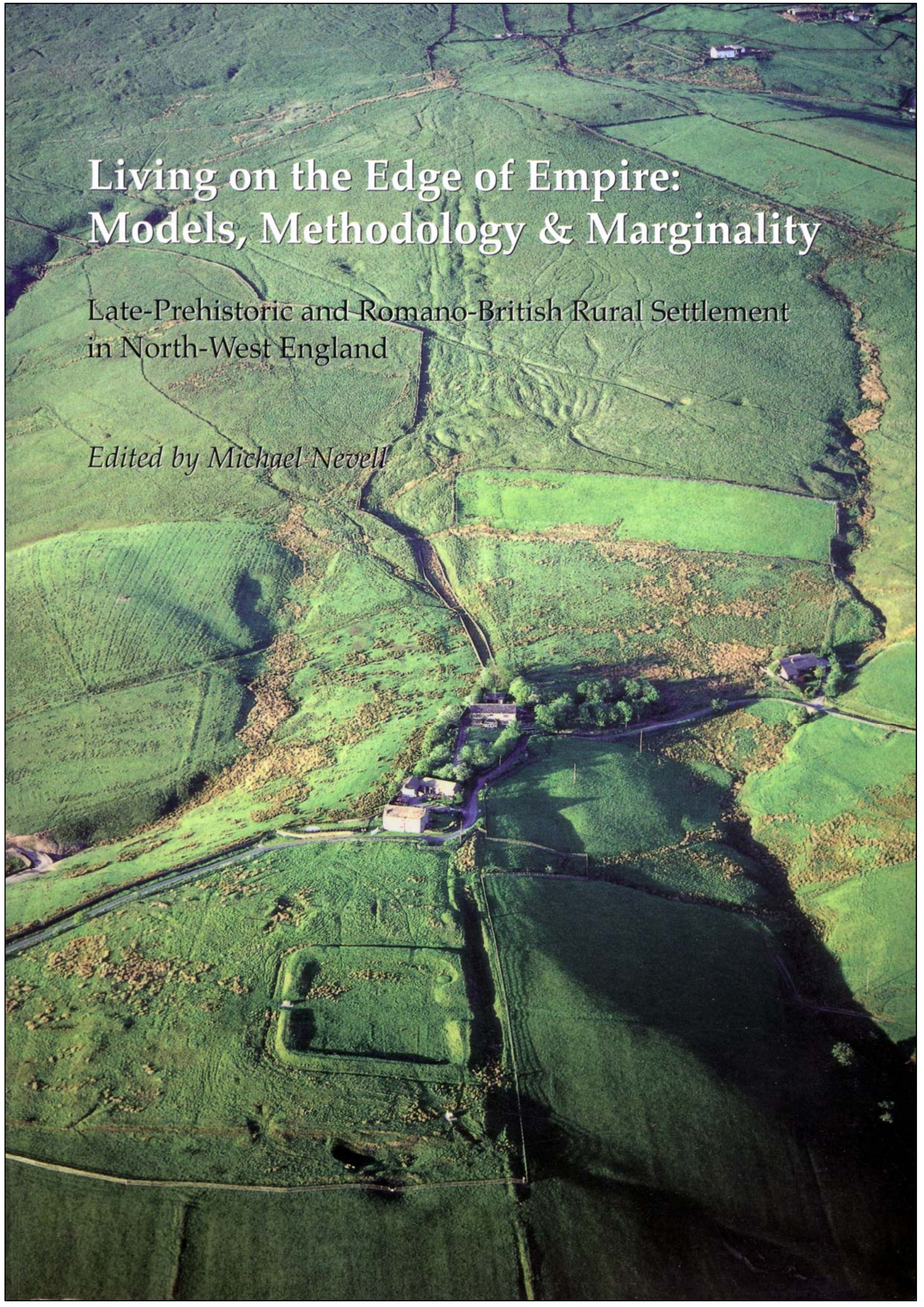

Living on the Edge of Empire: Models, Methodology & Marginality

Late-Prehistoric and Romano-British Rural Settlement in North-West England

Edited by Michael Nevell

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Preface

'Until the lions learn to write, tales of hunting will always glorify the hunter'

(Kenyan proverb)

The central problem of proto-historical archaeology lies in establishing convincing interpretive links between partial written sources, material culture and its associated society. Nowhere, perhaps, is this interpretive problem more complex, thanks to one-sided historical sources, than at the interface between conquerors and conquered, the interface between conquest, cultural continuity and social change.

Historians of more recent colonial periods have contributed to the debate comparanda: they have also gone beyond that in illuminating, principally from the nineteenth century, those very attitudes to empire which have come to condition so many of our approaches to Rome's imperial expansion. Consciously or otherwise, until recently French, German and British archaeologists and historians brought to Roman provincial studies a set of preconceptions derived from their own period of colonial domination, though this common trench conceals considerable variations in the conceptual approaches involved. Roman Britain is a case in point: perhaps the most studied province of the empire, the archaeological minutiae now available from Roman Britain make it particularly difficult to achieve objectivity. In this situation imperial mythology reigns. Graphic descriptions of the North-West frontier of India, and such outposts as Fort Munro, can rapidly equate with our mental image of the auxiliary forts blocking the exits from Highland glens. The analogies are irresistible in places like the isolated fort at Fendoch; it blocked the exit from the Sma' Glen in the Highlands of Perthshire only a few hundred metres below the line chosen by General Wade for the Hanoverian military road during what was a relatively recent example of the tactics of suppressing internal resistance in Britain. Such equations, while valid in their immediately topographical application, may do a disservice when diffused. Like the red areas on maps of the former British Empire, the creation of the Roman province of Britannia has come to be regarded as a steadfast, inevitable process of territorial gain. Such an approach was all too understandable and has a long enough pedigree fostered by contemporary sources in antiquity itself.

The first century Roman historian Tacitus' remarks about his father-in-law, Agricola's, campaigns have firmly characterised our approach to the expansionist period of Roman colonialism in this country. Success was judged on the basis of American football, yardage gained. Governors serving at times of retrenchment or consolidation were damned with faint praise by the historian in the face of comparison with Agricola's's northward expansion. The maximal policy towards Roman Britain, namely total conquest, is implicitly assumed, in the pages of Tacitus, to be the correct and only answer. Subjectively, most modem commentators, unaffected by the devolutionary aspirations of a fragmenting Britain in recent years, have tended to view the adoption of median or minimal frontier policies, as reflected by the Antonine and Hadrianic Walls respectively, as relative declines on an implicit agenda of territorial acquisitions. Yet, such implicit judgements manifestly ignore the rapid changes in imperial policy in the 1st century AD and also, fail to understand the relative successes of defence-in-depth in the territorial stagnation of the 3rd and 4th centuries. More especially, however, the emphasis on the ineluctable progress of Roman arms and the presumption of Roman territorial imperatives, bring an unacceptably restricted approach, especially to the periods of rapid change. By contrast, the concepts applied by another set of archaeologists and historians equally bred in a French colonial background introduce a broader range of considerations in their studies of Roman Africa than are normally found in analyses of Roman Britain. While admittedly we must take account of the very different environments of the North African provinces, their approaches include a greater emphasis on a broad range of questions, such as identifying the areas of internal opposition to the colonial administration. While one might argue that recent French colonial history leads to an overemphasis on this aspect, they tend to see a conflict between the settled and the nomadic way of life, yet this is not necessarily viewed as a straightforward dichotomy. In many of their arguments account is taken of probable collusion between mountain peoples within a province and nomads without. Equally, the presence of a nomadic, transhuming element within the population is also recognised and this in my opinion is a concept that requires far greater consideration in a Pennine context than it has so far recieved. Furthermore, this particular group of arguments takes more account of the broad chronological spread involved and recognises that the creation of frontiers actually promoted the growth of tribal federations outside them, and that equally settled communities could exist beyond the Roman frontiers. Politically, by the third and fourth centuries, as is clearly demonstrated in Mauretania but is equally evident in Scotland, the tribal agglomerations grew in size to present more co-ordinated opposition to the later empire.

Such an emphasis on the tribal background to Roman

territorial expansion is increasingly seen as essential to studies of the British province, but there are other influences that need to be incorporated in the language and style of revisionism. Cultural continuity, so often an argument from silence or negative evidence, has assumed an importance of its own right, as illustrated by fresh studies of medieval Britain and Europe. Like Braudel and Evans-Pritchard before them, these studies recognise the problem of identifying elements of cultural resistance or, as opposed to stagnation, as an act of indigenous opposition to imposed change. Nowadays, too, these more sophisticated interpretations are tinted by the brash to post-colonial apologism. We live in a time when within a few months the Prime Minister has apologised for the Irish Famine, and the Queen herself has come close to doing the same over the massacre of Amritsar in British India. Such apologies - and there are many examples from elsewhere in the First World that could be cited - suggest that modern First World states are moving into a period of atonement, of apologism, if you like, half a century after the last World War. The American President has recently inaugurated a debate on the history of slavery and its effects. Such moves touch the zeitgeist, the growing belief that both nation and individual can change for the better by openly confronting problems in their mutual past.

History commands a special potency in certain countries - the divided Ireland for instance, or the fragmenting Jugoslavia; and there is considerable evidence to show that Britain has still to come to terms with its own colonial legacy fifty years after the twilight of the Raj and over two centuries after Pitt the Elder actually attacked Robert Clive, traditionally Britain's greatest statesman-general in India, for 'rapacity, plunder and extortion, which were choking to the feelings of humanity and disgraceful to the national character'. Despite endless glosses, the debate about the morality and economic value of British imperialism has in fact been with us from the early days of the Raj and, setting jingoism aside, in 1825 the President of the Board of Trade could even think publicly that we 'should find India independent more beneficial to us than in its present state', an argument that questions the underlying economic justifications at the heart of colonial exploitation.

Can interpretations of the period of the military and political domination of Britain by Rome now be seen in some ways as an early, ambivalent skeleton from Britain's own imperial past? As we approach the millennium, in a period of revisionist historical interpretation half a century after the last World War, it has become increasingly axiomatic that European colonialism, British, French, Dutch, German, Spanish or Portuguese (all very different in policy and practice) was morally unjustifiable; subjugation in short was always wrong, whatever the context. While this is far too simplistic a generalisation - witness the complexities of history and religion in the fragmentation of the former Jugoslavia - did colonialism leave nothing worth acknowledging or preserving in the realms of culture, administration or technological advance? Were those who practised it - and Rome is the most obvious example from the ancient world - self evidently imperialists and economic plunderers who in antiquity left us their literary apologia, written testimony that has for centuries served to expiate the realities of conquest and attempted cultural subjugation? This, to my mind, is the central conundrum of attempting any revisionist assessment of Roman Britain particularly areas of marginality to the rear of established frontiers. How can archaeologists assimilate the few and inevitably biased literary sources referring to events in Britain with the quantitavely prepondering mass of archaeological evidence currently available from widely differing contexts, military and civil, urban and rural? How can we arrive at convincing interpretive linkages perhaps on a basis when sometimes the significant may also be the negative, the absence of evidence. In effect, how can we escape the tyranny of the texts, however fragmentary? 'Until the lions learn to write, tales of hunting will always glorify the hunter'.

Professor Barri Jones, University of Manchester, 1999

Chapter 1

Introduction

Models, Theory and Marginality in Roman Archaeology

Michael Nevell & John Walker

This special edition of *Archaeology North West*, produced jointly by the Council for British Archaeology North West, the Field Archaeology Centre at the University of Manchester, and Chester Archaeology is the first monograph to be published on the Iron Age and Romano-British landscape of North West England.

Background to the Study

The origins of this volume lie in a one day conference, *Living on the Edge: Romano-British Rural Settlement in North West England*, held by the University of Manchester Archaeological Unit and CBA North West in November 1995. That conference brought together for the first time most of the leading regional researchers in this field. The intention then, and now, was to publish the proceedings, not as a final statement on the subject but as notes in progress, so to speak, with the intention of stimulating further research and debate. However, in the four years since that conference our knowledge of late prehistoric and Romano-British rural settlement of the region has developed considerably, and we felt it would be invidious not to acknowledge this in the final publication. Consequently, although many of the original speakers have contributed to the present volume the format and content of the work is far removed from the 1995 conference, reflecting more accurately current research directions, knowledge and theories.

This volume is a departure in another way, since it is the first time that CBA North West has published a thematic research volume, albeit still under the banner of our bi-annual bulletin *Archaeology North West*. Unlike in many parts of Britain, CBA North West is the only archaeological organisation that covers the whole of the region and embraces all sides of the discipline; amateur and professional, academic and arm-chair archaeologist. We therefore have a particular responsibility in promoting archaeology in the broadest sense. It is our hope that this volume will be the first of an occasional series of themed publications, under the *Archaeology North West* banner, concentrating on new areas of research within the region.

The subject studied by this first thematic volume is that of the late prehistoric and Romano-British countryside, and the study area is the modern counties of Cheshire, Greater Manchester, Lancashire and Merseyside. Inevitably the geographical focus of this volume is largely dictated by the location and interests of the contributors, hence the bias towards the southern part of our region. Nevertheless, it is precisely this area where most of the new finds and research has been conducted. Fortunately, this is a geographically coherent area, which can be broadly described as the Mersey Basin; the catchment of the River Mersey, running from the Pennines in the east to the Irish Sea and the Halkyn Mountains of the Welsh borders in the west, and from the Rivington uplands in the north to the Shropshire Plain in the south.

Whilst there are many modern studies on individual Romano-British sites within the North West, there are few which deal, in chronological depth, with the rural hinterlands of the Roman forts and towns of the region. It is hoped, therefore, that this volume will prove useful in promoting studies in these areas.

To move from producing a journal of record to a research volume places a range of burdens both upon the authors and the reader. Firstly, we have had to confront the problem of the historical validity of the North West, a term which has only gained currency during the 20th century. The fundamental problem is that the North West is not a coherent region; it is rather a collection of geographical, economic and political expressions, which vary according to the needs of different groups. This is perhaps best illustrated by contrasting the traditional CBA North West area with that of the newly constituted North West Regional Development Agency. Since its inception in the years immediately following the Second World War CBA North West has encompassed, first the historic counties of Lancashire and Cheshire, and latterly the modern counties of Cheshire, Greater Manchester, Lancashire and Merseyside, an area which since 1974 has included parts of the ancient county of Yorkshire. When the North West Regional Development Agency came into being in April 1999 it embraced not only Cheshire, Greater Manchester, Lancashire and Merseyside, but also the county of Cumbria. In view of the artificial nature of our region the contributors have not felt compelled to address themselves to the region as a whole, thus giving us the opportunity to explore a variety of themes in greater depth through local as well as regional studies. However, the scope of this work

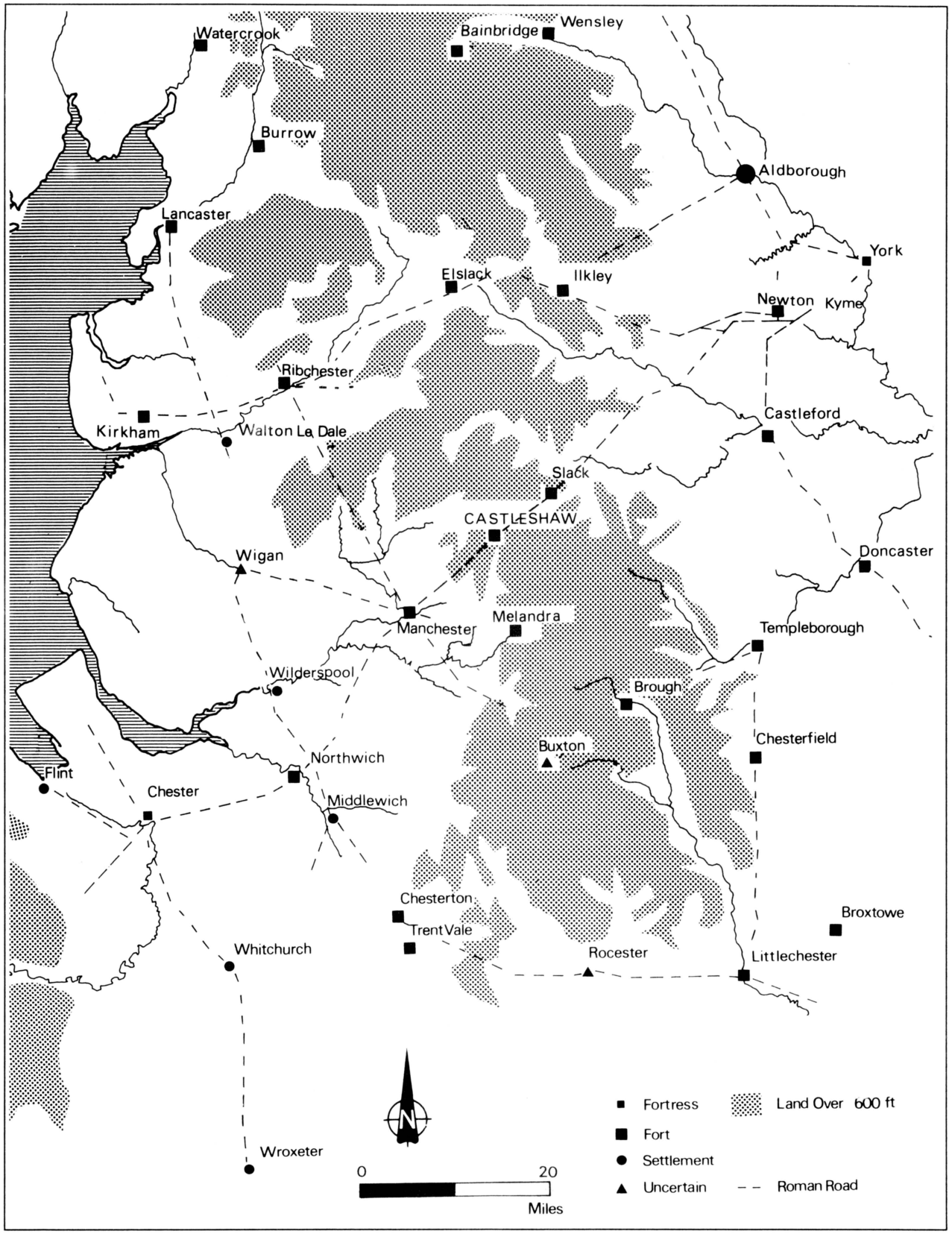


Fig 1.1 Major Roman sites in North West and northern central England.

remains that of the CBA regional group; namely Cheshire, Greater Manchester, Lancashire and Merseyside.

Research also places a new burden upon the reader, for whereas the previous issues of *Archaeology North West* have been content to report new finds and facts, research places much more emphasis on the interpretation of facts and requires from the reader a more questioning or sceptical attitude. The construction of a history and archaeology of cause and effect is an

activity that can easily lead to a piling of hypothesis upon hypothesis. The contributors have tried to avoid many possible pitfalls by explicitly stating theoretical or controversial view points; but the danger of misperception on our part still exists.

Given that this volume presents new challenges, one might ask why we have chosen to make the attempt. There are two main reasons. Firstly, in its review of England's archaeology, and the particular issue of archaeological transition, English Heritage concluded that: 'more work is required to enable archaeology to contribute to important debates and controversies which have been largely the province of economic historians' (English Heritage 1997, 45). The impact of the Roman Empire on the countryside is one of those areas. The second reason is that the North West is an area where our existing evidence for the key periods of archaeological transition is uneven, thus offering a wide scope for future research. Whilst the region is pre-eminent in the evidence for the shift from a medieval, rural, society to an industrial, urban, society, the evidence for the introduction of farming, at the Mesolithic/Neolithic boundary, or the transition from stone tool using societies to metal using ones (late Neolithic to Bronze Age periods) is very sparse. There is one period of transition, however, for which there already exists a large body of data, albeit skewed towards military archaeology; the era of the Roman Imperial conquest.

Theory and Practice

The Romano-British period, together with its associated social and cultural changes, has left a rich archaeological record across much of western and southern Europe, northern Africa and the Middle East. In Britain it is a period that is perceived as being well known and extensively studied. At least within the North West the period is marked by the appearance of large military sites and, for the first time, associated urban centres (Fig 1.1). Despite over two centuries of scholarly study we are only just beginning to investigate the impact of the Roman military presence on the indigenous Iron Age population, who made their living from subsistence farming in a climatically and agriculturally marginal area. It is now clear that at least in this region there is a growing need to understand the origins and ultimate destination of Romanisation, since this era of transition, with its interplay between subsistence farming, the landscape and the climate, may provide models and parallels applicable and/or useful when studying other episodes of transition, such as the shift from hunter-gathering to farming, or the change from a rural to an industrial society.

The sheer scale of the changes wrought by the growth of the Roman Empire has resulted in a whole host of historical analyses and explanations ranging from grand theory, down to detailed studies of individual sites. The contributions to the debate made by archaeologists have been equally variable but have tended, on the whole, to lean towards studies of the mechanics or physical character of individual finds, sites, structures or industries. Until comparatively recently British archaeologists working on the Roman Empire have shied away from the use of theory and model building in the ways familiar to prehistorians. This tendency, at least amongst many of the Roman archaeologists working in the North West and northern Britain, is understandable given the sheer scale of the historical data available, coupled with the depth of the theories of economic historians specialising in the ancient world, but, as English Heritage observed, it may have meant that their contribution to the debate has not been as great as it could have been.

Consequently this volume is not just concerned with reporting recent finds in the field, but rather is an attempt to provide a theoretical framework both for the location and interpretation of late prehistoric and Romano-British rural sites within the region. The unifying theme of this work has been an exploration of the concept of marginality. As a theme this might at first glance appear somewhat vague. As Pollard has recently observed 'the concept lacks precision in at least two senses; in the sense of what constitutes marginality, and in drawing the boundary of such an area' (Pollard 1997, 9). However, Pollard has also demonstrated the impact of two main types of marginality; political and economic (Pollard 1997, 10-7). In North West terms we might be able to see the impact of each during the late prehistoric and Romano-British era. Firstly, in the political issue of centre versus periphery, the issue appears to be the pull between the centre as an overriding significance which seeks to open up, subject, and colonise the fringe, and the fringe which might come to dominate the system of which it was a notionally periphery (Millett 1990). These stresses could be expressed physically as much as intellectually and in the North West, which lay at the extreme north-western edge of the Roman Empire, might be recoverable from the archaeological data. Secondly, economic marginality, which is more about the natural features of a region rather than its political make-up. In pre-industrial, non-urbanised, societies this economic marginality was expressed in how good the land was for cultivation. Typically there were three types of landscape which made regions marginal in Europe; mountains, forests and fen or marshland, and the North West has all three in some abundance. However, some of these marginal regions became highly productive economically once industrialisation took hold. Therefore, we should be wary of dismissing such areas as always being economically marginal just because they were marginal for subsistence agriculture (Dark & Dark 1995). There is also a third kind of marginality which Pollard touched upon, that of intellectual marginality, best seen in a disregard for other societies, places and concepts. This too can be seen in the North West, but it is not a product of the data itself, but of the people studying that information.

Thus, the concept and physical expression of a marginal area is not fixed but changes according to the differing needs of the societies it encompasses.

The Aim of the Study

How applicable and valid these ideas and approaches are to the study of the North West is the purpose of this work. Therefore, the volume is structured so as to provide a step by step guide through current theoretical approaches and research on the late prehistoric and Romano-British landscape.

In the first section two articles deal with a variety of theoretical approaches and models for understanding late prehistoric settlement and the transition to being part of the Roman Empire. In the first Michael Nevell uses eco-deterministic models to show that large parts of the region were agriculturally marginal at different times. These models also suggest a rise in settlement activity beginning a century before the arrival of the Roman army, but markedly increasing thereafter. In the second article Keith Matthews uses anthropological parallels and models to suggest a hierarchical pattern of settlement in the Roman period of a type familiar from many parts of Britain and the Empire, arguing against the region being marginal, at least in the economic sense.

The second section analyses the problems of site location and identification within the Mersey Basin which have bedevilled the search for rural settlement for many years. Jill Collens discusses the usefulness of repeated aerial reconnaissance in a region traditionally seen as unconducive to cropmark formation because of the extensive coverage of claylands and the urban sprawl of Chester, Liverpool and Manchester. As both she and Keith Maude emphasise, however, such data will remain enigmatic unless it is coupled with a systematic programme of field investigation in order to provide the new sites with a date and function.

The final section is a series of four case studies dealing with the issues of marginality and the transition from a local subsistence prehistoric society, to a fringe area of a single province within the Roman Empire. Detailed discussion of the excavations at Great Woolden Hall and Irby, the region's two most closely studied late prehistoric and Romano-British rural settlements, by Michael Nevell, Robert Philpott and Mark Adams reveal aspects of these settlements that are both familiar and unfamiliar from other parts of Britain. Two further papers study in detail one upland valley within the southern Pennines and the affect of the Roman occupation on this area. The work of Norman Redhead and Barbara Brayshay reveal's a tightly managed pastoral during the early part of the Roman period, perhaps as a direct result of the Roman military presence at Castleshaw with its parasitic extra-mural settlement.

What all these papers show is a region that was marginal in many ways. Geographically, climatic changes meant that the Pennine foothills were agriculturally marginal for much of the late prehistoric period, but not during the Roman era, whilst highly local conditions in the valleys could favour subsistence farming in most centuries. Politically, in the late prehistoric period the area was marginal in as much as it lay on the boundary between at least three tribal groupings; the Brigantes, Deceangli and Cornovii. This perhaps explains an emerging settlement hierarchy that lacks large central places as foci of power and status. In the Roman period the Mersey Basin and the North West remained politically marginal, with power concentrated in the south-eastern part of the province and in the heart of the Empire, Rome. Economically, however, it was not marginal, since there is growing evidence for a large expansion in agriculture during this era in both the lowland and upland areas of the region.

The North West is thus an area that historically has been a marginal or transitional region. Therefore, the interplay between the political, economic and geographical forces in this area have much to contribute to our understanding of such zones in general and in particular the development of this area in later periods of cultural transition.

Part 1

Modelling Iron Age and Romano-British Settlement

In this first section two articles deal with a variety of theoretical approaches and models for understanding late prehistoric settlement and the transition to being part of the Roman Empire. In the first paper Michael Nevell uses eco-deterministic models to show that large parts of the region were agriculturally marginal at different times. These models also suggest a rise in settlement activity beginning a century before the arrival of the Roman army, but markedly increasing thereafter. In the second paper Keith Matthews uses anthropological parallels and models to suggest a hierarchical pattern of settlement in the Roman period of a type familiar from many parts of Britain and the Empire. He also argues against the region being marginal, at least in the economic sense.

Chapter 2

Iron Age and Romano-British Rural Settlement in North West England

theory, marginality and settlement

Michael Nevell

In the last 15 years rural settlement sites and material culture of the late prehistoric and Romano-British era have started to emerge west of the Pennines and south of the Lake District. The range of material that has come to light is varied and in some cases spectacular. From pottery and farmsteads (Fig 2.2), to gold coins, sculpture (Fig 2.1) and bog bodies our perceptions of the period in this area are starting to change. However, we have been, and still are, hampered by our own prejudices; in the assumption that the North West is an archaeologically backward area; by the perceived difficulties of recovering the evidence itself; and by the interpretations we have put upon the evidence. J D Marshall writing in the Lancashire volume of the City and County Histories series in 1974 noted that 'Lancashire as a whole was thinly settled in pre-history, and the region was plainly inhospitable' (Marshall 1974, 13). This opinion was echoed later by Hartley and Fitts (Hartley & Fitts 1988, 68-70) and a similar view was expressed 13 years later for the Cheshire evidence (Petch 1987). Kenyon could state in 1991 that 'the North West remained a largely aceramic, impoverished, cultural backwater' in the prehistoric period and that this was reflected during the Roman period in a lack of 'Romanisation in the form of recognisable urban settlements or villa estates' over much of the region (Kenyon 1991, 28, 53). A similar view was expressed by the finds specialists in the published excavation report for Beeston Castle (Royle & Woodward 1993, 74) and has recently been echoed by Crosby who observed that 'Cheshire, not quite on the frontier but certainly on the economic margin of the empire, probably retained many of the characteristics of pre-Roman farming systems' (Crosby 1995, 26). Higham has even suggested that iron working was not introduced into Cheshire until after the Roman conquest (Higham 1993, 28), whilst Haselgrove has recently written that the 'Iron Age in Lancashire is poorer than for almost any other part of the country' (Haselgrove 1996, 61).

Fig 2.1: Iron Age bull's head escutcheon, a recent metal-detector find from near Crewe, Cheshire. Scale 1:2. Copyright Cheshire Museums.

Two themes emerge from these views. Firstly, that the climate and physical geography of the region made the area marginal for early settlement. Secondly, that this in turn led to the archaeological remains of the late prehistoric and Romano-British era in the North West being sparse and the material culture of poor quality. The first theme is perhaps the key point of interest, for climatic marginality implies change, which suggests that the local communities of the region could have exhibited some form of stress during this period which might be recoverable archaeologically. This paper will therefore attempt to assess how valid these two assumptions are by reviewing our current state of knowledge. Both periods will be treated as two halves of one continuum separated by the pivotal act of the Roman conquest during the AD 70s AD (Shotter 1997). This will provide a period of nearly a millennium which should allow a sufficiently large mass of data to be studied.

Defining the Geographical Area Under Study

However, before we can begin to assess how climatic marginality might have effected the archaeology of the

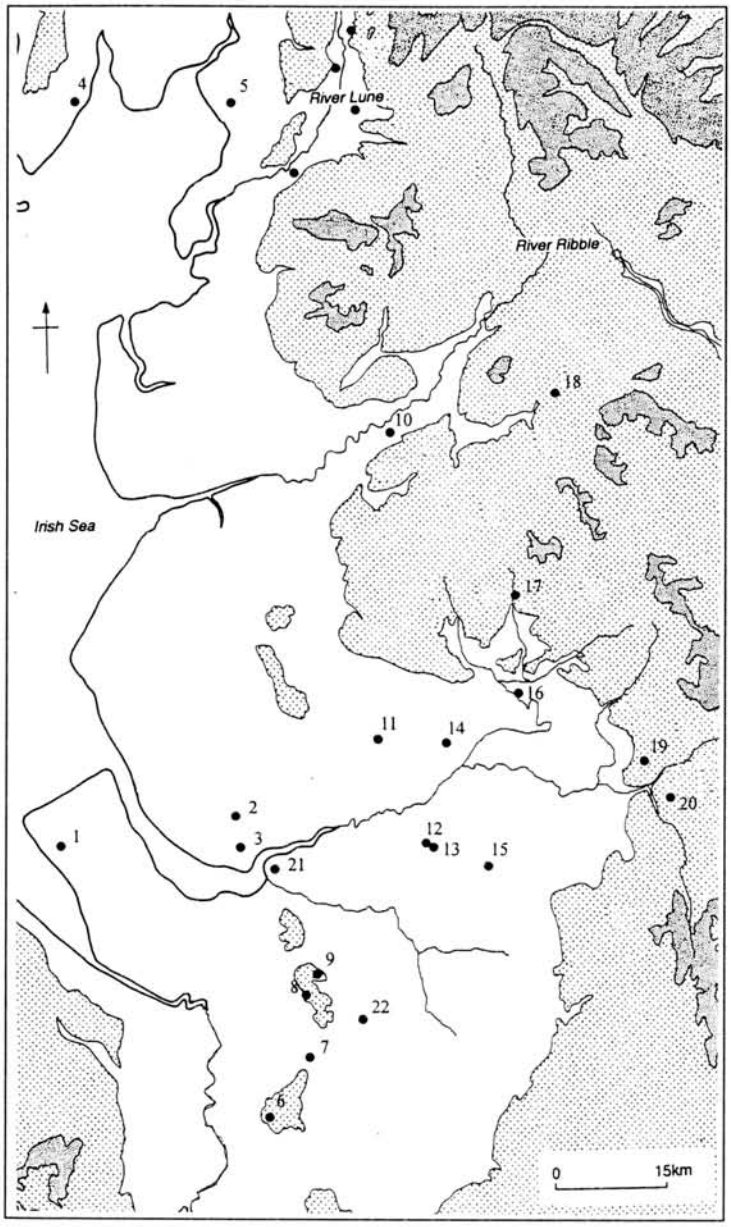


Fig 2.2: Distribution of known late prehistoric and Romano-British enclosure sites in the North West (excluding Cumbria). Note the area between 100m AOD and 250m AOD the theoretical agriculturally marginal area during the Iron Age (contours at 100m and 400m intervals).

Key:

(1) Irby; (2) Tarbock; (3) Halewood; (4) Skelmore Heads; (5) Warton Crag; (6) Maiden Castle; (7) Beeston Castle; (8) Kelsborrow; (9) Eddisbury; (10) Portfield Castle; (11) Southworth, Winwick; (12) Legh Oaks I; (13) Legh Oaks II; (14) Great Woolden; (15) Tatton Park; (16) Rainsough; (17) Castlesteads; (18) Castercliffe; (19) Werneth; (20) Mellor; (21) Halton Brow; (22) Eaton-by-Tarporley Roman villa.

late prehistoric and Romano-British period in the North West we have to arrive at a consistent definition of the area under discussion. We can not easily compare, for instance, the statements of the archaeologists and historians quoted above because their terms of reference do not match. They were each talking about a different geographical entity; the modern counties of Lancashire or Cheshire, the historic County Palatines of Lancashire and Cheshire; or even Lancashire and Cumbria taken together. This lack of a common geographical reference extends elsewhere amongst the archaeological profession, even to English Heritage sponsored initiatives. The North West Wetlands Survey, for instance, ranges from Cumbria in the north, through Lancashire, Merseyside, Greater Manchester, and Cheshire, to Shropshire and Staffordshire in the south. The term North West is itself a largely 20th century invention, and means different things to different groups depending on their point of view, politically and geographically.

We need to turn away from these modern administrative boundaries, with their own in built constraints, and seek coherent geographical areas if we are to begin to understand the impact of the climate of the area on the quality of archaeological material from west of the Pennines. If we look at the topography of this area we can see that between the north Midlands plain and the Cumbria hills the landscape is dominated by a series of river valleys running east to west into the Irish Sea; the Dee, Gowy, Weaver, Mersey, Alt, Douglas, Ribble, Wyre and Lune. This has led to a great deal of topographical fragmentation since these valleys are divided by prominent ridges and hills, especially north of the Ribble where the Lancashire plain is reduced to a narrow strip a few kilometres wide. However, some coherence can be seen in the catchment area of the River Mersey and its estuary. The Mersey Basin, as geographers have long called this area, encompasses most of the land south of Wigan and north of Nantwich and includes the Gowy, Weaver, Sankey, and Mersey rivers; an area roughly 80 km by 70 km. It is surrounded on three sides by hills; the Rossendale

Years BC/AD	9000	8000	7000	6000	5000	4000	3000	2000	1000	BC | AD	1000
Pollen zone	III	IV	V	VI		VIIa		VIIb	VIII		
Major vegetation	Tundra	Tun. and shrub	Birch Pine Hazel	Pine Hazel	Pine Hazel Elm Oak	Lime Elm Oak Alder		Oak Alder (Heather, grasses and herbs increasing)	Decline of woodland and rise of shrubs and grasses Appearance of cereal pollen		
Clearance and agriculture	None	Little evidence of forest disturbance		Frequent forest disturbance Hunting and gathering				Small scale forest clearance and pastoralism	Forest regener-ation	Major forest clearance Mixed farming	Fo. regen Mi. fa. / Fo cl. Mi fa.
Soils	Profiles not stable	Maturing soil profiles base-rich		Stable base-rich forest soils				Increasing acidity, podzolization and erosion			
Average summer temperature (degrees centigrade)	0	Rise to 12	12	Rise to 16.5 (Climatic Optimum)			Decline to 15	Rise to 17 (post-glacial high)	Decl. to 14	Steady rise to 15	Decl to 14 / St. rise to 16
Wetlands	Start of mossland formation in lowland basins (Ashton Moss)			Start of upland blanket peat			Expansion of blanket peat (Featherbed Moss)		Very rapid peat gr.	Weathering of peat profiles	Rapid peat growth
Archaeology	Upper Late Palaeo-lithic	Early Mesolithic		Late Mesolithic			Late Mesolithic/ Early Neolithic	Late Neolithic/ Early Bronze Age	Late Bronze Age/ Iron Age	R B	Pre-Con-quest / Norman
Years BC/AD	9000	8000	7000	6000	5000	4000	3000	2000	1000	BC | AD	1000

Table 2.1: Time-chart showing the development of the Mersey Basin landscape from 9000 BC to c AD 1250 with reference to the palaeo-environmental and archaeological evidence (after Nevell 1992, 14).

uplands and its outliers around Wigan to the north and north west, and the Pennines to the east and south-east as far as Congleton and this catchment area runs westwards as far as Liverpool, Chester and the Wirral. These geographical features define an area that is roughly bowl shaped; the very area where most of the new finds of the last 15 years have come from; the bog bodies, the metalwork, the pottery and above all the settlement sites. It is this area that the rest of this paper will focus upon.

A Model for Climatic Marginality

How valid is the assumption that the environment of this region was hostile to settlement in the late prehistoric and Romano-British periods?

The dramatic effect of fluctuations in annual mean temperature on local agricultural conditions is being increasingly recognised by geographers and archaeologists alike (Kenyon 1991, 14-5; Parry 1978, 100-2). The link between climatic deterioration and the abandonment of cereal cultivation at higher altitudes was first extensively explored in this country by Dr M L Parry, who established the climatic limits for the cultivation of oats in the Lammermuir Hills in south-east Scotland (Parry 1975). These climatic limits were based upon mean summer temperature, annual rainfall, and wind speed. He observed that a change in any of these factors led to a change in the altitudinal limits for cultivation. On this basis he was able to map the probable cultivation limit at various stages of the climatic cooling period between AD 1300 and AD 1700. How far are Parry's theories applicable to the North West, and might they help is assessing how agriculturally marginal the region was in the late prehistoric and Romano-British era? As long ago as the early 1960's Crowe estimated that the altitudinal lapse rate for the North West, the amount by which the annual mean temperature drops with increased height, was in the order of 70m for every 0.5 degrees centigrade. Using Crowe's figures as a guide it is possible to assess the impact of the climatic changes charted by Lamb in the first millennium BC (Lamb 1982, 141) on the North West.

According to Lamb the climate of England declined sharply at the end of the second millennium BC, with a fall in mean annual temperature of around 2 degrees centigrade. Thus from being *c* 1.5 degrees above the mid-twentieth century average (*c* 15.5) around 1200 BC, by *c* 750 BC the annual summer temperature of Britain had fallen to 0.5 degrees below the twentieth century average (Table 2.1; Lamb 1982, 55). This was coupled with an increase in the prevailing westerly winds, and consequently in rainfall. Temperatures declined by a further *c* 0.5 degrees until around 150 BC when they began to rise slowly, reaching twentieth century levels around the beginning of the first century AD and peaking in the third century at around 0.5 degrees above the mid-twentieth century average. Such figures are undoubtedly crude but it is not so much the

absolute temperatures that are important in the assessment of the impact of climatic change on the local environment, but rather the pattern of fluctuation.

In the Mersey Basin and elsewhere west of the Pennines, the effect of these climatic changes on the altitudinal limit of cultivation, and by implication permanent settlement, would have been particularly severe. The mid-twentieth century marginal limit for cereal cultivation lies between 200m and 250m AOD (Crowe 1962, 44). Using Parry's model suggests that around 1200 BC the altitudinal limit for cereal cultivation may have been as high as 460m AOD, but by *c* 150 BC the *c* 2.5 degrees fall could have reduced this limit to as low as 110m AOD. Certainly land above this level would have been marginal for cereal cultivation. The recovery in temperatures after *c* 150 BC would have restored the limits for cereal cultivation to their mid-twentieth century levels, between 200m and 250m AOD. Therefore, theoretically for most of the first millennium BC all year round settlement above c 110m AOD within the Mersey Basin would appear to have been filled with risk.

Having demonstrated the theoretical basis for climatic change and agricultural marginality in the later prehistoric and Romano-British period how far does the local palaeo-environmental evidence support this model? We are fortunate in the North West in having a large number of natural palaeo-environmental deposits available for analysis, in particular lowland peat bogs and upland blanket peat deposits, many of which have been studied in the last two decades. It should thus be possible to assess the impact of these climatic changes on the local vegetational history of the Mersey Basin by studying these local sources.

Agriculturally, we have hypothesised that the most marginal areas along the western Pennine fringe would have been land between 110m and 250m AOD zone. In the southern Pennines a number of studies have been undertaken of the blanket peat deposits above this zone. These indicate that the climatic deterioration of the early first millennium BC dramatically increased the rate of upland peat growth, which inundated most areas above 300m AOD that might have been used for pasturing in the Neolithic and Bronze Ages (Tallis 1991; Tallis & McGuire 1972; Tallis & Switsur 1973). Furthermore, the palaeo-environmental evidence indicates that blanket peat formation permanently replaced the heathland and scrubland that existed before c 1200 BC, so that the recovery in temperatures and decline in rainfall in the first part of the first millennium AD, the Romano-British period, would have halted but not reversed these effects (Tallis 1997; Tallis & Livett 1994; Tallis & Swistur 1990).

Changes in the vegetational history of the lowland areas of the Mersey Basin, below the 200m to 250m AOD zone, were not as severe, but the peat bog deposits studied from Ashton Moss, Chat Moss, Lindow Moss, Risley Moss and Wynbunury Mosses also reflect the fall and rise in temperature and the variations in rainfall during the late prehistoric and Romano-British periods.

An Eco-deterministic Model of Settlement

It has been shown that the palaeo-environmental deposits of the Mersey Basin preserve evidence for climatic change during this period. However, they also show something else; evidence of anthropogenic changes to the vegetation of the Mersey Basin in the form of woodland clearance episodes, which allows us to suggest a reconstruction of the impact of changing settlement trends on the landscape of the area.

In using the palaeo-environmental evidence to assess the impact of humans on the Mersey Basin certain problems arise. The first of these is that only a few of the pollen diagrams studied in the region have been the subject of detailed radio-carbon assays. This means that we have to rely on comparison with other dated pollen diagrams in order to identify the first millennium BC and early first millennium AD clearance episodes in all the diagrams from the Mersey Basin. Birks' comparison of the pollen diagrams from Holcroft and Lindow Mosses with those from northern Lancashire has recently been strengthened by a newly carbon-dated pollen diagram from Lindow Moss and the research work of the North West Wetlands Survey (Hall *et al* 1995; Leah *et al* 1997; Oldfield *et al* 1986). Birks (Birks 1965, 309-11) found two features common to all the North West peat pollen diagrams which delineated the late prehistoric and Romano-British eras. The first was a major recurrence surface, or bog regeneration phase, from the early first millennium BC, dated in the Mersey Basin at Chat Moss to the years 795-595 BC (695 ± 100 BC, Q 683) and at Lindow Moss to the years 580-420 BC (500 ± 80 BC, BM 2400). In northern Lancashire it was dated to the period 930-690 BC at Pilling Moss (810 ± 120 BC, Q 68). The second was a further major recurrence surface dated at Helsington Moss in the central Pennines to the years AD 326-526 (426 ± 100, Q 83; Godwin & Willis 1960, 62-72). This is visible in all mossland pollen samples from northern England where the peat stratigraphy survives that late (Oldfield 1963, 23). Thus, within the pollen record of the region the mid-first millennium BC to mid-first millennium AD is bracketed by two distinctive environmental phases. Whilst this provides a broad framework within which to work, exact dating, such as whether an increase in cereal pollen belongs to the late prehistoric or Romano-British period, is difficult.

The second major problem is how far the pollen evidence from mosses can be used as a guide for a whole region. This has been covered in great depth by Turner (Turner 1983, 67-73) who discusses the size of the pollen deposit and its significance; for instance the balance between local and regional pollen varies with the size of the deposit and the position of the sample. Generally local pollen represents the vegetation within a 1 km radius of the sample, whilst regional pollen, which to be truly representative needs to be taken from the centre of the deposit, can characterise the vegetation of an area up to 5 km radius from the sample.

Within the Mersey Basin this environmental

Fig 2.3: Eddisbury hillfort looking north, showing the surviving earthworks. This site was abandoned sometime in the late first millennium BC.

evidence, overwhelmingly from mossland deposits, but also including samples from archaeological contexts, can be used to reconstruct the environmental history of the period. Of the main mossland and lake deposits studied within the Mersey Basin (Cowell & Innes 1994; Hall *et al* 1995; Leah *et al* 1997) there are only seven dated pollen cores that having a bearing on this period from the lowland areas of the Basin; two from Chat Moss, two from Lindow Moss, one from Holcroft Moss, one from Knowsley Park Moss and one from Simonswood Moss. Although seven detailed pollen cores have been published from the upland regions fringing the study area to the north and east (three from the southern Pennines and four from the Rossendale uplands) only three, one from Rossendale at Deep Clough and two from the southern Pennines, at Rishworth Moor and Featherbed Moss, impinge on the Mersey Basin. These diagrams provide regional environmental data concerning two key areas within the Mersey Basin. Firstly, the lower Mersey terraces around Warrington. Secondly, the 110m-250m AOD zone which, it has been argued, was marginal arable land throughout the first millennium BC.

The seven dated lowland pollen diagrams testify to wide ranging landscape changes in the mid to late first millennium BC. Four diagrams, Holcroft (Birks 1965, 302-4), Chat Moss A and B, (Birks 1964, 37-41) and Lindow Moss I (Birks 1965, 305-7) each record three major and prolonged episodes of woodland clearance in the period *c* 795 BC to *c* AD 526. Without firm dating evidence it is difficult to ascribe these episodes to particular periods within this era, although the final clearance in each diagram is terminated by the recurrence surface or regeneration phase dated at Helsington Moss to the period AD 326-526 and is thus taken to be late or sub-Roman in origin.

Lowland Settlement Trends During the First Millennium BC

Having established the chronological framework of our eco-deterministic model of settlement trends, we can now look in detail at this palaeo-environmental evidence. All the lowland diagrams show a broadly similar developments in the regional vegetation of the lowland areas of the Mersey Basin, with the two earliest episodes of woodland clearance, probably assignable to the mid and late first millennium BC, separated by a short phase of woodland regeneration. The first of these episodes was characterised by sustained woodland clearance and an absence of cereal pollen, suggesting pastoral farming. This occurs in most of the diagrams of the Mersey Basin immediately after the early first millennium BC recurrence surface dated to the period 795-420 BC. At Chat Moss A and B, pollen diagrams indicate major forest clearance beginning with this recurrence surface. The details from Chat Moss showed a severe decline in oak woodland and a corresponding rise in bracken and plantain frequency. Ash and willow pollen became important, and beech became a major woodland component from this time onwards. In sample A (SJ 7180 9600), from the middle of the moss, tree and shrub pollen fell to 58% of total dry land pollen, with herbaceous pollen accounting for the reminding 42%, whilst in sample B (SJ 7035 9480), which was closer to the western edge of the moss, these figures were 66% and 34% respectively.

Similar patterns can be seen in published diagrams from Holcroft and Lindow Mosses, and an unpublished diagram taken from Risley Moss (Leah *et al* 1997). At Holcroft Moss (SJ 6740 9335), Birks' phase C3, which once more occurs immediately after the first millennium BC recurrence surface, was characterised by pastoral type clearance with increased representation of

Plantago Lanceolata, Rumex and other grass pollen. Tree and shrub pollen accounted for 72% of the total dry land pollen, with herbaceous pollen accounting for the remaining 28%. The Lindow Moss I sample also indicated woodland clearance immediately after the early first millennium BC recurrence surface. This too was characterised by a sharp rise in herbaceous dry land pollen, to 35%, with tree and shrub pollen accounting for the remaining 65% of pollen. Once more increases in weeds such as Plantago Lanceolata and Rumex suggested pastoral activity.

Similar phases of pastoral type activity are recorded from a number of small palaeo-environmental samples on the northern and eastern fringes of the Mersey Basin. A pollen diagram from Simonswood Moss on Merseyide (SJ 445 996) saw intensive clearance activity associated with traces of cereal pollen in the years following the period 1154-780 BC (2730 ± 100 BP; Birm-1220; Cowell & Innes 1994). A similar episode, but with not traces of cereal pollen, was noted at Knowsley Park Moss to the south (SJ 455 961) during and shortly after the years 930-790 BC (2670 ± 60 BP; Birm 1176; Cowell & Innes 1994). In the Pennine foothills fringing the eastern edge of the Basin a small basin mire on Godley Brook at Godley Hill in the Longdendale valley (SJ 9680 9515) has produced a clearance phase dated to the years 810-415 BC (2530 ± 60 BP; Beta-111472; Ogle, Robinson & Shimwell 1997).

A brief period of forest regeneration was followed by the second phase of woodland clearance within the Mersey Basin, during the late first millennium BC. This was characterised by a period of highly intensive agricultural activity, involving major deforestation, high levels of weed pollen, and, for the first time, the introduction of cereals (and possibly hemp/hops) in high quantity. This period of intense land use has only been dated at Lindow Moss II (SJ 8200 8050), where this major clearance episode occurs after 430-250 BC (340 ± 90 BC; BM 2401). During this phase tree and shrub pollen fell to 74%, herbaceous pollen rose to 23% and cereal pollen accounted for 3% of the dry land pollen total. Significant increases in the relative frequency of gramineae, Plantago Lanceolata, and Rumex pollen, coupled with wheat pollen and possibly barley oats suggested to Oldfield that this phase, around

Fig 2.4: Castlesteads promontory enclosure in the Irwell valley to the north of Bury. An escarpment edge site from the late Iron Age. Note the single ditch cutting off the promontory in the centre of the photograph.

