409-10). Important studies of archaeological deposits in York such as *Archaeology and Development in York* (the 'Ove Arup Report' of 1990), a major component of which was the sub-surface mapping of those deposits. This strand of research was initially prompted by the excavation of flood sediments sealing a Roman road surface excavated at 58-9 Skeldergate in 1975, causing reconsideration of an influential paper by H.G. Ramm, which had suggested that the 'end of Roman York' might be explained as being a result of extensive flooding of the city over the 10 metre contour, a level of inundation which would have rendered large areas of the legionary fortress and colonia uninhabitable (Ramm 1971). Ramm had in turn taken his lead from an observation by George Benson in the early 20<sup>th</sup> century, to the effect that deposits of Viking Age date which he had observed

in the course of building construction on High Ousegate, to the north-east of the Roman legionary fortress and on the upper edge of the valley of the river Foss, represented 'warp' deposited by flooding. YAT's excavations in nearby Coppergate in the course of the 1970s established that the deposits Benson had seen were almost certainly layers of secondary dumped material, rather than *in situ* water-lain sediments (Hall 1978). Ramm's own identification of 'flood deposits' on the spur of land on which Clifford's Tower stands, which led to his proposing late-Roman flooding at a very high level (1971), can be critiqued in similar terms. In this instance, although his identification of sediments as water-lain may well be accurate, these layers are almost certainly early Holocene glacio-fluvial sediments. Ramm's proposal that the 'end of Roman York' was characterised, indeed caused by, extreme flood events more severe than the settlement had experienced in the 4<sup>th</sup> century and earlier may be discounted.

2.3.4 This is not to say, of course, that the floodplains of the Ouse and Foss were not subject to inundation in the course of the Roman period. That they in fact were, in all likelihood repeatedly, is demonstrated by the evidence from 58-9 Skeldergate, and more recently by a study of Roman and later flood sediments from an excavation near the south-west river front of the Ouse at North Street (Hudson-Edwards *et al* 1999), have addressed such issues, in the first case in very general terms, in the second at a particular site. But again there has been no systematic attempt to *model* the early riverine landscape or understand in detail the disposition of its landforms in terms of the morphology and extents of river valleys, terraces and floodplains. Such an approach requires as full an understanding as can be obtained of the morphology and development of the rivers from the late Pleistocene / early Holocene (c.11,000 – 10,000 BP) onwards, with the recognition that they represent a changing, *dynamic* system through time being crucial (cf. Brown 1997, 17-37). The closest any archaeological study to date has come to this is still arguably that contained in the first chapter of George Benson's study *York : from its origin to the end of the 11<sup>th</sup> century* – published in 1911.

2.3.5 Similarly, although it has been acknowledged in the archaeological literature of Roman York as long ago as 1962, with the publication of RCHM(E)'s volume *EBVRACVM* (specifically in its introduction by Sir Ian Richmond), which gathered together for the first time all of the information then known about Roman York, that the river Ouse, and by extension its tributary the Foss, were *tidal* rivers, it is only relatively recently (Briden 1998) the full significance of this in terms of the dynamics and use of the rivers in antiquity have been appreciated. This in turn has important implications both for the role of the Ouse river system in York's development as an urban settlement, and for the form, disposition and appearance of that settlement.

2.3.6 These issues – the tidal nature of the Ouse, and its level, particularly its (maximum) level *at high tide* – are clearly critical to understanding how the rivers affected both the functioning and form of York as an urban place, impacting on how the river would have functioned as a communications artery, and on the extent and disposition of land available for settlement and the construction of urban infrastructure. The extension of the latter by land-reclamation and building out into the floodplains of the two rivers is one of the characteristic phenomena of the archaeology of York in the 1<sup>st</sup> millennium AD and beyond, affecting the nature and character of archaeological deposits which are important to discussion and research proposals in subsequent chapters; cf. 4.3.1 - 4.3.3.

## 2.4 The origins of the riverine landscape at York (Fig.2.D)

2.4.1 Perhaps the most significant and profound transition within the scope of this study is that from a *pre-urban* landscape to a settlement with urban characteristics inhabited by thousands of people – in the case of York the construction and occupation of the fortress of the Roman IX legion in AD 71. Understanding of the early riverine landscape is vital to this (see also Chapter 3); the more so because that landscape and the modifications to it made in the course of the Roman period were to have a profound influence on the disposition, extent and character of urban settlement at York throughout the

1<sup>st</sup> millennium AD. The degree to which the inhabitants of York sought to reshape it across the succeeding 1,600 years only serves to emphasise the fact.

2.4.2 The importance of the rivers and their valleys, terraces and floodplains to the origins and development of York as an urban settlement should not, and indeed cannot, be seen in isolation from the associated glacial and peri-glacial landforms which constituted their original landscape context. Some of traces of these can be recognised in the modern townscape, but many have been obscured or destroyed by subsequent urban development over almost two millennia, particularly but not exclusively in the past 200 years. Some of these are mapped in Benson's 1911 study, but remote sensing techniques which have become available to archaeologists in the 21<sup>st</sup> century – notably LiDAR (airborne Light Detection and Ranging) – have provided the means for far more nuanced recognition and understanding of the form and character of the landscape which underlies the city.

2.4.3 In conjunction with the riverine topography, these relict, destroyed or obscured landforms have important implications, notably for the character and disposition of 1<sup>st</sup>-millennium AD settlement on at York from AD 71, but also for the potential significance, as yet largely unconsidered, of the pre-urban site in later prehistory and possibly much earlier, perhaps extending as far back as the Mesolithic / early Holocene. The observations of Tilley (1994, 94-109) and Bradley (2000) on the significance and meaning of *natural* landscapes and their characteristics, unmodified by human construction or 'monumentalisation', to prehistoric communities are of relevance here.

2.4.4 To understand the closely reciprocal, dynamic relationship between York's rivers and the development of urban settlement on the site of the present city, it is therefore essential to situate study of the rivers within as full an understanding as possible of the original glacial and peri-glacial landforms which provided their setting, and had a determining influence on their development from the early Holocene onwards. This is an area of research which in York has barely begun, and which is still in its infancy even in British towns and cities where more attention has been devoted to it.

## **2.5 Approaches to understanding rivers in urban settings in the 1<sup>st</sup> millennium AD**

2.5.1 The level and 'behaviour' of the Ouse at York in antiquity will have been heavily influenced by the hydrology of the Ouse catchment upstream of the city, and by the tides of the Humber, whose influence would have been recognisable and significant (cf. Briden 1988). The exact magnitude of these effects will have been determined by a range of factors and variables – contemporary sea level, degree of run-off from the uplands feeding the Ouse catchment, degree of 'absorbency' of the Vale of York landscape both upstream and downstream of York itself in dampening flood and tidal impacts – for which we have at present very little or no detailed information, and which are certain to have varied through time (for example the 'late Roman marine transgression'; van de Noort 2004, 107). The Humber Wetlands Project survey of the Vale of York to the south of the city provides some baseline data (van de Noort and Ellis, 1999), but a much more broadly-based dataset would be required from the Vale in order to obtain a detailed picture of the early hydrology of the Ouse and its tributaries in this lowland tract. This is clearly beyond the scope of the research proposed here.

2.5.2 What *is* possible, however, is to model the riverine and adjacent landforms and environments of the urban site of York in antiquity, using available archaeological evidence in conjunction with cartographic sources and topographic observations pertaining to the medieval and modern city, and then to consider (albeit in general rather than in detail; the data required to attempt the latter is at present thin on the ground) how tidal variation and fluctuations in volume of flow would have impacted on the river valleys at York and on early urban landscapes there. Such modelling will in turn provide the basis for addressing other aspects of the interrelationships between rivers, riverine topography and

urban settlement. Examples from other higher-order Romano-British settlements may instructively be considered, some of which have been studied and analysed in these terms in more detail than has to date been the case for York.

2.5.3 Increasingly, the investigation of river courses, palaeochannels and floodplains within and adjacent to Romano-British urban settlements is indicating the degree to which these were interconnected, and the extent to which riverine landscapes were consciously and deliberately transformed by the creation of these towns. As Rogers, in collating archaeological evidence for these transformations from the major urban settlements (2013,18) argues, as well as their functional outcomes they would have had a social and ideational dimension which may have been as important, if not more so, than any intended practical effect, and that such impact would itself have been completely intentional.

2.5.4 Pre-eminent amongst the studies indicating these changes are those of London (*Londinium*) and Winchester (*Venta Belgarum*). In London, where the construction of the Jubilee Line Extension and a range of other projects provided opportunities for a full bio-stratigraphic study of the Thames and its tributaries under the modern conurbation, it has been possible to model in some detail of the prehistoric land surface across large areas of the city's contemporary 'footprint', to understand the development of this stretch of the Thames valley through the Holocene (Sidell et al 2000, espec. pp.103-24; idem. et al 2002, espec. pp.7-55). A less ambitious but still systematic programme was undertaken at Winchester to provide the beginnings of a detailed understanding of the relationship between the Romano-British urban settlement and its riverine landscape (Scobie *et al* 1991; Quaalmann 1993), and similar work has been carried out in the environs of the modern Brayford Pool, Lincoln, at the confluence of the rivers Witham and Till (Jones et al 2003, 16-17). At the other Romano-British urban sites mentioned in these paragraphs, understanding is still based largely on observations of the modern topography and river courses, which, as the examples cited previously indicate, may have changed dramatically in the intervening two millennia.

2.5.5 In some cases the effects of their rivers on the fortunes, viability and even very existence of Romano-British urban settlements are dramatic and obvious. At London the fall of the level of the river Thames (which must have been caused by a fall in sea level) c.AD 300 resulted in the moving of the tidal head of the river downstream, 'taking with it London's role as a natural harbour at the conjunction of up-river and coastal traffic within the road networks' (Milne 1993). Much closer to York, Brough-on-Humber (*Petuaria*) suffered from precisely the *reverse* effect; in the mid-/late-4<sup>th</sup> century, rising sea level breached the south-west corner of the walled enclosure of this enigmatic but in fundamental respects urban settlement, and the putative naval haven associated with it may have silted up (Wacher 1995, 401). At the site of the legionary fortress and civilian settlement at Chester (*Deva*), a site with institutional and geographical similarities to York in its early stages, the tidal river Dee in the reach of the Roman settlement was subject to severe silting throughout the medieval period, and this may have had effects in the Roman period as well (Mason 2001).

2.5.6 Comparable dynamics may have affected York on the tidal river Ouse, notwithstanding that it is (and was) very much further from the open sea than any of these three settlements. Aside from the hydrology and tidal dynamics of rivers affecting Romano-British towns, their original *selection* as urban sites, and the character of the rivers when they (or the forts and fortresses which were their military precursors) were established, display some recurring patterns. A number of these are shared with York, and brief comparison is of considerable interest and offers instructive parallels which are highly relevant to this chapter.

2.5.7 The site of the legionary fortress of *legio IX* at York (*Eburacum*), the foundation of which in AD 71 marked the beginning of the urban trajectory at this location, is sited on a low plateau between and immediately upstream of the confluence of the river Ouse and its tributary the Foss. Such a site is

markedly similar to that of three other Roman towns. At Gloucester, the Roman *colonia Nervia Glevensum*, founded in AD 96-8, lies immediately south of the Roman confluence of the river Severn and its tributary the Twyver, on the site of a legionary fortress of c.AD 67. This was, preceded by a fortress of c.AD 49 at Kingsholm, which was located on a low spur of ground *between* the confluence (Wacher 1995, 150 fig.66, p.153). Both positions are strikingly similar to that of the legionary fortress at York, between the Ouse and the Foss (ibid., fig.73, p.166) Similarly at Winchester, the civitas capital *Venta Belgarum*, founded c.AD 70, was partly built on a promontory defined by the river Itchen and a tributary watercourse (ibid. fig.131, p.292, flowing into the Itchen from the W. At Wroxeter the civitas capital *Virconium Cornoviorum* was built in the AD 90s on the site of the fortress of *legio XIV* of c.AD 60, built to the east of a southwards bend in the river Severn, on the spur of ground defined by the confluence with its tributary the Bell Brook, flowing into it from the east (ibid., fig.165, p.364). Unlike Gloucester and Wroxeter, though, the civil urban settlement at York was not built *over* the site of its fortress, but on the opposite bank of the major river (the Ouse) on which the original fortress was sited, as well as (probably) in the immediate environs of the fortress itself (Ottaway 1993, 69). Although not located on a river confluence, the sites of the Roman towns of St Albans (*Verulamium*, on the river Ver; Wacher 1995, fig.99, p.218) and Cirencester (*Corinium Dobunorum*, on the river Churn; ibid. fig.136, p.305), occupy riverine locations similar in detail to that of York; Cirencester is described as 'built in a position then favoured by Roman military engineers; on a low plateau connected with higher ground to the south and west, but overlooking lower, possibly marshy ground elsewhere (ibid., 29) a description which could be applied almost verbatim to the site of York. The sites of the Romano-British towns at Leicester and Exeter are also generically similar to that of the York legionary fortress, the latter also having been preceded by the fortress of *legio II*.

2.5.8 At Winchester, Canterbury *Kent (Durovernum Cantiacorum*, on the river Stour; ibid fig.88, p.192), and Lincoln *Lincs (Colonia [Domitiana] Lindensium*, on the river Witham; ibid fig.57, 134), the evidence of modern topography and/or excavation indicates that in the Roman period the rivers in question flowed across their floodplains in dual or multiple channels. Plans of the sites of Leicester *Leics (Ratae Corieltaavorum)* on the river Soar, and Exeter *Devon (Isca Dumnoniorum)* on the river Exe (ibid. fig.154, p.344; fig.151, p.366) seem at first sight to indicate that the same is true of these rivers in antiquity, but research by Rogers has indicated that in both these cases the multiple channels observed today may be attributed to alterations to these rivers' courses in medieval times (2013, 99; 102) Nevertheless, in all probability many if not most of the rivers on which Romano-British towns were situated would originally have been 'braided' watercourses, and the evidence collated by Rogers for the very extensive engineering undertaken in the Roman period to create entirely new rock-cut river channels at Winchester and Cirencester (ibid. 79; 59) indicates that the process of 'rationalising' rivers' courses began at a very early date. In the case of York, although the modern river Ouse is confined to a single channel, this channel is very evidently the creation of the medieval and post-medieval periods, and evidence accrued in the course of this assessment gives strong indications that the river encountered by the Roman *legio IX* in the late-1<sup>st</sup> century AD flowed in braided channels; exploring this, and its development and alteration over the succeeding nine centuries is one of the aims of the research proposed in this chapter.

2.5.9 At Winchester, Aldborough (*Isurium Brigantum*, on the river Ure; Wacher 1995, fig.179, p.404) Lincoln and Cirencester (ibid., fig.57, p.134; 305) it can be seen that the urban settlements were built out from higher ground into their respective rivers' floodplains, a substantial undertaking with major implications for the remodelling of their riverine landscapes, the hydrology and behaviour of the rivers, and the potential for the organic preservation of archaeological materials. Again, although this phenomenon has not previously been specifically identified at York, research undertaken as part of the assessment for this chapter makes it virtually certain that this was the case at *Eburacum* too, and the research proposed seeks to confirm and amplify this observation.

2.5.10 Finally, at Canterbury and Winchester, one of the channels of the main river on which the Romano-British towns are located flow *within* their walled circuits, whilst at Wroxeter the tributary Bell Brook flows within its walls, and at London the Walbrook (Wacher 1995, fig.88, p.192; fig.132, p.294; fig.165, p.364; fig.37, p.89). At Canterbury some 15 ha of ground on the north bank of the Great Stour are incorporated within the Roman walled area, whilst at Wroxeter c.18 ha of ground on the north bank of the Bell Brook are incorporated within the walled enclosure. Archaeological investigation in the vicinity of the intra-mural branch of the Stour at Canterbury and the upper reaches of the Walbrook in London seems to indicate that these watercourses became subject to flooding in the 3<sup>rd</sup> century, resulting in the abandonment of these areas of these towns (Rogers 2013, 214, who also notes the enclosure of what appear to have been marshlands within the town wall of London). With reference to York, these observations lend additional force to Ottaway's insistence that, whilst the Roman settlement on the south-west bank of the river Ouse is routinely referred to by archaeologists as 'the *colonia*', there is nothing to indicate, and no reason to assume, that the *colonia* was *restricted* to the south-west bank (Ottaway 1993, 69) – it may well have extended into the immediate environs of the legionary fortress on the north-east bank of the river.

2.5.11 The confluence of the rivers below Lincoln merits further consideration in the context of this discussion. In the Roman period the valley floor around what is now the Brayford Pool formed an area of river channels and marshes, subject to seasonal flooding between the gravel terraces. In the winter months the water would expand to occupy much of the valley floor, shrinking in summer to create a landscape of river channels, meres and pools', set amongst sand and gravel islands (Jones et al 2003, 16-17). 'the existence of an extensive area of water, and pools, and containing some sand islands, gave a very special character to the site of what was to become Lincoln.' (ibid., 25) Levels of water in this part of the valley the Roman period seem to have fluctuated, and this may have been linked to changing sea levels; east of the Witham Gap, the Iron Age and Romano-British coastline at high tide lay considerably inland of its present line. Lincoln may have been on a tidal inlet, which may also have parallels with York's situation.

2.5.12 The characteristics of Lincoln's Roman topography and riverscape have been deployed to emphasise a further dimension of the riverine locations of Romano-British urban settlements – their role as boundaries between regions and polities and, consequently, loci of interaction between the inhabitants of such regions and polities, and the potential 'ritual / votive' (i.e. ideological and, by extension, social) significance of the locale (Jones et al 2003, 25, 32-3, 52; Stocker 2003b). Whilst Rogers (2013, 29) has expressed scepticism about the role of rivers and wetlands as boundaries between tribal polities, his objections perhaps take insufficient account of the potential role of ('liminal' ?) boundary locations as intermittent, annual, perhaps seasonal, places of congregation and assembly, reflecting the existence and expression of differing degrees of social 'boundedness' at different geographical scales at different times – an issue which is argued in this chapter to be highly significant in understanding pre-Roman York. The approach to Roman Lincoln adopted by Jones and by Stocker builds on the work of Tilley (1994) and Bradley (2000) in emphasising that monumentality, or even substantial evidence for settlement, need not necessarily be expected at locations which were nevertheless of great significance to prehistoric, and subsequently Romano-British, communities. These dimensions of the sites and origins of Romano-British urban settlements may also be highly relevant to *Eburacum*, Roman York, and are considered and developed further in Chapter 3.

2.5.13 As a final comment, it should be reiterated that all of the issues discussed here in relation to the riverine dimensions of *Romano-British* urban sites also apply to the later centuries of the 1<sup>st</sup> millennium AD, and some aspects of these are discussed in connection with the research proposed for York. In York as in many other urban sites of the 1<sup>st</sup> millennium, however, it was Romano-British transformation of the comparatively unadulterated river channels, floodplains and river terraces present in the LpRIA and earlier prehistory which to a large extent determined river and riverside development

and hydrology in later centuries, and for this reason attention and detailed discussion of parallels has been focused on this period.

## **2.6 York : river development from the early Holocene to the Norman Conquest – research issues and questions** (Figs 2.A, 2.D-E, 2.J-M, 2.S)

In the process of the assessment of the potential for archaeological study of York's rivers and their landscape, a range of research issues and questions, some long-standing, others previously unconsidered, have become apparent. These may be briefly summarised as follows.

### *2.6.1 The formation and sedimentary character of the low plateau, dissected by the river Ouse, on which historic settlement at York is centred*

Whether this plateau at the confluence of the Ouse and Foss on which the historic settlement of the city was focused is a remnant of the moraine itself, isolated from the main ridge by peri-glacial erosion resulting from ice-melt, or is a geologically distinct formation – for example lacustrine sediments accumulating through 'ponding' in a melt-water lake underneath glacial ice behind the boulder-clay ridge – is at present unclear, as the geological sediments have not as yet been mapped in a sufficient level of detail using the information available from records of archaeological investigations and other ground interventions. The British Geological Survey (BGS)'s mapping at 1:50,000 appears to indicate the plateau deposits as variously morainic boulder-clay and sheets of outwash till, but frequent archaeological encounters with fine silts and clean clays in excavations on it may hint at other, lacustrine formation processes for these deposits.

### *2.6.2 The development of the riverine landscape through the Holocene*

The development of the river valleys, terraces, floodplains and channels of the rivers Ouse and Foss will have been a dynamic process (e.g. Monkhouse 1971, 135; 161-4), which in this specific instance began c.11,000 BP (c.9,000 BC). The interpretation of 'natural' sediments in York's river valleys should not assume the existence of 'a' river channel in the remote past, subsequently altered by medieval and post-medieval land-reclamation and encroachment. In all probability the river channels of the Ouse and Foss – and each river may in its earlier history have flowed in more than one channel contemporaneously – will have migrated across their respective floodplains throughout the Holocene, until 'fixed' by the establishment of impermeable river frontages – a development which apparently commenced in the 2<sup>nd</sup> century AD and recurred at intervals over the succeeding 1,900 years. An additional consideration is the impact of fluctuating sea level on river level, tidal influence and landform creation at the site of York through the course of the Holocene. Observation of the modern landscape suggests that there may be evidence of earlier river terraces adjacent to the Ouse floodplain to the south of the city (most likely originating in later prehistory, perhaps after c.5,000 BP – Dr A.J.Howard, *pers comm.*), and evidence for late-Roman marine transgression is documented in the region (van de Noort 2004, 107). However, van de Noort's discussion of the inadequacies of current evidence for later Holocene sea level change in the lower Humber catchment, and the complexities of its interpretation (*ibid.*, 21-5), indicate the scale of the task, and it is clearly too big an issue to be addressed here. Nevertheless it is crucial to the creation and development of York's landscape in the course of the Holocene, and needs to be borne in mind in understanding that development. Conversely evidence from York, for example concerning the origins and date of river terraces alongside the Ouse and Foss, may offer information relevant to the understanding of later Holocene sea level change.

### 2.6.3 *The original landscape setting and context of York's rivers*

2.6.3.1 The riverine topography of York and its site in the 1<sup>st</sup> millennium AD and earlier needs to be considered and understood in relation to the glacial and peri-glacial landforms of its immediate landscape context. The glacial moraine is the most obvious of these. In the immediate environs of York's historic core the moraine rises to its highest points at Holgate Hill, overlooking Holgate Beck above its eastern bank, and Scarcroft Hill, above the western bank of the river Ouse. These hills, respectively c.1 km west and 1.5 kms south of the historic core, rise to a height of c.23 m aOD. To the east of Holgate Beck the Severus Hills, 2.5 kms distant from the centre of the city reach c.38 m aOD, and between these two Windmill Rise also attains a height of c.23 m aOD. East of the Ouse the moraine rises to c.30 m aOD at Siward's Howe, 2.5 kms south-east of the central area. From their various distances all of these eminences overlook the plateau astride the river Ouse on which 1<sup>st</sup>-millennium York was built. With the exception of Siward's Howe, topped by a large mound of uncertain but probably ancient date, records of earthworks or finds of pre-Conquest, Roman or prehistoric date are absent from these locations (although there are artefactual indications of richly-furnished Roman cemeteries around the feet of Holgate and Severus Hills; RCHM(E) 1962, 100; 106). Whether or not this apparent absence of evidence for ancient activity on them should be taken at face value, the potential significance of these summits (and indeed of the ridge of moraine from which they rise), overlooking as they do the plateau astride the Ouse on which historic settlement at York was established, should be held in mind with reference to the landscape setting of early urban settlement at York.

2.6.3.2 The high-points of the moraine to the south of the city are all – even though built over by 19<sup>th</sup>- and 20<sup>th</sup>-century housing – recognisable in York's suburban landscape today; and whilst the 2-3 storey (and higher) buildings of the modern city preclude their being visible from most of the central area of the city, they still afford panoramic views of that central area. By contrast, several other significant elements of the pre-modern Holocene landscape are far less obvious in the contemporary urban and suburban townscape, but their existence may be demonstrated or inferred through topographic or archaeological observations.

2.6.3.3 In 2008 extensive excavations to the east of Heslington village and the University of York main campus, some 3.5 kms south-east of the centre of York, uncovered a broad palaeochannel created by a watercourse which in later prehistory had flowed from north to south down the frontal slope of the moraine. When viewed in relation to LiDAR coverage of the moraine at this point, it became clear that the palaeochannel had drained an ovate depression in the top of the moraine, measuring c.300 m x c.175 m partly built over by a 1960s housing estate but with most of the area of the depression still open ground. Anecdotal evidence, as yet unverified, suggests that coring of this area of open ground within the past thirty years indicated a considerable depth of peat and other infill sediments. Although further investigation is required to fully understand this feature, the indications currently available seem to indicate that the large, oval depression represents a hollow in the surface of the moraine created during the ice-retreat of the early Holocene, forming a raised mere – perhaps a 'kettle-hole lake', formed by the melting of a massive block of glacial ice embedded in the till of the moraine – from which a watercourse subsequently flowed southwards. The chronology of the progressive infilling of this feature in the course of the Holocene must await further study, although it appears that the palaeochannel which flowed from it was active in later prehistory.

2.6.3.4 This suite of evidence, and the positing of a 'raised mere' at this point on the moraine, prompted the examination of the topography of the immediate environs of central York to see whether similar features might be recognisable elsewhere in this glaciated landscape. The largest and most obvious comparable feature is the Knavesmire (in the 15<sup>th</sup> century 'Knavesmere'; Benson 1911) now also dried up and the site for the past 250 years of York racecourse, horse-racing at this location perhaps having begun with races *around* the mere), although the size and level aOD of this feature (closer to that of the modern river level) may indicate a different post-glacial formation process to the mere on the moraine at Heslington. Knavesmire, 2 kms to the south of the city, features prominently in George Benson's

1911 study of the pre-Roman ('Brigantian') landscape of York and its environs (Benson 1911, fig.8; Fig.2.G), as do Askham Bogs, 2 kms south-west of the racecourse; over 100 years after its publication, Benson's work still represents the most comprehensive and insightful study of the pre-urban topography. Examination of his 1911 fig.8 (Fig.G), combined with the more detailed topographic information furnished by recent LiDAR coverage of the city, suggests further candidates for raised meres of early Holocene origin, to either side of the Blossom St ridge; in the areas of Scarcroft (between the medieval city walls and the moraine) to its south-east, extending over an area of c.350 m x 300 m, and in what was formerly Bishop Fields to its north-west, since the later 19<sup>th</sup> century the area of York's extensive railway marshalling yards, the suggested mere in this instance potentially extending over an area of c.1.2 km x 800 m. Benson also indicates the presence of a 'Campleshon Lake' on the ridge of moraine between Knavesmire and the river Ouse, represented on the 1853 Ordnance Survey map as 'Campleshon Pond', measuring c.250 m x c.100 m, whilst Raine (1955, 304) refers to there being a pond within Scarcroft 'now filled in', shown 'on the earliest ordnance map.. as being of considerable size'. It may be proposed that Campleshon Pond represents a raised mere similar to that suggested at Heslington, with the Scarcroft pond surviving into the 19<sup>th</sup> century perhaps being the last remnant of an originally much more extensive body of standing water, by that time silted up or deliberately infilled. A 1485 record of a bridge on 'Baggergate' – now Nunnery Lane – between the city walls and Scarcroft indicates that it oversailed a dyke draining the Scarcroft area into the river Ouse (ibid., 313).

2.6.3.5 The exceptionally large mere suggested as having originally occupied the site of Bishop Fields would have been bounded to the south by the moraine between Holgate Hill and the Severus Hills, and on its northern side by a ridge parallel to and overlooking the river Ouse (a major feature which was levelled when the existing railway station was built in the late 1870s), Holgate Beck would have flowed into this mere from Askham Bogs to the south, and out of it, into the river Ouse, towards its north-western end. There is every possibility that, at least at some point in its history, it also drained into the Ouse via a channel running in the valley parallel to Toft Green, within the medieval city walls, a location at which, in the 3<sup>rd</sup> century AD, a major Roman bath complex was constructed.

2.6.3.6 The evolution and history of these putative raised meres – at Campleshon Pond, Scarcroft and Bishop Fields – from their origins in the early Holocene to their having been completely infilled and invisible in the suburban townscape – is at present unknown, and would require a detailed and dedicated programme of research to establish. It is clear that those suggested at Scarcroft and Bishop Fields did not survive in anything more than extremely attenuated form to be recorded by early cartographers, and seem likely to have been much-reduced even by the time of the Norman Conquest. The case for their existence has been made here as they would have formed substantial and dramatic features of the prehistoric and early-historic topography of the environs of urban settlement at York, influential in the identification of the site of York as a significant location to its early urban (and, arguably, pre-urban – see Chapter 3, 3.6, below) communities, and major landscape features affecting, indeed determining, the disposition of settlement and land-use around the urban core across the 1<sup>st</sup> millennium AD.

2.6.3.7 This discussion naturally leads to consideration of whether similar raised meres may have been features of the pre-urban landscape beneath the historic core of urban settlement, namely on the plateau on which the Roman legionary fortress was built late in the 1<sup>st</sup> century AD. As most of this area is now sealed beneath up to 4 metres of archaeological deposits deriving from the better part of 2,000 years of urban occupation, demonstrating the existence of such features there is extremely difficult. There are, however, some intriguing hints. Borehole records from Spen Lane and Aldwark, immediately south-east of the Roman legionary fortress, which are included in the 1991 *York Development and Archaeology Study*, appear to indicate that glacial till in this area is first encountered at a depth some three metres below the level at which it is encountered in the surrounding area, possibly suggesting the existence of a natural depression similar in size to the one at Heslington. Excavations beneath York Minster in the late 1960s encountered water still flowing (as it does to this day) south-westwards towards

the river Ouse in a Roman culvert (Phillips 1985, 57); 100 m east of the Minster the street name 'Ogleforth', documented in the 12<sup>th</sup> century as 'Ugelsford' – 'owl's ford' or 'the ford of [the personal name] Ugel' related at that time to 'no stream or stretch of water that needed a ford' (Raine 1955, 49), but very likely refers to a watercourse which had once flowed north-eastwards towards the river Foss down the shallow valley in which (extra-mural) Monkgate runs. The evidence from beneath the Minster and from Ogleforth may indicate outflows from a raised mere located beneath the northern quadrant of the Roman legionary fortress, in a similar manner to that documented at Scarcroft on the south-west of the river Ouse, as rehearsed above.

2.6.3.8 LiDAR coverage of York hints at the former existence of several other large 'kettleholes' in the immediate northern, eastern and western environs of the historic central area, and it is possible that the courses of the valleys of the rivers Ouse and Foss were partly determined by the presence of such features forming 'weak points' where the rivers' erosive effects were most rapid. There are also hints of other peri-glacial landforms typical of the vicinity of frontal moraines, whose identification again involves localities named in medieval sources. In 1368 the first reference to the area to the south of Walmgate Bar (the gateway through the eastern defences of the city), between the river Foss and the rising ground of the eastern arm of the moraine, as 'the Bean Hills' occurs (Raine 1955, 298). The name usually seems to be taken to refer to an area where a specific type of horticulture took place; but it may be suggested that it in fact references the actual *morphology* of the hills in question, perhaps therefore indicating the presence here of a drumlin-field. The location on low-lying ground between the two arms of the moraine appears characteristic of such landforms (cf. Monkhouse 1971, fig.120, pp.242-3), which in this case, it must be assumed, would have been small mounds, a few metres long and high. No trace of such features now survive at this location in the modern townscape, but this would not be expected given the levelling of much of the area in 1826 for the construction of a new Cattlemarket.

2.6.3.9 This interpretation of the Holocene landscape of the environs of York as having been markedly lacustrine in character, with ridges, spurs and other landforms of peri-glacial sediment rising above raised meres as well as above the rivers Ouse and Foss, has been proposed by combining fragmentary archaeological, antiquarian and cartographic evidence with what can be recognised of York's underlying topography in the modern urban landscape. Self-evidently, it requires a great deal more detailed research to confirm and develop these suggestions. The fragmentary evidence which can at present be recognised is nevertheless important as it offers tantalising glimpses of a highly distinctive natural topography significant to the understanding of the pre-Roman landscape at York, the selection of the site for the location of the late 1<sup>st</sup>-century Roman legionary fortress, and the subsequent disposition and development of urban settlement in the course of the 1<sup>st</sup> millennium AD. The characteristics of this landscape acquire even greater interest when considered in conjunction with the evidence for forms of the actual valleys, floodplains and channels of the rivers Ouse and Foss themselves, before the establishment of urban settlement and in the course of its development.

#### 2.6.4 *The original (pre-Roman) form of the river valleys, channels and floodplains of the Ouse and Foss*

2.6.4.1 It is now axiomatic to the study of historic York that the high-water channels of the Ouse and Foss were significantly broader in the 1<sup>st</sup> millennium AD than is the case today; exactly how much broader is unclear, but consideration of archaeological evidence in conjunction with the modern topography of York has the potential to shed light on this issue. The modern river Ouse flows through the centre of the historic city in a channel c.50 m wide, with impermeable river frontages on both banks. In most areas these frontages are post-medieval, dating from the 19<sup>th</sup> and 20<sup>th</sup> centuries over much of the river's length, although on the north-eastern bank at least some of the river-walling is of late medieval date, with the blocked entrances to water lanes (whose origins lie in the 11<sup>th</sup>/12<sup>th</sup> centuries or even earlier) clearly visible. The modern channel of the river Foss was fixed by the construction of the 'Foss Navigation' in the late-18<sup>th</sup> century (Broadhead 1982, 85), which cut a regular channel of straight

stretches and sharp bends c.25 m wide across the then marshy ground through which the river in its previous form had meandered in at least two, probably shifting and varying, channels.

2.6.4.2 Both river courses as they exist today are very evidently late medieval and modern rationalisations of what had previously been much broader, shallower and more chaotic channels and floodplains. The Ouse, and by extension the Foss, were tidal until the construction of the locks at Naburn, some 6 kms downstream of the city, in 1757, and exposed to tidal influence the water level in these channels would have varied, often quite dramatically, on a daily basis. In this state the rivers need to be considered and visualised as having had high-water and low-water channels, the former extending across much of their floodplains, the latter, much narrower and lower in level, flowing through mud-flats on either bank, and possibly in multiple channels between strands of alluvium mid-stream. Stretches of original floodplain on both banks of the Ouse are now sealed beneath the modern river banks and the earlier deposits which underlie them. Although there has been little archaeological investigation of these, and where it has occurred it has been on a very limited scale in 'key-hole' investigations, enough information now exists to indicate the progressive extension of the built environment into the floodplain and river channel(s) from the Roman period onwards, in a manner similar to that now well-testified on the Thames at London, though, given the disparity in size between the Thames and the Ouse, on a markedly smaller scale.

2.6.4.3 The development of the riverine landscape of the Foss is extremely complex. Before the creation of the 'Foss Navigation', the river had flowed through mud-flats which had accumulated as the 'King's Fishpool', created in the 1080s by the damming of the river's course by the new Norman castle, on the site where the 13<sup>th</sup>-century Clifford's Tower now stands, close to its junction with the Ouse (Rollason 1998, 183; 217), progressively silted up over the course of the subsequent seven centuries. This damming of the river would also have sealed the Foss from the tide, and may also have affected the degree of tidal influence within the Ouse, perhaps raising the water level there by preventing its 'dissipation' up the Foss. Before the damming, the river appears to have meandered circuitously, probably in multiple channels, within a broad basin immediately to the east of the 'plateau' on the north-east bank of the Ouse, and on a course which differed markedly from that which exists today (2.6.4.12-16, below; Fig.2.E.i). At high tides this seems likely to have created a considerable expanse of water, not dissimilar to that which would have existed more permanently following the damming and the creation of the King's Fishpool. At low tides, like the Ouse, the Foss would have flowed through mud-flats in a much narrower channel or channels.

2.6.4.4 It has been noted that there has been comparatively little excavation close to York's rivers, certainly excavation which has penetrated deeply enough to reach 1<sup>st</sup> millennium horizons. Whilst the very large excavations in the Foss valley at 16-22 Coppergate between 1976 and 1981, and at Hungate between 2005 and 2010 were respectively sited on (what appears to be) a terrace above the river and on the edge of its floodplain, at no point in either were river channels actually encountered in controlled excavation. Nevertheless, from the number of small excavations which have been undertaken in both river valleys over the past forty years or more, combined with evidence from boreholes and consideration of the modern topography, some observations may be made which are important for understanding the rivers and their landscape in the 1<sup>st</sup> millennium AD.

2.6.4.5 Considering the Ouse first, evidence from excavations at Wellington Row, 24-30 Tanner Row, 1-9 Micklegate, and boreholing at the former NCP car park site on the corner of Skeldergate and Fetter Lane provides strong hints that an early palaeochannel of the Ouse lies beneath the lower, riverward stretch of Micklegate and continues beneath George Hudson Street and Rougier Street. The first suggestion of this is provided by the fact that the uppermost surface of the 'natural', pre-Roman fluvio-glacial sediments at the Tanner Row site is c.1 m *lower* than the equivalent surface at Wellington Row, even though the latter lies very close to the modern Ouse riverfront, and even closer to its Roman predecessor, whilst the Tanner Row site is c.100 m further away from it to the south-west. Borehole

data from further south-east along George Hudson Street appears to replicate this pattern. The evidence of boreholes from the Skeldergate / Fetter Lane site, combined with observations from excavations at 1-9 Micklegate, indicate the presence at this point of a channel extending north-westwards, away from the modern channel of the Ouse, and towards Micklegate (Hunter-Mann 1999). This last observation has been little remarked on to date, having been interpreted as simply an irregularity in the south-western riverbank. Combined with the observations from 24-30 Tanner Row and from Wellington Row, however, it may be seen as evidence of something of much greater significance – an original palaeochannel of the Ouse, which had originally been cut hard against the glacial sediments forming that part of the plateau to the south-west of the river. The northern limit of this palaeochannel would be anticipated to be in the vicinity of the south-western abutment of modern Lendal Bridge, a length of c.350 metres. Medieval street names in this vicinity may lend support to the suggestion. The area is, and was at least as early as the late-15<sup>th</sup> century, named 'Le Mote', later 'Tanner's Moat' (Raine 1955, 28), as its name suggests a location at which the noxious by-products of tanning were disposed of. The conventional explanation of this, of a moat or ditch adjacent, parallel to and *inside* the medieval city wall at this point, does not convince. A better one may well be that the 'moat' in question was the northern extremity of the palaeochannel argued for here, still present and visible in the townscape, and perhaps even partially active as late as the 15<sup>th</sup> century.

2.6.4.6 The suggestion is that in the course of the Holocene this palaeochannel and what is now the main channel of the Ouse flowed either side of an island within the floodplain at least c.350 m long and up to c.100 m wide. Whether the palaeochannel was still active by the LpRIA / early Roman period, had already silted up and been 'by-passed' by the main channel, or was seasonally active in response to high tides and /or heavy rainfall upstream is obviously unknown, and a question way beyond anything which evidence at present available can address. Evidence from 24-30 Tanner Row and Wellington Row is instructive. There, very wet ground with discernible narrow water courses, 'possibly.. boggy or liable to periodic inundation' (Hall & Kenward 1990, 327) was infilled with dumped material in the mid-/late-2<sup>nd</sup> century as a prelude to the construction of a suite of timber buildings on the site (Chapter 5, 5.3b.3). One of the earliest features at Wellington Row was what appears to have been a brushwood 'causeway' (Ottaway 1993, 39), running orthogonally to the river and adjacent to the site of the Roman bridge (the bridge seemingly also first constructed in the mid-/late-2<sup>nd</sup> century). Whether the suggested palaeochannel was actually active or not by the 1<sup>st</sup> century AD, the 'island' it created appears to have been an area of level, low-lying ground which would have provided an obvious crossing-point of the Ouse.

2.6.4.7 The immediate pre-Roman landscape on the south-west bank of the river Ouse might, then, be visualised as a quite steep transition from the plateau of glacial sediments to a floodplain c.8-10 m below it, with an active, seasonally-active or relict river channel hard against the low river-cliff, and a low-lying island up to c.100 m wide separating that channel from the main course of the Ouse. Across the river on the north-eastern bank, there are hints of a similar circumstance a little further downstream.

2.6.4.8 As a result of the effects of two millennia of urban development, the full width of the valley of the Ouse is now largely obscured. Reference has been made to the river-cliff on the south-western side of the valley, cut into by the suggested palaeochannel. The modern south-western river frontage lies some 150 m to the north-east of this river-cliff, separated from it by a sheet of alluvial sediment deposited on the inside of the meander of the river's main channel in the course of the Holocene, which in turn was cut through by the palaeochannel discussed above. On the north-eastern bank of the Ouse, however, on the outside of its meander, the main channel of the river ran hard against the plateau, cutting a river-cliff on that side of the floodplain which would have stood to a height of c.\*.\* m above the pre-urban river level and dropped steeply down to its main channel (cf. Ottaway 2011, fig.56, p.118). The upper edge of this river cliff appears to be only c.50 m behind the modern river frontage, running roughly parallel with and to the south-west of Coney Street.

2.6.4.9 Moving further downstream, the plateau on the north-eastern bank of the Ouse tails off into the narrow spur of land which separates the Ouse from its tributary the Foss, and on which York Castle was first built in the 1080s (2.1.1, above). The point at which this narrowing occurs is in the vicinity of Ousegate, Coppergate and Friargate and, on the river Ouse itself, at Ouse Bridge. Immediately downstream of the bridge, the north-eastern bank of the river, as King's Staith, deviates markedly from the gradual curve it follows on the bridge's upstream side. The modern river frontage downstream of Ouse Bridge is between 30 and 40 metres south-west of – that is into the present channel of the Ouse – than would be the case if it followed the projected line of the river bank upstream of the bridge. The effect is particularly evident when looking downstream over King's Staith from the north-eastern side of Ouse Bridge. Whilst it is possible that this is simply the result of relatively minor late- and post-medieval additions to the river frontage, evidence from boreholes recorded from properties on King Street, the lane running from King's Staith up towards Friargate, suggests that the original river cliff at this point may in fact have run along a line close to that inferred upstream of Ouse Bridge to the south-west of Coney Street, with an original river channel which extended well *behind*, that is to the north-east of, what is now King's Staith. Projecting this line further to the south-west would place the original north-eastern bank of the Ouse between Ouse Bridge and Castle Mills only *c.*20 m from the base of the motte on which Clifford's Tower stands, about 60 m north-east of the modern river front.

2.6.4.10 This interpretation has major implications for understanding several aspects of the river Ouse in this area in the 1<sup>st</sup> millennium AD. One possibility is that *all* of the land to the south-west of the projected line originally lay within the main channel of the river, and was subject to extensive progressive reclamation in the course of the 1<sup>st</sup> and 2<sup>nd</sup> millennia. Considered in the light of the situation on the opposite bank of the Ouse (2.6.4.5-7, above), however, perhaps a more likely circumstance is that, once again, in this stretch the early river flowed in at least *two* channels, with a long, thin island of fluvio-glacial sediment and/or river alluvium separating a main channel to the south-west from a subsidiary which flowed hard against the plateau and its south-easterly spur on the Ouse's north-eastern bank. The suggested island would have extended from the vicinity of Ouse Bridge to at least Castle Mills and St George's Field, a distance of *c.*450 m, and possibly as far as the present Blue Bridge, *c.*700 m from Ouse Bridge, and have been up to perhaps 60-70 m wide at its widest point; what were to become King's Staith and St George's Field would have formed part of this island. (It is notable that such an interpretation offers a degree of 'symmetry' in terms of giving the original valley of the Ouse a roughly equal width all the way through what became the centre of the historic city; Figs 2.D, 2.E). The subsidiary channel would then have been progressively infilled in the course of the later-1<sup>st</sup> and first half of the 2<sup>nd</sup> millennia, one very notable event in this process probably being the foundation of, and reclamation of land from the river for, the friary of the Franciscans, founded in 1243 (Raine 1955, 203).

2.6.4.11 This in turn leads to consideration of the early confluence of the rivers Ouse and Foss, which in its modern form is located at the Blue Bridge, at the southern extremity of modern St George's Field. The suggestion that St George's Field originally formed part of an island, with a subsidiary channel of the Ouse flowing to its north-east, would place the original confluence of the river Foss *with that* subsidiary channel (rather than with the *main* channel) very close to where the southernmost medieval wall of York Castle now stands. The processes of deposition and erosion of sediment at such a location would undoubtedly have been extremely complex, impacting on what would probably have been the near-continuously changing form of the southern end of the proposed island. These would have been further complicated by the damming of the river Foss and (presumably) the creation of run-off channels around this dam to its north-east in the late-11<sup>th</sup> century. Observation of deep excavations on St George's Field, undertaken in the course of construction of flood defences and a pumping station in 1992, revealed a sequence of water-lain sediments which appear consistent with an early channel having flowed 50 m or more to the north-east of the river Ouse today (Hunter-Mann 1992). The subsequent history of the proposed subsidiary channel of the Ouse would presumably have been very closely tied up with the development of York Castle, for which it would presumably have served as a

moat (*contra* many reconstructions which show a 'purpose-dug' moat on the south-western side of the castle), with the construction of the Franciscan friary from 1243 perhaps marking the decisive point in the history of the in-filling of the channel.

2.6.4.12 The river Foss saw, if anything, an even more complex history than the Ouse, its meandering course through the broad 'Foss basin' being staunched by its aforementioned damming and the consequent creation of the King's Fishpool within that basin. This in turn led to the accumulation of up to c.3 m of sediment beneath the placid waters of the pool over seven centuries, which both seals and provides an obstacle to investigating earlier riverine sediments. Between Castle Mills and the 19<sup>th</sup>-century bridge in Piccadilly, immediately south-east of the Merchant Adventurers' Hall, the Foss, like the Ouse, originally flowed in a river valley and high-water channel much wider – probably up to c.75 m, three times the river's present width – than is apparent today, where no suggestion of a valley is even recognisable in this stretch. North of this point its history becomes even more complex. Boreholing undertaken in association with the Coppergate development encountered depths of sediment which appear to indicate the presence of a palaeochannel extending the course of the Foss under modern Piccadilly on a more northerly alignment than is the case today, where the modern river bends sharply eastwards (Fig.5.E). Projecting the line of this palaeochannel extends it underneath the Merchant Adventurers' Hall, built in 1357-61, but now known through excavation to itself be built on top of the stone walls of a substantial building of probably 12<sup>th</sup>-century date (Hunter-Mann 1996, 5-11).

2.6.4.13 If this palaeochannel was still active in the 1<sup>st</sup> millennium AD, there was clearly a great deal of land reclamation and infilling of the Foss river valley and channel before the 12<sup>th</sup> century, resulting in the river's course having been moved tens of metres to the south. (The possibility again exists that there may have been an island mid-stream, as suggested for the Ouse, but there is presently no evidence on which to develop such a hypothesis). That this may in fact have been the case is suggested by the somewhat enigmatic remains excavated in 1951-2 beneath the Telephone Exchange in Garden Place, some 200 m north-east of the Merchant Adventurers' Hall. Here, a massive stone structure measuring c.7.0 m x 6.5 m, with walls of massive blocks of gritstone c.1.5 m thick was recorded adjacent to a line of piles set in a north-north-east / south-south-west aligned feature described labelled 'old river bed' (R.C.H.M.(E) 1962, 64, fig.52). The feature has been interpreted as the remains of a waterfront, evidently of Roman date.

