

APPROACHES TO THE INVESTIGATION, ANALYSIS AND DISSEMINATION OF WORK ON ROMANO-BRITISH RURAL SETTLEMENTS AND LANDSCAPES

A REVIEW

PAPER 2: FIELD INVESTIGATION AND REPORTING METHODOLOGIES

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1.1 The methods used to investigate Romano-British rural settlements vary considerably across England and Wales. In part this is a reflection of differing requirements set by local planning authorities (which can sometimes differ markedly between contiguous local authorities which draw their advice from different sources) but it is also a product of the approaches and philosophies adopted by different archaeological contractors. Whilst there has been an element of custom and practice which has developed over the last 25 years, especially in the sampling levels applied to feature types, variation is considerable. In some cases this is explicable, and fully justified by the nature of the archaeology itself: for instance rural settlements in the south and east of England usually produce far more artefacts than those in parts of the South West peninsula, Wales and the North, and thus methodologies designed to maximise artefact recovery in these areas are easily understood. In some cases the variation in practice is less readily explicable.

1.2 This paper presents a series of reflections on field investigation and reporting methodologies utilised for excavation under the broad headings of design; field practice; analysis and reporting. It is not the aim of this paper to be prescriptive or dogmatic. There is no single 'right' way to approach a site investigation. Nevertheless it is surprising, if not slightly disappointing, how little evolution of investigation methodologies there has been over the last quarter century. Curators, consultants and contractors should always be open to methodological experimentation. Trying something new might sometimes pay off.

2. Design

2.1 The design of an excavation is a critical part of the whole process – a poor design often leads to an unsuccessful investigation that does not do justice to the potential of the archaeology found, and that often leads to an uninspiring report. Another failing can be an over rigid adherence to a design which assumes one type of archaeology will be found even when the results in the field indicate something quite different. This can result in a mechanical and unintelligent approach to the investigation which loses sight of the bigger picture in favour (for instance) of a rigid adherence to specific sampling levels for certain types of feature. Curators, consultants and contractors are active participants in the design of a piece of fieldwork and have a shared responsibility to seek the best outcomes within the framework of a reasonable and proportionate response to the level of harm that a development will cause to the historic environment. Some successful pieces of work adopt a reflexive approach based upon what is being found and harness a collaborative approach to strategy formulation to prioritise the use of resources and levels of investigation. But curators need to be firm if such decisions appear to be primarily driven by a desire to cut costs rather than a reasoned approach to optimise understanding of the archaeology present.

2.2 In many cases the stated research objectives of an excavation do not go much beyond establishing the form, development, stratigraphic sequence and development of a given site. There can also be a tendency to regard regional research agendas as a check list – it is rare that an investigation can't be considered to contribute to at least one or two stated research objectives given how broadly these are drawn in many regional research strategies. It is undoubtedly difficult (and in some cases futile) to over specify the research contribution of an

excavation before a spade goes in the ground. In some cases a prior evaluation might provide sufficient confidence on the character of the archaeology present to enable a robust research design to be formulated, but this is not invariably so. When the archaeology exposed is not as expected, there is a strong case for a period of reflection early on in the fieldwork programme to review, and if necessary amend, the investigation strategy and data collection methodologies. The post-excavation assessment is also an important review point as it is often the first point when the full nature and potential of the finds and environmental assemblages become apparent. That document may therefore be the best place to articulate highly nuanced questions (such as those, for instance, relating to expressions of personal identity or the integration of a given site into the broader provincial economy), but good quality artefact and biological assemblages which can be related to a well-dated site sequence are often a pre-requisite for these more sophisticated approaches.

3. Field Practice

3.1 Assessment and evaluation of the techniques utilised in field investigation is a complex subject, and one which does not overly lend itself to generalisations. Therefore a small number of topics have been identified below which do have a broader applicability.