Table 2.1: Late Prehistoric & Romano-British Sites in the Mersey Basin

Name of Site	*Area in Hectares*	Period of Activity	*Height Above Sea Level*	*Number of Ditches*
Beeston Castle	4ha	LBA - Mid-Iron Age	100m AOD	2
Brookhouse, Halewood	?	Iron Age/RB	20m AOD	2
Castlesteads	1.1ha	Late Iron Age	110m AOD	1
Eddisbury	3.5ha	Iron Age	150m AOD	3
Great Woolden	1.1ha	Late Iron Age-RB	20m AOD	2
Halton Brow	1.68ha	RB	70m AOD	1
Hangingbank	1.23ha	RB	230m AOD	2
Irby	0.88ha	Iron Age-RB	60m AOD	1
Kelsborrow	3.3ha	Iron Age	170m AOD	2
Legh Oaks I	0.1ha	Iron Age	60m AOD	1
Legh Oaks II	0.31ha	RB	60m AOD	1
Maiden Castle	0.7ha	Iron Age	211m AOD	2
Mellor	2.2ha	Late Iron Age-RB	220m AOD	2
Rainsough	0.96ha	Late Iron Age-RB	65m AOD	1
Winwick	1.27ha	RB	25m AOD	1
Tarbrook	?	RB	20m AOD	1
Tatton Park	0.45ha	late Iron Age-RB	40m AOD	open

Lindow Moss, witnessed major forest disturbance, burning and occupation for farming over a period of centuries (Oldfield et al 1986, 84). Birks' evidence for the same period from Lindow Moss I (SJ 8235 7965) was not as emphatic, but nonetheless indicated major woodland clearance, with rises in herbaceous pollen and high values of Artemisia and Chenopodiacae pollen and isolated grains of Linum pollen suggesting nearby arable activity (Birks 1965, 310).

Samples from Chat Moss A, in the middle of the moss (SJ 7180 9600), and from Chat Moss B, on the western edge, near the Glazebrook valley (SJ 7035 9480), also record cereal pollen for the first time from broadly contemporary clearances dated by Birks to the late first millennium BC (Birks 1964, 33-4). Both are characterised by a decline in shrub pollen, to 30% in Chat Moss A and 24% in Chat Moss B, coincident with a decline in tree pollen to 33% in each diagram. High values of dry land herb pollen were recorded, with these rising to 34% in Chat Moss A and 40% in Chat Moss B, and for the first time cereal-type pollen is recorded in significant numbers, accounting for 3% of the total dry land pollen in each sample. This latter figure suggests that some arable farming was being practised nearby. The contemporary clearance from Holcroft Moss (SJ 6740 9335), Birks' C4 clearance phase (Birks 1965, 304) is less distinctive, with declines in tree and shrub pollen to 48% and 17% respectively, and a rise in herb pollen frequencies to 35%. There was very little indication of plants associated with cultivation activity, although the high values of Artemisia and Chenopodiacae pollen as well as the isolated grains of linum suggest some arable activity in the vicinity of the moss (Birks 1965, 310).

A pollen diagram from Simonswood Moss on Merseyside (SJ 445 996) saw similar intensive clearance activity, associated with cereal pollen levels above 1% of total land pollen counts, beginning in the period 790-257 BC (2380 ± 80 BP; Birm-1221; Cowell & Innes 1994).

Upland Settlement in the First Millennium BC

In contrast to these lowland pollen samples, which each indicate a two phase development of agriculture in the Mersey Basin during the mid to late first millennium BC, the three diagrams from the uplands of the region indicate sustained forest clearance from the mid-millennium in the Rossendale area, but only from the late first millennium elsewhere in the southern Pennines. The first of these samples comes from the Rossendale uplands. This sample, from Deep Clough A (SD 777 169), lies at the head of a small tributary stream of the river Irwell, draining eastwards from the watershed between Holcombe Hill and Harcles Hill at 340m OD (Tallis & McGuire 1972, 727). Here Tallis and McGuire dated two clearance episodes, C3 and C4, to the periods *c* 690-500 BC and *c* 350 BC to AD 290. These calculations were based on relative dates derived from an assumed steady rate of peat accumulation above the single carbon dated sample of 1710-1470 BC (1590 ± 120 BC, Birm 147; Tallis & McGuire 1972, 736-7). Whilst these figures can not be considered as wholly accurate because of this assumption, there are no external factors casting doubt on their assumptions. Episode C3, *c* 690-500 BC, witnessed a substantial decline in tree pollen. Before this date tree pollen accounted for 75-80% of the total dry land pollen, being dominated by Quercus, Alnus, and Corylus pollen, with smaller amounts of Ulmus and Betula. In C3 tree pollen fell to 44%, shrub pollen fell to 6%, whilst herbaceous pollen dominated the spectra, with 49%. Cereal pollen did not occur.

After a short period of partial woodland regeneration, a second major woodland clearance, C4, lasting until the middle of the Romano-British period and beginning

around *c* 350 BC can be detected. Tree pollen again fell, this time to 53%, but herbaceous pollen only rose to 26%. The two chief characteristics of this sample was the rise of shrub pollen to 19% and the appearance of cereal pollen in significant quantities, 2%, half way through the clearance episode. Tallis and McGuire ascribe the upsurge in shrub pollen, particularly Calluna and Plantago values, to an increase in site moisture possibly as the result of climatic deterioration around the middle of the first millennium BC, coupled with a rise in soil erosion. The steep rise in grass pollens in both C3 and C4 indicates substantial woodland clearance in the mid to late first millennium BC, whilst the absence of cereal pollen in C3 suggests that the Rossendale uplands may have been used only for summer pasturage in the mid first millennium. The occurrence of cereal pollen in C4 may suggest the introduction of arable farming on the flanks of the Rossendale uplands. Though the exact timing of phase C4 can not be fixed, the first occurrence of this pollen suggests a first century BC or first century AD context.

This evidence is compatible with the samples from Rishworth Moor (SD 988 173), where four radio-carbon assays provide a secure framework for the many clearances observed. Here, sustained forest clearance did not occur until after 570-370 BC (470 ± 100 BC; GaK 2824). This was characterised by a great increase in the variety and quantity of non-arboreal pollen, coupled with a corresponding decrease in tree pollen values. These changes culminated around 50 BC - AD 110 (30 ± 80 AD; GaK 2825), with tree pollen accounting for 15% of the total, shrub pollen 10%, and herbaceous pollen the rest. For the first time cereal pollen occurred, although it accounted for less than 1% of the total, perhaps reflecting the impact of an ameliorating climate and the consequent rise in the marginal limit for cereal agriculture in this area (Bartley 1975, 378).

A similar contemporary pattern of clearance can also be seen from the Featherbed Moss pollen diagram. This pollen diagram suggests irregular and spasmodic changes in the tree pollen during the middle of the first millennium BC. This activity was not sufficient to make any great change on the overall intensity of the woodland, and since there was an absence of cereal pollen the inference is that the uplands in the vicinity were used only for summer pasture (Tallis & Switsur 1973, 726-7). Sustained forest clearance did not occur until after 351-251 BC (301 ± 50 BC, Q 854) when grass pollen rose to 54% of the total dryland pollen sample, and tree pollen fell to only 30%. This large clearance activity was maintained until the end of the first millennium BC, by which time traces of cereal pollen, though less than 1%, are first detectable (Tallis & Switsur 1973, 726).

Settlement Trends During the Romano-British Period

Seven dated pollen diagrams are available for this period within the study area, and all record major and sustained woodland clearance over many centuries at the end of the first millennium BC and during the first centuries of the first millennium AD. These clearances appear to be broadly chronologically coincident across the Basin, and form the third significant period of palaeoenvironmental disturbance after the recurrence surface of 795-595 BC. The end of this third phase of clearance activity is marked by a second recurrence surface which is radio-carbon date to the year 326-526 AD (Godwin & Willis 1960, 62-72).

Five pollen diagrams indicate a major upsurge in agricultural activity in the centuries immediately before the *c* 326-526 AD recurrence surface. The Chat Moss A and B diagrams suggest that the strongest increase in agricultural activity took place within the middle reaches of the Mersey valley. At Chat Moss B tree, shrub, and grass pollens were all roughly equal at around 30%, whereas cereal pollen leapt to 12% of the total dry land pollen sample. At Chat Moss A grass pollen rose to 69% and cereal pollen to 5% of the total dry land pollen sample. This palaeoenvironmental evidence is supported by similar findings from Holcroft Moss, where grass pollen rose to 41% but cereal pollen only rose to 3% of total dry land pollen. The evidence for substantial woodland clearance from Lindow Moss I is equally strong, with grass pollen reaching 46% of the total dry land pollen sample, and cereal pollen accounting for 4%. These figures mark the pre-Norman Conquest peak of cereal pollen in the Mersey Basin. A similar episode was noted at Knowsley Park Moss on Merseyside (SJ 455 961) where a large sustained clearance episode began shortly before the period AD 240-440 (1680 ± 50 BP; Birm 1176; Cowell & Innes 1994).

This evidence is supported by two palaeoliminological studies in Cheshire. The first, from Peckforton Mere (SJ 5310 5575) near the Central Cheshire Ridge, indicated a period of rapid soil erosion thought to date from the Romano-British period (Schoenwetter 1982). The second, from Rostherne Mere in northern Cheshire (SJ 7440 8400), began sometime between 366 BC and AD 60 (2090 ± 70BP; SRR-1891; Leah *et al* 1997) when a pronounced rise in soil erosion is thought to indicate intensive local clearance activity.

The upland pollen diagrams from the fringes of the Mersey Basin also indicate an upsurge in activity during this period, but of a different nature. The pollen diagrams from Deep Clough A, at 340m OD, and from Rishworth Moor, at 410m OD, both indicate the continuance of the substantial woodland clearance seen towards the end of the first millennium BC, and the dominance of grass pollens indicative of an open landscape perhaps used for pastoral farming. At Deep Clough A, although cereal pollen does occur in the Roman period the quantities are so small, less than 1% of the total dry land pollen, that Tallis and McGuire argued that this related to the lower flanks of the Rossendale hills, rather than to the immediate locality of Deep Clough A (Tallis & McGuire 1972, 723). Likewise cereal pollen occurs at Rishworth Moor, but

again only in minute quantities well below 1% of the total dry land pollen sample.(Bartley 1975, 378). The extent of upland woodland clearance in this area by the beginning of the Roman period is indicated by a pollen sample carbon dated to 50 BC to AD 110 (30 ± 80 AD; GaK 2025) which shows that tree pollen accounted for only 15% of the total dry land pollen, shrub pollen 10% but grass pollen 75%. Extensive upland woodland clearance is also indicated from Featherbed Moss. Between 128-28 BC (78 ± 50 BC; Q 853) and AD 500-600 (550 ± 50; Q 852) there occurred the largest post-glacial sustained clearance of woodland in this part of the southern Pennines. During this phase tree pollen fell to 23% and grass pollen rose to 58% of the total dry land pollen sample. Most striking was the appearance for the first time of cereal pollen, which held steady at just below 2% of total dry land pollen throughout this period.

Although there is very little excavated archaeological evidence to indicate the continued presence of rural settlements in the Mersey Basin after *c* AD 200, the evidence supplied by palaeoenvironmental material and coin-loss indicate little change in the level of rural activity within the Mersey Basin during the third and fourth centuries AD.

Palaeoenvironmental evidence from Chat Moss and Lindow Moss both indicate the continuance of early Roman clearances, with their significant levels of cereal pollen, until the recurrence surfaces of the fifth century AD (Howard-Davis *et al* 1988, 24). The continuing strength of lowland agricultural activity in the third and fourth century is also suggested by the pattern of coin loss in the Mersey Basin during these centuries. More significantly, two upland pollen diagrams from the northern and eastern fringes of the Mersey Basin, appear to provide some evidence suggesting a decline in agricultural activity above *c* 300m OD in the Mersey Basin after *c* AD 290. In central Rossendale, the Deep Clough A site, at 340m OD, indicates that the regeneration of the forest cover occurred after *c* AD 290 (Tallis & McGuire 1972, 727). At Featherbed Moss, at 500m OD, regeneration began around AD 280 (Tallis & Switsur 1973, 744), although in both diagrams cereal pollen continued to be present during the fourth centuries. Since both sites lie above the model for the altitudinal limit for cereal cultivation and habitation outlined earlier, they might be thought to act as a sensitive barometer to climatic and social changes.

The palaeo-environmental evidence for the period *c* 795 BC to AD 526 shows in some detail the climatic decline of the early to mid first millennium BC and the subsequent recovery of the late first millennium BC and first few centuries of the first millennium AD. Furthermore, this evidence would also seem to show rises and falls in human activity, indicated by three phases of clearance episodes which culminated in the late first millennium BC with the first occurrence of cereal pollen coincident with sustained forest clearance. This pattern would appear to match the climatic cycle of this period although whether the two are directly related is difficult to prove but superficially the link seems strong. However, what of our marginality model? The palaeoenvironmental evidence would seem to provide some support for the theory that the 110-250m zone in southern Pennines and its foothills was the most agriculturally marginal area, but the lack of a comprehensive network of dated palaeoenvironmental samples from across the basin means that other marginal areas may not be represented in this date. One further zone of agricultural marginality highlighted by the North West Wetlands Survey is the large basin mosslands of the region, which were not conducive to early settlement in the same way as the Somerset Levels and the Fens. Even so, it is clear that the assumption that the whole of the region was marginal for settlement in some way during this period can not be sustained.

The Archaeological Evidence for Settlement

Having established a model for identifying agriculturally marginal areas in the region, and a model for analysing broader settlement trends, how far does the archaeological evidence support these theories? In particular, is there any evidence for the second assumption outlined at the beginning of this paper that this marginality led to the archaeological remains of this period being sparse and its material culture of poor quality?

The archaeological evidence for settlement during the first millennium BC and early first millennium AD (Iron Age and Romano-British era) is dominated by two types of evidence; earthwork enclosures and cropmark enclosures. The best known of these are the earthwork

Fig 2.5: Legh Oaks II , a cirvilinear enclosure on clay which has produced 2nd century AD pottery. Copyright Dr Nick Higham.

enclosures, most of which were first identified and catalogued by Forde-Johnson (Fig 2.3; Forde-Johnson 1962). He used the hillfort model in his interpretation of these sites, comparing them with the better known sites of the Welsh Marches and South-West of England. Using his criteria there are thirteen hillfort type sites that lie in the modern counties of Cheshire, Greater Manchester, Lancashire and Merseyside, of which eleven are situated within the Mersey Basin (Beeston Castle, Bradley, Burton Point, Castlesteads (Fig 2.4), Eddisbury (Fig 2.3), Helsby, Kelsborrow, Maiden Castle, Oakmere, Rainsough, and Woodhouses). These sites ranged in size from 0.1ha (Burton Point) to 4ha (Beeston Castle), and had a mixture of single and multiple ditches and banks as defences.

The second group of enclosure sites, cropmarks, have been identified by a number of recent surveys by archaeologists from Chester, Liverpool and Manchester. Within the Mersey Basin these number over 50 and more can be expected. These sites are characterised by small single and double ditched enclosures, usually less than 1.5 ha in area, of a type familiar in southern Britain from the late first millennium BC (Nevell 1989a, 31-3; Collens 1994, 22; Cowell 1991a, 50). These cropmarks range in size from 0.1ha to 2.8ha. Stylistically there is no difference between the cropmark sites and the earthwork sites traditionally identified at hillforts, other than topographical location (the earthworks usually lie in the 110-250m AOD zone) and the presence of earthwork banks and ditches in the latter. Within Forde-Johnson's own work he made a distinction between true hillforts above roughly 2.5ha in area which acted as central places and the home of a local chieftain, and smaller sites which he regarded as farmsteads. If we apply this criterion to the Mersey Basin, then of the earthwork enclosures only Kelsborrow (3.3ha), Eddisbury (3.5ha) and Beeston (4ha) can be viewed as true hillforts. How accurate such an assumption might be is open to question, although anthropological parallels (see Matthews this volume) would suggest that such a settlement hierarchy may be recoverable from size alone. The point here is that the earthwork and cropmark enclosures from the Mersey Basin can be treated as broadly one group of site (Table 2.2).

This gives us over 60 sites in the Mersey Basin which morphologically may belong to the late prehistoric and Romano-British periods, although only 18 have produced excavation evidence from this period. Of these twelve can be shown to be late prehistoric in origin (Table 2.2). 13 enclosures can be shown by excavation to have Romano-British phases, and seven have both late prehistoric and Romano-British phases (Castlesteads, Great Woolden Hall, Irby, Mellor, Rainsough and Tatton Park; Table 2.2). There are a further eight enclosures where various types of fieldwork have failed to provide a positive date, although a late prehistoric or Romano-British origin is strongly suspected (Arthill, Bradley, Burton Point, Giant's Seat, Helsby, Oakmere, Rhodes Green, and Woodhouses).

Three topographical sub-groups can be tentatively identified within this group of 26 enclosures. Firstly, promontory settlements, examples of which are beginning to be found along the escarpment edges of the river valleys of the Mersey Basin. Dated examples are known from Castlesteads, Great Woolden, and Rainsough, but other potential examples include a double-ditched cropmark site at Giants Seat in the Irwell Valley, and the cropmark ditched enclosure at Rhodes Green in the Irk valley. Secondly, hilltop sites along the western Pennine fringes and along the Central Cheshire Ridge (Beeston Castle, Eddisbury, Kelsborrow, Maiden Castle, Mellor and Hangingbank). Thirdly, niche sites on or near to the boundary between two different soils types (Irby, Halton Brow, Legh Oaks I & II, Fig 2.5, Tatton Park and Winwick).

We can suggest a climatically deterministic model for settlement constraint in the basin which would see the potential area available for cereal production shrinking but also the upper limit for grazing in this area was being reduced. It maybe significant that the few upland univallate hillforts or palisaded enclosures of the southern Pennine uplands, Almondbury, Castercliffe, Mam Tor and perhaps Portfield, (Combes 1982; Combes & Thompson 1979; Cunliffe 1991 344-52; Varley 1976) appear to have been abandoned by the middle centuries of the millennium (Kenyon 1991, 28; Hart 1984, 73-5) and that by the last quarter of the first millennium BC none of the largest hillfort sites in the North West were occupied. Thus, at the hillfort of Portfield, in the Ribble valley to the north of the Mersey Basin, the main period of use for the defences belonged to the period 750-500 BC (Beswick & Coombs 1986, 175-6). Similarly at Castercliffe (also in the Ribble valley, SD 884 388) radio-carbon dates for the ramparts centred on 510 ± 70 BC (S 286; Coombs 1982, 127-8.) whilst in Cheshire the ramparts at Maiden Castle were dated to *c* 390 BC (British Archaeological Abstracts 88/510.) and the main occupation of the hillfort at Beeston Castle spanned the years 765 to 257 BC (Ellis 1993, 85-6).

The best known of the non-hillfort type sites is Great Woolden Hall (SJ 691 936), a promontory double-ditched enclosure in the Glazebrook valley between Salford and Warrington excavated by GMAU in 1986-8. The finds and overall phasing of this site would appear to provide our best guide as to the trends likely to be visible on the other lesser known sites (Nevell 1989b & 1992b).

The earliest activity at Great Woolden was represented by a small assemblage of flint recovered from fieldwalking activities over the enclosure and from the excavations themselves. This material would seem to fit a date sometime in the late Neolithic or early Bronze Age, although it is not clear whether this activity was little more than ephemeral.

The major period of activity (Phases II to IV) were associated with the ditches of the enclosure, which appears to have begun in the latter part of the first millennium BC. This took the form of four structural episodes spanning the first century BC to the late

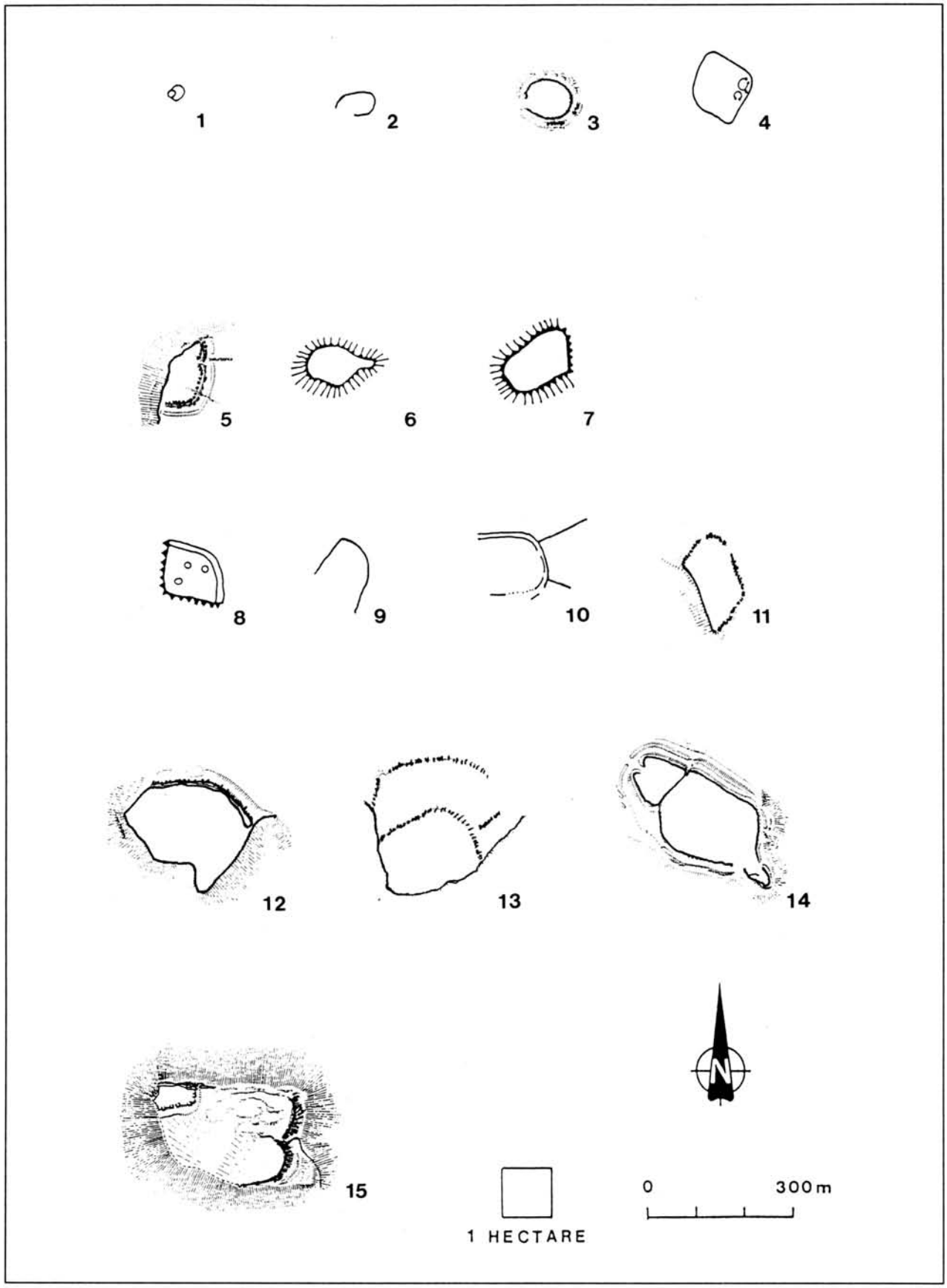


Fig 2.6: Comparative plans of some late Iron Age and Romano-British enclosures from the Mersey Basin. Key: (1) Legh Oaks I; (2) Legh Oaks II; (3) Castercliffe hillfort; (4) Winwick; (5) Maiden Castle; (6) Rainsough; (7) Castlesteads; (8) Great Woolden; (9) Halton Brow; (10) Hangingbank; (11) Portfield Camp; (12) Kelsborrow; (13) Warton Crag; (14) Eddisbury; (15) Beeston Castle. All drawn to the same scale. Sources: Harris 1987; Haselgrove 1996; & Nevell 1992a.

second/early third century AD, starting with a series of rectangular pits in Phase I; moving to a ditched compound containing a hut circle in Phase II; being succeeded by an oval palisaded compound, with a hut, in Phase III (two circular features were located elsewhere within the enclosure by geophysical survey and it is possible that these may represent other structures from Phases II and III); and finally being replaced by a further series of pits in Phase IV. Phases II and III were dated, by radio-carbon samples, to 120 BC - AD 80 (40 BC ± 25, GrN 16849) and 65-15 BC (20 BC ± 100, GrN 16850).

The acidic conditions of the site meant that very little palaeo-environmental material survived. However, the presence of burnt sheep bones in Phases II and III, burnt pig bones in Phases II and IV, and rotary quern fragments from Phase III hint at a mixed farming economy.

The final phase of activity at Great Woolden Hall (Phase IV) was represented by second century, local Romano-British wares from the plough soil and from the final fill of the inner ditch; this latter context also produced a radio-carbon date of AD 100-320 (AD 210 ± 110, GrN 16851). The gap between Phases III and IV may suggest a hiatus in occupation, at least in this part of the enclosure.

How far Great Woolden Hall and the other excavated enclosures genuinely reflect the late prehistoric settlement pattern is unclear (Fig 2.6). The number of sites so far recovered is too low to give anything other than an indication of potential settlement densities, but the concentration of 12 cropmark and excavated enclosure sites around Warrington suggest that we may be dealing with intensive valley occupation in localised areas. Furthermore, it seems probable that during the late prehistoric period the Mersey Basin lay on the interface between the main settlement types of the Iron Age: the hillfort dominated zone to the west and south, the villages and open settlements to the south-east, and the enclosed homesteads of the north and north-east. It is thus possible that many unenclosed settlements, like the recently excavated example at Tarbock in the Sankey valley (Robert Philpott *pers comm*) in eastern Merseyside, and the unenclosed site at Tatton Park, await discovery.

The fragmentary evidence and settlement pattern for the Mersey Basin and the North West (Higham 1980) in general makes it difficult to study in detail the development and spread of settlement during the late first millennium BC and early first millennium AD. Even so a number of general conclusions about the possible social organisation of these sites can be put forward. Although most of the dated sites can be found on the glacial and alluvial deposits of the area the presence of two settlements on the heavy boulder clay of the northern Cheshire ridge (Legh Oaks and Tatton Park) suggests that competition for the lighter, more easily worked, soils was already sufficient to encourage some communities to colonise these marginal areas. This theory is supported not only by the presence of sites on these clay soils, but by the number and location of the multivallate sites within the Basin. Of the 40 or more examples so far identified, most can be found on the lighter soils of the central Basin lowlands, specifically the first and second terraces of the river Mersey.

North West: An Agriculturally Marginal Area?

The internal evidence from the Mersey Basin is insufficient to indicate whether climatic or social changes might be the cause of this decline in upland activity. The wider trends of climatic change in the British Isles in the middle centuries of the first millennium AD indicate that, after the recovery of the climate in the first century BC/AD to conditions slightly better than the late twentieth century, the climate remained stable for the next four centuries. Apart from a few sharp winters in the middle decades of the third century, the next sharp downturn in the climate did not come until around AD 400 which marked the beginning of a period of colder and wetter summers (Lamb 1982, 56-7). It would thus appear unlikely that climatic conditions were the overriding factor in the regeneration of woodland, and the decline in agricultural activity in the upland areas of the Mersey Basin after *c* AD 290.

Other reasons have to be sought and these may, in part, lie in the permanent decline in demand for agricultural produce needed by the Roman army and its dependants, and environmental degradation. The middle decades of the second century AD witnessed a sharp decline in the garrison of the Mersey Basin. The fortlet at Castleshaw had already been abandoned by the army in the early AD 120's, possibly in response to the manpower needs of Hadrian's Wall, whilst the fort at Middlewich also seems to have been abandoned by this decade (Tindall 1994, 4; Walker 1989, 14). It was during the decade AD 140-50 that the sharpest decline occurred, with the garrison falling from 1,500 men to approximately 500. This was the result of the abandonment of the forts at Melandra Castle and Wigan (assuming the latter site can be interpreted as a fort). From a peak of around 2000 in *c* AD 100 the number of soldiers in the Basin had dropped to *c* 500 by AD 150. Furthermore, it is likely that much of the Roman auxiliary garrison at Manchester was absent during much of the third century AD (Walker 1986, 142-3).

By the later second century this would have reduced the supply demands of the Roman army by 75%. The rise of the Wilderspool settlement and Manchester vicus may have off-set much of this apparent reduction in demand. This may be suggested by the coincidence in the decline in upland activity, beginning in the third quarter on the third century AD, and the sharp decline in activity witnessed at both these settlements in the mid third century AD. A causal relationship is difficult to establish in the absence of excavated upland farmstead

sites, but may be suspected on chronological grounds. Other factors may also have militated against the continued exploitation of these upland pasture zones. In particular the Deep Clough A site indicates that there was significant soil erosion prior to the onset of forest regeneration and renewed peat growth from *c* AD 280 (Tallis & McGuire 1973, 733). Since such a phenomenon is not apparent in other upland diagrams from the Mersey Basin such an interpretation must remain tentative.

Recent light has been thrown on some of the strains of cereal grain grown in the Mersey Basin during the Romano-British period by the examination of Lindow Man's stomach contents. This revealed the presence of macro-fossils of emmer and spelt wheats, barley, oats, and possibly rye (Brothwell 1986, 92). The growing of spelt wheat and rye is confirmed by the sample from the Lousher's Lane site at Warrington, dating to the third century AD (Hinchliffe & Williams 1992, 167). *Triticum*-type pollen was recognised in the pollen diagram from Knowsley Park Moss. From the enclosure at Irby (see Philpott & Adams this volume) has come cereal grains of barley, spelt, bread wheat, oats and possibly rye. Emmer wheat is recorded from archaeological contexts at an unenclosed settlement at Halewood, Merseyside (SJ 45 86; *Britannia* 28, 422). Although these samples are not large enough to provide a detailed analysis of Romano-British arable practice in the Mersey Basin they do indicate that a range of grain types were known to the local farmers, whilst the remains of chaff from barley, oats and spelt suggest that crop processing was similar to non-mechanised pre-industrial processing techniques.

The assumption that the area west of the Pennines, was in some way hostile to settlement would thus seem to have some climatic basis. Whilst the climatic deterioration during the first three quarters of the first millennium BC coincides with a major period of forest clearance in the lowlands across the region which seems to have been pastoral in character, it also coincides with the abandonment of some of the hillforts in the region. The recovery of the climate at the end of the first millennium BC coincides with renewed forest clearance across the Mersey Basin in both the lowlands and the uplands, this time associated with cereal pollen in both areas, and the emergence of a series of ditched enclosures below the then limit of cereal cultivation between 200m and 250m AOD.

Conclusions

At the beginning of this paper two themes were identified. Firstly, that the archaeological remains of the Iron Age in the North West were considered by scholars to be very sparse and of poor quality. Secondly that this was in some way related to the physical geography of the region which was hostile to early settlement.

It has been shown that part of the first supposition stems from a confusion as to the area under discussion, and partly to the inappropriate use of models from elsewhere in the country. At least within the Mersey Basin the archaeological evidence for rural settlement during the Iron Age and Romano-British period is not of poor quality on those sites which have been excavated. Indeed, three distinct settlement types have been identified (escarpment edge, hilltop and niche site enclosures) in the river valleys of the area, and the first steps taken towards characterising the economic and social background of the period. The nature of the archaeological evidence remains, however, sparse and although part of the apparent paucity of sites and people in the Mersey Basin may be accounted for by the difficulties of site identification, we must conclude that it also reflects, however imperfectly and statistically unsatisfactory, a genuine lower level of population and settlement activity.

Why may be related to the second theme (perhaps of more interest archaeologically); that the nature of rural settlement in the region has been in part determined by the geographical and climatic conditions of the area. This view has received some support for the Mersey Basin where the surviving palaeoenvironmental evidence, the evidence for climatic change in the first millennium BC and early first millennium AD, and the archaeological evidence are converging. There is at least some superficial evidence to suggest a decline in settlement activity in the early part of the millennium coincident with a worsening in the climate of the region. When the climate revived so did the evidence for settlement. However, moving from this observation to proving a causative link will require more evidence than we have at present, although the task should be easier now researchers have realised that there is evidence of the Iron Age to be found. The interest in the future must surely lie in trying to link the evidence we already have for palaeoenvironmental stress with the archaeology of this period.

Chapter 3

Rural settlement in Roman Cheshire: a theoretical view

Keith J Matthews

Theory is of supreme importance to every discipline with academic pretensions since without theoretical frameworks, no discipline can order or interpret its data. The belated growth of theoretical awareness in archaeology is generally traced back to the 1950s in the United States. However, implicit theory was necessarily used to underpin archaeological models from the discipline's beginnings (Hodder 1991, 95; Dark 1995, 3). Theoretical issues are central to much contemporary archaeological thought.

An exciting aspect of theoretical approaches is that they force a dialectic between the data recovered in the field and the interpretations we place upon them. Ian Hodder has called this process the hermeneutic spiral (Hodder 1992, 213). Older approaches to interpretation were content to describe observations of the data and then draw conclusions about the date and nature of the activities which produced them (the so-called culture-historical approach). A more recent trend has been to attempt to recover the social practices which lay behind the activities, whether they are viewed as essentially systemic and functionally adaptive (the processual paradigm) or as polysemous and embedded (the post-processual approach).

When confronted with an apparent problem - in the instance I will be discussing, the paucity of solid data about virtually every aspect of rural settlement in Cheshire during the Roman period - we can turn to theory for guidance (but not necessarily answers). We can construct a number of alternative models for settlement patterns which contrast with the military-dominated views which have hitherto been prevalent. By returning to the data we can then examine how well the observations fit the predictions. I will try three model-building approaches, using an anthropological model relating to group size, a geographical model of settlement hierarchy and spacing and an historical model derived from early medieval estate organisation in Wales.

Rural settlement has rarely been explored as a topic in its own right, whether it be in Roman Britain, modern Europe or any society whose elites have been essentially urban. The classic statement on the subject - A L F Rivet's *Town and Country in Roman Britain* - was published in 1958. It was concerned to document the effects of Romanisation on the province, defined (Rivet 1958, 101) as 'an increased use of Roman goods and the adoption of a Roman style of living by people who continued to farm their land in the old way'. A second edition of the book was issued in 1964, and is still often referred to in bibliographies. Perhaps inspired by this lead, a conference was organised in 1965 by the Council for British Archaeology (Thomas 1966). The resulting publication summarised the state of knowledge of the Romano-British countryside at that time, but it did not lead to a more extensive upsurge of interest in the subject.

Indeed, in 1983 Peter Fowler, asked whether the lack of interest was a consequence of a genuine failure in Romano-British rural settlement or if it was a failure of study by twentieth-century academics. His conclusion that it was more a lack of interest in the subject-matter than a lack of evidence did little to change the situation: six years later Richard Hingley (Hingley 1989, 3) argued along similar lines that the historical perspective established by Haverfield had failed us. This model focussed attention onto the elites at the expense of the poor. The most recent treatment of the subject (de la Bedoyere 1993) remains firmly committed to villas and other such readily detectable remains. This presentation of Britain in the first four centuries AD emphasises the 'Roman' at the expense of the 'British'.

Richard Hingley proposed that exploration of two major themes would aid the study of rural settlement: firstly, family and community; secondly, wealth and poverty. These are subjects which are remote from the usual topics found in accounts of Romano-British archaeology. He concluded that our histories of Roman Britain are written from a Roman perspective which for obvious reasons leads to a view of the province that fails to do justice to the historical reality. Even worse, from a purely theoretical point of view, the archaeologists of Roman Cheshire have generally failed to explore and explain the special qualities of the data at their disposal. Although the data are not rich, a significant quantity does exist, most of it consisting of fragments of material culture, that special class of data which archaeology claims to understand best.

In what follows I will examine the relation of Chester to the surrounding region and then outline the three differing models of rural settlement mentioned above. I will conclude by attempting a theorisation of Romano-British material culture in its regional context and its implications for a socio-history.

Chester: Some Problems

Although the previous section has downplayed the importance of the military occupation of Cheshire, the legionary fortress of Deva nevertheless dominated the surrounding region (Fig 3.1). Not least, it would have made considerable demands upon the local farmers who

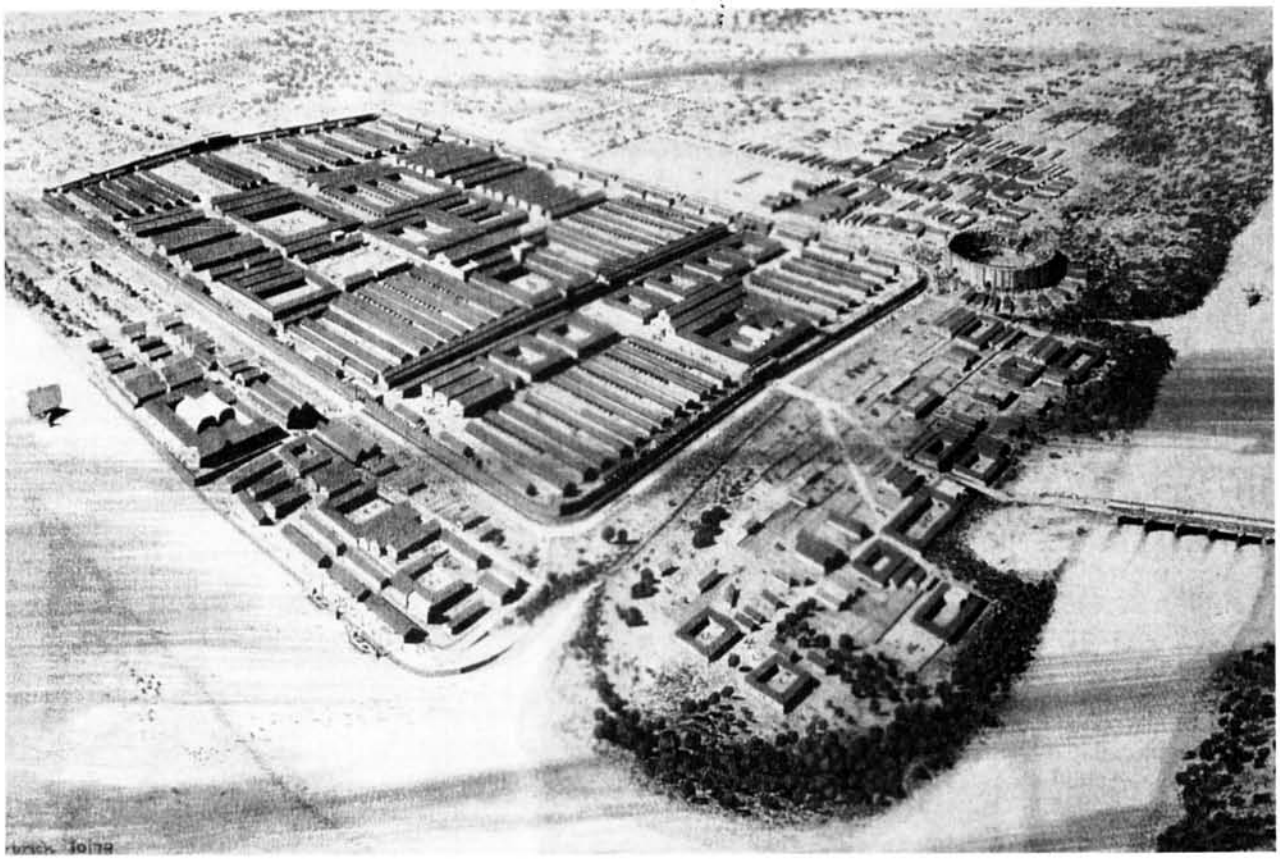


Fig 3.1: The Roman fortress at Chester as it might have appeared from the south-west. Recontruction painting by D Swarbrick. Copyright Chester City Council.

provided much of its food and because its status made it de jure the most important place in the North West. Moreover, it remained a military installation longer than any other site. in the county and its needs for a military *territorium* would have disrupted land-ownership patterns in the western part of the county. In this section I propose to examine two of the fundamental problems posed by the existence and success of Deva as a central place.

Feeding the Garrison - Feeding the Town

Martin Millett calculated the likely burden of the invasion army on British farmers, and his figures can be used to estimate the supplies needed by Deva (Millett 1990, 56). The population consisted of a notional legionary strength of 8000 men, plus their dependants and other inhabitants of the *canabae*, which perhaps brought the figure to around 20,000. This would have been an enormous population, well above the sizes postulated for *Civitas* capitals and 'small towns' (Frere 1987, 253).

The subsistence level of the corn dole at Rome was calculated as 30 *medii* (200 kg) per person per annum. This figure makes the minimum requirement for the notional population of Chester 4000 tonnes of grain per annum. However, it is thought that soldiers were allowed around 500 kg per annum, amounting to 4000 tonnes for a legion at full strength. If the remainder of the population consumed wheat at subsistence levels, this would have made a total of 6400 tonnes per annum. On the other hand, if the entire population each consumed 500 kg of grain annually, the total figure would be 10,000 tonnes of grain.

The average yield of emmer wheat using Iron Age farming techniques has been assessed experimentally at two tonnes per hectare. This suggests that the inhabitants of Deva would consume the produce of between 2000 ha and 5000 ha annually. Millett, however, argues that the yield is too high and that the notional yield should be halved (Millett 1990, 57); this would represent the produce of a square between 20 km x 20 km and 31.6 km x 31.6 km collected as a 10% levy.

There is therefore no reason to regard the feeding of the garrison and its dependants as posing an insupportable strain upon the resources of the region. It has long been recognised that Strabo's account of Iron Age grain exports from Britain indicates that the island was easily capable of supporting an army of occupation (Rivet 1958, 101). Indeed, the military personnel of Deva could easily have been supplied with grain from the *prata legionis* alone. If these covered an area of around 500 km, as has been suggested (Mason 1987, 35). If the prata were farmed under direct military supervision, the grain supplies might not have been deducted through the tax system, but supplied directly to the garrison. In this case, the corn supply for the military personnel could have come from a square of between 20 km^2 (i.e. 4.5 km x 4.5 km) and 40 km^2 (i.e. 6.3 km x 63 km).

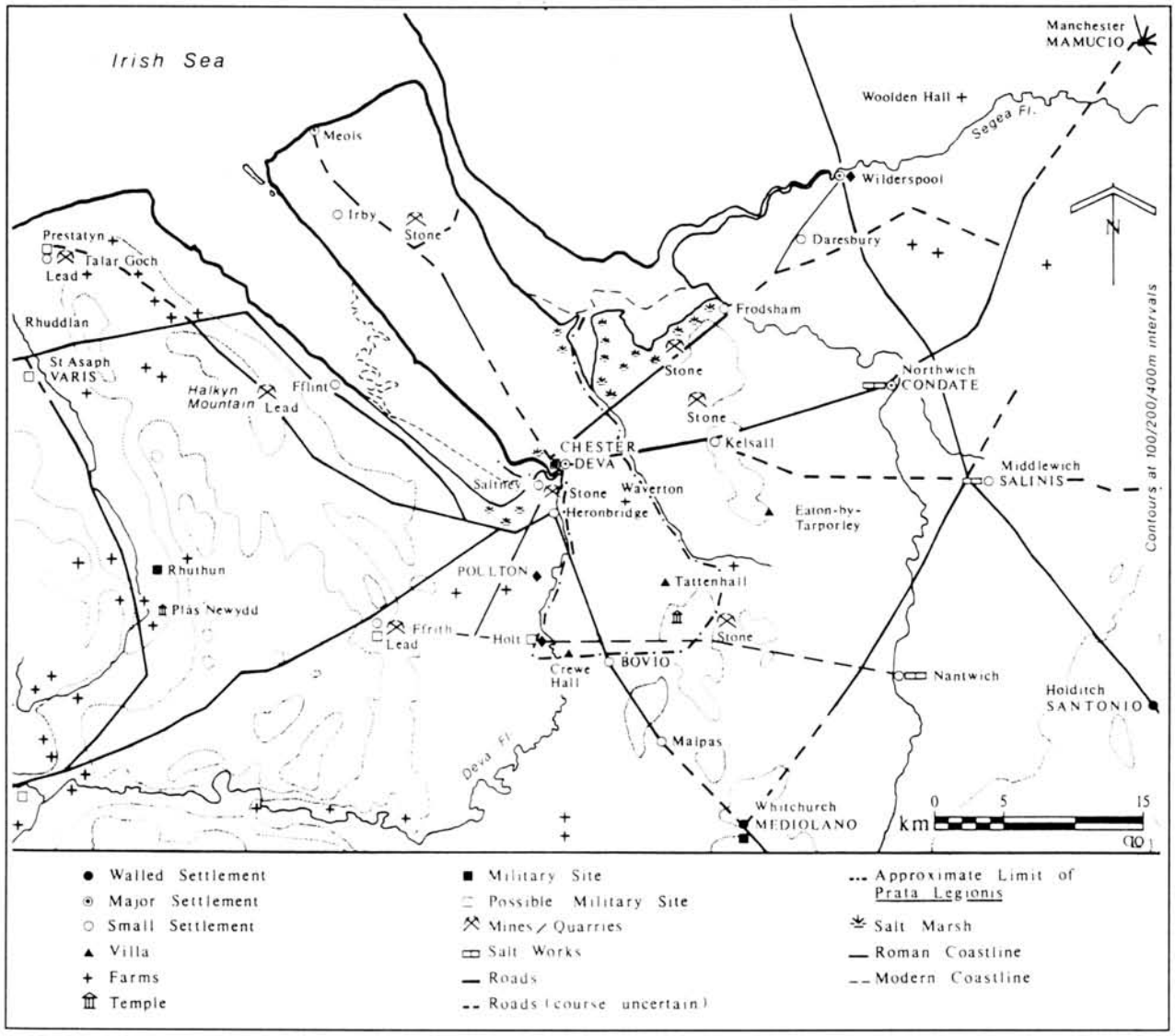


Fig 3.2: Roman Cheshire.

What these calculations do not take into account is the infrastructure necessary for producing the grain, harvesting it and getting it to Chester. The movement of 10,000 tonnes of grain following the annual harvests would have been a major undertaking. Furthermore, these calculations deal only with one relatively minor component of the provisioning of Deva: the food needs of the urban populations at Chester, Middlewich, Nantwich, Northwich and Wilderspool would have been much larger and more complex than these calculations suggest (Fig 3.2). Even the military food supply, often considered to have been more restricted than civilian, included large quantities of meat. At Chester the full range of common meats - both farmed and hunted - is attested (Davies 1971, 127; Harrison in Matthews 1995, 50).

The Status of Chester

There are two views about the status of Deva during the later Roman period which cannot be reconciled: the dominant is that the garrison remained in place, albeit reduced in size from the third century on, and that the civilian population remained small or even declined (Thompson 1965, 46), while the other has Chester promoted to Colonia status in the third century (Mason 1986, 55), perhaps following the permanent removal of the legion. The evidence for civilian promotion is equivocal, consisting of inscribed altars from continental Europe giving Deva as the place of 'origin of their dedicators (Rivet & Smith 1979, 336), and a fragmentary, unreconstructable but evidently civilian inscription from the fortress (Petch 1971, 21). The altars have been dismissed as irrelevant to the status of Chester, as Deva was a common river name throughout western Europe (Mason 1986, 55). However, this causes further problems. as no other place known or conjectured to have been called by the name is of sufficient size or status to have been regarded as an official place of origin: in their major study of Romano-British place-names, A L F Rivet and Colin Smith accept the identification of the Deva of the inscriptions with Chester (Rivet & Smith 1979, 336). It is very unlikely that an unrecorded unit of local

Social Formation	*Size of Largest Settlement*	*Settlement Pattern*	*Size of Regional Network*
Complex State	> 5000	six-tier hierarchy	*c* 30,000 km^2
Simple State	< 5000	five-tier hierarchy	*c* 10,000 km^2
Complex chiefdom	> 2500	four-tier hierarchy	*c* 1500 km^2
Simple chiefdom	> 2500	three-tier hierarchy	-
Peer polity II	c 2500	minimal hierarchy	*c* 1500 km^2
'Big Man' society	< 2500	two-tier hierarchy	*c* 2500 km^2
Peer polity I	> 500	minimal hierarchy	-
Acephalous group	500	aggregated	*c* 2500 people
Family level (public)	150	disaggregated	*c* 500 people
Family level (hamlet)	< 25	-	*c* 500 people
Family level (family)	6-8	-	*c* 500 people

Table 3.1: Classification scheme for levels of social integration and settlement size (after Kosse 1990, 295).

government with this name awaits discovery in the better-documented provinces of Gaul or Spain.

There is the possibility that a new name for Chester developed in the later Roman period. The evidence is not contemporary, but it is nevertheless worth considering. Bede, writing in AD 731, knew the place not as Deva, but as *Civitas Legionum*, with Old English and Old Welsh variants Legacaestir and Carlegion (*Historia Ecclesiastica* ii.2). Where he knows the Romano-British name of a place, it is his usual practice to give it and to refer to any English or Welsh versions as less 'correct' alternatives; the suggestion here is that he understood Civitas Legionum to be the standard Latin form for Chester. It is even possible that Gildas, writing in the sixth century, was referring to Chester rather than Caerleon in describing the martyrs Aaron and Julius as Legionum Urbis cives (*de Excidio et Conquestu Britanniae* 10.2). If these post-Roman forms actually derive from late Roman practice, which is a reasonable assumption, they provide evidence that the place was of mixed status: a Civitas, but 'of the Legions', whether referring to the time at which the name was coined, or harking back to a remembered past.

Further light may be thrown on the status of fourth-century Chester by its later development. It has long been suspected that its fifth- and sixth-century history was predominantly ecclesiastical (Higham 1993, 66) and there is every reason to believe that, whatever the character and location of the main religious foundation, it was established by the fourth century (Matthews 1995, 63). Long disregarded evidence for the role of Chester in regulating salt manufacture in the region (Kendrick 1866, 200; RIB 2416.6 in Frere & Tomlin 1991, 67) can now be complemented with recently discovered evidence for a fourth-century Bishop Viventius also involved in salt production (Penney & Shotter 1995). The implication must be that if control of the salt industry lay at Chester, then so did the bishopric. This is near-conclusive proof that Chester was a place of some status in the fourth century.

However, the existence of a bishopric at Deva does not imply full urban status: military bases were also appropriate locations for episcopal sees (Jones 1968, 16). The fourth-century church was funded partly by the state and partly from oblationes (donations) and property rental derived from endowments by wealthy benefactors. It is probable that the church at Chester acquired its interests in the salt industry as a result of the latter process, although it is also possible (if rather less likely) that the family of Bishop Viventius already had a stake in it. In this regard, it is worth noting the two inscriptions from Nantwich, mentioning a *Cuniticle...* or *Cunitus Cler..* (Petch 1987, 209). Generally expanded to read *Cuniti Ti[berii] Cl[audii] Er...* it is probably better to read *Cuniti Cler[ici]* or *Cunitus Cler[icus]*, 'of Cunitus the priest' or 'Cunitus the priest', in view of the new inscription; this implies an institutional, not a personal, stake in salt.

