

## Late Iron Age to Roman period research topics and priorities

These issues are relevant to several of the topics and priorities to be considered and discussed during the workshops. They will not form the focus of a group discussion session, but are likely to be relevant to many of the topics and priorities discussed.

### Cross-cutting themes

The many long-standing generic themes of the periods' archaeology, such as town, hinterland and countryside interrelationships (i.e. the 'hierarchy of settlement'), the role of trade/redistribution and transportation – plus, for example, the impact of taxation, literacy and coinage, the role of the army or the expression of Romanisation in patterns of land-holding and tenancy – that usually feature in both the region's and national research agendas, will never have final resolution. Accordingly, while they should be understood as underpinning what is here presented, the focus will instead be upon more immediate matters.

Equally, with so much relevant excavation having been undertaken in the region over the last 20 years, in the face of the amassed data the days of 'check-list-type' research issues are behind us. With the basic parameters of the periods' main settlement-types and their sequence-chronologies now essentially established (e.g. Smith *et al.* 2016), the progression of knowledge can no longer be a matter of 'one-linear' directives but, rather, detailing and propensity in the light of larger scale patterning. Achieving this will require other approaches to excavation and co-ordinated programmes of research.

One theme that emerges out of this is what information is now being obtained through various scientific analyses. Directly telling of 'foreignness'/mobility and distant 'connectivity' – matters of pressing relevance – these studies are now providing significant insights into the periods' archaeology. Given this, the argument could now be mounted whether there should be a percentage-based science levy implemented on major excavation projects.

Also to be highlighted is the lack of regional/county site-by-period (and key artefact) distribution mapping. This, for example, proved a significant hindrance in the course of Mucking's post-excavation and, increasingly, it is impacting upon what dissertation topics students can now reasonably undertake. There clearly is a need to have readily available 'authoritative' maps of the kind that accompanied Thompson's 2015 Hertfordshire Iron Age paper. In the case of the specific periods that concern us here, we are fortunate that the Reading Project's data-bases includes just such mapping. How, however, are these now to be updated and maintained? As things stand, one can only see this being conducted by the County Council Heritage/Environment sections. Yes, it will have to involve additional curatorial input (and fees), but it would surely result in massive research dividends.

### Omitted Issues

There are, of course, a myriad of arising topics that could fall under this headline, which fieldwork is now in a position to seriously address. One, for example, concerning matters of 'mixed/expressed' identities, is whether brooch-use was greater in 'higher level' settlement contexts (towns, roadside settlements/'centres'). Again, statistical area-/cubic-measure control will be crucial here. Relating to the dynamics of Conquest Period acculturation and literacy, another is *Terra Nigra* stamps (see Rigby 1973); particularly, that the imported vessel ones involved 'real/named' stamps, while their local imitation equivalents usually just involve symbols: variously circle- and triangle-arrangements.

Given the scale of the now-massed regional data-set, these are only a few issues of many and their listing could go on ...

## The Challenge of Numbers

This is *the* issue that we must now contend with. On the one hand, it relates to the sheer quantity of fieldwork now undertaken *per annum* within the region. Thinking of it as an unparalleled, mass 'digging everything' experiment, it is imperative that greater statistical means are employed to mobilise and allow for sound comparative artefact density measures between sites. Equally, with 'solid' settlement densities estimates now forthcoming from certain portions of the region (e.g. Bedford-area and Cambridge's hinterland), we need to achieve comparative distributional data from other areas (e.g. Norfolk) to know just how widespread these dense settlement levels were. Also relevant for the region's Late Iron Age centres, to what degree did Roman town and hinterland densities vary from the countryside at large? What, moreover, was the impact of immediate access to road and river transportation links? Did these promote higher settlement levels as opposed to the 'land behind'?

The recognition of such settlement densities is nothing short of 'game-changing'. Occurring at levels as high as anywhere known within the greater Roman Empire (e.g. Jeneson 2011), it should recast the agenda of the region's archaeology. When it comes to the periods' farmsteads, if not making their excavation a 'repeatable experiment' (Evans 2012), faced with their numbers, this squarely demands that they are approached with much greater methodological innovation; otherwise, they risk becoming little more than 'by-rote' exercises, potentially leading to information redundancy.

