

## Chapter 3

# The Romano-British Period Research Agenda

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### *Introduction*

A review of research into the North West's archaeology in the Romano-British period gives at first an impression of an area relatively well studied. The distribution of known sites in the HERs suggests a reasonably widespread and evenly distributed degree of knowledge. In reality this distribution is unlikely to be genuinely representative of past settlement and activity and is biased according to a number of factors such as geology and topography, agricultural regimes, and the selective nature of archaeological research, including both antiquarian work and modern development-led projects. Despite a considerable number of antiquarian investigations directed towards the archaeology of the period, a significant proportion of this work simply does not stand up to contemporary scrutiny. The first major gap in our current knowledge of this period, therefore, is in understanding the nature of the archaeological dataset; whether the data are genuinely representational, and where the biases may lie. The research potential of the archaeological resource for the period could be greatly increased overall by addressing several key areas.

### *Improving Accessibility of Data*

It remains difficult to access information about current research and archives, despite the publication of summaries of recent work in publications of the Society for the Promotion of Roman Studies, the CBA and the Archaeological Investigations Project at Bournemouth University. Equally, it is currently difficult to trace all work undertaken in universities, at undergraduate and post-graduate level, or to search for that material by geographical area. There is a need

to be able to find out simply and quickly what work has been undertaken within a particular area, but there is ultimately no single location where all grey literature, reports and theses are listed, let alone available for consultation.

### *Initiatives*

- 3.1 There is need for full assessment of the current resource beyond the scope of the Research Framework process. This work should cover antiquarian work, museum archives, SMRs and HERs, and the archives of university departments and archaeological units.
- 3.2 Too much information remains unpublished or presented in grey literature only with no usable synthesis, and a framework is needed to address this regionally or nationally.
- 3.3 As a minimum, all Romano-British sites excavated should have an entry in *Britannia* and this requirement should be stated within curators' briefs.

### *Unpublished Archives*

A significant body of archaeological data, often excavated under modern conditions, remains beyond the public domain and is not currently under analysis or preparation for publication. This backlog is not the result of any single factor, and the history of some post-excavation projects is as long and complicated as their stratigraphic records. This has limited the scope of the Resource Assessment and some of the problems highlighted below in the Agenda could be addressed by existing material, if the data were avail-



Fig 3.1 Conservation of the granaries at Galava Roman Fort, Ambleside, after re-excavation for English Heritage (Jason Wood).

able for study. The current backlog of unpublished material covers all types of sites from rural and urban locations, and is evident throughout the region. Noteworthy examples for this period include archaeological work on sites at Ambleside, Carlisle,

Chester, Eaton by Tarporley, Manchester, Middlewich, Papcastle, Ribchester, Walton-le-Dale, Wilderspool, and numerous smaller interventions. It is acknowledged that some of the analyses on this material are ongoing, and in the long term publications

will be forthcoming. However, some archives appear to be static, with no apparent movement towards analysis and publication.

#### *Initiative*

- 3.4 An audit and prioritised programme for post excavation of key sites is required to deal with a backlog of unpublished excavations (see above General Introduction).

### ***Chronologies and Dating***

While pottery dating from the 1<sup>st</sup> to 3<sup>rd</sup> centuries is fairly widespread in the region, it is not necessarily found on all sites dating from this period, and reliance on datable ceramic material is not suitable or satisfactory to establish chronologies for the majority of rural sites in the North West. Additional sampling strategies need to be implemented in order to establish chronologically defined stratigraphic sequences. There is still uncertainty about the actual foundation date of many rural sites with what appears to be Romano-British occupation evidence and equally many questions about 4<sup>th</sup>-century or later phasing on both rural and urban sites. There is also considerable doubt that the end of the supply of durable material culture necessarily occurs at the same time as the end of occupation on rural sites. The view that AD 410 represents a significant event for the rural population and saw widespread abandonment of the settlements has been rejected and increasingly replaced by a view that society continued to function at some military sites as well as in the countryside. The occurrence on several rural sites of early medieval occupation recognised only by radiocarbon determinations of features containing residual Romano-British pottery highlights the potential for 'Roman-period' sites to contribute to the identification of the highly elusive early medieval settlement.

#### *Initiative*

- 3.5 Many more radiocarbon dates are required from Romano-British sites, for both early and late phases and most especially for rural sites. Briefs for development-led projects and project research designs should require positive discrimination in favour of programmes of dating, stratigraphic and scientific analysis (see above General Introduction).

### ***Identification of new sites***

There are substantial gaps in the known geographical distribution of rural sites, which are almost certainly a result of the difficulty of locating sites and/or a lack of appropriate archaeological fieldwork, rather than a

genuine reflection of the original distribution. This is illustrated, for example, by the A5300 road corridor which ran through an area of Merseyside thought to be devoid of Romano-British settlement. Fieldwork located three previously unknown sites occupied in the Romano-British period along a 4km stretch of road. Repeated aerial reconnaissance in an area perceived as poor for production of cropmark sites has shown the potential to detect the relatively ephemeral remains of rural or short-lived military sites in the restricted but often unpredictable windows of favourable conditions.

While the development control process may enable the Research Agenda to be pursued in certain parts of the region such as areas of Cheshire or Merseyside where there is intensive development pressure, in other parts of the region, such as the Cumbrian fells or upland Lancashire, development is restricted and takes place at a slower rate so there are fewer opportunities either to investigate known sites or to recover information on new sites through developer-funded work.

#### *Initiatives*

- 3.6 Proactive programmes of fieldwork and air reconnaissance are required if we wish to see significant new understanding of rural society and economies, particularly in the uplands, during the Roman period.
- 3.7 Absence of known distributions should not be regarded as genuine gaps and should be addressed positively through site assessments and evaluations (see above General Introduction). Similarly, genuine absences of relevant material in fieldwalking or other interventions should be recorded to contribute towards a fuller picture of overall landuse in the period.

### ***New Research Questions for the Romano-British Period in the North West***

Beyond established models for the chronology of military sites, towns, industrial settlements and rural farmsteads, few new questions are being asked of this significant archaeological resource, or the interaction between the wider population and the military, the economy or the environment. Aspects of the period, previously thought to be well understood, such as the military occupation of the region, are in fact imperfectly understood. In short, there are currently too many presumptions based on too little material. There is a need to go beyond more traditional archaeologies and archaeological methods that are not suitable to address the specific problems for this period in the North West, and to approach the archaeology of this period (as with any other) with method-

ologies that will elicit significant data. This needs to be a top down approach starting with those writing briefs and project designs for work, and implemented and monitored for all aspects of field projects.