2.6.4.14 The circumstances and records of this excavation make its interpretation difficult, but two points merit particular comment. Firstly its location is extremely close to the line of the Roman road as projected from the south-eastern gate of the Roman legionary fortress. Secondly, the massive blocks of gritstone and their configuration, as represented on the (rather gloomy and dispirited) engraving of the structure which is fig. 53 of *Ebvracvm* (ibid., 66), and on photographs of the excavation and the structure which came to light in the course of the recent Hungate project, are highly reminiscent of those found in excavations of the Roman bridge abutment and road ramp at *Corstopitum*, Corbridge, *Northumb.* in 2004. This close parallel, and the position of the structure so close to the projected line of the Roman road, surely indicates that the massive structure is also a bridge abutment, and that this is the point at which the Roman road was carried over the Foss by a major bridge. The feature with the line of piles in its base described as 'old river bed' is, however, on a north-south alignment which would seem to contradict all that is known of the probable alignment of a river bank in this locality. The explanation for this seems likely to be that the feature labelled 'old river bed' was actually created by the *robbing* of other massive blocks of gritstone which had formed part of the original structure (exactly as occurred at Corbridge, where stones were removed and transported in the later 7<sup>th</sup> century to build Bishop Wilfrid's crypt at Hexham, 6 kms down the river Tyne) and does not therefore represent a river channel at all. The presence of a Roman bridge abutment and road ramp does, however, indicate that the bank of the river Foss was very nearby, presumably immediately to the south. This is consistent with the proposition that the palaeochannel encountered at Piccadilly was live and active for at least the earlier part of the 1<sup>st</sup> millennium AD, and that consequently much of the medieval and modern land

around Fossgate, including the Merchant Adventurers' Hall and its 12<sup>th</sup>-century predecessor, comprises land infilled and reclaimed from the Foss before the 12<sup>th</sup> century, and the pushing of the course of the river to the south.

2.6.4.15 This early course of the Foss would, therefore, appear to have swung north-westwards to a much greater degree than is the case today, and flowed close to, indeed cut into, the south-eastern edge of the plateau. It also appears to have flowed much further to the south-east, again, hard against the edge of the Foss basin formed by the spur of fluvio-glacial sediments along whose spine medieval Walmgate runs. That this south-eastern meander of the early river channel extended beyond the line of the present Wormald's Cut is confirmed by the results of excavations behind 76-82 Walmgate in 1988, where apparently river-lain sediments and subsequent infill deposits were encountered, extending up to c.20 m south-eastwards of the equivalent edge of the Cut (Oakey 1988). This meander seems likely to have continued to flow close to the south-eastern edge of the Foss basin before curving northwards again. The absence of any Holocene alluvial sediments (other than possible 'overbank' deposits resulting from flood events) or river channels within the large excavations in the Hungate area, which reached 'natural' across almost the entire area of ground between Hungate itself and Dundas Street, an area of some 5,000 m<sup>2</sup>, is consistent with this interpretation.

2.6.4.16 The course of the river Foss in the 1<sup>st</sup> millennium AD thus appears to have been much more sinuous than came to be the case when the Foss Navigation was dug through the seven centuries of silt and mud which had accumulated beneath the surface of the King's Fishpool, and consequently to have extended over a much greater area of the Foss basin. Attention has already been drawn to the fact that throughout the 1<sup>st</sup> millennium AD the river would have been subject to tidal influence (2.3.5, above), with probability that at certain times of the day, season and year it would have presented an expanse of open water not dissimilar in appearance to the King's Fishpool of later times. This expanse would drain away with the turning of the tide to leave (in all probability) a straggling network of small channels, to be replenished and over-filled when the tide came in again.

2.6.4.17 Looking at the Ouse / Foss nexus as a whole, a few observations may usefully be reiterated. The rivers at the dawn of the 1<sup>st</sup> millennium AD were already the product of the better part of ten millennia of development, and rivers and their environs are always dynamic and active environments (2.3.4). The main channel of the early Ouse seems likely, as late as the first centuries of Roman occupation, to have been flanked by subsidiary channels which flowed, or had in the past flowed, hard against the river-cliffs on the north-eastern and south-western sides of its valley, around two large islands of fluvio-glacial and alluvial sediment, located close to the valley sides (2.6.4.5-11; Fig.2.E.i). A similar situation may have existed within the floodplain of the Foss, which certainly had a far more sinuous course than its modern successor, swinging from one side to the other of the broad Foss basin (2.6.4.12-16). The water level in both rivers would have risen and fallen with the tide, their floodplains by turn broad sheets of water at high tide, reduced to much narrower, probably multiple channels in both Ouse and Foss at the daily retreat of the sea (2.6.4.2).

2.6.5.1 There is at present no evidence to suggest that the natural courses and landforms of the two rivers and their environs were modified to any significant degree, if at all, before the Roman period. This is not to say that the locale was not of interest and significance to prehistoric communities in the region, and indeed it will be argued below that this very much was the case (Chapter 3, 3.6-7). There are strong indications, however, that within a century of its initial foundation, *Eboracum's* riverscape, at least along the river Ouse, had undergone a dramatic transformation.

2.6.5.2 'Keyhole' excavations at the North Street Pumping Station, c.20 m landward from the modern Ouse waterfront on its south-western bank, c.250 m downstream at Albion Wharf, 23-8 Skeldergate, and in one of YAT's earliest excavations, at 58-9 Skeldergate, inland of and on the other side of the street to Albion Wharf, testify to this. On the first two sites, at depths about eight metres below the

modern ground surface, c. 1.5 m aOD, evidence for a Roman waterfront was encountered (Finlayson 1993). At the North Street site this comprised large blocks of gritstone resting on timber piles, apparently part of a substantial river wall; at Albion Wharf a single substantial timber seems likely to have been part of the 'bracing' of dumped sediments infilling ground behind a similar structure (YAT archive report, 1990). In both cases these are c.20 m to the landward side of the modern waterfront, and a similar distance from the riverward sides of modern North Street and Skeldergate respectively. At 58-9 Skeldergate, on the landward side of the street, a deep, narrow trench c.25 m long and 2 m in width extended to the south-western edge of the modern street (Donaghey 1978, figs 3 & 4, pp.4-5). At this, the north-eastern end of the trench, a sequence of three cambered road surfaces of cobbles and sandy gravel up to c.5.7 m wide, their make-up layers and fine-grained sand and silt accumulations on their surfaces, c.700 mms thick in total and overlaying an apparently LpRIA soil horizon, was recorded about 3.2 m from its north-eastern limit. An extensive layer of apparently alluvial sediment (2397) extended riverwards on the sloping ground surface beyond the north-eastern edge of these road surfaces. The uppermost surface was in turn sealed by a deposit of dark, well-sorted soil up to c.800 mms thick. On top of this was a further series of four road surfaces, in this case of rubble and silt, without separate make-up layers or silt accumulations on their surfaces, but supported on widely-spaced timber piles. These road surfaces survived to a maximum width of c.5.5 m and c.600 mms in thickness, were sited slightly further to the north-east of their predecessors, and extended to within one metre of the north-eastern end of the excavation (ibid., fig.5, facing p.5). It appears that only the north-eastern half of this sequence of road surfaces survives, that to the south-west having been robbed away, and that its original width in its entirety, including its central drain, would have been c.8.0 m.

2.6.5.3 This sequence is of great interest to the issue of the creation of a stone waterfront along the south-west bank of the Ouse indicated by the evidence from North Street and from Albion Wharf, 23-8 Skeldergate, immediately opposite 58-9, on the other side of the modern street. Flood sediments had accumulated on the first road surface (ibid., 9), and after two secondary re-surfacings, which were in turn overlain by alluvium, an extensive dump of soil raised the ground level for the laying of a new road surface, itself subsequently re-laid twice. These surfaces were bounded on their riverward side by what the excavator describes as a 'substantial...revetment wall' (ibid., 11). This 'wall' in fact survived as two blocks of stone on either side of a cut feature measuring c.600 mms wide by c.800 mms deep; it seems far more likely to mark the robbing-out of a roadside stone drain, similar to those found in excavations of the Roman road at 39-41 Coney Street, upstream on the opposite bank of the Ouse (Hall 1986). The interpretation of this feature as a 'river wall', or even a 'defensive wall' (Donaghey 1978, 11) cannot therefore be sustained. The issue of the presence or absence of a riverside wall to the north-east of these road surfaces is, however, highly pertinent to this discussion.

2.6.5.4 The excavation report draws attention to the considerable evidence for flooding of the earlier sequence of road surfaces, and offers the observation, very significant to this discussion, that these road surfaces were subject to periodic inundation, having run alongside a sloping riverbank with no consolidated river frontage (ibid., 9). By contrast the upper sequence of road surfaces, the lowest of which was raised on a layer of dumped material c.500 mms above its predecessors, display no such flood sediments, are much more solidly constructed, and appear to have shifted riverwards by c.1.5 m in comparison with their predecessors. Whilst the published interpretation requires modification in some of its detail, its drawing of a contrast between an early road evidently prone to the periodic flooding of an 'open', sloping riverbank with a later, more solidly-constructed sequence of road surfaces seemingly laid as part of a consolidation of the riverbank behind a stone wall is persuasive. The major difference in the interpretation proposed here is that the actual riverside wall seems likely to have been located some metres *beyond* the area excavated at 58-9 Skeldergate, beneath or on the other, riverward side of the medieval and modern street.

2.6.5.5 This returns attention to the evidence for a Roman river frontage at Albion Wharf, 23-8 Skeldergate, directly opposite 58-9 on the riverward side of the street. This was encountered (in an

excavation undertaken in 1989) at a depth of almost 9.0 m below modern ground level in a 3 m x 3m excavation, narrowed at that depth to c.2 m x 1 m, located c.25 m north-east of the north-eastern limit of the 58-9 Skeldergate trench. A single substantial timber, aligned broadly parallel to the modern river, is interpreted as a component of a Roman-period river frontage. It may have formed part of a timber 'bracing' of dumped deposits behind a stone river-front wall similar to that encountered further upstream in North Street, and its presence seems likely to indicate that such a wall was located only a little further to the north-east.

2.6.5.6 Roman pottery stratified in the road surfaces at 58-9 Skeldergate places the earliest of these in the mid- / late-2<sup>nd</sup> century, with its re-surfacings in the late-2<sup>nd</sup> and 3<sup>rd</sup>. The earliest of the later sequence of road surfaces also contained material dating from the 3<sup>rd</sup> century, the later roads which overlay it being dated to the 3<sup>rd</sup> and 4<sup>th</sup> centuries. This chronology fits well with the ceramic assemblage found in association with the Albion Wharf timber bracing, attributed to the early-3<sup>rd</sup> century (Monaghan 1997, 1127), suggesting that the later sequence of road surfaces at 58-9 Skeldergate, laid over a thick dumped deposit which sealed their predecessors, may well have been a part of the same re-modelling of the Ouse river front indicated by the evidence from nearby Albion Wharf. (Although it should also be noted that there are issues of deposition, formation process and assemblage status relating to riverside dumps which complicate such interpretations; Chapter 4, 4.3-7, below). Pottery associated with the robbed-out riverfront wall and adjacent large masonry blocks from the deep excavation at North Street dates from the late-2<sup>nd</sup> century (Finlayson 1993, 6), and the large-scale dumping of sediment at 24-30 Tanner Row is dated by pottery to the same period.

2.6.5.7 This dating evidence can comfortably be accommodated within a *terminus post quem* (TPQ) of the early-3<sup>rd</sup> century for an extensive re-modelling of the Ouse's south-western river bank. Whilst the tendency has been to take differences in the TPQs of structural developments in this area of York at face value, and suggest a sequence of separate, particularistic episodes (cf. Ottaway 1993, notably the mid-2<sup>nd</sup> century date for the construction of the Wellington Row Area 7 building; *ibid*; Monaghan 1997, 1109), these interpretations perhaps do not take sufficient account of the depositional issues surrounding the dating of ceramic assemblages referred to in the previous paragraph, and perhaps more importantly in this instance the potential impact of the *truncation* of ground levels in preparation for the construction of major buildings in furnishing a TPQ which pre-dates the actual episode of construction by some considerable margin.

2.6.5.8 The sequence from 58-9 Skeldergate has been rehearsed here in some detail as this 1973 excavation still offers some of the best evidence for the development of the Roman river frontage on the south-west bank of the Ouse which has been excavated to date. This evidence indicates a sloping 'open' riverbank in the LpRIA, where subsequent early Roman-period road surfaces were subject to periodic flooding until the late-2<sup>nd</sup> or early-3<sup>rd</sup> century, when a major re-modelling of the riverside zone involved the construction of more substantial road surfaces, apparently less prone to inundation, behind a consolidated frontage, probably a stone river wall. This is a sequence which has a resonance with the evidence from deep excavations further upstream. The landscape of a broad, wet floodplain against the south-western slope of the river valley, probably separated from that slope by a palaeochannel which may still have been active in the LpRIA and early-Roman period (2.6.4.5, above) was, it may be argued, transformed by the construction of a massive stone river wall which moved the south-west river frontage to a line c.60 m north-east of the edge of the river valley in the vicinity of 58-9 Skeldergate, and c.150 m north-east of it on North Street, in the process sealing off the floodplain from inundation, raising the ground level behind the new river wall by extensive dumping of sediment, and permanently 'de-activating' the palaeochannel. Such an operation might be estimated to reclaim c.80,000 m<sup>2</sup> of land. It seems highly likely that this would also have coincided with the construction of a stone bridge over the Ouse, and the laying (as at 58-9 Skeldergate) of more substantial road surfaces than had been the case previously (Ottaway 1993). This operation represented a massive transformation of the Roman urban landscape, and what had been the Ouse's floodplain, subject to frequent flooding, became, from

the early-3<sup>rd</sup> century, what was almost certainly the core area of the *colonia*, with masonry buildings constructed on a monumental scale (ibid.). The widespread occurrence of such major land-reclamation at Roman urban centres in riverine locations has been considered by Rogers (2013, 200-203).

2.6.5.9 In terms of understanding the development of the Roman riverfronts of the north-east bank of the Ouse and of the river Foss, at present there is even less evidence than the fragmentary information available for the south-west bank of the Ouse. However, the construction of an apparently substantial bridge over the Foss (2.6.4.13, above) speaks of a similar process to that proposed south-west of the Ouse, and several limited excavations around the eastern edge of the Foss basin in the Layerthorpe area (notably at the Adams Hydraulics site – Monaghan 1997, 1075 – and other nearby locations) indicates the massive dumping of early-3<sup>rd</sup> century kiln debris from nearby Ebor ware kilns (cf. 9.6a.2, below), suggesting consolidation and infilling of the river's environs in a manner comparable to that proposed south-west of the Ouse, and seemingly in the same period.

2.6.5.10 Returning to that area, one major episode of Roman re-modelling of the landscape which has been commented on for a long time is the evidence for the terracing of the plateau on the south side of the river valley (Carver 1978, 29; Roskams 1997). Again, this has been dated by pottery to the end of the 2<sup>nd</sup> century (Carver et al 1978, 38). Invoking the comments previously made about *TPQs*, it is proposed that this terracing formed part of the wider operation which included the construction of the river wall and the reclamation of a large area of land from the Ouse floodplain, further emphasising what a huge transformation of the landscape of *Eboracum* the early-3<sup>rd</sup> century must have seen. Rogers has argued (2013, 203) that such massive re-deposition may have had a ritual dimension, bringing such landscapes into 'the Roman aesthetic, and that 'this transformation of the landscape...was as monumental and as significant as the construction of buildings on top' (ibid., 20). This assertion seems to be stretching a point, and it might be more appropriate to say that such modifications were an integral and inseparable element of the construction of monumental architecture in riverine environments, as occurred at York.

2.6.5.11 As well as the reclamation of land for building the 'new *Eboracum*', the construction of new river frontages would have had a 'side-effect' on the hydrology of the Ouse, and perhaps also the Foss, which may in fact have been deliberate. Taking in such a huge area of the river's floodplain for building and creating a much narrower river channel would have created a significantly greater depth of water at high tide where the Ouse flowed through the urban settlement. This effect may perhaps have been intended, allowing as it would vessels of deeper draught to moor against the new quayside. It would also, however, potentially increase the damaging effects of flooding when the Ouse river system was fed by heavy rainfall and run-off, and would also have impacted on the hydrology of both the Ouse and Foss immediately upstream of their now much narrower river channels and consolidated river frontages.

## 2.6.6 *The confluence of the river Foss in the 1<sup>st</sup> millennium AD*

Related to the suggestions of the 'braiding' of the original river channel, there are strong indications that the present location of the confluence of the rivers Ouse and Foss (some 400 m downstream of the surviving curtain wall of York Castle), and the spit of land known as 'St George's Fields' which leads to it, are creations of the 2<sup>nd</sup> millennium AD, probably in part a result of the damming of the Foss in the late-11<sup>th</sup> century. It is likely that the original confluence of the rivers (at high tide, at least) was immediately to the south of the Castle's curtain wall and the short peninsula of elevated glacial sediments on which it stands.

2.6.7 Immediately to the east of the historic urban core, the valley of the river Foss opens out into a broad basin between Walmgate and Layerthorpe, measuring approximately, as far as the modern

landscape allows this to be determined, 500 m x 400 m. To the north-west, upstream of the point where it cuts through the low plateau, the Ouse valley opens out in similar fashion, broadening to extend over an area c.2.5 kms long by up to 800 m wide, incorporating the riverward part of the Museum Gardens, Clifton Long Reach, Clifton Ings and beyond to Rawcliffe Ings on the north-east bank, and Water End, Acomb Ings and Poppleton Ings on the south-west. In the context of a tidal river system such as the Ouse and Foss, the level of water in these basins would have risen and fallen on a daily basis. This seems likely to have been a significant aspect of the dynamics of this landscape for local and regional populations from earliest prehistory, occurring within the context of an already highly distinctive landscape. The constriction of the river channels and the consolidation of their banks with stone frontages within the urban area from the mid- 2<sup>nd</sup> century onwards (see 2.6.5.2-9, above; Fig.2.E.ii) would have increased the magnitude of this diurnal rise and fall in water level within the basins, which would then have been ideal locations for the beaching of shallow-draught vessels, away from consolidated river frontages, and thus potentially of great potential significance for settlement in the post-Roman period. The locations of two of the three known early Anglian cremations cemeteries from York (Heworth and Severus Junction; Fig.2.D), perched respectively on river terraces immediately above the Foss and Ouse basins, may testify to a preference for such beaching (and settlement ?) sites. The parallel with the location of middle- (and now, with the evidence from St Martin-in-the-Fields, *early*-) Saxon London; (Vince 1990, 13-25; Malcolm et al 2003; Booth 2009; Burton 2007; Telfer 2008) is suggestive.

#### 2.6.8 16-22 Coppergate

The location of the 16-22 Coppergate excavations and adjacent sites (especially 22 Piccadilly) in relation to the floodplain and a possible Holocene river terrace in the Foss valley is vitally important in the interpretation of the site, Periods 1-3 (2<sup>nd</sup>-9<sup>th</sup> centuries AD) in particular, as this relationship has implications both for the nature of these earlier periods of activity and the character of the sediments encountered in them, particularly in the 4<sup>th</sup>-9<sup>th</sup> centuries AD. To date, published discussions of the archaeology of this area, whilst mentioning the character and profile of the 'natural' there (e.g. Hall & Hunter-Mann 2002, 790; fig.470: Ottaway 2011, 201), have perhaps paid too little attention to the formal geomorphological characterisation and classification of landforms of the pre-urban topography, and understanding these in terms of geomorphological and fluvial formation processes which are widely recognised and understood by Quaternary geologists and geomorphologists. The basal, glacial or periglacial sediments encountered at 16-22 Coppergate appear to slope downwards to a more level profile at 22 Piccadilly, closer to the Foss, possibly indicating the presence of a river terrace there; this is a surface which in discussion has been referred to as a 'floodplain' (Hall & Hunter-Mann 2002, 681). The extreme complexity of the changing relationship between land and river in the 1<sup>st</sup> millennium admittedly makes this a very difficult areas to address with unavoidably fragmentary information – where river levels are rising for a variety of reasons, as has apparently occurred over the past two millennia, a feature which began as a raised terrace overlooking a river channel and its floodplain may in time become incorporated within that floodplain. All the more reason, therefore, to view the evidence from these sites with reference to a broader understanding of York's pre-urban morphology, invoking well-understood geomorphological processes and land-forms. Modelling the Holocene landscape *before* the establishment of urban settlement must surely be an essential platform for understanding subsequent developments, especially where the changing relationships between river channels, floodplains and river-valley profiles are as complex and dynamic as seems to have been the case in this part of York in the 1<sup>st</sup> millennium AD.

#### 2.6.9 *The damming of the river Foss and the creation of the 'King's Fishpool'*

The damming of the river Foss, sealing it from tidal influence and causing the creation of an extensive (permanent, not tidal) area of open water, the 'King's Fishpool' in the Foss basin to the east of the

historic urban core, is well-testified by both documentary sources (Rollason 1998, 183; 217) and archaeology. The Fishpool, which survived as an area of marsh and standing water until it was drained in the late-18<sup>th</sup> century, deposited 3-4 m of sediment within the Foss basin, encountered at a number of sites in Piccadilly and in the Hungate area, which forms a significant obstacle to direct archaeological investigation of the morphology of the river valley in the 1<sup>st</sup> millennium AD and earlier periods. Its creation through the damming of the Foss close to the castle must also have had significant effects on the still-tidal river Ouse, potentially increasing the level of high tides in the larger river, and being the probable context for the re-shaping of the confluence of the two rivers into a recognisable precursor of its present form (see 2.6.4.11, above).

## 2.7 The nature of the archaeological evidence

2.7.1 There is now a considerable quantity of archaeological evidence from the city which can elaborate and potentially transform our understanding of the rivers' importance in shaping York, both figuratively and literally, in the 1<sup>st</sup> millennium AD. The essential next step is clearly to collate comprehensively and in detail, and map across the city, the evidence of archaeology and Quaternary geology which bears on the proposed interpretative models of rivers and their associated landscapes through the Holocene – archaeologically, in this context, from the early Mesolithic to the Norman Conquest.

2.7.2 The archaeological evidence can be categorised as;

- observations, records and in a few instances sediment samples made or taken during the course of dedicated archaeological investigation, whether formal excavations or watching briefs
- observations drawn from ground interventions undertaken primarily for engineering purposes, in particular deep boreholes; in some cases the records of sediments obtained from these have been made with the involvement of archaeologists, in many cases they have not. The former allow more nuanced interpretation, but the latter also have information value, in relation to the Quaternary drift geology on which York is sited, and which, it has been argued, is highly significant in understanding the settlement's early urban form(s)

2.7.3 To achieve this successfully using this archaeological information requires the *modelling* of the rivers and their adjacent landscape across this period, considering the evidence of archaeology with reference to the modern urban topography, early cartographic sources dating from the 17<sup>th</sup> century onwards, and, in some particular instances, medieval and post-medieval documentary sources.

## 2.8 Proposed analyses

2.8.1 Examine stratigraphic evidence for the morphology of river valleys, terraces and floodplains, and of the adjacent Holocene fluvio-glacial landscape, from;

- excavations – using context / sediment descriptions, photographs, and plan and section data relating to slope angle and level AOD of the Holocene ground surface

and

- boreholes – these have limited and infrequent information to impart about the detailed configuration and chronology of archaeological strata, but contain significant potential for mapping the early Holocene morphology of the site of the historic urban settlement and its environs, and its interface with the earliest archaeological horizons, and identifying areas where

great depths of *modern* infill have transformed and obscured the original contours and form of the site of the historic urban settlement

2.8.2 In consultation with a Quaternary geologist, identify (where possible) the character of the geological sediments encountered in the excavation and borehole records, e.g. discriminating between till / boulder clay and sediments of lacustrine origin

2.8.3 by interpreting this data with reference to the wider (modern) topography of the historic urban settlement, 18<sup>th</sup>- /19<sup>th</sup>-century cartographic data, and in selected instances study of the later archaeology and documentary sources (e.g. Foss Bridge, Tanner's Moat), generate a model for the morphology of the Holocene river valleys and their environs, and for their development and change through to the end of the 1<sup>st</sup> millennium AD. Understanding of the very extensive late-18<sup>th</sup>- /19<sup>th</sup>-century impacts on the river valleys recognisable through archaeological excavation is significant here.

2.8.4 utilise a Geographical Information System (GIS) to integrate, manipulate and model these datasets.

## **2.10 Archival and management recommendations arising from Chapter 2**

2.10.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

2.10.2 Established protocols for the observation and recording of Holocene sediments in the city would very evidently be valuable in developing understanding of the morphology and topography of the pre-urban landscape of the site of York. These might include;

2.10.2.1 : the examination, where possible, of *in situ* glacial and peri-/post-glacial sediments by a Quaternary geologist

2.10.2.2 : the archaeological recording, and where possible observation by a Quaternary geologist, of the sediment cores obtained through engineering boreholes

2.10.2.3 : the dedicated photographic record of exposures of Holocene surfaces

2.10.2.4 : where possible, excavation *into* Holocene sediments to the maximum practicable depth to expose a profile for examination and recording photographically, and the creation of a digital archive of these photographic records

2.10.2.5 : there is a pressing need for the updating of this element of the deposit model created as part of *Archaeology and Development in York* (the 'Ove Arup Report') in 1990, and the active *modelling* of this data in terms of recognisable geomorphology and landforms

## Chapter 3 Later pre-Roman Iron Age settlement in the Vale of York; settlement, land-use and the origins of *Eboracum*

### Summary

*The earliest stages of incontrovertibly urban settlement in Britain, represented by the Roman towns of the later-1<sup>st</sup>- and 2<sup>nd</sup>-centuries AD, were set within the pre-existing landscapes of the Later pre-Roman Iron Age (LpRIA). In a number of cases, particularly in south-eastern Britain, it has been recognised that these early towns were located in close and deliberate relationship to the pre-Roman centres of power, communal interaction and exchange often termed 'oppida'. These, and the relationships between them and the early-Roman towns which succeeded them, have most often been discussed in terms of 'status' and 'prestige', with little consideration given to the human, subsistence and social dynamics through which these different categories of settlement interacted and were integrated.*

*The landscape of the late pre-Roman Iron Age (LpRIA) in the vicinity of York, whilst still little known compared to that of the upland areas to its east and west, and much less so than those of southern England, has been increasingly revealed over the past two decades and more by both aerial survey and ground-based fieldwork. The former has revealed quite extensive evidence for land enclosure (either LpRIA or Romano-British), and a number of settlements within a c. 15 km radius of the city have been excavated.*

*The locations of these LpRIA settlements in the Vale, in terms of their relationship to its low-relief topography and early Holocene drift geology, hints at their having been, at least in some phases of their occupation, seasonally-occupied locales functioning within a system of transhumant pastoralism, which encompassed the upland areas of the Yorkshire Wolds to the east and the lower Pennine foothills to the west, rather than permanently-inhabited settlements as has usually been assumed.*

*It is argued that the seasonal movement of livestock and communities into the Vale in the LpRIA would have been highly significant in integrating social groups from across the region, and that the topography of the Vale of York – specifically the ridges of glacial moraine which cross it from west to east – is likely to have made the site of York itself a vitally important location in this period. The absence of direct archaeological evidence for this is explained by the great depth of later strata overlying the pre-Roman fluvio-glacial topography on which the historic city is sited. This proposal has in turn major implications for the rationale, circumstances and impact of the construction of the Roman legionary fortress on the site in AD 71, and for the military and urban settlements which developed there over the subsequent c.350 years.*

*It is proposed to investigate this transhumant model through detailed recording and analysis of the substantial coarse pottery assemblages from the excavated LpRIA settlements of the Vale. This would allow identification of the movement of these ceramics between the Vale and its upland margins on the basis of their inclusions and petrological and compositional characteristics, and, as part of the same process, seek to refine the chronology, or at least sequence, of the different ceramic fabrics found on Vale of York sites. This model also raises important questions about the interpretation of variation in LpRIA ceramic fabrics, in terms of these fabrics being considered to represent the work of geographically and socially distinct groups of manufacturers, and, by extension, being expressions of different 'group identities', as is frequently stated or – more often – assumed.*

### 3.1. The later pre-Roman Iron Age : the regional research context (Fig.3.B)

3.1.1 At the regional level, the later pre-Roman Iron Age (c.400 BC – AD 50; henceforth LpRIA) of Yorkshire has a long history of research, and a substantial, increasing and increasingly understood corpus of archaeological evidence. The richness of the LpRIA archaeology of the Yorkshire Wolds to the east of the Vale of York is well attested, with numerous settlements, ditched field systems, trackways and ‘ladder settlements’ (often identified through aerial photography) attested. Major excavations of settlements have taken place, for example at Garton Slack and Wetwang Slack. The Wolds have produced numerous richly furnished inhumations of this period, including burials with carts / ‘chariots’, horses and swords within square-ditched barrows.

3.1.2 On the other side of the Vale, on the Magnesian limestone of the Pennine foothills to the west, the archaeology of the LpRIA is not at first appearance as rich as that of the Wolds, and is certainly less well-known nationally, but it is still extensive; ditched field systems and trackways, settlement sites, and recently the occasional cart / ‘chariot’ burial and square-ditched barrow are in evidence (Boyle, 2004).

3.1.3 The Vale of York itself, which separates – or perhaps more accurately *connects* – these two areas of fertile upland has, however, been far less thoroughly studied, and the archaeological remains of this period which have been found there are yet to match those found in the uplands to the east and west, although examples of all of the major types of monument seen in the uplands – with the exception, to date, of cart / ‘chariot’ burials – are in evidence there. Acknowledged evidence for LpRIA settlement beneath the historic core of the city of York is currently very sparse indeed – only a small number of sherds of possibly LpRIA pottery recovered from later contexts, and a handful of more or less ephemeral natural-cut features which have been tentatively attributed to this date. It should be recognised, however, that over most of the area of historic settlement the natural ground surface (fluvioglacial deposits) lies between 4.0 – 7.0 m below modern street level; consequently this level has only been reached at a few locations, in most cases only within very small exposures.

3.1.4 That this is the case is in large part due to the organisation of archaeological fieldwork development over the past century-and-a-half and the resulting development of distinct regional and – in this case, on the Wolds, the lower Pennines, the Vale of York and in York itself – *sub*-regional traditions of study, often with a lack of integration of the results of research in these areas. In the case of the Vale of York – where the comparative sparseness of visible monuments and surface artefacts has inhibited dedicated archaeological study in the past – any such tradition has been very limited outside the city. This has had the further effect of separating the study of the two upland areas from each other, with the Vale being an area in between, c. 40 kms across, which has rarely figured in discussion, due to the interconnected facts of lack of evidence and lack of a sustained research tradition.

### 3.2 The wider research context and rationale for study

3.2.1 Very extensive evidence for settlement and land organization in the LpRIA is evident from aerial reconnaissance and excavation across southern Britain, especially from the river valley terraces of major river systems such as the Thames and the Trent and lower upland slopes and plateaux such as the Cotswolds. In general terms, existing evidence from the Yorkshire Wolds and the magnesian limestone belt of the eastern foothills of the Pennines fits comfortably into the pattern recognizable further south. As well as settlement sites, much of the evidence relates to ditched enclosures / field systems and trackways. Overall, the descriptive and interpretative literature relating to this period is vast. Whilst the regional settlement and landscape archaeologies they describe and analyse share several common characteristics, the scale of research and increasing levels of detailed scrutiny are also revealing recognisable regional and local differences across and between different regions. The broad picture has typically been characterised as a pattern of dispersed settlements, whose inhabitants

were engaged in a mixed economy with differing regional emphases on arable agriculture and livestock husbandry.

3.2.2 As in the specific case of Yorkshire, commented on above, it may be argued that the extent and distribution of this research largely reflects the *visibility* of sites, artefacts and landscapes in these zones, from the air and on the ground. Overall, less attention has been paid to settlement patterns within the *floodplains* and associated low-lying relief of the large river basins (of which the Vale of York is an example), although this has begun to change, particularly with the realisation of the potential for the preservation of organic archaeological material beneath riverine and lacustrine sediments in such locations.

3.2.3 Discussion of Romano-British urban origins in relation to LpRIA settlement and society has focused on the siting of military installations and the foundation of towns on or adjacent to existing communal foci such as hillforts and *oppida*, and the implications this has for understanding relationships between indigenous Iron Age communities and Rome. Verulamium, Colchester, Canterbury, Chichester, Cirencester and Silchester are early Roman foundations all set within or adjacent to LpRIA landscapes of huge banks and ditches which have been identified as *oppida*; Leicester is another possible example, based on its name *Ratae Corieltavorum*. These sites are all located in the southern zone of Britain, with Leicester – where the presence of such an *oppidum* remains speculative – something of an outlier. Although *oppida* and the monumental banks and ditches which defined them are most often characterized, and understood and discussed, in terms of élite display and as venues for exchange and ‘trade’ between such élites, they seem at base to be gigantic super-enclosures and containment areas for *livestock*, whether or not their scale, in terms of massiveness and extent, greatly exceeds any practical requirements. This is an observation which has been made with reference to Bagendon, near Cirencester, but has been largely absent from wider discussion.

3.2.4 Gloucester, Exeter, Caistor-by-Norwich, Lincoln, Aldborough – and York – have not been identified as having such very large LpRIA predecessor settlement / monument complexes (although see the discussion below, 3.10.4, for a revised view of Lincoln). These all lie well outside the south-eastern ‘*oppidum zone*’. In these cases the default explanation for the location of an early Romano-British town may be summed up by Wachter’s description of these towns as being located at ‘sites chosen because they represented the greatest concentration of influential natives’ (1995, 337). Rogers, noting evidence from Gloucester and Lincoln, has observed that the presence of ‘watery places’ containing ‘ritual deposits’ may have been important in their selection as the sites of Roman towns (2013, 31), and by implication this is a factor which could have been significant at the other Romano-British towns listed here.

### **3.3 Drift geology, geomorphology and the locations and visibility of LpRIA settlement in the Vale of York**

3.3.1 The relative sparseness of archaeological evidence for LpRIA settlement and land organisation within the Vale of York has been noted, but the increasing rate of discovery of settlement sites (through excavation) and land organisation (through aerial reconnaissance) over the past twenty years is making it increasingly clear that this apparent sparseness is a function of visibility factors on the heterogeneous Quaternary drift geology of the Vale. This comprises lacustrine clays and silts which accumulated on the lakebed, and eventually infilled, the early Holocene Lake Humber (which had formed in front of a retreating glacier c.14,000 BP), with strands and sheets of sands and gravels deposited on the dried-up lakebed by glacial outwash, and in some areas dunes of blown sand, as well as the till of the glacial frontal moraines which extend from east to west across the Vale and take their names – York and Escrick – from the settlements now sited on them. In the modern landscape the moraines rise many

metres above the surrounding ground surface, with the ridges and sheets of sands and gravels and the dunes of blown sand having much lower elevations, but still typically rising slightly above the lacustrine silts and clays.

3.3.2 Archaeological evidence of all pre-medieval periods in the Vale is at present very largely, although not exclusively, restricted to the slightly elevated areas of sand and gravel outwash. It is unclear whether this is a real reflection of the distribution and disposition of LpRIA settlement and land-use – with these being restricted to the slightly elevated areas of sands and gravels in that period – or whether archaeological features and artefacts are simply less visible, both from the air and on the ground, in areas of lacustrine silts and clays or alluvium. This is a major outstanding question in understanding the archaeology of the Vale of York in all periods before the late medieval.

With the current state of knowledge, two scenarios therefore present themselves;

- that the relative sparseness of archaeological evidence for LpRIA (and indeed Romano-British) settlement and land-use from areas of lacustrine silts and clays within the Vale of York (compared to the surrounding uplands) is real
- that this distribution is primarily a function of *visibility*, and that the true extent of LpRIA settlement and land-use in the Vale is far greater than currently recognised.

3.3.3 In both cases, but particularly the latter, the introduction of *chronology* adds a whole new dimension to the discussion. The earliest permanent or semi-permanent habitation and land-organisation in the Vale might date from the earlier Iron Age, the Bronze Age or even the Neolithic. Evidence for these earlier periods in the Vale is at present restricted to sparse distributions of artefacts, although it is possible that some enclosures and land divisions recognised in excavation and through aerial reconnaissance may date from the earlier Iron Age or Bronze Age. Although detailed chronological information is all but absent, it may be hypothesised that in the course of the mid-/ late-Iron Age habitation and land organisation – including the introduction of ditched field systems – progressively extended across more and more of the slightly-elevated areas of sands and gravels. At this stage the lower-lying lacustrine silts and clays are likely to have comprised very wet ground for much of the year, and were probably subject to extensive inundation and flooding in winter. Subsequently, in the LpRIA or the Romano-British period, habitation sites and land organisation may have been extended onto these lower-lying lacustrine silts and clays, with interconnected field ditches serving to drain the wet ground.

3.3.4 At present we do not know whether the latter took place, on any scale, at all. If it did we have no evidence for its chronology. (There are suggestive indications of such a process in parts of the Vale, as at Elvington, c.5 kms south-east of York, but whether these field systems date as far back as the LpRIA and Romano-British period is unknown.) Similarly, there is as yet little direct environmental evidence available to confirm the ‘wetland’ hypothesis for the lacustrine silts and clays in these periods, or indeed to reconstruct the environments and character of habitation and land-use on the slightly elevated sands and gravels, though the known nature of the Vale landscape in the 18<sup>th</sup> and 19<sup>th</sup> centuries, with its extensive areas of fen and carr lends support to such a characterisation in earlier periods. If the Vale’s low-lying topography is accepted as being indicative of a wetland environment in antiquity, pastoral rather than arable land-use should probably be the preferred interpretation.

### **3.4 Archaeological evidence for LpRIA settlement within the Vale of York** (Figs 3.A, 3.B)

Having outlined the overall pattern of distribution of known LpRIA archaeology within the Vale of York, its characteristics can be considered in a little more detail.

#### *3.4.1 Aerial photography*

As noted previously, aerial photographic evidence from the Vale, as collated by English Heritage's National Mapping Programme for the Vale of York, completed in 1998, has identified a number of cropmark complexes showing the existence of a range of field boundaries and enclosures. The dates of these are for the most part unconfirmed, but they are usually described (by convention, and through parallels with other, better-studied areas of the region) as being 'Iron Age / Romano-British'. Within this broad c.800 year date-band further resolution is not usually offered. As has been noted, the currently-known distribution of these cropmark enclosures is almost wholly restricted to the areas of slightly-elevated sands and gravels. Whether this reflects their limits in antiquity, or simply the fact that cropmarks are more readily visible on sand and gravel subsoils than on silts and clays (as a result of both the mechanisms of cropmark formation and the pattern of modern land-use), is at present uncertain.

#### *3.4.2 Characteristics of excavated sites*

**3.4.2.1** Until the advent of PPG16-driven fieldwork and excavation in the early 1990s, very little was known of the archaeology of the Vale of York in *any* period in the city's environs and beyond, the only site of direct relevance to this chapter which had been excavated being the small LpRIA settlement and associated field system at Lingcroft Farm, Naburn, 4 kms to the south of York, investigated in the 1980s (Jones 1985).

**3.4.2.2** Subsequently, fieldwork undertaken in the context of PPG16 and succeeding planning guidance regulations has identified a number of LpRIA settlement sites in the Vale within a 15 km radius of York itself; Crankley Lane, Easingwold; Rawcliffe Moor; Mill House Farm, Kexby; Germany Beck, Fulford; Naburn Sewage Treatment Works; and most recently Heslington East (University of York Campus 3). It has already been noted that some sherds of pottery which may be of LpRIA date have been found as residual material in later contexts from a handful of sites in York itself, and a few slight features cut into the 'natural' or the original pre-Roman ground surface from a handful of sites within the city have been identified as possibly being of this date.

**3.4.2.3** The sites in the Vale of York beyond the city typically comprise groups of roundhouses and / or associated small pennannular, curvilinear, and occasionally rectilinear enclosures, defined by fences, palisades and in some cases ditches (almost certainly embanked, and possibly with fences atop the banks), often set within larger rectilinear ditched enclosures and fields. The most substantial component of the material assemblage from these sites is the coarse pottery, forms being typically simple jars and bowls. Artefacts, and particularly readily dateable artefacts, are rare, although most produce small assemblages, often with indications of metalworking (typically slag, crucible and mould or furnace fragments) on or near the settlement sites. Animal bone assemblages tend to be small with only a few fragments readily identifiable to species, and this remains the case even in the one case (Heslington East) where they comprise several thousand fragments. The small size of animal bone assemblages may be due to acidic soil conditions on the clay, silts and sands, but could also reflect an original absence of discard and deposition. The high degree of fragmentation of the assemblages which have survived might also be indicative of specific processing activities.

3.4.2.4 The excavated settlement sites are typically located at least partly on the slightly-raised sand and gravel ridges and sheets, but do in some cases extend onto the adjacent, lower-lying silts and clays (cf. Crankley Lane, Easingwold and Heslington East).

3.4.2.5 There is at present very little palaeoenvironmental evidence from the excavated sites, or from their surrounding landscape, to indicate, in detail or more generally, the vegetation and environmental setting of these settlements. It may be proposed with a measure of confidence, however, that in the low-lying Vale of York in the LpRIA their locations would have been on and adjacent to wet and marshy ground (extensive areas of carr and ings in the Vale were drained as recently as the 18<sup>th</sup> and 19<sup>th</sup> centuries), with the slightly-elevated, better-draining areas of sands and gravel being drier and more suitable for settlement and land enclosure (as witnessed, currently at least, by the distribution of cropmark enclosures in the Vale).

### 3.4.3 *Dating of sites and settlements*

3.4.3.1 At present, close dating of most of these sites is not possible – the coarse ceramics which they have produced are attributed to a broad period of c.500 years, from c.400 BC until the Roman Conquest. The ceramics belong to a broad LpRIA tradition recognised across Yorkshire, but there is considerable variability in detail, as would be expected within a broadly-defined regional tradition of hand-crafted artefacts.

3.4.3.2. The sequences from these sites may suggest that *roundhouses* – and therefore long-term habitation of these sites ? – occur latest in the sequence, and the bulk of the pottery may be associated with these latest phases ? At Easingwold, two C<sup>14</sup> dates place this latest phase within the span c.100 BC – c.AD 200, perhaps most likely in the first half of the 1<sup>st</sup> century AD; for purposes of discussion here, though, ‘LpRIA’ will refer to the broad 500-year period, as it is not possible to discriminate chronological sub-divisions of this period across the sites

## 3.5 **A model for the functioning of LpRIA settlements in the Vale** (Figs 3.B, 3.E-G)

3.5.1 Refining the chronology of sites and material within the (very) broad bracket of ‘c.400 BC – AD 100’ is clearly desirable, but seems likely to be a long drawn-out process involving programmes of radiometric dating of carbon, ceramics and perhaps sediments from sites excavated in the future. It is better at this stage to view the suite of broadly LpRIA sites and material as a group, and consider what the apparent character of these sites, and their locations and environmental and landscape contexts, might indicate about their social and economic interrelationships with one another and with the terrain and the wider region within which they were situated.

3.5.2 This approach may be contrasted with that taken in many previous studies of the archaeology of the LpRIA, which have usually restricted themselves to single environmental or topographic zones, usually – and understandably – where archaeological evidence has been found in the greatest quantity, which in turn has a determining effect (as in the case of Yorkshire) on the development of sub-regional research traditions. Knight’s 2007 summary of archaeological evidence from the Trent valley provides an example of a consideration of LpRIA settlement and land-use within a specified zone – in this instance river gravel terraces – presented with little reference to the adjacent floodplain and upland areas (Knight 2007, 191). Consequently the study does not seek to *model* the *dynamics* of land-use represented by these settlements, fields and trackways, beyond the statement that the increasing scale of enclosure may indicate an area being ‘in particular demand for increased grazing’ (214); although it

is noted that dispersed terrace-edge communities with juxtaposed arable land may have encircled a zone of communal pasture, as suggested at Stanton Harcourt in the Thames valley. Giles' study of the evidence of LpRIA settlement and land division on the Yorkshire Wolds (2010) does address how these elements of the landscape were used and inter-related, but again is circumscribed by the extent of the upland area.

3.5.3 Attempting to piece together the (still very fragmentary) information about the dating, siting and function of Iron Age settlement in the Vale of York purely from the handful of excavated sites would, inevitably, lead to a picture so hedged about with uncertainties and qualifications that it would further understanding little if at all. Rather, it is necessary to pull back and consider the wider picture – the setting of these sites within their contemporary Vale landscape, and their potential relationship to the more extensive settlement evidence available from the upland areas to the east and west. The approach taken will be to propose a *model* for the potential inter-relationship between settlement, population and land-use between these upland areas and the Vale.

3.5.4 The model is cast in very general terms; its point is not to offer a rigid framework for interpretation, but a means of framing research into the sites and assemblages which are currently available, and which might be anticipated from future work in the Vale. Its starting point is the general character of the LpRIA archaeology of the chalk Yorkshire Wolds and the magnesian limestone belt of the eastern Pennines. Sites in both areas provide extensive evidence in a variety of forms (but particularly in animal bone assemblages, with the calcareous soils of these areas being more conducive to its survival) for the rearing, husbandry and consumption of cattle and caprids. This, combined with the extensive evidence of enclosures and droeways derived from aerial reconnaissance, testifies to the significance of the rearing and consumption of livestock, especially cattle, to the food economies of LpRIA communities in the region. Also worth noting here is what are arguably the most dramatic feature of archaeology of the Yorkshire Wolds in the Iron Age; the richly-furnished burials, often within square-ditched barrows, which include amongst their burial accompaniments metalwork of the highest quality and, in a significant number of cases, wheeled-vehicles – carts or 'chariots'. Examples of these burial monuments, long known from the Wolds, have more recently been excavated on the magnesian limestone to the west of the Vale of York and, though presently in small numbers and lacking accompanying metalwork or wheeled vehicles, in the Vale itself.

3.5.5 It has been suggested that within the Vale the distribution of wet / marshy and comparatively dry ground will have largely reflected the geology and resultant low-relief topography of the Quaternary drift deposits. The fact that components of LpRIA settlement and land enclosure do extend *beyond* the margins of the slightly-elevated sands and gravels, or of the moraines, onto areas of lacustrine silt and clay, as at Crankley Lane, Easingwold and Heslington East, is readily acknowledged – this may be indicative of ground which in winter was waterlogged or submerged being enclosed during the drier summer months for the purpose of providing enclosed pasture for livestock at that time of year.

This model proposes – acknowledging that there is, at present, little in the way of direct supporting archaeological evidence – that the LpRIA settlements which are beginning to be recognised in the Vale of York, and the material culture, feature complexes and land enclosure associated with them, do not [necessarily] represent permanent habitation / settlement sites, but were in fact *seasonally* occupied locales. In this context, livestock herds (with cattle perhaps most likely to have been the dominant species) are seen as having been brought down from the adjacent upland areas in the summer months to graze on the rich pasture available there in this drier season.

3.5.6 It may thus be suggested that the LpRIA archaeology of the Vale of York should be understood in the context of the seasonal transhumance of massed herds of livestock – here the emphasis will be placed on cattle – from the uplands to the east and west into the Vale during the summer months, when the lower-lying parts of the Vale would have been relatively dry, exposing and making available extensive areas of pasture enriched by alluvial sediments. This would also have involved the movement

of at least some of the human populations from these areas with the cattle, and might have involved the larger part of any kin-group, tribe or other community or social grouping. Several of the curvilinear enclosing features encountered on the small number of excavated sites bear interpretation as relating to the corralling and penning of livestock, and similar features are also identifiable on some aerial photographs. These features are usually found on the edges of the slightly elevated sand and gravel areas, adjacent and extending into areas of lower-lying lacustrine silts and clays. Smaller annular and pennisular structures and enclosures which also feature on these sites may relate to human habitation or the enclosure and penning of stock; in some instances this distinction appears clear and evident, in others less so. Each summer return to the Vale would have seen the structures and enclosing features repaired and, where necessary, their layout adjusted to reflect changes in the disposition of wetland pasture and inundated ground, a process which would have occurred over varying timescales and which would explain the sequence of enclosures changing in size and shape at some excavated LpRIA sites in the Vale, as at Crankley Lane, Easingwold.