The new evidence is still not conclusive about the status of late Roman Chester. On the one hand, the old hypothesis that Deva survived as a predominantly ecclesiastical centre through the sub-Roman period is given considerable support, but on the other, the official status of a place supporting a bishop could have been either urban or military. Unless epigraphic evidence of the highest quality mentioning a Colonia Devensis (or some such title) is discovered, we must confess our ignorance of the status of the civilian settlement during the later Roman period. What it does show, though, is that the population did not decline drastically after AD 200 but on the contrary was sufficiently prosperous to support a bishop.

Models of Rural Settlement

The study of rural settlement - whether by archaeologists, anthropologists, geographers or historians is very much seen as the poor cousin of the study of urbanisation. Towns and cities are privileged in our accounts because of their identification with 'civilisation' (Delamont 1995, 108), especially the civilisation which has produced the academic tradition within which archaeological and other researchers

operate. The rural settings of the towns are in turn denigrated by being presented as 'hinterlands'. Whilst it is obvious that rural settlement around towns and cities is heavily reliant upon them as market-places for the exchange of local produce for specialised produce, it is also true that rural land ownership has generally provided the basis and model for wealth among pre-modern urban elites.

Market Product	*Distance*	*Administrative Level*	*Population*
Expensive jewellery	186 km	regional capital city	300,000
Display clothing	108 km	provincial centre	90,000
	62 km	small state capital	27,000
Quality clothing	36 km	district city	9,000
Children's clothing	21 km	county town	3,500
Work clothing	12 km	small town	1,500
Food necessities	7 km	village	800

Table 3.2: Correlation between consumer products, settlement hierarchy, spacing and size (after Jones 1966, 86 & 88).

It is therefore important to understand the forms of rural settlement which underpinned the urban societies dependent upon them. Indeed, the success or failure of urbanisation must rely to some extent upon the vitality of rural settlement. Farms do not flourish close to towns simply because of the presence of the town: without successful farms to supply them, towns could not survive. The two forms of settlement exist in a state of dynamic tension which frequently resembles an equilibrium weighted towards the urban. However, a recent book on farms begins with the bald statement that 'Farms and fields are at the very basis of our existence' (Wade-Martins 1995, 7). This claim would be difficult to gainsay and holds as true for Romano-British Cheshire as it does for twentieth-century England.

My theoretical examination of Romano-British rural settlement in Cheshire will draw heavily on work in three non-archaeological disciplines: anthropology, geography and history. While the geographical and historical models (central place theory and 'Celtic' multiple estates) are familiar to archaeologists, the anthropological model is sufficiently new for its impact not yet to have been widely felt. However, it is an extremely fruitful model, with good claims to operate cross-culturally and a historically, and it is this model I will examine first.

Population Density Model

During the 1970s and 80s anthropological work on the size and organisation of human groups began to recognise that there were cross-cultural thresholds of group size on either side of which different forms of social organisation and settlement would be found (Orme 1981, 160; Kosse 1990, 287). Thresholds have been identified at populations of 150 ± 25, 500 ± 100 and 2500 ± 500. The 500 threshold marks the upper limit of a gathering which does not need to be organised, while the 2500 threshold marks the difference between politically simple and politically complex settlements. The lower threshold is more subtle in its effects, but seems to be linked with disaggregated and aggregated settlement patterns. The thresholds and their links with social formations and settlement patterns are summarised in Table 3.1.

Krisztina Kosse derived this model from both anthropological data about human settlement patterns and neurological tests of the capacity of short-term and long-term memory. Six levels have been established for amounts of data which can be utilised and stored together by the human brain; 2^0; $2^3 \pm 2^5$; $2^7 \pm 2^1$; $2^9 \pm 2^7$; $2^{10} \pm 2^8$; and $2^{11} \pm 2^9$. The third, fourth and sixth of these correspond to the anthropologically derived thresholds, which strongly implies a pan-cultural nature to the phenomenon and suggests that it is rooted in the structure of the human brain. It also suggests the existence of other thresholds in group size whose effects have not yet been identified. The lowest, for instance, might correspond to the one-to-one relationship of monogamous/monandrous couple. It is exciting that the model proposed by Kosse is not purely deterministic with increasing threshold size, more choices exist for social development allowing each individual social group to have its own unique historical trajectory.

We know that Roman Britain belongs to the most complex level of social organisation presented by this model, the state. Although Krisztina Kosse limited her study to societies no more complex than ‚simple' states, we can extend her model with the recognition of two additional tiers of settlement type, the provincial centre and the regional administrative centre (compare Bekker-Nielsen 1989, 6). A six-tier hierarchy of

Maenol (a multiple estate)			
Tref (vill)	*Tref*	*Tref*	*Tref*
4 holdings	4 holdings	4 holdings	4 holdings
16 sharelands	16 sharelands	16 sharelands	16 sharelands
64 homesteads	64 homesteads	64 homesteads	64 homesteads

Table 3.3: Hierarchical structure of the multiple estate (after Jones 1976, 15).

settlements will contain a main settlement of over 5,000 population, secondary settlements of over 2,500, tertiary settlements of 500-2,500, quaternary settlements of up to 500 people, quinternary settlements of up to 150 individuals and single farmsteads of family size, the definition of which, is culturally dependent. We can perhaps think of these as capitals, cities, towns, villages, hamlets and farms.

This model can be applied to the archaeologically-attested settlement patterns of Roman Britain. In areas of Britain more favourable to the detection of archaeological sites the predicted hierarchies can be seen to exist. Away from the provincial capitals, with populations in excess of 10,000, we have civitas capitals, with populations estimated to have been about 2,000 upwards and lesser walled towns with estimated populations in the range 300-1500 (Frere 1987, 253). These figures agree surprisingly well with the secondary and tertiary levels of the hierarchy. We can also predict that some of the solaced 'small towns' would have belonged to the tertiary level. The smaller settlements in this class probably belonged with those settlements which have in recent years been recognised as villages (Hanley 1987, 39), and formed the quaternary level of settlement. Below that level we have small agglomerations of farms, particularly recognisable in highland regions, and villas in the lowland zone which formed the quinternary level, and below that the individual farm.

Central Place Theory

Although much in vogue among archaeologists in the 1970s, Central Place Theory became unfashionable during the 1980s, arguably because of the inappropriate uses to which it had been put (Collis 1986, 38). However, the theory, developed by Walter Christaller in the 1930s, is based on a number of common-sense hypotheses which have cross-cultural applicability: firstly that a town needs a rural hinterland to support it, secondly that the bigger the town, the bigger its hinterland, and. thirdly that tributary areas focused on small towns will be found in the hinterlands of large towns. Early applications of the theory in archaeology simply followed Christaller's models - based on southern German urban patterns - and were not found to be useful except in rare specific cases. An example relevant to the theme of this paper which carries some conviction is an analysis of the spacing of Romano-British towns carried but by Ian Hodder and Mark Hassall (Hassall 1971).

The basic premise of the theory is that the locations of settlements of different rank can be predicted according to the nature of the ranking system. Christaller proposed three basic rink types: one based on market activity, one based on transport and one based on administration. In the first type, second order places are situated in the best location to be accessible to three first-order places, maximising access to markets. In the second, second-order places are located on the communications routes between two first-order places. In both these instances, the second-order places are to be found on the borders between the territories of first-order places. In the last, second-order places lie entirely within the territory of the first-order place on which they are dependent. Third-, fourth-, fifth-, sixth- and seventh-order places also exist in this scheme, nesting within the larger patterns but conforming to one of the three organisational patterns discussed.

In twentieth-century terms, it has been possible to characterise the functions of different sizes of settlement and to correlate these with their market functions, their average spacing and their relative administrative importance. This is summarised in Table 3.2. It is possible to spot the seven-kilometre spacing mentioned above as the ideal distance between places of specialised activity, which is the lowest rank of market in this instance. Clearly, we cannot take this model wholesale and apply it to Roman Britain. The correlation of market product, administrative level and population size are undoubtedly historically constituted and have no claim to universality of application. However, the distances proposed between settlements is based on the case of movement of human beings. The development, of the hierarchies on which Christaller's hypothesis is based occurred before the transport revolution of the nineteenth century which allows us to suggest that here we might have some kind of cross-cultural bridge.

Christaller's model must be regarded as incomplete, largely because of his assumption of a capitalist market economy (Wagstaff 1986, 121). This led him to presuppose the primacy of the market principle in the distribution of places and the subordination of the transport and administrative organising principles. Clearly, in a society where the free market system is unknown, the marketing principle will be subordinate to one or both of the other principles. If, for instance, the Romano-British urban system were deliberately established as an act of Romanisation, then we might expect the administrative principle to be fundamental; had it grown up as a result of trade links in a socially embedded economy, we might expect it to conform most closely to the transport principle. In practice, we might find that it corresponds not to one system alone, but to a combination of all three, varying over time and distance.

The Multiple Estate Model

Since its publication in 1976, G R J Jones's exposition of the historical evidence for multiple estates in medieval Wales has been enormously influential in discussions of early estate organisation (Jones 1976). The model has been used, for instance, in the reconstruction of Anglo-Saxon *regiones* and *parochiae* (Friel 1982, 14; Higham 1993, 136), although its application to prehistoric settlement patterns has been severely criticised (Dark 1995, 104). However. the basic cultural tradition of settlement organisation within the politically fragmented early medieval Wales suggests a common origin in the sub-Roman or Romano-British period. Individual principalities (*gwladau*) may be taken as the successors of the *civitates*, at least in south and east Wales; their most important subdivision was the *cantref* (etymologically, 'hundred *trefi* (vills)'). These were in turn subdivided into *cymydau*

(commotes), which notionally contained twelve *maenolau* (multiple estates). Each of these contained four *trefi* (vills) plus two extra *trefi*, making fifty *trefi* in each *cymyd*. The two additional *trefi* were royal demesne, comprising the *maerdref* (overseer's vill), and a *tref* consisting of waste and summer pasture. The lower part of the hierarchy is shown in Table 3.3.

The numerical precision of the ideal structure of the medieval Welsh multiple estate is a reflection of the nature of the evidence; in its fullest form it is preserved in legal texts of the thirteenth century.

However, the concept was clearly already ancient, and Domesday Book for Monmouthshire includes entries for multiple estates consisting of up to thirteen trefi. In practice the system was clearly a lot more flexible than the legal texts imply. The idea of specialist food production for rent (generally known as renders), with provision made for the supply of peripatetic royal courts, is central to the model, though. This last point shows that the system as recorded must differ substantially from hypothetical Romano-British antecedents, as administration was centralised in the civitas capitals and static.

As with the anthropological model, there is a five-tier hierarchy. However, this is based not on group (i.e. settlement) size but on territorial organisation in a society without significant population concentrations. In the legal texts, four homesteads are defined as the constituent parts of a shareland; four sharelands form a holding, four holdings a *tref* or villa (vill) and four *trefi*, a maenol (estate) (Table 3.3). Although medieval Wales has often been characterised as a land without towns or villages (even by contemporaries such as Giraldus Cambrensis), there is evidence to show that there were a few nucleated settlements (Davies 1982, 20). We should understand the terms used in the hierarchical structure as referring not to settlement size but to settlement status: in early medieval Britain the administrative centres were not necessarily the largest settlements.

Synthesis of the Models

These three models are obviously mutually compatible as they deal with essentially exclusive aspects of rural settlement. The first is concerned with the organisational abilities of the human mind and the numbers of people which can be encompassed within social transactions. The second attempts to explain settlement location within networks of market supply, communication and administration. The third examines an historically documented form of early state and estate organisation in medieval Wales. In each of the three models there is an hierarchical view of settlement. We would be rash to dismiss such a view in this instance, given the bureaucratic nature of Roman provincial organisation, which ranked settlements according to status for the purposes of local government.

The spacing of settlements is also relevant to an interpretation of hierarchy. Seven kilometres is the distance accepted by anthropologists as an average day's return journey by foot to a location at which a specialised activity will take place. This can be recognised in the sub-Roman settlement patterns of south-western England as the spacing of estate centres located in reused hilltop enclosures (Dark 1995, 162). I have suggested elsewhere (Matthews 1994, 53) that the eight-kilometre spacing of hilltop enclosures in central Cheshire reflects this type of local focal-point-based arrangement in the first millennium BC. The recognition of a similar pattern in major sites of the Roman period would create a framework on which the tertiary, quaternary and quinternary settlement levels could hang (Fig 3.2).

In the North West, recognition of these distinct levels has not so far been easy. Chester is obviously the pre-eminent settlement, whether we regard it from the point of view of its military dominance or its uncertain civilian status. Northwich, Middlewich, Nantwich and so on clearly belong to a secondary level of nucleated settlement but we have not yet excavated any tertiary settlements. The scatter of material from Ashton-juxta-Tarvin is suggestive of this class of village-like settlement though. Places such as Irby (Philpott 1994, 27) appear to belong to the quaternary level, and Great Woolden Hall Farm (Nevell 1989b, 42) to the lowest rank (Fig 3.2).

Conclusion

The theoretical positions outlined above remain untested by fieldwork, It is vital that we begin to investigate those places where Romano-British farmsteads and villages appear to have existed as a matter of urgency. We also need to examine the distribution of different classes of material culture throughout the region to establish whether or not the models presented here are valid. Cheshire is not peripheral to Roman Britain but central. Its population was not 'living on the edge', although it was liminal, existing on the border between the urban culture of the south and east and the military culture of the north and west. Its areas of conflict and tension were concentrated in the cosmopolitan and vicanal population of Deva's *canabae*.

The pattern of life in Romano-British Cheshire can be understood through structures of the longue duree the basic mode of consumption and its cultural affinity were established in the pre-Roman Iron Age and continued into the sub-Roman period. The archaeological effect of the Roman occupation has been to swamp native patterns through the colonial power's use of durable material culture and structures which ineradicably altered the landscape. The differing patterns of consumption are subcultural; the cultural hegemony operating throughout the Roman Empire created a cosmopolitan, high culture to which most citizens probably aspired, but layered below that were military and native subcultures. Vicanus-centred consumption patterns are a fusion between native and military subcultures. The different patterns can be viewed as layers of information, with cosmopolitan subculture

being simply the uppermost and most easily visible layer. At the same time, the history of the Roman occupation has been written in shorter-term events than we can recognise for the native population. While Roman history is usually written in terms of 'evenements' and 'conjonctures' to use Braudel's terms (Smith 1992, 25), the amount and type of data for the local population forces us to write its history as one of the longue duree. If we are to write the history of the Roman North West, it has to be on the region's own terms. All too frequently the investigators of its past have been Rome-centred in their views. They have either failed to appreciate the specific historical context placing Cheshire in a normative account of the empire in general or of Britain specifically, or have concentrated on the military aspects, with all the chronological distortion that entails. What we lack is the theoretical framework in which to place our data. The intention of this paper has been to open up a few routes towards establishing such a framework.

Part 2

Approaches to Site Location and Identification

This second section analyses the problems of site location and identification within the Mersey Basin, and the North West in general, which have bedevilled the search for rural settlement for many years. Jill Collens discusses the usefulness of repeated aerial reconnaissance in a region traditionally seen as unconducive to cropmark formation because of the extensive coverage of claylands and the urban sprawl of Chester, Liverpool and Manchester. As both she and Keith Maude emphasise, however, such data will remain enigmatic unless it is coupled with a systematic programme of field investigation in order to provide the new sites with a date and function.

Chapter 4

Flying on the Edge

Aerial Photography and Early Settlement Patterns in Cheshire and Merseyside

Jill Collens

Aerial photography has made a major contribution to our understanding of settlement patterns and has profoundly altered our view of settlement densities. This is particularly the case for the late prehistoric and Romano-British periods where, as well as facilitating the discovery of Roman military sites, aerial survey has also had a radical impact on our knowledge of contemporary native rural settlement.

Studies of the river valleys of midland and southern England have revealed high densities of cropmark features, which are often in groups and frequently superimposed. These have been interpreted as the settlements or farmsteads of native communities (Benson and Miles 1974; Gates 1975; Whimster 1989). Similarly, in Shropshire and mid-Wales, aerial reconnaissance has been responsible for the rapid increase in the numbers of late prehistoric and Romano-British enclosures (Watson and Musson 1993; Whimster 1989). However here the similarity with the midland and southern river valleys ends, since in Shropshire and Wales the settlement pattern appears to have been one of isolated farmsteads, which were dispersed in the landscape. This type of pattern also appears to be characteristic of Cheshire and Merseyside, but on a different scale, since the densities seen in Shropshire and mid-Wales have not yet been recorded in the North West.

Air Survey in Cheshire

Cheshire County Council and the National Museums and Galleries on Merseyside have carried out a joint aerial survey from the late 1980s, with Rob Philpott of the National Museums starting the work in 1987 and the author joining the programme in 1989. The survey is part-funded by the Royal Commission on the Historical Monuments of England as part of their regional flying programme. Since the survey began, nearly fifty new enclosure sites have been recorded (Fig 4.1), most of which are probably of late prehistoric or Romano-British date. The total number of sites is therefore small and this area cannot be compared with some parts of England, such as Northumberland, where over 70 new sites were recorded in the summer of 1995 alone (Featherstone *et al* 1995). However, in addition to the enclosure sites a similar number of possible sites have been recorded during the survey. These possible sites are represented by incomplete enclosure circuits which may be revealed more clearly in future seasons and so may eventually add to the total.

That only a limited number of sites have been recorded by the survey to date may be attributed to the fact that population densities were lower in the North West of England during the later prehistoric and Romano-British periods than, for example, in midland and southern England. This issue is addressed more fully below.

Alternatively, low site numbers may be due to problems associated with aerial reconnaissance in the North West. The soils of Cheshire and Merseyside are predominantly stagnogleys; that is water-retentive soils formed on a drift deposit of boulder clay (Furness 1978). Since cropmarks form most easily in situations of moisture stress, the moisture-retentive properties of these soils are not the most conducive to cropmark formation. In addition, Cheshire and Merseyside are predominantly pastoral counties, and cropmarks form in pasture generally only in drought conditions. The most favourable landuse for producing cropmarks is cereal cultivation and therefore present day landuse in Cheshire and Merseyside is not the most suitable for cropmark formation. The combined factors, of soil type and present day landuse, render the North West a difficult area for the aerial archaeologist. In addition, controlled air space around Liverpool and Manchester airports results in areas of limited accessibility at certain times of the year, particularly during the peak holiday periods in the summer months. Finally, limited resources mean that on average only about twelve hours flying per year is achieved, although flying time in the exceptional summer of 1995 rose to more than twenty hours.

Interpretation Problems

The interpretation of cropmark evidence can be fraught with difficulties, especially when there are limited indications of cultural or chronological associations. Since only a restricted number of enclosure sites have been recorded during the survey, it is not possible as yet to use this evidence to propose

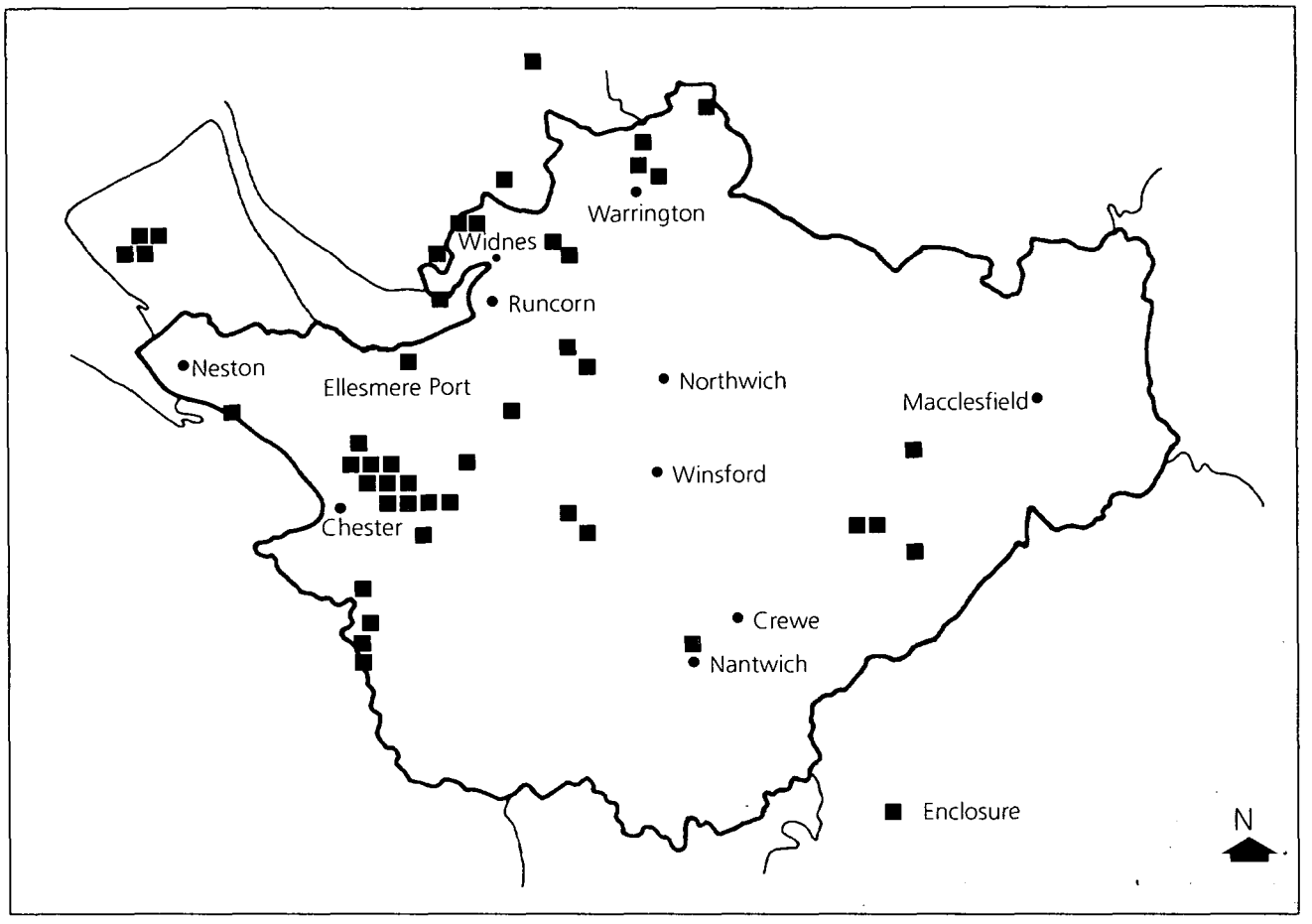


Fig 4.1: New enclosure sites identified during flying between 1989 and 1995.

settlement models. However, preliminary analysis of a set of morphological and locational attributes produces some pointers which may prove useful in future research. The following analysis is based only on the 50 probable enclosure sites recorded during the survey. It excludes previously known sites and fragmentary cropmarks found during the survey and for which future reconnaissance may produce additional information.

Morphological analysis of the cropmark evidence involves the consideration of a set of selected site attributes, such as site type, number of lines of enclosure, site shape and area. The cropmark evidence produced by the survey is wholly in the form of enclosed settlements, with boundary ditches defining an area of occupation or activity. Enclosures range in size from less than half a hectare to nearly two hectares. All except one are single enclosures, the exception being a site at Greasby on the Wirral, which has contiguous or conjoined enclosures where two small enclosures of approximately similar size share one common side. There are no examples of unenclosed sites, that is sites whose focus of activity is not confined within an enclosure boundary. Nor are there any examples of complex site types which consist of a series of conjoined and/or overlapping enclosures, representing a composite and successive form of settlement. Linear features, providing indications of possible field systems or land divisions, are similarly few in number. These three site types, unenclosed sites, complex sites and linear features, are more characteristic of the river valleys of midland and southern England although, given the difficulties previously mentioned about cropmark formation in the North West, their absence here should perhaps be viewed with caution.

The enclosure sites revealed during the survey are usually single, isolated sites, although a few examples do exist in pairs, such as two sub-rectangular enclosures at Brereton near Congleton, which lie about 50m apart. Their proximity may indicate a chronological relationship, possibly showing a shift in settlement focus from one site to the other. Alternately, they may suggest a social or functional connection, representing the homesteads of an extended family unit or enclosures of one social unit performing separate functions.

Site Morphology

The vast majority of the enclosure sites are univallate. The terms univallate and multivallate are used here in their accepted archaeological sense, i.e. univallate meaning only one bank and/or ditch and multivallate being more than one bank and/or ditch. They are not used in their strictest sense *per se*, since here the number of enclosing ditches and not banks (*valla*) is the defining criterion. Only four examples display more than one ditch circuit and again this could be an indication of chronological succession and a complex structural history. Sites may originally have been constructed in

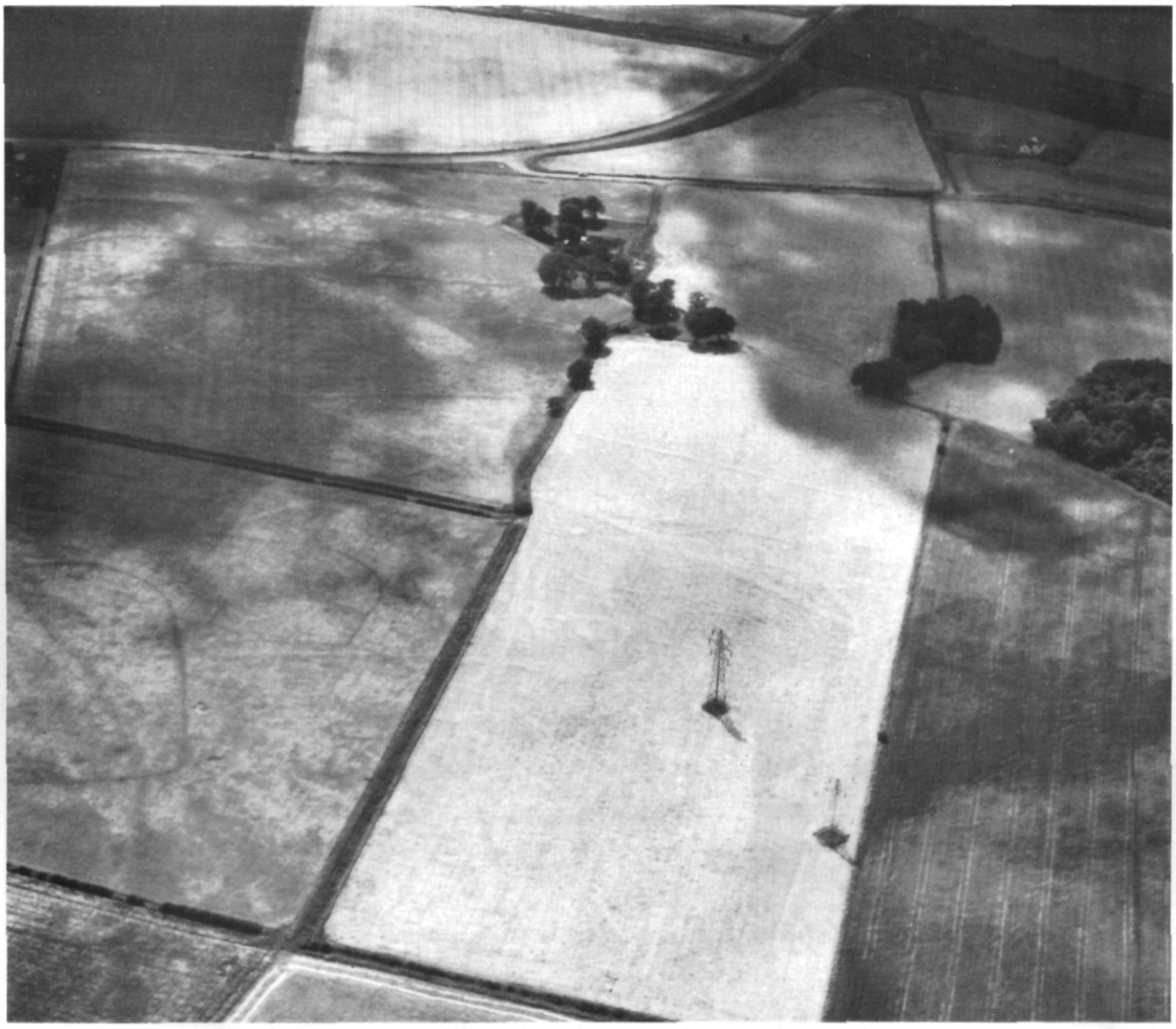


Fig 4.2: A Romano-British enclosure near Winwick, in the lower Mersey Valley (Philpott et al 1993). The enclosure is on the left and the Roman road, excavated in 1992 (GMAU 1992), runs across the middle of the picture. This enclosure may lie within a contemporary field system. Copyright RCHME.

univallate form, with additional lines of enclosure added subsequently. Conversely, the inner lines of enclosure may have been abandoned in favour of a larger area. The sequence of multivallation at a particular site can be extremely difficult to resolve. With earthwork lines of enclosure, it may be possible to indicate lines of addition or abandonment, but with those in the form of cropmarks, such suggestions are at best extremely tenuous and are usually impossible to support. The sequence of settlement as demonstrated by the morphological plan of a cropmark site may be deceptive. For example, the plan of a cropmark enclosure at Collfryn near Welshpool, Powys, as revealed by aerial photography shows four lines of enclosure. However excavation has demonstrated that this plan conceals a sequence of two phases. The first enclosed phase consisted of three banks and ditches, while the second phase consisted of only two banks and ditches. The site appears never to have been surrounded by four contemporary banks and ditches as the cropmark evidence may imply (Britnell 1989).

The majority of the sites are sub-rectangular in shape with more than 35 enclosures falling into this category (Fig 4.2). Three enclosures tend towards a rectilinear shape, while seven are sub-circular or oval. The assessment of site shape is a very subjective, yet informative exercise. The use of shape as a characteristic site attribute has often been criticised. However, shape can be an important diagnostic feature of sites, especially where it is not determined by local topography. In these cases, shape may be influenced by other factors which could be related to prevailing social and economic conditions and therefore deserves examination independently of other site characteristics. Various site shapes were no doubt in use over a wide time range, but the concentration of sites of a similar shape in a specific location may be indicative of a close functional or chronological link, such as the case of the

enclosures at Upton, Chester, which are discussed below. A further example comes from the Montgomery-Chirbury Vale in Powys and the Shrewsbury-Wroxeter area in Shropshire, where there appears to be a concentration of univallate rectangular sites, seemingly in the vicinity of permanent Roman garrisons (Stamford 1980; Collens 1988; Whimster 1989). In such cases, shape can be shown to be an extremely important characteristic attribute. A wide range of shape terminology may be employed, but names such as circular, curvilinear, rectangular or rectilinear are not of paramount importance in themselves. Provided that they are applied consistently to a set of data, it is the site groupings they produce which are more important.

In some parts of the country it has been demonstrated that sub-circular or oval shaped sites tend to be earlier than sub-rectangular sites (Yarwood & Marriott nd). This has not yet been conclusively shown by excavation in the North West, although the oval and sub-circular shaped sites at Legh Oaks Farm, High Legh, in northern Cheshire, and at Brookhouse Farm, Halewood in Merseyside, did prove on excavation to have been established in the Iron Age (Nevell 1989a; Philpott 1994). In contrast, the sub-rectangular shaped enclosure at Southworth, Winwick produced finds no earlier than the second century AD (Philpott *et al* 1993). Building styles rather than enclosure shape per se may be more indicative of site chronology, there being a general development from circular houses of Iron Age type to rectangular buildings in a more Romanised style, as revealed during excavations at Irby on the Wirral, and at Arthill and Tatton Park in northern Cheshire (Philpott 1994b; Nevell 1992a; Higham 1985). However on the basis of limited excavation evidence, only tentative conclusions about enclosure chronology should be drawn.

This basic morphological analysis allows us to conclude that the majority of the enclosure sites recorded so far during the survey are sub-rectangular, univallate, isolated sites.

Topographical Context

In order to establish a picture of the sites in their landscape context it is important to consider the locational analysis of the sites, and examine the criteria of situation, altitude, geology and soils. Enclosure sites display a preference for gently sloping ground, and often overlook streams. Sites lie within an altitudinal range of between 5 and 150m, but the majority lie below 50m. This contrasts with the nine known earthwork enclosures or hillforts in Cheshire, of which six lie at elevations of over 120m, the highest being Maiden Castle, Bickerton, at 211m above AOD (Longley 1987). The survival of earthwork sites at higher altitudes is to be expected and is presumably simply a reflection of past agricultural activity, although the survival of earthwork sites at lower altitudes, such as the enclosure at Bradley, south east of Helsby, at 30m AOD, should not be overlooked.

Over half of the enclosures appear to lie on boulder clay, with the remainder on glacial or alluvial deposits. Unfortunately large scale geology maps are not available for the area, and large scale soil maps have only been produced for a few 100 km^2 areas. Access to large scale maps when assessing sites in their landscape context is of crucial importance, since it is apparent on several of the air photos that enclosure sites are actually lying at or near geological boundaries, such as the enclosures at Crowton, south east of Frodsham and Glazebury north of Warrington.

The enclosure near Poole Hall to the north of Nantwich lies in a minor river valley. The air photo shows it lying on a lighter, probably more freely-drained, band of soil. The 1:50,000 geology map classifies this area as boulder clay. However the 1:25,000 soil map which has been produced for this area, shows that there is in fact an island of Brown earth soils here, surrounded by gleyed soils (Furness 1971). The enclosure occupies this island of freely-drained soils, amidst soils with impeded drainage. This example demonstrates the importance of large scale mapping, which can reveal subtleties in soil type and geology and provide a greater appreciation of the mosaic pattern which is found across the whole country.

It is possible to conclude from this basic locational analysis that most of the enclosures recorded lie on the gentle slopes of river valleys below 50m. There appears to be a significant group of sites located on patches of freely-drained soils in the midst of soils with impeded drainage. However, whether this was a deliberate locational choice, which can be attributed to the late prehistoric and Romano-British population, or whether these sites are only revealed as cropmarks because they are situated on freely drained soils, cannot as yet be ascertained.

The problems of using present day soil status in the study of past settlement distributions should also be considered. Unfortunately only a limited assessment of past soil status has taken place (Collens 1988), but the results appear to suggest that it is the relative difference between two soil groups that is important; that is, the difference between a 'better' soil for agriculture and a 'poorer' one, rather than their absolute status today. It is the relative agricultural potential of soils in the prehistoric period which needs to be appreciated, in other words which soils were best for the agricultural practices of the time. Attempts to use present day soil groups in the studies of past settlement location should therefore be carried out with caution.

A further factor which needs to be assessed when considering settlement patterns is the cultural and chronological associations of the enclosures. It is necessary to examine whether there is any evidence to suggest a function and date for these sites in order to assess whether they form part of a single settlement phase. Five sites recorded during the survey have been

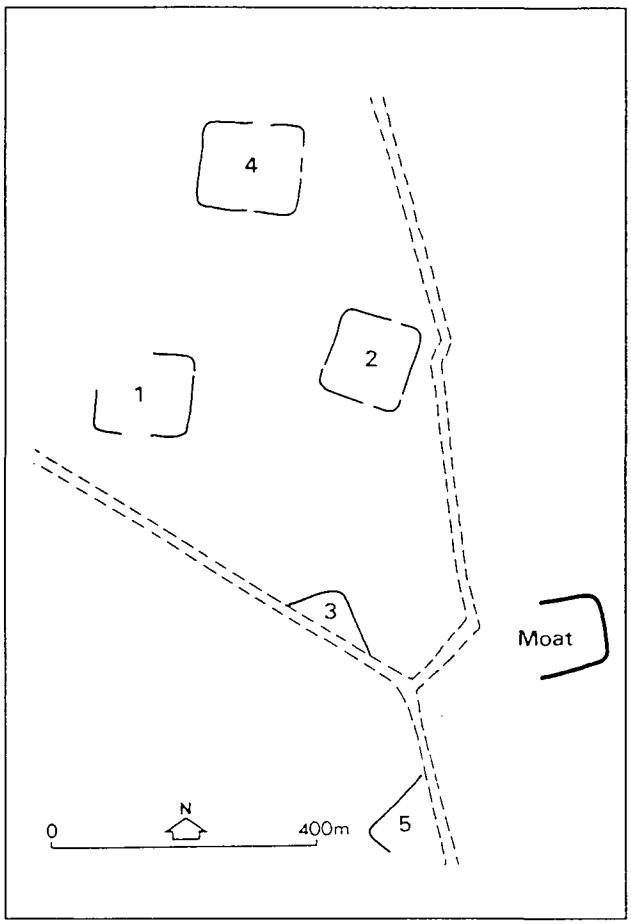


Fig 4.3: Roman practice camps to the east of Chester.

evaluated by excavation to varying degrees, but only three have produced evidence to allow an assessment of date and function. Two of these proved to be native settlements, while the other is interpreted as a Roman military site.

The double-ditched oval enclosure at Brookhouse Farm, Halewood has already been mentioned. The site was partially investigated in 1991 and 1993, prior to road widening and pipeline construction. Excavation revealed very substantial enclosure ditches, the inner ditch being over 5m wide at the top and about 3m deep. It was rich in waterlogged deposits which produced several pieces of worked timber, hazel nuts, insects, twigs and leaves. The interior of the enclosure contained evidence of timber structures, including a rectilinear building and a four-post structure. The latter are usually interpreted as granaries on Iron Age sites. The small amount of pottery from the site suggests occupation in the later prehistoric period, continuing into the Romano-British period (Philpott 1994).

At Southworth, south of Winwick, an evaluation of a single-ditched rectangular enclosure was carried out in 1993, prior to the submission of a minerals planning application. Excavation revealed that the enclosure ditch had been truncated by ploughing, so that it only survived to a depth of about 0.8m. Second century AD pottery was recovered from the ditch, and a series of post holes, gullies or beam slots and a possible basket-lined pit were revealed in the interior (Philpott *et al* 1993).

At Ince near Stanlow, a double-ditched sub-rectangular enclosure was found in 1992. The site stands on a low eminence on the south bank of the River Mersey, looking out over the Ince Marshes, with strategic views both towards the estuary and inland. In March 1994, a small scale excavation revealed rock cut ditches and post holes in the interior. A small piece of samian ware provides a date from the end of the first century or the beginning of the second century and the shape and position of the fort suggest a Roman military function. Philpott suggests that the site may have served as a fortlet guarding the Mersey estuary (Philpott 1994).

Non-intensive fieldwalking at three sites, including the site of the two conjoined enclosures at Greasby, mentioned above, has produced pottery of Romano-British date. Given the general paucity of finds from fieldwalking and evaluation in the North West, the presence of even a few sherds of pottery in close proximity to an enclosure site must be viewed as significant.

On the basis of the limited amount of fieldwork that has taken place on enclosure sites found during the present survey and on the sites at Arthill and Legh Oaks, in northern Cheshire, and Great Woolden Hall, Greater Manchester (Nevell 1987; 1988; & 1989), there is little doubt that many of these sites were farmsteads, probably involved in both arable and pastoral agriculture.

In addition to the evidence provided by fieldwork, the morphology of the enclosures themselves may provide clues to their date and function. Morphology remains at present the only basis for the interpretation of enclosure sites from the Upton area to the north-east of Chester (Fig 4.3). Between 1986 and 1994 a group of five sub-rectangular enclosures with rounded corners was discovered. The first enclosure was recorded by Dr Nick Higham of Manchester University in 1986, and subsequent trial trenching revealed a V-shaped ditch, but no dating evidence. Given the shape of these enclosures and their proximity to Chester they were initially interpreted as Roman military sites, possibly practice camps. But the Royal Commission's Field Survey team which recorded the slight earthwork remains at two of the sites in 1989, suggested that they may have served as medieval heathland enclosures. However continued reconnaissance has not only extended the distribution of these sites, but has also provided conclusive dating evidence. Traces of six new enclosures were recorded in 1995, extending the distribution from Picton in the north to Guilden Sutton in the south (Fig 4.2). One enclosure has only two sides and one rounded corner remaining, but displays two clear entrances with out-curving protective 'claviculae', typical Roman military features. Given the similarity of this enclosure to all the others found on the east side of Chester since 1986, it seems reasonable to assume that

this provides a date for the group as a whole and that they are all Roman military sites - possibly practice camps.

The similarity of this group of enclosures to the earthwork enclosures on Stamford Heath, to the east of Chester, and to the cropmark enclosures found in 1994 at Waverton, south east of Chester and at Kingsley, south east of Helsby, has wider implications for Roman military activity around Chester.

Conclusion

It is not yet possible to use the evidence provided by aerial reconnaissance to produce settlement models or phases for the later prehistoric or Romano-British periods in the North West. However, morphological and locational analysis of the cropmarks allows us to conclude that most of the enclosures are single, sub-rectangular, univallate sites, lying on sloping land in minor river valleys. Concentrations of sites are emerging in the tributaries of the Mersey Valley around Winwick, and in the Tarbock-Halewood area; in the Dee Valley around Churton and in the Weaver Valley. Excluding the Upton enclosures and a few other Roman military-type sites, the majority of the enclosure sites would appear to be late prehistoric or Romano-British farmsteads.

This is probably as far as the evidence can be taken at present, but there are many issues which are raised by the survey and which need to be addressed. For example, how representative of the settlement patterns of the period are these single, isolated enclosures? Viewed on their own, they suggest a pattern of isolated farmsteads dispersed in the landscape. Is this a true reflection of the contemporary settlement pattern or are levels in the settlement hierarchy missing? If the reconnaissance programme continues, is a greater variety of sites likely to be discovered, or did certain types of site never exist? Part of the answer to these questions can be found in an examination of the earthwork enclosures or hillforts in the area. The fact that large, elaborate hillforts such as Eddisbury and Beeston, exist in Cheshire suggests some form of hierarchical organisation of sites and implies a complex system of social and agricultural land management. In addition, analysis of the later prehistoric pottery from the region, known as Very Coarse Pottery, and of the finds assemblages from sites such as Irby, are revealing an economic infrastructure and established trading networks in the North West (Nevell 1994 & Philpott 1994a). But unfortunately the results so far from aerial reconnaissance are not providing the full range of settlement types which must have accompanied this politically and economically structured society.

The cropmark evidence also suggests a limited variety of enclosure size and shape. Again, is this a true reflection of settlement types in the region or are certain types missing?

The distinct lack of internal features within enclosure sites, and of unenclosed settlements and field systems in the cropmark record, may be associated with the problems of cropmark formation in the North West, as discussed above. However a further possibility should also be considered. The enclosure ditches which have been recorded would have formed the most substantial elements of the farmstead sites. Other features, such as houses, agricultural buildings and fence lines would have been much less substantial. Given the predominantly pastoral nature of much of Cheshire today there is a tendency to underestimate the extent of plough damage which has taken place in the past. A comparison of the vertical air photos taken by the RAF in 1947 with the vertical air photos taken for the County Council's Environmental Planning Service in the 1970s, 1980s and 1990s demonstrates the extent of ploughing activities in the immediate post-war period, by the virtual obliteration of extensive tracts of earthwork ridge and furrow. This period of active reduction by the plough, coupled with the present day problems of cropmark formation, may explain why only the most substantial enclosure ditches have survived and the apparent lack of survival of more ephemeral structures and elements in the settlement hierarchy.

The levels of population and social organisation of the North West may never have approached those of midland and southern England in the late prehistoric and Romano-British periods. However aerial reconnaissance is beginning to contribute to our understanding of settlement patterns during this period. In order to broaden our knowledge, the results of aerial survey need to be compared with the distribution of previously known enclosures and with evidence produced by excavation. In the future, field investigation should not only address site-specific questions such as date, function, development and inter-site associations, but should also examine the relationship of the enclosures to their local landscape as well as their connections with the Iron Age hillforts and Roman military sites in the area. The ability of a combined programme of air survey, fieldwork and excavation to alter views about settlement in a limited area, is amply demonstrated by the results of a programme to examine the small enclosures of the Severn valley in Powys (Musson 1994). Here a picture of a warlike society based on heavily defended settlements has been transformed to one of a society living in an hierarchy of settlements based on agriculture with a well established trading network. Musson notes that this is a 'striking testimony to the power of aerial photography to supplement the evidence of ground observation' (Musson 1994). The major conclusion, however, is that only a holistic approach will provide a greater understanding of the settlement patterns in the late prehistoric and Romano-British periods in the North West.

Chapter 5

The Very Edge

Reappraising Romano-British Settlement in the Central Pennines; the Littondale Experience

Keith Maude

Littondale is an unspoilt, remote, Yorkshire Dale situated on the west side of Wharfedale in the central Pennines. It is about 12.8 km long, with four small villages, two pubs and two post offices. The remoteness of the Dale means that provisions must be purchased at the small towns of Grassington or Settle each some twelve miles away, although in the past a greater degree of self sufficiency would have been necessary, with the selling of manufactured articles and agricultural produce carried out at market.

During the Roman period the North of England was on the 'edge of Empire' whilst the Dales area, far from the centres of political authority was on the 'very edge'. In comparison to the North West of England however, the Dales area is very rich in archaeological remains in the form of earthwork sites (King 1986), with Littondale in particular having sites along the full length of the valley.

These earthworks have been assumed to be the remains of early farmsteads with their associated field systems. They can be seen from ground level but are best viewed either from the hillcrests at either side of the dale or if possible from a light aircraft or helicopter.

Reference to Figs 1 & 2 (the latter being a map of the archaeological sites in upper Littondale between Arncliffe and FoxUp) reveals the extensive nature of the remains and shows that the dale had been sub-divided into fields long before the enclosures of the eighteenth century.

These earlier fields divide the lower land in the dale between the river and the dale sides, although in several places the dividing boundaries extend on to the present moorland. There once existed a series of settlements located on the spring line, presumably in order to ensure an adequate supply of water, with field systems and trackways running down into the valley bottom. The entire system has been interpreted, on typological groups, as belonging to several periods, traditionally seen as probably the Iron Age and early Roman eras. However, a lack of systematic field work in what has been regarded as a well studied area (Hartley & Fitts 1988, 118 n36), means that this assumption has not been proved.

Prior to 1989 only three of these earthwork sites had been excavated. Two sites in Pen y Ghent Gill, a small westerly tributary valley, were excavated in the 1930's by Dr A Raistrick and Mr W Bennett (Raistrick 1939 &

Fig 5.1: Aerial view looking south-east at the junction between Littondale and Wharfdale. Note the earthwork field systems that run between the uplands on the right and the river Skirfare on the left.

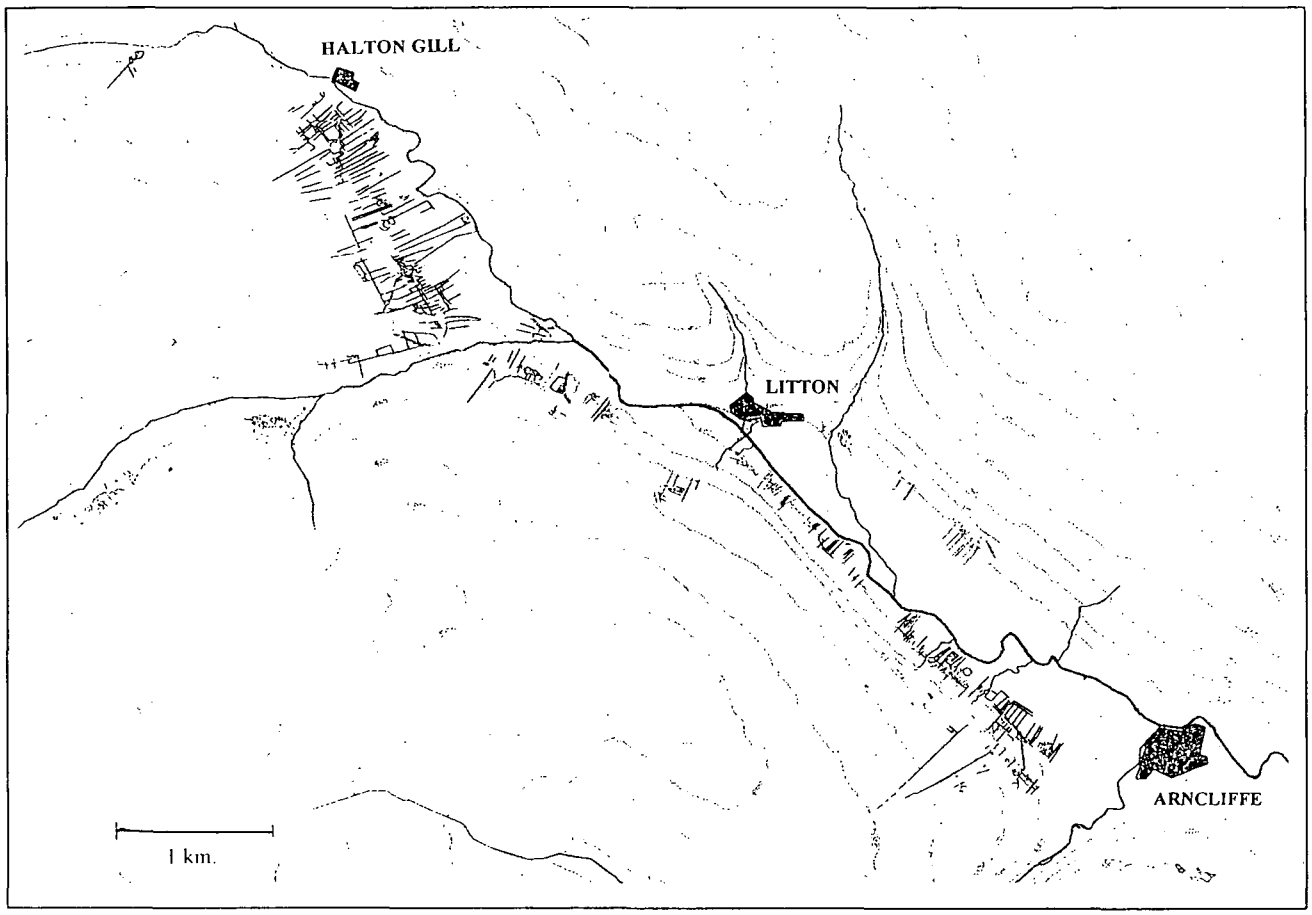


Fig 5.2: Detailed plot of the ancient field systems within upper Littondale between Arncliffe and FoxUp, derived from new aerial and earthworks surveys undertaken by the University of Manchester.

1960). These were at Dawson Close where earthwork settlement sites are located on the widest shelf of the limestone. From the evidence of the recovered pottery and metal work an Iron Age date was assigned to these sites.