There is an inherent tension in research aspirations for the region. On the one hand there is a lack of basic data and knowledge with which to formulate new models for research, and on the other hand a need to challenge traditional approaches in order to address the major areas of weakness in current archaeological understanding. The Agenda for the period attempts to achieve a balance between addressing high level theoretical questions about patterns of social, cultural and economic relationships in the North West and identifying research projects with well-focused aims that are realistically deliverable given the Region's distinctive archaeological character and relatively modest infrastructure.

### *The Late Pre-Roman Iron Age*

The key to understanding early Romano-British society is an understanding of Late Pre-Roman Iron Age (LPRIA) society. It has recently been argued that the Roman army invaded and occupied the North West because the economic and agricultural structure was already in place to support a large garrison (Wells 2003, 81) but there is currently little evidence for this beyond the environmental record. The sparseness of material culture on all sites constrains attempts to reconstruct even general models of the chronology, status and economy of most sites. There is little evidence for social stratification in the LPRIA and in many areas equally little sign after the army have been stationed in the region. The region is 'poor' in some respects but this also adds to its regional distinctiveness (Haselgrove *et al* 2001, 22-5), and to the challenges faced by archaeologists working here. We have little idea of the LPRIA population density (often presumed to be low), ethnicity and ethnic identity, beyond the use of unhelpful cultural labels such as 'the Brigantes'.

There is little archaeological evidence for the physical expression of cultural or tribal identity or social ranking, or understanding of how that might be detected from the archaeological record. It is not clear if natural resources (salt, metal ores, coal, grazing land etc) in the LPRIA were 'owned' by individuals or tribal groups, or exploited communally. The marked difference in the LPRIA material culture across the Pennines, and more subtle differences in material culture within the North West region (eg either side of the Mersey), hint at cultural groupings within northern England which require detailed investigation.

There is a serious lack of information about LPRIA settlement throughout the region. This covers all classes or types of sites. The apparent invisibility of

evidence from this period has been improved significantly over recent years, especially in the southern part of the region. It is likely that many more Iron Age and Romano-British rural settlements will be discovered and excavated during development-led investigation, and further analysis will undoubtedly begin to increase the number of sites known to be occupied in the Late Iron Age. It is important that these sites are excavated to uniform high standards, and that provision is made for a suite of scientific and artefactual analyses that are appropriate to the data and address current research questions. The potential for accurate dating and phasing of rural sites is available, but this will require targeted programs of sampling and scientific dating. The potential for artefactual dating cannot be relied upon prior to the commencement of site work.

There has been little integrated research to relate the location of Roman military sites to the distribution of the native population. To attempt this for the whole region probably requires far more information about LPRIA settlement in the region than is currently available. Nevertheless, an attempt should be made, in order to explore methodologies and establish how much relevant data actually exists.

### *Initiatives*

- 3.8 There is a need for stratified and dated material from all LPRIA sites, including the larger enclosed lowland and hilltop sites, the smaller enclosed settlements, and seemingly open settlements. The assigning of dates to enclosures and cropmarks on morphological grounds is not secure and rigorous application of sequences of radiocarbon dates are required to produce secure chronologies.
- 3.9 There is a need to look for any evidence for the fortification, or re-fortification, of enclosed sites in the 1<sup>st</sup> century AD, and for evidence for either continuous occupation or abandonment of sites over the LPRIA to Romano-British transition.
- 3.10 The question of identifying regional or tribal identities may be addressed through artefact assemblages, building style and other indicators to assess the continuation of these aspects through the Roman period.
- 3.11 There is unexplored potential for artefact studies to identify distinctive distributions in the type of artefacts in use and the frequency of their occurrence. For example glass bracelets or certain brooch types which may be indicative of the economic and social networks within which they were made, distributed and worn. It may be possible to define LPRIA ethnic heartlands



Fig 3.2 The line of the Roman road known as King Street, Cheshire (Cheshire County Council).

and peripheries in the distribution of Romano-British sites and artefacts.

- 3.12 A critical assessment of the location of the earliest military installations and their relationship to known native settlements or material is required. A detailed project incorporating the mapping of known Late Iron Age settlements and landscapes in relation to known Roman military sites may elucidate aspects of Late Iron Age settlement hierarchy and Roman military strategy. Such work could draw on the current SMR/HER and Portable Antiquities Scheme (PAS) databases in order to interpret economy and political structure from the archaeological data, and then attempt to reconcile the results with the documentary sources.

### ***Tribal Identity***

The documentary data attests the 'tribes' or *civitates* of the Brigantes, Cornovii and later the Carvetii. In reality we know little about these polities. There has been a major discontinuity between analyses using historical and archaeological data; each operating to some degree without consideration of the other. The former highlights the 'Brigantian confederacy' of Cartimandua, straddling the Pennines, with 'septs' such as the Setantii. The latter has so far emphasised the apparent lack of hierarchy visible in settlement types in the North West.

### ***Initiative***

- 3.13 It is perhaps time for critical reassessment of relevant documentary data for the extent and organisation of the Brigantes and subsidiary polities, and to formulate archaeologically achievable proposals to address questions raised by historical interpretations.

### ***Environment***

Despite recent overviews for parts of the region (eg Wells 2003) the existing environmental work for the period is not synthesised or well disseminated. A significant proportion, up to 90%, is unpublished or within grey literature. There are few rural faunal assemblages, largely due to the poor survival of bone, and it may be productive to look at other sources of evidence such as lipids on ceramics to determine elements of diet and economy. In the North East, barley seems to be the predominant crop, in contrast with the south, but evidence in the North West is currently sparse.

There is a need to exploit a wider range of environmental analyses. For example, only a very few sites have had analysis undertaken on buried soils (mostly along Hadrian's Wall), although these have generally produced useful results and indicate a complex mosaic of vegetation and land use. All military installations with ramparts (eg forts, annexes, milecastles, Hadrian's Wall and the vallum) have the potential to

preserve buried soils. Turves utilised in construction survive on many sites and have been under-studied in terms of recognition, habitat exploitation and uses on site, despite new methodologies being developed to study them. Ditches, often associated with ramparts, may also contain preserved waterlogged remains of plants, sediments and animal remains with similar or complementary evidence.