Certainly, the socio-cultural implications of such high settlement densities must be more widely acknowledged. Now knowing that 'they', in effect, could have waved to their neighbours from their front doors is a very different 'past world' than was envisaged 20 to 30 years ago, when migrant potters or itinerate metalsmiths were needed to account for distantly shared material culture traits. The past was evidently much more densely settled than earlier researchers could ever have imagined. Thus far, however, our interpretative frameworks have yet to fully take account of this.

# Settlement

## Towns

As noted in a recent paper (Smith forthcoming), recent developer-funded fieldwork has afforded relatively few opportunities to investigate, at least at any scale, the 'core-areas' of the region's Roman towns and where, instead, most recent excavation has occurred in their suburbs and hinterlands. While the latter are seeing various degree of environmental sampling programmes, with the town-core investigations having been undertaken to 'pre-modern' standards, much of this work was then conducted without much archaeological science and offers little statistical control of their recovered finds. This means that it can be difficult to directly compare town results proper with those from their suburbs and hinterland settlements. When opportunities arise within the 'cores', these should be intensively excavated to a high standard to maximise recovery and be accompanied by intense environmental sampling.

## Farmsteads

In recent years many sites of this type have now been excavated within the region and this is to the point that they soon risk becoming repetitive. In this regard, a number of points warrant notice. First, that too much excavation is strictly focused on their core-area paddocks, with insufficient attention given to their fields, which after all was the basis of their production. Not only is this true as regards environmental study (e.g. soil micromorphology and pollen), concerning what was actually growing where, but also what processing and stock facilities actually occurred out in the fields. In this, further testing of whether fields were manured is needed (especially lazy-bed plots), as is determining the location of woodlots. With some landscapes so packed with farmsteads, to what degree was the land 'managed' and their practices sustainable? In short, *the operation of the period's farmsteads will not be understood by only investigating their settlement-area cores*, and their fields – and the holdings' 'interfaces' – require investigation.

## Faunal and plant remains

As is apparent in the Reading volumes, emphasis should be given to the recovery and analyses of waterlogged plant remains, as they generally contain a far greater range of fruits and horticultural crops than bulk charred remains' samples (Smith *et al.* 2016, 240). Equally, insect remains can elucidate what grain pests were introduced in Roman times and, too, where livestock were concentrated (e.g. Smith & Kenward 2011). In this capacity, the further application of 'hard science' will prove insightful. Human isotopic analyses have, for example, shown dietary differences relating to Romanisation and, arguably, rural and urban consumption patterns. Moreover, aDNA and isotopic analyses have the potential to inform us of animal management and, as demonstrated through aDNA in the case of Colne Fen's Langdale Hale's horses, whether improved stock were imported from the Continent.

Second, it is settlements of this type in which variable methodologies should be applied. Rather than continuing to dig them by just 'standard rote', in the light of their frequency, some could see more minimal recording (e.g. just establishing their plan layout and broad sequence-chronology). In balance, though, others warrant being excavated (and sampled) to a much higher intensity, so that the dynamics of their operation – variously the foci of processing, storage, consumption and middening – can be interrogated and detailed.

Assemblage size is also relevant. With so much excavation of such sites being undertaken, and with their 'norms' now being established (Smith *et al.* 2016; Allen *et al.* 2017), with few exceptions aside, to make any serious contribution to knowledge and robust statements about the past requires *substantial assemblages*. If attempting to benchmark this, then levels in range of the 5,000 or more sherds or animal bones could, perhaps, be posited. The same is obviously also true of the quantity of bulk environmental sampling undertaken and just how many litres needs to be processed to actually say something meaningful. Coupled together with dry-sieving programmes, the small finds-fractions retrieved from such sampling also has – as demonstrated by Ballantyne's analyses of the Colne Fen sites – the potential to provide insights into micro-level depositional patterning.

## Craft and Industry

### Pottery Studies

As highlighted in the Reading Project studies, as issues of ceramic trade/supply are coming to the fore it is imperative that relevant specialists are familiar with the full range of major pottery industries so that the scale of their regional distributions can be mapped. Conversely, with 'Early' kilns now being widely found on settlements the context of their production needs to be explored: were they strictly local settlement related or were some more widely traded? To this end, programmes of thin-sectioning will need to be regularly implemented.