3.5.7 Introducing such dynamics into studies of LpRIA river valley and lowland landscapes, it may be noted that there appears to have been little if any consideration of the potential role of seasonal (summer) transhumant movements of livestock between uplands and river floodplains in structuring the land enclosure and settlement archaeology of the LpRIA. That transhumant practices occurred is acknowledged (cf. Cunliffe 1995, 212; Harding 2004, 38, 46), and the use of lowlands, as distinct from high uplands, in this respect in the LpRIA has been archaeologically testified in the coastal Gwent levels (Cunliffe 1995, 259; Rippon 1996, 22-4). But the practice appears never to have been introduced into discussion as a possible underlying dynamic for understanding archaeological evidence of land enclosure, settlement pattern, and artefact distributions, of the LpRIA and Romano-British periods. In contrast to this, and an extremely valuable parallel for this discussion, is Wrathmell's recent interpretation (2012, 86-9) of early medieval settlement, land organisation and animal husbandry practices on the Yorkshire Wolds and in the Vale of Pickering. Whilst discussed primarily with reference to sheep, this persuasive study indicates the potential significance of transhumant livestock movements in structuring organisation of settlement, exploitation of land and movement of people and goods, and the archaeological cognates of these.

3.5.8 This is also true of discussion of Romano-British urban origins. In an often highly judicious summary of the establishment of Roman towns in south-east England, for example, Burnham *et al* observe that '...the socio-political and religious roles of late Iron Age centres and Roman towns have often been neglected. In the socio-political sphere, considerable interests attaches to the function of earthworks, whether designed for defence, symbolic or legal definition, status, control of population movement, or protection of official features.' (2001, 70). What is striking here is that, in listing a number of options for the functions of LpRIA and early Romano-British earthworks, no reference is made to the potential (arguably *probable*) role of these earthworks in the control and corralling of *livestock* – albeit constructed on a monumental scale as a statement of power, hegemony and status. Although Rogers (2013, 185) does note that such a function has been suggested by Moore for the *oppidum* earthworks at Bagendon, above Cirencester, this dimension to such sites does not appear to have been entertained, still less developed and explored, over the past half-century.

3.5.9 This is in marked contrast to the interpretations of an earlier generation of researchers, who characterised northern Britain in the LpRIA and early Roman period as operating what they called a 'Stanwick-type' economy based on pastoralism, and named after the great earthworks at Stanwick in North Yorkshire, identified by Wheeler as being 'related to the necessity of rounding up and protecting cattle' (Piggott 1958, 14). The massive scale of the banks and ditches, and an emphasis on expressions of status, hierarchy and identity above overly-functional, 'economistic' explanations of these great earthwork complexes in more recent discussions of the period, has led to this perspective being discredited and seemingly all but abandoned, but it has much to recommend it; grandiose and disproportionate scale of construction for purposes of asserting status does not by any means preclude

origins in subsistence practice, or the continuation of such a basic function for these monuments; indeed, the assertion of status *through* monumental expressions of hegemony over fundamental resources is highly plausible and indeed probable.

3.5.10 This widespread 'writing out' of livestock (specifically cattle, in all probability) from characterisations of LpRIA society was followed in relation to northern as well as southern Britain. In the latter case this was due to increasing evidence for, and a belief in the pre-eminence of, arable cultivation as the basis of the LpRIA economy (*ibid.*). In the north it appears to have been a desire on the part of researchers in the region that it should not be seen as 'backward', either in the past or in the present, in relation to the south, leading to a strenuous emphasis on the evidence for, and widespread extent of, agrarian regimes in this period. This seems largely to have been the result of Piggott's seemingly disparaging reference – it was certainly received as such! – to 'footloose Celtic cowboys' (1958, 25) in LpRIA northern Britain, a statement which perhaps unsurprisingly prompted a defensive response from northern archaeologists. As a consequence, discussion of cattle-rearing in the region appears to have become almost taboo, unless quickly accompanied by reference to the equal or greater status of crop cultivation.

3.5.11 Such culturally-defensive responses do not provide a particularly sound basis for research, and in any case the 'pastoral / arable' divide is largely a false one. As Grant (2004, 377) has observed, 'an increased investment in raising [cattle] was vital to the expansion of cereal cultivation', presumably for purposes of plough-traction and manuring. Arable expansion would have required larger herds of livestock; cattle, their movement and enclosure must therefore have been as significant for the *oppida* of the south-east as for the – allegedly – more pastoral economies of the north and west. The transhumant movements involved can also provide a context and circumstance for much of the (regional and inter-regional) 'trade' – perhaps better-characterised as tribute-giving and -taking – and possibly also for the manufacture of *ceramics*, a seasonal activity for which summer production in low-lying wetlands has much to recommend it. Such a practice could have profound implications for the interpretation, and even basic classification, of LpRIA ceramic assemblages.

3.5.12 At a number of sites (e.g. Heslington East and Easingwold) the large-ish curvilinear enclosures and similarly curvilinear trackways give way to regularly rectilinear fields (particularly in evidence at Heslington East but also apparent at Crankley Lane, Easingwold) laid-out along ditched droveways. This has also been seen at other sites, where the later ditched field systems are interpreted as being of Roman date. This change in land organisation is seen at several of the LpRIA sites in the Vale excavated to date, but the *chronology* of the change may differ in each case. At Heslington East it seems very likely that this occurred before the 1<sup>st</sup> century AD, and possibly as early as the 4<sup>th</sup> century BC. At Easingwold this change seems most likely to have been a Romano-British development, given the C<sub>14</sub> dating of the latest phase of LpRIA activity to the first half of the 1<sup>st</sup>-century AD (see above, 3.4.3.2). The location of Heslington East on the raised moraine – drier and better-drained ground – may be relevant here).

3.5.13 Chronology apart, what do these changes in land organisation mean? The introduction of arable agriculture to the Vale? A change in the way stock was reared and managed, moving away from a system of long-distance transit to summer pasture? A combination of these two, the former a part of the latter? Obviously this broad interpretation of the 'economic' and social dynamics of the LpRIA in the Vale of York requires further substantiation and elaboration with reference to a larger body of evidence than currently exists – although direct indices of the seasonality which is central to the model proposed here may be hard to come by. Environmental evidence and the exposure and recording of particular sequences of enclosures in their entirety, or at least over wider areas than has currently been possible (Heslington East excepted) are particular priorities. Opportunities to pursue these aims are most likely to occur in the context of commercial, developer-funded archaeology, and these obviously cannot be readily predicted.

3.5.14 A regime of *seasonal transhumant pastoralism* is thus proposed for the Vale of York in the LpRIA. The transhumant model has important implications for the understanding and interpretation of the LpRIA settlements which have been excavated in the Vale of York over the past twenty years or so, and the ceramics from these sites, and from those on the uplands to the east and west of the Vale, offer a possible means to test, develop and refine it. In turn, it has implications for the manner in which LpRIA ceramics are interpreted, understood, and even classified, with wider ramifications for staples of interpretation of the late Iron Age in Britain such as ‘group identity’, and ‘trade’ between such alleged ‘groups’. Finally, it has implications for the origins of Romano-British settlement (in the form of the legionary fortress) at York itself – *Eboracum* – in the late-1<sup>st</sup> century AD, and for the manner in which geographically disparate late Iron Age communities in the north may have combined as ‘the Brigantes’ and the possible significance of the site of York as a focus for such combination. , This, an issue which may also be very relevant to other higher-order Roman settlements in Britain, will be discussed first.

### **3.6 Implications of the model for the site of York in the LpRIA and the siting of the Roman legionary fortress** (Figs 3.J, 3.K)

3.6.1 The model outlined above has implications not only for the way in which LpRIA settlement and land-use in the Vale of York is understood, but for the dynamics of pastoral / agrarian production, and of social organisation and aggregation, across much of what is now Yorkshire and perhaps even beyond.

3.6.2 The movement of livestock and their attendant communities (or parts thereof) into the lowland Vale in the summer months would not simply have been an aspect of the contemporary ‘pastoral economy’; it would also have provided a context within which geographically-separated communities / groups from the whole of the Ouse and Derwent catchments would have converged annually, at a specific time of year. This in turn has important potential implications for the circumstances and manner of group integration and identity across the region in the LpRIA, and for the *social* significance of the Vale landscape – and of particular localities within it – in this period. It also has considerable resonance with traditional, historically-driven narratives involving ideas such as the existence of a ‘Brigantian federation’ of communities or tribes under ‘Parisian hegemony’.

3.6.3 Study of the overall LpRIA ceramic assemblage from across the Yorkshire region does seem to indicate a broad, common substrate which might be indicative of a degree of social and cultural integration of population groups in the eastern (Wolds and North York Moors) central (Tees valley, Vale of Mowbray and Vale of York) and western (magnesian limestone belt / lower Pennines) (Evans 1995, 57, 65). Transhumant movement of livestock and people *into* the central lowlands for summer grazing, from both the eastern and western uplands, would in all probability have resulted in these groups meeting and assembling in the Vale of York at this time of year. Considering the topography of the Vale, the probable major routes from east and west down into the central lowland are clear – along the ridges of glacial terminal moraine which extend across it. The two arms of the larger of these moraines, separated by the channel of the river Ouse at its confluence with the Foss, meet in the centre of the Vale – at York itself.

3.6.4 These proposals regarding the seasonal transhumant movement of stock and people into the Vale of York in the LpRIA – an occasion for the meeting and gathering of groups otherwise dispersed across the uplands of the region – thus have dramatic implications for the role and significance of the site of York itself in prehistory. Reassessment of the pre-Roman topography of the site (2.6.4, above) suggests probable fording points across the Foss (from the eastern approaches – the Wolds and Howardian Hills / ?North York Moors) and across the Ouse (from the western approaches – the magnesian limestone belt and lower Pennines). At the point where they breach the moraine B both

rivers would have been tidal, with typically low water levels at low tide in summer. These fording points would have provided access to that (larger) part of the plateau of clays and sands to the north-east of the river Ouse on which the Roman fortress was built in the later 1<sup>st</sup> century AD. There is in fact direct evidence of the gathering of livestock on both riverbanks of the Ouse in the LpRIA or very early Roman period, although of course in itself this only confirms that such activity took place, not that the specific model proposed here need be correct. At 58-9 Skeldergate, on the south-west bank, palaeoenvironmental and pedological analysis of a soil horizon buried beneath the earliest Roman road surface (Chapter 2, 2.6.5.2, above) identified grassland prone to periodic flooding, the grass apparently cropped and the soil churned and manured by large, grazing livestock, possibly horses but more likely cattle (Hall *et al* 1980, 108-9). Although less well-preserved, sediment which formed the pre-Roman ground surface at 39-41 Coney Street (Kenward & Williams 1979, 76) displayed similar characteristics, and has also been interpreted as grassland under grazing (Hall *et al* 1980, 110-11). The earliest Roman horizons at 24-30 Tanner Row provided palaeoenvironmental indicators associated with herbivore dung, with the term 'rough grazing' recurrent in their interpretation (*ibid.* 326, 336). The presence of plant and insect assemblages characteristic of ruminant dung in Bronze Age riverine sediments at the early confluence of the rivers Ouse and Foss at St George's Field (Hunter-Mann 1994) indicate that such activity may have had a long history in the vicinity.

3.6.5 Acceptance of this interpretation transforms discussion about the rationale for the siting of the Roman legionary fortress at York at this specific location. This has traditionally been ascribed to strategic considerations relating to the contemporary politics (as rehearsed by classical authors) of central and northern Britain, and to military advantages in terms of the location itself and its support / supply in relation to the Roman military network to the south. By contrast, the model offered here would see the legionary fortress as constructed on the central, focal point at which populations otherwise dispersed across the uplands of the region would have congregated each summer – the *locus* at which these groups came together and at which kinship, mutual obligations, tribute giving and taking and other mechanisms and negotiations through which dispersed social groups were integrated and social cohesion affirmed would have taken place.

3.6.6.1 Thus the construction of a Roman legionary fortress at this site would have established in the most emphatic (and brutal ?) way imaginable control of the region – not just at a location with strategic and military advantages, but by 'nailing' the very location at which the dispersed LpRIA communities of the region came together each year to negotiate and reaffirm their relationships to one another as part of a larger social group / polity. The possibility, indeed strong likelihood, that such a location would have had ritual and ceremonial resonance would have made its tearing apart as a distinctive piece of landscape and topography (perhaps a 'sacred grove'; – *Eboracum*, 'the place of the yews' ?) and reconstitution as a massive ramparted-and-stockaded fortress even more traumatic for the populations of the region – the old order torn apart and new overlords incontestably in control.

3.6.6.2 This is an interpretation which echoes the observations of Stocker with reference to Lincoln (2003). It also invites brief consideration of the meaning of the place-name '*Eburacum*' / '*Eboracum*', and the bearing this may have on the discussion. Richmond (1962, xxix-xxx) notes that the element '*Ebur*' is cognate with Old Irish *ibhar* or *iubhar*, 'yew', and that in combination with *-acum* it may be rendered as 'the place of yews' or 'the field of Ebuos', a personal name derived from that species of tree. He also argues, however, that in Roman times a popular derivation for the name may have been 'the place of the boar'. Fellows-Jensen (1998, 226-7) rejects the 'boar' interpretation, but concurs with the *ibhar* / yew and *Ebuos* (a personal name which occurs on a Gaulish inscription) attributions. More specifically, she renders an original British name '*Eburacon*', argued to be the basis of '*Eboracum*' as 'a place abounding in \**Ebuo*', or as 'the property or estate of *Ebuos*'. These precise identifications may have some interesting implications for the matter under discussion here. Firstly, Fellows-Jensen notes that 'the exact meaning of \**Ebuo* cannot be determined', and notes that, as well as possibly being cognate with 'yew' in Old Irish, it could also be the equivalent of 'hog-weed' in Welsh, 'mountain ash' in German,

and 'black alder' in Breton. The last of these is particularly interesting, as the tree species most frequently represented, and apparently predominant, in the pollen and plant macrofossil record relating to the very earliest horizons of Roman York is alder.

3.6.6.3 Secondly, whilst her assumption appears to be that the name *Eburos*, derived from the plant or tree species \**Eburo* in 'the property or estate of –' is a human, corporeal landowner, there seems no reason why such a name should not in fact refer to a deity or 'spirit of the place' and its vegetation; it has been widely acknowledged that many such must have existed for which we have no, or in this suggested instance no *other*, record. Both of these observations are consonant with the suggestions proposed here.

3.6.6.4 Finally, Fellows-Jensen's observation (1998, 227) that 'in the Romano-British sources the name *Eburacum*, *Eboracum* would seem originally to have referred to the military fortress on the left [north-east] bank of the Ouse...the civilian settlement on the right bank...known as *Colonia Eboracensis*' may also hint at a distinct and special status for the site of the fortress and what had been there before it, even if ordinary contemporary usage identified both as *Eboracum*. The gist of the argument made here, however, obviates the need for there to have been 'a British **settlement** [italics MW] on the site'. Whilst 'the name itself points to a pre-Roman settlement (since if the site had not already had a name, the Romans would most likely have named it from one of the rivers flowing there, 'according to the common Roman practice'; *ibid.*), an explanation other than the presence of a substantial, permanent LpRIA settlement on the site has been suggested here.

3.6.7 There would, of course, also have been strong material advantages to this location for the siting of a legionary fortress. This line of argument began with the suggestion of the transhumant movement of stock between upland and lowland. The site of York in the LpRIA would, it has been argued, have been surrounded by low-lying summer pasture, including that along the river floodplains immediately adjacent to the plateau on which the fortress was to be sited, which previously would have fed and watered the herds of livestock brought down from the uplands. This same pattern of transhumant movement would now lead to the gates of the fortress, there to be expropriated by the Roman army in tribute and taxation, with cattle and other livestock providing the foodstuffs and raw materials (e.g. leather) which are so amply attested in the archaeological record of Roman York.

3.6.8 The obvious and immediate objection to this scenario is the present lack of very much evidence for LpRIA settlement beneath the fortress or elsewhere on the raised plateau to the north-east of the river Ouse. There is certainly no evidence at present, for example, of any major or monumental pre-Roman enclosure on the site. However, the area of the plateau, particularly within the fortress, which has been excavated to the level of the natural ground surface, c.4.0 m beneath modern pavement level, is an extremely small percentage (?<2%) of its total area. Only at 9 Blake Street, 12-18 Swinegate and York Minster Library have excavations reached the pre-Roman ground surface across areas of more than c.10m<sup>2</sup>; elsewhere that level has been reached in small 'keyhole' excavations at The Bedern, 39-41 Coney Street, 3 Little Stonegate and at several locations on and close to the walls of the legionary fortress. Some of these excavations have recorded natural-cut features which might be attributable to the LpRIA – the earliest features at 9 Blake Street (Hall 1997, fig.\*\* , p.\*\* ) are interpreted in the published report as early Roman, but the stratification and disposition of dateable artefacts within their fills would seem to allow the features themselves to be of LpRIA date, partly depending on how they are interpreted; Figs 3.K.i-ii – and at 3 Little Stonegate. The small size of these interventions, which combined have exposed less than c.500 m<sup>2</sup> of a fortress which extends over c.190,000 m<sup>2</sup>, sited on a raised plateau covering an area of c.270,000 m<sup>2</sup>, only serves to emphasise that pre-Roman land use on the plateau is at present unknown.

3.6.9 As noted earlier, a handful of slight structural traces, and small quantities of LpRIA-tradition pottery, have been found from excavations within the city. The small quantity of the latter may also reflect the infrequent penetration of excavations to the pre-Roman ground level, although it might also

be argued, given the quantity of LpRIA pottery from Heslington East, that in this case more such pottery would have been expected as residual finds in later contexts. This objection may in turn be countered by the observation that, at Heslington East, the overwhelming bulk of the LpRIA pottery from the site derived from a highly localised and restricted group of contexts and features which extended across an area of <50 m<sup>2</sup>, with the great majority of excavated features and deposits across a site c.75,000 m<sup>2</sup> in extent producing only very low densities of ceramics, or none at all. Given the very small percentage of the fortress and plateau which has seen *any* archaeological excavation, even of Roman and later deposits, the tiny quantity of LpRIA ceramics found as residual material in later contexts need not be an indicator of the level of pre-Roman activity on the plateau, or of material culture deposited there. In any case, the plateau area need not have seen domestic settlement and activity in order to have been a significant place in the landscape to LpRIA (and earlier ?) communities. Having stood proud from its surrounding, low-lying, wetland landscape to a far greater degree, or at least far more obviously, than is the case today, the site may not even have required enclosure or other forms of 'monumentalisation', being a landmark and *locus* defined by its topography and (possibly) land cover and vegetation (cf. Tilley 1994, Bradley 2000, cited above in 2.5.12) – for example a large clearing / glade in a grove of trees, a suggestion which of course returns discussion to the issue of the meaning(s) of the place-name *Eboracum* (3.6.6, above).

3.6.10 It remains possible, however, that a major pre-Roman enclosure *did* exist on this site, but has simply not as yet been encountered in excavation. As noted, the overall area of the plateau to the north-east of the river Ouse is about 270,000 m<sup>2</sup>. This is an area which could comfortably accommodate an enclosure the size of the late Iron Age hillfort at Danebury, *Hants*, one of the Neolithic henges at Thornborough, *N. Yorks*, or even the henge and stone circle of Avebury, *Wilts*. Study of the archaeological landscapes and monuments found at the confluence of the rivers Trent and Soar in Leicestershire, a location very much analogous to that of York, testifies to the potential social and ritual importance of such places.

### **3.7 Investigating the LpRIA on the site and in the environs of the later urban settlement at York**

3.7.1 Testing these interpretations through existing archaeological data is at present barely possible. The proposals for a regional significance for the site of the Roman legionary fortress in the LpRIA have a logic in terms of transhumant seasonal movement of livestock and people into the Vale, but direct evidence of LpRIA activity on that site and in its immediate environs which might help to confirm this will depend on future opportunities to excavate there.

3.7.2 How any pre-Roman activity relating to the site of York can be investigated archaeologically, short of extensive open-area excavation through c.4.0 m of important and complex later stratigraphy down to pre-Roman ground-level – a prospect which is, to say the least, unlikely in the foreseeable future – is very difficult to imagine. It seems likely to remain an interpretative proposal to be held in mind, considered and debated, rather than actively pursued through a dedicated archaeological programme, until some point in the remote future when archaeological prospection methods have advanced to a level not currently anticipated, or when archaeological research operates in organisational and financial circumstances very different to those which currently prevail. It has been outlined at some length here, however, as it clearly has immense implications for our understanding of the origins of the urban settlement at York, one of the most significant of all the transitions which this study seeks to investigate.

3.7.3 At present, actual or possible evidence for LpRIA settlement within and immediately adjacent to the York's historic core comprises a total of c.120 sherds of LpRIA-type pottery (Monaghan's fabric group N; '... a nebulous grouping of handmade vessel fabrics with either non-Roman or non-local characteristics' – 1997, 886), with a scatter of c.180 LpRIA sherds from areas which now form the

suburbs of the modern city, multiple sherds having been recorded from the areas of Fulford, Holgate, and Wigginton Road subsequent to the publication of Monaghan's corpus in 1997. How the fabrics of Monaghan's group N relate to those of the pottery found at sites such as Heslington East, Rawcliffe Moor and Crankley Lane, Easingwold is currently uncertain, and it is clear that the central and suburban York finds should be examined in conjunction with the assemblages from these Vale of York sites. (Monaghan discusses his 'native wares' with the tacit assumption that, as they are found primarily in contexts dating to his Ceramic Periods (CPs) 1b and 2a – dating to between c.AD 100-160 – they were manufactured and used in this period, but it is clearly possible that these represent pre-Roman sherds subsequently incorporated in later deposits. Monaghan suggests that the major assemblage of fabric group N, from early-2<sup>nd</sup> century deposits at 9 Blake Street, were from vessels which 'had travelled up the east coast from south-east England or the Continent (*sic.*), citing parallels for two examples in the Low Countries, that most 'probably arrived via the movement of people or goods' and are 'unlikely to have been important, except perhaps on a very localised basis' (1997, 886). If it is hypothesised that the non-local component of group N in fact represent pre-Roman imports, retrieved in excavation as residual material in later contexts, such origins might suggest connections between the site of York in the LpRIA and the contemporary site at Redcliff, near Brough on the north shore of the Humber c.30 kms to the south, which it has been suggested was a port-of-trade at this date. The model for York in the LpRIA proposed in this chapter would certainly make the place a potential final destination for imports such as this, and provides a mechanism for the 'movement of people' suggested by Monaghan as the context for their arrival.

3.7.4 One aspect of the proposed significance of the site of York in the LpRIA which *might* be addressed in the context of this project overall is the morphology and hydrology of the pre-Roman land-surface – included within the scope of Chapter 2 – particularly as it relates to the location and environs of the legionary fortress. There are indications from Roman and later horizons in this area of springs, streams, and perhaps even a natural mere or meres like those proposed in other areas of the modern city (see 2.6.3.7, above), as well as, possibly, deep, man-made features on this plateau. But for the most part these can only be inferred from the disposition of later archaeological structures and strata and the behaviour of watercourses where these are encountered in later contexts, or from sharp localised variations in the depth below the modern ground surface of archaeological and post-glacial drift sediments indicated by boreholing. The research proposed in Chapter 2 may, however, provide more data which will allow these inferences to be investigated and expanded.

### 3.8 Regional LpRIA ceramics in relation to the 'transhumance' model

3.8.1 Returning to the wider suggestion of a transhumant pattern of settlement and land-use in the LpRIA Vale as a whole poses the question – how can *this* aspect of the model and its implications begin to be investigated archaeologically ? There are of course important questions which could and should be addressed, for example –

- the refinement and improved characterisation of the Vale landscape and environment in the LpRIA, looking at environmental data and the existence / extent of evidence for enclosure / settlement of this date *away* from the areas of slightly-elevated low-relief – does the equation of variations in quaternary geology with areas of dry and wet, marshy ground hold up ?
- are there indications of extension of permanent land-division and settlement into the lower-lying areas in the course of the LpRIA ?

– but achieving these will involve and require new fieldwork, whether dedicated research or within context of PPG 16 / PPS 5, and / or through dedicated research-driven fieldwork, perhaps enacted through community archaeology and outreach programmes.

3.8.2 In terms of the proposal that LpRIA land-use in the Vale of York primarily involved the grazing of livestock, the distribution of LpRIA quernstones in the region does appear biased towards upland areas to the east and west, with far fewer known from the Vale; but is this a real pattern or, once again, simply a function of archaeological visibility and discrepant intensity of fieldwork ?

3.8.3 The range of material culture from the excavated LpRIA sites from the Vale referred to above (3.4.2.2) is limited. The animal bone assemblages from them are typically small, and even where they are quite large (notably at Heslington East), research potential is limited due to the degree of fragmentation of the majority of the bones. (There are nevertheless some interesting basic parallels between the sites, notably the predominance of skull elements – mandibles and teeth; although this may simply reflect bone decay and deterioration in the Vale's soil environments, the possibility of this pattern, and the degree of fragmentation of the animal bones, being the result of cultural practice and / or specific aspects of the butchery and processing of the bones should not be ruled out).

3.8.4 But in the first instance the material most suited to the investigation of transhumant movements, because it both occurs in the greatest quantities and has the potential to be 'sourced', even if only in quite general terms, is LpRIA coarse pottery. It has been noted previously that this is the single major class of artefact from excavated LpRIA sites in the Vale. Such pottery is classified mainly by form (which are for the most part straightforward jar forms with some variations in body shape and rim profiles) and fabric inclusions. These are usually held to represent distinct regional or sub-regional 'cultural traditions', and are understood and interpreted as such – this has been discussed for east Yorkshire as part of a study of north-eastern England by Evans (1995).

3.8.5 Evans' study indicates that many of the main forms (predominantly jars with variant, but often generically similar rim-forms) are found in broad distributions across eastern Yorkshire from the Humber to the Tees and in the south-eastern Vale of York. The very limited number of sites within the central Vale which had been excavated at the time of Evans' survey mean that there is little to indicate the extent to which this pattern extends into the Vale. The only site to the west of the Vale included in the survey is at Dalton Parlours, on the Magnesian limestone above the valley of the river Wharfe. Evans' survey also maps the distribution of the use of calcite and dolerite as temper in these vessels, with calcite-temper dominating in eastern Yorkshire and dolerite-temper dominating in the Tees valley. However, information on the dominant temper is known from only nineteen of the 58 excavated sites included in the survey (Evans 1995, fig.5.2, p.49). No mention is made of quartz temper, whether vein quartz or quartz sand, though these figure strongly in assemblages from Heslington East and Easingwold, and are apparently also common in eastern Yorkshire, judging from Didsbury's classifications of Iron Age pottery from that area.

3.8.6 The proposed contextualisation of ceramics within seasonal transhumant movements of livestock and people from the surrounding uplands to the low-lying Vale of York has some interesting implications for the processes and organisation of ceramic production, the way it is usually understood and interpreted, and even the way in which these ceramics have been and are classified. In a wetland environment, clay dug in late spring / early summer can be readily kept moist, ready for the forming, drying and firing of pots in summer conditions and temperatures which favour the pre-firing drying of formed clay vessels. Extensive resources of dry underwood for fuel are also available. It may therefore be suggested that the manufacture of pots may have been an integral part of transhumant stock movements into the low-lying wetlands in summer, raising the question of whether a significant component of LpRIA ceramics found in this region were manufactured in the Vale in the summer, when livestock herds were grazing on the wetland summer pasture ?

3.8.7 Such an interpretation leads on to the question of whether the (explicit or tacit) interpretation of dolerite-, calcite-, and quartz-tempered LpRIA ceramics as representing distinct, if related, 'cultural

traditions', reflecting distinct and differentiated 'community identities', as is usually all but taken for granted, should be accepted? Or are these differences simply a function of ceramics having been made at different locations at different times of the year? – spring and autumn in the uplands, summer in the lowlands? – perhaps (even) by the **same** individuals as part of communities which were significantly more mobile in the context of transhumant movement of livestock than has previously been allowed? Certainly, basic vessel forms with only minor variations recur across the region (Evans 1995, although his study does not make any links between ceramic fabric variants and specific vessel forms). Might these not be better seen as a *common* cultural tradition across the region (Evans' 'basic substrate common to the region'; 1995, 57), with differences in temper the result of different locations of manufacture relating to a seasonal cycle of movement? Evans attempts to link such variation as there is in the regional ceramic assemblage to notions of a 'Brigantian core' on the magnesian limestone on the western side of the Vale, and a 'hegemony of the Parisi', ideas proposed by Higham (ibid.). In truth the ceramic evidence does not seem particularly well-suited to interpretation in these terms, as is in effect acknowledged by Evans with the phrase, '...whatever their political relationships, the 'core' area of the Brigantes.. has a ceramic tradition very close to and probably derived from that of the Parisi, but with some subtle differences'. The regional assemblage between the Humber and the Tees *is*, apparently, very different in character from that to the south of the Humber in Lincolnshire (ibid., 65).

3.8.8 What would have been the function and purpose of the carrying of ceramics vessels, in which jars are the hugely predominant form, in transhumant movements? Food preparation? Storage? Transportation? Would ceramics manufactured in the Vale be made in order to carry comestibles from there to the adjacent upland areas in the course of these movements? And vice-versa with the vessels using the tempers derived from those upland areas? These questions lead on to one of the most distinctive and widely-known characteristics of the LpRIA in Yorkshire, namely the 'chariot' or cart burials which have long been known from the Yorkshire Wolds and the eastern margins of the Vale of York, but which have now begun to be encountered on the magnesian limestone to the west of the Vale. This emphasis on wheeled vehicles in high-status burials of the LpRIA, a practice which extended into the early-Roman period seems to suggest strongly that personal mobility – and visibility amongst crowds of people and herds of livestock in transit? – featured prominently in the assertion and recognition of status in life and in death, as would be anticipated in circumstances in which transhumant movement was fundamental to social structure, organisation and cohesion across a very wide area, as well as an important aspect of subsistence practice.

### **3.9 Investigating LpRIA ceramic assemblages from the Vale of York in relation to the transhumance model**

3.9.1 Substantial assemblages of pottery have been recovered from Crankley Lane, Easingwold (c.1,500 sherds), Rawcliffe Moor (c.1,500 sherds) and Heslington East (c.2,000 sherds), with smaller assemblages, all <100 sherds, from the other sites referred to. Existing assessment reports from these excavations all acknowledge the generic similarity of these assemblages, and their broad dating to the period c.400 BC – AD 100, with the assessment of the Heslington East material laying emphasis on the 2<sup>nd</sup> / 3<sup>rd</sup> centuries BC. This very broad date-range obviously places limitations on the interpretation of both assemblages and sites. The beginnings of the basis for chronological refinement already exist – a large percentage of the pottery from Easingwold is from a well-sealed context from which organic material provided a C<sub>14</sub> date with a range of c.50 BC - AD 150, locating this material firmly within the very latest stage of the LpRIA; at Heslington East, organic detritus adhering to the ceramics themselves offers opportunities for C<sub>14</sub> dating, and it is anticipated that this will be undertaken as part of the post-excavation analysis of this developer-funded project. Additionally, thermoluminescence (TL) dating may also offer a method which can provide greater chronological resolution for these ceramics.

3.9.2 What is proposed here, however, is an approach based on more basic categorisation and analysis. This is necessary in order to investigate the transhumance model for the Vale of York in the LpRIA through the ceramic evidence, but would also establish a 'baseline' for the study of LpRIA pottery in the Vale, and address their relationships with the contemporary ceramics found in the adjacent uplands to the east and west.

3.9.3 Existing classifications of ceramic fabrics from the Vale of York sites discussed here (which in most cases have been based on very rapid assessments; the exceptions being Crankley Lane, Easingwold, and Heslington East, where assessment has been more thorough) have utilised very broad-brush categories, referring to four major inclusion-types – vein quartz, quartz sand, calcite and dolerite. This 'lumping' approach is in accord with the classifications routinely employed in the better-studied upland areas to the east and west of the Vale.

3.9.4 In the case of both Easingwold and Heslington East, however, these general groupings contain a much broader range of distinguishable fabric variants (22 initially identified in the case of Easingwold, c.30 at Heslington East), which involve discrimination on the basis of frequency of inclusions (based on rapid macro-inspection), the overall texture of the fabric, and distinctive 'firing signature' – e.g. oxidisation, reduction, and fabrics which combine the two in more- or less-coherent and consistent fashion. These variations have often been ignored in LpRIA ceramic analyses in the region (and beyond), tacitly written-off as being wholly random and without significant or meaningful information content worthy of analysis – for example the varying reducing or oxidising effects of clamp-kiln or bonfire firings. Whilst it is acknowledged that this may be true in a number of cases, it seems an unwarranted assumption that there is *no* meaningful, analytically-useful variation of this sort amongst these ceramic assemblages which could be identified and utilised, especially since previous studies in the region seem to have commenced with this assumption, and in consequence have not sought to observe and record such characteristics and look for patterning in their occurrence. The potential relevance, indeed importance, of taking firing colouration and surface finishing into account in the classification of coarse ceramics has certainly been implicitly recognised in the work of Rigby (1980, 47) and Evans (1985, 320, 369) on coarse pottery of Romano-British date (the 'calcite-gritted' tradition of east Yorkshire), and more explicitly by Whyman (2001, 278-80) with assemblages of the same type from York. Detailed ceramic variations may be the result of a range of factors, including clay source, the 'finishing' of vessels before firing, fuel, the particular method and technology of firing and the firing temperature which these result in. The processes of LpRIA ceramic manufacture include functional practices and cultural choices whose impact on the finished vessels might provide the basis for a much more nuanced understanding of the material, and in turn provide a route into patterns of manufacture and supply, perhaps leading to a more refined chronology, or at least sequencing, of ceramic fabrics and forms.

3.9.5 It is therefore proposed that a finer-grained classification of the ceramics from these Vale of York LpRIA sites be undertaken, based upon (but possibly further refining) those already established for Crankley Lane, Easingwold and Heslington East, and applying these to the other sites and finds mentioned, notably Rawcliffe Moor, but also from the other, smaller assemblages from the sites in the vicinity of York, and the fabrics recovered from sites in York's historic core which have been categorised as 'native' (Monaghan 1997, 886). This will involve the examination of a total of c.5,000 sherds of LpRIA coarse pottery.

3.9.6 Having created this more-detailed classification of the material, the following issues may then be addressed;

- are any of these more detailed fabric variants recognisable at more than one of the Vale of York LpRIA sites under discussion ?

- can any clustering of these ceramic variants on a given site – within individual contexts, within groups of closely-related contexts, or spatially – be recognised, which might suggest functional or chronological variation, or both ?
- is there any consistent relationship between specific fabric variants as defined in this more refined classification, and particular vessel forms ?

3.9.7 This process of more detailed classification of LpRIA ceramics from the Vale of York, and subsequent preliminary analysis in terms of the presence / absence of the resultant fabric variants on individual sites, stratigraphic and spatial clustering, and the occurrence of particular vessel forms in a particular or restricted range of fabric variants, can then provide a framework within which a programme of petrological and ICPS characterisation of ceramic fabrics may be proposed. The use of these techniques in coarse ceramics from later periods (see 9.3, below) has demonstrated their capacity to identify, based respectively on inclusions and the chemical composition of clay, probable areas of manufacture of ceramics, whether in broad terms (e.g. ‘within the Vale of York’) or, in some cases, to more specific localities, information which is clearly of considerable significance in understanding the LpRIA ceramics of the Vale.

3.9.8 The second interpretative issue, of particular relevance to the proposal of seasonal transhumant livestock movements, is that of the relationship of ceramic assemblages from LpRIA sites in the Vale of York with their equivalents from the Yorkshire Wolds to the east and the magnesian limestone belt and lower Pennines to the west. In broad terms;

- are LpRIA ceramics manufactured in these upland areas found on broadly contemporary Vale of York sites ? (this is known, or is at least extremely likely, to be the case for Wolds products, given that a significant component of the assemblage from Lingcroft Farm is calcite-tempered)
- conversely, are Vale-manufactured LpRIA ceramics found amongst assemblages in these upland areas ?

Evans’ 1995 overview of LpRIA pottery from north-east England does not include material from the central Vale of York, aside from the single site of Lingcroft Farm, Naburn – most of the Vale sites considered here had not been excavated when the article was written – and discusses the more distinctive calcite- and dolerite-tempered fabrics with only a brief passing reference to quartz-tempered fabrics (present in quantity at Lingcroft Farm), whether vein quartz or quartz sand. His distribution map of fabrics illustrates sites where dolerite- and calcite-tempered wares respectively are ‘predominant’, but the majority of sites in east Yorkshire and in the south-east of the Vale of York (mainly from the extensive fieldwork in the Foulness valley; Halkon & Millett 1999) are not classified as either; whether this indicates a predominance of quartz temper in these assemblages, or a ‘balance’ and consequent ‘non-predominance’ of either dolerite or calcite as temper in the ceramic assemblages is not made clear.

3.9.9 Petrological characterisation of LpRIA sherds from the site at Dalton Parlours in West Yorkshire (Buckland *et al* 1990), concluded that the majority of these ceramics ‘could’ have been manufactured within a ten-mile radius of the site (a radius which, incidentally, includes part of the Vale of York), but also pointed out that some of the vessels there seem likely to originate from the opposite side of the Vale of York (more correctly in this case, the Vale of Mowbray) at the western end of the Cleveland Hills; both of these observations are consistent with the transhumance model suggested here. The recent research agenda for Iron Age and Roman West Yorkshire (Chadwick 2009) notes the highly diverse origins of LpRIA ceramics recovered from excavations in this area (likely sources including the Vale of York, Vale of Pickering and Humberside, all suggested through petrological / ICPS analysis), and suggests transhumant movement as a possible mechanism for this patterning. (Transhumance is cited as an *alternative* mechanism to ‘kinship networks and alliances’; in fact it seems very probable, if

not certain, that transhumance, kinship networks and alliances would have been inextricably interconnected).

3.9.10 In the first instance, this expansion of the geographical scope of the ceramic research proposed above would involve an examination of published or archived reports to assess the possibilities and potential; but the obvious next step would be the direct comparison of the Vale of York fabric series with actual assemblages from these areas, and the extension of the programme of petrological / ICPS characterisation into assemblages from the upland areas to the east and west of the Vale.

### **3.10 Wider implications of this model for understanding the LpRIA – Romano-British transition in Yorkshire and beyond**

3.10.1 The potential implications of the ‘transhumance’ model of LpRIA settlement in the Vale of York for the late-1<sup>st</sup>-century foundation of the Roman legionary fortress at *Eboracum* and subsequent urban development there have been rehearsed in 3.6, above. The model also, of course, impacts on understanding of the LpRIA in the upland regions to the east and west of the Vale, in one particular instance especially. Discussion of the great *oppida* earthworks located close to the early Romano-British towns of southern England has proposed the view (unfashionable and seemingly largely ignored over the past few decades) that the primary purpose of their massive banks was the corralling and channelling of movement of large herds of livestock, primarily cattle (3.5.8-11, above). In the northern Pennines, apart from the massive banks and ditches of the enclosure at Stanwick, some 50 miles north-west of York, no earthworks equivalent to those of the southern *oppida* have been identified.

3.10.2 Looking at the immediate regional context of York, however, attention may be drawn to the complex of massive banks and ditches of Becca Banks, South Dyke and The Rein – collectively known as the ‘Aberford Dykes’, sited on the magnesian limestone c.11 miles west of York, either side of the village from which they take their name, and Grim’s Ditch, about 5 miles further west. Each over a mile long (in the case of Grim’s Ditch about 2½ miles), these earthworks have traditionally been attributed to the period of the post-Roman British kingdom of Elmet, the 5<sup>th</sup> and 6<sup>th</sup> centuries AD (Faull and Moorhouse 1982, 172-4). However, the most recent excavations undertaken on them appear to indicate a date or dates in the LpRIA for their construction (Roberts *et al* 2001, 284). Notwithstanding this revision of the date of the embankments, discussion has still focused on an allegedly defensive function (*ibid.*, 144-8). However, the scale and disposition of the earthworks across the landscape is markedly reminiscent of those of the oppidum earthworks at Bagendon and Ditches, on the Cotswolds above Cirencester (compare Roberts *et al* 2001, fig.141, p.270). Additionally, the Aberford Dyke system is located on the magnesian limestone immediately to the west of the western arm of the glacial terminal moraine which extends across the Vale of York, the feature which has been argued to have been one of the main routes for transhumant movement into the Vale in the LpRIA (3.6.3, above), some 6 miles from York itself.

3.10.3 Whilst acknowledging that the distance between the Aberford Dykes and York, at c.11 miles, is very significantly greater than that between Bagendon / Ditches and Cirencester (c.3 miles), it is proposed that the functional and social relationships between them in the LpRIA and early-Roman period was the same, and that in both instances large *oppidum* banks and ditch complexes in upland locations were sited in relation to lowland summer *foci* of the transhumant grazing of livestock. Rogers (2013, 185), refers to such a situation in relation to Cirencester, though without developing the scenario and its wider implications and applications. These wider implications and applications are exactly what is proposed here; that the purpose and function of massive *oppida* earthworks, recognising the expression of status and power inherent in their scale, was the corralling, control and channelling of livestock; that such control was both an expression and a fundamental basis of social power and hierarchy in the LpRIA; and that the relationship of *oppida*, frequently on upland or elevated ground

overlooking the lowland, riverine sites of early Romano-British towns, reflects the significance of the seasonal gathering of communities and their livestock at such locations, and the subsequent establishment of urban settlements there. The emphasis on cattle which was central to Wheeler's and Piggott's 1950s conception of the Iron Age is, in essence, correct, and the transhumant model proposed here offers an LpRIA social context for the siting of Romano-British towns and their close geographical association with *oppida* earthworks.

3.10.4 This explanation may, it is argued, be applied to *all* Romano-British towns (although there may be interesting contrasts to be drawn and explained between towns which are actually sited *within oppida* earthworks, (such as Canterbury and Silchester, and those built directly on riverine sites overlooked by such LpRIA earthwork complexes – as at *Verulamium* and Cirencester). The legionary fortress and subsequent urban settlement at York, with its proposed connection with an *oppidum* represented by the Aberford Dykes, falls into the latter category, and it is worth noting that, if the transhumance model for the LpRIA Vale and its adjacent uplands, and the implications drawn out from it, are correct, an earthwork complex similar to the Aberford Dykes might be anticipated on the opposite, *eastern* side of the Vale of York, where the glacial moraine extends from the elevated ground immediately west of the Yorkshire Wolds, perhaps in the vicinity of Stamford Bridge. To the west of the Pennines the legionary fortress at Chester, sited on a sandstone outcrop in the river Dee in the middle of the Cheshire plain, with the foothills of the Pennines to the east and those of the Welsh uplands to the west (Mason 2001), may reflect a location at a similar LpRIA focus for seasonal livestock movement to that proposed for York.

### 3.11 Proposed analyses

3.11.1 Close and detailed comparison of ceramic assemblages from Vale of York LpRIA sites; this needs to compare a range of aspects of the appearance and characteristics of the sherds, not simply very broad classification by distinctive temper and inclusions (quartz, calcite, dolerite etc) but also fabric hardness and texture, characteristics of firing, finishing and decoration, and forms represented in the different fabrics identified.

3.11.2 Comparison needs to be as comprehensive as possible, ideally viewing assemblages in the same location at the same time so that direct comparisons can be made; a detailed system of classification similar to that employed on the late-Roman coarse-wares at Wellington Row (see 7.4.3, below) may be appropriate.

3.11.3 This work should include the relatively small number of possible LpRIA sherds retrieved from later contexts in excavations within the York urban area.

3.11.4 In the case of the LpRIA settlements in the Vale beyond York, the stratigraphic and spatial distribution and stratigraphic associations of the different ceramic variants and forms thus identified should be investigated, to see whether fabric variation or other attributes can be used to discriminate them sequentially or chronologically.

3.11.5 In order to investigate the proposed transhumant model of LpRIA settlement in the Vale, this approach needs to be extended to include assemblages from the adjacent upland areas – the Yorkshire Wolds to the east and the lower Pennine foothills to the west, to investigate the similarities / differences between assemblages from these areas and the Vale – in particular the extent to which fabrics potentially originating in the Vale occur in the upland assemblages, and vice-versa.

3.11.6 The heterogeneous drift geology of the Vale, and the widespread presence of erratics within its glaciated terrain, obviously complicates the issue of the source / origin of ceramic fabrics, so petrological and ICPS study will be required to resolve, clarify and confirm these sources.

3.11.7 Direct investigation of the proposal that the site of York may have been an important seasonal focus for the entire region in the LpRIA is acutely problematic, due to the limited extent to which the earliest archaeological horizons and natural ground surface have been reached within the area of the historic urban core, particularly beneath and adjacent to the legionary fortress where it is proposed such a focus would have been sited. The work proposed in Chapter 2 for mapping the natural ground surface may however provide information about the original topography and morphology of this area relevant to this theme.

### **3.13 Archival and management recommendations arising from Chapter 3**

3.13.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

3.13.1.1 As this chapter has called into question the notion that ceramics found in different parts of the region employing different tempers were necessarily produced by members of separate, distinct communities, the classification schema employed for LpRIA pottery in the Vale of York and its upland margins (and in the north of England generally) should be less wholly focused on generic macro-inclusions ('quartz', 'dolerite', 'calcite' etc. – although these are clearly important), and should pay more systematic attention to firing characteristics and surface finishing.

3.13.1.2 As an adjunct of this, classification protocols should err on the side of 'splitting' rather than 'lumping', in order to facilitate possible spatial and chronological differentiation.

3.13.1.3 The more finely-grained fabric series derived from individual sites under such classification protocols should be compared *directly* (i.e. 'in the room' comparison) with those from other sites, to see which fabric characteristics 'map across' from one site to another, and within and between the broad fabric types based on inclusions.

## Chapter 4 Provisioning and supply of urban settlement at *Eboracum* from the late-1<sup>st</sup> to early-5<sup>th</sup> centuries AD

### Summary

*All urban settlements depend for their existence on provisioning and supply of essential foodstuffs to feed their populations. Fundamental to the recognition of regimes and patterning of supply archaeologically are ceramic, animal bone and palaeoenvironmental assemblages. Recent overviews have emphasised the importance and potential of understanding of the depositional processes and context of such assemblages – in particular the nature and degree of the functional and chronological association of assemblage with the deposition of the context which contained it – for their most accurate, nuanced and effective interpretation.*

*The provisioning and supply of food resources to the urban settlement at York between the late-1<sup>st</sup> and early-5<sup>th</sup> centuries was obviously essential to its very existence. This chapter seeks to combine the potential of animal bone assemblages to inform on the species, husbandry regimes and mechanisms involved in such provisioning, and that of pottery in providing evidence for sources of ceramic supply, and as an artefact-type dateable with varying degrees of precision.*

*More closely-integrated analysis of these two classes of artefact than is usually the case is therefore proposed. It is suggested that the bulk of ceramic output, the grey- / red- and coarse-ware component, and specifically the jar forms which dominate these assemblages, were manufactured primarily as containers for the transportation of foodstuffs, as an integral component of agrarian production rather than as commodities for sale in themselves. In Roman York the bulk of these wares were manufactured within a c.50 km radius of the urban site, and their study may inform more than is usually acknowledged about which areas within the region provided food resources to the fortress and town at different times within the Roman period (see also Chapter 9, 9.6a).*

*The large ceramic assemblages from Roman sequences in York, particularly from deeply-stratified sites within the floodplain of the Ouse where extensive dumping and ground-raising took place, are co-stratified with large quantities of animal bone. Roman pottery from across York has been attributed to four broadly-dated ‘Ceramic Periods’ (CPs – with further ‘sub-period’ divisions) on the basis of the composition of assemblages. Quantification of animal bone assemblages from Roman sites has usually been based around the structural and stratigraphic phasing of single sites, with the difficulty that this approach usually does not take into account the differing origins and depositional status (‘primary’ / ‘secondary’ etc.) of the separate layers which make up these phases, leading to the amalgamation within single-site assemblages of material of widely-differing origin and date. Because of the extensive dumping of deposits in these riverside locations, with each individual component potentially embodying very different origins and relationships between assemblage and deposition, this issue is particularly acute. By the same token, however, the distinctive sediment characteristics within these sequences offer great potential for their disaggregation and recombination into new groupings.*

*This chapter therefore proposes the ‘disaggregation’ of these single-site phasing structures, and the creation of new assemblages for analysis by combining material from contexts on different sites, on the basis of the CP (or CP range) represented in individual deposits. The approach will take into account indications of the depositional status of the deposit – primary or secondary – in combining assemblages, and generate and compare assemblages at a range of chronological scales, from broad early- / late-Roman to more tightly-defined CP and sub-period timescales. This approach seeks to overcome the effects of residuality which impact on assemblages within single-site sequences, and to use secondary deposits to identify broad differences in the characteristics of city-wide animal bone assemblages at these different chronological scales.*

*By inputting this data within YAT's Interactive Archaeological DataBase (IADB) it will be possible to experiment with various combinations of animal bone and ceramic data to identify chronological patterning within the animal bone assemblages, looking for indications of differences in species and species range / variety, slaughter patterns, carcass processing, differing supply areas and other variables. In the first instance this will use data from assemblages already recorded, to test the principles involved and provide a guide to approaches to unprocessed material held in archive.*

#### **4.1 Roman York – limitations of current knowledge** (Fig.4.A)

4.1.1 There is a long history of archaeological investigation of Roman York, but due to the accumulation of later archaeological deposits to depths of between 4.0 m – 8.0 m+ across much of the area of historic settlement, and the status of the modern city as designated Conservation Area (Ottaway 1993), *Eboracum* has not been revealed archaeologically to the extent other major Roman centres buried beneath modern towns and cities, such as London, Gloucester, Colchester and Chester, have through major open-area excavations (e.g. Wachter 1995, 82-132; 150-167; Mason 2001). Extensive areas of the Roman cemeteries of York were exposed (and destroyed) in the second half of the 19<sup>th</sup> century, largely in the context of the construction of the railways and (often associated) housing in the inner suburban area (Jones 1984), but archaeological recording and retrieval in the course of these operations was intermittent and ad hoc. The construction of infrastructure immediately before and during WW2 also resulted in the exposure of elements of the Roman settlement, particularly on the south-west bank of the Ouse. It was investigations and records such as these, together with a small number of restricted excavations in advance of new construction projects in the 1950s and 1960s which reached Roman levels (in several cases investigating the wall of the legionary fortress) which furnished much of the archaeological evidence presented in the R.C.H.M.(E)'s 1962 volume *Ebvracvm*.