Leeds University Department of Archaeology carried out the third excavation at Thornber Barns in 1968 on the well defined circular farmstead with adjacent fields and enclosures (Fig 5.1). This site is located below the limestone scarp at Scoska Wood which is now the largest remaining ash wood in the Yorkshire Dales. Within the wood to the north west of the site is Scoska Cave from which human skeletal remains (presumed to be prehistoric) were recovered in 1905. A Neolithic flint scraper and a Roman coin circa AD 270 were recovered from the scree outside the cave. The excavation at Thornber Barns recovered rotary quern fragments, Romano-British pottery and a coin of Antonius Pius.

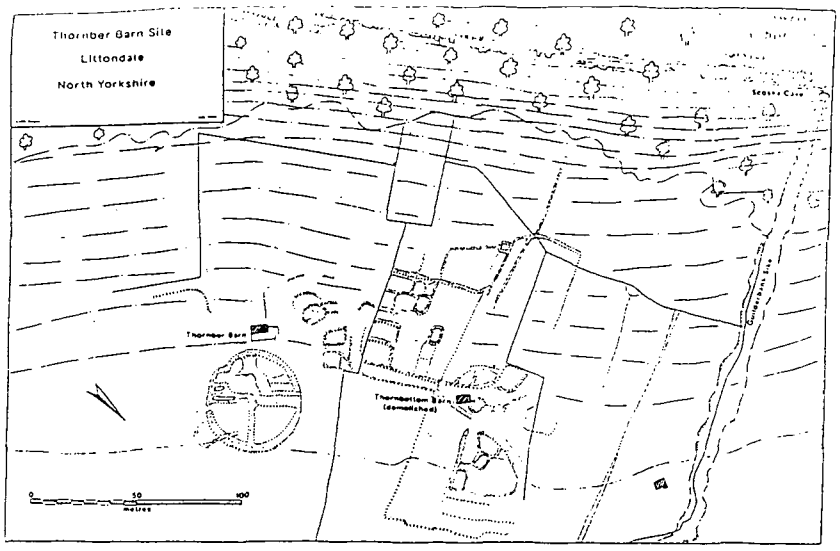
Further archaeological work since 1989 has been carried out in the Dale by the Department of Archaeology, University of Manchester with the intention of mapping this landscape through new aerial and earthwork surveys (Fig 5.2), and to date the putative farmstead sites through sample excavation. Two sample excavations were carried out on the sites at Halton Gill and one at New Ing Barn to the north west of Litton village (Maude 1990).

The Halton Gill Site

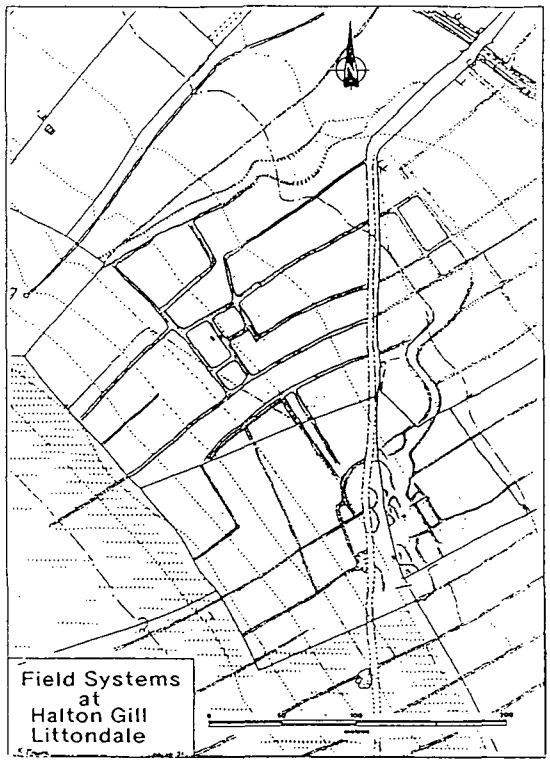
The field systems on the hillside to the south of Halton Gill can easily be seen, especially when the sun is low in the sky. What is not apparent is that the field systems surround a farmstead. Air photographs however reveal the presence of the farmstead which is now bisected by the Halton Gill to Stainforth road (Fig 5.2).

Tracks or drove ways lead to the site and the longest linear field boundary which runs from the river to the fell is aligned on the site. Further field boundaries run parallel to this main boundary on either side of the farmstead giving fields of almost constant width. The entire system gives the impression of a planned layout as opposed to one which has grown haphazardly.

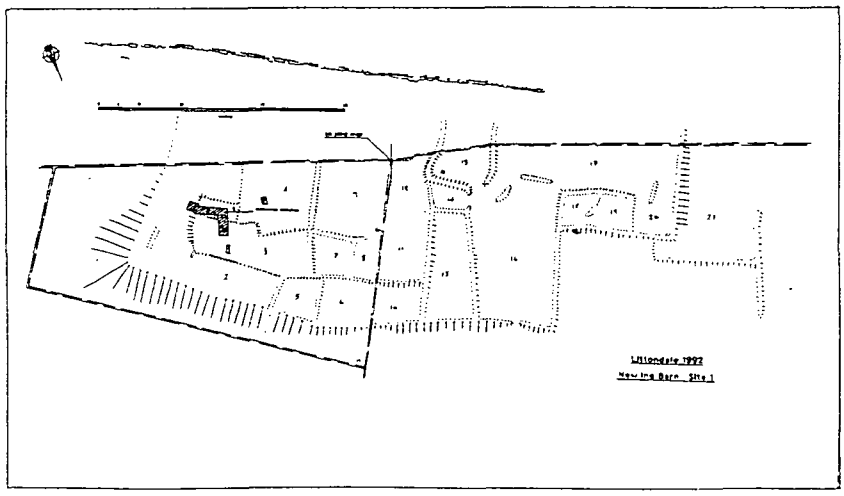
Excavation was carried out on the site in 1991 consisted of a series of test trenches which were placed in order to investigate the main farmstead and its adjoining small enclosures. The largest trench was excavated across the main lynchet just to the north and adjoining the farmstead. Topsoil was very shallow and immediately overlay the natural limestone surface so that stratigraphy was virtually non existent. At the top of the upper bank of the lynchet however a small wall had been built which had retained a relatively thick layer of soil and this area contained most of the artefacts which were recovered, the main dating evidence being provided by the sherds of Romano-British pottery dated



THORNBER BARNS



HALTON GILL



NEW ING BARN

Fig 5.3: Earthwork plans of the three farmsteads excavated within Littondale.

to the third century AD. The sloping face of the lynchet was revetted with water worn cobble which had presumably been obtained from the River Skirfare which is approximately 200 metres distant. This revetting like the small wall suggests that an attempt was being made to minimise down slope soil erosion.

A trench in one of the adjoining enclosures contained the bottom half of a flat quern which reinforces the third century date and a undatable whetstone was recovered from a trench in the fields 100 metres to the north west. What appeared to be a saddle quern was recovered from the nearby field wall and one piece of beaker pottery with cord decoration was also recovered. This artefact is of a Bronze Age date, it was however stratified within Roman period levels and is therefore thought to have been brought on to the site during that period.

The dating evidence suggests that the site was a functioning farmstead in the late third century AD.

The New Ing Barn Site

This site lies at the foot of the hill slope to the north west of Litton village below the old road from Litton to Pen y Ghent and consists of a series of contiguous rectangular enclosures on top of a small ridge (Fig 5.3; Maude 1992).

Excavation was carried out in 1992 and a similar strategy to the one employed at Halton Gill was used. As expected a similar stratigraphic sequence was encountered with very shallow topsoil overlying the limestone. At New Ing, however, structural components of the farmstead comprising a flagged area and a possible wall were still in place. The flags were made from gritstone, being readily available higher on the fell, in contrast to the limestone of the site (Fig 5.4).

Again a series of artefacts were recovered; Romano-British pottery which included part of a mortaria, rim sherds of Huntcliffe ware, buff and grey wares, a small blue bead and a, coin (Antonianius) which would appear to be of Tetricus II (AD 273) but which is thought to be a forgery? This period is thought to have been one with high inflation rates and perhaps as a consequence most counterfeit Roman coins are of this period. Also from a counterfeiters standpoint the Dales area is an ideal location to operate from. It is remote and has lead mines which are known to have been operating during the Roman period and hence a possible supply of metal which can be used to debase silver coinage was available. These artefacts again suggest a date for the farmstead in the late third to early fourth centuries. As at Halton Gill, part of a rotary quern was recovered. In this case it was a broken half of an upper stone made from millstone grit. The quern, unlike the one from Halton Gill, did not have any apparent wear on its grinding face and there was a naturally occurring fault visible in the broken section of the quern. It would therefore appear as if the quern had been broken during manufacture, which would suggest that querns were being made on the site.

Discussion

Aerial and earthwork surveys by the University of Manchester have shown that seven early farmsteads exist within the Littondale earthwork complex, and these area all sited on the south-western side of the River Skirfare between Arncliffe and Halton Gill. (Maude 1990). These are located along or close to the spring line thus ensuring a supply of water during the summer months at which time the river is consistently dry. This south-western valley location also provides shelter from the prevailing winds and the effects of the wind chill factor in winter, and is a drier location than the north-eastern side of the valley.

So far three of these farmsteads have been excavated and dated and artefactual evidence has been recovered which suggests that they were functioning in the latter half of the third century AD. Although the sites are typologically dissimilar, they are all closely dated to the same period, which suggests that the whole valley system may belong to one period. In this case a reliance on a purely typological approach which suggested different periods appears to be wrong.

During the third century AD the area would have been more remote than today because of slow communication. Richmond, as long ago as the 1920's, suggested that some sort of social disturbance had occurred in the north of England during the latter half of the third century, this being detectable from excavation evidence which showed that Roman forts from Brough-on-Noe in the south to Hadrian's Wall in the north had been reoccupied in the late third century. Although this view is now unfashionable, the rebuilding work being interpreted as a period of restoration after an era of peace and perhaps neglect (Hartley & Fitts 1988, 31), what is undeniable is that within the Dales only the fort at Bainbridge was occupied continuously during the Roman period, whereas the other-Pennine forts at Elslack, Ilkley and Burrow-in-Lonsdale were abandoned and then rebuilt during the late third century. This places Littondale firmly within the highland military zone of Roman Britain.

This added military presence may account for the increased farming activity during the period due to the expanded population and the subsequent injection of money into the local economy. Coins have been found on two of the sites and also represent a common find from caves within the Dales area. This would appear to suggest that a monetary market system was in use in the Dales rather than just subsistence farming. No doubt the monetary economy ran in parallel with an exchange/ barter system, although the presence of professionally made pottery on the sites may imply a greater degree of integration with the wider Empire economy than previously thought.

Finds of querns on all the excavated sites implies farmsteads with grain being ground on site for domestic use. It does not prove, however, that cereals were being grown, for whilst it has been shown that it is possible to

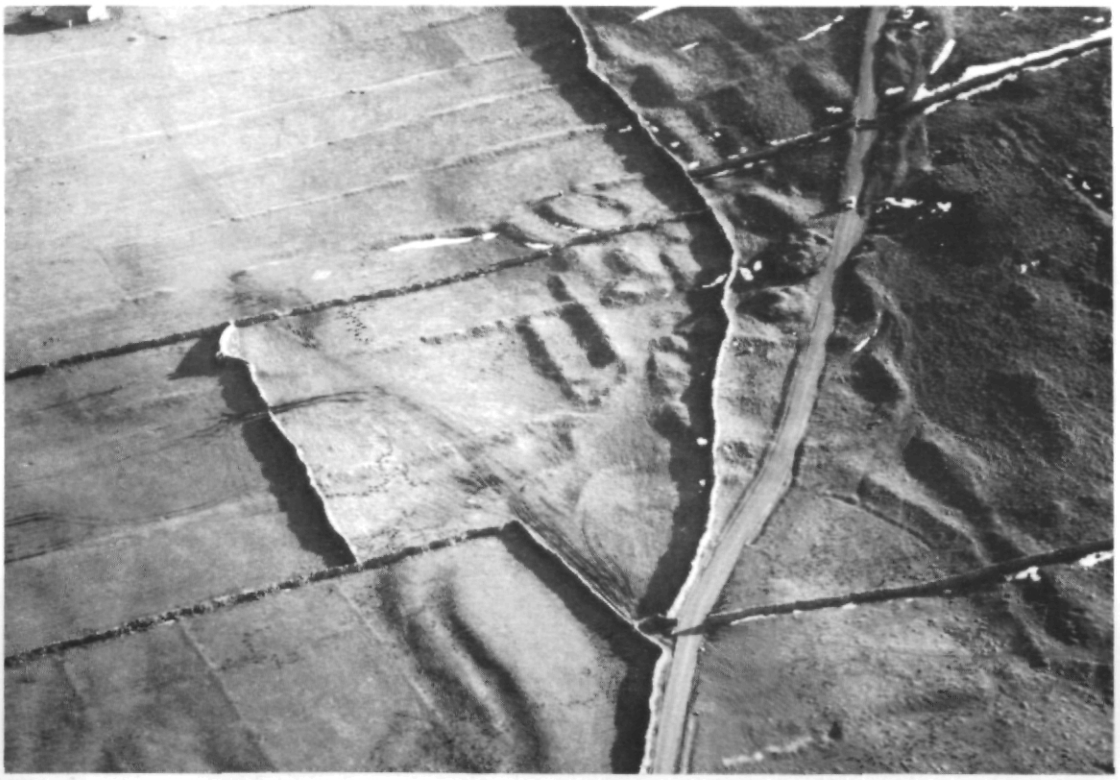


Fig 5.4: Aerial view of the Halton Gill Romano-British farmstead and its associated field system. Excavations have shown that this site appears to be late third century AD in origin.

grow cereals in the Dales, the area has always been agriculturally marginal, the valley bottom ranging from *c* 240m to *c* 300m above sea level. What the finds do show is that querns were an essential part of every households 'consumer durables' and a close ethnographic parallel can be made with the farming communities of Orkney and Shetland where, at the start of this century, each household had its own rotary quern. On these islands flour was kept in the more durable grain form and ground into flour as required.

From an arable agriculture aspect Littondale is and was a marginal area on 'the edge of Empire', but it would appear that when the economic climate was right it was developed agriculturally to supply the booming market provided by the Roman military. Markets at native settlements must have existed, but the main market focal points will have been at the Roman forts; both Bainbridge and Burrow are known to have had *vici*.

The main produce from Littondale is likely to have been livestock, cattle and sheep (as in the Middle Ages and today), which would have been taken to market as wool, hides or on the hoof. Journeys to market would have involved several days walk and all the forts are within one day's walk, although Ilkley at a distance of 30 km is probably too far. Archaeological research in Littondale suggests that in the late third and early fourth centuries AD, the Dales was an area of much agricultural and possibly industrial activity, whilst marginal from a geographical standpoint.

Returning to our concept of 'edge of Empire' and 'the very edge', both terms are subjective and to some extent of our own making. They are viable if viewed from the centripetal aspect of Empire from a military, political and economic standpoint. Considered in the regional context, however, they fail to adequately explain the local evidence. What is clear is that large parts of the Littondale field system would appear to be functioning during the later Roman period, and that in this valley at least the use of typological dating techniques on the curvilinear and rectilinear earthworks interpreted as farmsteads does not work. In other words there is no substitution for sample excavation in order to test hypothesises arrived at from aerial and earthwork evidence.

What is required now is the application of this sample excavation programme on the other four farmstead sites within Littondale, and throughout the Dales, in order to establish the date of the surviving ancient agricultural landscapes of these valleys, and in particular to test the hypothesis of an increase in agricultural activity during the late third century AD.

Part 3

Case Studies

This final section is a series of four case studies dealing with the issues of marginality and the transition from a local subsistence prehistoric society, to a fringe area of a single province within the Roman Empire. Detailed discussion of the excavations at Great Woolden Hall and Irby, the region's two most closely studied late prehistoric and Romano-British rural settlements, by Michael Nevell, Robert Philpott and Mark Adams reveal aspects of these settlements that are both familiar and unfamiliar from other parts of Britain. Two further papers study in detail one upland valley within the southern Pennines and the affect of the Roman occupation on this area. The work of Norman Redhead and Barbara Brayshay reveals a tightly managed pastoral landscape during the early part of the Roman period, perhaps as a direct result of the Roman military presence at Castleshaw with its parasitic extra-mural settlement.

Chapter 6

Great Woolden Hall Farm

A Model for the Material Culture of Iron Age and Romano-British Rural Settlement in North West England?

Michael Nevell

The site of the double-ditched enclosure at Great Woolden Hall (SJ 691 936), excavated between 1986 and 1988, was one of the earliest Iron Age and Romano-British farms to be investigated in the North West (Fig 6.1). The 1980s saw the first interest in such sites with rural settlements at Tatton Park (excavated 1979-84), Eaton-by-Tarporley (excavated 1980-2) and Legh Oaks near High Legh (excavated 1985-8) being investigated. However, during the 1980s Great Woolden Hall was typologically the largest and most extensively excavated of these sites. It was also the rural site with the widest and greatest range of material remains excavated during the 1980s. As such it has had an impact on the archaeological literature of the region perhaps greater than an equivalent site would have had in other parts of the country. This article presents, for the first time, a full account of those excavations and the finds they produced. It also attempts to answer the question whether Great Woolden Hall can be used as a type site for the material culture of the countryside during the Iron Age and Romano-British periods.

Introduction

Great Woolden Hall is situated on open farmland some 50m east of the Cheshire/Salford border. It lies on the edge of a 5m high escarpment, at 16m AOD, and is defined on its northern side by a small stream, and on its western and southern sides by the Glazebrook, a tributary of the River Mersey (Fig 6.2). One hundred metres to the east lies the edge of the huge basin peat bog of Chat Moss. Immediately west of the site are further expanses of peat such as Risley and Holcroft Mosses.

The research strategy employed was an initial evaluation in October 1986 with two trenches dug across the line of the cropmarks, followed by extensive geophysical survey and fieldwalking of the interior, culminating in the area excavation of the site during

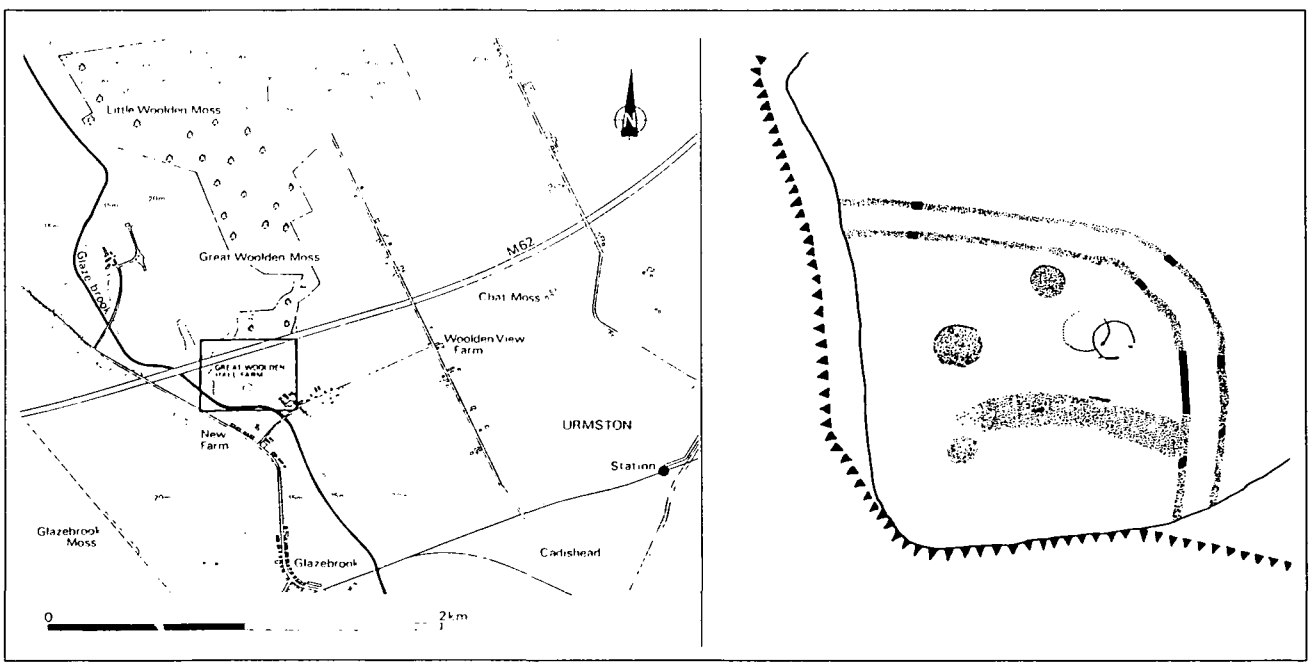


Fig 6.1: The location of the Great Woolden Hall Iron Age and Romano-British farmstead (left), showing details of the cropmark and resistivity data (right).

Fig 6.2: Aerial shot of the cropmarks at Great Woolden in 1986 looking southwards. The farmstead is an escarpment edge site on sands gravels in the Glazebrook valley. Chat Moss lies to the left and Holcroft Moss to the right. Copyright Dr Nick Higham.

1987 and 1988 (Fig 6.3). The evaluation confirmed the presence of two ditches cutting off this promontory and produced evidence for a Roman date. The resistivity survey was then used to inform the progress of the area excavations and covered *c* 75% of the site, with the south-western tip of the site remaining inaccessible. Linear areas of low resistance in the northern and eastern sections of the site coincided with the locations of the ditches found in the evaluation. A concentration of high readings mid-way along the eastern edge of the enclosure, which coincided with a break in the ditch line, was tentatively interpreted as a possible entrance. Anomalies were also noted within the interior, including a band of high resistance running westward from the putative entrance, and at the time it was thought that this may represent some form of internal trackway. There was also an intermittent band of high resistance

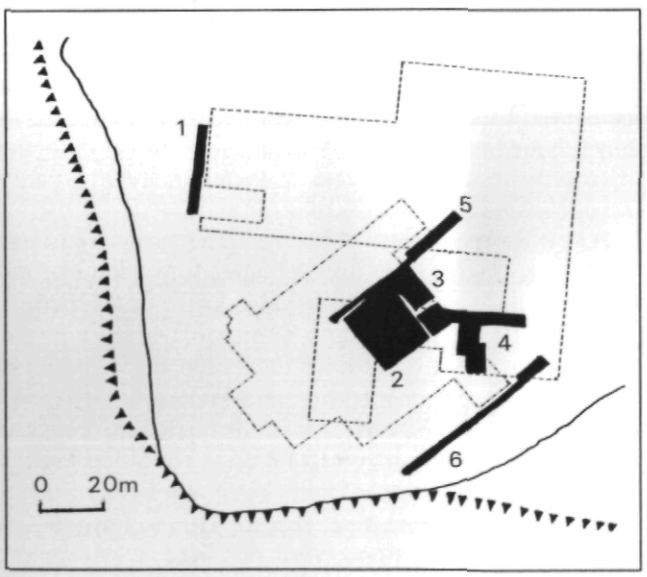


Fig 6.3: The location of trenches at Great Woolden and the resistivity surveys (dashed lines).

Table 6.1: Radio-carbon Dates from Great Woolden Hall

65-15 BC (40 ± 25 BC, GrN 16849): from 350 (posthole for CS1), Phase II.

120 BC-AD 80 (20 BC ± 100, GrN 16849), charcoal from 198 (construction trench for CS2), Phase III.

AD 100-320 (210 ± 100 AD, GrN 16851), charcoal from 680 (inner ditch re-cut), Phase IV.

running parallel to, but west and south of, the ditches, which was tentatively interpreted as the remains of a rampart. In the western half of the enclosure were two discreet areas of high resistance coinciding with circular cropmarks, perhaps indicating the presence of enclosures or compounds within the settlement.

Once the archaeological deposits were exposed it became obvious that they had been severely truncated by modern ploughing, and disturbed by drains at 10m intervals. The damage was such that contemporary ground surfaces only survived in a few areas of the excavation, notably in the north-western quadrant of Trench 2. It was estimated that at least 0.3m of archaeological deposits had been removed by ploughing activity. In consequence, many of the features only survived in a negative form and thus proved difficult to phase.

Outline Chronology

The earliest activity on the site was represented by an assemblage of flint recovered from fieldwalking the enclosure and from the excavations themselves. This material would seem to fit a date sometime in the late Neolithic or early Bronze Age. It is not clear whether this activity was little more than ephemeral. The major structural activity, associated with the ditches of the enclosure, appears to have begun in the latter part of the first millennium BC. This took the form of four structural episodes spanning the first century BC to the late third century AD, starting with a series of rectangular pits in Phase I; moving to a ditched compound containing a hut circle in Phase II; being succeeded by an oval palisaded compound, with hut, in Phase III; and finally being replaced by a further series of pits in Phase IV. Phases II and III were dated, by radio-carbon samples, to 65-15 BC and 120 BC–80 AD (Table 6.1). The final phase of activity was evidenced by second century, local Romano-British wares from the plough soil and from the final fill of the inner ditch; this latter context also produced a radio-carbon date of AD 100-320. The gap between Phases III and IV may suggest a hiatus in occupation, at least in this part of the enclosure.

Excavations I; The Ditches

The site at Great Woolden Hall Farm was first recorded in the summer of 1986 as a cropmark formed by two curving parallel lines, roughly 10m apart, cutting off a promontory above the Glazebrook. After initial

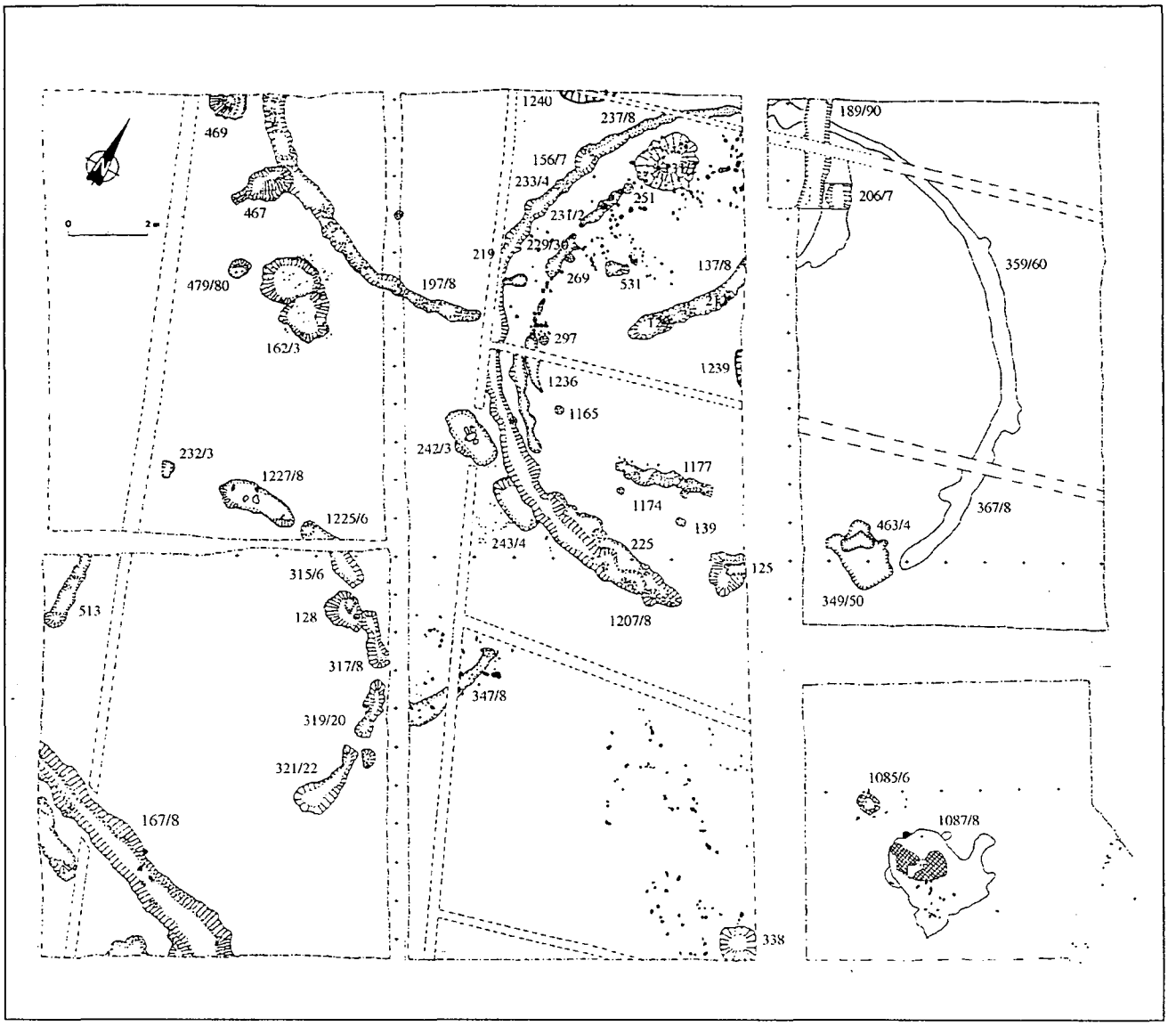


Fig 6.4; Final plan of the main excavation trenches (T2, T3 & T4) showing the location of the contexts mentioned in the text.

plotting the cropmarks could be seen to enclose an area roughly 110m x 100m or 1.1ha. Two internal features, in the form of circles *c* 10m in diameter, were identified, and it was noted that the cropmarks of the ditches faded somewhat at a point mid-way along the eastern side of the enclosure. Study of the 1:10,000 black and white vertical photographs for the area, Greater Manchester Geology Survey 1:10,000 black and white verticals, July 1971, indicated that the site had been visible in 1973, although no further details could be added.

The geophysical survey traced the ditches as two large anomalies across the eastern and northern parts of the survey area. Of particular interest was the apparent break in the ditches on the eastern side. This took the form of high readings which were interpreted as some form of entrance, although it was not possible to test this by excavation. A further high anomaly, *c* 5m to 10m wide, could be seen intermittently, running along the inner side of the ditches across the survey. When part of this area was excavated in Trench 4 this band proved to be devoid of archaeological features, but did appear to have been compacted. It is thus possible that the resistivity survey had located the badly plough-damaged remains of a rampart.

Based on the results of the resistivity survey it was decided to section the ditches at various points along their line in order to establish their size and function. Four trenches were cut, Trench 1 being at the north-western extremity of the enclosure; Trench 5 being at the north-east corner; and Trench 4 and Trench 6 being along the eastern side of the enclosure (Figs 6.3 & 6.4). The opportunity was taken to follow in Trench 4 the line of the inner ditch over a length of 10m, enabling a representative picture of its form to be recorded. Eight sections were obtained, allowing the character of the features to be assessed.

Fig 6.5: Detail of the excavations (looking south) of Circular Structure 1 in Trench 2. Note the inner row of postholes behind the outer construction trench.

The distance between the inner and outer ditches was found to vary between 5m and 7m, while the width of the inner ditch (context 680) was found to vary from 3m to 4.5m, and its depth from 1m in Trench 1, to 1.3m, in Trench 6.

Likewise the width of the outer ditch (691) also varied, from 3m to 4m, while its depth ranged from 1.3m, in Trench 4, to 0.8m, in Trench 6.

In all the sections relating to the inner ditch could be seen a final re-cut (535), the fill of which in T4 (536) was associated with a quantity of burnt material, including second century Roman coarse wares. This re-cut proved to be 1.2m to 2.5m in width and between 0.7m and 1m in depth. Suggestions of an earlier re-cut were also noted in the Trench 4 section. A final re-cut was also recorded in two of the sections in Trenches 4 and 5 for the outer ditch.

Pottery was recovered in some abundance from the inner ditch. This included rims and body sherds of late prehistoric Very Course Pottery (VCP), as well as second century Roman coarse wares, although this latter material was confined to the fill of the final re-cut. Only one sherd of pottery, a body sherd of VCP, was recovered from the outer ditch.

The fact that both ditches appeared to respect each other along their entire length, and were a relatively constant distance apart, suggests that they were contemporary in their use. Unfortunately it is impossible to say with certainty whether one or the other was earlier in date, since the stratigraphy between the two structures had been removed by ploughing. It seems likely that both ditches date from the late first millennium BC. Each showed signs of severe weathering, which is hardly surprising given the unstable nature of the sandy subsoil. This erosion was compounded by the ploughing which had also removed the top portion of the ditch profiles and may have removed the evidence for a rampart and/or fence-line at the back of the inner ditch. The presence of some sort of barrier in this area may be indicated by the apparent absence of features immediately to the rear of the inner ditch, especially noted in Trench 4, but also recorded elsewhere. Both ditches would appear to be slight structures; indeed the final re-cut in the inner ditch is no more than a shallow gully. It thus seems likely that these structures were dug as boundary markers and/or drainage channels, perhaps for the corralling of livestock. Any notion of a defensive origin for these features must be firmly resisted, especially since no trace of a rampart or palisade were recovered.

Excavations II; The Structures

Circular Structure 1 (Phase II)

The earliest structure identified was recovered from Trench 3 and the north-east quadrant of Trench 2 (Figs 6.5 & 6.6). Although only the western half of the interior was examined in detail, the overall plan was obtained by the excavation of Trench 3. This complex can be seen

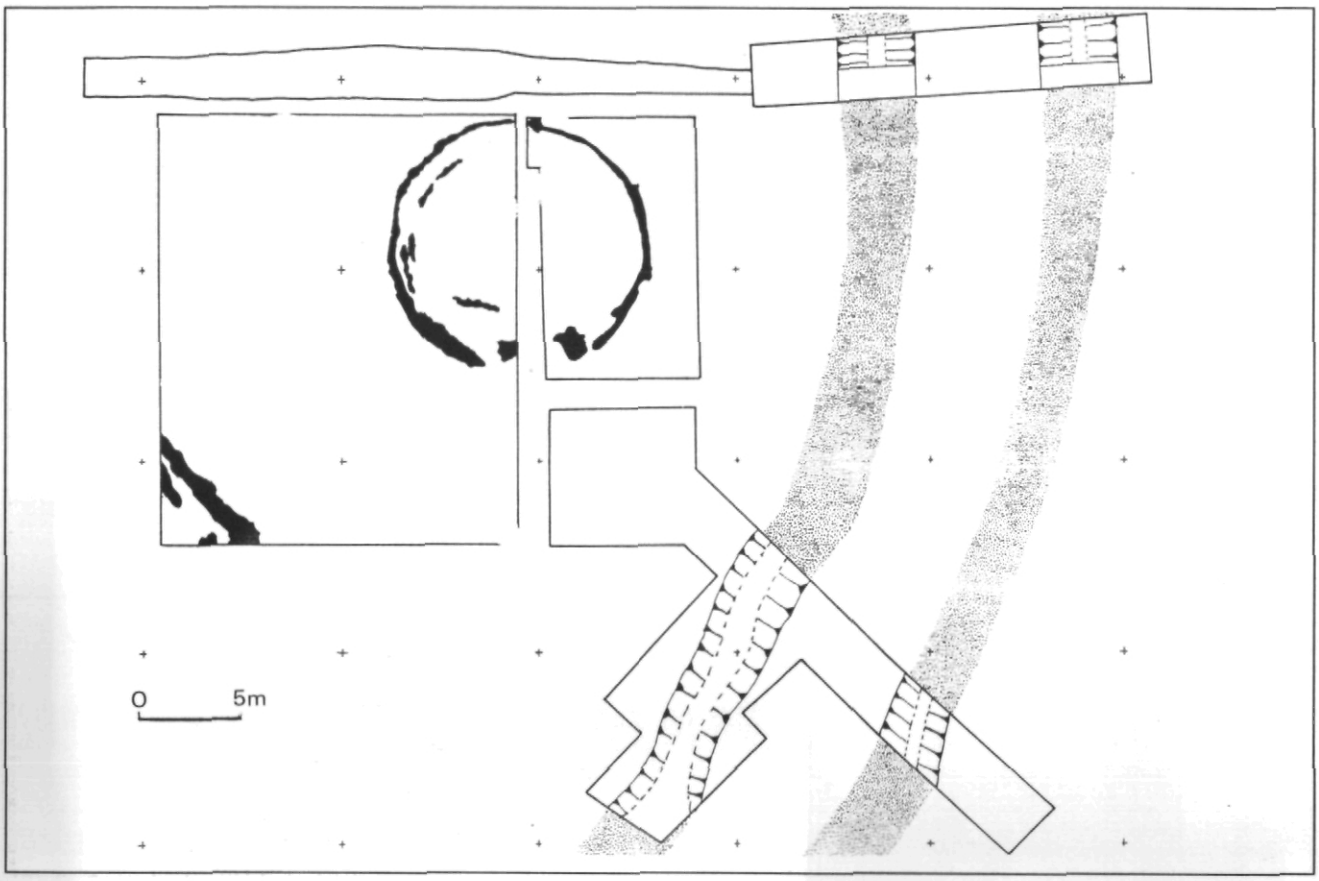


Fig 6.6: Great Woolden Hall Phase II features, 65-15 BC.

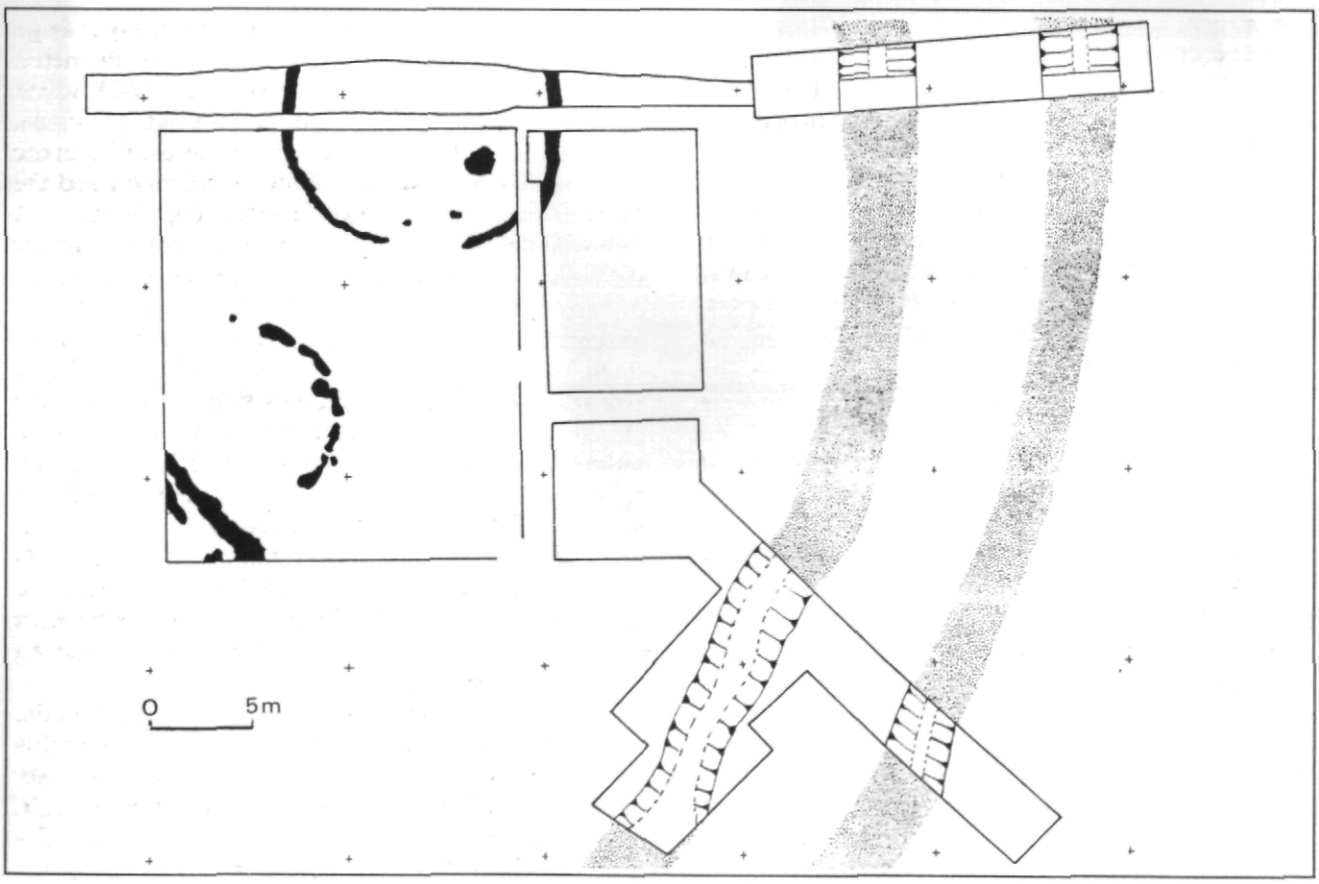


Fig 6.7: Great Woolden Hall Phase III features, 120 BC to AD 80.

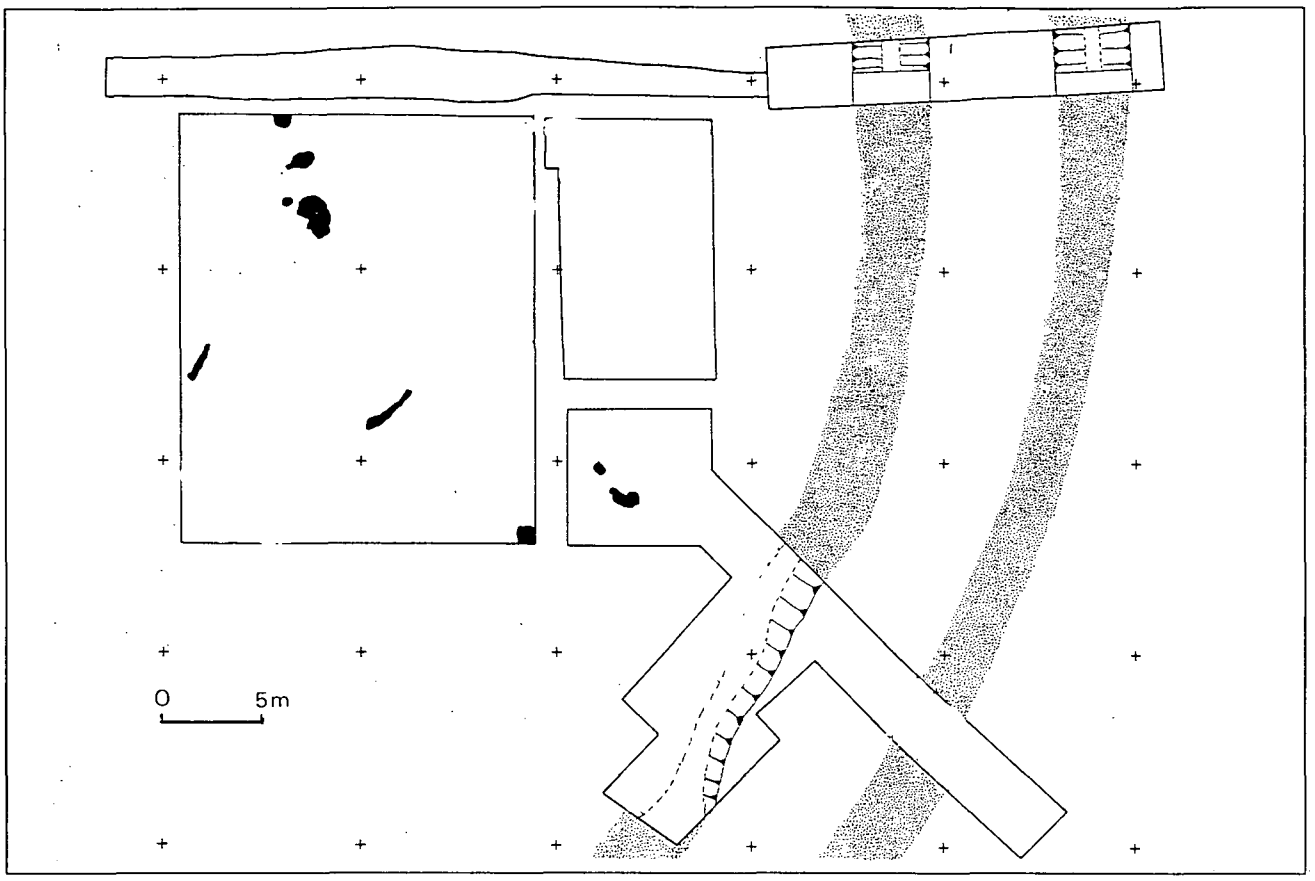


Fig 6.8: Great Woolden Hall Phase IV features, AD 100-320.

to consist of two major elements - an outer circular post-trench (219, 359 & 367) and an inner ring of posts. The outer circle enclosed an area *c* 12.8m in diameter. This trench varied in width from 0.3m to 0.5m, and in depth from 0.15m to 0.5m, being filled with a homogeneous sandy-grey silt.

A gap of 1.8m on the south-eastern side of the enclosure indicated the presence of an entrance, and excavation of the trench immediately to the west showed that it terminated in a medium sized posthole (1207), 0.5m in diameter, with a post-pipe (1208) 0.3m across and 0.5m deep. This was the only section of the trench excavated that provided evidence for a secondary phase. This took the form of a short re-cut (225) *c* 5m long, 0.3m wide and 0.2m deep, on a slightly more northerly alignment, which also ended in a posthole. Although the eastern side of the trench remained mostly unexcavated, the recovered plan indicated that a similar development had taken place along a 6m stretch of the trench immediately east of the entrance.

The entrance itself was defined by two large post-pits, each separated from the outer post-trench by a gap, 0.8m on its western side and 1.2m on its eastern side. Both pits were excavated and each proved to be roughly rectangular in plan, and box-shaped in section. The eastern post-pit (349) was 1.6m by 1.2m and 0.4m deep, while the western one (125) was 1.2m by 1.2m and 0.4m deep. In each case the post pipes were recovered and proved to be 0.6m in diameter in the eastern post-pit, and 0.5m in diameter in the western post-pit. The fill of both pits proved to be composed almost entirely of large river smoothed stones, *c* 0.2m to 0.3m in diameter. Finds from the fill of post-pit 349 included VCP-wares and a large rotary quern fragment, whilst finds from the western post-pit included more VCP sherds. Within the post-trench were a series of features which formed the second element of the double-ring house. A semi-circular arrangement of six small circular postholes were excavated in the north-eastern quadrant of Trench 2; most were between 0.2m and 0.25m in diameter, and in depth varied from 0.2m to 0.3m, all were truncated (251; 265; 297; 1165; 1175; 139). There was one posthole (265) that was slightly smaller than the others, being only 0.15m across and 0.17m deep, though it was on the same alignment and was thus taken as part of the group. The two most southern postholes were set within a narrow, rectangular-profiled trench (1177) 2.3m long and between 0.2m and 0.35m at its western terminus, and was packed with a mixture of yellow and white clay (1178). Finds from these features were limited, although a posthole (1174) produced chock-stones and VCP wares.

The eastern section of Trench 2, which ran across the full width of CS1, indicated the presence of the remains of internal features within this double-ring round-house. These took the form of a mixed clay and stone deposit, varying in thickness from 0.1m to 0.35m (36), and a hearth, 0.95m in diameter (1239), 5m north-west of the hut entrance. All these features had been severely truncated by ploughing.

Circular Structure 2 (Phase III)

The second major structure to be identified overlay the northern half of CS1 in Trenches 2 and 3 (Fig 6.7). Consequently, only the southern half of this feature was available for investigation. The main elements of the structure comprised a post-trench (137, 189 & 197), of which a 23m stretch was excavated, defining an elliptical area. The trench was interrupted on its southern side by a break of 3.6m. Since this area was irregular in plan, there was some difficulty in recovering the exact diameter of the structure. However the diameter, as recorded in the northern sections of Trench 2 and Trench 3, was 14.3m When excavated the trench proved to be *c* 1m in width and between 0.3m and 0.5m in depth, and was roughly box-shaped in section. Within this, set at irregular intervals, were discreet patches of charcoal, *c* 0.1m to 0.35m in diameter, and usually surrounded by river rolled stones roughly 0.15m across. Twelve such areas were excavated within the western stretch of the ditch and were interpreted as the burnt remains of large stakes, forming a series of posts. Similar features were excavated within the eastern stretch of the ditch, the evidence was more fragmentary; only four such posts were located.

There is evidence within Trench 3 to suggest that at least the south-eastern part of the post-trench was re-cut. The present trench was found to partially overlie a 4m length of U-shaped ditch, *c* 0.60m wide and *c* 0.30m deep (206). This feature followed a slightly more easterly alignment than its successor.

Within the 3.6m gap, on the south-eastern side of the post-trench, was the remains of a clay spread, *c* 15mm thick, covering an area approximately 9m square, and extending 1.5m to the north of the gap and *c* 1m to the south (840). This sealed the eaves drip for CS1. A rectangular posthole, 0.35m x 0.25m, and 0.5m deep, cut through the clay spread approximately 2m north of the eastern terminal of the post trench (531). It showed signs of the post having been deliberately removed, the southern edge of the hole being severely damaged and misshapen. A second rectangular posthole (695), 0.45m x 0.25m, and 0.60m deep, lay 1.9m to the west of the first; this time 1m north of the western terminal of the post trench. However, this latter feature can not be directly associated with either the clay spread or the western palisade trench of CS2, because of the damage caused by an adjacent nineteenth century terracotta land drain, although it partially overlay the construction trench for CS1.

Two hearths lay within the possible double-ringed round-house but only one can be linked stratigraphically with this structure. This feature (1240) lay in the northern section of Trench 2, opposite the entrance into the compound. It was badly damaged by two modern drains and by subsequent ploughing. The surviving remains indicated a feature *c* 0.9m in diameter, composed of red clay, surrounding a central hollow. The second hearth (132) can not be positively linked stratigraphically with CS2, but it's association is implied by its position sealing the eaves drip for CS1.

The relationship between CS1 and CS2 can be seen most clearly in the eastern section of Trench 2, where the post-trench for CS2 cuts the occupation levels within CS1; and in the northern quadrant of Trench 3, where the post-trench for CS2 cuts the post-trench for CS1. This places CS1 in Phase II of the site and CS2 in Phase III.

Pit Alignment (Phase III)

A series of five roughly rectangular pits (321, 319, 317, 315/1225 and 1227), aligned in semi-circular fashion, were excavated in the western half of T2 (Fig 6.7). They varied in size from 1.6m by 0.4m to 2.2m by 0.6m, and in depth they were all shallow, being between 0.2m and 0.35m. They had a boxed-shaped profile and filled with a dark grey, sandy silt. There were no indications of structural elements within the pits. The finds from these features proved extremely meagre; there was no pottery and only a small quantity of wood charcoal and a few stones, of fluvial origin, present in each feature. A further pit (1182), running into the baulk of Trench 2 to the south-west of this arrangement, may also have been part of this feature as it lay on the projected alignment. In form and plan it was similar to the other pits being U-shaped in profile with near vertical sides, 0.9m wide, at least 2.10m long and 0.3m deep.