Of Late Iron Age ceramic assemblages, the idea that these involve archaic/conservative communities is now widely cited and, with it, that handmade pottery continued to be made alongside wheelmade vessels. This is certainly true and in some cases where clear Late Iron Age to Roman continuity can be demonstrated, in their Late Iron Age assemblages some apparently had only a limited wheelmade component. Equally, there are other sites where a settlement's entire pottery repertoire almost seems to have been wheelmade. The problem is that the notion of 'archaic' pottery traditions is becoming something of a convenient catch-phrase. If a community did practice wheelmade manufacture, then it is difficult to understand why, given its much greater technological efficiency, they would continue to also produce handmade forms (unless involving vessels of a certain type; e.g. large storage pots). Rather, if the overall percentage of a site's wheelmade wares were low, then the question becomes whether they represent local imports and if only certain forms (e.g. serving vessels) were being obtained. Conversely, if an assemblage's frequency of handmade wares was low, then greater effort needs to be made to determine if this material was actually residual through the analysis of their fabrics and mean sherd weights. The idea that only some settlements may have actually practiced wheelmade production, and that such technological knowledge may not then have been universal, has tremendous potential concerning notions of 'mixed'/multiple Late Iron Age communities.

We have come to think of the Aylesford-Swarling zone in terms of standard core-periphery models and where its defining traits would regularly fall-off or 'decay' with distance from their 'core'. Given the evidence from the Bedford- and the Cambridge-area's – respectively their small square shrines and cremation rings – this may not be what happened. Almost as if marking the border, the 'zone's northern limits maybe seeing stronger trait-expression than anticipated; whereas there seems something of a patchwork, both behind and beyond it, in which individual communities variously interacted with and uptook these Gaulish influences. If so, this is surely a theme warranting broader study and much more detailed pottery analysis. After all, on this hang a great deal. The issue being to what degree, across the region, this change was a matter of any population influx, as opposed to varying responses to, and the complicated dynamics of, *acculturation*.

### Material Technology and Sourcing

The scientific sourcing of materials is clearly crucial to the study of trade and long-distance contact. This does not just apply to ceramic thin-sectioning but also the chemical composition of glass and various resins. In this capacity, the employment of portable XRF units can also be recommended and recent trials have been done in deep Roman town suburban sequences to test whether the impact of the period's industrial pollution registers.

## Methodological approaches

### Excavation Sample, Finds Densities and Distribution Analyses

The distinction between Late Iron Age and Early Roman-period pottery assemblages can be difficult. One result of this is that there has been something of a trend to group together the first century AD 'transition' into one broad phase. While in some cases this cannot be avoided, every effort should be made to disentangle and articulate their respective settlement layouts when possible. The actual impact of the Conquest, after all, has to be one of the key horizons in land-use/cultural sequences that require understanding. Accordingly, attempting to achieve this, a greater intensity of excavation sampling of these horizons' features may be necessary. Further to calls for greater methodological innovation, it may well be necessary to not just excavate site sequences by just uniform rate, but vary the sampling intensity (especially of linear features) according to the needs/questions being asked of specific phases and their articulation.

As would be expected, it appears that the 'higher level' Roman-period settlements – variously towns/nucleated/roadside, and some complex farmsteads and villas – generally evince a wider range of craft/industrial activities, coinage and, too, a greater variety of plant foods. Roadside settlements/'centres' (and towns), clearly were places where a wide range of peoples/influences intermixed and 'connected' (Smith & Fulford 2018). Accordingly, a greater sampling intensity may also then generally be required on these more 'complicated' sites if the full range of their functions and their loci are to be distinguished and detailed.

There have been recent calls for greater statistical control of site finds densities (Evans 2012; Fulford & Holbrook 2018), so that the quantities achieved from one type of settlement can truly be compared to others. Of course, this by no means is exclusive to Romano-British sites, but the need is all the more acute for the period due to the sheer number of sites dug *per annum* of that attribution, the size of its assemblages and, too, because of its greater range of settlement types – its established 'hierarchy' – than in later prehistory. Such measures would allow us to firmly explore whether there were depositional threshold-levels between town, suburban and hinterland/countryside settlements.

While per hectare finds densities (by category/type) have already been employed as a means of comparison, it is recognised that this can only provide a crude rule-of-thumb measure and one ultimately dependent on the intensity of a site's sampling. Far better would be if finds densities could be expressed by feature cubic-capacity and, then, the range and average densities per phase and period from sites as a whole. Thus far, these techniques have only been used in a few cases, but with digital recording techniques they should not prove too onerous to implement.

Together with this, there clearly is a pressing need for site publications to more widely present artefact-category distributional analyses. Given that almost all major sites are now digitally recorded and computerised finds databases are employed, it is remarkable how few of their publications actually include specific artefact-type distributions. Without this, it is difficult to appreciate, for example, a settlement's middening patterns or whether finewares clustering occurred adjacent to house compounds, as opposed to animal paddocks. Indeed, not undertaking this kind analysis and visualisation, is to miss one of the main strengths of large-scale/total settlement investigations.