4.1.2 Due to these constraints we have little or no coherent archaeological evidence for many of the important structures which would be anticipated in the legionary fortress on the north-east bank of the Ouse and in the civilian settlement / *colonia* to the south-west of the river, nor of installations such as the aqueduct and amphitheatre which these settlements would certainly have possessed.

4.1.3 Nevertheless, since 1972, the year in which York Archaeological Trust was founded, there have been a dozen substantial excavations of the Roman settlements at York, as well as c.50 smaller investigations which have produced significant information. The *broad* disposition of settlement to the north-east and south-west of the Ouse is tolerably well understood, but the evidence for the urban layout and for individual structures is fragmentary in the extreme.

4.1.4 The majority of the larger excavations have been carried out on the south-west bank of the Ouse, in the area of the *colonia* notably, although there have also been two substantial excavations – York Minster and 9, Blake Street – within the area of the legionary fortress. (One of these – York Minster – was undertaken in extremely difficult circumstances, and, whilst it unquestionably produced evidence of first-rank importance, it was, like archaeological investigation of Roman York overall, highly fragmented and problematic in its detailed interpretation; Phillips & Heywood 1995).

#### **4.2 The wider research context and rationale for study**

4.2.1 Research into urban development and the roles and character of urban centres in both contemporary and ancient contexts has increasingly recognised that 'urban histories are inseparable from the histories of the economic, social and political systems of which they are [or were] a part', and

that they are and were 'fields of action integral to some larger world' (both cited in Perring 2002; 3, 11). Thus the relationship between urban sites and their *hinterlands* 'was influenced by invisible controls such as tributes to lords, links between dispersed estate holdings, and networks of patronage, obligation and tradition'. By extension, 'The spatial organisation of landscapes in most periods was not based on large, coherent blocks, but...was a patchwork of settlements linked into overlapping exchange networks at various levels...[this is]...as true of the ties of kinship and patronage that link rural populations to urban central places...as it is of economic relationships...[hinterlands] cannot be viewed as continuous, homogeneous regions or uncontested spaces, and their study is the study of variation in settlement interaction within and between differently defined urban fields' (ibid.).

4.2.2 These observations are obviously relevant to the model proposed for the location and role of York's site in the LpRIA (3.5-6, above), and they are also considered central to the interpretation of urban settlement there in the Anglian and Anglo-Scandinavian centuries, and the transition between these, treated in a later chapter (8.4-6, below). Roman York is, however, the first stage of urban settlement with artefact and ecofact assemblages substantial enough to allow such relationships to be investigated using these resources. By seeking to characterise the provisioning and supply of different areas of the Roman urban settlement at York between the late-1<sup>st</sup> and early-5<sup>th</sup> centuries AD, a period of c.350 years, this chapter attempts to address the issue of how the relationships of a specific Romano-British urban centre with its hinterlands changed across this period. Within this broad timeframe, perhaps of particular significance is the marked 'step-change' which is evident from the later 3<sup>rd</sup> century AD in many aspects of the archaeology of Roman Britain, and the Roman Empire as a whole, in urban form and building types, rural settlement patterns, coinage, ceramics and burial practice. What do these observed changes in the character of these various types of archaeological evidence *mean* in terms of social organisation, and the articulation of surplus – for example to Romano-British urban settlements – required to underpin it ?

4.2.3 In this chapter attention is focused on the potential of archaeological ceramics, animal bone assemblages and palaeoenvironmental evidence, each category being employed for a different purpose. It is a commonplace that ceramics and ceramic assemblages are themselves (up to a certain level of resolution) dateable, and can provide information about the date of the deposit which contains them (taking due account of a range of issues relating to their use and deposition). In many instances they can be attributed to specific production sites, or at least locales. Even in cases where this is not possible, modern analytical techniques for determining the chemical composition and petrology of a ceramic have the potential to provide information about the organisation of the production of recognisable ware and fabric types (Orton & Hughes 2013, 25-36; 160-175). Animal bone assemblages may be analysed to address a range of issues regarding husbandry practices, slaughter patterns, butchery and post-mortem processing and consumption, all of which bear on the supply of foodstuffs to an urban place and to its character as a settlement (Perring 2002, table 1 pp.36-7; O'Connor 2003, 132-87; Maltby 1994). Palaeoenvironmental evidence has similar potential (ibid., table 3, pp.44-5), particularly in towns such as York where waterlogging of deposits can result in outstanding levels of survival of organic remains (cf. Hall & Kenward 1990, 322-70; 4.3.6, below). Here, however, the emphasis is placed on the use of palaeoenvironmental evidence for informing on the origins and sources of deposits, and the depositional processes involved in their creation, as this is a central element of the approach adopted here, and one which, it is argued, allows the potential of existing *processed* data to be deployed in new ways, without requiring expensive further processing of sediments.

4.2.4 To address this issue the chapter will propose means of utilising the evidence provided by Romano-British ceramic and animal bone assemblages from excavations in York, with particular and systematic attention paid to their stratigraphic and depositional contexts and the formation processes involved in the creation of these. This, it is argued, will allow the *grouping* of these assemblages, in

chronologically-specific combinations utilising the 'Ceramic Periods' proposed for York in by Jason Monaghan in his synthesis of Roman pottery from the city (Monaghan 1997; 835, 837-50), across *different* sites from within and around the Romano-British urban settlement, in a manner which has not previously been achieved or indeed attempted in York or elsewhere. The approach proposed here will seek to work from broad 'early-' / 'late-' Roman comparisons of ceramic and animal bone assemblages, to establish and refine differences in assemblages either side of this division, and then to investigate whether understanding can be refined to establish changes at a the higher degree of chronological resolution represented by the 'Ceramic Periods' and their sub-divisions which have been established for Roman ceramics from York.

4.2.5 This approach is aligned with the priorities of a number of recent overviews and commentaries concerned with how Roman urban sites might or should be investigated archaeologically. The starting point for this discussion may be found in a series of inter-related comments made by Martin Millett in the 2001 volume *Britons and Romans : advancing an archaeological agenda* (James & Millett 2001), which pose the basic question – 'What constituted Roman urbanism?'. Millett develops this question to argue that 'what we recognise as 'urban' depends on our response to the settlement in a particular geographical context', and that there is a need 'to rethink Romano-British urbanism from fundamentals, and use the evidence from archaeology to attempt to distinguish the various roles of particular sites'. Thus 'The question.. should not be 'can it be called a town', but 'what was happening here and how did the settlement function within society?'" (Millett 2001, 65-6).

4.2.6 Addressing these fundamental issues, Millett proposed approaches to the analysis of finds, architectural evidence and cemetery data (*ibid.*, 66). Cemeteries lie outside the scope of any of the research proposed here, but finds and architectural evidence form the core of this chapter, Chapter 6 and, in that it involves the study of the supply of building materials essential for different forms of architectural expression, Chapter 5. The analysis of artefact assemblages in such an approach should 'not assume there is such a thing as an assemblage characteristic of a particular type of site.. in primary work we need to set aside current site typologies and use approaches *to explore the data about finds assemblages themselves* [MW italics]. Only once we have explored the settlement evidence itself using the finds will we be able to use them to more adequately address economic issues. Approaches to issues like production and consumption can surely only proceed once we understand better the nature of the nucleated centres.' (*ibid.*).

4.2.7 Since the central focus of the studies proposed here is specifically the urban settlement at *York*, it is also worth noting Millett's point that whilst there may be '...some grounds for believing that we can distinguish 'typical' public towns within the south and east of the province, and we perhaps have a fair idea of how such sites functioned within society.. we do not even begin to understand the equivalent major centres in the frontier zone (e.g. York, Carlisle, Malton, Catterick, Piercebridge and Corbridge)..'  
(*ibid.*).

4.2.8 These approaches are supported and developed by Burnham *et al* in the same volume, considering themes for research into urban development in Britain from c.100 BC to c.AD 200. The authors observe that the study of production, distribution and consumption is critical to the *functional* dimension of urban development because 'so much of this obviously underlies the model of an increasingly hierarchical pattern of urban sites in the Roman period and the debate over the role of early towns as consumer cities or centres of production and innovation.' To address this, '...research should focus on the impact of settlement (urban) development on local agricultural and industrial production and on its market role (or otherwise)'. (Burnham et al 2001, 70).

4.2.9 The need to situate and conceptualise the study of Romano-British urban sites within wider contexts of settlement, society and production has been emphasised by Taylor, again in *Britons and Romans*, who argues that previous research emphasising their 'special' status has had '...the effect of

isolating the study of towns from their social, temporal and spatial context. These nucleated settlements cannot be understood on their own but rather in relation to the changing social landscape in which they developed...’ and that, as well as direct study of the landscape and settlements surrounding urban sites (see Chapter 3), research should involve ‘Close study of the rationale for and effect of the construction of new networks of communication and supply, the analysis of material flows, and the reorganisation of local agrarian practice’, in order to demonstrate ‘how key changes occurring in rural social relations may have played one important role in the establishment [of Roman urban settlements]’ (Taylor 2001, 57-8).

4.2.10 In addressing the broad analytical and interpretative issues relating to Romano-British urban settlement identified by Millett, Taylor and themselves, Burnham *et al* argue that an improved awareness of the potential of environmental and artefactual evidence is critical, requiring a change in attitude to data collection and analysis. Research, they argue, ‘..is still geared to sites *per se* and to settlement archaeology, *rather than to the society which generated these remains* [MW italics]. This is true both of excavation strategies, which are primarily concerned with the recovery of structural evidence rather than with recording artefacts and their contextual relationships, and of modern excavation reports.’ (Burnham *et al* 2001, 70). They go on to make a point which is central to the analytical approach to the ‘big questions’, rehearsed above, proposed in this chapter, namely;

‘..depositional patterning and different site associations of particular categories of artefact demands greater attention.. sites encapsulate information about all kinds of past behaviour patterns, albeit severely scrambled by depositional and post-depositional processes. If we wish to investigate the principles articulating and structuring the social relationships of past urban populations, much of this information will have to be sought in the matrix of artefactual and contextual relationships which comprise the archaeological record of successive activities at that site.’

(*ibid.*, 74)

4.2.11 The comments of Burnham *et al* cited above are acknowledged as relating primarily to the *functional* aspects of Roman urbanism, that is how urban settlements were populated and sustained, and the role they played in the articulating patterns of material production and consumption (*ibid.*, 70). It is clear, however, that issues of identity, status and display, and the aspects of production and consumption through which these are expressed, are essential in the study of Roman urban settlements (e.g. Hill 2001; Gardner 2007). These issues are discussed and addressed in Chapter 6, but it should be clear that the research issues considered in this chapter and in Chapters 5 and 6 are, in the final analysis, all but indivisible.

4.2.12 Since this chapter specifies different areas of the Roman urban settlement at York defined as the ‘(legionary) fortress’ ‘*canabae*’ and ‘*colonia*’ attention must be paid to Simon James’ comments concerning the Roman military and received ideas of the supposed ‘military / civilian’ dichotomy in the Roman empire. James notes our continuing ignorance of the interactions between military communities and their neighbours in the surrounding districts, and argues that forts – and legionary fortresses – did not necessarily represent the ‘hermetic divide’ between military and civilian, as much previous research has assumed (James 2001, 82), and that rather than ‘fort-*vicus* complexes represent[ing] two spatially- and socially-distinct communities’, they would in fact have been ‘only partly-differentiated components of one complex community’ (*ibid.*, 86).

4.2.13 Addressing the overarching research issues for Romano-British urbanism outlined above, all of the authors cited emphasise the potential of artefactual, zooarchaeological and palaeoenvironmental data, a potential which, they argue, has yet to be properly utilised. This viewpoint is supported by the comments of specialist researchers in the fields selected for analysis in this chapter, ceramics and animal bone. For Romano-British ceramics, Evans has noted that only a handful of studies have utilised

the integration of ceramic and animal bone data, and illustrated the potential of this approach by co-quantifying these two types of assemblages from two sites (1995b, 43-54). Evans' own approach at numerous Romano-British sites of all types, including urban settlements, has been to employ functional comparisons between assemblages to differentiate, and identify characteristic 'ceramic signatures' for, different site-types (e.g. Evans 2001). In this he partly anticipates the comments of Millett (2001, 66) that studies of assemblages from Romano-British urban settlements should model their approach on that of Richard Reece for Romano-British coinage, seeking to establish different site 'signatures' by quantifying the degree to which assemblages diverge from 'norms' established for the *overall* Romano-British urban – or indeed across the overall Romano-British *settlement* – assemblage.

4.2.14 Whilst quantitative and statistical methods for the analysis of animal bone assemblages from Romano-British sites have been more widely used than is the case with ceramic studies, Dobney cautions that zooarchaeological data 'does not always figure prominently (if at all) in debates regarding specific periods'. He notes that the wealth of material and data contrasts with the often poor quality of the zooarchaeological record, emphasising the need for 'actual biometric data, not generalisations such as 'a few large individuals' (2001, 36, 39). A further problem, and one which is especially pertinent to this chapter, is his identification of the 'lack of detailed information regarding dating frameworks...often grouped as merely 'Roman', thus effectively 'diluting' 400 years of occupation (and the myriad of changes that may have occurred in all aspects of social and economic history) into one general, but to all intents and purposes practically useless, period.' (ibid., 36).

4.2.15 This observation lies at the heart of what is discussed and proposed (below) here, and harks back to the comments of Burnham *et al*/cited above in 4.2.9 regarding depositional and post-depositional processes, that these are critical to *all* understanding and interpretation of assemblages from archaeological sites. Gardner (2007, 85-6, 172-5) has noted the significance of rubbish disposal and dumping in the formation of many Romano-British assemblages, particularly bulk assemblages of pottery and animal bone (ibid., 90-99, 157-64), and argues that such practices are culturally specific and meaningful (ibid., 85-6, 172-4). Although there is a marked and critical absence of any detailed, meaningful consideration of deposit formation processes and assemblage status in his discussion of this alleged 'cultural specificity' and 'meaning', this general observation is nevertheless particularly relevant to the oft-remarked contrast between artefact / ecofact deposition in Romano-British urban settlements, including York, in the later-3<sup>rd</sup> and 4<sup>th</sup> compared with the earlier centuries of Roman Britain, and hence to the research discussed both here and in Chapter 6.

4.2.16 The most succinct and comprehensive comment on the need to understand the depositional context of assemblages, however, is that of Hill;

'How the archaeological record was formed is central to understanding all other aspects of that record, and there have been few serious attempts to address these issues for Romano-British sites. Deposition is an essential component of studying finds in their full context..

..These new questions to ask of the data can lead to new ways of recording data in the field or *marshalling it during post-excavation* [italics MW]...much can be done using existing and post-excavation recording strategies.. Studies of finds distributions across sites and within structures, attention to depositional processes.. need to become far more common...there is a vital need that site archives contain adequate standardised and contextualised data...surprisingly few big, published Roman sites have the level of detail required for all classes of finds in their archives.'

(2001, 17)

4.2.17 This statement sets the scene for the research proposals laid out below. York *has* the archives of Roman sites, with high-quality standardised data recorded to a level of detail which will allow the

contextualised study of finds distributions and depositional processes. The approaches detailed below offer a means to investigate these in the terms recommended by Millett, Hill, Burnham *et al* and the other authors cited in this discussion.

### 4.3 York : Roman sites and stratified sequences (Figs.4.B, 4.C)

4.3.1 Of the Roman-period sites excavated in York, listed and mapped on Figs.4.A, 5.A and 6.A, a number – mostly but not exclusively located in the river valleys, terraces and floodplains of the rivers Ouse and Foss – have produced deep, well-stratified archaeological sequences spanning the period from the late-1<sup>st</sup> / early-2<sup>nd</sup> century to the beginning of the 5<sup>th</sup> and beyond. Particularly notable amongst these are; Wellington Row, 5 Rougier Street, 24-30 Tanner Row, 1-9 Micklegate (all located on the original floodplain of the river Ouse on its south-west bank); 16-22 Coppergate (on the ?floodplain or a low river terrace on the north-west bank of the river Foss); 35-41 Blossom Street (in a suburban area to the north-west of the *colonia*) and 9 Blake St (within the *praetentura* in the southern quarter of the legionary fortress).

4.3.2 The stratigraphic sequences from each of these sites include extensive *dumping* episodes, incorporating deposits which contain a wide range of artefacts and ecofacts, including in some cases (notably those in the river valleys) substantial preservation of organic material and palaeoenvironmental indicators. Additionally, in each of the zones of the Romano-British settlement referred to above are a number of excavations which, whilst much smaller in scale than those specified, have produced stratified sequences with the same characteristics, and which can also be included within the scope of the analytical work proposed here.

4.3.3 These characteristics are especially pronounced in York's river floodplain sites, which involved very extensive dumping in advance of the construction of masonry buildings. The dumps of 'made-ground' on these sites often comprise numerous individually distinguishable deposits within what appear to have been single episodes of large-scale dumping. Individual layers within these dumps often clearly derive from very different sources and include deposits, and within those deposits *assemblages*, of differing status in relation to the depositional event (the large-scale dumping) within which they had become incorporated. The majority clearly comprise material dug from the ground elsewhere within or around the Roman settlement and re-deposited on the site at which they were encountered in the course of archaeological excavation, but some contexts apparently represent the *primary* discard of debris and detritus, probably deriving from activities which took place only shortly before, and perhaps within the vicinity of, its deposition.

4.3.4 There are good published examples of this from York. An excavation at 37 Bishophill Senior, adjacent to the medieval church of St Mary Bishophill Senior on the south-west bank of the river Ouse encountered, within artificially-created terracing of Roman date, thick dumps of re-deposited natural (fluvioglacial) sediments interleaved with thin lenses of soil containing large sherds of 3<sup>rd</sup>-century pottery (CP \*\*), in many cases clearly from the same vessels. The latter were recognised by the excavator / author as representing events involving primary discard (Carver 1978, 30). At 9 Blake St, on the low plateau within the legionary fortress, elevated c.8 m above the modern river level and located over 100 m from Ouse river valley, an extensive dump of clay, again almost certainly re-deposited fluvioglacial sediments and containing significant quantities of early-3<sup>rd</sup>-century (CP 3a) pottery, was interleaved with lenses of soil containing ceramics of the late-3<sup>rd</sup> / early-4<sup>th</sup> century (CP 4a) (Hall 1997, 349-50). In situations such as this the need to understand deposit status and formation process, and incorporate and take account of these in analysis of the assemblages, attributed to *stratigraphically*-defined periods, which the deposits contain, is readily apparent.

4.3.5 The site at 37 Bishophill Senior was excavated in 1973, that at 9 Blake St in 1975. Since then, excavations in York, particularly on the original floodplains and lower terraces of the Ouse and Foss, but also on the higher ground within the legionary fortress and in the *colonia* and extra-mural areas, have recorded numerous comparable examples (in the sense of episodes of what seems to be primary discard distinguishable amidst layers of secondary deposition). Typically, these layers, all classified (accurately) as 'dump deposits' have simply been grouped together as the 'made-ground' preceding successive construction episodes, and their analysis has not extended beyond their being treated as undifferentiated components of assemblages grouped according to stratigraphically-defined periods.

4.3.6 Information about the *formation processes* and *origins* of these dumped sediments, both important in assessing deposit status and the character of a dumped layer and its contents, may be provided by the palaeoenvironmental information provided by the analysis of sediment samples, the potential of which is clearly demonstrated in the discussion of the evidence from the excavation at 24-30 Tanner Row, published in *The Archaeology of York* 14/6 (Hall & Kenward 1990, esp. pp.323-68). There, the combined evidence of invertebrates, plant macrofossils and molluscs obtained through the processing of samples retrieved from the excavation identified (to cite a handful of examples), disturbed ground grazed and trampled by animals (*ibid.*, 329), the secondary dumping of organic material originally deposited within or around inhabited buildings (*ibid.*, 335), waterlain deposits (*ibid.*, 336), the importation to the site of resources from diverse environments such as calcareous grasslands and raised bog (*ibid.*, 349), and at one point in the sequence a marked reduction in the indicators of an aquatic and waterside habitat which had previously predominated (*ibid.*, 363). Whilst the presentation of the results of this environmental analysis is closely *referenced* to the stratigraphic phasing of the site and to the physical characteristics of the sediments in question, there is clearly a great deal more scope for combining and integrating the stratigraphic sequence and layer descriptions with the environmental evidence and various categories of artefact assemblage in a more thoroughgoing manner, in order to model the processes and 'inputs' behind the patterning of deposition, and to begin to isolate differences in the likely sources of the sediments encountered on the site. Such an approach clearly has considerable potential in discriminating between the individual components of dumped horizons, in terms both of their origins and of the *statuses* of the sediments and the cultural and biological material they contain, an essential element of the approach to quantifying and interpreting artefact and ecofact assemblages which will be proposed here.

#### **4.4 Ceramic Periods and animal bone assemblages**

4.4.1 The most frequently-occurring classes of finds from these excavations, as on almost all excavations of Roman-period sites in York (and other Roman urban settlements), are ceramics and animal bone. The potential of these artefact types to inform on patterns of supply, processing and consumption within urban communities are well-rehearsed and have been summarised above (4.2.3). The approach proposed in this section for the study of changing patterns of supply of the Roman York involves the *integrated* analysis of ceramic and animal bone assemblages within the stratigraphic sequences from which they were retrieved, which it is anticipated may ultimately allow the integration of these data between sites in different parts of the city in a manner which has not been attempted or achieved before.

4.4.3 The characteristics of animal bone assemblages which might be used for comparative purposes in this approach, indicating differences in livestock supply, species diversity and post-mortem treatment / preparation of carcasses for consumption have been defined by O'Connor 2003 (132-187) and in Perring 2001 (Table 1, pp.36-7), cf. 4.2.3, above.

4.4.5 Ceramics from the majority of the large excavations undertaken in York have been classified, identified, quantified and reported (Monaghan 1997, 1038-1152). The level of recording and quantification of animal bone assemblages varies between sites, from comprehensive identification, recording and publication (Tanner Row, O'Connor 1988) to highly selective study of small samples of the total material available from sites such as Wellington Row and 1-9 Micklegate in the course of assessment of material from these sites.

4.4.6 Monaghan's classification and quantification of Romano-British ceramics from York has resulted in his postulation of successive 'Ceramic Periods' (hereafter 'CPs'), characterised by the presence (and deposition) of ware-types and form-variants in particular combinations which recur on sites across the Roman urban settlement (Monaghan 1997, 837-850). He identified four distinct periods, each divided into two (or in the case of the latest, CP 4, three) sub-periods, each period and sub-period being attributed an approximate chronological range as listed here, based ultimately on their associations with co-stratified coins, but also sometimes employing inferences which draw on more subjective interpretations of the ceramics and their stratigraphic contexts (Monaghan 1997; 827, 833)

CP 1a	c.AD 71-100
CP 1b	c.AD 100-120
CP 2a	c.AD 120-160
CP 2b	c.AD 160-200
CP 3a	c.AD 200-225
CP 3b	c.AD 225-280
CP 4a	c.AD 280-360
CP 4b	c.AD 360-410
CP 4c	c.AD 410+

*(Defined in Monaghan 1997, 835)*

4.4.7 As a result of this analysis, every deposit excavated in York which contains Romano-British ceramics may be said to have its own 'CP signature', allowing its attribution to a single CP, or even CP sub-period, or a sequential range of CPs. The definition of these CPs was necessarily arrived at by the comparison of assemblages, both generally and quantitatively, from the discrete stratified sequences excavated from individual sites across Roman York, with the creation of these assemblages often involving the amalgamation of the contents of multiple individual, distinguishable deposits. Similarly, analysis of animal bone assemblages has necessarily, for the most part, been conducted on a site-by-site basis. In analysis of both ceramics and animal bone, the phasing structure for each individual site as provided by the excavators has been used as the framework for their quantification and interpretation.

4.4.8 This is of course a legitimate, accepted and near-uniformly adopted approach to the analysis of ceramic and archaeozoological assemblages. It does however impose some limitations, particularly apparent in the case of animal bones but also affecting the analysis of ceramics. In both cases, in order to establish assemblages of sufficient size to allow meaningful quantitative comparison, multiple stratigraphic units / contexts / layers on a given site are grouped together in accordance with the structural and stratigraphic phasing of the sequence, creating the assemblage which forms the basis for quantification and comparison. Such a methodology does not, however, take account of the potentially differing origins and depositional statuses of sediments and the assemblages they contain in relation to the dumping episodes within which they became incorporated.

## 4.5 The structure, composition and ceramic dating of assemblages

4.5.1 In proposing an alternative approach which seeks to correct this shortcoming (which may have a very considerable impact on the interpretation of ceramic and animal bone assemblages, the site from which they derive and indeed the Roman-period settlement as a whole), brief consideration of the formation, structure and composition of assemblages derived from stratified sequences such as those encountered in Roman York is necessary.

4.5.2 Ceramic, animal bone and other artefact and ecofact assemblages are retrieved from the ground as components of specific *contexts*, typically defined in the course of excavation by their different, usually visually distinguishable, sediment characteristics. For the analysis of animal bone and of ceramics (i.e., in the case of York, the identification, in association, of the combinations of ware/fabric and form types used to create CPs) these contexts and their contents usually have to be agglomerated in higher-order groupings – ‘phases’ and ‘periods’ – in order to create groups large enough for reliable quantification and comparison.

4.5.3 As has been noted, these groupings are typically based on the *structural and stratigraphic* phases and/or periods created by the excavators of a site or the author of the site report (often the same individual or team), and will usually be constructed around or in relation to significant *structural* episodes on the site. In such phasing schemes layers of different depositional status are routinely grouped together; the origins of these individual deposits – and therefore those of their *contents* – within a given stratigraphically-defined phase or period will, however, frequently be very different. The phases and periods may incorporate *primary* deposits, laid down during the lifetime of and in direct association with the buildings or structures which ‘benchmark’ the phase / period architecture, but these deposits and their contents will usually form a small fraction of the overall volume of sediment and quantity of artefacts and ecofacts recovered from a site.

4.5.4 The site-defined phases and periods will also incorporate deposits comprising the dumps and ‘made-ground’ on which buildings and structures were constructed. These sediments and their contents will often not have had any necessary or direct functional, ‘systemic’ relationship with the buildings and structures which stood on them and the activities which took place in and around those buildings – indeed within suites of excavated evidence this lack of direct association is likely to be the norm rather than the exception. The original formation of the sediment matrix of these dumped deposits, and the discard and deposition of the sediment and its contents in the location where it was excavated, may have been remote in time and space. The whole issue of the relationship between artefact / assemblage, deposit and depositional context has been addressed by Roskams (1992), whose observations and approach lie at the heart of what is proposed here. It is a matter which has also been discussed by Blinkhorn and Cumberpatch (2000), who have noted the pre-eminence of the concerns of the ‘field archaeologist’ (perhaps more specifically ‘stratigraphic researcher’) in the framing of archaeological research designs and programmes of post-excavation analysis. The need for constructive combination of the differing needs of stratigraphic and assemblage analysis can also be detected in the comments of Burnham *et al* (2001), cited above.

4.5.5 Whilst ‘dumping’ and ‘construction’ episodes may well be distinguished as sub-phases within stratigraphic sequences, the need to amalgamate for the purposes of the quantified analysis of assemblages will very often lead to these being grouped together for such analysis. Therefore, when the artefact / ecofact contents of such phases are grouped together, material with very different depositional status in relation to a given structural / stratigraphic phase of a site will often be treated and interpreted as a single entity. As mentioned previously, in extreme cases the nature of a site and the small size of assemblages from individual contexts or even entire phases may lead to the amalgamation of material deposited across a very broad time-span on a single site, (cf. O’Connor 1988). This must inevitably distort the picture obtained by combining material of potentially widely-differing

date within a single assemblage, the chronological attribution of the assemblage as a whole being that of the uppermost deposits – in the case under discussion here, usually the structural activity atop the dumped horizons of the underlying ‘made-ground’.

## 4.6 Stratigraphic analysis and context / assemblage relationships; an example from Lincoln

4.6.1 The approach which is being proposed here may profitably be considered with reference to a sequence of deposits frequently cited in discussion of late-Roman Britain – a series of dumped layers containing huge quantities of animal bone excavated from a site close to the river Witham at Lincoln. A component of a series of ‘reclamation dumps’ which extended 32 metres into the river’s floodplain in the course of the later-3<sup>rd</sup> and 4<sup>th</sup> centuries (Jones *et al* 2003, 90), the sheer scale of these dumps and their apparently close dating to the very late 4<sup>th</sup> century have been used to argue that the population of Lincoln at this late date ‘must have been of considerable size, with a considerable degree of social organisation of at least some aspects of victualling..’ (Dobney 2001, 90), and has been cited by Gardner in discussion of his ‘structurationist’ approach to rubbish disposal (2007, 175).

4.6.2 Unfortunately at the time of writing the full stratigraphic context of the Lincoln dumping episodes from SITE NAME under discussion here has yet to be published – it is due to appear as volume ?4 in the series *The Archaeology of Lincoln* – so it is not possible to refer in detail to the *stratigraphic* groups and phases concerned, or to understand the size, constituent elements and stratigraphic configurations of context groups from the site, all of which are of significance for the form of analysis proposed here. It can nevertheless serve as an example of how a different approach to combining stratigraphic and assemblage analysis might produce research dividends, particularly as the approach to these employed in the research and publication of other sites in Lincoln both uses Roskams’ approach and has described its utilisation in post-excavation analysis in some detail.

4.6.3 As previously noted, what is at issue here is understanding the *formation processes* of the deposits from SITE NAME, in order to understand the *origins* and *depositional and chronological status* of the assemblages which they contained. Jones *et al* note that ‘we cannot tell from the stratigraphic evidence if there was intermittent dumping or, as now seems more likely, a small number of major operations’, and that ‘some of the material must have come from existing rubbish dumps elsewhere in the city, and it is important to remember this when considering the nature of the activity on the riverfront itself’ (2003, 101). These comments go straight to the heart of the issues which this chapter is intended to address, and the research it proposes hopefully resolve, in relation to well-stratified sequences of dumped deposits from York. To consider them further it is necessary to examine the manner in which the sequences from Lincoln have been structured and phased in post-excavation analysis, and how deposit status has been used in the interrogation of the data and the chronological attributions consequently arrived at.

4.6.4 The approaches and methods employed are discussed in some detail in Lincoln Archaeological Studies 3 (Steane *et al* 2006, 5-7). Using the widely-employed system of hierarchical grouping of stratigraphic data in which individual *contexts* (‘layers’, ‘structures’ and ‘cuts’) are grouped into progressively higher-order entities (‘context groups’, ‘land-use blocks’, ‘phases’ etc.), ‘contexts.. [were] arranged into context groups (‘cg’s): each cg represents a discrete event in the narrative of the site..’ (ibid., 5). The Lincoln researchers then integrated finds data within this framework of context groups in order to establish a chronological framework for their sequences.

4.6.5 It should be emphasised at the outset that the approach taken by the Lincoln team was in line with the best accepted practice for the organisation and interpretation of urban sequences, as employed by archaeologists working on numerous urban sites of all periods across Britain. The study and

reporting of artefacts prioritised those deposits in which the relationship between a stratigraphic unit ('context') and the artefacts contained within that stratigraphic unit could be identified as 'primary', i.e. where the activity represented by a given assemblage related *directly* to the stratigraphic unit, structure or feature in which it was found or with which it was closely associated; in the words of the Lincoln researchers, 'the criteria used rest[ed] on the relationship between artefact and deposit as outlined by Roskams'. This refers to Roskams' (1992) classification of this relationship in terms of the degree of association of the artefactual content of a stratigraphic unit with the activity which the *deposition* of that stratigraphic unit represented; broadly speaking the degree of contemporaneity and functional 'connectedness', or conversely residuality and functional remoteness, of artefacts and assemblages with the deposit, structure or feature which contained them or with which they were associated. Roskams proposed a four-fold division, A-D, progressing along the scale from contemporaneity to residuality, acknowledging that further gradations of this division could be identified and might prove useful, according to the specific stratigraphic and depositional circumstances under consideration (ibid.).

4.6.6 In their stratigraphic analyses and reporting, the Lincoln researchers prioritised those contexts classified as Roskams' Type A, reflecting a primary requirement to establish a chronology for their stratified sequences; 'Finds contemporary with and functionally connected with their cg are always discussed in this text; (Types) B, C & D progressively more selectively'; 'Registered finds (and building materials) are rarely presented as key dating evidence and only selectively used for interpretative purposes (Steane et al 2006, 7). They also decided to present and publish their data only down to the level of context groups; 'context groups are the lowest element of the interpretative hierarchy presented in this text' (ibid., 5).

4.6.7 Roskams noted that how and which archaeological assemblages might be selected for any given study depends on the questions being asked and the stage in the research cycle; for some research questions material with high levels of residuality (e.g. his Type D) might be of great relevance and significance (1992). The decisions of the Lincoln researchers reflect this. However, returning to the observation of Jones *et al* (2003, 101) that 'some of the material [from the late-Roman riverfront dumps] must have come from existing rubbish dumps elsewhere in the city, and it is important to remember this when considering the nature of the activity on the riverfront itself', we can see that their approach, with its emphasis on Roskams 'Type A' context / assemblage relationships, effectively marginalises this question, which in the case of SITE NAME is crucial to the understanding of the important animal bone assemblages which the dumped sediments contain. This effect is exacerbated by the decision to report and discuss stratigraphic evidence only down to the level of *context groups*; how are these *groups* of dumped contexts constructed in terms of Roskams' assemblage / context Types ? It may be that individual context groups, in all probability created on the basis of stratigraphic and structural criteria, contain *within* them a range of such Types; if so these would need to be disaggregated down to context level for purposes of interpretation of the assemblages they contain in the terms being proposed here.

4.6.8 It can thus be seen that, by prioritising material directly relevant to the interpretation of the structural sequence on a site, that site sequence is itself elevated as a research priority, and that the remainder of the stratigraphic evidence and assemblages from a site – perhaps the great bulk of it – is demoted, receiving more cursory treatment, or perhaps not researched or reported at all. Yet this material constitutes an information resource which may be extremely relevant to understanding of a (Romano-British) settlement as a whole, and indeed the wider society which created it, rather than to the particular site or sequence under immediate study. The approach taken at Lincoln might be characterised in the terms expressed by Burnham *et al*, noted above (4.2.9); that research '*..is still geared to sites per se and to settlement archaeology, rather than to the society which generated these remains [MW italics].. strategies.. are primarily concerned with the recovery of structural evidence rather than with recording artefacts and their contextual relationships..*' (2001, 70).

4.6.9 Observing that the researching and reporting of the Lincoln evidence discussed here prioritised primary contexts, from site-specific stratigraphic groupings with narrowly-defined chronologies is not intended as a criticism; this is a necessary stage of archaeological analysis, and where resources are finite (as they always are), such prioritisation can be understood as unavoidable. It *is* the case, however, that in these circumstances selecting one analytical route marginalises another, meaning that huge scope remains for the investigation of large assemblages which have a relevance for the understanding of a settlement, and society, *as a whole*, rather than a single site or group of sites within it. Such approaches, and the differing analytical and classificatory methods which they imply, could seemingly be very usefully applied to the important late-4<sup>th</sup>-century dump deposits from the Lincoln waterfront at SITE NAME, and – as proposed in this chapter – to analogous strata from York covering the entire period from the early-2<sup>nd</sup> to the late-4<sup>th</sup> centuries.

## 4.7 York : disaggregating and recombining ceramic and animal bone assemblages

4.7.1 Returning from the Lincoln example to discussion of approaches proposed for York, in the case of animal bone assemblages which clearly *are* ‘primary’ deposits in relation to such structural episodes, these have usually, as in the case of Lincoln, been – understandably and legitimately – selected for study and analysis, and can frequently be related to highly specific processing activities (e.g. O’Connor 1984, 13-16). However, for assemblages of both pottery and animal bones to be large enough for quantified comparison, *aggregates* of contexts, and even of phases, invariably *have* to be made.

4.7.2 When amalgamated in broadly contemporary groupings based on their ‘CP signature’, which include deposits and the assemblages they contain from a range of excavated Roman-period sites across York, it is proposed that ‘residual’ material in ‘secondary’ deposits of the type under discussion here has the potential to provide much significant information about the Roman settlement *as a whole* in the period *before* their final deposition at the locations at which they were encountered in archaeological excavation.

4.7.3 This obviously poses the question of how ‘the period before their final deposition’ can be defined chronologically ?

- on the basis of the CP represented by the pottery any given layer contains and (where they exist within the deposit) other dateable artefacts
- but strictly, the CP and other dateable artefacts within a deposit only provide a *terminus ante quem* (TAQ)\* for any residual material which may be contained within that deposit – everything it contains is either contemporary with, or earlier than, the latest CP to which its ceramic contents are attributable. For example, a deposit with a CP3a ‘signature’, conventionally dated to c.AD 200-225, could contain within it material from the preceding c.130 years of the occupation of Roman York, (or, in principle, earlier); and this may or may not be represented in the ceramic assemblage

(\* - in strict terms this is not a logically *necessary* conclusion – it *is*, however, how dating by ceramics or CPs works, since the *absence* of a ware type from a ceramic assemblage is frequently utilised as much a part of dating schema based on pottery as is the *presence* of a type – cf. for York, Monaghan 1997).

4.7.4 Similarly, a secondary deposit with a CP4b signature may contain within it material from the preceding 350 years or (potentially) more, as well as material contemporary with the CP4b component

of the ceramic assemblage. However, secondary dumped deposits whose contents are given a (notional) TAQ by their having a CP3a signature will not (or at least are highly unlikely to) contain later material, contemporary with CP4b. Even if a CP4b-signatured deposit *does* have incorporated within it cultural material from some point or points within the c.300+ years preceding c.AD 360, with no artefactual indication of this, it still represents a sediment into which post-CP3a material *can* have been incorporated – whereas, again, a CP3a-signatured secondary dump deposit is highly unlikely to – in cases where CP4b-signatured deposits overlie a CP3a deposit, one might almost say *cannot* – contain later material contemporary with CP4b.

4.7.5 This approach to dumped deposits and assemblages – the discrimination of individual stratigraphic components and the recombination of the assemblages they contain into new groupings – recalls, and to a degree runs counter to, the discussion by Ed Harris in his seminal *Principles of Archaeological Stratigraphy*, of the process of stratification (Harris 1979, 34-5). There, Harris states that 'Without...lithification [transformation into stone over a very long period of time] archaeological stratification cannot be overturned or reversed without losing its original characteristics... strata [are] not reversed as a block (the usual geological circumstance), but dug out bucket by bucket and in the process transformed into new strata, whatever their soil composition...They are all unique depositions in soil composition, in time and space'. In absolute terms, at the level of individual actions of soil movement specified by Harris, this is unquestionably true. However, the argument made here is that *elements* of the original structure of sediments found in sequences of dumped layers such as those encountered in York's Roman-period floodplain sites (and some others) – notably in relation to their *contents* – survives from their digging out of the ground to final 'dump-spot' to allow those contents to be usefully quantified and interpreted with reference to a range of time-scales. These time-scales will usually be broader than is typically sought or considered 'useful' by archaeologists schooled in the culture-historical tradition which still predominates in Romano-British archaeology, but it has been argued here that they have a clear analytical utility, and may in fact serve as a 'stepping-stone' leading ultimately to the study of such material at more finely-calibrated chronological scales, as will be developed below.

4.7.6 A starting point for analysis would therefore seem to be comparison of assemblages between broad date horizons, as represented by the CP contents of deposits, rather than the more detailed centuries AD, or CPs or their sub-periods – which in some cases are equated with time-spans as short as c.25 years. It is of course axiomatic that the greatest possible level of chronological resolution is desirable for the understanding and interpretation of archaeological evidence, and as a principle this need not be questioned. It is very often the case, however, that archaeological data are not consistently susceptible to tight dating schema, which can lead to exaggerated claims or unwarranted assumptions regarding the degree of chronological precision which can be achieved, or the writing-off of data or assemblages as being unusable or irrelevant to research (which, as has been seen – 4.6.5-9, above – is often the fate of material identified as being 'residual' in relation to a specified structural episode on a particular site). In Romano-British studies this attitude can be seen to have its roots in the origins of the discipline in the later nineteenth and early twentieth centuries, where the primary aim of archaeological research was to equate particular sites and material remains with specific events, particularly the military campaigns of emperors and their generals, documented by the Classical authors. The legacy of this approach persists to this day. In addressing the data from the different perspective proposed here, starting with broad chronological comparisons and then seeking to refine and narrow date ranges, study might commence with the very broad categorisation of deposits and assemblages into 'early' and 'late' (Roman). The grouping of contexts in this approach would, it should be emphasised, be based on their 'CP signatures', irrespective of their stratigraphic location within particular stratified sequences.

4.7.7 As this chapter is concerned with the identification of changes in patterns of the provisioning and supply of Roman York, an appropriate division between 'early' and 'late' is provided by the CP3a / 3b

interface, c.AD 225 – when production of the major component of York's supply of utilitarian ceramics, 'Ebor ware', manufactured in the *canabae* within the environs of the legionary fortress itself, ceased, and was replaced by the production of apparently equivalent ceramics at more remote locations in the region – Malton /Norton, Holme-on-Spalding-Moor, the Howardian Hills, and more easterly areas of Yorkshire (see 9.6a.1, below) and perhaps at locations in the Vale of York at some remove from York itself. Also, for the proposed analyses, the time-spans of the two halves of this broad division – c.AD 71-225 = 154 years, c.AD 225-410 = 185 years – are roughly comparable.

4.7.8 When comparisons have been made at this broad scale, and broad similarities and differences established, examination and comparison of assemblages at a higher level of chronological resolution might be assayed – for example by aggregating contexts from different sites grouped according to individual CPs, or even sub-divisions of CPs. The logical conclusion of such an approach would be to install all available information concerning the character and contents of individual contexts from multiple sites, particularly CP categorisation and other artefact-derived chronological information, but also classifications of formation processes and the primary / secondary depositional status of sediments and assemblages, within a database or spreadsheet format, to experiment with the grouping of deposits according to various attributes and in varying combinations – CP representation, stratigraphic units, deposit status – to see whether any 'supra-stratigraphic' patterning emerges within and /or between sites. In the case of such data from *individual* sites it could be argued that this approach should be undertaken in the course of stratigraphic analysis for the light it might shed on formation processes and the status and grouping of deposits within that individual sequence. This would, of course, require the integration and timetabling of artefact and ecofact recording and analyses with that of the stratigraphic sequence. The overall approach obviously opens the door to multivariate approaches and formal statistical analysis in the search for and identification of significant patterning.

4.7.9 The problem of residuality is of course a long-standing one in urban archaeology, and its effects can never be completely avoided. It is suggested, however, that the approaches proposed here to the grouping / aggregation of assemblages from the deposit types under discussion, across and between stratigraphic sequences from separate excavations, might serve to establish consistent differences in the composition of animal bone and ceramic assemblages at initially broad and progressively greater levels of chronological resolution, thereby improving the clarity of our understanding of the distinctive characteristics of ceramic and animal bone assemblages in Roman York in different periods between the late-1<sup>st</sup> and early-5<sup>th</sup> centuries AD.

4.7.10 The character of the stratification on several of Roman York's floodplain sites – the rapid deposition of multiple distinct(ive) deposits within episodes of dumping – makes these sites particularly suitable for such analysis, as individual deposits deriving from different sources are often readily distinguishable, and structural and stratigraphic phases can readily be disaggregated in terms of the depositional status of their component sediments. As noted previously, however (4.3.1; 4.3.3-5), there are also sites in more elevated locations within the Roman urban settlement where the depositional sequence makes such an approach possible. Within such analysis the representation of different elements of the ceramic assemblage through the sequence could also be profitably investigated through conventional seriation (cf. Orton *et al* 199\*, \*\*\*, Carver 1986), not previously applied to York sites in spite of the obvious suitability for such an approach of the of the city's deeply-stratified sequences, utilising the diagnostic elements of assemblages used to define CPs.

4.7.11 In the case of the floodplain sites, a framework which might prove valuable for the integration of assemblages across and between sites within the Ouse floodplain has been identified in the course of assessment, with a markedly similar succession of sediment deposition apparently common to several excavated sites. This may be summarised as follows;

**A preliminary classification of sequence of deposit types / formation processes for Roman York (Ouse floodplain sites)**

'Primary ground surfaces' :	pre- / early-Roman buried soils, river margins  <i>[capturing of assemblages of ?primary stray / dropped / tipped material]</i>
<hr/>	
'Mass' levelling deposits' :	large volumes of soil / clay / building debris incorporating diverse large coarse components incl. pottery & animal bone  <i>[incorporation of material accumulated / lying around over long period of time; typically large assemblages]</i>
'Primary refuse discard' :	less extensive / less thick deposits disposed of immediately / shortly after activity which produced them; very distinctive deposits and assemblages  <i>[deposition of residues / detritus specific to particular activities undertaken in near vicinity]</i>

The above two deposit types are frequently interleaved in riverside dumps

'Clean' stone structures'	Little accumulation of sediment due to solid structures / surfaces kept clear of debris
'Niche' deposits assoc. w. stone structures'	Sediment traps in interstices of stone buildings, but also potentially including some larger areas of deposition, e.g. gardens, accumulation on road surfaces  <i>[capturing of assemblages of ?primary stray / dropped material, but also possibly imported soil mass and tipped debris]</i>
'Primary discard & accumulation'	Deposition and accumulation of material at and around location of its creation / use  <i>[capturing of assemblages of ?primary stray / dropped / tipped material]</i>

(The broad *depositional* chronologies for these (based on TPQs within the phased sequences of individual sites, and distinct from the 'CP signatures' of dumped deposits within the sequences) are as follows;

late-1 <sup>st</sup> – late-2 <sup>nd</sup> centuries :	<b>CPs 1 &amp; 2</b>
late-2 <sup>nd</sup> – early-3 <sup>rd</sup> centuries :	<b>CP 3a</b>
mid – late 3 <sup>rd</sup> century :	<b>CP 3b</b>
late-3 <sup>rd</sup> – 4 <sup>th</sup> century>:	<b>CP 4</b>

## 4.8 Summary of approach

4.8.1 The proposal here is therefore to

- a) combine individual *context* assemblages in groups at different levels of chronological resolution, employing the CPs identified for York and their representation within the individual contexts; for example, comparing contexts grouped by their CP 'signature' (CPs 1, 2, 3, 4) and sub-divisions within them, or comparing contexts combined into 'early' (CPs 1-3a) & 'late' (CPs 3b-4c) groups
- b) shift the focus away from individual sites and seek to integrate analysis of Romano-British ceramic and animal bone assemblages from *across* the Roman urban settlement, using and integrating assemblages from multiple sites
- c) create viable (i.e. sufficiently large) assemblages for analysis, based not on phasing organised around structural episodes on *individual* sites, but based on *formation processes* and *CP attribution* – i.e. grouping deposits of directly comparable depositional status ('dump', 'occupation'; 'secondary', 'primary'), ceramic content, and sediment characteristics – across and between several sites

4.8.2 The purpose of this approach is to;

- a) obtain and compare 'background' signatures for animal bone assemblages co-deposited with ceramics of different CPs, or broader and narrower time-frames as represented by combinations or sub-divisions of these CPs, allowing comparisons and contrasts between them
- b) by tabulating the ceramic and animal bone assemblages by individual *contexts*, to experiment with the combination of contexts into different higher-order groupings, for example to see whether there are any recurring associations of specific animal bone characteristics with specific ceramic assemblage types, or with particular sediment types, perhaps allowing the identification of material from a probable common source within different areas of the urban settlement

Overall, this approach might be characterised as attempting an integrated, 'holistic' analysis of the corpora of ceramic and archaeozoological evidence from Roman York.