Existing work has demonstrated the rich resource available for geoarchaeological and palaeoecological analysis within lake sediments, peat bogs and coastal and estuarine deposits. Natural and anthropogenic changes to inland river valleys, including realignment of river channels in the post-medieval period, have preserved palaeo-channels with high, but unexploited, potential for organic survival especially in the vicinity of settlements. Similarly the peat deposits of the Romano-British period represent a significant untapped resource and only a limited number have been investigated for their contribution to understanding changes in climate and vegetation. Lake sediments in Cumbria also represent a significant potential resource for investigation of climate change and pollution from industrial activities otherwise undocumented. A systematic programme of sampling in all these types of wet environment could begin to address the question of whether there really was a significant increase in land-use intensity and diversity in the Romano-British period, and its consequences for habitats, soils, and patterns of erosion.

Coastal change during and since the Roman period includes the silting of the Mersey and Dee estuaries, creating extensive salt marshes on the Wirral shore and infilling the Pool of Liverpool. The movement and encroachment of sand dunes, which were well established by the Roman period on the soft coastline of southern part of the region, present largely unexplored potential for the survival of extensive, well preserved buried land surfaces under the dunes, as evidenced at Meols for other periods. Details of coastal changes are not well understood and the marine transgression is poorly dated, although this could have had major implications for coastal installations such as defences and harbours. The extent to which the coastal resources were utilised in the late Iron Age and Romano-British period is uncertain. There is little direct evidence for fishing equipment of the Roman period and even though molluscs and fish have been recognised in the archaeological record, remains of fish are scarce.

There are almost no dendrochronological studies of the mid to late Roman period but a good dendrochronology master curve has been constructed for 1<sup>st</sup> and 2<sup>nd</sup> centuries from Carlisle, one of only two in the whole country. Many urban or proto-urban sites within the North West contain waterlogged deposits especially wells, deep pits etc that may preserve timbers or roundwood *in situ*, and the region's wet cli-



Fig 3.3 Denarius of the Emperor Trajan (AD 98– 17) from Bebbington, Cheshire (PAS).

mate favours this type of preservation. Some forts near river crossings (as at Ribchester) may have considerable waterlogged or other anaerobic deposits. Rural sites are less likely to have preserved timbers/roundwood due to lack of waterlogged material, but some may have occasional wells and pits where organic material may be preserved. Woodland management is not well understood, despite the clear need of the military for large quantities of timber and roundwood, especially in the 1<sup>st</sup> and 2<sup>nd</sup> centuries. Studies of roundwood from Carlisle (Huntley 1987; 1989) have demonstrated relevance to considerations of land-use/resource acquisition and woodland management. There are clear indications that the availability of resources changed through time and that sometimes acquisition was *ad hoc* and sometimes from managed woodlands.

#### Initiatives

- 3.14 A programme of analysis should target late Holocene peat and silt deposits, with good dating control and using a variety of methods. There is a need to look not only for woodland clearance and the introduction or increase in pasture and arable, but also for surface wetness indicators relating to climate change and indicators of industrial emissions.
- 3.15 Programmes of sampling should target estuaries and tidal reaches of major rivers for geoarchaeological investigations of river deposits, especially the River Dee, with a view to locating the main channel and its depth. Similar studies could be undertaken in the Fylde and Solway. This could also elucidate how far upstream it may have been navigable and how military supplies including personnel were deployed throughout the North West region.
- 3.16 Wherever ramparts or ditches are to be excavated, a sampling strategy should be considered for the recovery and investigation of buried soils, turves and similar deposits likely to preserve pollen, insects and other micro-organisms

likely to be indicators of past vegetation, water quality and landuse. Specialists need to look for turf material and be aware of what to expect.

- 3.17 Roundwood studies could be extended to other sites to search for consistent patterns or site-specific *ad hoc* exploitation of resources. A high priority should also be given to dendrochronological studies of timbers, especially those thought to be possibly mid or late Roman in date. There is a need to extend the dendrochronological master curve to cover the whole of the Romano-British period. Studies of timbers, dendrochronology and roundwood need to be linked with pollen studies of clearance and deforestation. This could be linked to studies of other woodland resources and use of land for pasture or for cultivation, with studies of climatic changes and evidence for soil erosion.

### **Military Activity**

A significant proportion of antiquarian and later research focussed on the Roman military and the stations of the northern frontier. Despite the quantity of archaeological research on Roman military sites, the

*Fig 3.4 Timber water pipe within the Roman fort at Carlisle, uncovered during the millennium excavations (OA North).*



process of the military advance into the north and the subsequent infra-structure and deployment of the army is still poorly understood.

The discovery of new military sites in recent years suggests we need to be more open minded about the topographical layout of the network of occupation. Although we may have an outline of military activity, a great many details still need to be filled in. Many military sites lack detailed chronologies, to elucidate the strategy, chronology and geography of the conquest of the region. The nature of any Roman military activity prior to this is uncertain. There is an extensive backlog of unpublished material from many military sites. Some of this work was undertaken in antiquity, while some was undertaken as rescue work in the latter half of the 20<sup>th</sup> century. There is a great deal of potential within material already excavated, which in some cases has been analysed, but not published. The recent work on the Brougham cemetery material, excavated in the 1960s, has illustrated the high returns than can be achieved with the application of new analytical approaches and interpretation (Cool 2004).

Although many of the known fort sites are scheduled ancient monuments and under little threat from development, they are not inaccessible to investigation. Work is not entirely prohibited, provided research proposals are properly presented and adequately funded, as current work at the Chester amphitheatre and Heronbridge demonstrates. The excavations at Birdoswald (Wilmott 1997) amply demonstrate the insights to be gained through large scale modern excavation of a fort site, although the expense of large scale research exercises suggests that large scale work of this kind is unlikely to be undertaken in the future. This does not preclude entirely development-led work on fort sites beneath modern towns, such as Carlisle (and Stanwix), Chester, Lancaster, Manchester, Middleswich and Ribchester.

Many forts may have as yet unknown predecessors beneath known levels or adjacent to known sites. Possibilities include Ravenglass (Potter 1979), Beckfoot and Maryport. There is also the possibility of new fort sites being discovered. Potential areas include Farndon, Nantwich, Wilderspool, Walton-le-Dale, Fleetwood, Wigan, Affetside and the South Cumbrian coast. Non-intrusive work such as geophysics and aerial reconnaissance has enjoyed substantial success within recent years and should be utilised to address such questions.