### Surface Collection and Metal-detecting

Overview studies have variously called for surface collection and the consistent application of metal-detecting on Roman settlements. Certainly, as regards issues of identity, settlement status and the distinction of their inhabitants' 'roles', *the maximization of metalwork assemblages must be considered a major directive*. True of the periods' coins, personal ornaments and tools, the quantity of finds caught up in surface deposits on ploughed-out sites has been shown to be considerable (at, for example, the Camp Ground, some 700 coins and 8000 sherds were thus retrieved across its c. 5.5ha). Accordingly, even if intensive fieldwalking-collection is often unpractical, every attempt needs to be made to metal-detect these horizons. Experimental trials at both the Camp Ground and North West Cambridge have shown that it is most appropriately done at the level of the lower sub-soil. Accordingly, during the course of machine-stripping the main Roman settlements at Longstanton/Northstowe, following the stripping of the topsoil, the lower soil horizon was systematically metal-

detected with finds plotted by hand-held GPS units. This has proven a quick and efficient technique. If properly co-ordinated, it need not result in any delay or interruption to a site's stripping programme, and can result in a massive increase in metalwork finds.

### Building Recovery

Reviewing recent site publications, it is clear that many of the periods' settlements result in the recovery of a very few, if any, definite building remains. This is largely the product of intense plough-damage, that many of the periods' structures were evidently not deeply footed and just involved sill-beam construction, plus also the impact of 'hard' excavation machine-stripping. The latter was evident when, in 1999, the CAU excavated Colne Fen's Langdale Hale 'state farm'. Despite that a number of 'shallow' structures were then forthcoming, comparison could be made to where part of the settlement had been dug during a student training excavation in the 1970s. Then, using just a JCB to remove topsoil, but leaving its interface with underlying gravel geology in, this was subject to 'trowel-/hoe-line' exposure and cleaning, with the result that more shallow building components were recovered than during the main site's stripping done decades later (Mytum 2013).

It is obviously unfeasible to so carefully expose strata in such a manner given the large-scale excavation programmes now regularly undertaken. Nevertheless when, for example, evaluation-phase geophysical surveys indicate the location of buildings, then greater care should be taken in their exposure and to allow greater finds retrieval and sampling (e.g. metal-detecting and phosphate/magnetic susceptibility) of their overlying 'interface'. Put simply, to keep on excavating so many settlements of the period as is now happening, but with so little recovery of convincing building plans, does seem rather pointless and, at least in some instances, doing less – but better – might provide 'more'.

### Cemetery Recovery and Human Remains

Reviewing the site literature, it is revealing how many Roman settlements are being excavated in their near-entirety, but without cemeteries identified. In recognition that accompanying cemeteries may lie at a distance to their settlements' compounds, the argument could be made that, in the course of evaluation fieldwork, a higher intensity of trench sampling-interval may be necessary in their surrounding area.

With the distinction of 'mixed' burial rites within both LIA and Roman-period cemeteries, the need to absolutely date key burials – and not just rely of 'typological' criteria – is becoming evermore apparent. This is not just true of 'Early' cemeteries having both cremations and inhumations (Lyons 2011), but, as emphasised by Gerrard (2015), 'Late' inhumation burials. With so few of the latter having dateable grave goods, not only is this crucial as regards Late Roman/Early Anglo-Saxon traditions, but also to establish the advent and spread of such practices as decapitation.

The application of 'science', furthermore – both aDNA and isotopic – is where great advances are currently being made and is likely to do so for the foreseeable future (e.g. Shaw *et al.* 2016). Not only does this have the potential to identify whom were 'foreigners' within burial communities but also familial groupings within cemeteries. In this regard, Harvard's mass-scale first millennium BC aDNA sample (also including Conquest Period/Early Roman burials) is likely to produce groundbreaking results and, with experimental trials currently in hand, it can only be hoped that this could soon be extended to cremated remains.

The application of scientific techniques to the periods' human remains also relates to matters of health (see e.g. Rohnbogner 2018). Beyond just standard measures of trauma and pathology, advances in the study of bodily parasites means that bulk soil samples should now be routinely taken from the stomach-area of inhumations (Mitchell 2016) and, arguably, also animal-carcass burials.