## 4.9 Proposed analyses

4.9.1 Re-grouping of assemblages by CP representation *between* sites rather than location in stratigraphic sequence on a single site

4.9.2 Initial comparison utilising very broad chronological horizons

4.9.3 Seek differences in composition of animal bone assemblages - based on a variety of possible indicators / signatures – between these broad chronological groupings

4.9.4 If these become evident in existing quantified data, further evidence for any differences suggested can be sought in further recording and quantification of animal bone assemblages from sites where these have not yet been identified and recorded in detail

4.9.5 Categorisation / groupings of deposits and their animal bone assemblages by their CP will also allow the possibility of refining / isolating differences in / between animal bone assemblages associated with individual CPs, or even Csub-Ps

4.9.6 It will be possible to *experiment* with groupings, to see whether patterns emerge in animal bone assemblages at greater levels of resolution

4.9.7 Try different groupings of individual contexts based on various criteria in search for patterns in animal bone assemblages

## 4.11 Archival and management recommendations arising from Chapter 4

4.11.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

4.11.1.1 Greater attention needs to be paid to consideration of *deposit status* during and post-excavation, in particular which contexts are grouped and combined to generate assemblages for quantitative and comparative analysis in analytical and interpretative studies.

4.11.1.2 Clearly, such work is facilitated by the holding of quantitative data in accessible digital form. Whether this is practical or valuable as an output of the *assessment* stage of reporting for commercially-funded field projects in York depends on the nature of the assessment protocols required by specifications for archaeological work within the city. Quantification by context of ceramics and animal bone may be more achievable at assessment stage for smaller excavations (and assemblages of commensurate size) than for larger ones, particularly in the case of animal bone.

4.11.1.3 With regard to animal bone, the incorporation of 'broad-brush' context-by-context animal bone assessment data – species present, carcass components represented, broad quantification (perhaps with fragment number ranges - <10 fragments, 10-50, 50-100, 100-500, 1000+.. ?) – might allow some useful initial comparisons to be made across and between sites, and the collation of assemblages across multiple sites for programmes of more detailed analysis. Again, this would be especially the case when combined with quantified ceramic data categorised by Ceramic Period.

4.11.1.4 The categorisation of ceramic assemblages by *Ceramic Period (CP) and sub-Period* (that is, by *individual CP, Csub-P and range of CPs*), and the incorporation of this data within an appropriate database (for example York Archaeological Trust's IADB) ought to be achievable in post-excavation assessment, and would be an extremely useful basis for comparison between sites.

## Chapter 5 Building *Eboracum* : stone, tile, timber and other building materials in the construction of a Roman fortress and town

### Summary

*Urban settlements depend for their existence on the materials required for the construction of their buildings and infrastructure as much as essential foodstuffs, and the selection and characteristics of these have a major impact on the specific forms of buildings and the general appearance of a town or city. They also offer important information about the relationships between an urban settlement and its hinterlands, and changes in the character and sources of these materials has significant implications for the nature of those relationships.*

*Two of the three main classes of material from which Roman York was built – stone, and brick and tile ('ceramic building material' – CBM) – have been encountered in quantity in excavations within the city. Significant quantities of the third, timber, have been found preserved on a handful of sites, and retrieved and recorded. Other materials and methods of construction which may have been relevant, indeed important, throughout the Romano-British period, have, however, received little attention.*

*Building stone in the Roman urban settlement is dominated by two types of limestone; magnesian limestone deriving from extensive beds in the lower Pennine foothills to the west of the Vale of York, and oolitic limestone from the Howardian Hills to the east of the Vale. Gritstone, derived from the same locality as the magnesian limestone, was also used in some quantity, and other stone-types also feature in archaeological strata from Roman York. It was the two limestones which formed the bulk of the building stone, however. It appears that the earliest Roman building in stone employed magnesian limestone, with oolitic sources being exploited later. Recent revisions of the chronology of the stone wall of the legionary fortress, built in magnesian limestone, also raise the possibility of a sharp divide between the use of the two stone-types, with oolitic limestone effectively replacing its magnesian counterpart, and with almost all of the known major buildings within the colonia to the south-west of the Ouse being built from oolitic material. This pattern, if confirmed, indicates important differences in the sources and possibly mechanisms of stone supply to the fortress and colonia at York.*

*The spectacular survival of building timber on one site in the Ouse floodplain, and less extensive preservation on a handful of other sites, with the virtually exclusive use of oak in construction, does not allow much scope for further investigation of timber supply. There are however indications of possible changing woodland management practices later in the Roman period, with young oaks felled early in their life-cycle being utilised in construction, and some evidence of re-use.*

*CBM from the great majority of Roman levels in York has been comprehensively recorded and attributed to a fabric series. The spatial and stratigraphic distributions of these different fabric-types can be examined, and their presence, absence or ratios at different times through the Roman period, or in different areas of the urban settlement, established. Potential links and common sources with the manufacture of different grey- / red- and coarse-ware ceramics, which are more readily dateable than CBM through the whole period, can also be investigated.*

*Building construction methods employing organic materials such as turf, mud-brick, wattle, daub and thatch, particularly in connection with the repeated re-use of stone-founded structures, and the continuing adaptation of masonry structures, may have been very significant in York and other higher-order Romano-British settlements, particularly in the later phases of their use from the later-3<sup>rd</sup> / early-4<sup>th</sup> century onwards. Structural, stratigraphic and palaeoenvironmental evidence exists in York to investigate these, but requires their detailed and painstaking examination.*

*These issues will be explored through examination of the type of building stone used in masonry structures which can be dated through associated stratified artefacts, the quantification of CBM present in dated phases and contexts within Roman sequences (integrated with the stratigraphic analysis proposed in Chapter 4), and the petrological and compositional (ICPS) characterisation of CBM fabric variants in conjunction with that proposed for ceramics in Chapter 9).*

## 5.1 The constructional history of Roman York : an outline

5.1.1 In Roman York, extensive construction in stone seems to have commenced in the Roman fortress from the mid- / late-2nd century onwards (Ottaway 1996, 292; Hall 1997, 327), although the chronology of the construction of the fortress wall in stone has been debated since the synthetic account presented in the R.C.H.M.(E)'s *Ebvracvm* volume in 1962 (R.C.H.M.(E), 5-37). Building in stone on the south-west bank of the river may have begun at around the same time (the construction of the first substantial, surfaced roads in this area appears to have begun then (Ottaway 1993, 74), although there are indications that the major stone *buildings* here are somewhat later, their construction perhaps commencing from the early-3rd century (ibid., 73, 75).

5.1.2 The construction history of Roman York, and its chronology, have been summarised by Ottaway (1996, \*\*\*-\*\*\*), and by the same author in a more popular and discursive mode (1993, \*\*, \*\*, \*\*). Whilst the chronology of particular elements of the Roman fortress is still disputed, notably those of the construction of the stone defences on its south-west side and of the rebuilding of the principia in stone, the prevailing consensus sees its earliest phase, comprising an earth-and-timber rampart and stockade enclosing ground-fast timber buildings (usually represented by the soil-filled voids of their sill-beam trenches and post-holes) constructed in the late-1st and early-2nd centuries, with these defences and structures being rebuilt in stone, or with stone footings, in the course of the later-2nd and early-3rd. On the south-west bank of the river Ouse – the area which almost certainly formed the core of the settlement raised to the status of *colonia*, probably in the early 3rd century – the earliest buildings so far encountered are the well-preserved timber structures at 24-30 Tanner Row (see 5.3b.3, below) the earliest of which seem to date from the late-2nd century. At Wellington Row, closer to the river, and adjacent to the main road through the settlement, a very substantial stone building – or a single chamber of an even larger structure – measuring c.20 m x 10 m was constructed above layers which contained a pottery assemblage dated to the mid-2nd century (Monaghan 1997, 1109), whilst further downstream an even larger masonry structure was constructed after c.AD 225 (ibid., 1102), apparently at broadly the same time that the Tanner Row timber buildings were demolished to make way for a substantial stone replacement (ibid., 1106).

5.1.3 It should be borne in mind, however, that the pottery which furnishes the dates cited for the construction of these large stone buildings in fact provides a *terminus post quem* (TPQ) for these events; it is entirely possible that the Wellington Row building was also built at some point in the first or second quarter of the 3rd century. This is particularly the case given that the creation of a level platform for such a substantial building operation in the fluvio-glacial sediments of the riverbank would very likely have involved the *truncation* of those deposits on the site which immediately pre-dated the construction episode. In any case the overall pattern in the area of the Romano-British settlement to the south-west of the river Ouse seems to be one of buildings constructed primarily of timber from the late-1st through the 2nd century, being replaced by successors built using quarried stone in abundance from the late-2nd / early-3rd centuries. Both types of building seemingly made extensive use of fired ceramic tiles as roofing material.

5.1.4 Virtually all of these stone-built, or at least stone-*founded* structures – see 5.3d.3-4, below – known of at present were subject to often extensive modification and reconfiguration in the course of

the later-3<sup>rd</sup> and 4<sup>th</sup> centuries, and in at least some instances into the 5<sup>th</sup>, potentially introducing other, less well-recognised classes of building material in their construction. These connected developments have potentially important implications for other research themes considered in this report (see 5.3d.3-4, below; Chapter 6, 6.2.1-5; Chapter 7, 7.3; 7.6.2-4).

## 5.2 The wider research context and rationale for study

5.2.1 In material terms, urban settlement is in significant respects defined by its built environment; a dense concentration of population (relative to overall contemporary population densities) requires structures to accommodate it, and in which to perform the range of activities which occur in urban communities. Characterising the supply of building materials, and where they were obtained from, and how these may have changed in the course of the late-1<sup>st</sup> to early-5<sup>th</sup> centuries, is therefore of considerable interest in studying the development of Roman urban settlement at York in this period.

5.2.2 As an aspect of urban provisioning and supply, this the relevance of this area of research can be justified in the same terms as have been rehearsed at length in the introduction to Chapter 4. Whilst that chapter is essentially concerned with the *victualling* of a Romano-British urban settlement, this one deals with three distinct types of material – timber, stone and brick/tile ('ceramic building materials', henceforth 'CBM') – within a single category, 'building materials', which whilst distinct from the food-related resources considered in Chapter 4, are equally essential for the creation and maintenance of the infrastructure of an urban place, necessary for accommodating its *human* population and their activities.

5.2.3 As with Chapter 4, however, there is also a less directly functional component to this subject, in that, as with victualling, the activities considered in this chapter served to create the *arena* in which Romano-British urban lifestyles and social relations were enacted, and, in their particular configurations as components of buildings and related structures, the materials involved were essential to creating the medium for the expression and display of status and identity in that manner. The choice and use of different building materials may itself have been an element of the expression of these. Again, these aspects are considered in more detail in Chapter 6.

5.2.4 There are, however, three points, developing issues addressed in the introductory section to Chapter 4 (4.2), which should be made here. Burnham *et al* note that little is currently known 'about the economic implications of actually *creating* the urban fabric, in terms of trying to estimate the amount of material involved, the sources of supply, and the mechanics of procurement.' (2001, 70), whilst Hill observes that 'the new public architecture...enabled and demonstrated the new political realities of life [to the indigenous population]' (2001, 14). Whilst timber was an essential component of this architecture, its scale, permanence and monumentality was, it may be argued, a function of construction in stone, brick and tile.

5.2.5 The points made by Burnham *et al* and Hill are mutually reinforcing, and both connect to Hill's claim that 'the 'veneer' model for the 'Romanisation' of Britain is wrong (ibid., 15); Romano-British stone quarrying and brick and tile manufacture, both on a massive scale, were, qualitatively and quantitatively, different from anything which the indigenous population of the British Isles had previously encountered or, more significantly, been involved in. This in turn leads into Lavan's (1999) argument, cited by Jones *et al* (2003, 130), that in Roman provincial centres (of which *Eboracum* was indisputably an example), it was 'only the presence of the Imperial court which stimulated huge investment and expenditure by provincial governors', an observation which may have significant implications for understanding the dynamics and chronology of Romano-British urban development at York and will be further touched on below.

5.2.6 Although the earliest structures in the legionary fortress, its environs and the settlement on the south-west bank of the Ouse were all built in timber, since its further research potential in York is at present limited (see below), discussion will commence with building stone.

### 5.3 Categories of building material from Roman York (Figs 5.A-G, 5.J, 5.R-T)

#### 5.3a Building stone

5.3a.1 Overall, there is a pressing need to evaluate in detail the chronology of construction in stone on both sides of the Ouse. The particularly fragmentary nature of our knowledge of the buildings and overall layout of Roman York means that the dating and correlation of sequences from different sites needs to be handled with considerable care, and with reference to the issues of deposit and artefact assemblage status rehearsed in Chapter 4 (4.3 – 4.5). Studying the excavated sequences in this way, examining in detail the association of *in situ* structural remains with stratified deposits containing dateable artefacts, and, crucially, the *status* of those deposits, will provide a clearer picture of the chronology of building stone supply, which is obviously crucial in understanding changes to it. Data from the site at Wellington Row, close to the modern river-frontage on the south-west bank of the Ouse, where the presence of building stone types in each context was identified and recorded by a geologist in the course of excavation, is of particular significance here.

5.3a.2 A useful step towards this has been taken with the compilation in 2007, before the current project was commissioned, of a gazetteer of buildings from all areas of the Roman urban settlement, undertaken for YAT in 2008 by Greg Parsons, then of the Dept of Archaeological Science, University of Bradford. What needs to be added to this gazetteer is information about the evidence for the attributed construction dates, taking full account the stratigraphic context of that evidence.

5.3a.3 The main sources of stone supply to Roman York have long been recognised. Buildings in the legionary fortress were virtually all built of magnesian limestone from the Pennine foothills to the west of the Vale of York (Buckland 1988). The single exception to this is the ‘Anglian Tower’\*, the dating and even function of which is uncertain and problematic. This enigmatic structure was built of roughly-coursed *oolitic* limestone rubble, almost certainly from the Howardian Hills to the east of the Vale of York. This is the stone-type of which all the known major buildings within the *colonia*, on the south-west bank of the Ouse (for example at Wellington Row and 1-9 Micklegate), were constructed (Ottaway 1993, 73, 102), albeit of regular and regularly-coursed blocks, rather than the small, irregular limestone slabs of the Anglian Tower (Buckland 1984, 53-4, & figs 2-4).

(\*The Anglian Tower itself is a structure of the greatest interest, for which a late-Roman date has been suggested on the basis that it employs seemingly freshly-quarried stone, rather than re-using masonry from Roman buildings as might be expected of a post-Roman structure [Buckland 1984]. There is at present, however, fundamental uncertainty concerning its date, and indeed, this author would argue, its function as a structure; consequently it has not been included as a subject for discussion or research in this chapter).

5.3a.4 In addition to the two limestone variants, there are other stone-types used in York, notably the gritstone used for quoin-stones and other structural detailing, for columns, extensively in the Roman sewer system, and for sarcophagi, which was quarried from the same area as the magnesian limestone. Other stone-types occur in much smaller quantities (cf. Buckland 1988), although the likely origin of the sandstone roof-slabs recovered in quantity from Wellington Row (Ottaway 1993, 74) – from sources to the west or east of the Vale of York, or from elsewhere? – Buckland 1984, 55. However, it is the two limestone variants which account for the great bulk of construction in stone in the Roman urban settlement, and it is these on which most attention will be focused here.

5.3a.5 Oolitic limestone is recognised as having *augmented* magnesian limestone for building in *Eboracum* at some point in the Roman period (e.g. Buckland 1984, 54-5; Ottaway 1993, 73, 75), but the chronology of this has not been examined, in detail, on a site-by-site basis, a further reason for the critical examination of the dating evidence for stone structures proposed above. The results of recent excavations have in fact raised an extremely interesting possibility regarding the sequence of the different types of building stone used in Roman York, which may indicate more clear-cut chronological and spatial differentiation than has previously been recognised.

5.3a.6 This hinges on the dating of the south-western frontage of the legionary fortress, facing the river Ouse, built in magnesian limestone *saxa quadrata* with projecting corner and interval towers. Since the publication of *EBVRACVM* in 1962 this structure has been dated to the late-3<sup>rd</sup> / early-4<sup>th</sup> century (RCHM(E) 1962, 10; Sumpter & Coll 1977, 88-9), largely on the basis of morphologically similar fortifications considered to be of this date elsewhere in Britain and the Roman Empire, with support from stratigraphic evidence claimed but now contested, as a later addition to an earlier, late-2<sup>nd</sup> / early-3<sup>rd</sup> century circuit on the other three sides of the fortress, replacing the original south-west wall which would have been contemporary with those other three sides (RCHM(E) 1962, 8-10). A recent re-evaluation has revised this date to the early-3<sup>rd</sup> century, critiquing and discarding the evidence of a late-3<sup>rd</sup>-century coin alleged to have been found stratified in association with the construction of this wall (Ottaway 1996, 287), although this has been strongly contested by other researchers into Roman York (Heywood 1997). However, excavations undertaken in 2005 have caused this dating to be revised again. Roundwood piles supporting the foundation of the western projecting corner tower of the fortress (the 'Multangular Tower'), which show every indication of having been freshly-cut from recently-felled wood, have been C<sup>14</sup>-dated to *the first half of the 2<sup>nd</sup> century*, and excavation has shown no evidence for there having been a preceding phase of defences in stone along the south-western frontage of the fortress (Hunter-Mann 2010).

5.3a.7 The unavoidable implication of this discovery is that the south-western frontage with its projecting corner and interval towers was the *first* and *earliest* component of the walled circuit to be constructed in stone, with the other three sides added to *it*, rather than vice-versa, is one which has radical implications for the pattern of stone supply to the Roman urban settlement(s) at York. The previous chronology saw construction of the fortress walls in freshly-quarried *magnesian* limestone spanning the late-2<sup>nd</sup> – early-4<sup>th</sup> centuries; the new chronology, by moving the south-western frontage, the one element of the stone wall of the legionary fortress which had seemed, unambiguously, late Roman, from the 4<sup>th</sup> century to the early-/mid-2<sup>nd</sup>, raises the possibility that oolitic limestone actually *replaced* magnesian limestone in the 3<sup>rd</sup> and 4<sup>th</sup> centuries, rather than simply augmenting it. This pattern has parallels with the shift of *ceramic* production into oolitic limestone areas to the east of the Vale of York at this time, following abandonment of Ebor ware production in the immediate vicinity and wider environs of the fortress in the mid- 3<sup>rd</sup> century, as has been indicated in 4.7.7 above, and in Chapter 9 (9.6a.1).

5.3a.8 This apparent pattern, if correct, has great significance, as it would seem to indicate a complete re-orientation in supply of building stone to Roman York from west to east, probably at some point in the 3<sup>rd</sup> century. It may also indicate a relationship between the *colonia* on the south-west bank of the Ouse and the Howardian Hills which did not exist between the legionary fortress and that upland area – in spite of the presence of an adjacent fort at Malton, which must have been integrated within military networks.

5.3a.9 These possible developments can be investigated in more detail and clarified through examination of evidence from excavations in the fortress, *colonia* and other settlement areas to address the following questions;

- what is the chronology of building construction in these settlement areas using the major limestone types ?
- are there *any* indications of the construction of *buildings* – as distinct, for example, from road surfaces – in magnesian limestone in the settlement south-west of the Ouse ?
- the ‘Anglian Tower’ apart, what is the evidence for the use of oolitic limestone for building within the fortress ? (Buckland 1984, 54-5, cites several cases where ‘oolite’ or ‘oolitic limestone’ has been identified in the construction of the fortress wall and other structures within the fortress, but notes that in no case have these identifications been confirmed)
- do structural modifications to buildings in the later phases of the legionary fortress and its immediate environs, from the late 3<sup>rd</sup> century onwards, employ freshly-quarried magnesian limestone, freshly-quarried oolitic limestone, re-used magnesian limestone or re-used oolitic limestone, or what combination(s) of these ?; if the latter, do they show any indications of consistent spatial patterning across the fortress and its environs ?
- the possible occurrence of in the legionary fortress of the variant of oolitic limestone found in small quantities in magnesian limestone areas needs to be identified and checked
- what do the (often dateable) public inscriptions and private tombs and gravestones tell us about stone use – can any progression from magnesian to oolitic limestone be detected in these ?

5.3a.10 The re-use of Roman building stone in York in the post-Roman centuries is well-attested (notably its extensive use in the late 11<sup>th</sup>-century tower of the church of St Mary Bishophill Junior; Buckland 1987, 111), the corollary of such re-use being, for example, the near-total robbing of stonework from Roman masonry buildings at the nearby site 37 Bishophill Senior (Carver 1978, pl.\* , p.\*\*). Less remarked on – indeed frequently not explicitly recognised at all – is the considerable evidence for the re-use of building stone *within* the Roman period, for example in the *principia* building beneath York Minster (Phillips & Heywood 1995, pl.16, p.52) and at the extensive bath-house complex in the southern quarter of the legionary fortress, encountered at 4-6 Church Street (Whitwell 1976, 18-21 and pls XIIa, XIIIb and XIVb) and beneath the Roman Bath public house in St Sampson’s Square (R.C.H.M.(E), 42-3). This is a theme which is also particularly relevant to *very* late- / sub- / and post-Roman structural modifications. In such contexts, however, post-Roman stone-robbing comparable to, if less extreme than, that encountered at St Mary Bishophill Senior see for example (e.g. Chapter 7, 7.6.2-3) frequently renders building stone identification difficult or more usually impossible.

### 5.3b Timber

5.3b.1 Substantial assemblages of Roman building timber have been retrieved from four sites in York, three of them – 24-30 Tanner Row (Hall & Kenward 1990, 292; fig.68, p.340; fig.69, p.348; fig.70, p.356; Ottaway 1993, 79-83; fig.44, p.81; fig.45, p.82), Wellington Row (ibid., 76) and 58-9 Skeldergate (Donaghey 1978, 15-29) – within the Ouse floodplain on the south-west bank of the river, the fourth, 1-5 Aldwark (Ottaway 1996, 178-80), in the environs of the legionary fortress. By far the largest and most significant of these is that from 24-30 Tanner Row, where over 360 structural timbers were excavated and retrieved from four buildings and their associated structures, forming two successive ranges, one overlying the other, dating from the late-2<sup>nd</sup> to early-3<sup>rd</sup> centuries. At Wellington Row c.80 substantial roundwood piles were driven into the base of the construction trench for an extension to the large building in Area 7 (see Fig.5.F), an episode which existing accounts date to the late-2<sup>nd</sup> or early-3<sup>rd</sup> century but which could be, and in fact is more likely to be, significantly later (Monaghan 1997, 1109). The excavations at 58-9 Skeldergate and 1-5 Aldwark both encountered plank-lined wells very similar

to one another in terms of their method of construction. Both appear to have been constructed in the late-2<sup>nd</sup> / early-3<sup>rd</sup> century. Other sites in York have also produced some Roman timber (for example the late-1<sup>st</sup> century strapping of the legionary fortress rampart at 7-9 Aldwark; Ottaway 1996, 133), but these are typically small and poorly-preserved compared to the examples previously cited.

5.3b.2 The overwhelming majority of the timbers from these four sites are oak (*quercus*), and given the predominance of this single species, the usefulness of this data for investigating patterns of supply is limited. A further limitation is imposed by the fact that most of the oak used in Roman York (or at least that which has been encountered to date) was felled within the first fifty years of its growth cycle, which largely prevents the 'matching' of these timbers with reference to a dendrochronological sequence (cf. Ottaway 1993, 50), which might otherwise provide an extremely accurate date for their felling, and consequently for the construction of the buildings and structures they formed part of.

5.3b.3 Detailed examination and recording of the timbers from Tanner Row produced a wealth of evidence concerning their selection, dressing, cutting, jointing and re-use (Buckingham 1994, unpubl. archived manuscript), and the assemblage has significant further interpretative potential within a programme of fully-integrated stratigraphic and assemblage analysis such as that outlined in 4.7, above. Two characteristics are of particular interest. Firstly, a timber revetment in the earliest phase of building utilised significant numbers of lengths of ash (*fraxinus*) and small quantities of elm (*ulmus*) and pine (*pinus*) in its construction, contrasting with the evidence from elsewhere in York and from the later phases of building at Tanner Row itself and suggesting the opportunistic use of locally available wood resources in addition to oak. A similar phenomenon may be evident in the use of alder (*alnus*) piles in the underpinning of the foundations of the south-western curtain wall of the legionary fortress on the opposite, north-eastern bank of the Ouse, a structure which it now appears was constructed in the early-2<sup>nd</sup> century (Hunter-Mann 2012). The later phases of the Tanner Row buildings apparently display another interesting phenomenon, namely the quite extensive evidence for *re-use* of timber in their construction, the suggestion being that the re-used timbers in the Tanner Row buildings derived from the dismantling of earlier structures within the fortress. Unfortunately, information regarding possible chronological or sequential patterning of such re-use is not immediately available, though this could be obtained from the primary records held in archive. Probable extensive re-use of timbers has also been observed from the 58-9 Skeldergate well (Donaghy 1978, 29). Three of the timbers from this well were C<sub>14</sub>-dated, yielding results of ad 200 ±80 (HAR-1729), ad 120 ± 70 (HAR-1927) and 200 ± 70 bc (HAR-1928). The date ranges of the first two overlap, and these timbers could have been felled almost contemporaneously or up to two centuries apart, either freshly-cut for or re-used in the construction of the well. Of the last it is stated that its 'early date...presumably reflects the use of heartwood from old trees' (Hall *et al* 1980, 111). Comparable information about the timbers used in the well at 1-5 Aldwark does not seem to be available; this, being within the legionary fortress, would have been an interesting point of comparison.

5.3b.4 Nevertheless, there are some interesting observations to be made from what is currently known of the Tanner Row structural timbers. Where oak cannot be accommodated within a dendrochronological sequence due to its having been felled too early in its growth-cycle (at aged 50 years or younger), it has been suggested that such felling practice may be an indicator of woodland management (cf. Tyers *et al* 1994, 20), perhaps indicative of a shift from the utilisation of mature (?primary) woodland to managed 'stands' of trees. If this were the case with timber from the Tanner Row buildings (whose construction dates are considered to have commenced in the late-2<sup>nd</sup> century, with all three distinguishable phases of construction having occurred within the late-2<sup>nd</sup> to early-3<sup>rd</sup>), re-used from earlier buildings in the legionary fortress, this would suggest such management practice was in place by the middle of the 2<sup>nd</sup> century. Again, detailed examination of the distribution of evidence for re-used timber through the three phases could shed light on this possibility, and should ideally take place in the context of an integrated analysis of structures, stratigraphy and artefact assemblages as proposed in 4.7, above. The contrast between these suggestions of the early felling of trees within

managed woodland, and the presence in the Skeldergate well-lining of timber already growing in the 2<sup>nd</sup> century BC or earlier is noteworthy, though this could itself, of course, be re-used from a dismantled earlier structure.

5.3b.5 It is interesting to note, however, that the Wellington Row timber piles, probably of 3<sup>rd</sup> or earlier 4<sup>th</sup>-century date, were of wood felled too early in the growth cycle to be susceptible to dendro dating, and this substantial assemblage may therefore be indicative of major changes in woodland management practice, perhaps indicating a shift from mature (?primary) woodland to managed 'stands' of trees (Tyers *et al* 1994, 20).

5.3b.6 Unfortunately there is insufficient other material to be able to investigate this further in York, but it may be indicative of changing rural land-use and resource management, perhaps in the context of the establishment and expansion of estate production in York's rural hinterland, a development which may also be suggested by the growth of extensive rural ceramic manufactories, as at Crambeck, again in the Howardian Hills.

### 5.3c *Ceramic Building Material ('CBM')*

5.3c.1 Brick and tile ('CBM'), including that from Roman sequences, has been classified, recorded and quantified from *all* YAT excavated sites by Jane McComish of YAT, who analysed this data, is now held within YAT's IADB system, as part of a Masters dissertation, and kindly provided most of the information for this chapter section. Nineteen (19) visually distinguishable Roman-period variants have been identified, which were divided into five broad groupings, their inclusions in all cases dominated by quartz but containing a range of other coarse components in small quantities. These nineteen fabric-types are dominated by three variants (R2, R9 and R10), forming one group which accounted for 60% of all of the material examined. Samples from this group were compared with natural clay samples from recent excavations in Hungate, within c.100 m of the site of the legionary tile kilns excavated close to the Borthwick Institute in 19\*\*, (undertaken by Dr Alex Finlay, then of the Dept of Earth Sciences of the University of Durham), providing strong evidence that this locale was the clay source for this tile group. Although it has not yet been demonstrated, it seems highly likely that the other four groups all also exploited local clay sources, though not necessarily in the immediate vicinity of Hungate and the Borthwick tile kilns.

5.3c.2 The first step in investigating change in this aspect of supply of building materials to Roman York was investigation of the occurrence of the different fabric variants through stratigraphic sequences on Roman sites in York. This was undertaken on twenty (20) sites, located across all areas of the Roman settlement. Although certain chronological patterns were identified, for example a progressive decrease in thickness of tiles between the late-1<sup>st</sup> and mid-3<sup>rd</sup> centuries, all indications are that the tile (dominated throughout by variants R9 and R10) was manufactured locally throughout. An interesting pattern relating to the thickness of the tile was that the thickest tiles were those from within the legionary fortress, followed by the area to the south-west of the river Ouse (usually identified as the *colonia*; but see 2.5.10, above), with the thinnest tiles being found in the areas around and beyond these two foci. This seems to indicate a sequence of development of the built-up area of urban-type settlement at York which, whilst not unexpected, and demonstrated from other sources of evidence such as ceramics, does illustrate the interpretative potential of CBM when studied in the mass. All indications from York are that the *manufacture* of brick and tile ceased in the mid-3<sup>rd</sup> century, a pattern consonant with Roman Britain as a whole (Jane McComish *pers comm.*), though of course the potential for the *re-use* of this material, whether in masonry walls, roofs or floors, is considerable; that such re-use occurred in Roman York is well-attested (see 5.3a.9, above).

5.3c.3 There is potential for the work undertaken to date by McComish to be developed by expanding the range of sites examined, but perhaps more productively to examine the assemblages from the largest and most stratigraphically complex Roman-period excavations (some of which were included in the twenty sites alluded to above) in closer relation to the stratigraphic units which contained them, as part of the integrated analysis of deposit / assemblage origins, formation process and primary / secondary status proposed in 4.7, above. This might serve to further clarify the chronological and spatial patterning of the CBM fabric types and groups identified to date, in particular with reference to those variants which do not form part of the predominant R2/ R9 / R10 group, and also to associate roof-tile debris, as distinct from other roofing materials (see 5.3d.8, below), more specifically with particular stages in the life-histories of masonry buildings which frequently saw several major stages of adaptation (e.g. Chapter 7, 7.3.3; Fig.7.B).

5.3c.4 In addition to this, there are obvious potential links between CBM production and grey- / red-ware *ceramic* production (see 9.6a, below); this is demonstrably the case with Ebor ware, with brick and tile as well as ceramics having been manufactured on the Borthwick Institute site in the 2<sup>nd</sup> century. By including samples of CBM fabric variants in the ICPS analysis proposed below, it may be possible to identify common clay sources for both pottery and CBM manufacture, and to investigate the extent to which the organisation and locations of manufacture of the CBM supplied to Roman York followed those of its ceramics. This seems very likely to have been the case until the mid-3<sup>rd</sup> century, the point at which the tile manufactories supplying Roman York appear to have ceased production (McComish *pers comm.*); it is surely no coincidence that this is approximately the point at which ceramic supply to the fortress and *colonia* shifts from being locally-based (and massively dominated by 'Ebor ware') to more remote locations to the east (notably Crambeck production in the Howardian Hills).

5.3c.5 Roof-tile seems to have been replaced with split-stone roofing slabs as a roofing material in York by the mid-3<sup>rd</sup> century (such slabs having been used in this manner from the mid-/late-2<sup>nd</sup>), a pattern consistent with Roman Britain as a whole. Interestingly the source employed for many of these roofing slabs was sandstone deriving from the Coal Measure and Millstone Grit geological series in the valleys of the eastern Pennines (cf. Ottaway 1993, 55; Buckland 1988, 250) to the west of the Vale of York, that is the same general area from which the magnesian limestone and Millstone Grit used in the mid-2<sup>nd</sup>-century construction of the legionary fortress was sourced (5.3a.3, above). Sandstone slabs from the *eastern* side of the Vale are also known from Roman York, however, employed as flooring in the sewers and culverts beneath the legionary fortress (ibid., 265) a system considered to have been constructed by the late-2<sup>nd</sup> century, thus apparently pre-dating the widespread use in construction in Roman York of oolitic limestone from the same general area. Whether either sandstone or oolitic limestone (which itself splits into thin, flat slabs; Ottaway 1993, 40) from sources east of the Vale were used as roofing material following the apparent cessation of tile production in the mid-3<sup>rd</sup> century is at present unclear, as systematic research comparable to that of McComish for CBM has not as yet been undertaken to identify the occurrence and geological origin of stone flags and slabs from Roman sites in York. The evident potential for the *re-use* of ceramic tiles for the roofing of re-built or modified buildings after this point in time also needs to be borne in mind. Again, there is a resonance in the acquisition of these roof-tile equivalents from sources at a distance from York, particularly to the east of the Vale, with developments in ceramic supply. Buckland (1984; 1988, 263-4) has indeed argued for the importation of oolitic limestone to the Roman settlement as ballast in vessels carrying other, more valuable commodities, specifically the products of the kilns at Crambeck. Alternative explanations might, however, question whether such a marketised conception of later Roman Britain is the only, or indeed the most appropriate perspective to take on the transshipment of goods and materials to *Eboracum* in the 3<sup>rd</sup> and 4<sup>th</sup> centuries AD.

### 5.3d Other building materials

5.3d.1 Attention in this section has been focused on the three categories of Roman building material from York which have received most research attention, by virtue of their widespread survival as actual *in situ* masonry or demolition debris or, in the case of building timber which itself survives far less frequently, testified by the *negative* traces – post-holes, cill-beam slots etc. – which indicate its former presence. There are, however, indications of other materials which may have been important in the construction of the building stock of Roman York, and could indeed have a crucial role to play in understanding the development and even the chronology of the urban settlement. These have received very little attention to date because they are less immediately obvious than masonry walls and their foundations, structural timbers and the ground-fast associated traces they leave behind, or CBM and other roofing and flooring materials.

5.3d.2 The starting-point for consideration of such materials is a photograph of the lowest stone courses or foundation of a secondary, late 2<sup>nd</sup>-century (or later) dividing wall inserted into the mid-2<sup>nd</sup>-century barrack block excavated at 9 Blake Street (Hall 1997, fig.243 p.346; an equivalent reproduced here as Fig.5.D), with a facing of wall plaster surviving apparently *in situ* to a height of c.300 mms above the stone course. The text (p.345) assumes that this plaster survived ‘the robbing of the structure of the wall behind it’ when that stonework was subsequently robbed out. The soil visible *behind* this surviving plaster facing does not, however, resemble a typical robbing backfill deposit of the type frequently found on Roman and later sites in York, being a clean and apparently fine-grained sediment which the c.30 mm-thick plaster facing appears to be actually *adhering* to. This seems rather to be an example of mass-walling – perhaps of turf or mud-brick (though no outlines of individual turves or mud-bricks are recognisable), or even simply of compacted (rammed) earth – to which a plaster rendering had been applied. Whilst such methods of construction have been quite widely recognised from Romano-British towns and other sites, they have not previously been suggested or even considered in the case of Roman York.

5.3d.3 Although it should be noted that the example cited is an *internal* wall within a barrack (contrastingly, up to six courses of the north-western external wall of the building survived some 0.45 m higher – *ibid.*, fig.248, p.351 – an issue which will be returned to), the possibility that a) the ‘stone’ barracks were actually for the most part sleeper-walls for superstructures constructed in less durable material, and b) that this ‘less durable material’ might have comprised mass-walling comprising turves or mud-brick, as opposed to timber, has important ramifications for the study of buildings, settlement and structural and stratigraphic sequences in Roman York, perhaps especially in the later Romano-British period from the mid-/late-3<sup>rd</sup> century onwards. These may be briefly considered as follows.

5.3d.4 Firstly, recognition that the stone walls of the barrack blocks and many other military buildings within the legionary fortress may in very many cases have been ‘sleeper’ walls, supporting superstructures of timber frames with rendered or plastered wattle-&-daub infill, or (as suggested in the case of the 9 Blake Street barrack block) mass walling comprising turf or mud-brick, presumably also in conjunction with timber framing to carry a wall-plate or ring-beam to support the roof structure, allows the possibility that these sleeper walls could be repeatedly re-used as foundations for rebuilt structures, whilst leaving very little if any obvious trace on the foundation itself for such rebuilding. This in itself has important implications for the potential longevity of buildings as they are encountered archaeologically, where in most cases it is only the foundations or at best lowest courses of their walls which survive. If, by contrast, it is assumed that stone foundations carried stone superstructures to their full height, the assumption will tend to be that once a building was ‘reduced’ to its lowest courses of stonework it would have ceased to function.

5.3d.5 A further important implication of this interpretation of masonry ‘sleeper’ walls and the superstructures they carried is that their re-use for repeated rebuildings, on a regular, rectangular

structural 'footprint' would allow the construction of wall-plate or ring-beam roofs and a re-use of roofing materials – particularly ceramic tiles – from earlier incarnations of the structure. The re-use of individual timbers in such successive re-framings of or repairs to the superstructure is also highly likely, given the known extent of re-use of timber in the framed structures of the later medieval period, and indeed in the sequence of late-2<sup>nd</sup> century timber buildings from 24-30 Tanner Row (5.3b.1-3, above; Ottaway 1993). Once again, these considerations open up the possibility of a complexity and longevity of the structural history of buildings which need leave very little trace in their lower elements and associated surfaces, making them difficult to detect archaeologically, and very often wholly absent in the interpretation of archaeological sequences.

5.3d.6 As well as low sleeper walls of only two or three courses, it is clear that the superstructures of many of York's Roman buildings were constructed in stone to a higher level. This is demonstrably the case, for example, for the northern wall of the 9 Blake Street barrack block described previously (5.3d.2-3), where stone courses survived to a height of c.0.65 m above its foundation, and also at Wellington Row, where one wall of the large masonry building in Area 7 survived to fifteen (15) courses and c.1.5 m above its footings (see Fig.5.J). The question remains, however, whether these buildings would have been constructed entirely in stone to roof level, or whether their masonry walls would have been comparatively low in relation to the height of the building as a whole, supporting a timber superstructure above the level of the masonry typically encountered in excavations. These issues are, of course, important for understanding the architecture of Romano-British towns, and the appearance of buildings as an aspect of architectural display considered in Chapter 6. Their consideration here, however, is primarily concerned with their implications for the constructional *materials* employed in Roman York, and by extension for the structural histories and longevity of buildings encountered in excavations, the 'by-products' the deterioration and decay of such buildings might leave in the ground, and the interpretation of the remains encountered by archaeologists.

5.3d.7 The issue of repeated rebuilding of structures in the manner summarised above, where the *original* foundations and methods of construction are employed, leads on to consideration of more substantial structural adaptation, and the use of *different* building methods and materials in the re-use and adaptation of Roman masonry buildings. One aspect of this concerns the insertion of secondary settings and sockets for timber posts within the fabric of the stonework. The adaptation of the stone granaries at the Roman fort of *Banna* (Birdoswald) on Hadrian's Wall by the creation of such post-settings in the thickness of the lower courses of their walls in the 5<sup>th</sup> or possibly 6<sup>th</sup> century (Wilmott 1997) is a well-known example of this, and there is strong evidence for similar practice, in conjunction with the foundation of new timber uprights set on padstones in new locations within and around its stone walls, in the successive adaptations of the building at Wellington Row (see 7.3.3, below; Figs 7.B.c-d and 7.G.ii). This appears to have originally been constructed in the late 2<sup>nd</sup> or early-3<sup>rd</sup> century, but was subject to a major episode of reconstruction in the later 4<sup>th</sup>, and subsequent very substantial rebuilding and modifications which apparently extended well into the 5<sup>th</sup> (Whyman 2001). Modifications such as this may indicate a shift in construction method (as they certainly do at Birdoswald from superstructures built entirely from stone, or wooden superstructures employing squarely-cut and jointed dressed timber set on sill-beams and supporting wall plates or ring-beams, to more *ad hoc* methods involving uprights set into the masonry fabric of the building, or supported on padstones, or earth-fast, or a combination of these, potentially using components including both re-used cut timber from earlier buildings and freshly-felled roundwood.

5.3d.8 These observations lend significance to the often very slight features and indications of impacts on the surviving stonework of Roman masonry buildings, which require recording in an appropriate level of detail, and, equally importantly, careful scrutiny during post-excavation analysis. A phenomenon which may very often go hand-in-hand with such adaptations is the raising of internal floor levels and exterior ground surfaces within and around the building in question; this is certainly what happened at Wellington Row, leading to the level of the floor within the final structural adaptation of the building being

over one metre above that of the original. Such accumulations of sediment lead in turn to consideration of the potential of the masonry 'cores' of Romano-British buildings to be adapted and continue as habitable structures through the use, in addition to the creation of new forms of wooden superstructures as described above, of other organic and mineral building and roofing materials, namely turf, mud-brick, wattle, daub, earth and thatch. The degrading and disposal of such materials as they decayed and were replaced might very well result (as suggested by Dark, 199\*, \*\*\*), in the context early post-Roman Britain) in deposits such as the 'dark earth' frequently encountered in the post-Roman landscapes of British towns, but also in the late-Roman layers which give 3<sup>rd</sup>- and 4<sup>th</sup>-century horizons in York and other higher-order Romano-British settlements a decidedly muddy appearance. The organic and mineral traces which might be expected to be present within these materials – plant and insect species characteristic of grassland, fen/ carr and ruminant dung, for example – are often present in abundance in environmental samples taken from these contexts. Although there are many possible mechanisms and routeways whereby such species could have been introduced into these horizons, the integration – again, as discussed and proposed in Chapter 4, 4.5-7, above – of palaeoenvironmental analysis with detailed consideration of the structural histories and evidence for adaptations of masonry buildings would be a step towards a better understanding of both buildings and the environmental assemblages found in varying degrees of association with them.

## 5.4 Proposed analyses

### *Building stone*

5.4.1 Comprehensive examination of all published and archived excavation records referring to stone-types encountered in excavations of Roman sites in York (including the detailed data on stratified stone from Wellington Row; 5.3a.1), and the *dating* of the structures built from them, taking into account issues of the *status* of associated deposits, as discussed in Chapter 4 (4.3) – in particular the identification / discrimination of magnesian and oolitic limestone, and their presence / absence / chronology in the legionary fortress, *colonia* and adjacent and suburban settlement areas.

5.4.2 Identify the *type* of oolitic limestone where this is found in the fortress – from the Howardian Hills to the east or from within the magnesian limestone beds of the Pennine foothills to the W, where it also occurs in restricted quantities (Ottaway 1996, 288)

5.4.3 Tabulate dated inscriptions on stone from York, and the type of stone employed; the great majority of these pre-date c.AD 300

5.4.4 Particularly with reference to 4<sup>th</sup>-century (and later ?) stone 'supply', examine excavated buildings and structures for re-use of building stone from earlier structures and the chronology of this as indicated by associated deposits.

### *Timber*

5.4.5 Given the ubiquity of oak in the construction of the relatively small number of timber buildings and structures which have been excavated in York, there seems little that can be done to pursue this issue further at present, except to note as above the apparent use of timber felled early in its growth cycle in piles used in the mid-4<sup>th</sup> century modification of the Wellington Row building may indicate changes in available timber sources and / or woodland management regimes by this period.

### *Brick & Tile (CBM)*

5.4.6 Roman-period brick and tile has been comprehensively recorded, classified and quantified by context from all YAT excavations in York; this data can be integrated within stratified sequences, and with the dateable artefacts those sequences contain, to seek chronological sequence / patterning of the different CBM fabric variants. Again, this analysis needs to be integrated with the approach to deposit status and chronology proposed in Chapter 4 (4.3, 4.4)

5.4.7 This approach will also allow *spatial* comparisons to be made, to identify possibly different patterns of supply to different areas of the urban settlement, throughout the Roman centuries or in different periods during that overall time-frame

5.4.8 Petrological and ICPS analysis, and comparison with the results of similar analysis of ceramic grey- / red- and coarse-wares (see 9.8.3 below) offers the potential to relate the CBM variants chronologically and in terms of production areas

## **5.6 Archival and management recommendations arising from Chapter 5**

5.6.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

5.6.1.1 The identification by a geologist of stone-types in structural stonework of Roman structures when exposed in the ground, and advice on the retention of samples and appropriate strategies for geological identification.

5.6.1.2 The selection and retention of dedicated samples of stone from different strata in the course of excavation – in the manner of the collection of a ‘suite’ of rocks from a locality as undertaken in geological fieldwork – for identification by a geologist, followed by a further stage of retention / discard with recommendations for further analysis.

5.6.1.3 The species identification of wood and timber assemblages from excavations in York is already routinely undertaken (at least on YAT excavations). This should provide a model protocol for excavations in the city

5.6.1.4 Roman-period CBM (on YAT excavations) is already classified and quantified using an existing type series and a discard strategy implemented in the course of excavations and at assessment stage, and this work has also been carried out on assemblages from major ‘backlog’ sites. This should provide a model protocol for excavations in the city.

5.6.1.5 The geological identification of building stone from excavations should be an equivalent protocol in the course of excavation and assessment as wood / timber and CBM currently are for YAT projects.