After the initial military advance and consolidation, when supply lines would have presumably been secured from the south, the Roman administration would have looked to the north for procuring supplies. The Cheshire and Lancashire industrial settlements were possibly primarily for this purpose. The inter-site relationship between military sites, industrial and manufacturing centres, field systems, rural

sites and transport networks in Lancashire and Cheshire may provide an insight into mechanisms of movement and trade supporting the frontier (see Settlement, below). Coin distributions are a key indicator of the means of taxation and exchange between the Roman authorities and further analysis of ceramic assemblages and metalwork may also illuminate the economics of occupation. Important contributions have been made by Shotter (1993; 1999; 2000), analysing the distribution of early coins, and Wild (2002), analysing that of early Flavian Samian. Rogers's (1996) argument of an early date for the mid-Lancashire north-south road is now out of favour and Richardson's (2004) suggestions of early roads along the Pennine edge south of Manchester have yet to be critically appraised.

Chester formed a hinge-point in Roman control of western and north-western Britain. The structural history of the fortress (defences, major buildings, barracks) reflects the interest of the imperial state in the region, whether in (re-) asserting military control or making architectural statements of its authority. Over the past 45 years extensive excavations have been carried out over large areas of the fortress. Numerous preliminary statements of the results are available, but only full publication will allow an understanding of the full nature of the evidence and critical appraisal of the current interpretations.

The publication scheme drawn up for English Heritage 20 years ago remains valid but resources of staff time and funding for external specialists are required to deliver this. There are high-quality stratigraphic and finds archives for many of the excavations, and much analysis has already been done. However, there is a danger that, as time goes by, that analysis will become obsolete and need to be redone.

#### *Initiatives*

- 3.18 The publication and dissemination of unpublished work from military and fort sites should be treated as a priority. Work on the Chester post excavation programme requires funding to progress with the analysis that is underway, in order to understand the structural history of the Roman fortress at Chester.
- 3.19 Development-led archaeology on military sites in urban contexts provides an important opportunity to review chronologies and phasing of the sequence of fort construction and use. Particular attention should be paid to any possible traces of early pre-fort phases or later Roman occupation. This should be complemented by carefully targeted geophysical survey and research excavation on scheduled military sites, as demonstrated at Birdoswald.

- 3.20 Potential sites of un-located forts have been identified and air reconnaissance and field evaluation / survey should be directed to these (Farndon, Nantwich, Wilderspool, Walton-le-Dale, Fleetwood, Wigan, Affetside, Hincaster, South Cumbrian coast, Barrow-in-Furness, St Bridget Beckermeth).

- 3.21 The nature of the coastal defences for the western seaboard in the 3<sup>rd</sup> and 4<sup>th</sup> centuries from the Bristol Channel to the Solway Firth and, in regional terms, from the Dee to the Solway, could be investigated in tandem with a programme of environmental research aimed at improving understanding of coastal and estuarine change.

- 3.22 The ethnicity and country of origin of those serving on the province's frontier are subjects of particular contemporary interest and while bone survival is often poor, every opportunity to analyse surviving human remains should be taken, in conjunction with study of artefacts, personal ornaments, burial practices and epigraphy, to understand the ethnic origins of units stationed in the North West.

#### *Settlement and Landuse*

The complex inter-relationship between town, fort and countryside which developed for the first time in the Romano-British period in the North West was the outcome of new political and social relationships, interactions and systems of communication and exchange. Rural communities and their agricultural economies need to be seen in relation to the new urban and military centres rather than as separate systems. The *vici* are in one sense the location of interaction between the countryside and the town, but there is currently little data on which to base serious examination of the differences between material culture and lifestyles in different kinds of community. Recent excavations have helped to improve our knowledge of urban settlements but certain types of site, such as villas, are apparently largely absent within the region. Manufacturing and industrial centres, often sited on navigable rivers, appear to characterise the earlier Roman period in Cheshire and Lancashire but we still have only a limited understanding of their origins, relationship with markets and the organisation of production and process flows. The Study Group for Roman Pottery (SGRP) Research Framework confirms that the bulk of known material has been recovered from military and urban sites, and both rural and *vici* sites are poorly represented (Evans & Willis 2002).

There is little published synthesis of Romano-British material culture in the region, especially out-



Fig 3.5 Well preserved centurion's quarters and barracks of the First Cohort of the Twentieth Legion at Chester, revealed during excavations at Crook Street in 1973/4 (Chester Archaeology).

side military sites and small towns. Arguably there is a crucial distinction between portable artefacts and building materials and, while both may provide an index to the influence of Romanisation, the extent to which Roman building types and techniques were adapted and adopted in different settlement types may be a fruitful area for research.

#### *Industrial settlements*

The so-called industrial settlements of Cheshire and Lancashire appear to have been primarily geared towards processing and producing supplies for the army in the north. It has been suggested that the regular layout of both plots of land and buildings may be evidence of direct military instigation and foundation, and the pottery assemblages have been likened in character to those from the fort sites themselves (J Evans pers comm). What is lacking is archaeological evidence for their origin and status, and of the communities occupying and working in them. Are these distinct and different from those in the surrounding countryside? Do their origins clearly post-date the arrival of Roman garrisons in the region? The full range of productive and industrial processes taking place on these sites and the extent to which they were centres for wider distribution also remains to be defined. The prevailing view of their later Roman decline should be tested against the results of recent excavations and by closer examination

of the uppermost stratigraphic deposits.

The Roman settlements at Heronbridge, Middlewich, Nantwich, Northwich, Walton-le-Dale, Wigan and Wilderspool have all demonstrated excellent preservation of archaeological deposits, and most have produced a wide range of evidence for buildings and industrial processes. Development-led excavation is likely to continue on most of these sites and should address these research questions specifically. The nature of the site at Wigan in particular requires clarification.

#### *Initiatives*

- 3.23 The publication of recent investigation is required, and comparison and synthesis of work on industrial centres.
- 3.24 Development-led excavation in these centres should have clearly focused objectives relevant to research questions for this particular class of settlement.

#### *Towns', Vici and Canabae*

If military influence was the motor of societal change in north-west Roman Britain, then one would expect that change to be at its greatest in the settlements in the neighbourhood of the forts, and most especially the legionary fortress. There remain many unan-

swered questions over the decline of *vici*, as most do not appear to have outlasted the mid 3<sup>rd</sup> century. There are no full, detailed vicus plans other than those from aerial photography and geophysics, and the organisation, phasing, population and buildings of the *vici* all require exploration. Again, evidence of the nature of these communities, their ethnicity and interaction with the surrounding rural communities are unexplored. What was the nature of the *canabae* and other surrounding settlements of the Chester fortress?