The total area enclosed by this arrangement was about 10m in diameter, but no 'internal' features could be linked stratigraphically with it, due to the severe plough damage at this southern end of Trench 2. Immediately to the north-west lay a series of shallow hollows, filled with charcoal and grey silt, which stratigraphically were cut from the same level. The function of these features, and that of the shallow charcoal spreads, is unknown, but the finds associated with them were prehistoric pottery, and predominately VCP wares, indicating either a Phase II or Phase III date. The little stratigraphy that did survive in this area showed that these features were from Phase III.

'Fence' Lines (Phase IV)

A shallow slot (347), running in a northerly direction for 2.7m from the baulk in the southern half of Trench 2, was excavated in the south-east quadrant (Fig 6.8). It was roughly U-shaped in profile, varying in depth from 50mm to 100mm. As it ran north its width shrank from 0.6m to 0.25m. It appeared to be associated with 33 stakehole-type features, which ran along the bottom of the slot. These varied in depth from 28mm to 135mm, but on average were 90mm deep. A further scatter of stakehole-type features lay immediately north-west of this feature. For the most part they were randomly placed, but a semi-circular arrangement, 0.5m across, of nine stakeholes, between 75mm and 110mm deep, lay 0.9m to the north-west of the slot. This linear arrangement may represent a stake fence line. A similar U-shaped trench lay along the western edge of Trench 2 on a similar alignment (513). While the position of

both features suggested a relationship with the D-shaped structure, there was no stratigraphical link apparent. The function of the semi-circular arrangement of stakeholes is unknown. Finds from both these features were exclusively Roman showing that they belonged to Phase IV.

Ditch Line (Phases II & III)

In the south-western corner of Trench 2 a U-shaped linear feature (166), *c* 0.8m across and *c* 0.3m deep, with shallow sloping sides, was examined (Figs 6.6 & 6.7). It contained no other features and was filled with a mixture of brown loam and grey silt (167), indicating that it had stood open for a time.

The southern end of the ditch was apparently sealed by a level of mixed clays *c* 0.15m in depth. This was the only stratigraphical relationship to have survived at this end of the site due to the heavy plough damage already mentioned. This level is akin to the 'occupation' levels seen at the northern end of Trench 2 (35 & 36), which sealed CS1 and CS2, and produced Romano-British pottery sherds. However, five sherds of VCP from the fill of the ditch showed that this feature was late prehistoric and belonged to either Phases II or III, possibly both. It had been abandoned by the Romano-British period (Phase IV). As to function it may have acted as a drainage ditch-cum-boundary marker related to some internal division of the settlement; or it may have defined a trackway within the settlement.

Excavations III; the Pits (Phases I & IV)

Excluding the semi-circular arrangement of pits excavated in the south-western quadrant of Trench 2, four further pits were investigated (Fig 6.8). Two of these (241 & 243) lay in the north-eastern quadrant of Trench 2 set 1m apart, in a well stratified position, partially sealed below the western compound ditch of CS1 and, thus, forming Phase 1 of the site occupation. Excavation proved extremely difficult for a variety of reasons, including the high water-table and the cutting of one of the pits by a modern land drain. Pit 243 proved to be 1.9m x 0.74m and *c* 0.4m deep, with near vertical sides and a flat bottom. It contained a uniform fill of mid-grey, sandy silt. Six large stones (up to 300mm in diameter) were found to be resting on the bottom of the pit; the only other find was a single sherd of pottery (SF19). Pit 241 was similar in size, 1.80m x 0.70m, and fill. The only find from this feature was the upper stone of a saddle quern. Both features appear to have been backfilled very soon after they were dug since there was no erosion apparent on the vertical sand sides of the features. As to their date, this lies sometime before the Phase II ditched compound and hut which was radio-carbon dated to the period 65-15 BC.

The remaining two pits lay in the north-western quadrant of Trench 2, forming part of the Phase IV occupation of the site. Pit 469 ran into the northern baulk of the trench so that only part of this feature was available for examination. This portion proved to be semi-circular in plan and roughly cone-shaped in section, being 1m across and 0.4m deep. It was filled with a sandy, dark-grey silt containing some bone and charcoal, and a single sherd of Roman pottery. Pit 467 lay *c* 1.5m immediately south of the former and was oval in plan, being 0.85m x 1.26m, with a rectangular extension, 0.36m x 0.28m, running eastwards. It was U-shaped in profile and was filled by a very dark grey sandy-silt, containing a large quantity of bone and charcoal, which contained a single Roman sherd of pottery (SF216).

Stratigraphically both features were later than CS2 in Phase III, since pit 467 partially overlay the outer post-trench for this structure (197). It is possible that both pits were contemporary, since they appear to have been cut from the same level, the clay occupation

Table 6.2: Catalogue of Bone Finds from Great Woolden

Context & Phasing	*Bone Description*
(36) Roman occupation layer, PIV	right side calcaneum, sheep.
(36) Roman occupation layer, PIV	tibia, sheep or goat.
(136) posthole, PII	distal end of first? phalange, possibly pig.
(146) posthole fill for CS1, PII	right side distal end tibia, pig.
(163) oven fill, PIV	left side complete second phalange, pig.
(350) post pit for CS2, PIII	metacarpal, possibly pig.
(840) clay level sealing CS1, PII	humerus, possibly sheep.
(1095) posthole in CS2, PIII	tibia, possibly sheep.

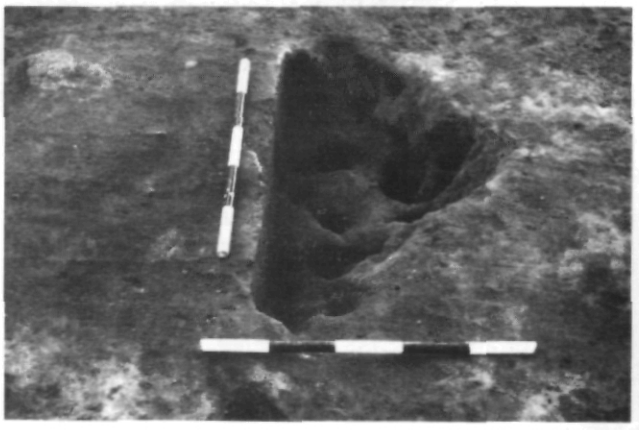


Fig 6.9: Hearth 131 during excavation. This feature belongs to Phase III and is probably to be associated with CS2.

deposit 35, which produced large amounts of Roman pottery.

Of the four pits excavated all produced burnt bone fragments, but due to the site conditions none of this material could be identified. The saddle quern rubbing stone from pit 241 can not be closely dated. This type of quern was introduced into the British Isles in the Neolithic period and continued in use into the Iron Age, being only gradually replaced by the introduction of the rotary quern during the third to first centuries BC. A date within this later period seems appropriate, bearing in mind the radio-carbon dates for Phases II and III.

Excavations IV; the Ovens and Hearths (Phases II & IV)

Features interpreted as two 'ovens' and four 'hearths' were excavated in Trenches 2 and 4 (Figs 6.6, 6.8 & 6.9). The two 'ovens' lay in the western half of Trench 2 and had been truncated by modern ploughing. 'Oven' 128 was 'U'-shaped in profile, 0.4m wide and 0.18m deep, cut into a mixed natural deposit of yellow clay and silver sand. It was packed with 24 stones, ranging in size from 50mm to 140mm, all of which showed signs of having been heated. Four small stakeholes were excavated at the bottom of the feature and three were found cutting in to the sides.

'Oven' 162 lay immediately south-west of CS2, cut into a deposit of silver sand and grey clay (possibly an occupation deposit). It proved to be a two phase structure, with the first being represented by an oval depression *c* 0.20m deep and *c* 1m x 1.2m. The feature was concave in profile and had been succeeded by a further 'oven' to the north, that overlapped the northern most 0.2m of the earlier 'oven'. This second 'oven' was of a similar size to the first being 0.25m deep, *c* 1m in diameter, but had a flat bottom. A large number of stakeholes were cut in to the sides and floor of this feature. Both were filled with an ash and charcoal deposit (163) containing burnt bone and Roman pottery suggesting that it belonged to Phase IV.

Four features interpreted as 'hearths' were located in the north-east quadrant of Trench 2 and in Trench 4. 'Hearth' 132 lay in the north-east quadrant of T2 and proved to be roughly circular in plan, and in section was a splayed 'V' shape, being 0.92m wide and 0.3m deep. It was cut from the general occupation layer (36), through the line of CS1, in to the natural subsoil. Eight circular stakeholes, up to 40mm in diameter and 60mm deep, had been dug into the interior of this feature, while a further dozen were cut into the hard, red clay ridge that defined this feature. Since the 'hearth' sealed the outer post-trench for CS1 it must belong to Phase IV.

'Hearth' 1239 lay in the middle of CS1, and had been badly truncated by modern ploughing. It was composed of a circular area of bright red clay, 1.15m in diameter, 0.22m deep, and was surround by small stones. Its stratigraphical relationship indicates that it could belong to either Phases II or III. Its position in the centre of CS1 suggests that it should be taken with that structure, that is falling within Phase II of the site.

The remaining two 'hearths' lay side-by-side in Trench 3, immediately to the rear of the inner ditch. They had both been badly plough-damaged. The base of 'hearth' 1085 survived tolerably well, its complete plan being recovered. It was 0.56m in diameter and c. 0.15m deep. It was made of orange/red clay set in sand. Enough of the feature survived to enable an inner bowl to be discerned, *c* 0.28m in width and *c* 0.07m in depth. Three stakeholes lay along the rim of this bowl. A further six stakeholes were randomly scattered around the edges of this feature. Since the stratigraphical relationship between these features and 'hearth' 1085 had been destroyed by ploughing it is unclear whether they are related to some form of superstructure. 'Hearth' 1087 lay 1m north-east of 'hearth' 1085. It was very badly plough-damaged, with only *c* 50% of its plan surviving. It appears to have been the most substantial of the 'hearth' features excavated, being *c* 2m in diameter. It was built of red clay, and had a central bowl, although this internal feature was so badly damaged that its dimensions could not be recovered. Like 'hearth' 1085 a series of stakeholes were found around the feature, although the removal of all stratigraphical relationships in this part of the site makes their relationship to 'hearth' 1087 unrecoverable. Both hearths produced Roman pottery showing that they belonged to Phase IV.

All the features described above contained charcoal and fragments of burnt bone but only 'oven' 162 produced identifiable pieces of bone, indicating the presence of pig on the site.

Excavated Material Culture

Prehistoric Pottery

Though only 10% of the interior of the settlement was excavated over 1500gm and 80 sherds of prehistoric pottery was excavated from all contexts. A small quantity was also retrieved from the ploughsoil via fieldwalking. This report is concerned with the stratified pottery finds and with those diagnostic pieces from the sub-plough soil (Fig 6.10). These fall into four main vessel types accounting for over 50% of all stratified material excavated on the site (for a full description and illustrations of the prehistoric pottery from Great Woolden Hall see Nevell 1992a, Appendix 3 & Nevell 1994).

The first pottery type was an almost complete small, thick walled, flat based, open bowl. Nine sherds weighing 516gms were found. The sherds were excavated from two adjacent postholes (142 & 146) within the construction trench (196) defining Circular Structure 2 of Phase III. The remains of a post from this feature was radio-carbon dated to 120 BC – 80 AD (GrN 16850). The bowl was hand-made, of slab construction, a technique visible in section (Fig 6.13). Similar pottery both in form and fabric, has been excavated at a complex flood plain terrace site at Willington in north-east Derbyshire (SK 285 278) and the Great Woolden Type 1 fabric is comparable with the Willington Iron Age 'B'

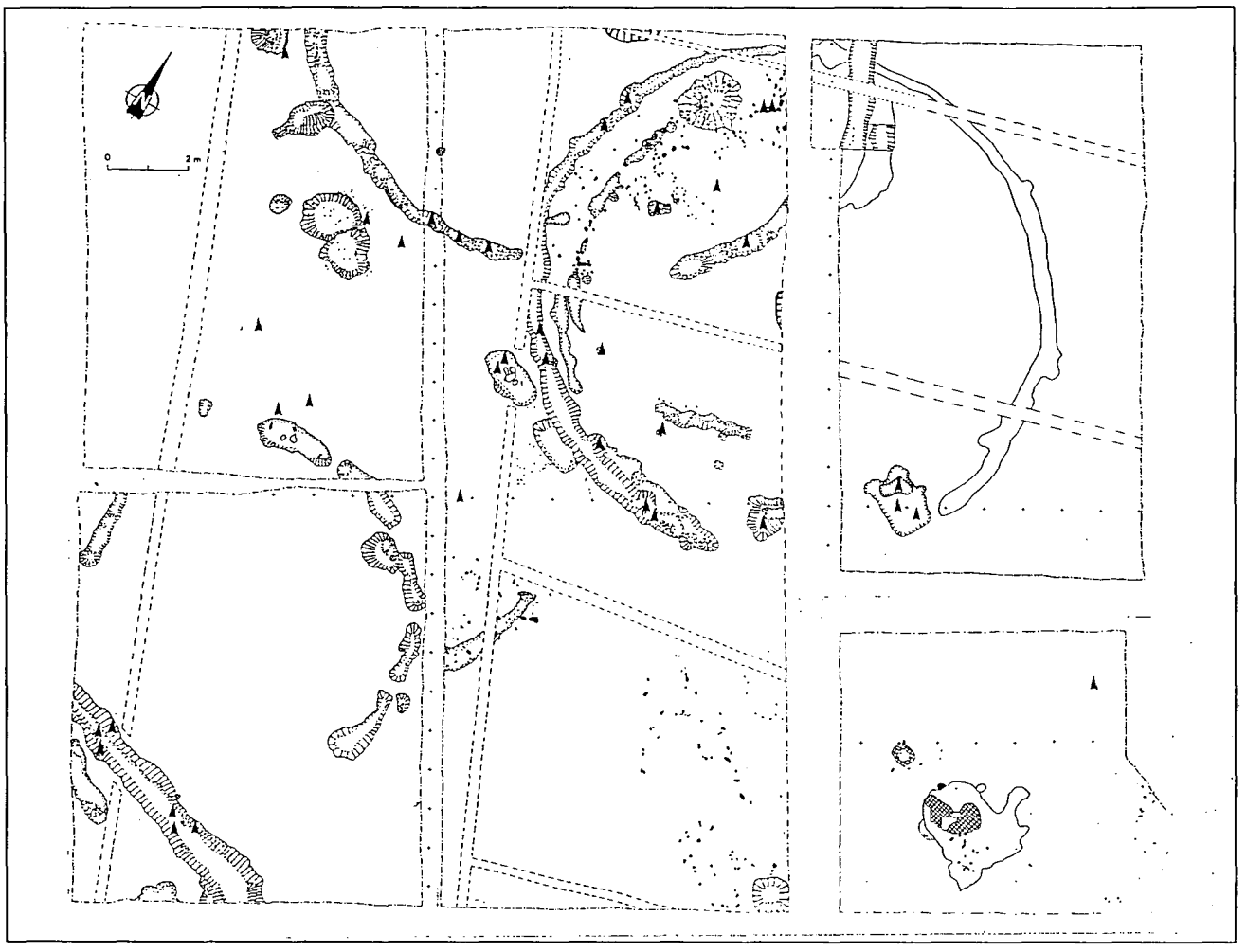


Fig 6.10: Distribution of prehistoric pottery finds (black triangles) in Trenches 2, 3 and 4. The finds assemblage is overwhelmingly dominated by VCP wares and nearly all sherds came from features.

ware (Wheeler 1979, 200). This was a long lived pottery type covering the period 700 BC to *c* 100 BC, on this site and others in this area of Derbyshire. Whilst the Great Woolden vessel was probably made on site from local clay, and is somewhat later than the north-east Derbyshire types, the comparison is suggestive of some form of contact between this area and the Mersey Basin.

Pottery type two is formed by over 1kg of VCP sherds. These form orange cylindrical vessels with a flared rim, in low-fired clay containing large quartz inclusions. This is the only known late prehistoric pottery industry in Cheshire. Ironically the exact production site has not been identified although spectrographic and thin section analysis by Morris indicates that it was manufactured in the Nantwich-Middlewich area (Morris 1985, 366). This is logical since this type of pottery is considered to have been used for the transportation of salt from the late prehistoric salt industry of Cheshire. In general, according to Morris, such vessels were constructed from three or four coils which were flattened and shaped into collars. These collars were then fitted on top of each other to form small pots measuring 220mm to 260mm high. Diameters range from 180mm to 230mm while the bases seem to have been a good deal smaller at 120mm to 160mm across (Morris 1985, 353). It appears to have been in manufacture from *c* 500 BC to the middle of the first century AD (that is the Roman conquest of Cheshire). At Great Woolden sherds of VCP were found in to contexts which have been radio-carbon dated. Firstly, a large post-pit for CS1 (126 within context 350) was part of a feature dated to the period 65-15 BC. Secondly, another posthole (142) which lies within the fill of the construction trench for CS2 (198) also produced VCP and was dated to the period 120 BC to 80 AD.

Pottery type three was most of a wheel turned vessel, fired in a bonfire and thus of a black to red-brown colour. There were few inclusions, less than 5% of the fabric. It had an 's'-shaped profile with a steeply over turned rim, burnished on the outside of the vessel, with some evidence of decoration in the form of striations. Excavated in the trench of Circular Structure 2, (context 196), a few metres west of Vessel 1, where it appears to have been used to pack postholes. It would appear to be a cooking pot of Gallo-Belgic type, common in south-east England of the late first century BC or early first century AD. So far nothing similar has been published in the North West, although a single S shaped sherd of Iron Age pottery from Beeston Castle is

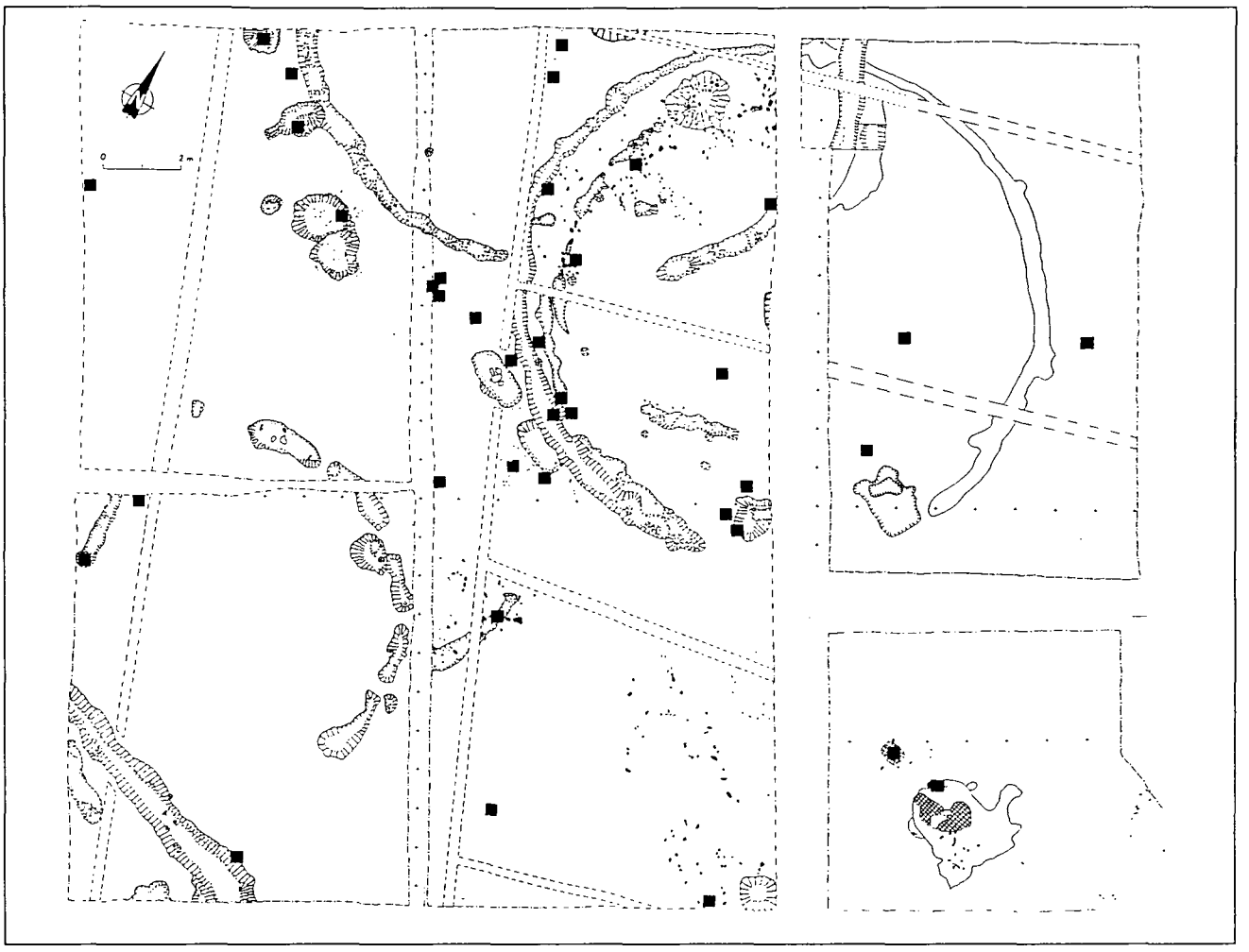


Fig 6.11: Distribution of Romano-British pottery finds (black squares) in Trenches 2, 3 and 4. The finds assemblage is dominated by badly abraded Cheshire Plain Wares. Nearly 50% of the Roman pottery was excavated from the final fills of the inner ditch (not shown here).

reminiscent of the pot from Great Woolden (Ellis 1993, 71).

The fourth pottery type came from the fill of a pit associated with Phase IV of the Great Woolden Hall site (context 163). This is a thin walled, straight-sided jar of dark-brown fabric, with large quartz inclusions and evidence of some organic temper. The interior shows signs of burnishing but the exterior is very rough, with what appears to be horizontal striations decorating the pot. Nine sherds of a single jar were found but only one beaded rim sherd survived. Since only one rim sherd was recovered it was extremely difficult to reconstruct the height and width of the vessel. It seemed unlikely to have been more than 100mm in diameter. A number of parallels were found for this particular material. It was similar to material excavated at Mam Tor, especially sherds from hut platforms 3 and 4 (Coombs & Thompson 1979, 37, no.2; 38, no. 1). This material was of late Bronze Age/early Iron Age date, centring upon 800 BC. A more intriguing parallel was found from Roman Manchester. A hand made vessel of similar type and fabric was discovered in the demolition debris of the Phase 2 Roman Fort (Walker 1986, 91, Fig. 6.4). This context is dated to the early second century AD. The excavators of Roman Manchester noted the parallel with the Mam Tor material and concluded that 'it probably represents a survival of the traditional Brigantian pottery industry'. This evidence suggested a local pottery tradition covering the whole of the first millennium BC and running into the second century AD.

The Roman Pottery

The stratified Roman pottery from Great Woolden is not extensive, weighing around 500gms, and numbering 49 sherds, and the identification of many of the wares can not be regarded as 100% accurate due to the damage to the material (as shown by the small average sherd size at 10.2gm and the worn nature of many of the sherds) by subsequent Roman activity, ploughing, and the severely acidic soil conditions (Fig 6.11). This had resulted in most of the material being very fragmented and in a lack of diagnostic sherds. Nevertheless, the picture provided by the material recovered from the Roman deposits appears coherent,

but allowance must be made for the plough damage and removal of the upper levels (for a full description of the Roman pottery see Nevell 1992a, Appendix 3).

The assemblage is dominated by fabrics in the Cheshire Plain Ware tradition with sandy orange and grey to buff wares including jars and beakers. There was also material from elsewhere including mortaria rim sherds of the Holt type 9 fabric, from the second century. After the Cheshire Plain Wares the next most common fabric was Black Burnished Ware pottery from south-east Dorset occurring in both the inner ditch and the from the plough soil. Diagnostic pieces were Gillam types 138 (*c* AD 100-250) from the final fill of the inner ditch, and types 308 (AD 130-80) and 309 (AD 160-200; Gillam 1970) from the ploughsoil. Imports from elsewhere in the Empire were confined to

Fig 6.12: Heat cracked stones recovered from the final occupation levels at Great Woolden (context 36).

unstratified material recovered during fieldwalking. This included amphora sherds of the Spanish type, and a single sherd of Samian, Drag 33 type, from the second century. The Roman pottery was found mostly in the occupation layers above the late Iron Age structures (contexts 35 & 36), although some material was found in a small number of features (hearths, ovens and the fence lines). Approximately half of the sherds came form the final fill of the inner ditch and most of these were burnt (there was no Roman pottery from the outer ditch). The latest sherds appear to be late second or early third century in date, most of these coming from either the Phase IV inner ditch fill (680) or the plough soil.

Lithics and Other Materials

The lithic assemblage from the fieldwalking and the excavations do not appear to differ in content, and although the sample is small it seems logical to assess the finds as one unit. The waste flakes indicate the production of tools on the site, whilst the wide striking platforms and pronounced bulbs of percussion on the scrapers and cores suggest that they have been detached by direct percussion (that is using a hammer stone). Within the excavations the flints were found in Phase II and III deposits (contexts 146, 167 and 190), and in Roman deposits (contexts 680 and 694) indicating that they have been redeposited. Those recovered from fieldwalking activities can be seen to cluster around the western edge of the enclosure, closest to the river. Nine of these pieces were found within 40m of the escarpment edge, in a band 40m wide. These finds could be seen to quickly decrease in number into the interior of the enclosure, so that beyond 40m only four flints were recovered, none of which lay outside the farmstead. This assemblage is consistent with a date in the late Neolithic or early Bronze Age, and the small number of flints found suggests an ephemeral occupation, perhaps as a temporary camp, which may have been used to exploit the rich food resources of the mosses immediately to the east and west during these periods. There is a strong possibility that a much larger site has been eroded by the Glazebrook.

As already mentioned earlier other lithic artefacts were excavated from the site, the most notable of which were what has been interpreted as a grit stone grain rubber for a saddle quern from the Phase I pit 241 and the lower stone of a grit stone rotary quern from the large entrance pots-pit to CS1 (350) from Phase II. There were also fragments of a clay crucible from the upper Phase IV fills of the inner ditch, along with slag and fragments of vitrified clay, and burnt stones from the pot pits for CSII in Phase III and from the general occupation layer associated with Phase IV (Fig 6.12; for further details see Nevell 1992a, Appendix 3).

Palaeoenvironmental Material

The acidic soil conditions of the site meant that no micro or macro-fossils survived within the portion of the enclosure investigated in the 1980s and that only a small quantity of animal bones was excavated (Table 6.2). These are very fragmentary and had a uniformly white colour and powdery texture, indicative of having been cooked. This calcination process enabled the bones to survive decomposition from bacteria and the acidic soil conditions. Although around 250 fragments were recovered during the excavations, these were usually too small for reliable identification. In three cases epiphyseal surfaces survived sufficiently to enable assignation to species, whilst six further fragments were tentatively identified. The size of the bone sample is far too small to allow any reasonable statistical analysis, and in any case is very biased in the range of material that has been preserved. Nevertheless, the presence of sheep was identified for Phase II (context 1095), Phase III (840) and Phase IV (36), whilst pig was present in Phase II contexts (136 and 350), Phase III (146) and during Phase IV (163).

Archaeological Context

Material Culture

How should one judge the relevance and importance of the evidence from Great Woolden Hall, which is after all just one rural site? There are two levels on which the importance of the site can be assessed; firstly on the

Fig 6.13: Great Woolden pottery type 1, a thick walled, flat based, open bowl made by hand. These sherds came from contexts 142 & 146 associated with a construction trench radio-carbon dated to the period 120 BC-AD 80.

range and quality of the archaeology in the light of what we know of the late Iron Age and Romano-British rural settlement in the region; and secondly, in its wider regional and national archaeological context.

A discussion of the relevance of the archaeological remains recovered from Great Woolden Hall must concern itself with the material culture of the site in its widest form; from flints and pottery to the shape of the buildings and the overall form of the settlement itself. In this regard the excavation of Great Woolden Hall during the late 1980s was a revelation. Here for the first time was a settlement of the late Iron Age and Romano-British periods with pottery, buildings and a chronology familiar from many other parts of Britain.

For instance, the excavation of over 1500gms of late prehistoric pottery still represents one of the largest such closed group on a site of this type in the North West. The three carbon dates obtained from the site provide a dating framework of 120 BC to AD 320 for this pottery as well as directly dating three fabrics. VCP came from two radio-carbon dated contexts giving ranges of 65-15 BC and 120 BC-AD 80, the two latest dated contexts for this fabric (Morris 1985, 361) suggesting that Cheshire VCP was in production perhaps as late as the mid-first century AD; that is until the Roman conquest of the area. As Great Woolden is *c* 50km from the source of this pottery (the Nantwich/Middlewich area) it lies within the extended distribution pattern for the later production of this material. In this later phase Morris argued that the pottery was distributed up to 140km from the core area of Nantwich. This distribution covered North Wales and Staffordshire down through the Welsh Marches (Morris 1985, 368-70). Radio-carbon dated deposits containing this pottery from a number of these sites indicates that this extended distribution area began in the third and second centuries BC. Not only is the VCP from Great Woolden the latest so far dated but it still represents the most northerly find of this material. At the time Great Woolden was excavated the only other occurrence of this pottery type in the region was at Beeston Castle in central Cheshire (Ellis 1993; Hough 1984, 245-9). However, since then VCP has been identified from the enclosures at Irby on the Wirral, Brook House Farm in Halewood and Mellor near Stockport, and there is strikingly similar material in the published accounts from Eddisbury hillfort on the central Cheshire ridge and Portfield hillfort in the Ribble valley (Fig 6.15). Vessel type 4, which was excavated from a Phase IV Roman pit was similar to fabrics from the Mam Tor hillfort, the Castlesteads enclosure (where eight sherds were excavated from a context radio-carbon dated to the period 260-120 BC; Beta-58077) and the Roman fort at Manchester. This gave a date range of *c* 800 BC to *c* AD 100 suggesting the existence of a regional pottery tradition other than VCP that survived into the Roman period.

The second pottery type to come from a radio-carbon dated context at Great Woolden was the Gallo-Belgic style type 3 vessel, which was found in a post-hole for the construction trench of CS2 in Phase III. The

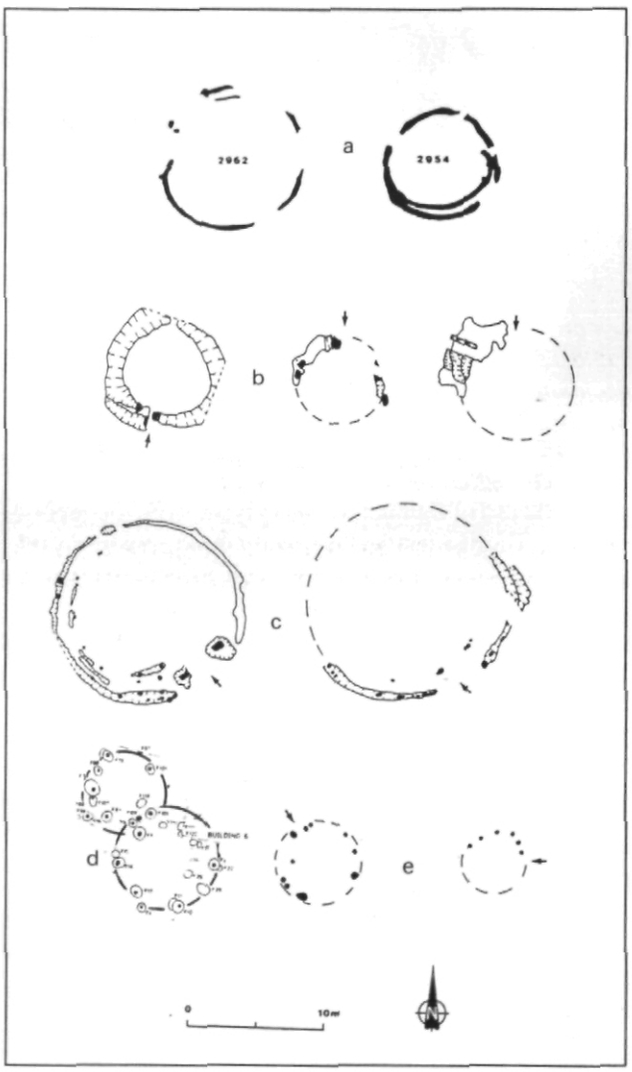


Fig 6.14: Comparative plans of late prehistoric and Roman circular structures from the Mersey Basin; (a) 2nd century Wilderspool; (b) Arthill, early second millennium BC; (c) Great Woolden, 120 BC to AD 80; (d) Beeston Castle 402-234 BC; (e) Tatton Park, 510-270 BC.

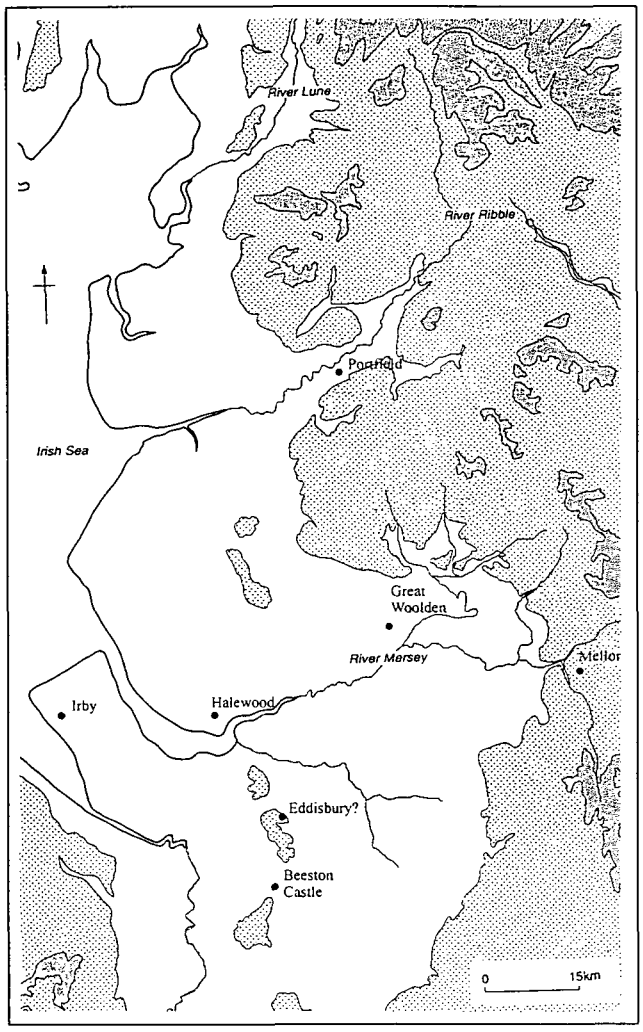


Fig 6.15: The distribution of VCP in the North West. Contours at 100m and 400m intervals.

radio-carbon date obtained gave a date range of 120 BC-AD 80 (GrN 16850). From the same context and thus the same date came vessel type 1.

The two main structures of the settlement were circular buildings of the type familiar from the late Prehistoric and Romano-British countryside. In Phase II Circular Structure 1 was defined by an outer post-trench and an inner ring of small postholes, forming a structure 12.7m in diameter. The evidence excavated within its interior seems to imply industrial rather than domestic activity. The weight of the roof was perhaps supported on the inner ring of posts, which would have needed a tie beam to brace them. How the dozens of stakeholes fringing the interior of the hut should be interpreted is not clear. It is possible that these represented internal divisions associated with the activity within this building. It would appear likely that the second circular structure *c* 15m in diameter, was a double-ring round house with an inner ring of postholes and an outer post-trench. Unfortunately the evidence is too fragmentary to allow any detailed discussion, but it seems likely from the position of the hearth that this Phase III hut was of the same construction as CS1.

Parallels for such structures as these are not often found in the North West (Fig 6.14). Circular post buildings are known from Beeston Castle, where a posthole associated with building 6 was radio-carbon dated to the period 402-234 BC (HAR-4406; Ellis 1993, 39), and at Tatton Park where a fire-pit associated with a circular structure was provisionally radio-carbon dated to the period 510-270 BC (HAR-5147; Higham 1985). Two circular post structures are also known from Irby (see Philpott & Adams this volume) and from the earlier enclosure at Legh Oaks (Nevell 1987 & 1992). However, the only direct parallels within the region are the industrial compounds with their circular post and trench buildings at Wilderspool, although these were of late second/early third century AD date (Hinchliffe & Williams 1992). There is general agreement concerning the basic form of these buildings in lowland Britain; a conical thatched roof whose rafters were supported on a relatively low external wall, with usually an inner ring of posts (Drury 1978, 119-20). Drury has pointed out that the use of relatively unsophisticated, though not necessarily weak, jointing techniques, utilising notching, is assumed to have been used for most of these buildings. The presence of hut circles on Roman farmsteads well into the third century AD is well attested on both northern and southern English sites, such as Penrith Farm in Cumbria and Lockington in Leicestershire (Hingley 1989). Although no such structures were excavated in Phase IV the three buildings identified within the unexcavated portion of the enclosure may fall within this period. There is no reason to assume that they would be substantially different in construction.

Discussion of the economic basis of the settlement is hampered by the fact that ground conditions were not conducive to the survival of faunal remains. However, whilst the apparent tendency for cropmark sites to cluster along the sands and gravels of the lower parts of the Mersey Basin is probably in part due to their relative ease of identification from the air (see Collens this volume), this may also be due to a genuine preference for these lighter and, therefore, more easily workable soils. While cereal pollen was recovered from the nearby Chat Moss pollen profiles (Birks 1964, 28) the only definite piece of agricultural equipment from Great Woolden was the rotary quern from Phase II. This is also the only evidence for grain on the site, whilst livestock is only represented by pig and sheep Phases II to IV. It may be permissible to assume that the wood from the structures excavated on the site was to be found locally, and in all probability the woodland fringing the moss was managed to provide a steady supply. It would thus seem logical to assume that the Great Woolden farmstead practised a mixed farming strategy at all periods, providing a small surplus that could be exchanged for Cheshire VCP or Roman coarse wares; but in what proportion and in what detail is impossible to say.

A National Context

As Matthews has noted (Matthews 1996, 20) the

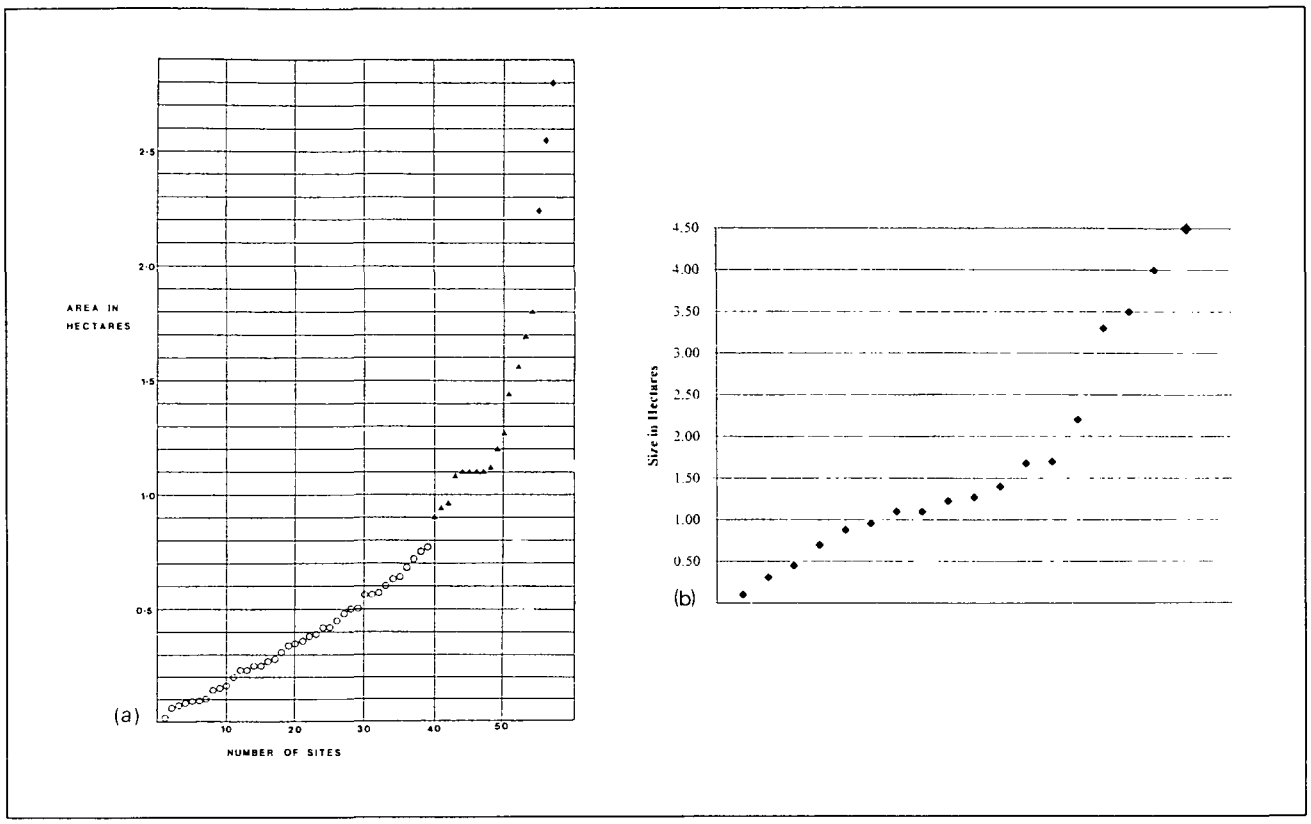


Fig 6.16 Rank/size graphs of the Iron Age and Romano-British enclosures; (a) confirmed and possible sites in the Mersey Basin, excluding sites over 2.5ha; (b) confirmed sites in the North West.

assumption that the rural communities of the North West were too poor to purchase the new material culture of the Roman period is a theoretical view point that can not be sustained, especially in view of the evidence from Great Woodlen Hall. What is clear is that the durable cultural remains (pottery and structures) are more limited in their scope and numbers than on many other rural sites for the Roman period in northern Britain (see Philpott & Adams this volume). But what of the material remains not represented at Great Woolden; in particular wooden, organic and metal artefacts? The site conditions at Great Woolden were not conducive to the survival of such evidence, although indirectly the material is there; in the evidence for wooden buildings and the slag and crucible fragments. Yet because this material is absent and the Roman cultural remains sparse there is a temptation to assume a lower level of material culture than is warranted (Higham 1993; Kenyon 1991). What appears to be at fault is not the archaeology but our own explanations. Our models of cultural usage and exchange, which in the past have been based upon the concept of economic need and cultural imperialism during the Roman period (Higham 1993; Petch 1987; Thompson 1965) need to be re-evaluated. For instance, ethno-graphical parallels have show how many small-scale pre-industrial societies used material culture as a means of constructing and reinforcing individuality rather than as an expression of economic need (Hodder 1982; Weissner 1984). Thus, if we look at the issue of the apparent 'paucity' of portable finds such as pottery from Great Woolden during the Roman period we find that anthropological models suggest two main types of exchange mechanism; subsistence exchange, often referred to as socially disembedded trade, which was concerned with everyday needs; and ceremonial or gift exchange, often termed socially embedded trade, which was concerned primarily with strengthening social ties through gift-partnership, exchange cycles, tribute, and diplomatic exchanges. In other words exchange was often for reasons other than profit, and this may be expressed in the composition of a finds assemblage. The wider implication for the study of rural settlement in the North West is that we should be seeking models that address the issues raised by the regional evidence, not using inappropriate models forced upon us from other areas (Matthews 1996, 18-9). We could thus re-examine the evidence to explain, for instance, the lack of material culture, or 'Romanisation', in the region in terms other than economic.

With these issues uppermost it is now possible to attempt to model the Great Woolden Hall settlement and so to provide a regional hypothesis for social organisation that can be tested in future years. The first issue we can address is the form of the enclosure. A study of over 240 rural enclosure settlements with Roman activity recorded in the pages of Britannia between 1970 and 1992 (Nevell 1992a) supports Keith Matthews anthropologically based model of settlement hierarchy, where the size of the social grouping is directly reflected in the size of settlements in the landscape. Thus, the 60 plus enclosures of the late

prehistoric and Romano-British period confirmed and suspected within the North West, fall into four broad size groupings which can be fitted into Matthews' model. These bands are sites between 0.1 and 04ha, sites between 0.4ha and 0.9ha, 0.9ha to 2ha and sites larger than 2ha, perhaps corresponding to Matthews seventh to fourth levels of settlement; that is small and large family farmsteads, hamlets and villages. Intriguingly, by the late Iron Age all the traditional style hillfort settlements, those to be associated with Matthews' fourth level of settlement which performed as central places, had all been abandoned, leaving the landscape dominated by sites such as Great Woolden Hall, a large family farmstead. Such a shallow hierarchy, with only two or three levels of settlement in the late Iron Age would appear to fit Kosse's definition of a simple chiefdom (Kosse 1990) and may even suggest that the Mersey Basin, if not the whole of the North West had been taken over by an external force in this period. One of the issues that will need to be addressed by researchers in the next decade is what rural settlements, if any, overlay these late prehistoric patterns in the Roman period. Is the Eaton-by-Tarporley Roman villa, and the few other potential Romanised farmsteads in western Cheshire (Crewe Hill near Farndon, Malpas, Tattenhall and Utkinton), the exception or do they represent a new settlement level in this period?

Great Woolden Hall was noteworthy as the first extensively excavated Iron Age and Romano-British farmstead in the North West, but clearly it can not be used as a typical rural settlement for both periods because of the complexity of that settlement pattern. Nevertheless, the typological, material cultural and social implications of the site means that it will remain one of the key rural settlement examples within the region for many years to come.

Acknowledgements

Thanks to Dr Nick Higham for first alerting GMAU to the existence of the site and to Nigel Neil and Claire Hartwell for the initial evaluation of 1986. Over two dozen people worked on the site during the two years of investigation, as part of the Salford Archaeological Project, an MSC funded scheme, but a special thanks is owed to the supervisors Peter Arrowsmith, Tom Jones, Derek Pierce, and Jackie Wylie. The Roman pottery was studied by Richard Clark, the bones by Norman Redhead, and palaeoenvironmental analysis was undertaken by Chester Archaeology.

Chapter 7

Excavations at an Iron Age and Romano-British Settlement at Irby, Wirral, 1987-96

An Interim Statement

Robert A. Philpott and Mark H. Adams

The investigation and excavation of the site at Irby forms part of a long-term programme of research into the Romano-British rural settlement of the lowland North-west of England initiated by R A Philpott. The aims of the wider programme are to study the distribution of settlement in the area, the internal organisation of settlements, their chronology, ecology and economy. The project has embraced aerial photography, with a programme of regional flying begun in 1987 which since 1989 has been run jointly with Dr Jill Collens of Cheshire County Council, fieldwalking and small-scale excavation.

The presence of an ancient settlement site in Mill Hill Road, Irby, Wirral (NGR SJ 25 83; Fig 7.1) first came to the attention of staff at Liverpool Museum when a late Roman bowl found by chance in a garden during the Second World War was brought for identification in the early 1980s. In 1987 further finds of pottery were reported to museum staff and a section of Romano-British ditch noted in the section of a modern construction trench. Subsequently, in 1989 and 1991, the owner, Mrs M Rogers, invited the Field Archaeology Section of Liverpool Museum to excavate in the same garden. The alignment of the ditch was confirmed and traces of occupation deposits were recovered, but the extent of the site remained unknown and the state of preservation of occupation deposits in the vicinity, particularly in view of the location of the site within a 1920s housing estate, was also undetermined. However, in 1992 Mr J H Billington, the owner of an adjacent undeveloped orchard, generously offered to allow the Museum to carry out larger-scale excavations there to help resolve these questions. Subsequently, the owners of further neighbouring plots also offered their gardens for investigation. Work began in the summer of 1992 and was concluded in April 1996. The constraints of working around buildings, hedges and gardens dictated that excavation would be piecemeal and the opening of large areas impossible. By the close of fieldwork over 40 small areas and separate trenches had been excavated in eight separate gardens covering a total of approximately 2500m (Fig 7.2). The objectives of the initial excavation were to assess the extent and the survival of Romano-British deposits in adjacent plots but once extensive deposits were found, more wide-reaching questions of the layout of the settlement, its chronology and environment could be addressed.

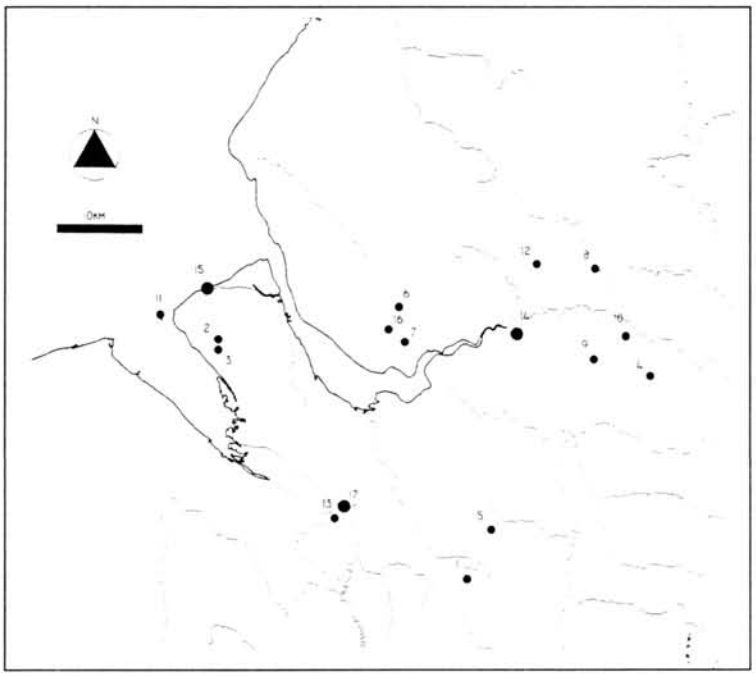


Fig 7.1: Location of Mill Hill Road, Irby and other Iron Age and/or Romano-British sites in the Mersey Basin region.