## Chapter 6 Consumption, identity and display in Roman York, c.AD 71 – 400

### Summary

*Organisation of settlement space and its architectural form, personal adornment and consumption are all recognised as means of the expression of status and identity, and urban settlements typically form major nexuses and arenas for such display and assertion. A range of archaeological evidence and assemblages of various categories of material may therefore be brought to bear in addressing such issues. As with the ceramics, animal bone and palaeoenvironmental assemblages discussed in Chapter 4, above, recent commentaries have emphasised the need for accurate understanding of structural and stratigraphic contexts of such assemblage, and the depositional processes responsible for creating them.*

*Roman buildings and structures across the urban settlement at York provide clear indications of substantial changes in the functions and status of these areas, and of individual buildings within them, between the late-1<sup>st</sup> and late-4<sup>th</sup> centuries.*

*Of particular note and interest are the indications of ‘convergence’ of the function and status of buildings in the 4<sup>th</sup> century. Alongside the construction of new residential buildings in this period, there are strong indications of the adaptation of existing masonry buildings, previously with military (in the fortress) or civic (in the colonia) functions, also being adapted for residential use.*

*It is proposed to investigate these apparent developments through artefact and animal bone assemblages, in terms of identifying indicators of the deposition and activities specifically associated with (i.e. in primary contexts in relation to) these changes in structural and architectural form, by identifying and characterising the combined assemblages – artefact, ceramic and animal bone – which are definitely related to them.*

*As a corollary of this, any broad changes in the composition of artefact assemblages from episodes of secondary deposition on these sites should be integrated and compared with the results of the research proposed in Chapter 4, utilising the broad-period comparisons proposed there.*

### 6.1 The wider research context and rationale for study

6.1.1 Changes in the patterning of social status within Roman Britain, and in the manner and forms in which that status was expressed through consumption and display, have been a staple of archaeological interpretation and discussion – usually closely intertwined with concepts of ‘Romanisation’ – since the earliest days of research. They have figured prominently in studies and discussion of the transformation from LpRIA to Romano-British societies, the creation of an urban society and its reflexes in rural hinterlands, in the marked changes recognisable in the archaeology of the diocese of Britain from the mid-/late-3<sup>rd</sup> century and through the 4<sup>th</sup>, and in the transformation – arguably the *breakdown* – of Romano-British lifestyles from the later 4<sup>th</sup> into the 5<sup>th</sup> and later centuries AD. Indeed, these changes have frequently been discussed in terms of changing ‘modes of expression’ (and / or *assertion*) of status and identity, an approach which the concept of ‘Romanisation’ itself embodies, but which has also remained at the heart of subsequent critiques of that concept, and of the approaches which have been presented as alternatives and replacements. In fact it may be argued that approaches which apply uncritical, generalised notions of ‘status’, its acquisition and expression, as an over-arching ‘explanation’ for changes such as those listed above is a major weakness in archaeological approaches to Roman Britain in general, and to Romano-British towns in particular, but is nevertheless

as evident in the work of recent critiques of 'Romanisation' as an interpretative concept as it is in those studies, – still the great majority – which adhere to it. *Why* did such changes in the manner of expression or assertion of status occur? What were the social circumstances, motivations and imperatives driving those who adopted and asserted them? In order to progress these questions the practices of status expression need to be considered with reference to historically-specific models of social change, and the contexts of the archaeological material which provides evidence for them accurately characterised and understood.

6.1.2 The expression of status and creation of identities through consumption and display, an important component of what is often referred to as 'Romanisation', has been a staple of the interpretation of Romano-British archaeology since its earliest days in the late-19<sup>th</sup> century. It continues to be widely acknowledged that the manner in which statuses and identities were created, constructed and expressed through the built environment, through personal adornment and display, and through the consumption of foodstuffs is, therefore – in conjunction with the issues and aspects of Romano-British urban supply presented in Chapters 4 and 5 – of central importance in modelling and understanding the changing character of Romano-British urban society between the 1<sup>st</sup> and 5<sup>th</sup> centuries AD, in York as in other Romano-British urban settlements, and indeed in cities and towns across the Roman Empire.

6.1.3 Amongst several recent critiques of the concept of 'Romanisation' and its application, J.D.Hill has pointed out that 'issues of power and dominion, largely absent in recent treatments of Romanisation, are essential to understand these processes', and that 'relations of power have to be addressed' in circumstances in which Roman imperial ideology played an *active* role in structuring social hierarchy and identity; Roman imperial *hegemony* and its playing-out in provincial society needs to be foregrounded when addressing issues of status and identity (Hill 2001, 13). Hill also emphasises that the actual archaeological evidence for statuses, identities, ideology and hegemony is *concrete*, taking the form of

'..the new public architecture that enabled and demonstrated the new political realities of life (basilicas, towns, forts, inscriptions, statues), the physical evidence for how religious practice and concepts changed, the small, forgotten things that show how domestic life altered, how people looked and walked differently, and so on. This physical evidence speaks of how people's identities were changing.. This making and remaking looks to *things* (buildings, costume, ways of eating) for reinforcement or challenges.'

(*ibid.*, 14)

6.1.4 Hill also identifies 'the body, foodways, settlement space and consumption' as important arenas in which discrepant statuses and identities might have been expressed in Romano-British society (*ibid.*, 17); its urban spaces would have been primary arenas for such expression. Millett (2001, 66) emphasises the social significance of '..architecture and planning.. progress has already been made in addressing conventional issues like public and private space, and settlement organisation,.. they also offer considerable potential for examining the organisation of social power through architectural symbolism, landscape dominance, and the control of communication.' Again, Lavan's comments regarding the probable role of Imperial impetus in the development of provincial capitals, cited by Jones *et al* (130; see 5.2.5, above), and Rogers' on the significance of the remodelling of urban topography in relation to rivers (2013, 200-203) are potentially of great relevance here, and perhaps especially at York.

6.1.5 Simon James has emphasised the potential significance of specifically *military* identity, articulating a 'self-aware, empire-wide identity group' (2001, 77) in structuring consumption, display and settlement space, and within that broad community, distinct identities, stating that there is '.. every reason to think that Roman regiments usually formed the armature for fully-fledged social communities.'

(ibid., 80). He goes on to argue that the ‘.. internal daily life [of military communities was] structured around issues of gender, class and ethnicity, as well as around the vocational and political distinctiveness of groups of professional soldiers of a colonial power’, and that the investigation of these through archaeological evidence ‘.. is likely to reveal that that the varied institutions and identities comprising military communities were differently manifested through the components of material culture, some more emphasised through the construction and use of space, others more through the manipulation of portable objects. Consequently, their material traces today are to be sought in different aspects of the archaeological record.’ (ibid., 80, 85) As noted in the introductory section to this chapter, this is a theme which has been addressed in previous studies of Romano-British material culture in York (cf. Swan & Monaghan 1993; Monaghan 1997; Cool *et al* 1995).

6.1.6 It has been suggested previously that the most apparent and perhaps profound shift in Romano-British ‘ways of living’, in Britain generally and in York, occurred in the course of the 3<sup>rd</sup> century, with the effects of the changes which occurred then being recognisable throughout the 4<sup>th</sup>. This is a point which has been made by Gardner (2007, 186) with reference to the construction of social identities. In his discussion of the evidence from Lincoln, Stocker, noting the apparent shift from public to private provision in urban space in the 4<sup>th</sup> century which has been widely proposed in the interpretation of Romano-British towns, takes the argument a stage further by proposing not only that by this date the towns were ‘little more than the defended enclaves of a governing elite’, but that the symbolic role of public buildings in these places made them ‘more like large ritual sites than large settlement sites’, proposing 4<sup>th</sup>-century Lincoln as ‘a shrine at which government itself was celebrated.. a shrine to the concept of Imperial government’ and concluding that it was more ‘like a large walled monastery’ than a Romano-British town as these have more usually been understood (2003, 139-40).

6.1.7 This is a characterisation which raises (or perhaps begs) a number of fundamental questions concerning the relationship between ideology, ritual and social practice *throughout* the history of Roman Britain (and indeed beyond), and may be seen to be in striking contrast with the characterisation of late Roman urban settlements preferred by, for example, Neil Faulkner, who interprets the contemporary evidence from Colchester (*Camulodunum*) and St Albans (*Verulamium*) as indicative of townscapes densely-inhabited by impoverished and subjugate populations (Faulkner 2000, 121-4). These interpretations need not necessarily be mutually exclusive, or may be understood as regional variations in the contemporary social landscape of late-Roman Britain (with York potentially displaying different characteristics again in this period). They do, however, serve to indicate just how divergent conceptions Romano-British urban sites in the later 3<sup>rd</sup> and 4<sup>th</sup> centuries are, and the consequent need for rigorous, detailed and nuanced characterisations of both assemblages and their stratigraphic and structural contexts in understanding them. It is particularly noticeable that, in York (as will be discussed below), detailed consideration and analysis of Romano-British assemblages has largely stopped short at the early-3<sup>rd</sup> century (cf. Swan & Monaghan 1993; Cool *et al* 1995), and the issues concerning deposit and assemblage status, and the relationship between these, presented in 4.4-5, above, have never been taken taken into account in such studies.

6.1.8 This observation in turn leads back, once again, to the comments of Burnham *et al* (2001, 74), previously cited in Chapters 4 and 5 (4.2.9 *et seq.*, 5.2.4 *et seq.*), of the need for critical and rigorous investigation of Romano-British urban assemblages in relation to their structural and stratigraphic contexts, and the deposit formation processes which created and structure these.

6.1.9 The proposals presented in this chapter thus seek to investigate these different aspects of the expression of Romano-British identities, consumption and display in an urban context – bodily adornment, foodways and architecture and settlement space *in relation to one another*, integrating the study of assemblages with their structural and stratigraphic contexts with reference to deposit formation processes. As previously noted (4.5-7), this is something which has rarely if ever been attempted on Romano-British urban sites, and the absence of this level of detailed analysis of the stratigraphic

contexts of assemblages, and evidence of structural modifications to buildings, is a very apparent weakness in the overviews by Gardner (2007) and Rogers (2011). By investigating *co-variation* of architectural form / settlement space and indicators of consumption and personal adornment / display, the research proposed in this chapter aims to understand the changing construction and expression of status and identities across Roman York. These are likely to have marked parallels with, but be distinct in details of form and means of display from, other broadly comparable Romano-British settlements.

## 6.2 Fortress, colonia, Imperial capital (?) : investigating change in architecture, use of space and urban form in Roman York (Figs 6.A, 6.C-D)

6.2.1 There are very clear indications across the Roman urban settlement at York of dramatic changes in land-use and the structural and architectural form of buildings between the late-1<sup>st</sup> and late-4<sup>th</sup> / early-5<sup>th</sup> centuries. In the legionary fortress, for example, the earth-fast timber-built barracks and administrative and other buildings constructed from the late 1<sup>st</sup> century give way to replacements on stone foundations and footings from the mid- / late-2<sup>nd</sup> (Ottaway 1996, 292; Hall 1997, 327), and there are suggestions that in the 4<sup>th</sup> century these quintessentially military buildings were being adapted to create urban townhouses, perhaps even 'villa-like' structures (Phillips & Heywood 1995; Roskams 2000). In the area of the *canabae* to the east of the fortress, at 21-33 Aldwark, a military manufactory / supply area of the 2<sup>nd</sup> century was by the 4<sup>th</sup> the site of another townhouse of some pretension, possessing a peristyle with a mosaic pavement (Brinklow *et al*, 1986, 36-44) –perhaps an indication that by this date the area defined as the *colonia* of York encompassed land on the north-east bank of the river Ouse, as Ottaway has pointed out, in cautioning against the view that the *colonia* be viewed as having been restricted to the river's south-west bank. The *colonia* may, indeed, have extended across the area to the east of the fortress from its foundation in the late-2<sup>nd</sup> or early-3<sup>rd</sup> century (cf. Ottaway 1993).

6.2.2 To the south-west of the Ouse, in the area of the low-lying floodplain, timber structures apparently used for manufacturing (and built of re-used timbers which had probably originally been components of buildings within the fortress, and almost certainly under military control), were overbuilt in the later-2<sup>nd</sup> / early-3<sup>rd</sup> century by major stone, possibly civic, buildings of the *colonia* (Ottaway 1993, 80, 87). On the higher ground immediately to the south-west, and still within the *colonia*, several substantial townhouses, some with mosaics, and large bath-house complexes were built in the course of the late-2<sup>nd</sup> – 4<sup>th</sup> centuries, in an area which seems to have seen little previous occupation (Carver *et al* 1978, 32-9; Ramm 1976; Wenham & Hall 1987, 76 and fig.20; Ottaway 1993, 103-4).

6.2.3 In the extra-mural areas on the south-west bank of the Ouse, as well as the growth of extensive cemeteries on areas which had previously been ditched fields, at least one further townhouse was constructed in the early 4<sup>th</sup> century (Brinklow *et al* 1986, 55-74). It seems improbable that this was the only example.

6.2.4 A particularly interesting aspect of this pattern is that by the mid- / late-4<sup>th</sup> century there seems to be considerable *convergence* of architectural form in what had previously been areas of buildings with clearly very different functions; there is evidence of both military buildings in the fortress and probable civic buildings in the *colonia* south-west of the Ouse being adapted into residential complexes with 'private' and 'civilian' characteristics (Roskams 1996, 269-71), alongside the relatively newly-built townhouses. In fact there are indications that some of these 'townhouses' may have been remarkably similar to the small contemporary villa complexes known from eastern Yorkshire, suggesting a uniformity of architectural form – and social organisation ? – across the urban and rural landscape (Whyman, 2001), a situation which may have some parallels in, for example, late Roman Cirencester. The potential for combining these observations and suggestions relating to structural evidence from

Roman York with the spatial distributions and stratigraphic associations in relation to these structures across the urban settlement is particularly intriguing.

6.2.5 In the legionary fortress and the *colonia* south-west of the Ouse, there are clear indications of further adaptations to these masonry structures in the very-late 4<sup>th</sup> century and into the 5<sup>th</sup>, including in at least one case, Wellington Row, the complete dismantling and rebuilding in a new form of a large masonry building (Whyman, 2001), a transformation which is specifically dealt with in Chapter 7.

6.2.6 The changes summarised above seemingly represent substantial transformations in the overall urban form of Roman York, and individual structures within the settlement. How far can or should they be interpreted, and to what degree, as ?

- indicating the progressive growth of 'markets' and 'wealth' in Roman York, until 'decline' in the late-4<sup>th</sup> / early-5<sup>th</sup> century ?
- the result of and response to direct intervention of the state, Imperial or provincial (cf. the documented visits of the emperors Septimius Severus, AD 208-11 and Constantius Chlorus, AD 305-6; 5.2.5, above
- a reflection of the changing role of the urban settlement in terms of its role as a military / administrative centre ?
- indicating broader changes in social / class relations across the region / province / diocese, and the means through and forms in which these relations were expressed ?

How can these major changes in urban form and structures be understood, in themselves and in relation to expression through consumption & display as represented in food remains & artefacts ?

### **6.3 Investigating change in the expression of status and identity in Roman York through artefact assemblages**

6.3.1 As in Chapter 4, to contextualise artefact and ecofact assemblages, and the evidence they represent for consumption and display, in relation to this changing urban landscape, it is important to identify (and broadly date – see 4.7.2-6, above) *secondary* aggregations of material, to examine broad patterns of consumption and display between the late-1<sup>st</sup> and late-4<sup>th</sup> centuries.

6.3.2 But critical in this instance, in relating consumption / display to architectural form, is to isolate locations of *primary* (discard / loss) deposition of artefacts, animal bone and pottery assemblages, which can therefore be reliably associated with the different architectures and structural forms recognisable in the urban settlement at York across the Roman period. The potential interpretative implications of differences in deposit status such as these have been rehearsed by Roskams (1992) and referred to extensively above.

6.3.3 In the case of animal bone assemblages, these have in a few cases been identified and the subject of dedicated research (cf. O'Connor 1988), but there is still much scope for the more thorough and systematic definition of primary contexts, and the assemblages they contain, in relation to structures and their modification, again, as rehearsed previously (4.4-7). The same applies, of course, to ceramic and artefact assemblages.

6.3.4 The aim here will be to build on the work undertaken in York by Hilary Cool, as presented in AY 17/10  *Finds from the Fortress* (Cool *et al* 1995), but with more emphasis on the detail of the stratigraphic

association and category/status of the contexts and groups of contexts from which they were retrieved (as discussed with reference to Chapter 4; 4.3, 4.7) and apply this *across* the Roman urban settlement, both spatially and chronologically. Importantly, this approach will also allow the *integration* of the evidence of different types of material – ceramics and animal bones, as well as ‘small finds’ – and thus study these classes of evidence *together*, in what might be termed ‘composite assemblages’, in relation to the changing architectural and structural forms and spatial organisation which have been outlined above.

6.3.5 This development of Cool’s approach is significant for three reasons;

6.3.5.1 it is clear from examining the stratigraphic report (AY 3/4; Hall 1997) on the excavations within the fortress at 9 Blake St, the small finds from which form the core of the analysis reported in AY 17/10 (Cool *et al* 1995), that assemblages have been grouped and compared by structural / stratigraphic phase, and that these stratigraphic groupings combine assemblages from deposits of very different depositional status, in the manner previously discussed with reference to Chapter 4 (this includes, for instance, the example cited previously in 4.3.4, above) ; by no means all of these deposits and their contents need be directly related to the structures excavated on the site, and it is important to establish which are likely to have been and which not

6.3.5.2 although not included within the formal analysis reported in AY 17/10, the conclusions arrived at in that fascicule in fact rely quite heavily on ceramic assemblages *as reported by structural / stratigraphic phase* (ibid., 1632, 1646); the detailed combination and analysis of the artefact assemblages with ceramics and animal bone *by context and with reference to deposit status and formation process* offers the prospect of significantly more accurate and nuanced interpretations of these assemblages

6.3.5.3 the main thrust of Cool’s analysis is to make comparisons between artefact assemblages from phases of the site either side of the early- / mid-2<sup>nd</sup> century (in which period stratigraphic and artefactual evidence seems to indicate abandonment of the site), and between these and contemporary assemblages from other legionary fortress sites in Britain (ibid. 1633-42). Comparison with the assemblage from the *later* phases of the site, post-c.AD 280, is alluded to in more cursory fashion (ibid. 1642) – but as has been previously noted (6.3, above), across York *as a whole*, there are marked changes in and adaptations to architectural form from the mid- / late-3<sup>rd</sup> century onwards, whose potential artefact correlates clearly merit investigation

6.3.6 YAT holds within its Interactive Archaeological Data Base (IADB) system records of the great majority of Roman finds from excavations across York, excavations which range from large, deep sites dug in the 1980s and early 1990s to typically much smaller investigations carried out in the post-PPG 16 era, recorded by basic type classification / simple description; many but by no means all of these have been recorded and identified in detail by specialists in Romano-British artefacts, but in the first instance these simple descriptions would allow the basic small-finds component of assemblages from specified contexts to be established. This can then be combined with quantified ceramic data (held from all the sites in York which will be included in this study) from the same contexts, and where it exists, quantified animal bone data. This approach would obviously be closely-integrated with that proposed in Chapter 4 (4.3, 4.4, 4.7), although would in some instances extend to sequences other than those of central importance to that research, with the focus in this instance on the isolation of *primary* contexts, whose deposition can be related to the use of specific buildings or structural episodes.

6.3.7 The selection of specific *contexts* for inclusion in analysis for this research would be based on the identification of those whose spatial and stratigraphic positions in relation to buildings make them

particularly relevant, but also on assemblages of small finds, ceramics and animal bone which – individually or in combination – have particularly interesting characteristics in terms of the evidence they provide for specific activities or forms of consumption and display, whether or not they derive from primary contexts. It may be that such assemblages are likely in the main to be ‘primary’ at the location of their final deposition (where they were excavated), but even in cases where they are not, information about the date of their original deposition, and possibly about the origin of the sediments containing them, would allow their incorporation into the proposed analysis. The element of this proposed study presented in Chapter 4 might well allow comment on the probable origin of such deposits.

## 6.4 Proposed analyses

6.4.1 Establish the overall distribution of artefacts from strata of Roman date across the urban settlement, from data already held within IADB, using simple descriptions as standard, with more detailed identification where this information exists, and possibly grouping these artefact types into higher-order functional categories

6.4.2 Integrate this information with that for ceramics and animal bone (see 4.9 above)

6.4.3 Identify stratigraphic relationship / deposit status of contexts in relation to different land-use episodes / structural forms

- are these differences indicated in artefact assemblages ? (which are *contemporary* with / relate *directly* to them – not simply found in the same site in systemically-unrelated contexts)
- are there any indications of the *convergence* of artefact assemblages of this type in buildings in the 4<sup>th</sup> century, paralleling the suggested adaptation of structures of different types into ?private residences in that period

6.4.4 Are there any *chronological* patterns detectable in the finds assemblages in *secondary* (e.g. dumped) contexts, or in primary contexts interleaved within secondary strata which do not have an apparent structural context ?

## 6.6 Archival and management recommendations arising from Chapter 6

6.6.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

6.6.1.1 The incorporation of artefact data at ‘simple name’ level within York Archaeological Trust’s IADB or a comparable database system – even prior to detailed identification and recording of the small finds – is a useful and necessary first step to facilitating city-wide comparative research of the sort proposed in this chapter, *especially* where this can be integrated with quantified ceramic data categorised by Ceramic Period (see 4.11.1.4)

6.6.2 Regarding animal bone assemblages as evidence of patterns of consumption and status, see 4.11.1.

## 6.7 Over-arching archival and management recommendations arising from Chapters 4 - 6

6.7.1 The research proposals presented in Chapters 4, 5 and 6 suggest the following, over-arching, archival and resource management practices and protocols;

6.7.1.1 *Assessment* of assemblages takes place on all excavations undertaken within York, whilst the full analysis and reporting of excavations and assemblages is far less frequent. Is there a case for the *tabulation* of assessment data by context, within parameters which currently-operating assessment protocols (or slightly upgraded / more stringent versions of these) allow ?

6.7.1.2 This might allow *consideration* – rather than full *investigation* – of sites and assemblages (or components of same) for the framing and preliminary exploration of research themes (such as those presented in this document, or others) and the considered and informed selection of sites, groups of contexts (or even *individual* contexts) and the assemblages they contain for more detailed analysis and investigation. Rather than this material and information remaining inaccessible and ‘inert’ whilst awaiting ‘full analysis and reporting’ which may never occur.

6.7.1.3 Where would such structured data be compiled, hosted and accessible ? Possibly through the development of the (online) *York Archaeological Trust York Archive Gazetteer* into a *York Archaeological Gazetteer* for all archaeological interventions in the city, accessible through a *York Heritage Portal* and hosted by City of York Council (CoYC) (or YAT, under the aegis of CoYC), as per the unsuccessful HER 21 bid submitted by CoYC with YAT in 2011 ?

6.7.1.4 Exploration of this possibility and its practical requirements goes beyond the remit of this project, and would require consideration of many practical and organisational issues, and the degree of conformity of assessment protocols currently employed by contractors operating in York. Such an approach would, however, acknowledge and respond to the fact that a sizeable majority of individual archaeological interventions routinely goes unpublished in the traditional, conventional sense, and place the assessment process and its results – which is as far as examination of many archaeological excavations in York are taken – as the primary interface between fieldwork and access to its results by the broader public, professional and scholarly audience. From a resource such as that proposed in 6.8.1.1-3, a multitude of potential researchers and authors could select, interpret and analyse archaeological data using whatever resources (of time, expertise, finance) they might be able to draw on, and report the conclusions they arrive at from their endeavours in whatever form they are able to arrange.

6.7.1.5 The possibility, and perhaps necessity, of such an approach to address the archaeological study of the city *in toto*, rather than simply on a ‘site-by-site’ basis, has become particularly apparent in Chapters 4, 5 and 6, but its relevance is of course by no means restricted to study of the Roman urban settlement. Assessment data from all archaeological periods could and should be contained within the proposed online database. And for such a resource to be genuinely useful, it would of course require the appropriate level of assessment data from the several large, pre-PPG 16 ‘backlog’ sites, which feature heavily in Chapters 7 and 8.

## Chapter 7 The end of Roman York and beyond – the re-modelling, occupation and use of urban space through the 5<sup>th</sup> century AD

### Summary

*Identifying clear and extensive traces of occupation and activity on Romano-British sites unambiguously dateable to the 5<sup>th</sup> century remains acutely problematic, and is currently still restricted to a relatively small number of near-iconic urban and military examples. Well-stratified archaeological sequences which extend from the late-4<sup>th</sup> century into this period and are associated with large artefact and ecofact assemblages are therefore at a premium and of first-rank significance. This significance is enhanced when it is possible to create structural templates and artefact / ecofact 'signatures' from the site, thus allowing the identification of 5<sup>th</sup>-century activity at other sites elsewhere in the settlement (and perhaps in others), whether through fresh excavations or the re-examination of the records held in the archives of earlier investigations.*

*A number of excavations in York have produced evidence for occupation and activity apparently extending beyond the late-4<sup>th</sup> century and into the 5<sup>th</sup>. The most significant of these is the site at Wellington Row, on the south-west bank of the Ouse and close to the Roman bridgehead. Here, close analysis of the stratigraphic sequence from Area 7 (the largest excavated area of ten in total, measuring c.20.0 m x 15.0 m) has identified several major episodes of adaptation of a masonry building originally constructed in the late-2<sup>nd</sup> / early-3<sup>rd</sup> century, the later phases of which, built above deposits containing coins issued in the period AD 388-402, must, realistically, have extended several decades into the 5<sup>th</sup>.*

*Detailed examination of the ('calcite-gritted') ceramic coarse-ware assemblages from this sequence has isolated fabric variants which occur only in the very latest phases, and hence appear to be exclusively 5<sup>th</sup> century in date. The identification of a distinctively 5<sup>th</sup>-century variant of a very widespread category of artefact offers the prospect of significant progress in recognising the fugitive archaeological evidence for occupation of that period, and parallels approaches which are being developed in the study of what have been traditionally regarded as (solely) 'late-4<sup>th</sup>-century' artefact assemblages. The assemblage from the late-4<sup>th</sup>-century and later phases of Wellington Row has been specifically identified as amongst the largest and most significant for the study of this period, nationally as well as in York itself. That the results of the ceramic analysis at Wellington Row are valid and significant is supported by the recognition of the same stratigraphic / chronological pattern amongst the coarse-wares from the York Minster excavations of the late 1960s / early 1970s.*

*In addition to Wellington Row and York Minster, the stratigraphic sequences from three other unpublished sites within the Roman urban settlement – 1-9 Micklegate, 3 Little Stonegate and 9 Blake Street – offer significant potential for providing evidence for this period. Together these five sites merit and require the level of detailed stratigraphic analysis applied at Wellington Row Area 7, the full analysis of the artefact and animal bone assemblages and palaeoenvironmental samples from them, and the detailed integration of this evidence within the stratigraphic sequence.*

*Furthermore, and emphasising the significance and potential of the Wellington Row sequence and its assemblages, the assessment has suggested a methodology for investigating the potential for evidence of 5<sup>th</sup>-century settlement across all Romano-British sequences excavated in York, including cases where existing and published interpretations have not recognised any. The work already undertaken has demonstrated that numerous features, frequently containing material of Anglo-Scandinavian date and interpreted as 'pits', actually represent the removal ('robbing') in that period of discrete structural elements of very-late-4<sup>th</sup> and 5<sup>th</sup>-century adaptations to the masonry building.*

*Because of the date of the material in their fills, they have invariably been phased later in the sequence and regarded as irrelevant to consideration of the latest Roman phases; yet they are often crucial to interpreting and even recognising the stratigraphic evidence for these phases. A rapid examination of other late-Roman sequences at sites in York and beyond indicates the widespread existence of such features, their potential significance for the period in question as yet unrecognised.*

*Re-examining the latest phases of Roman sequences accordingly, looking for the presence of artefacts and artefact assemblages characteristic of the very-late phases of Wellington Row, and for the apparently 5<sup>th</sup>-century ceramic coarse-ware fabric variants identified there, offers a route to mapping the distribution of settlement of that date across all Roman sites in York. In the case of the artefacts and ceramics, their presence even as residual material in much later contexts can be brought into play, thus allowing the identification of occupation at this date even where contemporary horizons have been heavily disturbed, as at, for example, 16-22 Coppergate, where it is clear that by far the greater part of late Roman strata and the artefacts they contained were re-deposited later in the sequence by the extensive ground disturbance of the site during the Anglo-Scandinavian period.*

## **7.1 The end of Roman towns, the end of Roman York**

7.1.1 The fate of urban sites, indeed of Romano-British society as a whole, from the early 5<sup>th</sup> century onwards has been one of the most enduring and problematic themes of research into the 1<sup>st</sup> millennium AD, and has generated a number of major works of synthesis over the past 25 years (Esmonde-Cleary 1989; Higham 1992; Faulkner 2000; Dark 2002). In terms of urban development in Britain, it clearly represents one of the most marked 'transitions', along with initial Romano-British urban development in the 1<sup>st</sup> and 2<sup>nd</sup> centuries AD, in the whole of the 1<sup>st</sup> millennium. Its nature, chronology and causes have been the subject of long-standing debate, with 'short' (the near-total collapse of Romano-British society within a very short space of time) and 'long' (its continuation, albeit in attenuated form, through much of the 5<sup>th</sup> century and possibly beyond) chronologies having been argued for and against. Present orthodoxy (cf. Esmonde-Cleary, Higham) favours the persistence of a recognisably Roman Britain – or at least a 'sub-Roman' variant of it – until c.AD 450-475, after which it is only faintly and infrequently identifiable (for example at Wroxeter), giving way in southern and eastern areas of the island of Britain to (what has traditionally been termed) 'Anglo-Saxon' material culture. Thus although the invocation of Anglo-Saxon settlement of Britain as a primary 'explanation' for the 'ending of Roman Britain' has now been abandoned, the currently-favoured chronology for this does not differ markedly from that favoured by Collingwood & Myres in the late 1930s, notwithstanding the subsequent debate between 'early collapse' and 'continuity' models in the 1960s and 1970s. In recent scholarship only Dark has consistently argued (or perhaps more correctly, claimed) that anything recognisable as the Romano-British society of the later-4<sup>th</sup> century was still in existence at the beginning of the 6<sup>th</sup>, and even later, at least beyond the south-east of the island, although this is a view in which he is now supported to some degree by White; 20<sup>\*\*</sup>, <sup>\*\*\*</sup>). Reece (1980) went to the opposite extreme, arguing that 'Romanised Britain', and in particular its towns, had effectively ceased to function before the beginning of the 4<sup>th</sup> century, being replaced by a form of social organisation which differed from that of the 7<sup>th</sup> century only in the manner of its expression.

7.1.2 Neither of these 'extreme' long - and - short chronologies is sustainable on the basis of the available archaeological evidence as it is currently understood. They do, however, serve to emphasise the different interpretations of this period based on the same data, the importance of defining what is actually meant by the term 'continuity', and indeed "Romano-British society" and the 'towns' which were arguably central to it, a question which leads back to some of the fundamental issues touched on in Chapters 4 and 6, and specifically to Millett's observations on this matter, cited in 4.2.5. They are also a reminder that, in spite of the various reinterpretations of the period, and of the events and social processes responsible for the rupture and fragmentation strongly indicated by archaeological evidence,

a fundamental obstacle to understanding remains the difficulty of recognition of material remains specific to the 5<sup>th</sup> century. Esmonde-Cleary (2001, 93) has observed that there remains an ‘..obvious ‘black hole’ in our knowledge and understanding of the post-Roman, non-Anglo-Saxon population of Britain through the 5<sup>th</sup> century. Little escapes the ‘event horizon’ resulting from the implosion of Romano-British material culture. But this group is crucial to our understanding of processes of change between AD 350 – AD 650.’ He goes on to note that the

‘..chronological horizon either side of AD 400.. needs further work.. [especially] more work on the artefacts.. the really odd thing about the collapse of Roman Britain is not so much the disappearance of elite culture, but the apparent total loss of all levels of material culture, including relatively simple technologies such as pottery-making. The precise sequence of this demise needs to be described and calibrated, both at the level of particular ceramic industries, but also at the level of individual sites.’

(*ibid.*, 96)

This is a statement which has been acknowledged and responded to over the past decade by the researches of Cool (2000), Gerrard (2010) and Whyman (2001), and it is this issue, the identification of relevant data-sets and the development and application of appropriate and specific research methods, which is the central theme and focus of this chapter.

7.1.3 Suggestions that York is likely to have been a significant place or location in the 5<sup>th</sup> and 6<sup>th</sup> centuries AD, even if it not ‘a town’ in a sense which would have been understood by its inhabitants of the 2<sup>nd</sup>, 3<sup>rd</sup> or even 4<sup>th</sup> centuries, have not to date been supported by much in the way of archaeological evidence. If it was the headquarters of the *dux Britanniarum* into the 5<sup>th</sup>-century, the seat of a late 5<sup>th</sup>-century metropolitan bishop of Britain as suggested by Charles Thomas (1981, 344), or the same author’s interpretation of the writings of Gildas that it was the seat of (the British war-leader) ‘Vortigern and his council’ (! – *ibid.*, 252), archaeological evidence for early post-Roman settlement in York is nevertheless as problematic and contentious as in other Romano-British urban settlements. Ramm’s 1971 survey, whilst arguing that extensive flooding in the early-5<sup>th</sup> century had rendered much of the late Roman town uninhabitable (1971; see 2.3.3, above), cited evidence for post-Roman repair of the legionary fortress defences, a handful of buildings from the fortress and *colonia* which may have continued to have been occupied beyond the end of the 4<sup>th</sup> century, and changes in burial rite, some probably Christian, in the same period as tentatively indicating continued occupation of the urban area into the 5<sup>th</sup> (*ibid.*). He acknowledged that interpretation was hampered by the scarcity or absence of chronologically-diagnostic artefacts after the end of the 4<sup>th</sup> century, a circumstance still confronted by Ottaway in his survey nearly thirty years later, which concluded with a picture of a largely abandoned urban site which, nevertheless, ‘any authority which inherited Roman power in the York area would have had an interest in’ (in Tweddle *et al* 1999, 150). In this survey of Anglian York, Tweddle acknowledged that in several cases structural features attributed to that period had no dateable finds associated with them, and could date to an earlier period, as in the cases of an unmortared stone wall encountered above late-Roman layers in excavations in the Bedern, and a similarly-built structure in the Museum Gardens, immediately outside the south-western wall of the legionary fortress (*ibid.*, 192). The interpretation of the early post-Roman evidence from beneath York Minster, discussed in more detail below (7.5), whilst debated (cf. Carver in Phillips & Heywood 1995), nevertheless does seem to demonstrate, in that location at least, the elite ‘interest’ alluded to by Ottaway.

7.1.4 A central tenet of this chapter is that the identification of 5<sup>th</sup>-century occupation of York, confirmation of its absence or of the removal of relevant strata by later disturbance, requires the detailed and integrated re-examination of stratigraphic and structural evidence in concert with that of artefact and ecofact assemblages, developing the work and approaches undertaken by Whyman (2001) and suggested by Cool (2000), focusing in the first instance on the large excavation at Wellington Row (a site which receives little attention or priority in Ottaway’s 1999 survey). It is suggested that such an

approach has the potential to transform understanding of this period in York, and in other comparable late Romano-British sites where it might be applied, and that the received picture of post-Roman, 5<sup>th</sup>-century York is in large part the result of a lack of rigorous and detailed attention to the analysis and interpretation of the available data.

7.1.5 In York itself a number of excavated Roman sites have been suggested as having sequences which extend into at least the early decades of the 5<sup>th</sup> century (e.g. Ramm 1971), but the most substantial and widely-cited evidence has been that retrieved from excavations beneath York Minster in the late 1960s and early 1970s (Phillips & Heywood 1995,). Re-examination of elements of the Minster sequences (the site was excavated in multiple, discrete excavations across a 5-year period) and the assemblages derived from them is proposed as part of this chapter, but the key site is that excavated at Wellington Row on the south-west bank of the river Ouse, close to the site of the Roman bridge which carried the main road to the south-west gate of the legionary fortress on the opposite bank. The depth, integrity and detailed level of the stratigraphic record of the late- and early post-Roman stratigraphic sequence on this site, and the size and quality of the artefact, zooarchaeological and palaeoenvironmental assemblages from it, offer outstanding potential for identifying and interpreting archaeological evidence for early post-Roman trajectories in a major urban settlement, into the 5<sup>th</sup> century and possibly beyond.

## 7.2 The wider research context and rationale for study

7.2.1 Wroxeter (*Viroconium*) has long been the type-site for the study of this period, with the meticulous excavation of the baths basilica revealing a sequence of construction and habitation which appears to extend some way into the 6<sup>th</sup> century (Barker 1997) There are indications of 'very late' sequences in several of the larger Romano-British urban sites, notably London (*Londinium*) St Albans (*Verulamium*) and Canterbury (*Durovernum Cantiacorum*), with claims having also been made for Silchester (*Calleva Atrebatum*), but in the majority of cases, due to sequences having been encountered in the course of development-driven excavations, opportunities to seek and investigate these beyond relatively small areas have been few and far-between. The structural and stratigraphic traces of 5<sup>th</sup>-century activity which *are* encountered, moreover, are typically fragmentary, exiguous, and difficult to pin down chronologically.

7.2.2 Two of the 'classic' sites for late-Roman sequences of construction and occupation extending into the 5<sup>th</sup> century, Wroxeter and St Albans, have been the result of excavations on unencumbered, 'greenfield' sites. Such sites have the advantage of having been less disturbed by subsequent activity than their counterparts where Roman levels are succeeded by a lengthy sequence of urban occupation and activity (such as, for example, Canterbury and Cirencester *Corinium Dobunorum*) which frequently results in successive episodes of ground disturbance. In the latter cases, however, the very existence of these later sequences often provides much more certain *terminii ante quem* for the very latest construction and habitation episodes on Romano-British urban sites, where evidence for construction and habitation appears to extend beyond the range of 'conventional' Roman chronologies of the late-4<sup>th</sup> century and well into the 5<sup>th</sup>.

7.2.3 In the northern area of Roman Britain, urban sequences probably extending well into the 5<sup>th</sup> century have been identified at Carlisle (*Luguvalium*; McCarthy 2002) and Catterick (*Cataractonium*; Wilson 2002), but the best currently-testified examples from Romano-British sites *per se* in the region are those from the frontier forts of Birdoswald (*Banna*; Wilmott 1997), South Shields (*Arbeia*; Bidwell 1994) and Binchester (*Vinovia*; Ferris 2011), where a new phase of excavation (Petts 201\*) is currently ongoing.

7.2.4 As previously noted, identifying elements of late Roman construction and habitation sequences which appear to extend beyond the limits of 'conventional', late-4<sup>th</sup>-century, coin-derived chronologies is one thing; tying these in to *absolute* chronologies within the 5<sup>th</sup> century and possibly beyond is quite another. The developing precision of radiometric chronologies may begin to render such techniques increasingly relevant to these issues of chronology (notwithstanding complexities within the calibration curve which at present limit the usefulness of this method of dating), and careful recording of artefact (Cool 2000) and coarse ceramic assemblages (Whyman 2001; Gerrard 2011) is beginning to identify elements of a material culture which may belong to, and in some cases be *specific* and *unique* to, the very latest phases of occupation of Roman urban and military sites, phases which overlie or are stratigraphically later than coin-dated horizons of the very-late-4<sup>th</sup> century.

7.2.5 These approaches and their results appear to be confirming the emphasis placed by Esmonde-Cleary's on artefact studies, but it is necessary to reiterate the point made by Burnham *et al* (2001, 74), cited above in 4.2.10, that full and proper understanding of the *depositional context* of artefact assemblages is absolutely critical; this observation is even *more* relevant, if that is possible, in studying and comprehending possible 5<sup>th</sup>-century horizons, structures and assemblages than it is in earlier phases of Romano-British sites.

### 7.3 Recognising 5<sup>th</sup>-century occupation in Roman York – Wellington Row (Figs 7.B-C, 7.G)

7.3.1 As Esmonde-Cleary has emphasised, before the character and extent of the occupation of *any* Roman urban settlement into the 5<sup>th</sup> century can be studied and understood, it must first be *recognised*. This process of recognition will usually involve;

- the identification of structural / stratigraphic episodes, overlying and immediately post-dating, deposits which themselves incorporate the acknowledged latest Roman assemblages regularly encountered in Britain, as defined by pottery, artefacts and – especially – coins
- identifying from within those 'latest Roman' assemblages elements whose currency, and in particular *manufacture*, may extend into, or belong exclusively to, the 5<sup>th</sup> century

7.3.2 Five excavations in York (undertaken in the last 40 years and employing modern excavation techniques) are at present regarded as having produced structures and strata acknowledged as having obvious potential for study and analysis in these terms; Wellington Row, York Minster, 1-9 Micklegate (Queen's Hotel), 3 Little Stonegate and 9 Blake Street. Of these sites York Minster has featured most prominently in the literature of the 5<sup>th</sup> century in York, and its significance and potential will be returned to. But it is the sequence and assemblages from Wellington Row, excavated over a period of 2½ years between 1987 and 1990 in far less difficult circumstances, and employing modern excavation recording protocols, which in the first instance offers the greatest potential for furthering understanding of early post-Roman trajectories in York, both as a site in itself, and as a means of isolating artefacts and artefact assemblages in the manner described above. If this can be achieved, it opens up the possibility of using components of the ceramic and artefact assemblages from stratified deposits at Wellington Row as 5<sup>th</sup>-century 'type fossils' in the identification of possible activity of this date at other sites in the city.

7.3.3 The site remains unpublished, apart from brief summaries (Monaghan 1997, 1108-23; Ottaway 1993, 73-7, 112-16). Analysis of the stratigraphic sequence in the largest of the ten areas excavated (Area 7) in the course of doctoral research (Whyman 2001), established three phases of substantial and extensive modifications to a large masonry building (originally constructed in the late-2<sup>nd</sup> / early-3<sup>rd</sup> centuries), the earliest of which post-dated horizons containing ten (10) stratified coins of the period AD

388 – 402, the last issue of official Roman coinage widely circulated in Britain. This sequence had not been recognised for what it is in the course of preparing the original stratigraphic report on the site which is held in YAT's archive. Since these structural adaptations were substantial, including one episode of in which the original masonry building had been largely dismantled and a new structure (with a slightly different 'footprint', and employing different principles of construction – cf.5.3d.7, above) built from its stonework, it may be argued with some confidence that this sequence extended well into the 5<sup>th</sup> century. Detailed examination of the late Roman coarse ceramic assemblage from layers contemporary with these very late structural modifications (which largely comprised pottery conventionally described as 'calcite-gritted ware', cf. Monaghan 1997, 907-13, a category which nevertheless includes within it a substantial element which, whilst sharing the vessel *forms* of this type, does not actually employ calcite as a temper) identified fabric variants which occurred *exclusively* within these layers, and were not present in earlier, underlying deposits which themselves contained late-Roman 'calcite-gritted' ware in quantity.

#### **7.4 Late-Roman coarse ceramics and 'very late' artefact assemblages from Wellington Row** (Fig.7.E, 7.F)

7.4.1 The possible continued use and, crucially, *production* of recognised late Roman ceramic types into the 5<sup>th</sup> century has received considerable attention since the 1980s, with studies of coarseware variants including East Midlands Shell-Tempered ware (Pomel 1984), the grog-tempered wares of the south coast (Lyne 1984) and Black-Burnished Ware Type 1 ('BB1') from Poole Harbour, Dorset and the wider south-west of England (Gerrard 2010). The identification of coarse ceramics variants such as these, which may be demonstrated on stratigraphic grounds to have been in use and discarded in the 5<sup>th</sup> century, might be argued to be of particular value in researching this period, given the very widespread occurrence of coarseware assemblages on late Romano-British sites.

7.4.2 The work undertaken in the 1990s on the stratigraphic sequence and coarse pottery assemblage from Area 7 at Wellington Row (Whyman 2001) sought to exploit the deeply-stratified sequence at the site, in which a large assemblage of late-Roman calcite-gritted ware was co-stratified with a around 1,700 Roman coins, many dating from the second half of the 4<sup>th</sup> century. As has been stated, the research isolated distinctive variants of 'calcite-gritted' ware which were found exclusively in association with the very latest structural modifications to the large masonry building on the site, in layers post-dating strata which contained several coin issues of AD 388-402. The approach may therefore be seen to address Esmonde-Cleary's observation that 'chronology remains one of the key weaknesses in structuring the evidence for this period' (2001, 92).

7.4.3 These ceramic variants were distinguished in some cases by the character of their temper – with chalk rather than calcite, or an absence of macroscopic tempering agents – or by distinctive firing 'signatures', with, for example, sherds displaying brick-red outer surfaces and grey cores. To achieve this level of detailed discrimination of ceramic fabrics, the classification of the Wellington Row material employed a 'splitting' protocol; in the course of detailed examination and recording, sherds with *any* distinguishable characteristics which were not exactly paralleled by sherds which had previously been examined and classified were allocated a new fabric code. This led to the identification of some sixty variants of 'calcite-gritted' coarseware within the Area 7 assemblage as a whole. For purposes of quantification, these sixty variants were grouped into twelve higher-order categories based on the similarity of their attributes in terms of temper and firing 'signature'. In this way two schemes of classification were established, one based on temper and fabric texture, one on the firing 'signature' of the sherd (e.g. oxidised, 'banded' core and outer surfaces etc.) Two of the former and two of the latter of these higher-order groupings occurred solely in the latest horizons on the site, as described and defined above. That this stratigraphic and chronological patterning in the occurrence of these 'calcite-

gritted' ware variants was not a random, 'one-off' coincidence appeared to be demonstrated when, as part of the same programme of doctoral research, examination of the late-Roman coarseware from some of the excavated areas at York Minster identified the same variants, again present exclusively in the very latest deposits (which did not contain any later, Anglo-Scandinavian or medieval material) associated with the adaptation and use of Roman structures on the site.

7.4.4 The significance and potential of the Wellington Row site and its archive in investigating the 5<sup>th</sup> century in York and in Britain is further indicated by the work of Hilary Cool on finds assemblages from the latest 4<sup>th</sup>-century phases of Romano-British sites across the country (Cool 2000). Cool forcefully emphasises the need to investigate artefact assemblages as a *whole* from these latest phases, and to identify the distinctive components of the assemblages which serve to differentiate them from those of the earlier 4<sup>th</sup> and preceding centuries. As a first essay into such research, Cool's 2000 article specifically names Wellington Row as a site of first-rank importance for further work in this vein.

7.4.5 Cool's approach to artefact assemblages serves to emphasise that stratigraphic *definition* of what she terms the 'very late' phases of Romano-British sites is absolutely critical in allowing the identification of assemblages of contemporary material of this date – a point entirely borne out by the research into the Wellington Row sequence and its stratified ceramics described above. It should be reiterated that the re-examination of the site archive which this work involved resulted in this sequence being re-interpreted in a manner markedly different from the original stratigraphic report prepared by the excavators of the site. The revised phasing of the site paid much more attention to;

- the nature of the original late-2<sup>nd</sup> / early-3<sup>rd</sup> century masonry structure, notably the fact that, until the late 4<sup>th</sup> century, the interior of the building had formed an undercroft to an overarched floor level; in the late-4<sup>th</sup> and into the 5<sup>th</sup> this space was progressively infilled as the floor level within the former undercroft space was progressively raised in the course of the successive major structural changes to the building
- the detailed articulation of *surviving* elements of the original masonry structure with structural features relating to its subsequent modification
- examination of discrete surviving areas of strata in relation to one another and to structural components *across* the excavated area, with more consideration of spatial relationships / patterns and levels AOD as well as stratigraphic superposition – i.e. vesting as much significance in spatial (plan) as stratigraphic (matrix) relationships in phasing the site, in order to identify contemporary surfaces of the late-4<sup>th</sup> / 5<sup>th</sup>-century phases within and outside the original masonry building
- taking full account of the evidence of *robbing* of both the original masonry building and the structural elements subsequently added to it, which in many cases took place long after the Roman period, such episodes typically being of Anglo-Scandinavian or even later medieval date

7.4.6 This approach – acknowledging the incorporation of surviving, modified components of earlier buildings, careful consideration of contemporary ground levels and surfaces, and the recognition that the pattern of robbing in later periods can be critical to the accurate understanding and reconstruction of late-4<sup>th</sup> / 5<sup>th</sup>-century adaptation of buildings – resulted in the establishment of a more coherent and convincing phasing of the Wellington Row sequence than had previously been achieved. The research established that it is essential that these issues feature prominently in stratigraphic analysis if sense is to be made of the 'very late' phases of Romano-British sites, in York and beyond. By extension, they are crucial in the grouping together of associated, contemporary artefacts from which the chronologically-diagnostic assemblages and objects sought by Cool can be adduced.