Closer examination of the upper levels of these sites may assist in explaining what was going on in the later 3<sup>rd</sup> and 4<sup>th</sup> centuries and subsequently. The absence of diagnostic artefacts could be evidence of depopulation, but the reasons for this need to be examined. The explanation may be other changing circumstances in the status and material culture of these communities. As Dio Cassius commented – did the Romano-Britons become different without knowing it?

The division of settlement types for this Research Assessment follows the now-conventional division between military *vici/canabae* and other settlements near military sites, inferring that native life was little affected by Roman rule. There may in fact be a range of responses and reactions to Roman military occupation, varying over time and geographically across the diverse region. The Chester environs in particular may present an opportunity to evaluate this presumption across a range of site types. A synoptic volume on recent excavations and earlier discoveries in the western *canabae* at Chester is at an advanced stage of preparation by Chester Archaeology, subject to availability of further resources for completion. There is material for a similar volume on the eastern *canabae*, where important discoveries of field systems at the urban-rural interface are currently being made. Work ongoing at Heronbridge is at the post-excavation stage and another suburban settlement is known at Saltney.

#### Initiatives

- 3.25 A programme of reassessment of existing archives may produce new interpretations of the later phases on Romano-British towns. Chester and Carlisle have both provided evidence for 4<sup>th</sup> century activity, although the nature of that activity is unclear.
- 3.26 Completion of post-excavation work on the Chester *canabae* and re-appraisal of archives of earlier excavations in other nearby areas could form the basis for a review of the satellite settlements around Chester, assessing the interaction of aspects of rural and urban communities.



Fig 3.6 Roman military buckle from Tiverton, Cheshire (PAS).

#### Rural Settlement

The known distribution of rural settlement sites, suggesting a sparsely distributed population inhabiting small, dispersed farmsteads, is acknowledged as incomplete. ‘Large areas of the North West have not been subjected to detailed field-work and have not as yet been covered by aerial reconnaissance’ (Shotton 1997, 104). The existing evidence for rural settlement has been studied by Nevell (1999c; 2004a) and Philpott, but the sample size is small. Major gaps are west Lancashire, where Dutton’s Farm, Lathom is the only excavated Romano-British rural site, and South Cumbria and the Furness Peninsula, where there is an extremely low density of visible rural Romano-British settlement. Virtually no rural sites have been excavated in eastern and southern Cheshire. Targeted programmes of work are required using a battery of techniques to overcome the obstacles of land-use, geology or nature of settlement which render sites difficult to recognise. Many of these aspects relate to the Iron Age, Romano-British and post-Roman periods and the nature of settlement and economy for a large proportion of the rural populace may have changed little between the latter centuries of the 1<sup>st</sup> millennium BC and the latter centuries of the 1<sup>st</sup> millennium AD (above Introduction xx).

The lack of modern excavation and scientific dating on upland rural sites means that with few exceptions (eg Hoan & Loney 2004) little new information has been added to that of 1930s surveys to enhance evidence for the chronology of the sites. Undated enclosures generally considered to be of late prehistoric/Romano-British type are increasingly known from the region through aerial reconnaissance, though few have seen sufficient investigation to be able to confirm their date or determine the duration of occupation. Some have been found to be Iron Age in origin with either continuous or renewed

occupation in the Romano-British period. Many low-land sites are truncated by the plough and lack the organic components of the finds and environmental assemblages. Waterlogged sites therefore have far greater potential in terms of the preservation of structural timber, animal bones evidence, evidence for food preparation and consumption, and artefacts in leather, wood and bone.

There are still major gaps in our understanding of Romano-British rural settlement, and how the native populations interacted with the Roman authorities. Current evidence suggests considerable differences within the region.

It is evident that some rural communities in the north of England possessed very few typically Roman artefacts, and do not appear to be active participants within a 'Romanised' society. In contrast settlements within the Dee/Mersey Basin area appear more closely integrated into the Romano-British market economy than other areas. The culture of the indigenous population needs to be examined in terms of the archaeological evidence, rather than in a theoretical model of Romanisation. While one might expect the demands of the army to be initially reflected in settlement expansion and increased agricultural activity, followed by recession as that market declined, it has yet to be shown that this pattern is discernible in the character of rural settlement in the Romano-British period.

Rural sites do not exist as isolated settlements in the landscape and their wider context is important to an understanding of the economy and settlement of

the region. We still have little understanding of changes in land use and animal husbandry. So little is known about the organisation and division of land that questions of estate management and administration can barely be addressed, and any continuity of land management from the LPRIA through the period and into the post-Roman era is almost entirely a matter for speculation. The subject of the allocation of land for military veterans and their relationship with the native population also deserves exploration.

The small number of properly excavated and published rural sites in the region means that little is known of rural building forms, of spatial organisation on rural sites, or of the rural trading economy. As in later periods, there has been an over-reliance on ceramics as a means of dating sites and at times there has been a failure to recognise the highly residual nature of much pottery. Many rural sites have strong ceramic profiles in the 2<sup>nd</sup> to 3<sup>rd</sup> centuries AD, corresponding with a peak in the production and consumption of pottery. These tend to have a swamping effect on later deposits.

The transitions at the beginning and end of the Roman period are generally poorly defined by durable material culture. At some Romano-British rural sites, this can be virtually or wholly absent from the archaeological record, such as at Barker House Farm, near Lancaster University (J Quartermaine pers comm), whereas some seemingly artefact-sparse sites may produce a single finds-rich phase (Hoan & Loney 2004). Radiocarbon dating programmes are needed as a priority to examine rural sites.

Fig 3.7 Roman bronze *patera* from Nantwich (UMAU).



### Initiatives

- 3.27 There is an urgent need for work to locate rural sites and to investigate potential Iron Age/Romano-British sites across the whole region, to determine their chronology, economy, character, and to examine the origins of rural settlement patterns. Whilst the sites of the majority of Roman forts and towns in the region are probably known, this is far from the case with rural settlements.
- 3.28 Rural sites need to be considered within their landscape context, by investigation of their field systems and boundaries, the local landuse, topography and exploitation of other resources. In the southern part of the region at least, the immediate vicinity of sites has often produced earlier or later occupation. Thus the core of the site is only part of the long history of the occupation of a particular location, and a longer view of the occupation is important to see the shifting of settlement component of sites. One approach would be to investigate a sample of cropmark enclosures, in a variety of topographical and geographical settings, including an excavation programme which embraces the area around the site.
- 3.29 A high priority must be the detailed examination of a sample of well preserved rural sites. It remains crucially important to establish the origin of sites and the chronology and nature of their occupation and abandonment. In order to overcome the problem of recognising occupation phases with no durable material culture this work will depend on structured programmes of radiocarbon sampling throughout the stratigraphic sequence. The need for such programmes should be specified by the archaeological curators in order to ensure a consistent approach.
- 3.30 A study of SMR and HER data for finds of diagnostic artefacts and hints of associated Roman building materials may indicate whether the virtual absence of 'villas' may be more apparent than real and, in more general terms, assist in mapping the scale and effect of Roman cultural influence.