Key:

1 Beeston; 2 Irby, Mill Hill Road; 3 Irby, Telegraph Road; 4 Tatton Park; 5 Eaton-by-Tarporley; 6 Ochre Brook, Tarbock; 7 Brook House Farm, Halewood; 8 Great Woolden Hall; 9 Legh Oaks Farm, High Legh; 10 Arthill Heath Farm, Little Bollington; 11 Hilbre Island; 12 Croft.; 13 Saltney; 14 Wilderspool; 15 Meols; 16 Court Farm, Halewood; 17 Chester.

Soils and Geology

The site lies at a little over 60 m AOD near the top of one of a series of low Permo-Triassic sandstone ridges which run along the Wirral peninsula (Fig 7.1). Close by, to the east and west, deposits of Boulder clay lap up the hill but most of the site has a well-drained brown earth soil of the Rivington Series.

The Stratigraphy

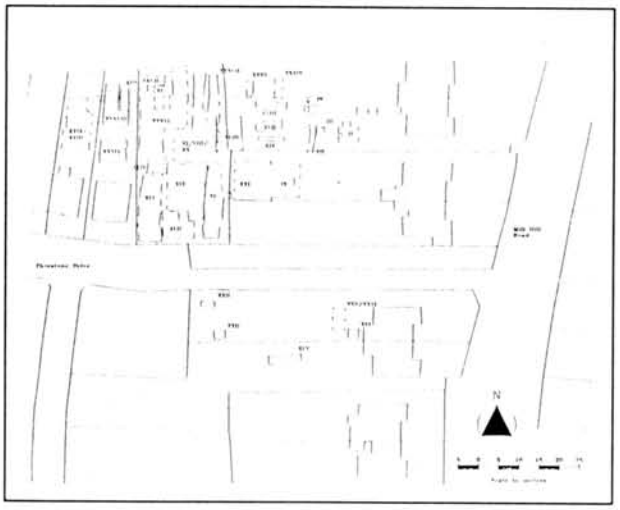


Fig 7.2: Location of the Irby trenches and modern house plots.

The general stratigraphy at Irby consists of a layer of topsoil and a ploughsoil layer, ranging in thickness from 0.2-0.4m, sealing a very dark brown to black layer of occupation debris which is characterised by abundant charcoal, heat-shattered stones and very occasional pottery. The main stone types within this deposit were red sandstone and cobbles of an igneous rock not native to the site. The igneous rock cobbles were often heavily fractured, presumably as the result of heating. This layer ranges in thickness from 10mm to 0.20m and is generally thinnest on the eastern part of the site, increasing in depth to the south and west. It rests almost directly on sandstone bedrock or grades onto a very thick deposit of soft silty sands derived from weathering of the sandstone. The layer of occupation debris is fairly homogeneous, both horizontally and vertically but shows subtle variations in colour, texture and the density of inclusions which probably represent different episodes in the accumulation of this deposit. However, rapid drying of the site tended to obliterate these differences. The main vertical changes in the soil profile occur as zones of mixing by earthworms, animal and root action at the top between the overlying ploughsoil and at the base of the profile between the sandstone bedrock or natural sand. The features described below can be broadly grouped into those sealed by the occupation deposits, those which cut through them and a substantial intermediate group which appear to have been produced at various stages during their formation.

The eastern part of the site has been heavily truncated by modern gardening; to the west the depth of stratigraphy is greater and the site appears to have lain in a slight hollow in the upper surface of the sandstone, which protected it from medieval and later ploughing. This has resulted in unusually good preservation for a rural site of this period. The site covers an area of at least 110 m east-west by over 80m north-south, and although the northern edge has been defined for some phases of the occupation, its limits have not yet been established in the other directions.

In many parts of the site, especially in Areas VIII, XIX, XXXVI, XL and XLI, the fills of features tend to be closely similar to the material through which they were cut. Many of the features appear to have been dug quickly and backfilled with the excavated material. This caused considerable difficulty in identifying and in phasing features. Features such as post-pits or post-holes could often only be identified with confidence when their packing stones were exposed, the cut for the feature often only becoming visible once much of the material surrounding the packing stones had been removed, exposing natural deposits in the sides of the cut. It was thus often impossible to be certain that these post-holes were not originally cut from a higher level. This has also meant that some post-holes which were not packed with stones may have remained undetected.

The Main Structural Phases

Phases 1-2

The first two phases of activity on the site are represented only by artefacts, Mesolithic/early Neolithic and late Neolithic/early Bronze Age worked flint. A number of features contain only flint but further detailed analysis of the stratigraphic record is required to identify separate phases of earlier prehistoric date.

Phase 3

The earliest phase of occupation which has left

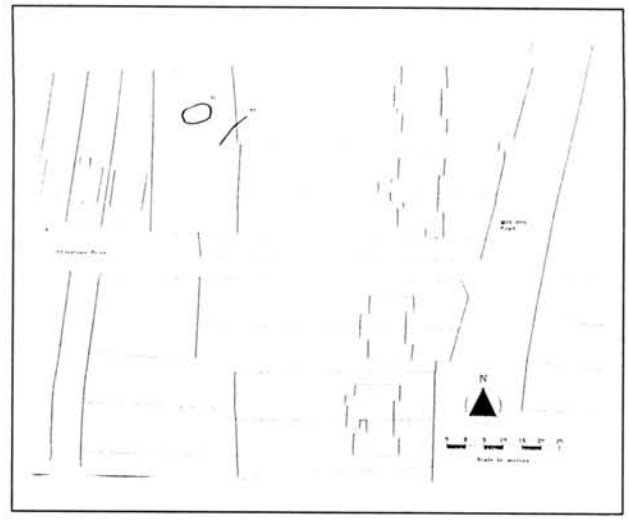


Fig 7.3: Location of structures in Phase 3.

recognisable archaeological deposits is represented by a series of shallow, heavily-truncated gullies, pits and small post-holes which cut into natural sand or sandstone. Little is available in terms of coherent building plans but elements of two probable structures have been recognised (S1, S2), both with curvilinear plans (Fig 7.3). Dating for these is at present uncertain though at the moment their association with a coarse, handmade pottery suggests a later prehistoric date. Although the bulk of the handmade pottery in the earliest contexts is Cheshire Stony VCP (Very Coarse Pottery) of probable Iron Age date, a few early features contain also worked flint. It is hoped that radiocarbon dates will be obtained for these features. No clear limits to the settlement at this stage have been reached and it is not yet certain that the site was enclosed during this phase.

Phase 4

The next main phase consists of a series of post-holes and other cut features, associated with small quantities of Roman pottery. The main structural element of this phase is a sequence of at least three circular buildings (S3, S4, S5), rebuilt on almost the same spot. These have been provisionally assigned to the same broad occupation phase (Fig 7.4) but until detailed stratigraphic analysis is carried out, it is uncertain that all of the features linked in Figure 3 are stratigraphically related. At the moment it appears that there were at least three to four roundhouses built using posts 0.2m in diameter spaced at intervals of 1-2m. Many of these posts were tightly packed with sandstone blocks, which appear from the degree of weathering to have been derived from field clearance rather than freshly quarried. The diameter of the structures ranges between 11m and 12m, and within the interior space of these buildings there is a dense concentration of large post-holes which may represent a sequence of internal posts to support a roof. No evidence for stone or tile roofing was found so it is assumed that these huts were roofed in thatch, heather or other organic material.

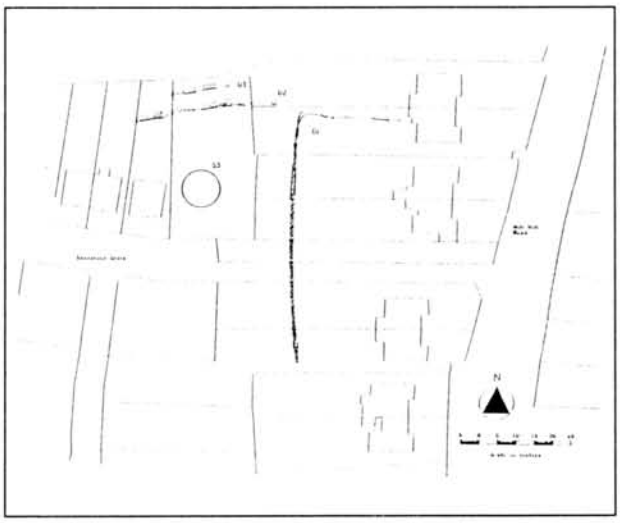


Figure 7.4: Location of structures in Phase 4.

The same location within the site seems to have been preferred for post-built structures throughout its occupation. A possible reason for the preference for this part of the site could be that it overlies a sandy natural subsoil. As well as offering better drainage than the sandstone bedrock to the north and west, the excavation of post-holes would have been easier on this part of the site. However, the reuse of the same location may indicate that space was limited within the settlement, probably because it had been enclosed by this time.

Probably during Phase 4, but possibly before, the settlement appears to have been enclosed by ditches. Four ditches have been recorded in total. Ditches 1 and 2, the two northernmost, may in fact be the two ends of the same feature but the full circuit has not been traced. The two ditches are separated by a gap in the northern side associated with a group of large post-holes, which appear to represent a gate structure. East of the entrance the Ditch 1 makes a 90^0 turn to run southwards for at least 60m bisecting the enclosure. Ditch 1 shows signs of a recut. A palisade line runs to the south of the east-west stretch of Ditch 1, and another palisade follows the same ditch after its turn to the south.

A third ditch (Ditch 3) was noted parallel to and north of Ditch 2. It is likely that the two western ditches (D2 and D3) were open contemporaneously as they are closely aligned but this has not yet been confirmed. The inner ditches (D1, 2) were deliberately filled in, possibly before the outer ditch (D3) silted naturally. Significantly, the black occupation deposits of the later Romano-British occupation sealed the inner ditch (D2) but did not extend as far as D3, suggesting the continued presence of a bank with its associated ditch prevented the spread of material that far. The precise date of infilling and the phases in which the two ditches were cut requires clarification by a detailed examination of the pottery in the primary fills and of the stratigraphic sequence.

Ditch 4 was located underlying the modern field boundary which forms the northern edge of the large plot but no finds were recovered from the short excavated section. As the hedge here also marks a parish boundary it is likely to be of some antiquity, probably late Anglo-Saxon in date, and it may be no coincidence that the alignment of the parish boundary follows the enclosure ditches precisely at this point, even making a slight change in direction beside the enclosure. It seems probable therefore that the parish boundary respected the earlier ditch or earthwork.

This phase is also associated with the first structural evidence for domestic activities at Irby. A clay-built oven was situated to the west, partly dug into bedrock. This appears to have collapsed during use and it is hoped will provide well preserved organic material such as seeds for much-needed environmental data.

Phase 5

The post-built roundhouses were succeeded by at least one structure (S6), but possibly more, built using a slightly different technique from preceding buildings

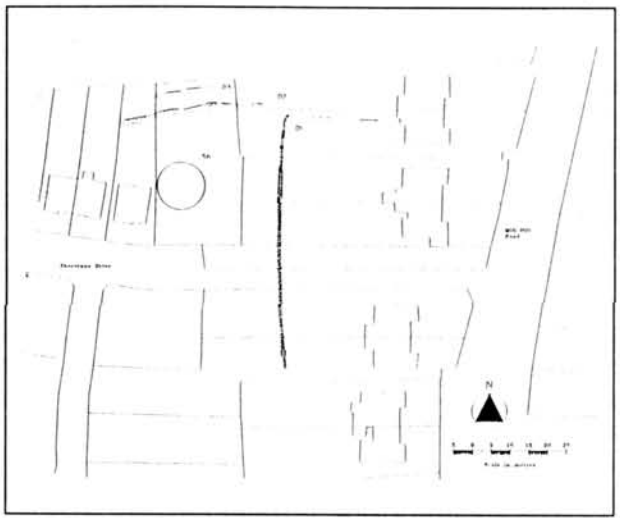


Fig 7.5: Location of structures in Phase 5.

(Fig 7.5). A trench 0.2m wide and at least 0.3m deep was used to provide a foundation for panels, probably of wattle and daub. These were packed into the trench using sandstone cobbles. On the northern side at least, the cobbles were undisturbed, indicating that the panels decayed *in situ*; thus the building was abandoned, not demolished. These buildings were polygonal, with each straight stretch of 1.5-2.0m representing the length of the panels. At the time of writing, the Irby example is provisionally dated to the 2nd century AD. Like the post-built roundhouses, these structures were probably also roofed with organic material.

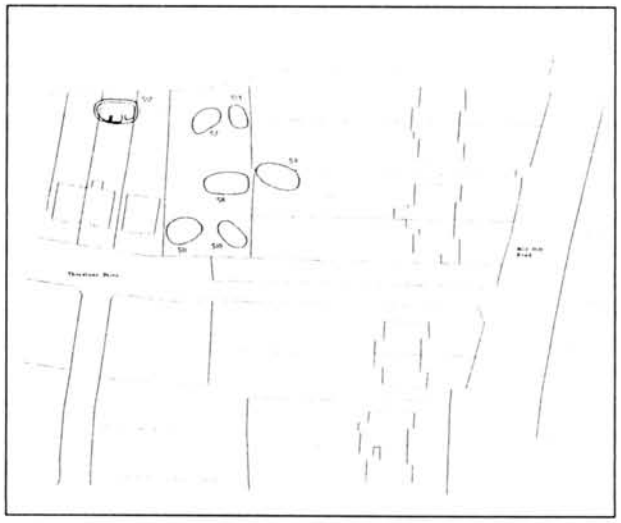


Fig 7.6: Location of structures in Phase 6.

Phase 6

Phase 6 seems to represent a major reorganisation of the plan of the settlement. The inner ditches (D1 and D2) were deliberately filled in with a deposit of crushed sandstone and rubbish. The primary fill of Ditch 2 contains pottery dating to the later 2nd century. The maximum combined extent so far recovered of Ditches 1 and 2 is 90 m east-west. During this phase, for the first time, buildings appear to spill over the main northern ditch (D2) and also probably across the north-south return of Ditch 1.

The Phase 5 roundhouses appear to have been replaced by a series of similar post-built structures (S7, S8, S9, S10, S11, S12, S13) which are sub-rectangular in plan (Fig 7.6). These are usually about 10 m long and 8 m wide. The incomplete plans of seven buildings appear to be represented. Three are spaced close together on three sides of an open area. In the absence of detailed analysis of the stratigraphy and pottery it is uncertain whether all are contemporary but this seems plausible since there appears to be no overlap.

The post-holes for at least one sub-rectangular building (S7, also possibly S13) were cut through a dark organic-rich layer which developed over the infilled ditch (D2). Another probable subrectangular building represented by a curvilinear gully with an angled return (S9) was probably constructed over the infilled ditch although the relationship was not clearly observed. A further gully at the southern end of the main excavated area closely resembles the first and may belong to a similar structure. The function of these structures is at present uncertain.

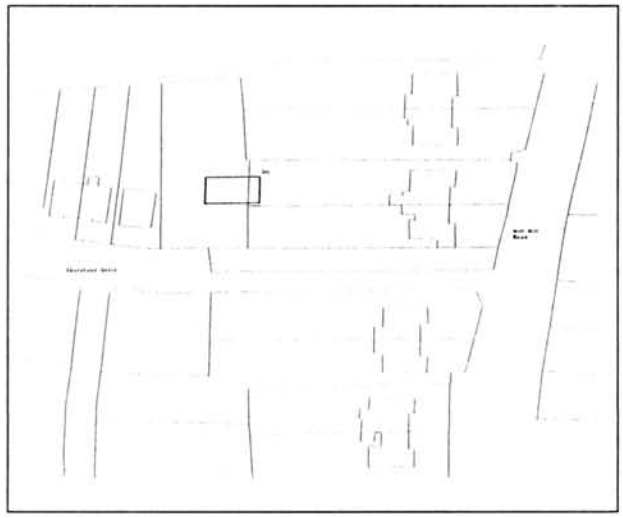


Fig 7.7: Location of structures in Phase 7.

Phase 7

The exact stratigraphic position of this phase is uncertain, though it was definitely sealed by one of the walls associated with Phase 8. The only structure in this phase was a shallow flat-bottomed gully aligned east-west which appears to represent a rectangular building measuring *c* 16 x 6.5m (S14, Fig 7.7). Due to the difficulty in locating features at Irby, this was not noted until layers which it probably cut had been removed. A relatively late date can be assigned upon the basis of the finds it contained. Alongside samian ware and a black-burnished ware rim, was 'shell-tempered' ware, suggesting a *terminus post quem* in the early 4th century AD.

Phase 8

The penultimate phase is represented by at least two low, rubble building foundations. A silver coin (as yet not positively identified, but probably a *denarius* in which case it is unlikely to post-date the mid 3rd century AD) was found within the wall of S15 which also cut deposits containing a 3rd-4th century AD coin. One structure is located in the western part of the site (S16), the other in the centre (S15; Fig 7.8). The wall to the west belongs to a building with substantial sandstone footings built of randomly packed blocks. At the top of the wall as it survived was a steatite bead carved with Plastic Style decoration of the 2nd century BC. This building had a cobbled threshold with clay floors in the interior which lay to the north. The size of this building can at present only be guessed at; only one side has at present been detected, but the width of the foundations suggests a substantial structure.

Contemporary with this building was a pair of east-west walls (S15), one of rubble construction, the other of somewhat larger blocks. The northern of these has been traced for at least 30m and seals the internal north-south ditch (Ditch 1). No floor surfaces were found associated with this structure. Both walls contained what appeared to be settings for a series of vertical timber posts, that to the north arranged in a zig-zag pattern. If it is correct to see these as a single entity, it measured 12m wide but no convincing end walls have been recovered. Substantial post-holes packed with large sandstone blocks exist to either side and small trenches excavated to the south have suggested further activity in this area. At the moment, the best interpretation that can be placed upon this structure is that it represents the footings of a substantial building constructed on a rubble plinth.

Possibly belonging to this phase is a wide, shallow gully (*c* 0.30m wide and 0.30m deep forming a probable subrectangular building of uncertain size (S18). The gully was packed with small cobbles and a void was present down one side which may represent the position of a timber panel.

Two other buildings may belong to this phase. A post-built rectangular structure (S17) with a possible internal partition is present in Areas VI, VIII and XXXVII. Structure 19 lay to the south-east of the main complex and consisted of a substantial gully packed with clay. In the fill was a broken beehive quern stone.

Phase 9

The latest phase on the site is represented by a series of large subrectangular post-holes measuring *c* 1m x 1m with substantial packing stones. These show some evidence of alignments and presumably form part of one or more substantial timber post-built structures (S20). Unlike many post-holes in earlier phases, the packing stones show no sign of disturbance, suggesting the posts were left to rot *in situ*, a circumstance consistent with the abandonment of the settlement. Although the fills contain Romano-British pottery, this could be residual

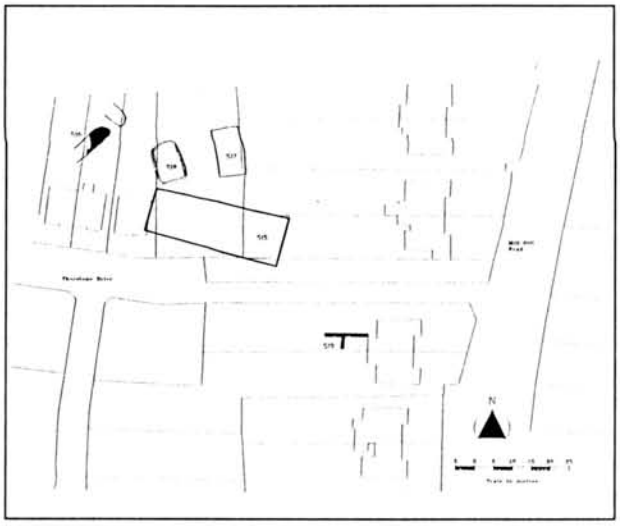


Fig 7.8: Location of structures in Phase 8.

and there is no absolute certainty of a Roman date for the latest phase. Only radiocarbon determination can resolve the question.

The Structural Sequence: Discussion

The sequence of buildings at Irby is surprisingly well preserved for a rural site. A number of structures have been detected though the plans of buildings are not yet well understood. The Iron Age structures appear to be poorly preserved and require further analysis to recover the plans. The earliest Romano-British buildings are circular structures of a type which has been widely recognised over Iron Age Britain and persisted in many places into the Romano-British period. At Irby a succession of these structures was built on the same spot, indicating frequent replacement and rebuilding, probably within a fairly constrained area within the enclosure. The presence of a large number of intercutting post-holes in the interiors of these overlapping structures suggests the use of posts as internal roof supports.

The polygonal building replaced strictly circular structures. Polygonal buildings have been recognised on a number of rural sites in southern and eastern England but rather than being timber-framed as is suggested for some examples (Leech 1982), the Irby example seems to have been constructed with panels each held within timber posts at the angles. A similar construction technique has been observed in Northumberland, for example at Belling Law, North Tynedale during the 1st-3rd centuries AD (Jobey 1977).

One unexpected discovery was the presence of a phase of well-stratified sub-rectangular buildings marking a transition from the familiar circular buildings of the Iron Age tradition to a Romanised rectangular form. Although the change in building plan from circular to rectangular has been identified at many rural sites in the Midlands and north of England (Higham and Jones 1983, 64-65; Hingley 1989, 33-35), the intermediate subrectangular structures are less common, although not unknown in Roman Britain.

Table 7.1: Preliminary Quantification of Romano-British Pottery from Irby, Wirral, by Type and Weight

Pottery Type	*Total Number of Sherds*	*Total Weight in gms*	*Average Weight*	*Standard Deviation*	*Max Weight*	*Min Weight*
Amphorae	18	578.80	34.05	39.43	157.8	2.9
Black Burnished	714	4309.42	7.00	23.35	520.8	0.1
Colour-coated	84	760.60	11.35	37.01	293.9	0.8
Grey Wares	269	1293.65	5.39	7.04	50.7	0.1
Mortaria	55	1209.7	22.82	20.56	96.5	0.9
Orange Wares	1217	5670.90	5.32	9.17	106.5	0.1
Samian	47	225.00	5.49	6.56	25.2	0.1
White Wares	42	623.1	15.58	28.92	165.3	0.2
Total	2446	14671.17	6.0			

Subrectangular buildings were recognised at Wilderspool, Warrington (Hinchcliffe and Williams 1992, 108-110, Fig 64) but recent work, notably in excavations by the Field Archaeology Section of Liverpool Museum at Halewood, Merseyside during 1996, have brought to light new examples, dated broadly to the 2nd-3rd century AD. These, together with a further possible case at Tarbock, suggest that, rather than being a single isolated instance, the Irby examples form part of a more widespread regional development in the mid-Roman period.

An understanding of the chronology of the early period is hampered by the almost complete dearth of closely dated late prehistoric finds. However, occupation may have continued without a break into the Romano-British period. At some stage, the site was enclosed by modest ditches whose primary purpose appears to have been to define the limits of the settlement, retain livestock and exclude wild animals and unruly neighbours, rather than being defensive in any military sense. At some time in the later 3rd or early 4th century AD the ditches were filled in and the settlement either shifted its focus or expanded over the ditch. This coincided with a change in construction from circular houses to subrectangular buildings. This phase may have immediately preceded or have been contemporary with substantial buildings with rubble foundations. This change in construction may reflect a growing Romanisation of the rural population owing perhaps to the influence of Roman structures in towns and military centres of the region.

Artefacts and Environmental Remains

The provisional discussion of the artefacts and environmental evidence relies heavily on the comments of the various specialists made at the assessment stage of the project. They are thus potentially subject to modification in the light of detailed analysis but a preliminary statement is desirable to illuminate chronology as well as economic and environmental aspects of the settlement.

Earlier Prehistoric Period

There are 142 pieces of struck flint from the site, demonstrating intermittent repeated occupation over many thousands of years. Over half of the assemblage is not sufficiently diagnostic to be attributed accurately to any particular period, consisting largely of small knapping debris and waste flakes.

The earliest finds from the site consist of a small group of Mesolithic stone tools and waste, comprising at least 30% of the assemblage. Four microliths date the occupation to the later Mesolithic period (after *c* 7000 BP). The other flint material is less easy to interpret. A small amount of Early Neolithic material (*c* 5400-4500 BP) may be present, but this type of flint is difficult to distinguish from Mesolithic types in the North West so this material may be part of the earlier occupation of the site. There is a small amount of more easily attributable late Neolithic/early Bronze Age (*c* 4500-3200 BP) material (*c* 2%) which is rare in the county but about which little can be said in settlement terms.

Part of the undiagnostic group includes some material of a more *ad hoc* flint technology which may date to slightly later than the above groups. If proved, this could be very significant but this kind of material is not yet well understood in the region and further work is required to confirm the dating.

The Iron Age Phase

The site has produced an important group of late prehistoric material, including one of the largest groups of pottery from the region. The pottery consists of 590 sherds of weighing over 3.5 kg, of which the majority is probably Iron Age in date. Among the seven or eight ceramic fabrics present, are two distinct types of Cheshire Stony VCP (Very Coarse Pottery) as well as a modest quantity of possible later Bronze Age material. The forms include vessels with flared rims and at least two barrel-shaped jars. The material is rare in the area, and is well-stratified but the chronology is wholly uncertain. The Cheshire Stony VCP offers little help in dating since it appears to have been manufactured over a long period; Nevell suggests *c* 500 BC to the mid 1st century AD (Nevell 1994, 34). Radiocarbon determinations are a high priority to refine the dating of the prehistoric phases of activity and of their associated artefacts. With the exception of the VCP which is likely to emanate from the Middlewich area 50 km south-east

of Irby, the origin of the material is as uncertain as the dating and thin-section analysis of the prehistoric pottery is planned to determine the source.

The Iron Age material includes the most closely datable single object, a decorated steatite bead, which is attributed on stylistic grounds to the 2nd century BC, although its findspot, firmly stratified within the construction of a Roman wall, suggests either the deliberate burial of an heirloom or the deposition of a 'found' article. Soapstone objects of Iron Age date are not common in Britain but a few pieces have been recovered from sites in Wales, including Walesland Rath in Dyfed, Prestatyn in Clwyd (Blockley 1989, 133, Fig 63, no 20) and the Iron-Age hillfort at Dinorben, Abergele (Savory 1971, Fig 1,3). The sources of steatite or soapstone are very restricted in Britain, but much the closest is Anglesey, and it seems likely that the Irby bead, as well as the Welsh material, derives from there. Whether it arrived directly or passed through intermediaries is uncertain. Together with the likely Middlewich source of the VCP, the presence of the bead provides an indication of contacts from outside the immediate region in this period. These are the only visible manifestation of what my have been commonplace contacts between and within tribal groups at that time.

Other finds of later prehistoric material include two spherical clay weights, one of which was complete, two fragments of subrectangular weight and one cylindrical weight about two-thirds complete. These are types found in late Bronze Age and Iron Age contexts in Britain. Larger examples of the same form as the cylindrical Irby type occur in Iron Age contexts at Willington, Derbyshire (Elmsdon 1979, 197-205) and the Breidden hillfort, Powys (Musson 1991, 38).

The Irby assemblage goes some way to reinforcing Nevell's recent conclusions on the later prehistoric pottery in the Mersey Basin (Nevell 1994a). It is becoming clear that an area which until fairly recently was considered virtually aceramic (Matthews 1994) does in fact have a variety of ceramic products. The Irby assemblage will extend the range of types from the region. However, the difficulty of locating late prehistoric sites, and the scarcity of finds associated with them, means that progress will be slow in elucidating the full range and chronology of the ceramic tradition.

The plant remains from the Irby site have far exceeded initial expectations and have the potential to make an important contribution to the understanding of the environment, diet and economy of the occupants during the late prehistoric and Romano-British periods. Only carbonised material survives on the site and no waterlogged deposits were encountered. The environmental assessment for the late prehistoric period identified some post-holes rich in carbonised cereal grains and chaff, including barley, spelt, and possibly rye and bread wheat. The lowland North West of England is very poor in environmental data for both the late prehistoric and Romano-British periods and an extensive programme of analysis on the large number of Irby samples has been agreed by English Heritage to attempt to provide baseline data on the changing use and treatment of cereals in the region.

The Romano-British Period

Few Romano-British rural sites have been excavated in the lowland north-west of England and they are notoriously poor in artefacts compared with sites of similar date in areas further south or east. The Romano-British finds assemblage from Irby is now amongst the largest from a rural site in the region and provides valuable evidence of the economy and chronology of the site as well as the range of activities practised there.

Inevitably, one of the most common classes of artefact is pottery with a total of about 2400 sherds (Table 7.1) but the material is heavily fragmented and few diagnostic sherds are present. However, a range of fabrics can be recognised from a variety of sources. Pottery from within the North West itself includes orange and grey wares probably from the Cheshire Plains kilns and *mortaria* from Wilderspool on the Mersey, and Holt on the River Dee. Material traded from elsewhere in Britain was produced in kilns in Warwickshire (Hartshill-Mancetter mortaria), Oxfordshire (mortaria), the Nene Valley (coloured-coated wares), south-east Dorset (Black-burnished Ware BB1) and probably Yorkshire/Lincolnshire ('shell-tempered ware'). Continental imports are represented by a small quantity of samian ware, a few amphora fragments and a little colour-coated ware. Overall, the Roman pottery dates from the later 1st to later 4th centuries AD with no apparent break (Figs 9 and 10).

A small quantity of personal ornaments has been discovered, including two shale bracelets (one of possible Iron Age date), a possible copper-alloy penannular brooch and two probable copper-alloy bracelets and a small number of glass beads and one of amber. A wave-decorated glass bead is an unparalleled type. A small quantity of vessel glass was recovered but only one vessel, a bottle, was identifiable. However, window glass is present in minute quantities, suggesting the presence of at least one high status structure in the settlement. It is likely that this lies outside the area excavated so far.

As is usual on rural sites in the region, coins are scarce and only seven certain Roman coins have been recovered in the whole excavation, with three further possible coin fragments. Not all have yet been conserved but four are certainly 4th century in date, the latest being an irregular copy of an issue of Magnentius or Decentius (AD 351-2). Only a single piece can possibly be ascribed to the 2nd or 3rd century. Perhaps relevant to the occupation of the present site is a small dispersed hoard of about nine coins which may have been buried in the AD 360s or 370s found in 1982 about 450 m from the settlement. Even taking in the nearby hoard, the low volume of coins reflects the pattern found elsewhere in northern and western rural Roman Britain

of minimal coin use until the AD 260s. Even after then the incidence of loss is so low as to suggest a very limited degree of coin use.

About 2700 fragments of metal-working working waste (slag and fragments of vitrified clay) testify to iron-smithing. Smithing hearth bottoms from small bowl hearths have been recognised, along with one tuyère fragment and fragments of broken crucibles. The fuel was charcoal although small quantities of coal have been recovered which palynological and reflectance analysis has demonstrated to have originated in an outcrop near Neston, south Wirral. Some of the products of smithing may be represented amongst the ironwork, which includes tools such as a saw, a barb-spring padlock, possible chisels and awls, carpenters' nails and shoe-nails, as well as possible binding strips. Crucible fragments hint at non-ferrous metallurgy taking place on the site.

Other finds include a range of objects appropriate to a farming settlement, with fragments of several sandstone rotary querns and one granite saddle quern. A carved stone trough of uncertain function was also recovered. Fired clay including some with wood or wattle impressions is probably derived from domestic ovens.

The environmental assessment of the Romano-British phases indicates the presence of cereal grains in a number of samples. Grains of barley, spelt, bread wheat, oats and possibly rye were all recorded, along with chaff from barley, oats and spelt. Weed seeds, heather and burnt peat were also noted along with seeds of *Prunus*, oak charcoal and a hazelnut shell. The heather may have been used on the site as bedding or thatching material (J Huntley *pers comm*). The potential importance of the site at Irby as one of the few to produce environmental data for the Romano-British rural lowland North West of England has been highlighted in recent research (Huntley and Stallibrass 1995, 46).

Economy

The finds assemblage gives some indication of the activities practised on the site at Irby, the trade contacts and the level of material culture of the site's occupants. Minor industrial activities have been recognised in the Romano-British period, with production of small iron objects, probably including the tools and nails recovered on site, and possibly copper-alloy objects as well. A significant number of quernstones, both saddle and rotary, and the presence of a variety of charred cereal grains and chaff suggest an agrarian aspect to the economy, while the presence of unfinished querns in red sandstone strongly suggest production using outcrops in the immediate locality.

Unfortunately soil conditions were too acidic for the preservation of anything but burnt bone, and there is thus virtually no direct evidence for animal husbandry or the consumption of animal products. The spinning and weaving of wool implied by the discovery of Iron Age loom weights and a Romano-British spindle whorl need not have used the produce of sheep from the farm but it remains likely that the settlement had a mixed economy.

The interaction of the inhabitants with the surrounding hinterland, and areas further afield, is suggested by the presence of pottery from Wilderspool, mid-Cheshire and also from southern Britain. The pottery assemblage is dominated by oxidised wares, probably largely from the Cheshire Plain kilns, but a considerable proportion (29% by sherd count) is Black-burnished ware from south Dorset. The high proportion of Black-burnished ware suggests direct access to the sea-borne market by which these entered the region (probably Meols on the north Wirral coast), and is comparable to the high values of this ware recorded from the settlement at Wilderspool on the Mersey (Allen and Fulford 1996, 247, 260).

The dearth of coins even in the later 3rd and 4th centuries AD suggest that the few minor luxury items were obtained through exchange of agricultural produce and manufactured items rather than cash, or that cash transactions took place away from the settlement.

The sparseness of material culture has already been mentioned and could be due to a number of reasons. The traditional explanation of poverty may indeed be a factor, but any assessment of wealth or poverty has to take into account the possibility of wealth reckoned in non-durable form (eg livestock), or in an archaeologically undetectable form (eg land). It must also be viewed against the wider context of the patterns of consumption and production at rural communities within the region and in neighbouring areas. There is growing evidence from excavated sites, as well as the much more partial picture afforded by fieldwalking and metal-detector finds, that pottery, coins and other metal items are scarce at rural settlements. This is unlikely to be due to the unavailability of manufactured items, since pottery, glass and copper-alloy and iron objects were all produced in Cheshire and the Mersey Basin. All of these were produced during the heyday of the industrial settlement at Wilderspool, only 35 km to the east of Irby, while pottery kilns are attested in Cheshire at Northwich, Middlewich and Chester. Traded wares from outside the region and, to a lesser extent from the continent, are present in significant quantities in assemblages at Chester and the mid-Cheshire towns. High quality pottery, other luxury objects and coinage seem to have been largely circulated within the urban settlements and military sites in the lowland North West, but failed to arrive in rural settlements in any more than very limited quantities. Although the towns and forts must to some degree have relied on their agricultural hinterland to supply cereals, livestock and other agricultural produce as well as raw materials, the exchange of goods in markets does not seem to have resulted in the outflow to rural settlements of a great volume either of coinage or of manufactured goods which can be detected in the archaeological record. The distance from formal markets was not great: Irby lies only 7 km from the Iron Age and Romano-British harbour at Meols while the legionary fortress of Chester with its civil *canabae* is 24 km to the south. It may be

that any surplus generated by the rural settlements was largely absorbed in taxes, leaving little disposable income to exchange for goods, or the means of storing and displaying status and wealth were not archaeologically visible. Thus the absence of certain types of vessel and the low level of general pottery use on many rural sites may not result from an inability to afford 'luxury' goods; instead, it may reflect a preference for long-established traditional materials and forms. At Irby the pottery assemblage may reflect the purchase of specialised forms such as jars and mortaria for storage and food preparation, with little emphasis on high quality table wares or dishes; flagons, for example, appear to be very scarce. It may be that vessels of wood or leather were favoured over pottery for some functions.

A further element may be the degree of self-sufficiency in economic terms that rural settlements exercised, allied with the practice of a range of specialised crafts. The Irby settlement produced evidence for iron smithing and probably quern production, as well as small-scale copper-alloy metallurgy. These demanded some raw materials, but the sandstone appears to be from the immediate vicinity of the site while the coal is from outcrops at Neston, 10 km south of Irby in south Wirral; the source of the iron is uncertain. Were these materials obtained through a local network of exchange between individual settlements outside formal markets? The products may have been largely consumed on site but with some local distribution which perhaps depended on a system of social relationships rooted in ties of kinship, rather than formal marketing.

Outstanding Research Questions

The excavation and initial assessment of the finds and stratigraphic record are now complete, following English Heritage's MAP2 procedure and agreement has been reached for funding of the post-excavation analysis. Much of the analytical work remains to be done, and there is great potential for refining our understanding of the structural sequence, and the site's economy and environment.

A series of important and intriguing questions remains unanswered as yet. We do not know when the settlement was founded, nor how long it was occupied during the prehistoric period. It is unclear whether the presence of some flintwork indicates casual temporary activity during the Neolithic and Bronze Age or more permanent settlement, nor are the precise form and number of buildings in the earliest phases known. Further structural analysis coupled with artefact analysis and radiocarbon determinations will help to refine the dating of the early, prehistoric, occupation phases even though the technique is not particularly precise for the early Iron Age. At the same time, petrological analysis of thin-sections for the VCP and other newly recognised prehistoric fabrics will contribute to our understanding of the manufacture and distribution of these wares.

For the Romano-British period, the dating of the phases of occupation requires considerable refinement, which will come in part from detailed examination of the environmental data, the pottery and other finds. In particular, further work is needed to resolve the question of continuity of occupation from the Iron Age to Romano-British period and toelucidate the relationship between the structures and the enclosure ditches.

Equally uncertain is the end of the occupation. Although the latest datable material on the site consists of pottery and coins of the 4th century AD, it cannot safely be assumed without consideration that the occupation finished at that time. The collapse of the market and manufacturing economy of Roman Britain in the first decade of the 5th century meant the end of coin-use and most domestic pottery industries. The example of Wroxeter, where a long sequence of occupation follows late 4th century deposits with few discernible post-Roman finds, warns us to exercise caution in the assumption that a site is abandoned at the point when datable finds cease, since we would not expect to find recognisable 5th century material. Thus, one priority of the post-excavation analysis will be to examine the dating evidence for the latest phase (Phase 8) by radiocarbon determination. It is interesting that amongst the latest features on the site is a series of large rock-cut post-holes with massive packing stones, apparently in a rectilinear pattern, which appear to belong to one or more large timber-framed buildings. It will be a matter of great interest to see whether the construction and use of these fit firmly within the Roman period or whether occupation continued beyond the visibility of the associated dating material.

Conclusions

The foregoing discussion has concentrated on the recent work on one site. The question of its importance for our understanding of Romano-British settlement in the lowland north-west has not been explored, although preliminary thoughts on broader questions of Romano-British settlement in the region have been discussed elsewhere (Philpott 1994).

The archaeological study of rural settlement may be viewed as an agglomeration of numerous individual site histories set in an economic and environmental framework. That Irby is far from isolated in the Iron Age and Romano-British landscape is becoming increasingly clear from the growing body of evidence from aerial photography (Collens 1994), fieldwalking, metal-detector finds and chance discoveries. At the time of writing there are still few excavated rural sites in the region which can be considered alongside Irby. However, the intensity of excavation and field survey in the region has accelerated, notably through the work of Mike Nevell in northern Cheshire and Greater Manchester, that of Keith Matthews on the early landscapes in west Cheshire, and through excavations such as Plas Coch, near Wrexham. Liverpool Museum has been active in the field, and since 1993 the Field Archaeology Section has undertaken the partial

excavation of three other Romano-British rural sites besides Irby (one with an Iron Age phase) and trial trenching at one more. Each newly excavated site generates new insights and raises new questions. The accumulation of excavation evidence illustrates the dangers of extrapolating from a tiny sample of partially excavated sites to a generalised account of landscape and settlement history. Already it is clear that rural settlement in the region over the later prehistoric and Romano-British periods will prove complex and varied. There is no such thing as a typical site; settlements exhibit differences in structural sequence, economic function, occupational history and artefact assemblages, which reflect a variety of factors; environmental constraints such as topography and soil type, local mineral, plant or animal resources, ownership or tenure, tribal allegiance, or the individual personality of the occupants. In some respects, Irby may prove to have some unusual features - the longevity of occupation, the exploitation of sandstone and coal, the variety of construction techniques and building plans. In other ways, it may share common characteristics with many of its contemporaries in the region - the production of cereals (and a mixed economy?), the presence of small-scale iron-working, and a low level of coin and pottery use.

At present it is still premature to attempt more than an outline account of later prehistoric and Romano-British rural settlement in the region since the primary data are still not available. The need to extend the range of sampled or excavated sites is self-evident. To this end, the Field Archaeology Section of Liverpool Museum has pursued a long-term research strategy to characterise the late prehistoric and Romano-British settlement in the lowland North West of England in the region by locating potential sites and investigating a sample of them using a range of techniques. In recognition of the fact that other archaeological organisations in the region share similar research interests, preliminary discussions are taking place over the establishment of a collaborative research programme which draws on the collective skills, experience and resources of the various parties to achieve a greater understanding of what is a difficult and elusive subject. In this highly competitive era when commercial pressures mean that archaeological sites are increasingly treated as a disposable commodity, the development of collaborative programmes to address regional research problems would represent a return to the primary purpose of archaeology.

Chapter 8

Edge of the Empire

Extra-Mural Settlement in a Marginal Context Roman Castleshaw

by Norman Redhead

Recent research has located the remains of occupation outside the defences of the Roman military station at Castleshaw - a short lived site that was agriculturally, climatically and strategically marginal. That such a site should attract extra-mural settlement is of considerable interest.

The Roman fort and fortlet at Castleshaw (SD 9988 0965) lie on a spur (called Castle Hill) on the eastern slopes of the Castleshaw Valley (Fig 8.1). The site is at 275m AOD, at the foot of Standedge, the summit of the Pennine ridge (450m AOD), and is overlooked by higher ground on all sides. The site is, nevertheless, extremely well placed with clear visibility up and down the valley.

Castleshaw consists of an Agricolan fort, displaying two phases of occupation, built around AD 79 and abandoned probably in the mid-AD 90s. This was overlain, after a period of abandonment, by a small fortlet erected around AD 105 which also had two phases of development before being slighted in the mid-AD 120s. All phases of construction were in turf and timber.

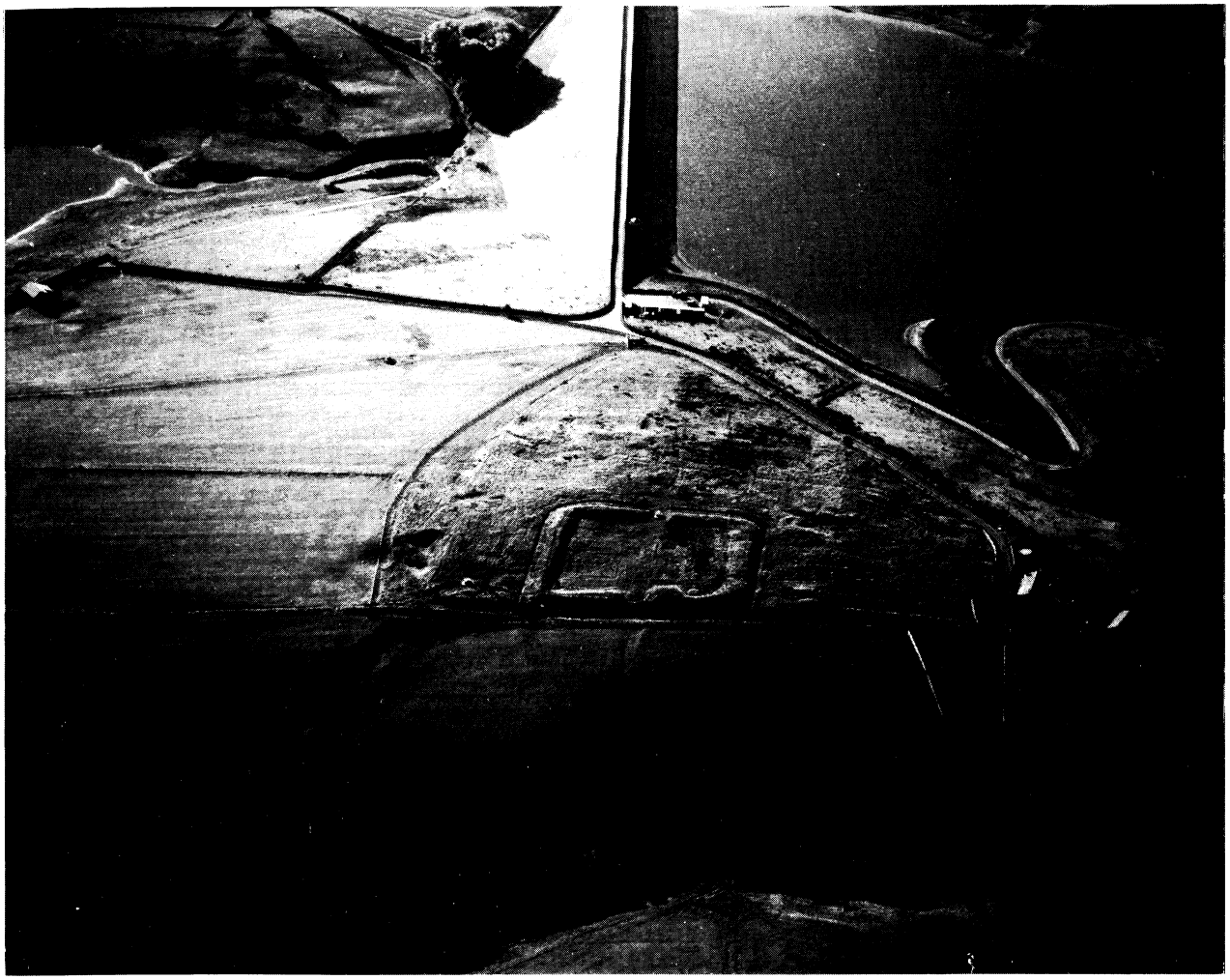


Fig 8.1: Aerial view of the Castleshaw Roman fort and fortlet.

The fort had a standard auxiliary infantry cohort which guarded the main York to Chester highway as it climbed to the Pennine pass. A sister fort only 8 miles away at Slack near Huddersfield controlled the eastern approach to the Pennines. The fortlet at Castleshaw, which succeeded the fort, was more unusual. It occupied 1950 m^2 and comprised principally an over large granary, commander's house, courtyard building, workshop, and one barrack block and had two possible roles: a base fortlet containing the core buildings of a normal unit where most of the troops were out-stationed, or a commissary fortlet dedicated to an administrative role for control and/or supply (Walker 1989).

As part of the continuing programme of management and research at the Castleshaw Roman forts site, the Greater Manchester Archaeological Unit recently undertook an evaluation of extra-mural activity to form a better understanding of the extent of Roman remains and the site's function. In 1994 two exploratory trenches were excavated opposite the south-west corner of the fortlet defences and the discovery of Roman deposits here led to a larger scale two week site investigation in summer 1995 and again in summer 1996. The project was directed by Norman Redhead of the GMAU with support from staff of the University of Manchester Archaeological Unit and volunteers. Funding was provided by the landowners North West Water Plc.

Methodology

Until the recent evaluation the area outside the defences of the fort had never been investigated archaeologically; although it was suspected that extra-mural activity may have taken place, there was little firm evidence for this. The evaluation examined the top of Daycroft Field, which occupies the remaining flattish part of the spur immediately south of the Roman forts. This hill top forms a rough triangle with the ground falling steeply away to the south towards Waters Clough but on the west side it shelves away much more gently. The Tangs, a field immediately to the west of the fort defences, was also investigated in the 1996 evaluation. This field slopes gently westwards before dropping more steeply down to Castle Hill Cote (Fig 8.1).

The evaluation methodology consisted of excavating one metre square test pits at 10m intervals across Daycroft Field opposite the Roman forts' southern defences. The edge of occupation and poorly understood areas were further defined by 5m interval test pits and narrow trenches. A total of 41 test pits and 5 trenches were excavated, together with the two small exploratory trenches from 1994 which had first indicated the presence of Roman deposits (Fig 8.2). In The Tangs field two lines of one metre square test pits were placed at right angles in order to intersect the Roman road exiting the west gate and to examine evidence for Roman occupation. Eventually 19 test pits were excavated together with one 10m long trench. The location of test pits and trenches is shown below.

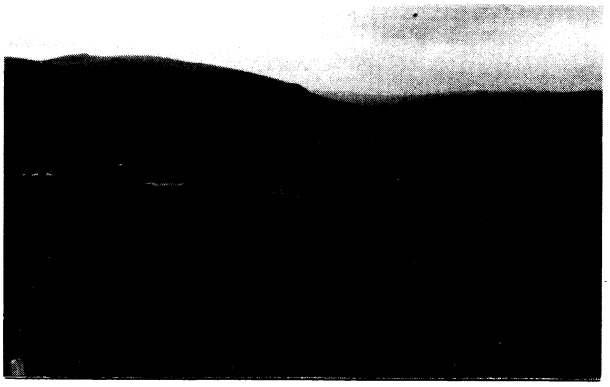


Fig 8.2: Test pitting in Daycroft Field.

Generally, test pits were dug to the top of Roman levels or, in the absence of Roman deposits, to natural. In the trenches Roman levels were excavated to provide a chronological and stratigraphic framework (Fig 8.1).

Full details of the methodology and excavation results are published in the Saddleworth Historical Society Bulletin (Redhead 1996a and 1997a) and also exist in unpublished evaluation reports (Redhead 1996b and 1997b). For the purposes of this article, where space is necessarily limited, a thematic summary of the results is presented together with a discussion of their significance.

The 1995-6 programme of evaluation outside the Roman fort and fortlet at Castleshaw clearly demonstrated the existence of a substantial area of extra-mural activity, probably of early 2nd century AD origin, occupying a triangular piece of land adjacent to the forts' southern defences. It also showed that there was little or no occupation outside the western defences.

Daycroft Field

In Daycroft Field Roman deposits were sealed by a thick deposit of plough soil, average depth 0.24m (ranging from 0.10m to 0.52m deep), with *c* 0.20m topsoil above this. The ploughing, which probably took place sometime between 1752 and 1897, smoothed the landscape and effectively masked Roman features. Undoubtedly ploughing had disturbed the top of Roman deposits, as was evident from Roman pottery occurring frequently in the lower 10cm of ploughsoil. However, Roman levels, although shallow, generally survived remarkably well. Archaeological evidence is illustrated in the plan below (Fig 8.3) and can be summarised in the following way.