7.4.7 In terms of its stratigraphic sequence (and records thereof) and ceramic, artefact, archaeozoological and palaeoenvironmental assemblages, Wellington Row offers the opportunity for a quantum leap in understanding of York and northern Britain in the 5<sup>th</sup> century AD. As a site and an archive, its significance in this respect ranks alongside that of Wroxeter, Birdoswald and Binchester. Furthermore, assessment and limited analysis of the structural and stratigraphic sequence from the site undertaken as part of this *Urban Transitions* project, combined with what is already known of the ceramic and artefact assemblages from the site (cf. Whyman 2001; Cool 2000), indicates that full analysis of these has the potential to furnish a stratigraphic 'template' and ceramic and artefact 'signatures' which could allow the identification and 'unlocking' of 5<sup>th</sup>-century phases of construction and occupation on a number of other excavated sites across Roman York. This is an issue which will be explored in greater detail below (7.6.1-4), but in the case of late-Roman coarse ceramics it has already been applied to a degree, and with positive results, at the site on which most previous discussion of early post-Roman 'continuity' in York has focused – that of the *principia* of the legionary fortress, and adjacent barracks, beneath York Minster.

## 7.5 York Minster

7.5.1 The post-Roman / pre-Norman Conquest phases of the stratigraphic sequence from York Minster, assembled from separately-excavated areas across the cathedral's interior and immediately outside its walls (Phillips & Heywood 1995), and particularly those in the area of the *principia* basilica, beneath the medieval cathedral's crossing, have assumed primary significance in discussion of the period in York (Carver 1995; Roskams 2000). However, no detailed analysis or publication of the relevant strata exists – the 1995 report on the excavations devotes just *half-a-page* of very schematic description to deposits from the *principia* which span the period from the later-4<sup>th</sup> to the 9<sup>th</sup> century, including the immediate post-Roman 'mud-silts' containing a large assemblage of the bones of immature pigs (the 'small pig' horizon; Carver 1995; Roskams 1996, 283-4; Gerrard 2007).

7.5.2 As has been noted, in some of the excavated areas at York Minster the late- / post-Roman horizons have produced the same late-Roman coarse ceramic variants identified as being exclusively of 5<sup>th</sup>-century date at Wellington Row. It has also been pointed out that this is highly significant for the understanding of these ceramics – the observation that the same variants occur only in the latest phases of *two* sites argues strongly against their simply representing randomised variations in pottery fabrics (see 7.4.3), and supports the contention that they are genuinely very late variants which may be treated as diagnostic of 5<sup>th</sup>-century activity, in the same manner proposed by Cool for her 'very late' artefact assemblages.

7.5.3 Unfortunately, the absolutely key area of York Minster for understanding this period could not be included in either Cool's artefact study or the ceramic research cited previously. The area of the *principia* basilica, where the 'mud-silts' / 'small pig horizon' were excavated, had to be excluded from both, because, as cited above (7.5.1), the stratigraphy of this crucially important area has not been systematically analysed and interpreted in detail. Accurate contextual information for the ceramic assemblage was unobtainable without exceedingly complex stratigraphic analysis (although the actual late Roman ceramic assemblage from the area was recorded in the course of the research). Similarly, a small number of objects from York Minster identified by Cool as belonging to her 'very late Roman' category are published in the 1995 publication of the excavations, alongside artefacts which accord with her description of 'very late' types from other sites in Britain, and which in several cases have parallels from sites which are well-known for having 'very-late' / early-post-Roman phases (see Fig. 7.F), but which are not included in her analysis because they are not from closely-phased and dated late-Roman contexts. Again, these are mostly from the area of the *principia* basilica.

7.5.4 It is clear that the very-late / early post-Roman evidence from York Minster, and in particular from the *principia* basilica, is vitally important for the understanding of the early post-Roman period, in York and indeed in Britain. This is apparent from the published discussion of the Minster excavations (Carver 1995), from Cool's discussion of 'very late' finds assemblages and the published artefacts from the site which fall into this category (2000), and from the parallels with the late-Roman coarse ceramics from Wellington Row (Whyman 2001). For the site and its assemblages to yield their full information potential, however, requires proper analysis of its stratigraphic sequences.

7.5.5 The circumstances of the York Minster excavations and the nature of the site records which these dictated mean that such analysis is complex and problematic. Most of the stratigraphic record in the *principia* basilica derives from drawn and photographed soil sections, with some drawn plans of major walls and other structures. The location of artefacts, including potsherds, within the sequence is either related to these sections or recorded by three-dimensional co-ordinates, rather than the more conventional context-based system employed elsewhere in the excavations (particularly in the trenches external to the cathedral), where work was less pressured and more time available to the excavators for recording (Phillips & Heywood 1995).

7.5.6 However, work on the stratigraphic sequence of the Minster excavations initiated in English Heritage-funded research on the archaeology of the 11<sup>th</sup>- and 12<sup>th</sup>-century cathedrals, directed towards the publication of the surviving structural remains of the building campaigns of Archbishops Thomas of Bayeux and Roger of Pont-l'Évêque and explored further as part of this project, has established a computer graphics (AutoCAD)-based post-excavation methodology which allows more detailed and accurate reconstruction of the archaeological sequence in the *principia* basilica, and the integration of the provenances of artefacts and artefact assemblages within it.

7.5.7 Ideally this approach to and level of stratigraphic analysis should be applied to *all* areas of the Minster in which Roman deposits were excavated. This would, however, be a huge undertaking, and the first step would be to analyse a single area of the *principia* basilica in this way, investigating the clear evidence for adaptation of the basilica structure, apparently in the 4<sup>th</sup> century (Phillips & Heywood 1995) and in all probability later as well, and integrating the recorded provenances of artefacts from that area within the stratigraphic sequence.

## 7.6 Recognising the 5th century on other Roman sites in York (Figs 7.A, 7.H, 7.J)

7.6.1 The other substantial excavations from York which have clear potential for the existence of 5<sup>th</sup>-century archaeological strata – 1-9 Micklegate (Queen's Hotel), 3 Little Stonegate and 9 Blake Street (the archaeology of the last of these already having been published as AY 3/4 - Hall 1997) are susceptible to more conventional stratigraphic analysis. There are, however, approaches derived from the Wellington Row stratigraphic analysis, from the associated research on late-Roman coarse pottery assemblages, and from Cool's work on artefact assemblages, which can be extended to *all* late Roman, indeed all *Roman* sites, within York.

### *Structural and stratigraphic evidence*

7.6.2 One of the characteristics of interpreting and understanding the late- / early-post-Roman phases of the sequence at Wellington Row was the recognition that many structural elements of these late adaptations were represented by both surviving elements of earlier Roman stone buildings, and by the robbing and removal of structural components which had been added in the very-late 4<sup>th</sup> and 5<sup>th</sup> centuries. The latter were frequently single isolated blocks of stone, usually large and sometimes massive, occasionally still *in situ* but more frequently robbed-out and removed, and their recognition

was critical to the identification and understanding of the 'very late' / early post-Roman structures on the site.

7.6.3 In the original Wellington Row stratigraphic report these robbed-out components were invariably referred to as 'pits', even when, as in many cases, they seemed markedly small and shallow to have performed such a function effectively. Furthermore, because the robbing events which had resulted in the creation of these features had, judging from the dateable ceramics and artefacts contained within their backfills, clearly taken place in later centuries – often the Anglo-Scandinavian (9<sup>th</sup>-11<sup>th</sup> centuries), and occasionally even later medieval periods – the features themselves *had been attributed to and phased solely within these later periods*. Since the understanding and interpretation – in fact the very *recognition* – of both 'very-late' / early post-Roman structures and strata, and how these structural and stratigraphic elements articulated with one another, depended on comprehension of the *overall* structural forms of which the elements represented by these robbed features were essential components, failure to recognise them for what they were had far-reaching implications for the overall understanding of the late- and early post-Roman sequence. These observations echo those of the doyen of the excavation of 'very-late' phases of Roman masonry buildings, Philip Barker, who emphasised that interpretation and even recognition of such complex and ephemeral structural remains might necessitate lateral thinking, and should not be hidebound by a limited understanding or overly-restricted range of 'templates' for the methods, materials and structural reconfiguration involved in adapting masonry buildings for new uses in the 5<sup>th</sup> century and later (Barker 1977, 189-93). They are also very evidently closely related to the discussion of building methods, materials and possibilities for the reconstruction and re-use of both Roman masonry- and timber-built structures in Chapter 5, 5.3d.5-7.

7.6.4 Examination of the records and reports of other sites in York where Romano-British sequences have been excavated has revealed comparable features on many of them, their potential relevance to the understanding of 'very late' phases and adaptations of Roman masonry structures unrecognised and presently unknown. Whilst it is of course acknowledged that such modifications need not *necessarily* date to the very end of the 4<sup>th</sup> century and later (although at the one site investigated in detail, Wellington Row, this definitely *is* the case), they clearly have a potential significance in this regard which needs to be explored. Furthermore, this is emphatically *not* an observation relevant only to excavated sites in York. A proliferation of 'later pits' cut into Roman levels, invariably assumed to be functionally- and chronologically-related only to the contents of their *fills*, with little attention paid to the spatial and stratigraphic relationship of the cut features themselves to earlier masonry structures and elements thereof, appears to be characteristic of the interpretation of many Romano-British urban sites.

#### *Ceramic coarsewares*

7.6.5 The fact that the same identifiable 'calcite-gritted' coarseware variants, present only in the early post-Roman phases, have been identified in substantial ceramic assemblages from two completely separate sites within York argues against the suggestion that these variants might simply be fortuitous or 'random', one-off variations in the coarse pottery from a single site. The research undertaken to date seems to indicate a sequential and chronological pattern to their occurrence. The obvious next step is to investigate whether they can be identified at other sites in York.

7.6.6 The examination and recording of 'calcite-gritted ware' assemblages from sites across the city, using the protocols employed at Wellington Row and York Minster, would reveal the presence, absence, quantity and distribution of the apparently 'very late' Roman / 5<sup>th</sup>-century variants identified at the two sites already studied. In the first instance, whether these sherds were found in stratified Roman deposits, or residually in layers from later periods, would not matter. Such research might well, however, identify assemblages of such material within the latest phases of Roman sequences which would

prompt reconsideration of their chronology and, perhaps, re-examination of their stratigraphic components, and the re-interpretation of these in terms of the structures and activity they represent.

7.6.7 There is a great deal of scope for this; c.10,000+ sherds of 'calcite-gritted' ware have been recorded from excavations in York (this figure being derived from information quantified and tabulated in Monaghan 1997). Identifying the 'calcite-gritted' assemblage using the fabric series established for Wellington Row and York Minster is a straightforward process, although time-consuming in that each sherd needs to be looked at in a section exposed by a fresh break of the sherd. There is, of course, the possibility, indeed probability, that an extensive programme of work of this nature on the York-wide 'calcite-gritted' assemblage will reveal new fabric variants not previously recorded in the assemblages from either of the sites studied so far.

7.6.8 The research can be pursued at two levels. In the first instance, the simple presence of these particular, late ceramic fabric variants at other sites in York, whether in stratified late-Roman levels, or even as residual material in much later post-Roman contexts, may inform about the extent and distribution of 5<sup>th</sup>-century activity across the Roman urban settlement (taking into account, of course, those issues of deposit status discussed with reference to Chapter 4, particularly regarding the possible importation of sediments and the artefacts they contain in episodes of dumping; 4.3). On sites where it is clear that Roman deposits and their contents have been extensively re-worked into much later horizons (as was clearly the case at 16-22 Coppergate, for example, where over 90% of a very large assemblage of c.1,600 sherds of 'calcite-gritted' and related wares was recovered from much later, Anglo-Scandinavian and medieval contexts; Monaghan 1997, 1077), it may indeed be the residual component of an assemblage which has the greatest potential and significance for this research, given that, in urban environments in particular, the very latest-Roman deposits are particularly vulnerable to disturbance and re-working into later period horizons.

7.6.9 However, in instances where the proposed 5<sup>th</sup>-century ceramic variants under discussion occur in stratified late-Roman deposits, and especially if they are present in substantial quantities, they clearly have potentially important implications for the dating of those deposits, and would present a strong case for more detailed examination of the relevant elements of the structural and stratigraphic sequence and its overall artefact assemblage.

#### *Petrological and compositional analysis of ceramic coarsewares*

7.6.10 A further element of the study of the proposed 5<sup>th</sup>-century coarse-ware variants should be a programme of petrological and ICPS analysis of the fabrics categorised at Wellington Row and York Minster, to see to what extent the visually-identified fabric variants relate to the petrology of their coarse inclusions and the chemical composition of their clays. It might also provide indications – especially when carried out in concert with the analyses of 1<sup>st</sup> millennium AD coarse ceramics proposed in 9.8, below (which this work would essentially form a sub-set of) – of the *sources* of these ceramics, in particular whether some of them were of very local manufacture.

7.6.11 This might be best done following the programme of identification of the proposed 5<sup>th</sup>-century fabric variants (and perhaps others as yet unidentified) across the city, when the full range of these variants from across Roman York has been established. But such analysis could also be undertaken on the existing fabric series from Wellington Row and York Minster, essentially as a component of 9.8, as discussed below. (Given the extent of distribution of these wares in the 4<sup>th</sup> century and the current, very limited knowledge of their production locations, there is also a strong case for a much more extensive study of late-Roman coarse-ware ['calcite-gritted'] variants in general, across the Yorkshire region and beyond, using these analytical methods, but this is clearly beyond the scope of the research proposed here).

### *'Very late' artefact assemblages*

7.6.12 Similarly, searching for artefact-types which form components of the 'very-late' assemblages proposed by Cool from sites across York – again, whether within stratified Roman sequences or residual within later contexts – will allow the mapping of these artefact-types, thus identifying the potential distribution of 5<sup>th</sup>-century activity across the Roman urban settlement as a whole. In the case of both coarse ceramics and 'very late' artefacts, of course, when these broad distributions are being considered, account will need to be taken of the probable stratigraphic context and thus *status* – for example primary or secondary – of the deposits which contain these artefacts or assemblages, to allow for the possibility of their deriving from secondary deposits imported to the sites at which they were found, from elsewhere within or around the city, as discussed in detail in Chapter 4 (4.3, 4.7).

## **7.7 Overview**

7.7.1 Study of these three elements – hitherto-unrecognised, robbed-out traces of very-late / early post-Roman adaptations of earlier structures, the presence of the latest coarse-ware ceramic variants identified at Wellington Row and York Minster, and of artefact assemblages or types identified by Cool as also being 'very-late' – will thus provide a means, for the first time, to examine the distribution and magnitude of probable 5<sup>th</sup>-century occupation across the urban settlement of York. It would also serve to identify sequences where further detailed stratigraphic analysis might reveal further potential 5<sup>th</sup>-century 'hotspots', in terms of parts of stratified sequences potentially of this date which have not previously been recognised or appreciated. This would be the first time such an approach has been undertaken in York, or indeed in any other Roman urban settlement in Britain.

7.7.2 Such a programme of research would very likely, of course, result in adjustments to the current perception of the chronological status of these ceramic- and artefact-types. Ceramic coarse-ware variants unrecognised at Wellington Row or York Minster (as defined by the work on those assemblages) will almost certainly be encountered, and some of those already identified may prove to have a broader (i.e. earlier) chronological range than our present knowledge seems to suggest. This may also be true of Cool's 'very-late' artefact types.

7.7.3 The broader picture of Britain increasingly seems to be indicating variant regional trajectories (cf. White 200\*; Rogers 2011b, \*\*\*), so any picture revealed in York by the research proposed here may well differ from other Roman urban sites. However, the potential to map tangible archaeological evidence for 5<sup>th</sup>-century activity *across a broad area of a Romano-British urban settlement*, firmly-based on distinctive ceramic- and artefact-types and detailed consideration of their stratigraphic contexts, would break new ground in the understanding of the period. Equally significantly, these approaches could also be developed and applied to *other* urban and military sites, and their wider regions, across Roman Britain, and have particular relevance for the study of the 5<sup>th</sup>-century AD in the many historic urban centres where potential 'very late-' / 'early post-' Roman horizons, which may not to date have been recognised as such, are succeeded by extensive later archaeological sequences.

7.7.4 Added to this, the identification of '5<sup>th</sup> century-specific' fabric variants, in all areas of Britain where they occur, may offer insights into the organisation of ceramic production in that century, the distribution mechanisms which lie behind them and, through this, shed light on social organisation in the early post-Roman period, and in what respects and to what degree this continued, or differed from, that (or, rather, *those*) which prevailed in the 4<sup>th</sup> century.

7.7.5 In the first instance, however, as the work on the Wellington Row sequence and assemblages indicates, it is crucial to establish, accurately and in detail, the stratigraphic contexts of these 'very-late' ceramic and artefact assemblages, and their full composition in terms of range of fabric-types and

artefacts, on the sites which are key to their recognition in the first place; primarily Wellington Row, but also York Minster, 1-9 Micklegate ('Queen's Hotel'), and 3 Little Stonegate.

## 7.8 Proposed analyses

7.8.1 Detailed analysis of stratigraphic evidence from latest horizons of Roman sequences, the disposition of these contexts in relation to earlier Roman masonry structures, and the later robbing of those structures, from Wellington Row, 1-9 Micklegate, York Minster (a sample area) and 3 Little Stonegate.

7.8.2 Full recording and analysis of coarse-ceramic, artefact, animal bone and palaeoenvironmental soil samples from deposits of latest-Roman /early post-Roman phases from Wellington Row.

7.8.3 Recording of coarse-ceramic and artefact variants which are present in these latest Roman phases (and absent from earlier horizons) where they occur as residual finds in later deposits on this site

7.8.4 Investigate the excavation archives of other York sites with Roman masonry buildings for currently unrecognised robbed-out structural elements which relate to late adaptations of those buildings

7.8.5 Examine late-Roman coarse-ware assemblages from excavations across York, residual finds as well as those stratified in late- / immediate post-Roman strata, for the presence of the proposed 5<sup>th</sup>-century variants identified at Wellington Row and York Minster

7.8.6 Petrological / ICPS analysis of these fabric variants to validate fabric categorisations, indicate commonality / diversity of sources, and identify potential areas of production (see also 9.8.3, 9.9.3, below)

7.8.7 Examine artefact assemblages from excavations across York for presence of (diagnostic) types stratified in late- / immediate post-Roman strata at Wellington Row

## 7.10 Archival and management recommendations arising from Chapter 7

7.10.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

7.10.1.1 There is a need for more systematic examination of stratigraphic evidence at the interface between the latest Roman and immediately later horizons – *whatever* the date of the latter – with particular attention to apparently later 'pits' and their stratigraphic and spatial relationships to underlying Roman masonry buildings.

7.10.1.2 The stratigraphic evidence for the robbing of Roman masonry buildings, and possibly quite slight impacts and variations in construction, need to be fully recorded and considered in relation to adjacent layers in some detail.

7.10.1.3 Only detailed recording and comparative analysis of artefacts and artefact assemblages from stratigraphic phases defined in the previous two paragraphs will identify

suites of objects specific to them; as this corpus builds, artefacts recovered as residual material from chronologically later horizons of excavations may also be seen to belong to it.

7.10.1.4 The examination and recording of late Roman coarse ceramic assemblages to the level of detail required to identify the fabric variants discussed here is much more time-consuming than the identification procedures which would typically be undertaken in the course of the post-excavation assessment stage of a commercial project. It is indeed much more detailed than has previously been undertaken on such ceramic assemblages from York and elsewhere in the context of researching and reporting for final publication. It would therefore require the introduction of a dedicated assessment protocol to excavation project specifications for work in York, using the fabric series established for the assemblages from Wellington Row and York Minster.

7.10.1.5 At this stage of the research, however, when the apparent significance of the variations identified at these two sites requires confirmation from others in the city, and given that the main resource available is provided by the numerous assemblages, some of them very large, from previous excavations, published and unpublished, a dedicated research project is required to cover *that* material (or at least a large-ish sample of it) before the incorporation of a relevant protocol into commercial project specifications is considered.

## Chapter 8 *Eoforwic* to *Jorvik* – the ‘Anglian’ to ‘Anglo-Scandinavian’ transition in York, AD 800 - 1000

### Summary

*The issue of urban origins and development from the 7<sup>th</sup> to the 10<sup>th</sup> centuries has been a major theme of the study of this period. Within this debate, however, more attention has been paid to the significance of wics of the 7<sup>th</sup>-9<sup>th</sup> centuries, their role in articulating production and exchange, place in contemporary settlement hierarchies and significance as the point-of-origin of the English town, than to explaining the growth of urban sites from the later 9<sup>th</sup> century onwards. In discussion of these later urban sites, market-driven explanations have held the field with relatively little consideration of alternatives. When archaeological evidence from other contemporary settlement types has been interpreted ‘the growth of towns’ in this period has often appeared to be a wholly separate, autonomous phenomenon, systemically unconnected with the social relations and hierarchies which were driving and structuring changes in rural settlement pattern and functions, except as an independently-operating source of ‘economic stimulus’. It has however been argued in some quarters that explanations of urban development through the later 9<sup>th</sup> and 10<sup>th</sup> centuries need to be understood in the same terms in which changes in rural settlement have been considered, in relation to changing structures of seigneurial power, patterns of landholding and articulation of production.*

*Large-scale excavations in York at 46-54 Fishergate and 16-22 Coppergate revealed seemingly complementary settlement evidence from the 9<sup>th</sup> century; part of a middle-Anglian settlement enclosure interpreted as a trading site or wic (‘Eoforwic’) at Fishergate, where occupation appears to have ceased in the middle decades of that century, and at Coppergate (Period 3), on ground which seems to have been largely abandoned between the late-4<sup>th</sup> and – mid- 9<sup>th</sup> centuries, settlement evidence, of seemingly unstructured and (to date) indeterminate character, which commences in those same decades. As this time-span coincides with the invasion, capture of York and settlement of Yorkshire by a Viking army, this is assumed to have been the context for what appears to have been a marked change in the organisation of the urban settlement at York.*

*Investigation of the large animal bone assemblage from Fishergate suggests that this settlement was provisioned by through tributary mechanisms imposed by royal or aristocratic authority. In this it contrasts with later, 10<sup>th</sup>- and 11<sup>th</sup>-century phases of the Coppergate site (Period 5), whose animal bone assemblages are more closely paralleled by more diverse and typically ‘urban’ assemblages from the later medieval period. However, the comparatively small animal bone assemblage from the late--9<sup>th</sup> century Period 3 at Coppergate appears to possess similar traits to that from Fishergate, perhaps suggesting a similar provisioning mechanism. Furthermore, examination of the site phase plan for this period at Coppergate also shows marked similarities with the layout of the Fishergate site in the early- / mid-9<sup>th</sup> century, with high densities of pits surrounding un-pitted, rectilinear areas which may indicate the positions of buildings. There are also indications that robbed-out padstones around the margins of these areas, perhaps representing the footings of buildings, may in existing interpretations have been mis-identified as later pits, as in earlier cases elsewhere in York, discussed in Chapter 7 (7.6.2-3).*

*Whilst there are close similarities between these phases on the two sites, a chronological distinction seems to be confirmed by the contrasting ceramic assemblages they produced, in particular the domination of the earliest Anglo-Scandinavian assemblage at Coppergate by York ware, all but absent from the Fishergate settlement. It is suggested, however, that this contrast may be the result of factors other than chronological succession, and that these two phases may have been partly contemporary. It is also proposed that the marked change in settlement form which clearly did occur in York between the early-9<sup>th</sup> and early-10<sup>th</sup> centuries reflects substantial changes in the role and*

organisation of the urban settlement, and how élites procured the material resources necessary to sustain both their social position and the urban settlement of Jorvik.

*Evidence from small sites to the east of the river Foss indicates the existence of other middle-Anglian, 8<sup>th</sup>- / 9<sup>th</sup>-century enclosures similar to that at Fishergate, whilst environmental indicators from small sites a little distant from 16-22 Coppergate are markedly different in the 10<sup>th</sup> century from those at Coppergate itself, indicating differentiated land-use in the area around the fortress. It is proposed that both the 8<sup>th</sup>- / 9<sup>th</sup>-century middle-Anglian enclosures east of the Foss, and the broad areas and spaces which were defined and enclosed by the built-up, 'urban', 10<sup>th</sup>-century Anglo-Scandinavian arterial street-frontages, related to the holding of livestock – here argued to be primarily cattle and suggested that settlement forms in both periods may represent discrete enclaves for distinct élite kin-groups and their retinues and dependents. The manner in which these groups related to the landscape beyond York, the parts of that landscape which they drew resources from, and how these resources were procured, seem however to have changed significantly between the 8<sup>th</sup> and 10<sup>th</sup> centuries.*

*A range of analyses of the stratigraphic, animal bone and environmental evidence from Period 3 at 16-22 Coppergate is proposed to address these questions, as well as analysis of environmental samples from several smaller sites to investigate further the suggestion of markedly-differentiated land-use in 10<sup>th</sup>-century Jorvik, with areas given over to open ground and the keeping of livestock. There are also close connections with the petrological and compositional analysis of ceramics proposed in Chapter 9 (9.6, 9.8.2).*

## **8.1 The wider research context and rationale for study**

8.1.1 The study of the middle-Saxon trading sites often referred to as *wics* or 'emporia' has been one of the most prominent themes of research into the 7<sup>th</sup>-9<sup>th</sup> centuries AD over the past 30 years. The role of these settlements in the contemporary economy and social and settlement hierarchy, who controlled them and to what purpose, and their significance in the development of the medieval and ultimately modern town, have been substantial and contested research issues. The discovery of the settlement of this date at 46-54 Fishergate in the mid-1980s brought York into the mainstream of this debate. Excavations at 16-22 Coppergate in the later 1970s had already recovered evidence a thriving and seemingly undeniably urban settlement originating in the second half of the 9<sup>th</sup> century, but developing in the course of the 10<sup>th</sup> into a form which apparently laid the basis for the development of the medieval city. As the settlement at Fishergate appeared to have fallen out of use shortly before that at Coppergate commenced, the reasons for this apparent 'step-change' in urban form began to be considered.

8.1.2 Whereas in the wake of Richard Hodges' seminal *Dark Age Economics* (1982) the study of *wics* / 'emporia' has very evidently problematised and questioned the character and role of these distinctive 7<sup>th</sup>-9<sup>th</sup> century settlements, this has perhaps not been so much in evidence in the study of English (and Anglo-Scandinavian) urban sites of the later-9<sup>th</sup> and 10<sup>th</sup> centuries. Typically, these settlements continue to be unproblematically referred to as 'towns', and their development and *raison d'être* to be generally considered as having been 'outside', and independent of, their wider social and settlement context, as if coming into being of their own accord. Hodges' 1982 interpretation saw *wics* as direct precursors of the social and economic development which led to the later growth of 'towns', laying the ground and setting the scene in the 7<sup>th</sup> and 8<sup>th</sup> centuries for the 'urban renaissance' of 10<sup>th</sup> and 11<sup>th</sup>, which in turn heralded the development of urban sites of a type which formed the basis of the medieval English town as recognised from the 12<sup>th</sup> century onwards.

8.1.3 Whilst this interpretation of the role and significance of the earlier *wics* / 'emporia' in beginning this process has been called into question, that there was what may be described as urban development in some form across southern Britain from the later-9<sup>th</sup> and 10<sup>th</sup> centuries seems undeniable. With *wics*

taken out of the equation, however, English urban settlements of this date appear to spring out of nowhere. The widespread lack of discussion of this development with reference its social and settlement context appears to tacitly accept the notion of medieval towns as having been 'mercantile islands in a sea of feudalism', and, by extension, effectively having sprung up of their own accord as a result of some innate desire amongst the English, and humanity in general, to 'truck, barter and exchange one thing for another'. But if the characteristic 'English medieval town' is to be understood to have been a primarily *commercial* entity, sustained by an independently-operating, 'free', price-regulating market, and to have originated as such in the 10<sup>th</sup> century AD, which thereby marks the birth of the town in a form in which it is recognised in Britain today (and this is a characterisation which, whilst rarely specifically and explicitly stated, underlies much of the debate on this matter – cf.8.1.4, below), then the characteristics of this crucial period of social transformation and urban inception, and the changes which took place during it, need to be analysed and understood, not assumed *a priori*. It is very apparent here that the comments of Martin Millett with reference to the study of *Romano-British* towns (cited in Chapter 4, 4.2.5-6, above), to the effect that what needs to be addressed is what actually *constituted* urbanism in that particular period, what took place in towns and how they were sustained, are equally relevant to the study and understanding of urban origins in the 9<sup>th</sup> and 10<sup>th</sup> centuries.

8.1.4 At York and across the Danelaw, this urban development is in broad terms contemporary with the documented Scandinavian settlement of the region from the middle of the 9<sup>th</sup> century, and in consequence this episode has provided an obvious context and 'explanation', in the sense of being the event which triggered an expansion of production and exchange which allegedly initiated and underpinned the growth of towns from this point forward. This tendency can certainly be detected in studies of York's Danelaw hinterland(s) in the later-9<sup>th</sup> and 10<sup>th</sup> centuries. Thus Hadley in her (2000) study of the northern Danelaw devotes extensive discussion across seventeen pages (197-213) to village origins in the 10<sup>th</sup> century in terms of developments in the social and institutional relations between lords and peasants; but just *two* pages in the same study to the development of towns in the same period. The growth of urban settlement is expressed in terms such as 'rapid economic development', 'urban expansion', 'developed as markets and urban centres', 'trade and manufacture.. boosted', '..international.. and national trade.. stimulated' (ibid., 31-3). Richards (1999) appears similarly disposed towards 10<sup>th</sup> century urban development, with the 'blossoming towns' of the early-10<sup>th</sup> century providing markets for the inhabitants of rural settlement sites such as Cottam on the Yorkshire Wolds, 'freed from royal control and allegiance to the vill', benefiting as independent producers from 'the opening up of trade and exchange, and..' – nothing less – '..a switch from a tributary to an exchange economy' (96, 99). Loveluck (2007), discussing the late-9<sup>th</sup> / early-10<sup>th</sup> century phase of the settlement at Flixborough in the lower Trent valley, refers to 'an emergent relationship between rural settlement and the development of the late-9<sup>th</sup> / early-10<sup>th</sup> century town' (Lincoln), but this relationship is not explored, and the reasons for urban development do not appear to be considered to be *systemically* linked to what was happening on rural sites such as Flixborough.

8.1.5 But these changes evident in the wider landscape, seemingly indicative of a shift to seigneurial power located and operating at a more local level than had previously been the case (apparent in funerary sculpture of the period – cf. Bailey 1982 – as well as, increasingly, in the excavated settlement evidence), raise the underlying question of whether the 10<sup>th</sup>-century town as an institution was an essentially *economic* entity, a result of and response to the rise of commerce and trade, or, conversely, an aggregation of seigneurial power and authority dependent on the social structures and relations which sustained these, a debate relevant to the apparent growth of towns in this period across southern Britain, in areas under English control as well as in the Danelaw.

8.1.6 Whilst much interpretation of the evidence from these urban settlements implicitly, instinctively and uncritically adopts a 'trade / commerce' perspective, the case has been made for a central role for aristocratic landholding and the social obligations of tenants and retainers which went with it in the creation and sustaining of urban settlements of this period (Astill 2009). Astill characterises the 'market

orthodoxy' as the view that 'the aristocracy was merely one of the many groups who had recourse to towns from the 8<sup>th</sup> century, and this mixed demand, articulated by the market, was present throughout the Middle Ages' (ibid., 260). Observing that, as described above, debates about the agency of social change in this period have largely been confined to discussions of the countryside, for the most part excluding the towns, he sets against this orthodoxy an alternative, with 'the aristocracy (including the king).. being the essential prime mover in town creation and the sustaining influence.. until the majority of the population had a need for centres of exchange and production, perhaps as late as the last two decades of the 12<sup>th</sup> century.' In such a circumstance, 'A town's impact [as a 'market centre' stimulating production] on the countryside between the later 9<sup>th</sup> and 11<sup>th</sup> centuries may have been minimal.' (ibid.). Developing this argument, he proposes that 'The aristocracy, with their scattered estates, could have used non-market exchange systems which potentially supported early medieval towns'. Thus, with reference to southern England and Mercia beyond the Danelaw,

'The emporia and the subsidiary collection centres of *villa regales* and minsters may.. have been supported by the surplus generated from estates and tribute. Similarly the *burhs* with their garrisons could have been manned and victualled from the aristocracy's estates.

'That the aristocracy had a clear interest in the burhs is reflected in the grants of holdings – the 'urban manors' [and evidence] suggests that the scale of industry.. was more appropriate to a patron rather than a wider clientele that would be expected in fully developed towns..'

'We should, then, consider whether it is possible to distinguish the effects of the different groups within the aristocracy on urbanization.'

(ibid.)

8.1.7 With specific reference to York, this last observation may be considered in the light of the late Richard Hall's comments concerning the documented factionalism which permeated the highest levels of society in York in the period between the later-9<sup>th</sup> and the 11<sup>th</sup> centuries. This was at least in part a response to the 'geographical and cultural heterogeneity of the York elites', which he lists as, in the 9<sup>th</sup> century 'Northumbrians, Halfdan's army, Archbishops as key supporters of royal authority, the earls of Bamburgh and the community of St Cuthbert', and in the 10<sup>th</sup> aristocratic groupings from 'Wessex, Dublin, Aethelstan [his retinue], Erik Bloodaxe.. [as well as] Scandinavian groups' (Hall 2000, 319-321). Hall discusses this mainly in terms of issues of identity and cultural / political affiliation; but with reference to Astill's comments cited above, it can also be considered in terms of the distinct *resource bases* which these distinct aristocratic groups and factions may have been drawing on to sustain themselves and their retinues and, by extension, a settlement which we would now describe as 'urban'.

8.1.8 In York, aspects of the excavated evidence from 46-54 Fishergate and 16-22 Coppergate, along with a cluster of sites adjacent to these two which have been excavated subsequent to their discoveries, provide opportunities to explore these interpretations using archaeological evidence for urban development. The proposals presented in this chapter seek to understand the transition from the 8<sup>th</sup>- / 9<sup>th</sup>-century settlement in Fishergate and adjacent areas to that at Coppergate, in the heart of what was to become the medieval and modern town, in the later-9<sup>th</sup> and 10<sup>th</sup> centuries, through

the differences, similarities and possible *overlapping* of the locations, spatial organisation and built and open environments of these successive phases of urban settlement, and how these reflected the relationship(s) of the urban settlements to their wider hinterlands

the social connections and mechanisms of distribution through which they were connected with those hinterlands, and how these differed between the successive settlements (an approach closely connected with that proposed in Chapter 9, 9.5.2-4, 9.6.2, below)

considering the implications of these for the interpretation of urban development in the later-9<sup>th</sup> / 10<sup>th</sup> century in relation to the evidence for settlement form, production and consumption from contemporary rural sites such as Flixborough and Cottam

8.1.9 As the references cited in 8.1.3-5 indicate, this integration of the evidence from urban sites of the 9<sup>th</sup> and 10<sup>th</sup> centuries into their wider settlement networks and patterns of production, distribution and consumption has not previously been undertaken in any detail. The rich archaeological record of this period from York offers the opportunity to do this, utilising an approach similar to that employed by Loveluck at Flixborough (2007, 152-7), and seeking to integrate understanding of Anglo-Scandinavian urban development with the contemporary changes increasingly being recognised in the countryside at settlements such as Flixborough and Cottam.

## **8.2 46-54 Fishergate and 16-22 Coppergate – a brief introduction** (Fig.8.D)

8.2.1 The 8<sup>th</sup> / 9<sup>th</sup> century *wic* settlement at 46-54 Fishergate, on the east bank of the river Foss, close to its modern confluence with the Ouse, appears to have contracted in the first half of the 9<sup>th</sup> century (Period 3c), and come to an end around the middle of that century (Mainman 1993, 650; Kemp 1996, 83). That this was the case is strongly suggested by the near-absence from the site of York ware, a ceramic type present in quantity from the earliest Anglo-Scandinavian phase at 16-22 Coppergate, further upstream and on the opposite bank of the river Foss (Mainman 1993, 651; Mainman 1990, 400-411, 415-21). This chronology is supported by the fact that the latest coins from this phase of the Fishergate site date to the period AD 850-60, and that coins of similar date at Coppergate are present amongst the earliest phase of Anglo-Scandinavian occupation there. The Fishergate site then appears to have been reoccupied on a markedly smaller scale in the later-10<sup>th</sup> century (Mainman 1993, 651; Kemp 1996, 12). A similar overall pattern is observable on the adjacent excavations at Blue Bridge Lane and Fishergate House, which revealed part of the same settlement complex (Vince & Young 2005).

8.2.2 The apparent hiatus in settlement at Fishergate after Period 3c, and the very small quantity of York ware from the site, in contrast with its presence in quantity in the earliest Anglo-Scandinavian phase at Coppergate's own Period 3 (these site periodisations, it should be noted, are specific to the individual sites in question, and do not equate with one another chronologically), on a site on which evidence for settlement in the 8<sup>th</sup> and early 9<sup>th</sup> centuries is limited, seems to indicate a substantial shift in the location and organisation of 'urban' settlement (if generic use of the term may be permitted for the purposes of this discussion) at York at this time. Since this shift occurs around the time of the documented seizure of York, and settlement and land-taking by a Viking army in the later 860s, the change in settlement pattern has been associated with these events, albeit usually with due acknowledgment that the imprecision of archaeological dating precludes certainty about the precise dates and causal associations involved.

8.2.3 There are two noteworthy observations relating to the apparent shift of settlement from Fishergate to Coppergate. The first of these has been identified through the study of animal bone assemblages from the two sites; Terry O'Connor's work on this material led him to propose that the archaeozoological evidence from Period 3a-c at Fishergate may indicate the provisioning of livestock to the site through tributary mechanisms, suggested by a comparatively narrow range of species, dominated by cattle which were past their prime, being represented in the animal bone assemblage. This is contrasted with the equivalent assemblage from Period 5b at Coppergate, dating to the later-10<sup>th</sup> / early-11<sup>th</sup> century, which suggest access to more varied animal food resources, with a greater range of species represented, closer to that typical of animal bone assemblages from medieval towns (O'Connor 1991, 278). These observations seem to indicate not just a shift in settlement *location* in the

course of the 9<sup>th</sup> century, but also a significant change in the food economy (commencing, at least) in this period.

8.2.4 Closer examination of the archaeological evidence from Period 3, the earliest recognisable phase of 9<sup>th</sup>-century settlement at 16-22 Coppergate, identifies some particularly interesting characteristics. Firstly, whilst in terms of the ratios of the main species (cattle, caprids and pigs) the animal bone assemblages from Period 5b, dated to the late-10<sup>th</sup> century, appear more similar to those from medieval periods later in the sequence, that from Period 3 shows, as recognised by O'Connor (ibid.), marked similarities with the assemblage from *Fishergate* Period 3. Secondly, whilst from Period 4b (mid- / late-10<sup>th</sup> century) onwards at Coppergate (perhaps even from Period 4a, early- / mid-10<sup>th</sup> century) the site was divided into narrow plots of land (tenements) with boundaries running orthogonally to Coppergate towards the river Foss, in Period 3 these had not yet been established, and the organisation of space and land-use – a large number of pits, in various clusters, some of those clusters markedly linear in form, with intervening areas free of contemporary features – is strongly reminiscent of that seen in Period 3a at *Fishergate* (Kemp 1996, fig.16, p.38; Mainman 1990, fig.215, p.488), where the areas free of intensive 'pitting' indicate the positions of post-built (in this case, earth-fast) buildings.

8.2.5 This is extremely interesting, as it indicates that the earliest 'Anglo-Scandinavian' occupation at 16-22 Coppergate was similar in fundamental respects to that from *Anglian* (46-54) *Fishergate*, the establishment of the tenement boundaries orthogonal to the street of Coppergate, which formed the framework of land organisation within which the substantial timber buildings of the late 10<sup>th</sup> century would be constructed, being a *later* development of the early- / mid-10<sup>th</sup> century. These observations invite further consideration of both the character of the evidence from Period 3 at 16-22 Coppergate, and that from 46-54 *Fishergate* and its adjacent sites, downstream on the eastern bank of the river Foss.

### 8.3 The 9<sup>th</sup>-century chronologies of *Fishergate* and *Coppergate* – some thoughts

8.3.1 The first issue is chronology. The near-absence, and presence in quantity, of York ware at *Fishergate* and *Coppergate* respectively has been taken to indicate a chronological progression, and the apparently clear-cut nature of the shift seems to support this interpretation (Mainman 1993, 650-51; Kemp 1996, 12). There may, however, be other dimensions to this patterning which merit consideration. As will be discussed in more detail below (9.5.1-2), at *Blue Bridge Lane*, a site adjacent to and contemporary with the settlement at 46-54 *Fishergate*, the presence within the pottery assemblage of a high proportion of vessels deriving from the Trent valley and North Lincolnshire may indicate a settlement drawing important elements of its resources from a locality some considerable distance from York. There appear to be marked differences in the source of ceramic supply between this site and 46-54 *Fishergate* itself (Vince & Young 2005). These adjacent sites were clearly part of the same, broadly contemporary settlement *complex*, but may represent different 'enclaves' which derived comparable resources (those involving ceramic vessels – as containers for foodstuffs ? – at least) from different areas beyond York, in at least one case apparently from some distance away.

8.3.2 Could a similar principle be applied to Period 3 at *Coppergate*, with its pottery assemblage dominated by York ware, scarcely present at all at *Fishergate* ? Rather than representing a strict *chronological* succession, might it be entertained that, at *Coppergate* in Period 3, a settlement comparable in form to that at *Fishergate*, and (as present understanding of its animal bone assemblage might suggest) provisioned in the same fashion, was drawing *its* resources, including ceramics, from a completely *different* locality to that which the inhabitants of the *Blue Bridge Lane* and *Fishergate* sites were drawing on? Since there are indications that York ware has close petrological and chemical

similarities to later (medieval) pottery around the western margins of the Vale of York (9.5.2; 9.5.4; 9.6d.1; 9.7.3, below), might we be seeing, at Coppergate, an enclave drawing resources from *that* locality, as Blue Bridge Lane seems to have drawn them from the lower Trent valley ?

8.3.3 It is not necessary, in this scenario, to abandon the view that the Coppergate York ware post-dates the quartz- and shell-tempered pottery from Fishergate. But the interpretative suggestions being advanced here on the basis of ceramic evidence – that ‘urban’ settlement at York in the 8<sup>th</sup> and first half of the 9<sup>th</sup> centuries may have effectively consisted of a cluster or aggregation of settlements, each defined by its own enclosure, representing the enclaves of different aristocratic / elite groups, claiming resources through tribute from different parts of the region and beyond – does require that straightforward ‘chronological’ interpretation of differences in ceramic assemblages in the 8<sup>th</sup> – 10<sup>th</sup> centuries (and later ?) in York be considered in this light.

8.3.4 York ware forms the major component of the ceramic assemblage of *Jorvik* in the later 9<sup>th</sup> and the first half of the 10<sup>th</sup> century, present in all areas of the urban settlement (Mainman 1990, 408). It does, however, occur in a number of fabric variants (*ibid.* 406, 410) and seems likely to have been manufactured at multiple production sites (*ibid.*, 410; 9.6d.1, below), and the idea that in the earliest phase at Coppergate, at least, it may in fact have been supplying just one ‘enclave’ in York, contemporary with the latest phase at Fishergate, may perhaps be entertained. But this also raises the question of whether quartz- and shell-tempered *hand-made* ceramics found in the earliest Anglo-Scandinavian phase at Coppergate, some variants of which are very similar in appearance and fabric to York ware itself (Mainman 1990, 408; 9.7.2, below), were actually *residual* in those contexts (where they were found in association with York ware), which a suggested re-interpretation of elements of the stratigraphic sequence (8.4.2, below) would allow. In that case the Coppergate *hand-made* ceramics could actually be *contemporary* with those from Fishergate, with the interpretation that York ware was a later development than the quartz- and shell-tempered hand-made fabrics restored. The currently-favoured interpretation seems to be that, where found in association, the hand-made vessels and York ware were in contemporary use (*ibid.*, 398), a contemporaneity which might in itself lend credence to the notion of different enclaves within the York settlement having been supplied from different sources. Discrimination between these two interpretations clearly requires careful examination of the occurrence of the different ware-types in the relevant part of the stratigraphic sequence, consideration of the formation processes behind and deposit status of these contexts (cf.4.5.4, above), and incorporation of any dating evidence provided by stratified coins or radiometric determinations.

#### **8.4 Period 3 at Fishergate, Period 3 at Coppergate : structural and spatial comparison (Figs 8.D, 8.K)**

8.4.1 Moving on to consideration of the actual features and stratigraphy of Coppergate Period 3, the general similarities with the layout of the middle-Anglian settlement at Fishergate have already been mentioned, in particular the possibility that the ‘un-pitted’ areas at 16-22 Coppergate, as at 46-54 Fishergate, indicate the sites of timber-built structures (8.2.4). Developing this line of argument further, the possibility may be noted that around the edges of the ‘un-pitted’ areas at Coppergate, a number of features appear to be very plausible candidates for the locations of robbed-out *padstones*, as identified in an earlier context at Wellington Row and discussed in Chapter 7 (7.6.2-3). At 9<sup>th</sup>-century Coppergate, the potential relevance of this interpretation is emphasised by the fact that one of these features, 27478, contained a large rectangular limestone block, probably robbed from an adjacent Roman structure, with a length of wood wedged beneath it, – the remains of a lever employed in an attempt (in this instance unsuccessful) to remove the stone from the ground. (A parallel for this was excavated at the Bedern (South-West), where a 12<sup>th</sup>-century attempt to raise massive gritstone blocks from the foundation of the wall of the Roman legionary fortress was abandoned, leaving the wooden levers in place [Fig.8.K].)

8.4.2 These observations also raise another important point. If many of these ‘pits’ are reinterpreted as robbed-out padstones, then their backfills – containing material of Anglo-Scandinavian date – and the original padstone-containing *features* relate to successive, but very distinct, phases of the site. This obviously impacts on the phasing of the sequence, and on what material, of what date, actually relates to the *use* of which features. Whilst the *backfilling* of these features incorporated ceramics of Anglo-Scandinavian date, the padstones which (it is proposed) these features originally contained were by definition *earlier* than that backfilling. But *how much* earlier? Could they in fact be contemporary with the Period 3c settlement at 46-54 Fishergate, or even the earlier, 3a and 3b phases of that middle-Anglian settlement? In this interpretation, the *backfills* of these 16-22 Coppergate features – deposits accumulating or dumped in the voids left by the removal of padstones – would actually belong to the *following* Periods, 4a or 4b, which are unambiguously part of the Anglo-Scandinavian activity on the site.

8.4.3 The existing interpretation of the Coppergate sequence considers the suggestion of the pit-free areas representing buildings, but rejects it on the basis of the absence of any indications of walls or floors; but this does not take into account the ‘robbed padstones’ interpretation, and the Fishergate Period 3 buildings, which have not been doubted, did not have any floors either (in fact the ‘spread midden’ apparently associated with one of them (Kemp 1996, 56-9) may have equivalent deposits in Period 3 at Coppergate). It is suggestive that the alignment of the ‘un-pitted’ areas of Coppergate Period 3 (Mainman 1990, fig.215, p.488) proposed as the sites of buildings is in accord with the same ‘radial’ arrangement, reflecting the original, curving sweep of the slope (or terrace?) of the valley of the river Foss, as that of the nearby church of St Mary Castlegate (compare *ibid.* fig.215 with *ibid.* Fig.141, p.376). This is a church which has produced direct archaeological evidence for having been in existence in the 8<sup>th</sup> century (Hall 1987, 150-54; fig.37, p.151).