### Artefacts

There is generally a low level of material culture outside military and urban centres and its recovery is subject to a degree of bias. Differential systems of land-use, including the presence of extensive tracts of permanent pasture, means little rotation and move-

ment of soil and limited opportunities for fieldwalking, metal detecting or the retrieval of chance finds. Reporting of finds, especially metal objects, to the Portable Antiquities Scheme (PAS), has been greater in the southern part of the region. Whilst this may reflect in part a genuine difference in levels of artefact and coin use across the Mersey it may equally be due to the location of the Finds Liaison Officer (FLO) in the south of the region. The recent appointment of a second FLO in the northern part of the region has begun to increase the number of finds, especially from Lancashire, which has often been perceived as a black hole in terms of finds reporting.

The PAS is currently recording important primary data, but there is no synthesis at a regional level. It is acknowledged that this is not the role of the PAS officers, but remains an extremely important requirement. The identification and distribution of artefact types may produce potentially important patterns at a localised level. There is no systematic publication of the finds (the database is on the internet), though articles such as that on brooches from Cheshire by Nick Herepath (2004) have begun to define the regional brooch use. While it is a significant asset to have the information on the PAS database this material requires analysis by finds specialists beyond that which the current presentation of the raw data alone can supply.

Artefact distributions have considerable potential to distinguish between activity areas, or social use of space within individual houses and buildings, within the environs of buildings, within military stations, within the *vici*, *canabae* and rural sites. Not only is there a requirement for much more systematic publication of artefacts from the region (eg Buxton & Howard-Davis 2000), but also chance finds. With the exception of pottery and coins, artefact studies of material from the region are sparse. Equally while there are many studies of pottery on a site basis, Gilham's (1968) extensive overview is now significantly out of date. Colin Richardson published many accounts of finds reported to Tullie House within the *Transactions of the Cumberland and Westmorland Society* and Roman brooches have been the subject of several studies (Snape 1993; Philpott 1999; Herepath 2004) but otherwise there has been little attempt to characterise regional or sub-regional patterns of artefact use or manufacture or types (cf Dearne in Derbyshire). Publication of finds has been undertaken at best on a site by site basis, or all too often not formally published at all. This has resulted in a highly disparate body of material which is difficult to assemble coherently, which in turn makes it difficult to characterise the artefact use of the region, or to identify regional patterns of use.

The study of classes of distinctive artefact – whether metalwork, ceramic or other – has the potential to inform questions such as regional or social



Fig 3.8 Complete Roman beaker recovered from the base of an eroding cliff face at the Beckfoot cemetery site, Cumbria (PAS).

identity, economic patterns of manufacture and marketing (see Hartley & Webster 1973, 89-98). The discrepancy between levels of durable material culture in use in rural sites and nucleated (urban or military) sites is significant and an assessment of the picture would be assisted greatly by corpora of artefacts. In this respect a re-examination of old museum collections has the potential to yield important new insights.

The Roman material from Meols, found in the 19<sup>th</sup> century and preserved in collections in five separate museums, has brought to light an important group of pre-Flavian finds, prompting a re-examination of the role of Meols in the early post-invasion period (Philpott *et al* forthcoming).

Waterlogged assemblages such as those at Carlisle (eg Caruana 1992; J Zant pers comm), Nantwich (P Connelly pers comm) and Ribchester (Buxton & Howard-Davis 2000), and exemplified *par excellence* outside the region at Vindolanda, are of great importance in providing detailed evidence for the organic component of sites which is usually lost on dryland sites.

The general scarcity of durable material culture on rural sites means that waterlogged deposits would provide an important corrective to the impression of low levels of material culture of all kinds, and would begin to enable us to characterise the total site assem-

blage on rural sites – to assess the use of leather, wood, bark, textiles and other organic material. In addition the preservation of structural timbers offers the possibility of establishing with remarkable precision the felling date, and hence a *terminus post quem* for construction of structures (cf Carlisle: Caruana 1992). The preservation of writing tablets at Carlisle provides information on aspects of Roman life and culture that are of international significance but are invisible to archaeological techniques.

#### *Initiatives*

- 3.31 Systematic publication of excavated assemblages from the region and of chance finds is a priority, in order to characterise contexts, identify regional types and intra- or inter-regional patterns of distribution. The unusually low level of material culture outside the major military/urban centres in the region means that the publication of individual or small groups of objects is a higher priority here than in artefact rich areas.
- 3.32 Greater use of new and developing techniques, such as high-quality digital cameras and scanners, should be employed, to enable cost-effective and high quality recording of artefacts and greater ease of dissemination.
- 3.33 Contexts with high potential for waterlogged assemblages provide the opportunity for high returns in terms of understanding the totality of material culture on sites that in this region generally produce low levels of more durable material. These should be a priority for investigation and proper resourcing of such projects (including conservation) should not be underestimated.

#### ***Ritual, Religion and Ceremony***

The evidence for LPRIA religion is scant, and remains so for a large part of the region after the military occupation. There are few temples in the region and none which are not military or urban in character. The concentration of metalwork (coins) around religious sites does not appear to be a common trait within the region and for a large part native religious expression does not appear to have had an archaeologically visible form.

A study of the distribution of evidence of Romano-Celtic deities (*interpretatio Romana*) and of deities who were evidently local in origin, and not related to Roman equivalents, may contribute to the understanding of the impact of Roman culture in different types of communities. Evidence of Christianity is largely also lacking apart from some portable artefacts and

tombstones.

#### *Initiatives*

- 3.34 There is scarcely any knowledge of religious sites in this period, apart from that evidenced by inference from inscriptions and sculpture/figurines, and the opportunity to investigate any such sites particularly in a rural context should be a priority.
- 3.35 The suggestion of a sub-Roman bishopric based in Chester and the association of a possible church within the Chester amphitheatre should be the subject for further research.