A road surface of 2.6m width which was identified in Trench 4 may have continued into Trench 3, perhaps representing the main spinal service road within the extra-mural area running roughly parallel with the fortlet southern defences. Test Pit 17 also produced cobbling interpreted as a track and this either forms part of the above service road or is a track running up to meet that road (Fig 8.5). TP10 contained either a floor or road surface; if the latter then this could be a continuation of the service road but only if that road angled down the hill from Trench 3 in a south-west direction. Part of

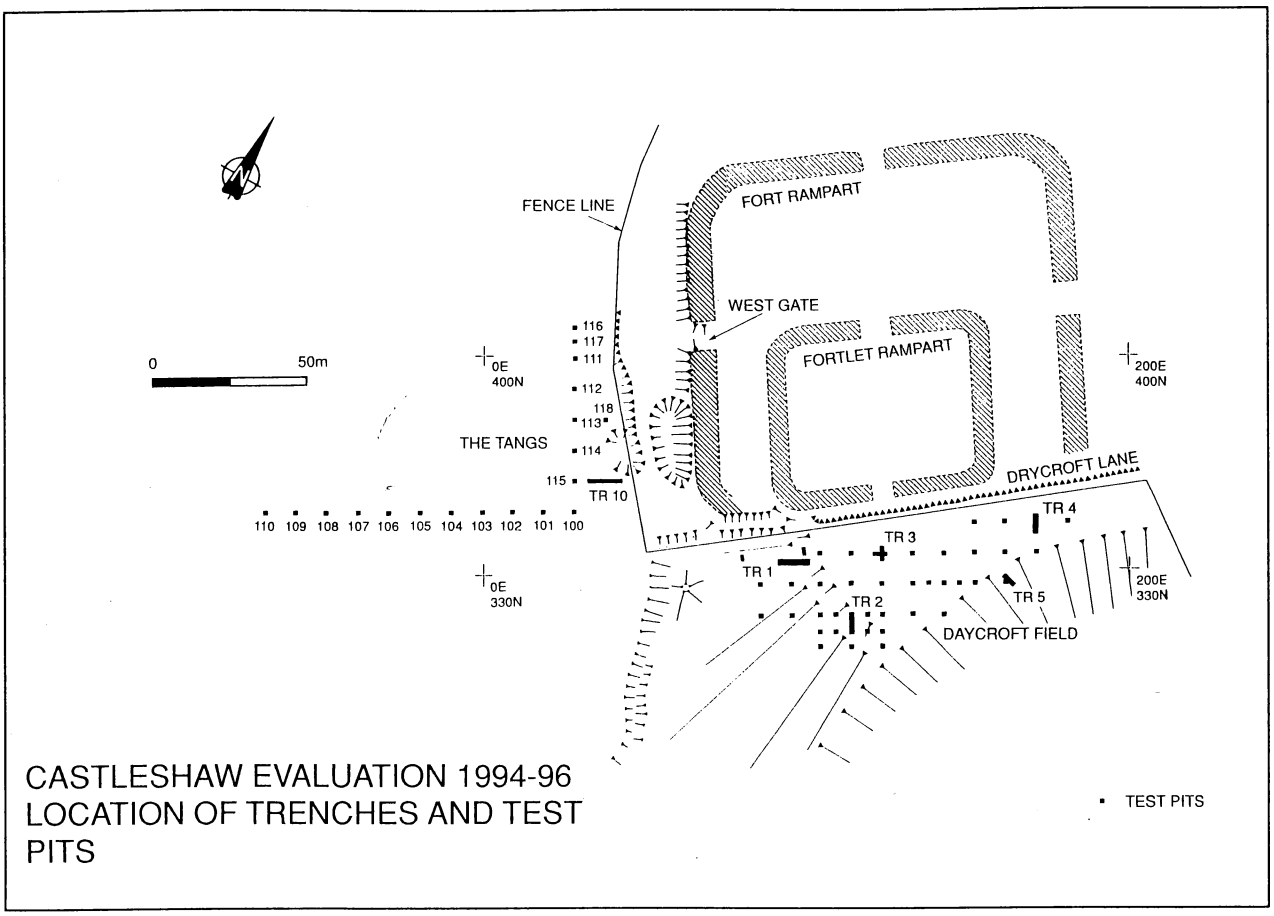


Fig 8.3: Castleshaw evaluation 1994-96. Location of trenches and test pits.

another road was also identified at the northern end of Trench 3 and this is interpreted as being remnants of the major highway that once ran along the south side of the Agricolan fort. This road has not been identified in any other test pits or trenches. One further possibility for a road in Daycroft Field was the negative feature in Trench 1 provisionally interpreted as a shallow ditch which may also have been picked up in TP36. This could in fact be a hollow-way running from the south-west corner of the fortlet down to the oven/hearth identified in TP11 and Trench 2.

Three roadside ditches were encountered. One was located in Trench 3 and appeared to serve the early fort phase highway, two others occurred in Trench 4 (TP29) and were associated with the service road. A possible shallow settlement boundary ditch was excavated in Trench 1 and may have continued south-eastwards to TP36. Trench 5 proved the existence of a ditch first seen at this point in TP28 (Figs 4 & 5). However, rather than marking the edge of the settlement at the top of the steep slope, the ditch appeared to run across the hill slope from east to west. Part of a ditch was revealed and excavated in TP37 and this one seemed to be running out of the settlement area in a north to south direction. These two ditches, from TP37 and TP28, may have been field boundaries or property divisions. Trench 2 showed that this part of the occupation area, represented by the hearth/oven in TP11, was not enclosed by a ditch (Plate4). Other possible ditches or substantial negative features were indicated by the character of deposits in TP6, 26, 30 and 31, but none of these test pits have been investigated further. Based on its character and location, TP31 may be a continuation of the southern roadside ditch in Trench 4.

By identifying occupation type deposits, such as those with concentrations of finds or charcoal flecking and burnt clay, it has been possible to suggest several areas where buildings were located in the extra-mural settlement and these are shown in (Fig 8.4). It is best to start with the most positive evidence which occurred in Trench 1 where a dwarf stone wall and associated post hole were revealed in the south-east corner of the trench (Fig 8.8). To the north of this was the evaluation slot excavated in 1994 which identified occupation deposits, and together with TP5 and TP9 to the east this represents a potential area for buildings of roughly 25m x 12m, perhaps lying along the north side of the service road seen in Trench 3 and bounded on the west side by the shallow ditch in Trench 1 (Fig 8.4).

A second area of potential for buildings is represented by TP10 (if the deposit here is interpreted as a floor surface) and TP14. Further to the east is TP18 which yielded a stone capped drain and several artefacts suggestive of a building close by, and further east from this test pit is TP40 which also indicated occupation, giving a potential area c 35m long and at least 12m width and perhaps aligning with the southern edge of the service road.

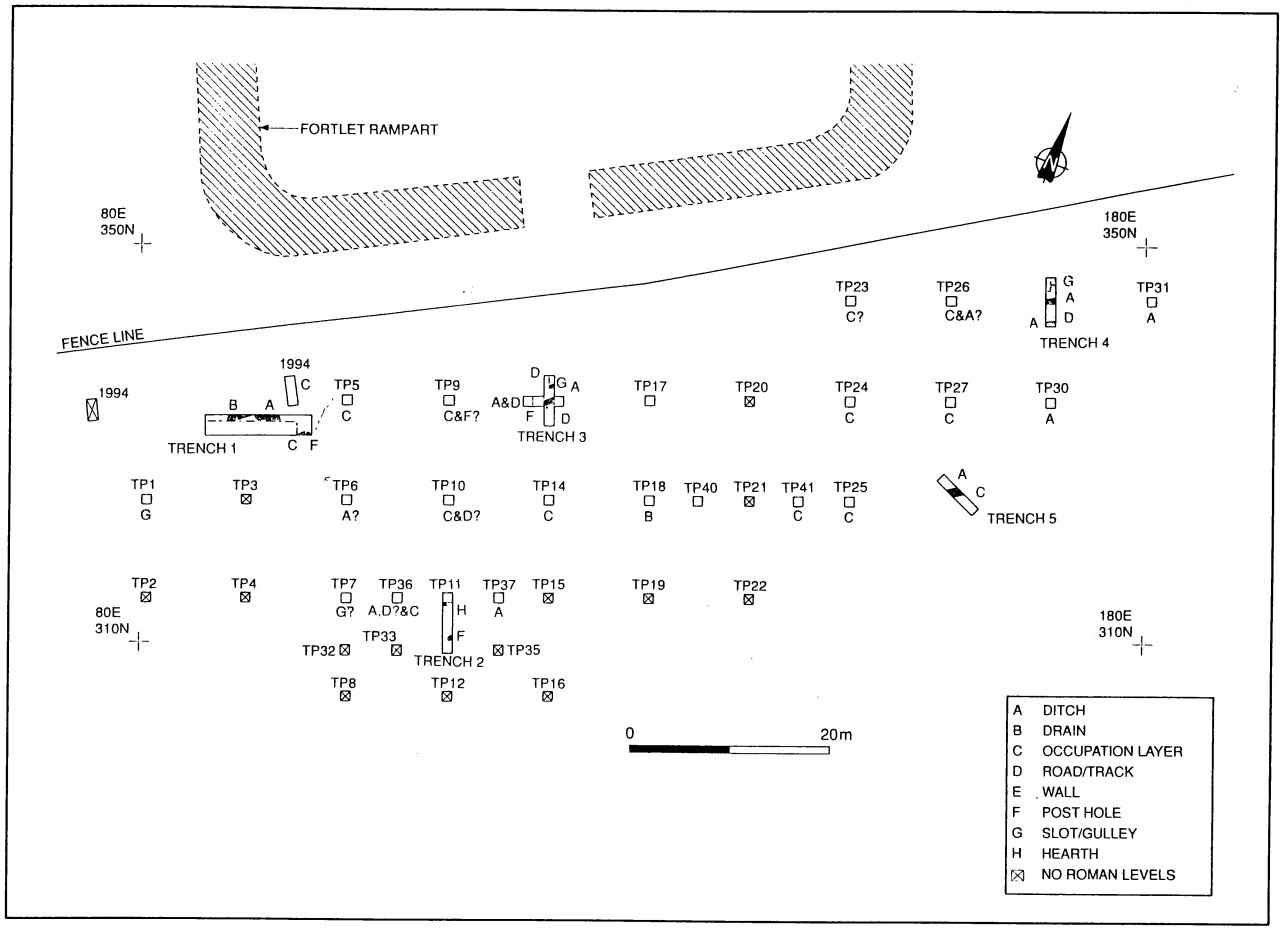


Fig 8.4: Daycroft Field, Castleshaw. Location of archaeological features and deposits.

The sterile line of TP20 to 21 has been shown to be quite narrow by the discovery of occupation material in TP40 and 41; indeed TP20 and 21 may by chance have just missed Roman deposits. However, it may not be coincidence that Samian ware was concentrated in a (third) area of occupation to the east of this sterile band. TP41, 24, 25, 27 (where a finely decorated Samian vessel of Dragendorf 37 form was found) and the northern part of Trench 5 all had deposits which seem to suggest a building in the vicinity, in an area of potential measuring roughly 25m x 12m. This building may have been for a higher status official and separated from others; certainly it lay at the most easterly part of the site, to the south of the service road and occupying the narrowest apex of the triangle of available level ground.

Fig 8.5: Possible track metalling in TP17, looking north.

Sommer, in his study of military *vici* in Britain, has looked at the size of houses and found that their average dimensions were 6-21m by 3-7m (Sommer 1984, 61). This gives an idea of the potential size of buildings at the Daycroft Field site and it can be seen that the three main areas of potential buildings can easily accommodate at least one building and perhaps more than one.

The evaluation revealed several individual features which indicated the presence of structures. Foremost amongst these was the hearth or oven base encountered in TP11 and the northern edge of Trench 2. It is not clear whether this formed a single structure or was one of a group. Several post holes were found, with the one in Trench 3 most likely to have belonged to a building. Those in TP28 and Trench 2 are more likely to have been part of fence structures as they were both peripheral to the settlement area and located on considerable slopes. It is possible that the charcoal deposit in Trench 5, which covered the fills of the ditch, represented a fence that had been burnt in situ.

A number of drains and gulleys have also come to light. Two stone capped gulleys revealed in Trench 1 and TP18 clearly acted as drains (Fig 8.9). Gulleys or slots from TP1 and TP7 could be for drainage or structural purposes but given their location seemingly

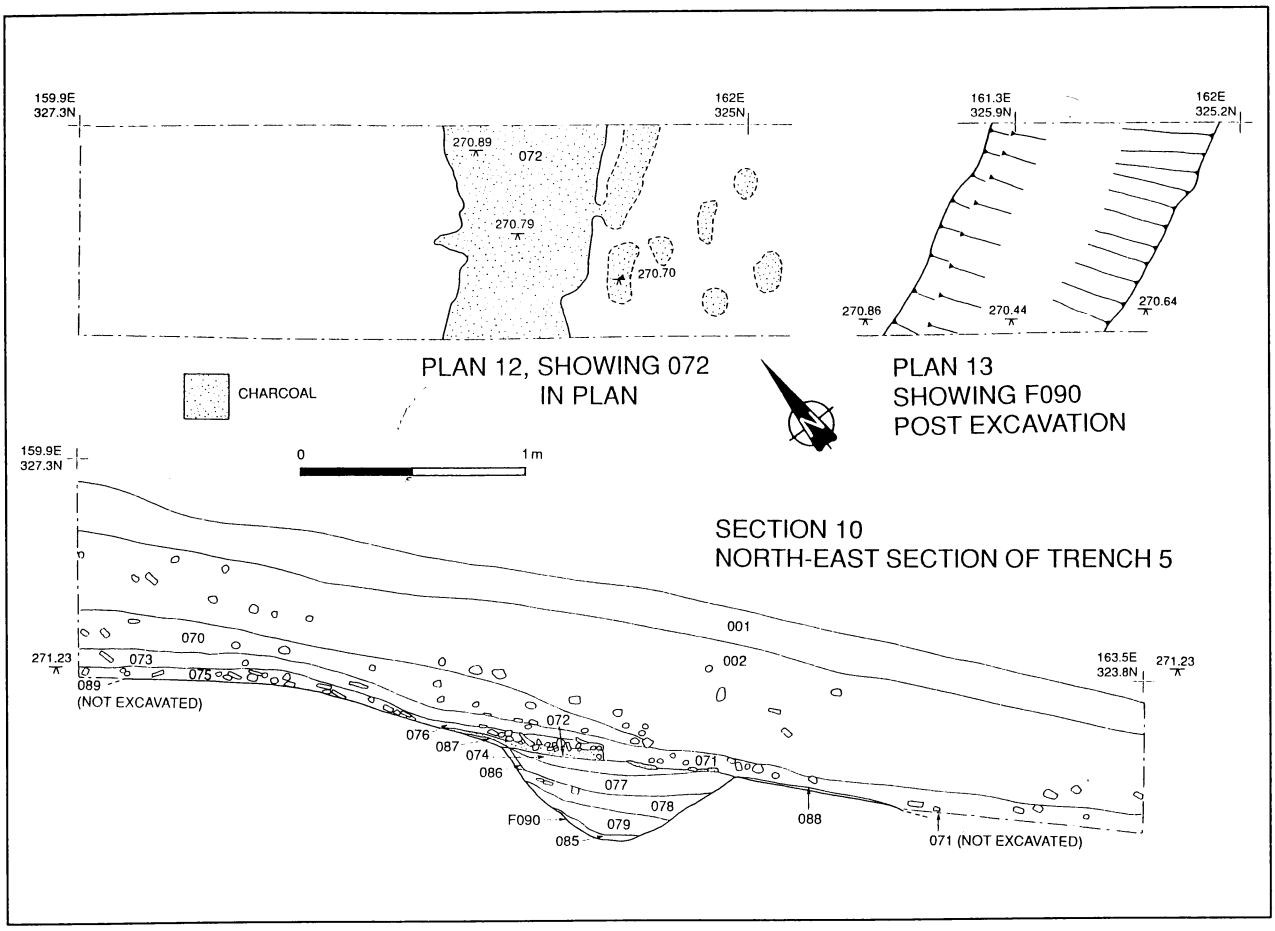
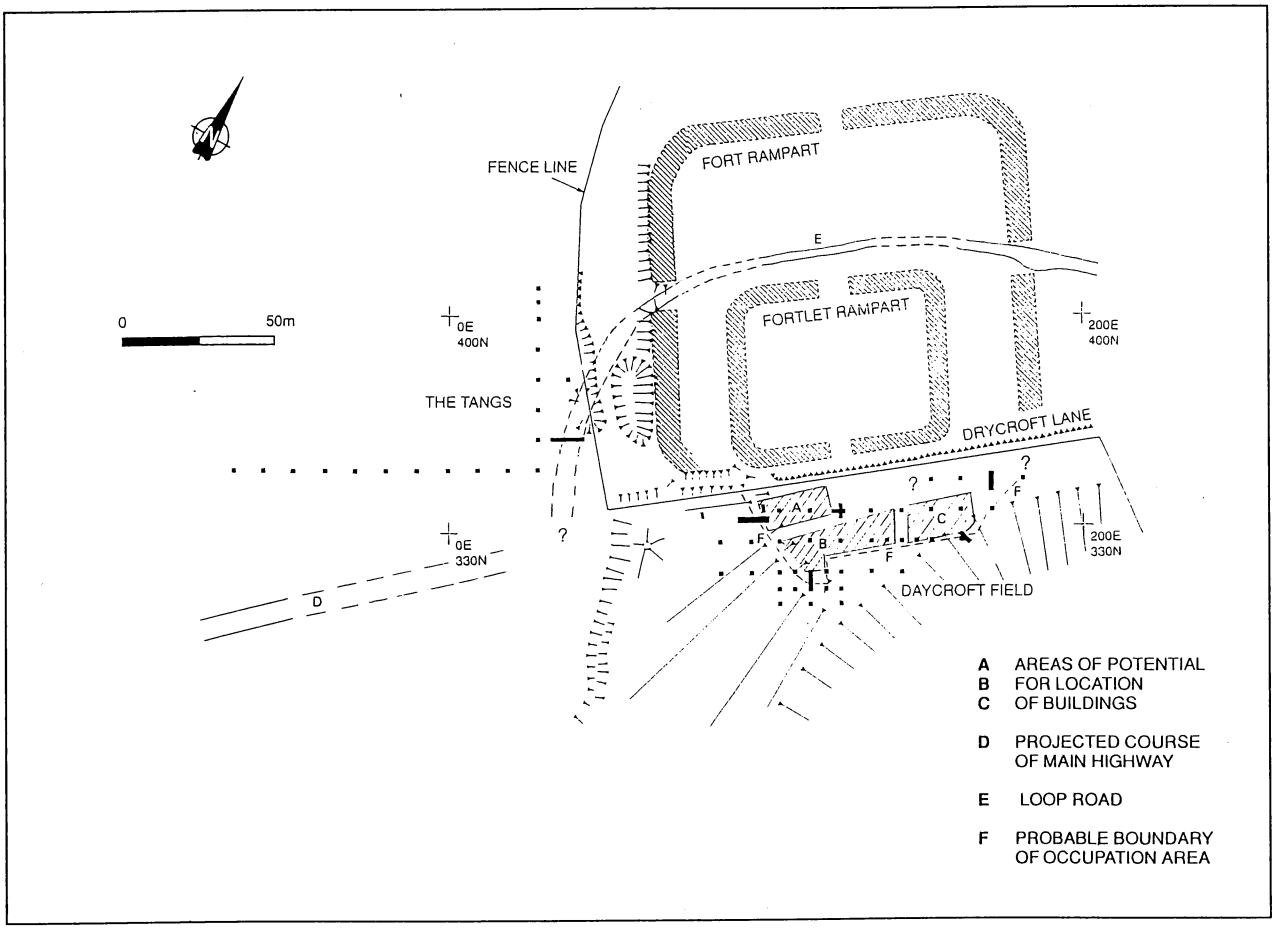


Fig 8.6 (above): Daycroft Field, Castleshaw, trench 5. *Fig 8.7 (below): Castleshaw 1994-96. Interpretation.*



outside the western edge of the occupation area the former is favoured. Similarly, the purpose of the gully under the road edge at the northern side of Trench 3 is uncertain as is that of the gully/post hole found in the northern part of Trench 4. It is possible these two features were related to each other and marked the line of the Agricolan highway.

With the exception of the road and its drainage ditch in the north half of Trench 3, and deposits in TP37 which were cut by a ditch, these features and deposits appear to belong to one phase of occupation. Pottery suggests an early 2nd century AD date for this extra-mural occupation. It is suggested that this activity took place during the second phase of building within the fortlet around AD 120. At about this time the hypocaust was remodelled and extra space added to the suite of rooms around it, the capacity of the granary was increased by a quarter, and the barrack block was re-built.

Stratigraphy is shallow and suggests a short length of occupation ending in firing of the buildings and clearance of the site. In Trench 1 there was a destruction deposit which includes burnt daub from a nearby building together with much charcoal and a very mixed deposit including pottery sherds which were characterised by low average sherd weight and high brokeness, all of which indicated clearance and levelling of building remains. Destruction by burning is evident elsewhere on the site with burnt timber remains present above the roadside ditch fill in Trench 3, in the shallow ditch in Trench 1 and above the ditch fills in Trench 5 (Fig 8.6). It is worth noting that inside the fortlet the excavators found that the most southerly room *(contubernium)* of the last phase barrack block was burnt in situ with oxidised red clay and charcoal marking the line of sill beams (Redhead 1989, 41). We cannot be certain that the Romans deliberately fired their timber buildings when they abandoned the site - if the timber was in good condition it would be extremely wasteful and therefore. We cannot rule out the possibility of accidental fire or destruction by enemy action.

The Tangs Field

In The Tangs deposits of archaeological interest were confined to an area adjacent to the south-west corner of the fort defences. Here a dense spread of stones was encountered across Trench 10 which could be interpreted as remains of a Roman road running alongside the ditch and connecting the western gate of the fort to the main highway. In the absence of any road evidence elsewhere in Tangs Field, despite extensive test pitting opposite the west gate, the stones in Trench 10 may also represent the diversion of the main highway round the back of the fortlet when the extra-mural settlement was established on the south side of the fortlet. Indeed, there could be two phases represented here, with the crushed sandstone surface being of fort date and patchy grey gritstone deposit above belonging to the fortlet phase. The stone spread appeared to continue into TP100 which also revealed layers of gritstone possibly for a drain. A large depression across the line of the fort ditch near the south-west corner may relate to (unrecorded) quarrying or excavation. If it is the former then there is a chance that the stone spread provided access to the quarry or was backfill material.

Other features of interest were confined to a possible slot in TP115 and post holes in TP101. There was no dating evidence from these test pits but in terms of depth and character the features could well be Roman. It is suggested that there was Roman activity in this area relating to the construction of the fort or perhaps representing structures beside the link road.

The Main Highway

In the 1995 evaluation there was speculation regarding the true course of the main highway as it reaches the fort. The road is evident as a well preserved earthwork some 100m to the west of the fort and a similar distance to the east. A recent resistivity survey has positively identified the road some 60m closer to the fort on the west side (Locket & Winters 1996). This work shows the road still aiming for a point just south of the fort defences, yet the only evidence for the road in the evaluation area comes from Trench 3, whereas Trench 10 and the 1994 slots showed no evidence even though they might be expected to run across it. In conclusion it appears that when the Agricolan fort was in operation the road did indeed run outside the south gate but that in the fortlet phase when Daycroft Field was used for settlement the road was diverted round the north side of the fortlet and this was the loop road encountered by Bruton in 1907 (Bruton 1908, 21). Most of the highway metalling in the Daycroft Field settlement area must have been taken up and re-used elsewhere.

Discussion

The evaluation has proved the existence of and defined the extent of extra-mural activity beside the fortlet's southern defences (Figs 8.7-8.9). However, although areas of buildings can be inferred it is impossible with current knowledge to define the shape and function of those buildings. The finds can be used to a certain extent; for example they appear military in character and the concentration of Samian ware in one particular area may indicate a higher status building at that point. Although the excavated areas and the finds assemblage are too small to be relied on overmuch, there are some general observations which can be made on the character of the settlement.

It is clear from the available evidence that the extra-mural area was not well defended. Indeed it could be argued that it was not even enclosed. The evidence can be stretched two ways; on the one hand a case could be made for a rather ragged boundary or fence, partly ditched and running around the occupied area. On the other hand the problems of the orientation of ditches at Trench 5 and TP36 and the lack of a ditch at Trench 2 suggest that the area was not formally enclosed and

certainly not defended in a military manner, that is there was neither a deep defensive ditch nor a rampart. On current evidence a function as a military annexe is unlikely and that of military *vicus* much more reasonable.

A *vicus* was a civilian settlement adjacent to a Roman fort. Camp followers may have been the first settlers but the presence of soldiers and regular wages would have soon attracted a mixed population of soldier's dependants, veterans, merchants, craftsmen and other service providers. In 1984 a study showed that only 36% of forts in Britain did not have military vici and it was suspected that this percentage would decrease with further research at the negative sites (Sommer 1984, 41-2). The author concluded 'that every fort was accompanied by a settlement of this sort' irrespective of altitude and therefore it is not surprising to find such evidence at Castleshaw. Sommer identified 101 military vici in Britain but if all forts had *vici* this number would rise to 156.

What form might the *vicus* have taken? Sommer's study has identified several elements common to vici (Sommer 1984, 46-9). The most popular feature was the house which took a rectangular form and was often divided into commercial and domestic parts. The houses were individual structures separated by drains and narrow lanes. Additional to the houses, one might expect a bath house, mansio and temple, all of which were controlled by the military, and also a cemetery. Another common element was industry, such as metal working, pottery production, tanning and a whole host of other industries which leave much less archaeological evidence.

At Castleshaw the evaluation has identified several features related to the above, such as drains, wall foundations, post holes for buildings, and an oven or hearth base. But only a more intensive, open area research excavation could hope to properly identify the shape and function of buildings and whether there were industrial processing areas within the settlement. The bath house and cemetery have not yet been identified

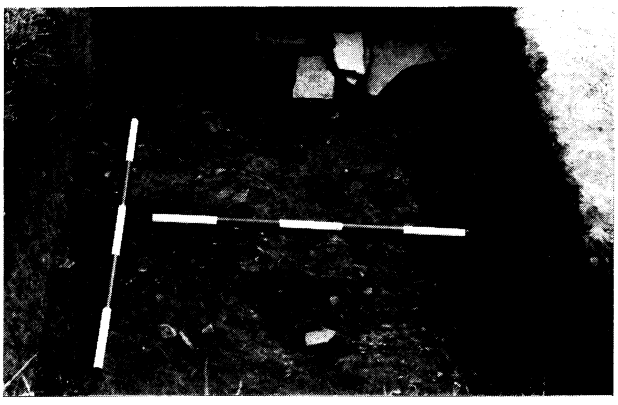


Fig 8.8: East end of Trench 1 showing wall base (F019) and post hole (F022) prior to excavation, looking south.

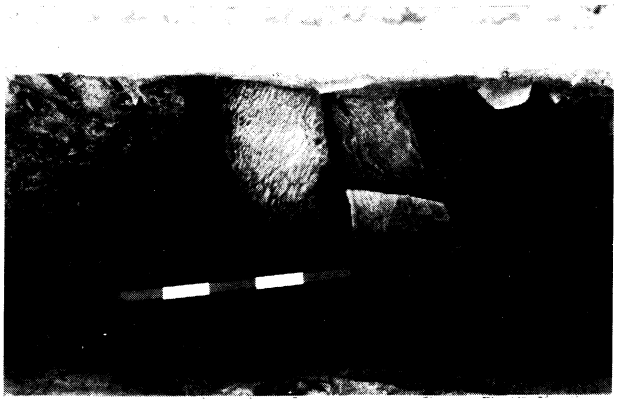


Fig 8.9: Capping stones over the drain in Trench 1.

but are likely to exist. The remains of a temple and mansio may lie undiscovered in the extra-mural area.

A further element present at some *vici* was agricultural production. Some *vici*, such as Brough (Dearne 1993, 160), have produced evidence of boundary ditches for allotments at the edge of the settlement suggesting small scale private cultivation. Sommer has argued that the scale of agricultural activity in the upland *vici* was probably small and that field systems were not present, with the *vicus* population relying on secondary sources of food such as meat and grain (Sommer 1984, 36-8). But proper investigation has not been undertaken on this subject and this claim cannot be proved.

At Castleshaw the presence of two ditches in Daycroft Field which appear to run out of the settlement area and which may be allotment divisions or part of a field system presents new evidence for agricultural practice. Analysis of pollen from one of these ditches gives a rare picture of the Roman upland environment showing open pasture. The abandonment of the site is quite dramatically represented in the pollen record giving a clear indication that the Romans were managing and exploiting the landscape. Well managed herb-rich pasture on the valley floor and lower slopes quickly reverted to the native grasses, bracken, heather and scrub following the fortlet's abandonment. Two grains of cereal pollen were identified but these are not enough on their own to postulate even localised cereal cultivation during the site's occupation (see Brayshay below).

The presence of a *vicus* at Castleshaw is quite acceptable given that its neighbouring forts at Manchester and Slack also had *vici*, as did Melandra further to the south. The one at Castleshaw seems to be on a much smaller scale than its neighbours, presumably due to its shorter length of occupation. However, we do not yet know the full extent of the Castleshaw *vicus*. We know that it occupied the remaining level ground outside the south defences, that it was not present on the west side, that it has not been investigated on the north side, and that it is probable there was extensive settlement on the flat east side where some features have

been identified but systematic fieldwork has not been undertaken. If we accept a fortlet date for the *vicus* then it may partly have occupied the flat area left by the dismantled earlier fort. Earlier excavators such as Bruton, Rosser and Thompson may have missed evidence for later phase buildings in this area.

One problem with the Castleshaw site is that the evidence points towards an early second century date which suggests that the Agricolan auxiliary fort did not have a *vicus*. However, it must be remembered that the evaluation comprised a very limited investigation and that a small level of pre-fortlet phase activity was identified in Daycroft Field; perhaps several buildings did lie alongside the main highway in the late 1st century AD but their remains have been partly removed or obscured by later building work.

The fortlet contained only one barrack, of 48 troops, and even allowing generously for administrative staff and other personnel there would be somewhat less than 100 men stationed in the fortlet. Could this few men have supported a vicus? If the interpretation of the fortlet being the nerve centre of an auxiliary cohort with most of the troops outstationed is used (Walker 1989, 105-7), then it would be more feasible with troops coming and going and presumably receiving their pay from the headquarters in the base fortlet. However, if the commissary fortlet theory is used (Walker 1989, 105-7) then perhaps we need to look at an alternative to the *vicus* definition. Daycroft Field may have been used for storage buildings, stabling and accommodation related to the multi-functional activities on site, for which there was clearly no longer enough room in the fortlet. We already have evidence that military standards of defence were compromised within the fortlet, for instance there was no intervallum road between the granary and the rampart, and perhaps it was felt that conditions were peaceful enough to make strong defence for the extra-mural area unnecessary.

Conclusion

The evaluation carried out between 1994 and 1996 has shown for the first time that there was extra-mural activity at Castleshaw south of the fortlet defences in Daycroft Field. The Roman military site at Castleshaw was marginal in several ways: it lay close to the edge of the Roman Empire in a sparsely populated area of rugged terrain and right at the limit of arable cultivation. The site was also peripheral in strategic terms, to judge by its short length of occupation and the fact that its neighbouring forts at Manchester and Slack continued in use beyond its abandonment. Yet despite this marginality Castleshaw attracted extra-mural settlement, which current evidence suggests was civilian in character. The civilian inhabitants appear to have been totally dependent on the military station, even though the number of military personnel in the fortlet numbered less than 100. The evidence for this comes from the excavation which indicates a dramatic end to occupation through burning and clearance of the site, rather than a steady decline. The pollen analysis is equally dramatic and suggests that managed pasture land quickly reverted to wilderness following the fortlet's abandonment.

We do not yet know the full extent of the *vicus* at Castleshaw, for example it is likely to have extended to the flat ground on the east side of the fort and fortlet. But now that the presence of extra-mural settlement has been established we can identify a considerable research potential, centred on the form and function of the settlement and why it developed at such a marginal, short lived military site.

Chapter 9

Some Palaeoenvironmetal Evidence for Marginality in the Upper Mersey Basin

Barbara Brayshay

In the absence of a large number of extensively excavated rural settlements in the Mersey Basin, from the late prehistoric and Romano-British periods, palaeoenvironmental studies are a powerful tool in throwing light on the vegetational history of this part of the North West. Most of the palaeo-environmental research in the region, however, has concentrated on the study of natural deposits, usually from lowland peat bogs or upland blanket peat deposits, which cover the period c 8000 BC to the early first millennium AD. However, the work of Tallis and Swistur, and Spikens in the central Pennines has shown that both natural and archaeological palaeo-b environmental deposits can be combined to provide new insights into the impact of humans on the landscape. With this earlier work in mind a joint project between Greater Manchester Archaeological Unit and the Palaeoecological Research Unit at the University of Manchester was set up with the intention of analysing the late prehistoric and Romano-British landscape, a period shown elsewhere in the region to be one of rapid landscape change and environmental stress. The area chosen encompassed the Castleshaw and Piethorne valleys, at the eastern end of the Mersey Basin in the central Pennines, in an area that is now agriculturally marginal, where GMAU were already involved in a long running landscape survey project. These studies were funded by North West Water. The investigations took samples from Castleshaw Moor and Dean Clough and combined them with data from the ditch fills of the extramural activity at the Roman fort in the Castleshaw Valley and a buried soil from beneath the Roman road at High Moor (Fig 9.1). Together these provide our clearest view yet of the late prehistoric and Romano-British landscape in this part of the central Pennines.

Landscape History

The vegetational landscape of Castleshaw Moor has a bleak and monotonous aspect with a pervasive cover of blanket peat and moorland (Fig 9.2). The present day vegetation of the moors consists of a mosaic of blanket peat communities which include species such as Nardus stricta, Molinia caerulea, Deschamsia spp., Juncus spp., and Eriophorum spp. Existing blanket peat is severely eroded, possibly as a result of climatic and topographic effects (Bower 1962), moor burning (Radley 1962), heavy sheep grazing (Shimwell 1974) and the impact of drainage and air pollution (Tallis 1985). Uneroded areas of peat are characterised by vegetation dominated by *Eriophorum vaginatum, Eriophorum angustifolium* and *Deschampsia flexuosa*. In Castleshaw Valley better drained soils support *Festuca ovina-Agrostis capillaris-Gallium saxatile* improved grassland.

Despite this apparent bleakness the moors have an intriguing settlement history dating back to the Mesolithic period. A series of radiocarbon dates from Mesolithic sites in the area (Switzur & Jacobi, 1975) indicated that people were present in the uplands from 7960-7260 BC (9560 ± 350 BP; Lominot III) to the Mesolithic-Neolithic transition at 3780-3540 BC (5610 ± 120 BP; Lominot IV). Much of the archaeological evidence from this period is buried beneath blanket peat but on Marsden Moor (NGR SD 401000) extensive flint scatters and hearths have been exposed by peat erosion. Recent archaeological investigations (Spikens 1994 & 1995) have shown that the Mesolithic artefacts were typically located at the interface between a palaeosol and overlying peat. The presence of a buried degraded brown earth soil (McHugh 1994) beneath peat, with associated Mesolithic archaeology raises questions regarding the nature of the pre-peat landscape and the role of human activity in the transition to peat.

Previous pollen analytical studies in the Pennine region (Tallis & Maguire 1972; Jacobi et al 1976; Williams 1985; Simmons & Innes 1987; Tallis 1991) have shown that the replacement of early Holocene woodland by acid grassland, heath and blanket peat communities occurred as a result of complex interactions between climate change and human subsistence related activities. Pollen and charcoal data showed that forest disturbance episodes were closely associated with fire and may reflect the clearance of vegetation, possibly to increase open areas of browse to attract grazing animals. These studies provide a regional context for the Castleshaw Moor and Dean Clough data and raise the possibility that peat may have begun accumulating on the moor during a period characterised regionally by blanket peat extension. Possibly a natural tendency towards acidification and paludification was enhanced by human activity which resulted in the switch to peat formation. Such a scenario would certainly implicate Mesolithic management of the upland scrub zone as a contributory factor in soil degradation. However no systematic studies have been

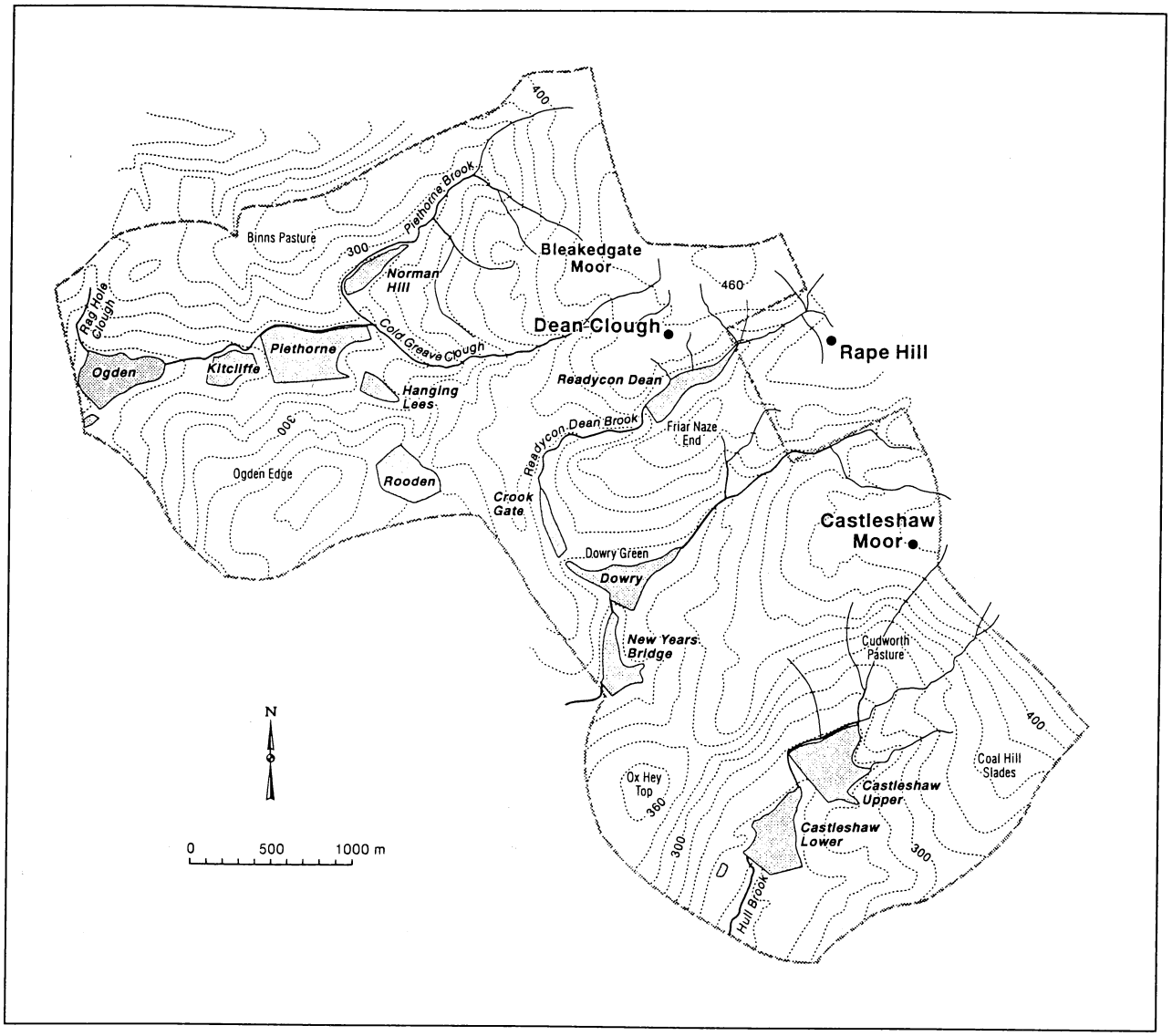


Fig 9.1: Location of pollen sampling sites in the Castleshaw and Piethorn valleys. Note Highmoor is two miles to the south-west and is not shown.

previously undertaken in the Castleshaw Moor and Dean Clough area, so little is known about how it fits into the broader regional framework.

The first evidence for settlement in the Castleshaw valley occurs in the early Bronze Age, with domestic 'Beaker' wares from a pit underlying the Roman fort. At this period several burial mounds were built in the vicinity, with examples surviving at Knott Hill and Harrop Edge which both overlook the Castleshaw valley. The later Bronze Age and Iron Age are very poorly represented in the archaeological record.

Likewise, very little is known about landscape history during later archaeological periods leading up to the Roman occupation in the area. No deep sequences of deposits suitable for environmental analysis were located on the valley floor. However sediments exposed in excavated sections at the Castleshaw *vicus* (Redhead 1996, 1997 & this volume) were found to be suitable for pollen analysis and had the potential to provide a 'snapshot' of the Roman landscape in the valley. A view of the wider landscape relies on analysis from the extensive upland blanket peats which surround the catchment, and which provisionally span most of the mid to late Holocene. It was anticipated that the pollen records from the blanket peat would reflect regional vegetational history dating from the Mesolithic to the present day. In contrast pollen derived from the archaeological investigations would provide detailed information about conditions in the Castleshaw Valley and in the uplands at High Moor at the time of the Roman occupation. When considered together these combined records have the potential to provide information about the evolution of this bleak upland landscape.

Methods: Sampling

Samples were obtained from four principle sites (Fig 9.1). The site on Castleshaw Moor (NGR SD 0045 1150), 445m AOD, was located in deep peats above the valley. A total of 4.2m of peat was recovered (Table 9.1).

Table 9.1: Radio-carbon Dates from the Castleshaw and Piethorn Valleys

Location	*Depth in cms*	*Biostratigraphy*	*Date (BP)*
Castleshaw Moor	420-415	base of deposits	5090 ± 80 BP (Beta 105685)
	70-75	*Corylus* decline/ Poacea-Cyperaceae rise	2620 ± 80 BP (Beta 105686)
High Moor	88	wood macrofossil at base of deposits	1980 ± 70 BP (Beta 105684)

Table 9.2: Summary of Sediments and Pollen from Castleshaw, Trench 5

Lithology	*Local Pollen Assemblage Zone*	*Depth Below Plough Soil in cms*	*Characterising Pollen Signature*
Brown/grey sandy silt	CT 5	30-35	Poaceae, *Calluna, Pteridium*
Sand/silt lense	CT 5/2	38-40	Poaceae, *Cerealia, Calluna*
Brown /Grey silty clay	CT 5/1	40-50	Poaceae, Plantago, *Rumex*

Table 9.3: Summary of Sediments and Pollen from Castleshaw, Trench 4

Lithology	*Local Pollen Assemblage Zone*	*Depth Below Plough Soil in cms*	*Characterising Pollen Signature*
Brown/grey sandy silt	CT 5	20-42	Poaceae, *Calluna, Pteridium*
Brown /Grey silty clay	CT 5/1	42-50	Poaceae, Cyperaceae, Plantago

The site on Dean Clough (NGR SD 9870 1260; 425m AOD, was located in an area of intact peat above the eroding peat margins where Mesolithic flints had been recovered (Spikens 1994, 1995). A total of 3.03m of peat was recovered.

Archaeological samples from cleaned vertical faces in Trench 4 and Trench 5, in the Castleshaw *vicus* (NGR SD 9995 0960), 275m AOD, were also retrieved (Tables 9.2 & 3).

Finally, archaeological samples were taken from turf beneath the Roman road at High Moor (NGR SD 9710 0624), 324m AOD (Table 9.1). At the same time a sample of wood for radiocarbon dating was removed from the base of the organic deposits.

Two samples from the Castleshaw Moor profile and one from the buried soil beneath the High Moor Roman Road, were selected for radio carbon dating (Table 9.1).

Other proxy dates used throughout the following discussion were computer generated and estimated assuming a constant sedimentation rate between radiocarbon dates. Comparison of the two pollen data sets suggests that the Castleshaw Moor deposits were truncated at *c* 50 BC, the upper part of the sediments possibly lost through peat erosion. The uppermost section of the Dean Clough profile provisionally extends the data to cover the period between 50 BC and the 20th century.

Mid-Holocene Vegetational Record

The basal radiocarbon date from Castleshaw Moor shows that the deposits began accumulating in a bedrock depression at 3220-3060 BC. Similarities with the basal pollen spectra from Dean Clough also suggests a similar date for peat inception. Given the treeless nature of the modern landscape the extent of scrub woodland in the basal pollen assemblage zones (CM1 & DC1) in both diagrams is striking. Maximum total tree and shrub percentage values reach 81% TLP at Castleshaw Moor and 92% TLP at Dean Clough. The tree and shrub pollen is largely derived from hazel-birch scrub. Corylus avellana (hazel) was the most dominant taxa reaching 57% TLP at Castleshaw Moor and 67% TLP at Dean Clough. The other main arboreal contributors were Betula (birch) and Pinus sylvestris (pine). Minor woodland taxa included Quercus (oak), Ulmus (elm), Hedera helix, (ivy),and Salix (willow). Alnus (alder) increased throughout the zone to 22% TLP at the upper zone boundary. Ericaceous heaths and blanket bog species, though poorly represented in both profiles, included increasing amounts of Calluna vulgaris (heather) and Sphagnum (bog moss). Minor taxa in this group included Vaccinium myrtillus (bilberry), Cyperaceae (sedges) and Drosera (sundew). Poaceae (grasses) and herbs such as Succisa pratensis (scabious) Urtica (nettle), Artemisia (mugworts) and Filipendula (meadowsweet) were also recorded as minor taxa. Ferns included scarce grains of Pteropsida (fern sores undifferentiated), Polypodium vulgare (hard fern), Dryopteris and Pteridium (bracken).

These data indicated that at *c* 5090 BP the vegetation of the area was predominantly scrub woodland with little evidence of blanket peat communities. The herbaceous component suggests grassland and some

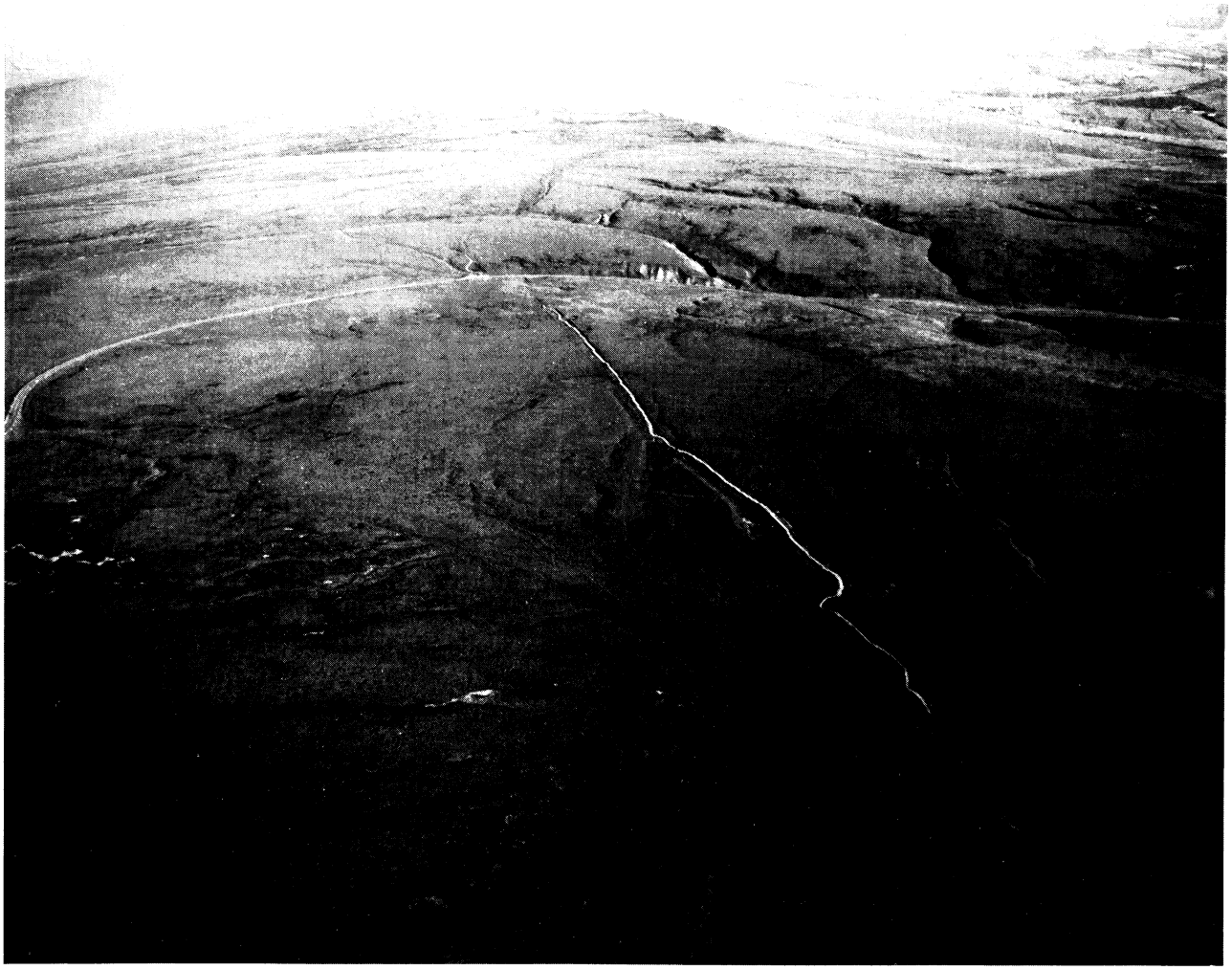


Fig 9.2: View of the blanket peat coverage over Dean Clough and Castleshaw Moor, which lie to the right of the Pennine way (seen here as a white gravel track).

disturbed areas in which Urtica (nettle) and Artemisia (mugworts) were present. An interesting feature of the diagrams is the relative paucity of forest trees. Woodland was dominated by *Corylus avellana* (hazel) a species associated with the upland scrub zone (*sensu* Tallis and Switzur 1990). Possibly forest trees such as *Quercus, Ulmus* and *Pinus* were confined to the areas of better drained soils of the Castleshaw Valley, with *Alnus* in wetter areas of the valley bottom and upland cloughs.