## 8.5 Settlement form and function in 8th – 9th-century Anglian York (Figs 8.A, 8.E, 8.F)

8.5.1 This discussion of the specifics of Period 3 at Coppergate prompts consideration of the broader picture of Anglian and Anglo-Scandinavian settlement form at York. Apart from rectangular timber buildings and frequent pits, a very obvious characteristic of the 46-54 Fishergate settlement is a curvilinear feature apparently enclosing a large area of ground to between itself and the river Foss, containing within it all of the Period 3 structures and features on the site (Kemp 1996, fig.16, p.38). Often referred to as a ‘ditch’ its profile actually suggests that it originally contained a substantial timber palisade (*ibid.* fig.7, facing p.22; fig.5, p.19; fig.4, p.18, fig.10, p.29). A similar feature, unrecognised before this assessment, was excavated at Paragon Street, some 200 m to the north-east of Fishergate, in 1973, a few metres from a well which contained within its infill middle-Anglian artefacts, although no pottery of that date. More recently, excavations at George Street / Dixon’s Lane, on the terrace immediately above the floodplain of the Foss some 400 m north of Fishergate and to the south-west of Walmgate, revealed another similar feature – again interpreted as a ‘ditch’, but more probably a palisade slot, associated with a quantity of pottery of the quartz-tempered type from Fishergate.

8.5.2 Consideration of these three apparently separate enclosing features – all located on the low, level plateau to the east of the river Foss – suggests the existence of three comparable enclosures, of which that at Fishergate has been most extensively excavated, each apparently defining and incorporating substantial areas of ground; at Fishergate probably over a hectare. (It appears that the Blue Bridge Lane site would have been *outside* the limit of this enclosure; the middle-Anglian occupation here may have been situated within a separate enclosure of similar type, but no evidence for this was found within the areas excavated.). The supply of coarse ceramics to these enclosures seems to have

been drawn from markedly different sources, some a considerable distance away from York (9.5.2, below).

8.5.3 These observations from 46-54 Fishergate, Paragon Street and Dixon Lane / George Street seem to indicate the existence of separate enclosures in the area east of the Foss and north of the Ouse. This broad, low spur of ground between the rivers, centred on the line of Walmgate, within the medieval city walls, could have accommodated several other enclosures of similar size. The palisades of the known enclosures would obviously have served to define, demarcate and regulate access to their interiors and whatever activities took place there. But they could also have served to contain and control livestock, and this may indeed be the explanation for their large size and – in the 46-54 Fishergate example at least – the apparently sparsely-built character of their interiors. This interpretation once again draws attention to the significance of livestock, particularly cattle, in the understanding of historic settlement at York, potentially from the pre-Roman Iron Age onwards, and perhaps even earlier than that (see 3.5 - 3.6, above).

8.5.4 It also prompts some thoughts about the change in settlement form which took place between the early-9th and early-10th centuries. In the first case, knowledge in any detail at all is restricted to the area just discussed, with its evidence for palisaded enclosures containing acres of ground. Nothing which is obviously directly comparable has been identified within or adjacent to the Roman legionary fortress or its immediate environs north of the Foss and east of the Ouse, although there is a narrow, curvilinear feature at the south-east end of the excavated area of 16-22 Coppergate which has now been attributed to Period 3 on that site, and which may represent part of an enclosing palisade similar to those described in 8.5.1. Certainly no feature of this type and date has yet been encountered on the *south-west* bank of the river Ouse. But the very *sparseness* of evidence from these areas (accepting the limited scale and extent of excavations into the typically very deep strata encountered there), and the environmental indications of the presence of open ground at some sites of this period (cf. the evidence from the fills of the Roman period well, excavated in Aldwark, in the area of the former Roman *canabae* to the south-east of the legionary fortress, north-west of the river Foss; REF), may indicate a similar situation in at least some of these areas in this period – with the walls of the Roman legionary fortress perhaps forming the biggest of all enclosures of this type ?

## **8.6 Settlement form and function in 10th-century Anglo-Scandinavian York** (Figs 8.A, 8.G)

8.6.1 This picture, of separate, curvilinear palisaded enclosures taking in large areas of, seemingly, open space appears to be in marked contrast with that which prevailed from the early decades of the 10th century. By that date the main arterial streets of York – testified by excavations at 1-9 Micklegate, 58-9 Skeldergate, \*\* High Ousegate, 16-22 Coppergate, 7-15 Spurriergate) and 41-49, 76-82, 104-112 and 118-126 Walmgate – had been established along both banks of the Ouse and Foss, with regular rows of tenements and buildings laid out along them, creating what was apparently a completely different settlement form. There may, however, be greater similarity between this new arrangement and that which had prevailed in the middle-Anglian period in the 8th and earlier 9th century, outlined above in 8.5.1-3, than is at first apparent. One of the key issues in the development of York (and of other medieval towns and cities in England) as an apparently densely-settled urban site from the 10th century onwards is the extent and chronology of building in the (seemingly large) areas and spaces behind and between the main arterial routes listed above. In the 10th century there is environmental evidence from small excavations in Parliament Street and Clifford Street, to the north and west of the Coppergate / Ousegate axis, of quite different activities having taken place in the areas *bounded* and *enclosed* by the built-up street frontages, so vividly demonstrated by the excavations at 16-22 Coppergate, than was the case along those street frontages themselves – conditions more indicative of farmyard-like environments and the feeding of livestock (Hall & Kenward 2004, 408-9). Similar indicators have also

been obtained from sites elsewhere in and around the historic urban core of York, for example at St Saviourgate to the east of Coppergate, and in Walmgate on the opposite side of the Foss (ibid., 419-23).

8.6.2 This suggests the possibility that the arterial streets and their built-up properties around the Roman legionary fortress, and in the area of the former Roman settlement on the south-west bank of the river Ouse, defined and encompassed areas of open ground behind and between them. Recent detailed examination of sites within the area of the Roman legionary fortress has apparently indicated the likely existence of quite extensive tracts of open ground continuing into the 11<sup>th</sup> century (Gareth Dean, *pers comm.*). Such land organisation would actually have much in common with the large enclosing features proposed for Anglian York in the 8<sup>th</sup> and early 9<sup>th</sup> centuries (8.5.1-3), the major obvious difference being the absence around the perimeters of these earlier enclosures of the regularly-defined, densely-packed rectilinear tenements of the type excavated at 16-22 Coppergate. (The *status* of the occupants of these buildings and tenements is, it must be insisted, less self-evident; whilst they have usually been characterised, often tacitly, as free, almost entrepreneurial craftsmen and traders, there is every likelihood that they would have had tightly defined and prescribed positions in the contemporary social hierarchy, owing direct duty and allegiance, and indeed their very *presence* there, to one or other of the seignorial power(s) in *Jorvik*.

8.6.3 What does seem clear, however, is the degree of *concentration* of manufacturing activities in some areas of 10<sup>th</sup>-century *Jorvik*, for which we have much less evidence from middle-Anglian *Eoforwic* in the 8<sup>th</sup> and 9<sup>th</sup>. This must in part be a result of the extraordinary conditions of preservation at Coppergate, and similarly favourable conditions at other riverine sites in the Ouse and Foss valleys, but must also reflect, at least in part, a real phenomenon – the concentration of activities which were previously dispersed at sites across the wider landscape at a single location. At a very local level this concentration in the mid-/ late- 9<sup>th</sup> century is graphically indicated by the demise of the settlement at Fishergate. But it would almost certainly have had an impact and been recognisable in the landscape well beyond the urban area, perhaps especially with regard to monasteries and their estates. The character of the site at Flixborough, and the changes evident at that settlement in the course of the 9<sup>th</sup> and 10<sup>th</sup> centuries (Loveluck 2007) are particularly relevant here, and given its location in the lower Trent valley, it may, in its earlier, 8<sup>th</sup>-century phases, have had quite direct connections with York, given the composition of the ceramic assemblage from Blue Bridge Lane (cf.8.3.1, above), an issue which will be considered in more detail in the next chapter (9.5.1).

8.6.4 In addition to the apparent *contrasts* between Anglian and Anglo-Scandinavian York, then, there may also be some less immediately evident similarities. In the latter case, if the suggestion of distinct palisaded enclosures / ‘enclaves’ in the middle-Anglian period, as at Fishergate and other locales in the river Foss / Walmgate area, occupied by different communities, retinues or otherwise-defined social groups (cf.9.5.1, 9.6c, below), is entertained, might the ‘blocks’ of ground defined by the main arterial streets of the 10<sup>th</sup>-century Anglo-Scandinavian settlement within the area of the Roman legionary fortress and its environs have been similarly distinct, in the manner that medieval and later towns, including York, had their own ‘quarters’ of distinct, ‘alien’ elements of the population? Hall’s previously-cited comment (2000, 319-321; 8.1.6, above) about the ‘geographical and cultural heterogeneity of the York élites’ is worth noting here. The suggestion also lends potential new significance to the *spatial* comparison of contemporary sites and assemblages (cf. Mainman & Rogers 2004), and might in particular be pursued through detailed recording and comparison of 9<sup>th</sup>- / 10<sup>th</sup>-century ceramic assemblages from across York (ibid., fig.118, p.461), an approach which will be explored in more detail in the next chapter (9.6b-d; 9.7).

## 8.7 Proposed analyses

Investigation of the model of the shift in settlement form and location from that represented by 46-54 Fishergate to that at 16-22 Coppergate will require;

8.7.1 Re-examination of Coppergate Period 3 strata (c.1,500 contexts), with specific reference to;

- possible 'robbed padstone' features and the structures they may represent
- the effects of this on phasing of deposits and assemblages (artefacts, pottery and animal bone) – the separation of those which *do* belong to Period 3, and those which may be re-attributed to Period 4.

8.7.2 Recording and quantification of full animal bone assemblage from Coppergate Period 3 deposits (additional to those already published in AY 15/2, O'Connor 1989) for comparison with Fishergate Period 3 assemblages.

8.7.3 Examination of York ware / Stamford-type wares / Gritty wares assemblages from sites across York to identify spatial variations in distribution of different variants / sub-fabrics of these wares, particularly with reference to different areas of the urban settlement (e.g. Coppergate / Ousegate, Micklegate / Skeldergate).

8.7.4 Analysis of palaeoenvironmental samples, and close examination of their contexts and chronology, from the small 10<sup>th</sup>-century sites referred to above to allow fuller comparison of land-use indicators.

## 8.9 Archival and management recommendations arising from Chapter 8

8.9.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

8.9.1.1 At the heart of this chapter is the analysis of material from 16-22 Coppergate, excavated between 1976-81 on a scale unlikely to be repeated for such a deep site within the central urban area. As such the archive from this site is something of a 'one-off', and it is difficult to draw lessons from it which are relevant to other sites which were dug later, typically very much smaller, and excavated and recorded using quite different methodologies for the retrieval and retention of many classes of artefact and ecofact.

8.9.1.2 The need to evaluate the potential *structural* significance of cut features routinely referred to as 'pits', as identified in 7.6.2-3, also applies here.

8.9.1.3 An important component of the research proposed here is the detailed investigation of palaeoenvironmental samples from a constellation of small sites within and around the central urban area. Detailed understanding of the stratigraphic contexts of these samples, and the status and chronology of those contexts (as considered in Chapter 4; 4.3, 4.5, 4.7) is critical, in that these samples are being used to provide evidence of open ground, 'farmyard' conditions, and the presence of livestock. It is therefore vitally important that the sediments they derive from are in their primary locations – i.e. not re-deposited on the site from elsewhere – and, related to this, that their chronology is accurately understood. Careful stratigraphic analysis and consideration of deposit status is therefore essential to contextualise these samples accurately.

## Chapter 9 Grey-, red- and coarse-wares : ceramic provision to York across the 1<sup>st</sup> millennium AD

### Summary

*The bulk of ceramics supplied to and used in York in the 1<sup>st</sup> millennium AD comprise utilitarian grey- / red- and coarse-wares, their forms heavily dominated by jars. It is proposed that the primary function of most of these was in the transportation and storage of foodstuffs, rather than as products for sale in their own right. As such their manufacture was essential to, and an integral part of, the functioning of the agrarian and pastoral economy in particular forms and modes, rather than a response to consumer demand created by an urban market, the model usually assumed in interpreting this material.*

*This perspective brings into play the different social mechanisms through which ceramics arrived in York in the 1<sup>st</sup> millennium AD, including (Roman) military-controlled production, tribute and taxation, rent, and the material obligations of producers, individually and collectively, to institutions and individuals enacted through these social relationships. The direct linkage of production of these types of vessels with the articulation of agrarian and pastoral surplus may also imply a closer geographical relationship between ceramic manufacture and food production than is often acknowledged. Thus the producing areas of the ceramics used in York in the 1<sup>st</sup> millennium AD may also offer a guide to where other resources consumed in the successive urban settlements were being obtained from.*

*The limited amount of petrological and compositional (ICPS) analysis of pottery from York, largely from the Anglian, Anglo-Scandinavian and later medieval periods, has already provided extremely interesting insights into both the source areas of ceramics through the 1<sup>st</sup> millennium AD, the apparently common sources of pottery of widely differing dates (even where specific locations are not known), and an index of the diversity and concentration of production sites in different periods. These initial results hint at both change and continuities within and across the conventional periods, with particularly interesting implications for the character of settlement and provisioning in the period from the 8<sup>th</sup> to the 10<sup>th</sup> centuries.*

*It is proposed to extend and consolidate the petrological and ICPS analysis of ceramic fabrics from York to better understand the inter-relationship between vessels of widely-differing dates apparently manufactured in the environs and vicinity of the urban settlement across the whole period. This will pay particular attention to locally-manufactured Romano-British ceramics (which have seen little previous analysis of this type), and also to improving understanding of the apparently common production areas of early- / middle-Anglian and Anglo-Scandinavian ceramics between the 5<sup>th</sup>/6<sup>th</sup> and 10<sup>th</sup> centuries. As well as seeking to identify specific manufacturing localities, the work will also seek to establish the degree of concentration and dispersal of ceramic production in these periods. (See also Chapters 3 and 7).*

### 9.1 Ceramics from 1<sup>st</sup>-millennium AD York

9.1.1 Archaeological excavations in York have produced very large quantities of ceramics from the 1<sup>st</sup> millennium AD, particularly in the years following the establishment of York Archaeological Trust in 1972 and the undertaking of the large area excavations in the later 1970s and 1980s. Notably, in terms of relevance to this chapter, these include the investigation of an area of the Anglo-Scandinavian town at 16-22 Coppergate (1976-81), the middle-Anglian *wic* settlement at 46-54 Fishergate (1985-6), and the large Roman masonry building of the 2<sup>nd</sup>-5<sup>th</sup> centuries at Wellington Row (1987-90), but these

examples are augmented by dozens of other sites (cf. Monaghan 1997, 1038-1142; Mainman 1990, \*\*\*; Mainman 1993, 557-62; Mainman & Rogers 2004, 459-60; fig. 118 p.461).

9.1.2 Monaghan's (1997) survey of Roman pottery from York, for example, presents and interprets information from over 165,000 sherds, weighing in total over 2.75 metric tonnes. Just over 70% of this material (by sherd-count) falls within the category of grey-, red- and coarse-wares which are the primary concern of this chapter. Mainman's (1990) report on the post-Roman ceramics from 16-22 Coppergate, largely from the period c.AD 850 – 1100, involved the study of almost 35,000 sherds from that single site, all but a very small percentage falling into the categories defined here. 46-54 Fishergate, currently the 'type-site' in York for the period c.AD 700 – 850 (Kemp 1996; Mainman 1993, 564-85, recently augmented by excavations on adjacent sites at Blue Bridge Lane and Fishergate House) is smaller by several orders of magnitude, having produced c.750 sherds of this period, of which about 50% fall into the category of locally- or regionally-produced coarsewares; but this material is pivotal to present understanding of ceramics in York in this period, and does not undermine the broader point regarding the very large quantity of material available for study and analysis.

9.1.3 Chronologically, the ceramics from York dating to the 1<sup>st</sup> millennium AD have been attributed to 'Ceramic Periods' (CPs) and sub-periods, a framework established by Monaghan for Roman pottery (1997, 835-50; see above, 4.4.6) for Roman pottery up until the early-5<sup>th</sup> century, and recently extended into the 2<sup>nd</sup> millennium through the later medieval period by Mainman & Jenner (2013, 1173-5). It is of course recognised that distinct CPs are necessarily somewhat inexact, will inevitably be subject to some revision and refinement, and that their boundaries are elastic. They do, nevertheless, provide a coherent and broadly accepted chronological framework for ceramics used and deposited within York across the 1<sup>st</sup> and 2<sup>nd</sup> millennia AD. The CPs have been defined as follows;

*(Defined in Monaghan 1997, 861-67)*

CP 1a	c.AD 71-100
CP 1b	c.AD 100-120
CP 2a	c.AD 120-160
CP 2b	c.AD 160-200
CP 3a	c.AD 200-225
CP 3b	c.AD 225-280
CP 4a	c.AD 280-360
CP 4b	c.AD 360-410
CP 4c	c.AD 410+

*(Defined in Mainman & Jenner 2013, 1173-75)*

CP 5	c.AD 450-690
CP 6	c.AD 690-866
CP 7	c.AD 866-930
CP 8	c.AD 930-1050

*(The following extend beyond the limits of this study, but are included as fabric similarities with earlier wares are relevant)*

CP 9	c.AD 1050-1150
CP 10	c.AD 1150-1250
CP 11	c.AD 1250-1350
CP 12	c.AD 1350-1450

## 9.2 Characterising urban settlement in the 1<sup>st</sup> millennium AD : the potential of grey-, red- and coarse-wares

9.2.1 For the purpose of this study, grey- / red- and coarse-ware ceramics have been distinguished from 'fine-wares' on the following grounds

- the latter are unequivocally concerned with *consumption* of food and associated display(s) of status
- it is argued here that grey- / red- and coarse-wares – predominantly in *jar* forms – were primarily manufactured for the *transportation* and *storage* of foodstuffs, with jars being *secondarily* utilised for the preparation (including cooking) of food; there are of course other classes of, for example, Romano-British vessels manufactured in these ware-types which clearly *were* specifically for food preparation and serving purposes (flagons, *mortaria* etc) – but production of grey- / red- and coarse-wares was overwhelmingly dominated by jar forms throughout the 1<sup>st</sup> millennium AD
- consequently it is proposed that their production was organised around the *provisioning* of foodstuffs, their transportation and storage, rather than the usual emphasis placed on their role in food preparation (cooking) and serving, and that these classes of ceramics are thus more closely related to other aspects of archaeological evidence (for example animal bone and plant macro-remains), in terms of the *production* and articulation of food resources, as distinct from just their *consumption*, than is usually recognised or acknowledged
- it follows from this that these classes of ceramic were not manufactured as commodities for sale in their own right, but primarily for their utility as *containers* : ceramic production may thus be seen as a closely-integrated aspect of *agrarian* production, not as an independently-functioning manufacture of commodities in the manner which most studies of ceramics across this period assume

By extension, this approach also calls into question the ubiquitous, disembodied 'market'-based explanations offered when interpreting ceramic assemblages from York (and elsewhere) across the 1<sup>st</sup> millennium AD.

9.2.2 This chapter therefore brings to centre-stage for the interpretation of pottery assemblages in the 1<sup>st</sup> millennium AD in York the operation of *other* dynamics of production, distribution and consumption – military production (in the Roman period), tribute and taxation (across much of the 1<sup>st</sup> millennium AD), and the various social and material obligations imposed by one group or class over another under such social relationships throughout the period. This perspective allows grey- / red- and coarse-wares to be viewed as an essential component in the articulation of agrarian surplus, and trends detected in it as causally linked with other aspects of the organisation of agrarian production – and vice-versa.

9.2.3 Pottery of the 1<sup>st</sup> millennium AD has been recovered from the historic urban areas of York and its environs in huge quantities and great variety, with c.35 distinct ware-types identified as having been used at various times between the 1<sup>st</sup> and 11<sup>th</sup> centuries, themselves frequently with several variants and sub-types. Conventionally divided between the broad periods which span the millennium – (pre-Roman) Iron Age, Romano-British, Anglian (early and middle) and Anglo-Scandinavian – in a few cases specific production sites for particular ware-types are known, and in many more the general area of production can be identified with some confidence. There remain, however, a number of ware-types from all of these broad periods whose manufacturing provenance is at best vaguely-known, albeit most likely to have been somewhere within the Yorkshire region.

9.2.4 The central elements of this research are, therefore,

- mapping the production locations of different ware-types through time
- considering how these, and the character of their products, might reflect, as well as location of manufacture, changing mechanisms of supply operating in different social contexts

### 9.3 Understanding ceramic production and distribution : petrological and compositional analysis

9.3.1 There has been an increasing use of petrological and compositional analysis of ceramics (Vince 2005) in addressing both of these questions by investigating;

- the degree of uniformity of or variation within ceramic fabrics categorised on the basis of macro-examination as discrete, distinct wares, whether as a single, homogeneous fabric or a series of distinguishable but generically similar sub-fabrics
- the extent to which wares identified as *different* from one another on the basis of macro-examination are in fact petrologically and chemically distinct, or are actually the same or closely similar in this respect
- the location or locality from which the clays and tempers used in ceramic fabrics were obtained, and by extension the site or locality of production of specific ceramic types
- petrological and compositional links between ceramic fabrics found in the city with particular production localities, where necessary and appropriate making petrological and chemical comparisons between ceramics of *different* periods – in some cases *widely*-different periods – extending beyond the chronological focus of this study and into the later medieval period

9.3.2 The characterisation of ceramics through petrology and Induction Coupled Plasma Spectroscopy (ICPS) has been widely used across a broad range of periods in British archaeology. Some of the most significant work has been that undertaken by the late Dr Alan Vince, on medieval pottery ranging in date from the 5<sup>th</sup> to 16<sup>th</sup> centuries AD. Dr Vince's work included much analysis of ceramics from York and its wider region, and as a result of this, as well as discriminating different production sources of broadly contemporary material, it had begun to establish close *similarities* in the petrological and chemical composition of ceramics of *different* periods.

9.3.3 This offers the prospect of establishing petrological, and in particular chemical compositional links between these wares, in terms of their production sources, which might not wholly fancifully be compared with genealogical, or even genetic, linkages. These connections open up the possibility of using knowledge of the specific production sites, or localised source areas, (where these are well-established with reference to, for example, certain later medieval wares), to identify the production locales of less immediately distinctive ceramics from earlier periods within the 1<sup>st</sup> millennium AD.

9.3.4 By taking this very broad chronological perspective, the patterns of ceramic production and supply to York, and changes to these across the 1<sup>st</sup> millennium AD, might be mapped and compared, and the implications of these for ceramic production, and the social organisation which lay behind it, considered (cf., for example 8.5, 8.6, above). The latter aim requires that the analytical research be

undertaken with specific reference to different models of the role of Romano-British, Anglian and Anglo-Scandinavian urban settlements and the organization of their supply.

9.3.5 Such a trans-period approach to the material, covering the entire 1<sup>st</sup> millennium and beyond, although hinted at in some of the work of Alan Vince on material from York, does not appear to date to have been systematically attempted with reference to any other urban settlement of this period in Britain.; neither has dedicated analytical research of this kind been undertaken with specific and explicit reference to models of urban development and changing mechanisms of supply in different periods. The research proposed here could thus provide a model for researching ceramics from, and ceramic supply to, other historic urban centres.

## 9.4 Petrological and compositional analysis of ceramics from York (Fig.9.B)

9.4.1 Petrological, compositional and related analysis has been undertaken on some 1<sup>st</sup>-millennium ceramics from York. Monaghan (1997, 1031-37) reports the results of thin-section analysis on 32 samples of Roman pottery, all of which fall into the grey- / red- or coarseware category under discussion here. (Additionally, Jeremy Evans undertook Neutron Activation Analysis [NAA] on late Roman pottery from across northern England, which included some samples of material from York; Evans 1985) The late Alan Vince undertook petrological analysis through thin-sectioning and chemical compositional analysis using Induction-Coupled Plasma Spectroscopy (ICPS), firstly on samples of pottery of mid-Anglian date from the excavations at 46-54 Fishergate, and more recently on apparently contemporary, and later, material from the immediately adjacent sites of Blue Bridge Lane and Fishergate House (Vince & Young 2005). Thin-sectioning and NAA has been undertaken on samples of 10<sup>th</sup>-century Torksey ware from 16-22 Coppergate (Brooks & Mainman 1984; Mainman 1990, 435-7).

9.4.2 Additionally, and – although it concerns material well beyond the chronological limits of this study – relevant to the analyses which will be proposed here, is the ICPS work on ceramics from York and its district dating from the 12<sup>th</sup>-16<sup>th</sup> centuries undertaken by Alan Vince as part of the *York Medieval Pottery* project (Mainman & Jenner 2013).

9.4.3 This work has produced some interesting results. At times these have been contradictory, as seen for example by the differing conclusions regarding the provenance of 10<sup>th</sup>-century Torksey ware arrived at using NAA (Mainman 1990, 436) and ICPS (Vince & Young 2005), a reminder that the interpretation of the results of such analytical techniques can be complex and problematic. But the studies cited above have for the most part been focused on single ware-types in the context of the examination of assemblages from a single site, or (as in the case of the thin-sectioning reported by Monaghan) have typically involved a series of single samples from different fabric types).

9.4.4 The ceramic characterisation work undertaken to date on grey- / red- and coarsewares of the 1<sup>st</sup> millennium AD, combined with known archaeological evidence for ceramic production sites in the region, has indicated that;

- there are seven (7) broadly-defined areas, mostly within a c.50 mile (80 km) radius of York which, at different times across the millennium, were responsible for the manufacture of the bulk of the pottery used and discarded in York
- there are similarities in the petrology and chemical composition of clays between distinct wares / fabrics from different CPs

The seven broadly-defined ceramic production areas may be summarised as follows;

Source area	1 <sup>st</sup> -millennium AD CP	2 <sup>nd</sup> -millennium AD CP
York itself and its immediate environs	(in CPs 1a – 3a;	& CP12)
Vale of York (specific location/s unknown)	(CPs 2a – 7)	
Humber basin, incl. Holme-on-Spalding-Moor	(CPs 3b – 4b;	& CP12)
Western Vale of York / low Pennine foothills	(CPs 7 – 9;	& CP11)
East Yorkshire	(CPs 2a – 4b, CP 6)	
Howardian / Hambleton Hills	(CPs 4a-b;	& CPs 10 – 12)
Lincolnshire & the Trent valley	(CPs 3a-b, CPs 5 – 8)	

9.4.5 Obviously there is a degree of overlap and duplication in these areas, reflecting the degree of specificity with which the production of various ware-types can at present be provenanced. It might be anticipated that some of the more general localities will, on further analysis, resolve into more specific locations – for example those attributed to ‘Vale of York’ may prove to derive from the vicinity of York itself, or some other specific area of the Vale (although the heterogeneous drift geology of the Vale, and particularly the dispersal of glacial erratics throughout the drift, means that such improved resolution cannot be assumed).

9.4.6 These broad production areas in part reflect, of course, the availability of the raw materials required for the manufacture of pottery – notably clay and fuel. There are, however, marked differences in their landscapes and topographies, from the low-lying flatlands of the Vale of York, the Humber basin and the Trent valley, to the hills and valleys of the Howardian / Hambleton Hills north of York and the magnesian limestone Pennine foothills to the W. It is clear from the general picture sketched above that the significance of these source areas for York varies in different CPs.

9.4.7 The shifting of ceramic production between these areas across the 1<sup>st</sup> millennium AD and beyond has almost invariably been attributed to the effects of new producers breaking into the York ‘market’ with its products, by implication the result of some new competitive advantage (e.g. price) or other consumer preference (e.g. particular vessel style). As has been noted, this chapter seeks to view the evidence from a different perspective, proposing that the pattern can be related to, and reflects, developments such as the changing tributary networks or distribution of estate landholdings of York’s controlling élites across the 1<sup>st</sup> millennium AD, with manufacture being organised, controlled and supplied to the urban settlement in concert with other elements of agrarian production, for example livestock and grain crops, taken as tribute, taxation or rent. These, it is argued, may offer a more appropriate framework for the interpretation of the ceramic evidence in this period than the disembedded, market-driven assumptions which currently prevail.

## 9.5 Developing the interpretation of petrological and compositional analysis of 1st-millennium AD ceramics from York (Fig.9.B)

9.5.1 An example from York’s CP 6, the middle-Anglian period, from the late-7<sup>th</sup> – mid-9<sup>th</sup> centuries, may serve to illustrate the differences of these perspectives. Petrological study using thin-sections of ceramics, combined with ICPS, seems to indicate that a significant and sometimes very high proportion (ranging from c.25% to c.75%) of pottery of this period from York, recovered from various excavations along Fishergate, near the modern confluence of the rivers Ouse and Foss, was manufactured in what is now Lincolnshire (*Lincs*), probably in the lower reaches of the Trent valley (Vince & Young 2005). The same techniques seem to indicate that a relatively low percentage of pottery of this date from these sites appears to have been manufactured in the Vale of York, even in the vicinity of York itself (*ibid.*). Is this to be interpreted as indicating that there are some characteristics of pottery from the lower Trent valley / *Lincs* (which seems, generically, to be very similar to its locally-manufactured counterpart) which

led to them being 'preferred' by the York market, or some circumstances of production in that area which allowed manufacturers there to 'undercut' their Vale of York counterparts ? Or is it more likely that what we are actually witnessing is an indication of York's élites taking tribute from the supplier area, with (as suggested above) the vessels having been the *containers* for foodstuffs taken in tribute, rather than commodities in their own right ? Alternatively, the vessels imported from the lower Trent valley / Lincs might, given the context of their location in an area considered to be part of the *wic* settlement of middle-Anglian York, represent vessels and their contents brought by élite groups or small communities *from* that area, for their own use and consumption, in the course of their (temporary ?; seasonal ?) occupation of the site. Neither of these interpretations presupposes or assumes mechanisms of provisioning and supply based on the operation of a free, competitive market in goods or materials, and they arguably fit more closely with what is known from other sources about the structure and organisation of society in that period.

9.5.2 Moving forward into CPs 7 and 8, covering the period c.AD 866 – 1050, some ceramics found in York are clearly still drawn from sources in the Trent valley and Lincs (including Torksey) and beyond (for example Stamford), but there are also strong indications of the establishment of more local production centres in the western Vale of York. Again, should this be seen as indicative of entrepreneurial manufacturers 'breaking into the York market' by exploiting the lesser transport costs associated with closer proximity to York (a suggestion itself called into question by the crucial role of rivers in the bulk transport of goods in this period; by river, the lower Trent valley is as close to York as the western margins of the Vale); or might it be better understood in terms of the establishment or extension of aristocratic landed estates in these localities, and the intensification of production – agrarian as well as ceramic – on them to provide for and sustain élites and their retinues based, intermittently or permanently, at York in this period ? There are indications of such developments in the course of the 9<sup>th</sup> and 10<sup>th</sup> centuries, in terms of the expansion and consolidation of aristocratic landholdings, from other sources (e.g. Hadley 2000, 167; 173; 191); and it may be argued that any genuinely 'market-driven' production by individual or groups of manufacturers which might have taken place would have occurred in the context and on the back of these social relationships and the geographical interactions which they created.

9.5.3 The example cited here, relating to CPs 6 – 8, may, it is proposed, be paralleled across the 1<sup>st</sup> millennium AD (that is in the Roman and early Anglian periods as well as in the middle-Anglian – Anglo-Scandinavian centuries), with the changes in the regional source areas of ceramic production being indicative of shifting patterns, and mechanisms (for example the taking of tribute, tax and rent, or the working of land and production by subject labour in the form of slaves or serfs) of élite acquisition of surplus, agrarian and manufactured, in various concrete forms. From this perspective the urban settlement at York may be seen as a manifestation of concentrated élite and aristocratic power, drawing resources to it from localities over which those élites exercised control in different ways, to differing degrees, at different times – rather than (as is implicit in most studies) as a population centre and market stimulating entrepreneurial production independently of contemporary social structures and relationships such as those alluded to here.

9.5.4 It is readily acknowledged that the research proposed here will not in itself discriminate between these 'socially-embedded' and 'free-market' models of production and supply; the aim is to characterise the sources of York's ceramic supply across the period with increased resolution, and knowledge of this does not automatically prefer one model over another (aside from examples such as that cited above, where CP 6 ceramics manufactured in Lincs apparently occurs more frequently than very similar ware manufactured locally to York, which does not seem to fit well with a 'market' model). But considerations which may be taken into account with the model preferred here include the significance of extensive tributary networks, drawing on discrete, dispersed and far-flung 'hinterlands' (for example material brought to York from southerly areas of the Trent valley), to the establishment, consolidation and development of estate lands, and increased production thereon, closer to York (e.g. indications of the

development of ceramic production in CPs 7 – 8 in localities on the magnesian limestone immediately to the west of the Vale of York). In the latter case, it may be that documentary evidence for landholdings in the later Anglo-Scandinavian period, including Domesday Book, may offer insights into such connections between York and aristocratic rural landholdings in the 11<sup>th</sup> century, which may also have been relevant in the preceding century(ies).

9.5.5 The potential of these analytical techniques in investigating the changing connections and relationships between York and its hinterland in the 1<sup>st</sup> millennium AD is apparent. It should be emphasised, however, that they do have their difficulties and limitations – they require careful interpretation, and can introduce complexity and uncertainty where previously there was (apparent !) simplicity and clarity.

9.5.6 A desirable approach to addressing the central questions posed in this chapter would be to investigate *all* of the differentiated ware-types known from York across this period. However, given that there are acknowledged and recognisable fabric variations *within* many ware-types, and that compositional analysis of clay (ICPS) has in several cases indicated that visually indistinguishable fabrics were actually manufactured from different (if generally very similar) clay sources, to cover all eventualities would involve taking multiple samples for analysis from each ware and each ware sub-variant – with c.35 main fabric types of 1<sup>st</sup> millennium AD ceramics from York, the number of fabric samples analysed would approach one thousand (1,000). Whilst analysis on this scale could transform understanding of ceramic supply to York and the organisation and distribution of its production, greatly facilitating their investigation in the terms defined above, a more restricted and targeted approach, addressing specific questions, is proposed here.

## 9.6 Period-based ceramic research issues

### 9.6a. Roman (CPs 1a – 3b)

9.6a.1 It has been noted above that, whilst the c.350 years of Roman York saw a wide range of grey- / red- and coarse-wares from multiple sources reaching and being used and discarded there, the greatest single shift in ceramic provision can be seen in the cessation of manufacture of Ebor ware in the environs of the legionary fortress and at other locations on the small tributaries of the river Foss within c.2 kms of York in the early- / mid-3<sup>rd</sup> century, and its apparent replacement with grey-wares from Malton / Norton, Holme-on-Spalding-Moor, and grey- and white-wares (manufactured from the primary Oxford clay found in the Howardian Hills) from Crambeck, and probably other related production sites along the same clay exposure. Only a very limited amount of petrological and compositional analysis has been undertaken on York's Romano-British ceramics (cf. Monaghan 1997, 1031-37; 9.4.1, above).

9.6a.2 Ebor ware (*ibid.*, 869-880) is the single largest component of the overall Romano-British ceramic assemblage from York; calculations undertaken as part of this assessment indicate that one in every four sherds of Romano-British pottery found within the city are of this type. Ebor ware production sites are known from the Foss basin (notably the Borthwick Institute, Aldwark, and adjacent sited which have produced this pottery in large quantities, including examples of 'wasters') and Apple Tree Farm, c.3 kms north-east of the Roman fortress. The detailed topographic surface-model provided by LiDAR coverage of York indicates that these two sites are located at opposite ends of the small river catchment of Osbaldwick Beck and Tang Hall Beck, which flow into the Foss basin. There seems a strong likelihood that these two sites are the currently-visible components of an extended area of production extending along and around and utilising the clay sources provided by both the glacial till and Holocene sediments which clearly accumulated within the Foss basin and these small tributaries, whose down-cutting courses would have served to expose such clay-beds. This possibility is given support by the discovery of Ebor ware wasters on the southern edge of the Foss basin, in the area of Foss Islands Road and

Lawrence Street (ibid., 1092), and the documented presence of *medieval* clay-pits for a tiliary in a nearby location, further from the city along Lawrence Street (Raine 1955, 296). (Set against the proposal is the *absence* of reported discoveries of any kilns or waster-heaps from the vicinity of the two becks in the 1930s, when the area was built over by a large housing estate. This does, however, seem to have been a period when there was very little archaeological coverage for York, and the absence of reported finds needs to be viewed in this light.)

9.6a.3 Since Ebor ware fabric is invariably fine-grained, with few if any coarse components, it is more susceptible to analysis of its clay composition through ICPS than through thin-sectioning and petrological characterisation, which relies on the identification of inclusions, although in practice both methods are usually applied to samples of ancient ceramics.

9.6a.4 Proposed analysis would involve the thin-sectioning and ICPS analysis of multiple samples of Romano-British ceramic fabrics known or considered to have been manufactured in the environs of York, notably Ebor ware (of which there are three variants recognised on the basis of macro-characteristics; 1, 2 and 3) and its grey-ware equivalent, including wasters from the Aldwark and Apple Tree Farm manufactories, but also Rustic ware (some of which may have been produced at sites other than known Ebor ware kilns; Monaghan 1997, 887) and probably some none-Ebor grey-wares. The latter form an important component of ceramic supply to York, but selection of samples for analysis is problematic, as it is clear that products from several, possibly numerous, different production sites are not visually distinguishable. However, the selection of sample sherds which may confidently be ascribed to the known major manufacturing sites at Norton and Holme-on-Spalding-Moor, and wasters from those sites themselves, and the selection of a significant number of other grey-ware samples from a range of different sites in York, may give a reasonable indication of whether this type was produced in significant quantities in the vicinity of *Eboracum*, as has been suggested (Monaghan 1997, 900-901)

9.6a.5 The aims of this analysis are, therefore;

- to establish whether Ebor ware and its variants were manufactured within one extended complex (Foss basin / Osbaldwick & Tang Hall Becks catchment), or whether there may have been other production areas (as suggested for Rustic ware, one variant of which is considered to have been manufactured alongside Ebor ware, another at a different production site but still within the locality)
- to establish whether any post-Ebor-ware grey-ware production was undertaken within the environs of York (as was the case with Ebor ware) or in the wider Vale, chemically distinguishable from the Norton and Holme-on-Spalding-Moor products
- to provide a baseline of ICPS chemical 'signatures' for Romano-British ceramic fabrics known to have been manufactured close to York, which can be compared with the clays used in coarse ceramics from later in the 1<sup>st</sup> millennium AD

#### 9.6b *Early Anglian (CP 5)*

9.6b.1 Recent excavations of a limited area of Early Anglian settlement of the 5<sup>th</sup>-6<sup>th</sup> centuries on Heslington Hill to the south-east of the historic urban area (Spall & Toop 2008) retrieved a ceramic assemblage numbering c.100 sherds, a selected sample of which (10 sherds) has been characterised through thin-sectioning and ICPS, revealing that the majority of these sherds were manufactured from local clay (ibid.). Comparison with the clays used in Ebor ware and any other locally-manufactured Romano-British wares using the same technique would clearly be instructive here – did the early

Anglian sherds use clays employed in one or more of the Roman ware-types, or were different clay sources used in the different periods ?

9.6b.2 The analysis of the Heslington Hill assemblage also identified sherds which had been manufactured from far more remote clay sources, in Lincolnshire and the Thames valley. The excavation report (*ibid.*, 20) notes that the Lincolnshire provenance prefigures ceramics from broadly the same locality found in quantity amongst the assemblage of middle Anglian (CP 6) date from Blue Bridge Lane (Vince & Young 2005).

9.6b.3 A major resource for the study of early Anglian ceramics in York is the collection of cremation urns recovered from the cemeteries at Heworth and The Mount in the 19<sup>th</sup> century, held in the Yorkshire Museum. Their fabrics are only cursorily described in the published sources (Myres 1977; Eagles 1979), and it is clear that they have not to date been subject to any detailed study or even systematic description, still less analysis using the methods under discussion here. Particularly relevant is the fact that some of the urns demonstrate stylistic links with examples from cemeteries in Lincolnshire, which also have similarities with urns from the early Anglian cremation cemetery at Sancton, on the Yorkshire Wolds c.20 kms east of York (the 'Sancton / Elkington potter'; Myres 1969, 129; 238-41, figs 46 & 47). This reinforces Spall and Toop's observation that connections between Lincolnshire and York and its region pre-date the middle-Anglian settlement at Fishergate (2008).

#### 9.6c *Middle Anglian (CP 6)*

9.6c.1 ICPS analysis of middle-Anglian ceramics from the Blue Bridge Lane site, adjacent to Fishergate, has identified a large percentage of coarse-ware fabrics from North Lincolnshire and the lower Trent valley (cf.9.5.1, above), forming a larger component of the overall assemblage than very similar locally-manufactured, wares. This clearly is not consistent with market-driven distribution, and would seem to reflect the character of the site and its provisioning.

9.6c.2 As noted previously (9.6b.3), there are precedents to these links in the early Anglian period; in the 8<sup>th</sup> / early-9<sup>th</sup> centuries they bring to mind connections between the kingdoms of Northumbria and Lindsey, and the possibility of tributary relationships between the two. In such a context the Blue Bridge Lane site could be seen as part of an enclave of an aristocratic elite from Lindsey, bringing provisions and goods acquired from their home territory through tributary mechanisms.

#### 9.6d *Anglo-Scandinavian (CPs 7-8)*

9.6d.1 CP 7 fabrics (based on the chronology of the sequence at 16-22 Coppergate) include some which are similar to those which occur in CP 6, but CP 7 is dominated by 'York ware' – wheel-thrown and highly-standardised in form and sizes – which does not. York ware includes a number of slightly variant fabrics, including the distinct category 'York d ware', suggesting a number of different production sites (Mainman 1990, 407-10), probably within the Yorkshire region (cf. the discussion in 8.3.4, above). Connections with Lincolnshire continue in the form of Shelly wares and Stamford wares, but manufacture within the Yorkshire region appears to be intensifying in this period. In CP 8 this pattern continues, with Torksey wares deriving from the eponymous location in Lincs., and 'Torksey-type' wares probably manufactured in the York district. Stamford-type wares and Gritty ware were certainly produced on the western side of the Vale of York and the lower Pennines in this period, but very probably in other areas of Yorkshire as well, there being a wide range of distinguishable wares and fabrics within the broad Gritty ware classification, seemingly indicative of a range of different potteries established on different clay sources (Mainman & Jenner 2013).

9.6d.2 These developments might be seen to indicate a progressive shift, in the course of the 9<sup>th</sup> and 10<sup>th</sup> centuries, from the geographically extensive tribute networks suggested for CP 6 (as represented by the provenances of coarse ceramics from the lower Trent valley and Lincolnshire) to more intensively organised and regulated production closer to York; the progressively more standardised and intensive production, in greater volume, perhaps indicative of the development of landed estates, and possibly the precursor of the estate structure crystallised in Domesday (see 8.1.4-5, 9.5.4, above; Hadley 2000, 167; 173; 191). It is possible that the hints of intensification of stock-rearing in the Vale of York in the same period (Hall & Kenward 2004) may be related to such a development.

## 9.7 Cross-period ceramic research issues

9.7.1 Apart from the beginnings of indications of shifts in the locations of the ceramic production which supplied York in the course of the 1<sup>st</sup> millennium AD, one of the striking aspects of these characterisation results, and one which offers a potentially fruitful line of research, is the *connections* it indicates between ceramics of different periods in terms of their utilisation of the same clay sources. The analysis of CP 6 sherds from the middle Anglian sites on Fishergate has identified similarities in the fabrics of both *early* Anglian (CP 5) and Anglo-Scandinavian (CP 7) wares, which seem to indicate common clay sources and production areas. Work undertaken by the late Alan Vince on York ceramics as part of commercial projects (e.g. Blue Bridge Lane / Fishergate House; Vince & Young 2005) or as part of wider overviews (e.g. Vince's Northumbrian Kingdom project and the York Medieval Pottery project,; Mainman & Jenner 2013) has indicated some close similarities in the petrology and/or chemical composition of clays in ceramic fabrics from *different* – in some cases widely separated – CPs. These observations suggest common or very closely-related sources of clay and / or temper having been used for distinct wares in different periods.

9.7.2 A good example concerns apparent or possible relationships between wares extending from CP 5 (c.AD 450 – 690) to CP 9 (c.AD 1050 – 1150). Vince's petrological / ICPS analyses of CP 6 middle-Anglian quartz sand-tempered ware from the adjacent sites of 46-54 Fishergate, Blue Bridge Lane and Fishergate House suggest a closely-related clay / temper source to early-Anglian CP 5 pottery from Heslington Hill (Spall & Toop 2008), c.1.5 kms away. In turn, these analyses also indicate close similarity between the CP 6 quartz sand-tempered fabric from 46-54 Fishergate and CP 7 Anglo-Scandinavian 'Handmade 1' fabric from Coppergate (Vince & Young 2005). Marked similarities in appearance, and in petrological composition, have also been noted between this CP 7 Handmade 1 and the apparently later (but also attributed to CP 7) York ware (Mainman 1990, 408).

9.7.3 The fabric of CP 7 York ware has itself been described as 'identical' to that of the products of early-13<sup>th</sup> century date (CP 10) date from Thorner, on the magnesian limestone immediately to the west of the Vale of York (Vince & Young 2005). Close similarities in fabric between CP 8 Gritty wares and both CP 7 York wares and the CP 10 Thorner wares have also been acknowledged.

9.7.4 This is clearly information of the greatest interest and significance to the themes under discussion here, offering as it does an indication of the interpretative potential of assembling more complete suites of petrological and ICPS characterisations from a range of samples of each ware type. The approach could go a long way to elucidating and refining both the areas of ceramic production involved in supplying the successive urban settlements at York across the 1<sup>st</sup> millennium AD, and the social relationships and mechanisms through which those ceramic resources, and by extension other elements of agrarian production, were articulated.

## 9.8 Proposed analyses

9.8.1 Examination and detailed fabric descriptions of early-Anglian cremation vessels from Heworth and The Mount – a total of 82 separate vessels – held by the Yorkshire Museum

9.8.2 Selection of sample sherds of;

Roman (CPs 1-3) – Ebor ware; Rustic ware; Grey-ware variants

Early Anglian (CP 5) – Heworth & The Mount cremation vessels

Middle Anglian (CP 6) – handmade fabrics from Fishergate and adjacent sites

Anglo-Scandinavian (CPs 7-8) – handmade fabrics from Coppergate; York ware; Stamford-type wares; Gritty ware sub-fabrics

Samples to be selected to include 3 examples from each recognisable sub-fabric identified within each broad ware-type (e.g. Ebor ware I-III, York ware sub-fabrics), where possible from different sites; in the case of the Heworth / The Mount cremation vessels, 1 sample from each vessel

9.8.3 Analysis of 180 sample sherds through petrological thin-sectioning & ICPS

## 9.10 Archival and management recommendations arising from Chapter 9

9.10.1 The research proposals for this theme suggest the following archival and resource management practices and protocols;

9.10.1.1 In the course of ceramic assessment and analysis, it would be helpful to employ a protocol for ceramic classification which errs on the side of ‘splitting’ variants of given ware types rather than ‘lumping’ them together.

9.10.1.2 As an example, the existing literature from York acknowledges that there are a number of widespread ceramic types - for example ‘York ware’ of the 9<sup>th</sup>-10<sup>th</sup> centuries, but several others as well (see above) – of which a number of variants exist, but these variants have not been systematically distinguished in reporting, or quantified separately. To do this would be extremely helpful for investigation of the issues discussed in this chapter, though again (as per 7.10.1.4-5 and 8.9.1.1 above), the bulk of the material to be investigated in the manner proposed was recovered from excavations undertaken in the period between the later 1970s and the early 1990s.

9.10.1.3 In terms of the *storage* of this material for future analysis, for larger context assemblages the separate bagging of visually-distinguishable fabric variants *within* the large individual context bags or boxes might also be helpful, although it would make the packaging process slightly more time-consuming, and the material slightly more bulky for storage.

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