#### *Burial*

Burials can yield valuable information about individuals and the social groups to which they belong. In the North West burial evidence is sparse and very unevenly distributed. Large samples of burials are desirable for the analysis of populations, to identify the development of cemeteries and the rites practised within them over time. However, burial practice may not involve the use of nucleated cemeteries, but be dispersed as single burials or small groups. These are nonetheless of value to identify cultural groupings, using analysis of burial ritual and new techniques such as isotope analysis. Allied with DNA analysis of wider populations in Britain and the continent, analyses of inhumations in towns, military or rural sites may assist in characterising the origin or ethnic affinities of population groups, to illuminate questions of population movements from elsewhere in Britain or the empire as opposed to those of local origin.

There are remarkably few examples of funerary practice from rural areas, beyond the hinterlands of towns and military installations. Military communities often have unusual or cosmopolitan funerary practices, which will not necessarily be shared by other Romano-Britons, and certain practices continue in the North West after they have ceased in other areas. It may be that there are different funerary practices employed over large parts of the region or even that cremated remains are simply deposited in the ground and not placed in ceramic urns.

Overall, we need to be pro-active whenever Romano-British funerary material is discovered in a rural context, or on the outskirts of the proto-urban settlements and *vici*, as the rural population may not be as homogenous as previously believed. Recent studies at Brougham and Carlisle demonstrate a wide range of burial rites and practices, which may reflect the presence of troops and their entourage from diverse geographical and ethnic origins, as indicated by epigraphy. Cemeteries at military or urban sites have the potential to inform on cemetery layout and chronological development, the chronology and

character of burial rites, the variety of burial practice, as well as pre-burial and post-burial rites such as funeral ceremonies, and post-burial feasting and offerings. Analysis recently published from Brougham emphasises the rich potential of statistical analysis of cemetery assemblages.

Burials occurring in cave deposits may be atypical but in some rural areas these represent the only burial record from this period since soil conditions often preclude preservation of inhumations (see above Introduction xx). In this context the deposits recovered from limestone caves in north Lancashire and south Cumbria have particular significance, as they represent a unique assemblage of human remains and artefacts from the period, although the circumstances of their deposition remain open to interpretation. It is likely that there are also selective depositional practices in play. It is by no means certain what proportion of the material currently held in the archive actually dates from the Romano-British period, although the association of artefacts would suggest that numerous cave assemblages have Romano-British elements. The current project on material from the Doghole (C) and Dog Holes Cave (L) planned by Liverpool John Moores University will provide an indicator of the potential for further cave material. Radiocarbon dating and stable isotope analysis will be essential in this context. Previously excavated material from further sites needs to be located and assessed.

#### *Initiatives*

- 3.36 Wherever identified, cremated remains should receive full and integrated analysis to investigate the range of practices and their distributions and associations.
- 3.37 Inhumations are less common survivals and merit intensive study, with macroscopic morphological and metrical analyses. All inhumations unaccompanied by dateable artefacts should be subject to radiocarbon dating, as well as stable isotopes and DNA analysis where appropriate, in order to place these within a coherent time-frame and to enable rural burial practices to be characterised in topographical and chronological terms. This may have significant implications for considerations of how, when and where foreign troops integrated with the indigenous populations.
- 3.38 DNA analysis should be deployed wherever feasible, for indications of whether individuals in groups of burials are related and to shed light on questions of homogeneity of populations.
- 3.39 Current work on assemblages from cave



Fig 3.9 Excavation of a kiln at Walton le Dale, Lancashire (OA North).

deposits including burials indicates their high potential and should be pursued further (see Introduction pp 25-26).

### **Technology and Production**

#### *Mineral resources and extraction*

The North West is rich in mineral resources such as coal, metal ores, and building stone. The first mine shaft of Roman date has been identified at Alderley Edge but the site otherwise lacks evidence of Roman activity. There is little other knowledge of the sources of metal ores and other minerals used in the North West in the Roman period or indeed of how extractive and processing industries related and were organised. As with the rural economy, it is unclear whether technology and production were significantly modified, or simply stimulated, by the demands of the Roman army and administration.

Examination of river silts in valleys such as the Ouse in the Vale of York has revealed traces of lead pollution from extraction sites upstream, providing a record of landscape change and mineral extraction (Hudson-Edwards *et al* 1999). Extraction sites such as Alderley Edge and potential sites in Cumbria, as well as those outside the region in north-east Wales and Derbyshire, may benefit from application of such techniques and, in Cumbria, by the analysis of lakebed silts. Palynological analysis can source coal to particular outcrops, allowing us to build up a picture

of mineral exploitation and patterns of movement of the mineral. Despite the region's role as major coal producer in later periods, very few analyses have been undertaken for the North West.

#### *Initiative*

3.40 Analysis of the origin of stone for building, funerary sculpture and quernstones may help to determine patterns of exploitation of resources, workshops and schools, and of trade on an intra- and inter-regional level.

#### *Industrial processes*

Industrial production is a feature of many sites in the North West, notably the proto-urban settlements of Cheshire and Lancashire and the Manchester *vicus*, although evidence is also found on rural sites. While some centres of production are known, details of industrial processes and the pattern of movement and consumption of both raw materials and the finished products are still poorly understood. The region lacks any synthetic study of Romano-British industry despite the prominent place this has in the character of many settlement centres. Similarly there is a need for the characterisation of the production outputs such as decorative styles of metalwork, their distribution and where they were made.

Vivien Swan wrote twenty years ago with regard to the Wilderspool industry 'the need now is for excava-

tion of more kilns at Wilderspool and in the north-west Midlands, as well as the discovery and exploration of the potteries near Carlisle or in south-west Scotland which were founded by migrants from Wilderspool around the middle of the 2<sup>nd</sup> century' (Swan 1984, 105).

Though much has been done to characterise production, typology and chronology of pottery in the region, there almost certainly remain unidentified manufacturing centres in the region. In terms of consumption, especially on rural sites, the recognition of problems of residuality and the limitations of pottery as a purely chronological indicator need to be addressed.

### Initiatives

3.41 Romano-British industries, and the communities that were engaged in processing and production of ceramics, salt and metalwork, have been identified throughout the North West and are a strong characteristic of the region in this period. Research is needed, however, to draw together the many and varies sources for this distinctive aspect of the Romano-British period, and to formulate an integrated research agenda rather than a series of single issue or site-related research questions.

3.42 Scientific analysis of materials and environmental sampling should be strategically applied to support site-specific research into industrial production.

3.43 For ceramics there is a need for the application of more sophisticated analysis than simply assessing sherd numbers, to look at quantity of pottery against volumes of stratified deposits. Alison Jones of Chester Archaeology produced an agenda for Roman pottery studies in the Dee-Mersey Region in 1994, and the SGRP Research Framework has also identified a series of agenda points (Evans & Willis 2002) which need to be addressed.