Woodland Disturbance

The second local pollen assemblage zone in both diagrams (LPAZ CM2 & DC2, *c* 2724 - 670 BC) was characterised by fluctuations in scrub woodland, heath and grassland taxa. These changes indicated periods of disturbance in woodland cover and corresponding expansions and contractions of open ground taxa. This section of the profiles, spans the late Neolithic and Bronze Age, a period which is associated with intensified woodland clearance for cultivation and pasture in the Pennines (Hicks, 1971, 1972, Tallis & McGuire 1974, Bartley, 1975). At Castleshaw Moor and Dean Clough (Figs 3 & 4) scrub woodland and heath communities appear to have persisted together throughout this period. Woodland remained largely dominated by Corylus (hazel) with some Quercus (oak), Fraxinus (ash), Tilia (lime), Ulmus (elm) and Betula (birch) and Alnus (alder) locally present. Increases in Calluna vulgaris (heather), Poaceae (grasses) and Cyperaceae (sedges) and the appearance of Empetrum (crowberry) may simply reflect ecological interactions in bog communities, in which Empetrum and Calluna were present on the acidifying podsols with Sphagnum, Eriophorum and grasses such as Molinia caerullea, Nardus stricta and Deschampsia spp. becoming more dominant in areas of shallow peat. However the reductions in woody taxa and the appearance of Plantago lanceolata, Rumex acetosa and Succisa together with species associated with disturbed ground (Plantago major/media, Artemisia, and Chenopodiaceae) suggested perturbations in woodland rather than peatland communities. Additionally the signals for woodland decline and grassland expansion appear to be more strongly represented in the Castleshaw Moor profile. This may be a reflection of the relative proximity of the sampling site to the better drained slopes of the Castleshaw Valley where clearance may have been taking place.

Fig 9.3: Castleshaw Moor, pollen percentage diagram (selected taxa).

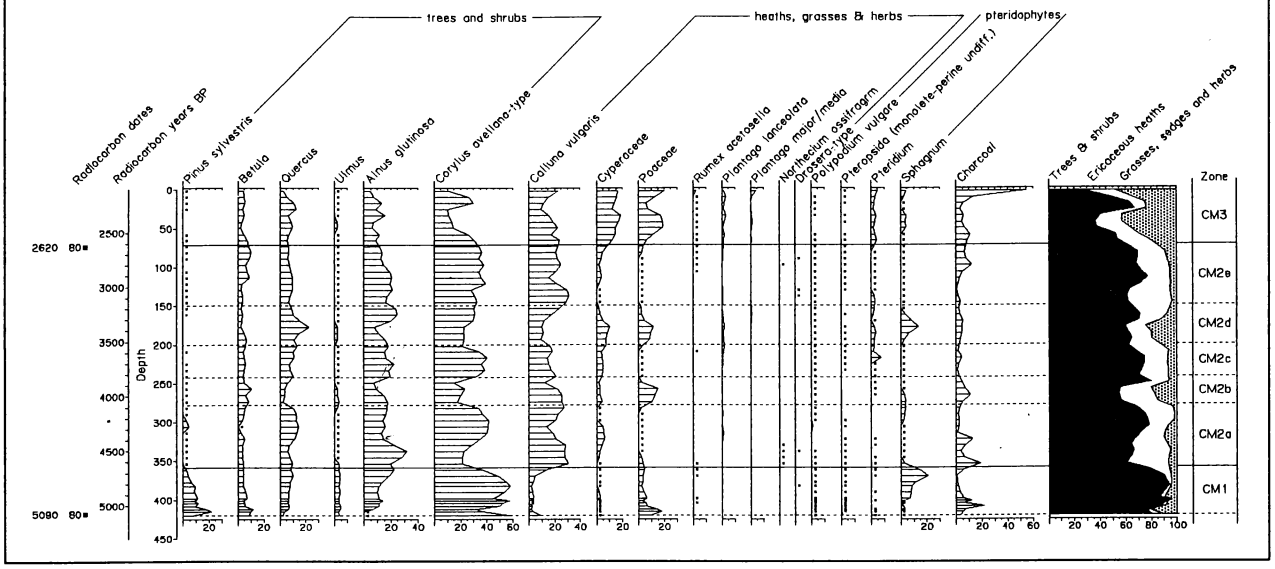


Fig 9.4: Dean Clough, pollen percentage diagram (selected taxa).

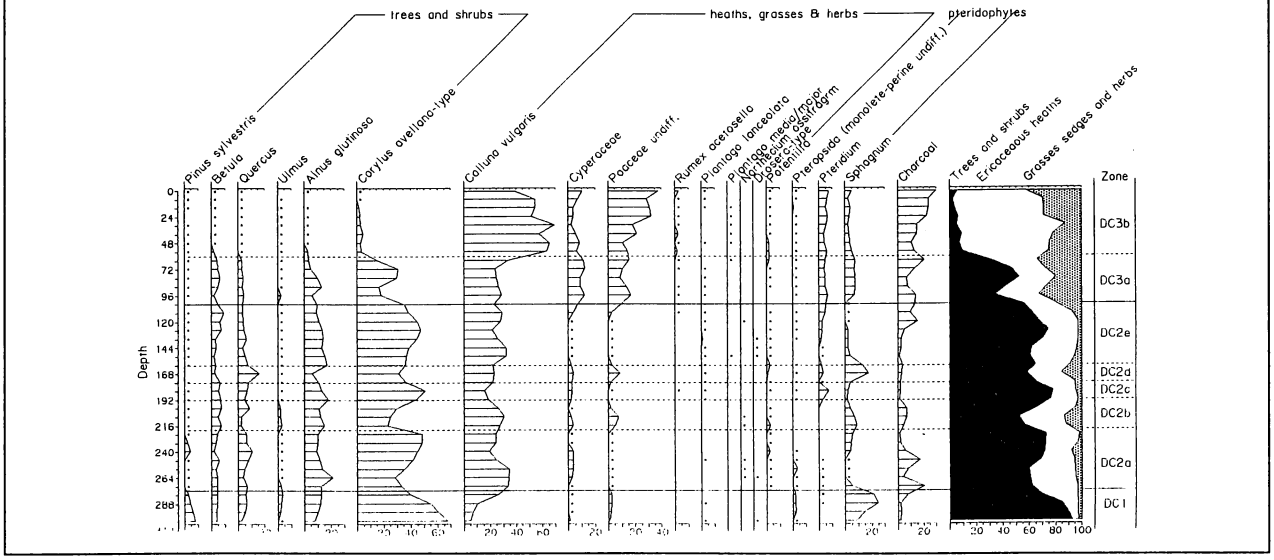
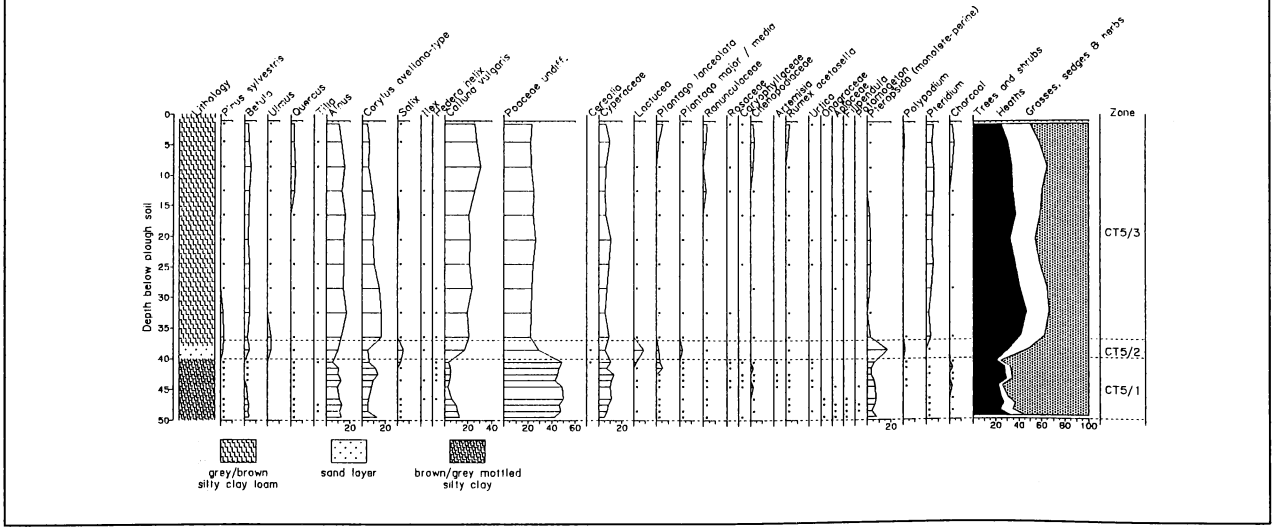


Fig 9.5: Castleshaw Roman fort, Trench 5 ditch fill pollen percentage diagram.



Another explanation worthy of further investigation is the possibility that disturbance during this period may be connected with the onset of peat erosion. The continuous presence of *Empetrum* throughout the zone is of particular interest in this respect. Similar mid-Holocene pollen records of *Empetrum* pollen have been noted from southern Pennine peats (Tallis 1997) and associated with the onset of gullying and erosion. *Empetrum* occurs on the dry hummocks of blanket bog pool and hummock communities, in blanket mire communities affected by grazing and burning and those affected by drainage or erosion (Tallis and Livett 1994). Today it can be found growing on the dry edges of eroded peat on the plateaux edges around the Castleshaw Valley. Tallis noted that *Empetrum* is sensitive to a high water table and mid Holocene records such as those from the Pennines may reflect a lowering of the water table in blanket peat which may result from hummock and hollow differentiation on the peat surface, climate change or peat erosion (Tallis 1997). Therefor the vegetation changes recorded in the pollen diagrams in this zone may reflect phases of peat erosion or peat flows which may be revealed by further pollen analysis and radiocarbon dating.

Woodland decline

Woodland and heath communities persisted together until 750-590 BC (2620 ± 70 BP) when woodland began to decline permanently and was replaced by *Calluna* (heather), Poaceae, (grasses) and Cyperaceae (sedges). Minor herbaceous taxa included pastoral indicators such as Plantago lanceolata (ribwort plantain)and Rumex spp.(sorrell). It was during this period that peat and grassland communities began to dominate the landscape. These changes were particularly noticeable in the Dean Clough diagram (Fig 9.3) where striking reductions in tree pollen and increasing Calluna vulgaris and grassland pollen frequencies were accompanied by a corresponding increase in micro-particulate charcoal. Such signals could reflect naturally occurring wildfires, alternatively Chambers has noted the past use of mires for grazing and the utilisation of fire in maintaining Calluna stands as pasture (Chambers 1996). It is probable that the upland moors were utilised for grazing animals, at least seasonally, and that fire was used as a management tool for maintaining juvenile Calluna stands. Today the surface of Calluna vulgaris heath in the British uplands is seasonally dry, if this was the case in the past then such areas would have been important, usable elements in the agricultural landscape providing browse where land area suitable for cultivation was limited. Human modification of the heathland may have played a significant role in determining the nature of blanket peat communities. At Castleshaw and Dean Clough the pollen records indicate that the blanket bog communities were more diverse than at present, with species such as Narthecium ossifragram, Potentilla (cf. erecta) and Drosera spp. as well as a diversity of ericaceous heath taxa.

The Roman Vicus Ditch Fills

The results of pollen analysis from the ditch fills are presented as percentage diagrams (Figs 9.5 & 9.6) and summarised in Table 9.3. and Table 9.4. The Local Pollen Assemblage Zones (LPAZ) are assigned an abbreviated site code, CT5 (Castleshaw Trench 5) and CT4 (Castleshaw Trench 4).

The basal pollen spectra from both ditch sections suggested that the vegetation of the valley in the vicinity of the Roman Fort consisted of herb-rich grasslands with some woodland in which Alnus (alder) Betula (birch), Corylus (hazel) and to a lesser extent Quercus (oak), Ilex (holly) and Ulmus (elm) were present. These data correlate well with the uppermost section of the Dean Clough diagram (Fig 9.3) which from *c* 50 BC onwards also showed a predominance of grasslands and heaths with some scrub woodland. The pollen spectra from both ditches had a higher non-arboreal / arboreal pollen ratio than that from the peat profiles suggesting that woodland was not immediately local to the fort. The herbaceous flora consisted of taxa associated with grassland, disturbed or ruderal habitats and wet/ waterlogged situations (Figs 9.4 & 9.5). Grassland indicators include species of Poaceae (grasses) which contributed 40% TLP and herbs such as Plantago lanceolata, Rumex, species of Ranunculaceae (buttercup family) and Caryophyllaceae (pinks) - plants which suggest herb-rich pasture rather than cultivated crops (Behre 1981). Plants associated with disturbed ground included *Plantago major/ media*, (greater plantain), *Artemisia* (wormwood), species of Chenopodiaceae (fat hen) and *Urtica* (nettles) possibly growing as roadside verge communities or in areas of disturbed, open ground around the fort. Waterlogged / wetland plants included Cyperaceae (sedges), *Filipendula* (meadow sweet), Onagraceae (cf. *Epilobium palustre* - marsh willowherb) and *Potomogeton* (pondweed) probably growing in the waterlogged base of the ditch.

Results of close interval sampling below the sand lens in Trench 5 (Fig 9.4) suggest disturbance to vegetation and soils in the catchment. Cultivation indicators include two Cerealia type grains (attributable to *Triticum* spp.) which occurred in one level from Trench 5 immediately below the sand band. The pollen spectra from this level was characterised by reductions in tree, shrub and grass and peaks in Pteropsida (fern spores) and Lactucea pollen. Previous studies of pollen from archaeological deposits exhibited similar over-representation of these taxa which Dimbleby interpreted as indicative of inwashed or degraded pollen spectra because both are particularly resistant to decay (Dimbleby 1985). This would suggest some disturbance of soils in the vicinity of the fort, possibly as a result of

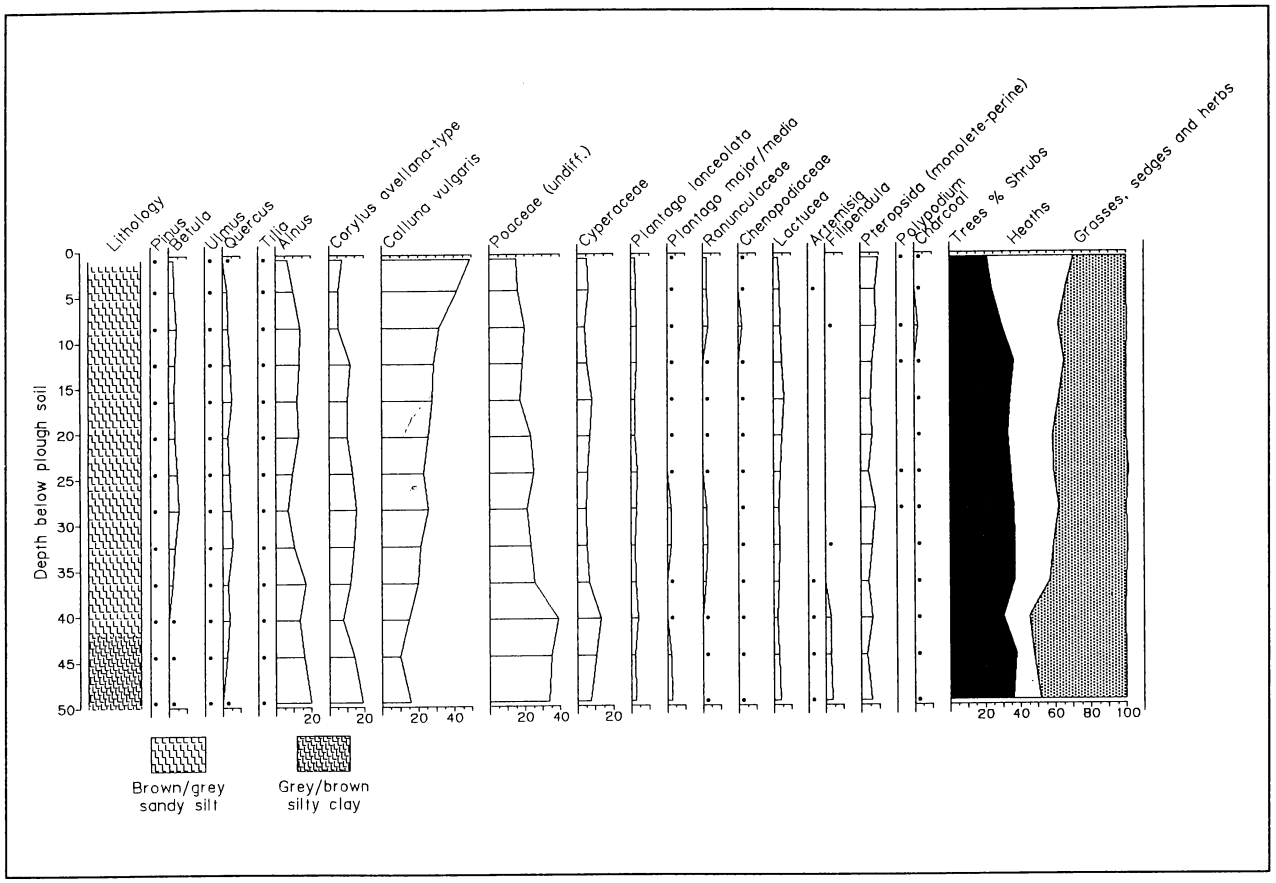


Fig 9.6: Castleshaw Roman fort, Trench 4 ditch fill, pollen percentage diagram.

cereal cultivation, which had resulted in a phase of erosion and inwashing of material into the Trench 5 ditch. These features were not so pronounced in the profile in Trench 4 possibly because pollen and spore preservation was generally poorer in this profile. The corresponding peak in charcoal suggests that vegetation and sedimentary changes may be associated with increased incidence of fire in the catchment.

In LPAZ CT5/3 and LPAZ CT4/3 pollen preservation and the diversity of the pollen spectra was poorer than in the basal layers. The pollen reflected a decrease in grassland and the spread of woodland and heath vegetation, the landscape remained open but there appeared to be some regeneration of woodland and spread of dry heathland in which *Calluna vulgaris* and *Pteridium aquilinum* (bracken) were present, both species are common today on the hillslopes around the fort and their expansion signals a shift towards acidification in the catchment soils. Possibly these were species able to spread into areas where cultivation had been abandoned.

Plant Resources

The pollen analytical data suggests a number of plants which were available for use by people occupying the fort area. Some woodland was present, possibly as small stands of trees and scrub growing on uncleared areas of the hillslopes, cloughs and plateau above the valley. Species recorded include Alnus (alder), Betula (birch), Quercus (oak), Ilex (holly), Ulmus (elm) and *Salix* (willow). Woodland would have provided timber for firewood - peat deposits were also locally available and may have been cut for fuel. Possibly any substantial timbers required for building would have had to be transported some distance to the site. *Salix* (willow) was available for basket-making and fencing. Woodland food resources could have included hazelnuts and fruit from species of Rosaceae such as *Rubus fruticosa* (blackberry). Evidence for agricultural activity is limited, possibly open grassland was maintained for pasture and the scarce Cerealia-type pollen grains originated from some limited cereal cultivation. Other wild herbaceous plants such as *Urtica* (nettles) and Chenopodiaceae (fat hen) have been documented as potential food plants (Mabey 1996).

The High Moor Palaeosol

Radio carbon dating of a wood macrofossil yielded a date of 100 BC-AD 40 (1980 ± 70 BP; Beta 82986) for the base of the deposit. In the basal samples (87.5 - 85 cm) total woodland pollen frequencies achieved levels of 55 - 40% TLP. (Figure 6). and were derived principally from Alnus glutinosa (alder) and Corylus avellana (hazel) and to a lesser extent Betula (birch). Minor woodland taxa included Quercus (oak), Tilia (lime), Pinus sylvestris (Scots pine), Salix (willow) and Hedera helix (ivy). Fern spores included Polypodium and scarce grains of Blechnum spicant (hard fern). The

remainder of the assemblage comprised heath and grassland taxa with Calluna vulgaris, (heather), Empetrum nigrum, (crowberry), Vaccinium (bilberry) together with Poaceae (grasses) and herbaceous taxa such as Plantago lanceolata, (ribwort plantain), Plantago major/media (great and hoary plantain), Potentilla (tormentil), Succisa pratensis (devils bit scabious) and species of Ranunculaceae (buttercup family) and Asteraceae (daisy family). Particulate charcoal was present in the deposits but occurred in low frequencies. These data suggest that the landscape at this time was partially wooded with areas of open heat and grassland communities. In levels 85 - 80 cm) tree and shrub pollen declined and was replaced by Calluna vulgaris (heather). These vegetation changes were accompanied by increasing levels of particulate charcoal indicating a strong correlation between declining woodland pollen values and increases in charcoal and heathland pollen taxa.

Conclusion

The combined pollen records from Castleshaw Moor and Dean Clough have provided a picture of changing mid to late Holocene landscapes in the west central Pennines. It seems that from 3,000 BC *Corylus avellana* (hazel) scrub was extensive, possibly with scattered stands of *Pinus* (pine) and later *Betula* (birch). Forest trees were not present in significant quantity, exposure and wetness may have inhibited their spread into the upland, but there remains the possibility that the altitudinal spread of forest was limited by management of the scrub zone from the Mesolithic period onwards. The particulate charcoal present in the basal sediments (Fig 9.2 & Fig 9.3) at both sites signalled fire in the region and raised the possibility of linkages between fire modified vegetation and peat inception. Fire may have been used to maintain the open nature of woodland, or the charcoal could indicate the presence of domestic fires in which wood was burned. Radiocarbon dating of the basal peat at Castleshaw Moor together with biostratigraphic correlation with the Dean Clough profile shows that peat inception at both sites post-dated the late Mesolithic culture, dated at March Hill to *c* 3660 BC (Switzur & Jacobi 1975). Comparison with other Pennine records suggests that this was a period when peat was spreading regionally (Tallis 1991).

A sequence of relatively small scale perturbations in woodland occurred during the Neolithic and Bronze Age and may reflect the management of the woodland scrub zone for grazing. If these changes are viewed in a regional context there appears to be convincing correlations between disturbance phases at Castleshaw Moor and Dean Clough with similar events recorded in central Rossendale and the southern Pennines (Tallis & McGuire 1972; Tallis 1993) which were interpreted as clearance associated with pastoralism and shifting agriculture during the late Neolithic and Bronze Age. Peaks in particulate charcoal reinforce the view of fire modified vegetation. There was no evidence, in the form of distinct charcoal layers, for fire on the bog surface. One possibility raised by Goransson is that phases of woodland contraction and regeneration such as those in evidence in these records represents the management, rather than piecemeal clearance of woodland (Goransson 1987). Coppicing, pollarding, shredding and leaf foddering (Rackham 1980) are all management tools which optimise woodland resources and would impact upon pollen production. Opening of a woodland canopy can result in an increase in ground flora, and grazing would inhibit woodland regeneration and maintain open stands.

From *c* 670 BC the landscape was progressively deforested and upland scrub was replaced by blanket bog. Increasing levels of particulate charcoal in the sediments from this period suggested that fire may have been an important component in vegetation change. Possibly intensified landuse during the pre-Roman Iron Age may have tipped the balance further towards increased soil impoverishment and acidification. In the Dean Clough profile the period covering the occupation of the Roman fort showed quiet drastic reductions in scrub woodland. The pollen spectra from the two ditch fills contained three distinct phases. An initial phase possibly following construction when the base of the ditches would have been at or around the watertable and stratified infilling occurred. A second phase most clearly defined in Trench 5 indicated some erosional inwash of sandy sediment into the ditch possibly as a result of disturbance linked palynologicaly to small scale cereal cultivation. The uppermost sections reflected a switch towards woodland regeneration and the spread of heath and bracken possibly resulting from a reduction in land use pressure following the abandonment of the site. Pollen analysis from beneath the Roman road at High Moor reinforced the view of woodland clearance and the creation of open heathland prior to the construction of the road which was also reflected in the Dean Clough profile. Similar clearances have been recorded from natural peat profiles from the eastern moors of the Peak District (Hicks 1971), Featherbed Moss, Derbyshire (Tallis & Switsur 1973, north-east England (Turner 1978) and from northern Britain in association with Hadrian's Wall (Barber 1993; Barber *et al* 1994). The High Moor data is consistent with an emerging pattern of land clearance during the Romano-British period.

Importantly these preliminary investigations provide new data from a previously uninvestigated area of the Pennines. In addition to the information provided on immediately local environmental history they have been shown to have wider regional significance in relation to studies of vegetation and environmental history from other peat sites in the Pennine uplands.

Chapter 10

Conclusion

The North West and Marginality
Their Fault or Ours? A Warning from the Cumbrian Evidence

Barri Jones

The traditional approach to the archaeology of Roman frontiers, through partly random evidence recorded in documentary sources, has in one sense bedevilled much of our approach to the topic in Britain. Much concern has been devoted to the reconstruction and military details of campaigns mentioned in historical sources, and for over a century now excavation of the northern frontier zone of Roman Britain has concentrated on the internal details rather than a broader landscape analysis of the forts, civilian settlements and the rural hinterland in their synthetic context. Above all, perhaps, the shaping of the subject has seen interpretation mainly in terms of the chronological sequence of perceived or attested military events.

The Theoretical Context

The limitations of this approach on a higher academic plane have been recognised in print for the best part of two decades. There is now perhaps a growing tendency to frame research questions in Roman frontier archaeology in terms of the relationship between Roman and native, especially amongst Dutch and other scholars such as Bloemers, Villems and Kuhn (Bloemers 1990). The attempt to look at a frontier in relation to its centripetal provincial context has also made it a currently fashionable area for study by ancient historians. Thus in this same period argument has polarised between two schools of thought which, simplistically described, suggest that the frontiers were either scientific, strategic boundaries, or the effectively accidental creations of a sequence of events. Although we may be able to agree that Roman emperors and generals never sat down in the *concilium principis* and worked out a grand military strategy it is perfectly possible to make a structural and behavioural analysis of the choices they did make for their frontiers. The weakness of Mann's recent arguments (Mann 1996), for instance, suggesting that frontier development was largely a random fossilisation of previous developments lies in the assumption that military and political factors are the only ones worth considering. Yet Owen Lattimore's contribution to frontier studies (Lattimore 1940) in his work on the Chinese and Mongolian Inner Asian Frontier lay essentially in his identification of the economic and ecological limits of imperial expansion. The Chinese frontiers, he believed, represented a compromise between the range of conquest and the economy of rule. Inevitably this compromise was not a clear geographic dividing line but a broad transitional region, an inner and out frontier as he called it, where it was never obvious in the first instance whether the food supply or local production could sustain an army without its becoming an intolerable economic or logistical burden. The danger, as he put it brilliantly, was that 'centripetal gain was converted into centrifugal loss'. In that sense frontiers represented the limits of growth and, as Lattimore said, that which was politically conceived as a sharp edge was constantly spread by the ebb and flow of history into a relatively broad and vague margin.

This line of argument accords with developments on other frontiers where centrally organised states also encountered a dispersed and fragmented opposition as Rome did, particularly in the north-western part of the Roman Empire. Prince Gorchikov, for example, faced with the same problem in Russia's imperial ambition in central Asia in the mid-nineteenth century complained that the expenses were no longer worth the expansion as Kirk pointed out in the pioneer volume *Invasion and Response* edited by Burham and Johnson (1979).

If we accept that the North West lay within the frontier zone of the province of Britain (Carrington 1986; Shotter 1997) what are the implications for the study of the Romano-British landscape in the North West? The questions that are coming to dominate frontier research to the detriment, it must be said, of fresh locational discovery are:

- *Firstly, what were the patterns of cultural interaction and change in the frontier zones?*
- *Secondly, how did these local conditions affect imperial decision making on whether or not to extend conquests.*

The most important for the North West is the first of these. The origin of the study of cultural interaction and change on the frontier zones can be traced to a paper by

Wilhemena Groenman-Van Waateringe in 1980 in which she clearly expressed a need to understand the social and economic processes in the frontier zones, questions that could only be addressed by archaeological research (Groenman-Van Waateringe 1980). In effect the archaeological record, it was argued, is the only reliable source for the study of the frontier regions of the Empire. The written record can help us little in understanding relationships between the army and the indigenous people, which it largely ignores save in a few passages such as Cassius Dio's description of acculturation in the emerging province of Germany.

Lattimore's model has been criticised on a number of points, notably the symbiotic exchange mechanisms between the nomadic and sedentary populations, a process known in Numidia but not yet accepted in Britain. Lattimore's arguments, however, were concerned not so much with the relations between groups within the indigenous population but rather the marginality of the land and here is perhaps the most important aspect of his work for the North West. Lattimore writes 'when the combined economy, society and state, interacting with each other had finally worked out the range of frontiers most profitable and satisfactory to them, they thereby defined also the geographical and environmental limits within which they could prosper' (Lattimore 1940, 241).

Strategic decisions were therefore made both consciously and what Lattimore termed 'unconscious trends' adumbrated by Appian, for instance, when he says that Emperors 'aimed to preserve their empire by the exercise of prudence rather than to extend their sway indefinitely over poverty stricken and profitless barbarians'. More specifically of Britain he wrote that the Romans 'have occupied the better part of it. That they do not care for the rest, for even the part that they do occupy is not very profitable to them'. In other words, as Whittaker has pointed out, Roman emperors or at least the Roman high command had some awareness, however rough and ready, of what we would call the marginal costs of imperialism (Whittaker 1994; Jones 1997).

The Cumbrian Evidence

It is precisely this ecological and demographic marginality that is increasingly being documented in various archaeological studies of the Roman Empire. In Britain one of the most intensively studied parts of the frontier zone lies in northern Cumbria. It is this region and the research approaches employed there that contain both warnings and guidance for future studies in North West England. Air surveys of settlement-patterns in the Solway and Tyne frontier regions, more particularly the former, show that on the Solway line site density north and south changes dramatically from approximately ten square kilometres to three and a half square kilometres per habitation (Fig 10.1).

I have argued elsewhere (Jones & Walker 1983; Higham & Jones 1985) that much of this differentiation

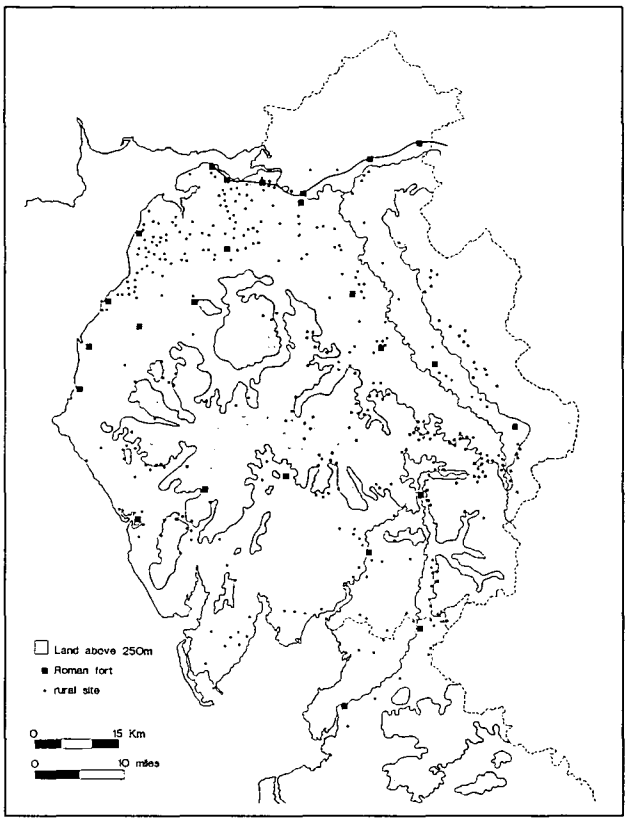


Fig 10.1: Confirmed and possible Roman rural sites in Cumbria and North Lancashire (after Shotter 1997, 71).

was probably the consequence rather than the cause of the Wall. That of course depends on the dating of the majority of the archaeological sites that emerge immediately prior to the Roman period. At the time I wrote that the Wall 'appears to incorporate in the decision making process a desire to maximise the area of potential arable land within the frontier area'. As Whittaker wrote 'any picturesque vision of north Britain filled with nothing but Celtic cowboys, as they are sometimes called before Rome's arrival, is no longer tenable' (Whittaker 1994). What one can perceive is a noticeable thinning out of the evidence for grain production in favour of pasturéland for cattle as one progresses northward towards the wall and beyond. The northern Pennine forts occupy what today is classed as land of grade three to five quality, a classic zone of ecological marginality.

There are inherent difficulties in making generalisations in this area. The lack of knowledge relating to late prehistoric Cumbria, for instance, makes it impossible to assess the Roman impact by contrasting the nature and extent of settlement before and after the Roman conquest. Nonetheless, no single site, and I would emphasise this, has yet produced positive evidence of immediately pre-Roman occupation. There is, therefore, effectively a hiatus in our knowledge of site evidence stretching broadly speaking from the mid-to-late first millennium BC to the demonstrable development of Romano-British farmstead sites at a stage following the establishment of the Roman military

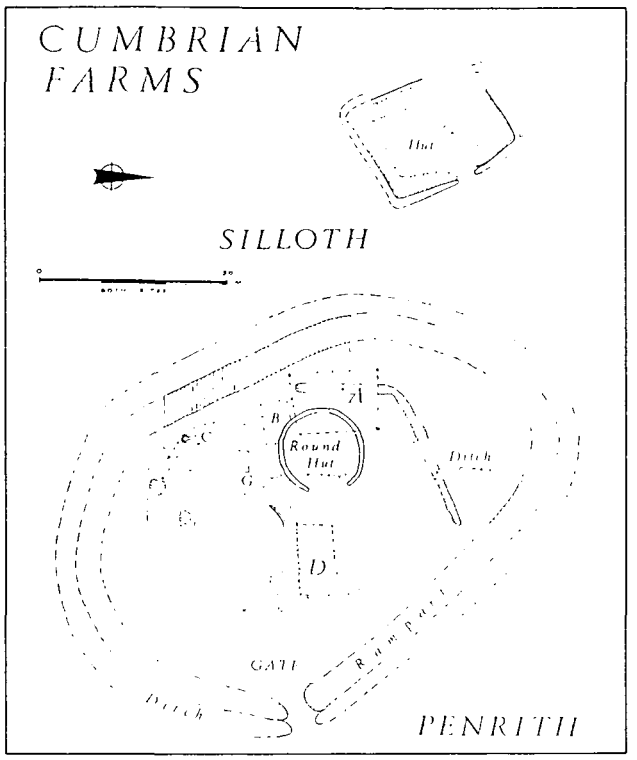


Fig 10.2: Penrith and Silloth Farms, northern Cumbria, Romano-British settlements. Both appear to be 2nd century AD in origin. Both are drawn at the same scale. After Higham & Jones 1985, 96.

frontiers (Fig 10.1). I would emphasise the plural in the light of the now established evidence for at least two periods in frontier formation west of Carlisle.

Understanding the extent of settlement and the nature of land use in the immediate pre-Roman period is therefore wholly dependent on extrapolation from the Roman period. What has shaped some of Dr Bewley's recent re-examination of the northern Cumbria (Bewley 1993) material is the presumed survival of characteristically Iron Age settlements into the Roman period. Take the round house and the ditched or wall-defined settlement (Fig 10.2). All are essentially late prehistoric in morphology and have obvious parallels elsewhere in Britain during the late prehistoric period. One might argue as Bewley has done that a substantial continuity is likely, although it is not proven. However, there is also a degree of circularity in the argument and for the moment we might perhaps assume that a proportion, however small, of the native settlements associated with the Roman period owe their origins to the preceding phase.

For the moment we may say that the growth in the late second and third centuries AD of an apparently prosperous and stable agricultural economy is most easily seen as a reflection of the creation of the linear frontier in the west. The hundreds of farms attested in the western hinterland of the Wall in contrast to the lack of such growth across the Solway surely allows us to see writ large in the distribution pattern the socio-economic effect of the Roman frontier, and to understand the fuller meaning behind Cassius Dio's simplistic explanation offered for motivation in the construction of the Wall.

It appears perfectly logical to argue that a percentage, however small, of the known sites must have their origins in the late prehistoric period. Perhaps it was Brian Blake who shaped this argument by the pioneer excavations in north-western Cumbria which found, particularly with sites around Wolsty, local black gritted fabrics that he erroneously identified as being of Iron Age date, from contexts that were inescapably third or fourth century AD. The principal question surrounds the degree to which the late Iron Age cultural tradition can be identified amidst the majority of farmstead sites. This in many ways was the central thesis behind Bewley's approach in the re-examination of the air photographic evidence. The reality of the situation remains that to date none of Bewley's case studies has provided an unequivocal example of a farmstead which lies in pre-Roman period. Disappointingly his recent work on the Solway Plain fails to state this with clarity, and to some extent the myth has been perpetuated by his recent English Heritage book on prehistoric settlement (Bewley 1994). The truth of the situation is that the only prehistoric site that he has examined, at Ewan Rigg near Maryport, proved to be of mid to Late Bronze Age date and that the correlation between cropmark evidence and the located site still presents problems of interpretation.

Can we offer anything that might replace this quest for a proportion of sites of late prehistoric date? Or rather have we been looking for the wrong kind of evidence? I believe we have been led down a blind alley and that we need to re-examine the political context of this area at the time of the conquest in the light of new theories put forward in the last decade.

The general consensus is now that the Stanwick fortifications at Scotch Corner should be regarded as the central core of the Cartuamanduan kingdom of Brigantia rather than any of the strongholds that were previously canvassed towards the central and southern Pennines. We might therefore ask ourselves what kind of pattern we would expect across north-western Brigantia. In this context I believe that Bewley's quest for farm sites of Iron Age origin beneath Roman ones is illusory, partly because the principal sites that appear do not take that form at all, but rather comprised the larger univallate and sometimes bivallate or even trivallate settlements which are absolute exceptions to the general rule in the settlement morphology that is available. If we begin to agglomerate these singular sites then I think we can begin to reconstruct something of the north-western Brigantian polity before the emergence, presumably towards the end of the second century, of the *civitas Carvetiorum* (Higham & Jones 1985). There was, perhaps, a major centre in the Kirby Stephen area. The Eden Valley round Penrith is the focal point of central Cumbria, and there a three hectare defensive enclosure at Clifton Dykes a few miles south of Penrith remains a prime candidate for the kind of site we should be looking for at this stage, lying close to the strategically important crossing of the River Emont. Unfortunately, bulldozing in the late 1960s has meant

that it has received no significant study, but appears on grounds of size to be the focal point of late prehistoric settlement in the Penrith area. Likewise, on grounds of size the site of Dobcross Hall also forms a prime candidate for consideration and should be considered in a separate category from the great majority of other settlements. A bivallate site is known at Millom on the south west lakeland coast, and a trivallate site has long been known at Swarby Hill on the Cumbrian coast north of Maryport. Potentially the most intriguing sites of this class, as we attempt to reconstruct the north western polity of the Brigantes, lie not under but around Carlisle. An early Cambridge air photograph has located a comparable site one kilometre south of Cummersdale to the south of Carlisle, and it is in this area that a newly discovered Roman fort has been located, probably owing its position either to the presence of this major site or the general distribution of presumed late tribal settlement in the valley towards Dalston. Equally, on the north side of the Eden at Rockcliffe evidence has emerged for a particularly interesting three acre bivallate site with associated field systems apparently controlling a river crossing of the Eden at the effective tidal limits of the river. Thus, it seems we have the makings of an outline political geography of the immediately pre-Roman periphery to the core of Brigantian territory centred on Stanwick. Its presence north of the river is another reason for thinking that part of the tribal territory concerned extended beyond the Eden and was later amputated by the creation of the Roman frontier. The exploitation of the late prehistoric countryside associated with these sites remains at the moment a blank, a void that has notionally been filled with an infrastructure of Iron Age settlement that has in reality singularly failed to be identified on the ground.

In Dr Higham's broadly eco-deterministic survey of the Northern Counties of England, which was based upon the palynological guidelines established during the previous two decades (Higham 1986) it appears that the pollen cores show that clearances occurred at different times in the west from the east. The work of Pennington in the Lake District in particular established that major forest clearance appears to be associated with the third and fourth centuries AD, a period when an intensification of the farming pattern undoubtedly occurs (Pennington 1970).

Whatever the arguments regarding the percentage of the cropmarks that have Iron Age antecedents there can be no doubt that of the 20 or so examples that have produced dating material the overwhelming pattern is of third century AD exploitation. This is demonstrated primarily by a growing body of ceramic evidence but we have also seen that it tallies with the palynological evidence attesting the amount of clearance going on in the west during this period. Thus, I would argue that our view of the relatively late development of Roman farm sites is a perfectly logically step in the overall pattern of development.

In another way it is part of a broader pattern. Archaeologists are fond of employing the concept of marginality in explaining where the Roman army chose

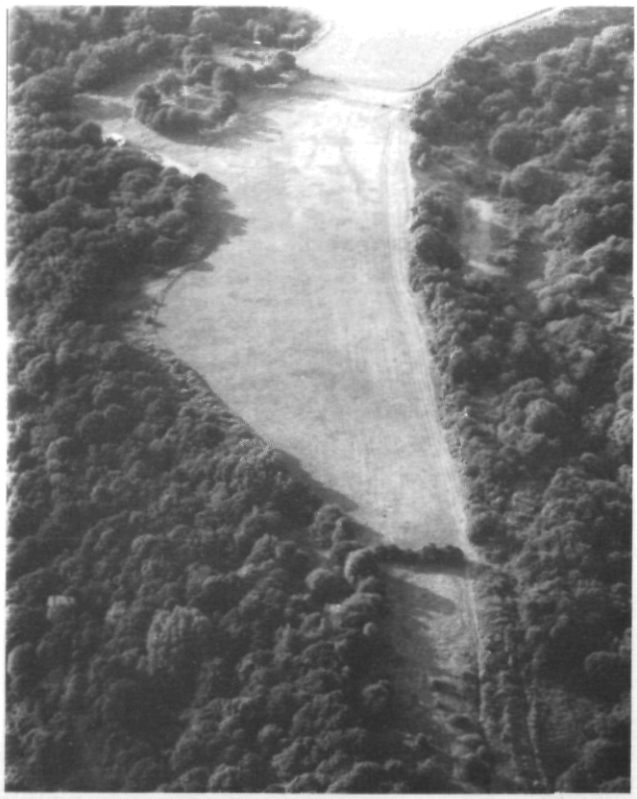


Fig 10.3: Giant's Seat in the Irwell Valley, Manchester. This is a potential escarpment edge site which has produced cropmark evidence for a double-ditched enclosure. Excavations showed the possible existance of ditches. These are the kind of sites to be expected in the western Pennine foothills.

to draw its frontiers. Thus, as we have seen Whittaker explains the choice of the Tyne/Solway line as representing a logical division between areas of potential cultivation and what could be consigned to the *barbaricum*. The danger is in seeing marginality as an unchanging effect. A moments thought will suggest that this is unlikely to be the case; the presence of a frontier zone de facto will set in motion changes to the levels of what is considered marginal once an economic market to supply the military is in place. Then, the incentives to exploit the increasingly marginal logically follow; in the Cumbrian case during the second and third centuries AD.

Is this part of a larger pattern? Again I think the answer is yes. If one takes a comparable body of evidence from the magnesium limestone country of south Yorkshire, where the late Derrick Riley located previously unsuspected settlement patterns, subsequent work has shown that most of the farms belong to the third and fourth centuries AD (Riley 1980). That example is probably too distant to be relevant to the North West, so let us take another example, that of Littondale in the Yorkshire Dales where the Department of Art History and Archaeology at the University of Manchester has recently conducted survey and excavation on behalf of the Dales National Park (see Maude this volume). The survey teams were presented with a, theoretically, predominantly prehistoric

Fig 10.4: The ancient landscape of Warburton, a settlement at the confluence of the Rivers Mersey and Bollin. Since 1997 the Warburton Archaeological Survey has fieldwalked nearly 200 acres, producing Roman pottery, querns and metalwork.

landscape to analyse and research. Morphologically, most of the settlement nuclei were circular in the prehistoric tradition, yet investigation showed that the bulk of the field systems and farms, in so far as it was possible to say, exhibited some evidence of Roman settlement. Furthermore, all the sites examined produced finds of the third or fourth century AD. Survey and excavation of one of the less accessible dales thus fits the same kind of exploitative pattern on climatically and agriculturally marginal land that is apparent from the work in the hinterland of Hadrian's Wall in northern Cumbria.

The North West Evidence

So far I have been discussing marginality (defined in the OED as 'difficult to cultivate' 'unprofitable') in the economic sense, and in particular in relation to the exploitation of upland margins within the Roman Empire. Yet archaeologists also use the term for those lowland areas which do not appear to have been agriculturally marginal. In relation to the North West, as Michael Nevell and John Walker have argued at the beginning of this work this is a topic in which greater semantic exactitude is required. We need to define our use of the term 'marginal' and distinguish thereby between areas in the region where agriculture was spread into primarily 'upland zones' of borderline cultivability and, on the other hand, zones where the apparent absence of settlement has led to an assumption of marginality. The former is economic marginality, the latter either political or intellectual marginality. Thus, elsewhere in this volume both Keith Matthews and Michael Nevell show that the North West has been dismissed by some researchers as an irrelevant backwater during the Iron Age and Romano-British periods; a view re-enforced by the application of inappropriate theoretical models.

As Jill Collens demonstrates this problem has extended to primary site location and investigation. Cheshire has often been considered marginal in agricultural and cropmark formation terms; partly because of the spread of the Merseyside conurbation into the Wirral and partly because of the predominantly heavy clay soils and pastoral landscapes of Cheshire which are not readily conducive to cropmark formation (Williams 1997). This impression has been re-enforced not just for Cheshire, but also for Greater Manchester, Lancashire and Merseyside by much of the work of the North West Wetlands Survey (Cowell & Innes 1994; Hall *et al* 1995; Leah *et al* 1997). Yet neighbouring areas such as Shropshire and Powys have, as we know, shown a dramatic increase in the number of cropmark enclosures, presumably of the later Prehistoric and Romano-British periods, in the last two decades through repeated programmes of flying. The programme that is

running in Cheshire and Merseyside has produced an increase in knowledge that is more gradual but nonetheless positive for that. Thus, once this approach of regular survey was adopted for Cheshire and Merseyside by Jill Collens and Rob Philpott new sites began to accumulate with each sortie. The approximately 50 enclosures so far located represent the starting point for an improved understanding of the late prehistoric and Romano-British settlement patterns of the region. As Keith Maude has demonstrated, however, such programmes are ultimately sterile if they are not supported by a fieldwork programme to investigate the new sites. This is why the work of Rob Philpott and Jill Collens since 1993 has been so important; it points the way to future progress on interpreting our early landscapes, and avoids the trap of the sterile re-working of the existing database.

In this regard the excavations by Michael Nevell and Rob Philpott of the late prehistoric and Romano-British farmsteads at, respectively, Great Woolden in the late 1980s and Irby in the 1990s stand out as beacons of archaeological hope.

Elsewhere within the Mersey Basin progress has been made in the analysis of upper reaches of the Mersey and Irwell valleys in the Pennine foothills to the east and north of Manchester. Norman Redhead and Barbara Brayshay have demonstrated the value of combining archaeological and palaeoenvironmental evidence at the local level, in this case the study of a single valley at Castleshaw, and the emerging picture is one of over exploitation in the early Roman period.

Conclusion

The North West is an area where there has been an assumption of agricultural marginality, and consequently an intellectual assumption in the past that this area is devoid of such early sites. However, the work of the researchers in this volume illustrates that marginality is not a fixed concept, and agriculturaly marginality especially so.

To take one example, in the foothills around Manchester regular flying during the 1990s as part of a number of joint research programmes between the Field Archaeology Centre and the Department of Art History and Archaeology at the University of Manchester has produced a dozen potential new sites of this period. These come not just from cropmarks on the isolated areas of sands and gravels, but surprisingly from very shallow surviving earthworks on the claylands. The investigation of one of these, the promontory site of Castlesteads in the Irwell valley to the north of Bury, shows that the methodological approach of flying coupled with site investigation underway in Cheshire and Merseyside is equally applicable to the upper reaches of the Mersey Basin. Here is unequivocal evidence for a promontory fort, and a limited sampling programme has served a greater purpose in demonstrating by the use of radiocarbon dates activity in the late Iron Age and early Romano-British periods.

We should not dismiss, however, the more traditional approach of fieldwalking. Targeted investigations of the new sites found by the flying programmes underway in the North West have produced results in both the lowlands and uplands. For instance, two cropmark sites near to Irby on the Wirral have produced Roman material, both pottery and metalwork, whilst in the Manchester area a cropmark site on sands and gravels at Rhodes Green near Prestwich also produced Roman pottery. Blanket fieldwalking is also beginning to produce results. There is a growing collection of Roman material, in the form of querns, pottery and metalwork, being amassed by systematic fieldwalking of one parish in the Bollin Valley. Here at Warburton palaeo-environmental evidence, flying and fieldwalking are combining to produce a picture of an ancient landscape of 4km^2 (Fig 10.4).

What the papers in this volume show is that archaeologists have in the past been dissuaded from working on the late prehistoric and Romano-British landscape in the North West because of intellectual marginalism through the perceived problems of the industrial overlay and blanket claylands. I hope that I have demonstrated that this 'presumption of marginality' needs to be avoided as these new rural sites begin to show that the area fits into a settlement pattern that can be paralleled not only in many parts of the Roman Empire but in many frontier areas. Within the North West a key area for future study and understanding of this pattern is the upper Mersey Basin in the 110m to 250m AOD zone, the area of predicted agricultural marginality that in the Roman period may have been over exploited. Yet, the difficulties of surface evaluation in the face of modern overlay make the North West one in which, I believe, we should be far more sceptical about the value and much more economical with the cost of surface survey. In short one can debate endlessly about the meaning of isolated pot sherds or cropmarks on an air photograph; that is, after all, part of the latter's fascination. But in the end there is no replacement, in my opinion, for systematic sample excavation, and our job in the next decade is to decide how we can best apply such a policy in a zone where presumed agricultural marginality has not only served to deter fieldwork, but has also extended the archaeological application of the term 'marginal' to that of intellectual marginality in a way that we must modify in the coming years.

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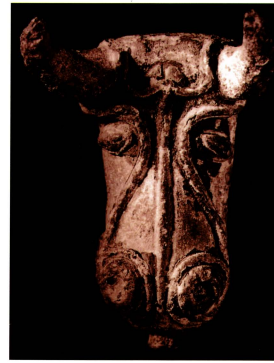

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