### Trade, Exchange and Interaction

The accepted hypothesis for the north-western provinces is that the monetisation which followed the imposition of Roman rule, and especially the demand for money taxes, stimulated a monetary economy to some degree, and had a multiplier effect on trade and economic activity generally.

While many questions may be posed theoretically about the relationship between trade, taxation and supply to urban and military centres and the impact of occupation, the limitations of the archaeological evidence place serious restrictions on any modelling



Fig 3.10 Roman period wood-lined well at Middlewich, Cheshire (Cheshire County Council).

of social and economic relations in the North West, as outlined above.

The evidence for Late Iron Age trade is sparse, but demonstrates some long distance exchange and the acquisition of high status artefacts. The nature of the evidence, however, renders the bulk of these transactions invisible.

For the Romano-British period too, evidence for exchange is largely confined to the proto-urban settlements and larger enclosed rural settlements, predominantly in the southern part of the region.

The presence of the army is thought to have provided the market for the majority of imported goods, and the monetary currency for trading, and the suggestion is that a significant proportion of the rural population operated outside the monetary system making payments in kind.

Evidence for exchange is at present mainly restricted to pottery, often not present in significant quantities outside urban and military contexts, but there is scope for tracking the exchange of other durable materials such as metalwork.

The coin data for the North West has been assembled by Shotter. There is an increase in coinage in the 3<sup>rd</sup> century but this does not appear to be the same as elsewhere. There are a significant number of later coins from Chester, but they are predominantly of low value. The coin data has potential for interpretation to create new models for economic activity, though models are also needed for the distribution mechanisms for other material culture.

The identification of the trading centre at Meols, evidently a port from the Iron Age onwards, is based largely on antiquarian reports and museum collections. Erosion has probably destroyed or removed much of the site there and Roman finds diminished in number during the 19<sup>th</sup> century. The report on the finds is currently in preparation.

There is however, considerable potential for associated structures, tracks and field systems to survive in the immediate hinterland behind the modern sea

wall.

### *Ports and Maritime Trade*

Despite having an extensive coastline penetrated by long estuaries and navigable rivers, disappointingly little is known of the ports of Roman North West. Coastal and estuarine sites such as Carlisle, Lancaster, Chester and Ravenglass are all documented ports, though Chester is the only site to have produced physical evidence for harbour installations. There is no direct evidence for the types of vessels employed in maritime traffic and trading in the region so far. Nor has the question of riverine traffic received much attention although clearly important in the location of forts, settlements such as Heronbridge, or industrial sites such as Walton-le-Dale, Wilderspool or Holt. Chester may have played a major role in the redistribution of goods to north Wales and the North West.

While Roman roads have received abundant study as means of transport, the coastal maritime trade has been little studied in its own right. The road system can be verified archaeologically and many aspects of it have been mapped. In contrast the actual points of embarkation and disembarkation of people and goods from waterborne craft can in many instances only be postulated.

The west coast trade route which can be glimpsed in the Iron Age continues in operation through the Ro-

*Fig 3.11 Potential Roman timber and stone ford in the River Lune, Lancaster (Pete Iles/Lancashire County Council).*



man period and beyond. The movement of some traded goods has been studied along this route, notably pottery including BB1 (Black Burnished Ware 1) from Dorset, though there has been little study of the traded products, and the direction and destination of trade. Inter-regional and international trade patterns deserve further study. As one of the principal coastal regions facing Ireland and the Isle of Man, the trading, diplomatic and military links across the Irish Sea deserve exploration (eg Robinson 2000), especially in view of Tacitus' reference to merchants visiting Ireland.

Patterns of overland trade with neighbouring regions to the east across the Pennines, with North Wales (notably minerals), to the north into Scotland and south into the Midlands also deserve consideration, using diagnostic goods such as sourced pottery or other distinctive artefacts.

No clear research agenda for this theme emerged from the Research Framework process though the import and export of goods are clearly evidenced from urban and military sites. The reason for this may be because, like industrial production, this aspect cannot be addressed regionally or strategically until relevant material, dispersed in the publications and unpublished archives of large numbers of projects, has been identified and brought together. Currently there is no satisfactory corpus of information on which to construct an economic model for trade in North West Roman Britain.

### *Initiatives*

- 3.44 Research is needed to draw together the potential evidence for this aspect of the Romano-British period and to formulate an integrated research agenda. Publication of the numerous excavated artefact assemblages recovered since the 1960s must be a regional priority, since they provide some of the raw data for analyses of production, trade and exchange.
- 3.45 An ongoing distribution plot of coins is required, in relation to date and value, in order to provide a model for trade against which other exchange distributions can be compared.
- 3.46 Individual, site-based projects which may make a significant contribution in terms of defining trading centres or products should be a priority for research.
- 3.47 Systematic survey of coastal, estuarine and river environments is required to assess the surviving resource and the potential for Romano-British buried land surfaces and structures. Coastal and river-edge development and engineering projects need to be undertaken with sufficient pro-

vision for archaeological works or supervision.

### **Legacy**

There is the suggestion that there is a decline in activity, or material evidence of activity, at a number of sites in the southern part of the region in the 4<sup>th</sup> century; industrial sites appear to have little pottery and few coins for the late period, and little trace of construction. These are also the deposits most affected by later ploughing. At Chester a ditch filled with Roman building material produced a single sherd of Saxon pottery indicating the residual nature of the Roman material. At Irby, Wirral a single 10<sup>th</sup> to 12<sup>th</sup> century spike lamp amongst much Roman material in a building foundation gully was the only datable evidence for a whole structural phase.

It remains unclear whether the decline in the volume of 4<sup>th</sup>-century pottery indicates a reduction in the population and in the scale of activity or a response to a change in availability of pottery in the late Roman period. Excavation at Birdoswald clearly demonstrates continued occupation within the fort

beyond the traditional end date of Roman military occupation in Britain. Evidence from within the fort and the civilian settlement at Carlisle would also suggest occupation into the 5<sup>th</sup> century. The nature of the later phases of occupation on military sites and urban sites is critical to this understanding and specific provision in project designs could help to ensure it is recognised and investigated appropriately.

### *Initiatives*

3.48 The ephemeral nature of the archaeology and the low density of artefacts requires greater attention to stratigraphic evidence and detailed sampling strategies in the higher levels of sites of all types in this period.

3.49 New research projects on well-preserved military sites with good indications of later occupation, to complement that at Birdoswald, are needed to establish whether this type of 5<sup>th</sup>-century and later activity may be typical or exceptional.