Making a Record of the Artefact Content of the Topsoil

3.2 Fieldwalking has largely been superseded in many parts of the country by geophysics as the standard prospection/evaluation technique because in comparison to the latter it is labour intensive and requires suitable land use at a time to fit in with the preparation period of a planning application. Yet systematic surface artefact collection (especially where this also involves the controlled use of a metal detector) has the potential to yield significant information about sites: for instance it is conceivable that the latest artefacts on a heavily plough damaged site may largely exist in the topsoil, and analysis of the proportions of finds from stratified contexts/surface cleaning will underestimate the prevalence of late material (cf. Evans 2012 on this topic). In some parts of the country there is a puzzling disparity between the quantities of finds recorded by the PAS from probable farmstead sites, and the quantity of material recovered from excavations of outwardly comparable sites which do not make systematic use of a metal-detector; see further Brindle in Paper 5). Artefact scatters in fields beyond a settlement core might also reflect manuring practices and serve as a proxy for arable land use. Consideration could therefore be given to utilising fieldwalking as the first stage in the mitigation programme rather than as an evaluation technique. This would only be justifiable where there is good reason to believe that the quantities of artefacts likely to be recovered render the effort expended worthwhile. This could be ascertained either during the evaluation phase or on the basis of previous work in the vicinity (it is likely to be the case over large swathes of southern and eastern England). In particularly promising situations where there is a substantial build-up of topsoil there might even be a case for its removal in 100mm thick spits with fieldwalking finds collected from the surface of each planum in small grids and the locations of metal detected finds recorded by GPS. That approach should allow recovered artefacts to be related to the site plan exposed in the subsequent excavation. Bespoke final ploughings of sites ahead of excavation to facilitate this approach, as occurred at Colne Fen, Cambridgeshire (Evans *et al.* 2013), might be considered, but in reality such opportunities will doubtless be rare.

3.3 It goes without saying that care should be taken when machining to ensure that any horizontal stratigraphy is not machined away without record, and that it should not automatically be assumed that only negative features cut into natural will survive in arable areas. But equally the hand removal of the base of the topsoil over several hectares will be prohibitively expensive and in very many cases unrewarding and not worth the effort expended. Inevitably, therefore, much will depend upon the skill and experience of the archaeologist monitoring the strip, and attempts to be over prescriptive in the specification are likely to be futile.

Sampling Levels for Different Feature Types

3.4 Unofficial norms for the sampling by hand excavation of different types of archaeological feature have developed over large parts of England and Wales. Frequently used samples are 10% of linear features (usually ditches); 50% of pits and postholes unless they are repetitious and contain few finds, and 100% of structural, funerary or ritual features. Where excavation reveals extensive ditched fieldsystems with seemingly low artefact concentrations, hand excavation of 10% of the length of every ditch can be both time consuming (and thus expensive), and also archaeologically unrewarding. Hand excavation is therefore frequently concentrated at terminals where greater quantities of finds are expected. Hand excavation of large ditches carries significant cost implications, and it is unrealistic to expect appreciably higher sampling levels except where there is a clear research case for doing so. In certain circumstances, however, greater consideration could be given to the controlled mechanical excavation of ditch fills after an appropriate quantum of hand examination has been completed. Rough sorting (and metal detecting) of the excavated fills could both recover artefacts, and potentially indicate the original presence of human / animal burials within a feature. Even if articulation and fine detail is lost, this would be better than no record at all.

Intra-Site Distributions

3.5 Remarkably little use seems to have been made in plotting the distributions of artefacts and ecofacts across an excavated area in published reports. For instance plotting the differential densities of artefacts and ecofacts in different parts of ditch systems could yield insights into differential uses of enclosures and sub-enclosures (settlement; stalling of stock; arable processing etc). It is disappointing that the project was unable to identify hardly any examples of projects where the quantities of artefacts recovered per standard volume of feature fill have been used as a basis for measuring differences, yet this is a standard technique in archaeobotany and work in a research context shows the potential (Fulford and Holbrook 2011; Eckardt 2006; Millett 2007). Rapid recording with a GPS of the profile of a section should render it relatively easy to calculate the volume of an excavated slot across a ditch, and thus enable calculations such as kg of pottery per m³ to be produced. Comparative volumetric data are essential if the relative abundance or scarcity of artefacts between different types of site, or different regions, is to be understood and significance appreciated.

Application of Soil Chemistry and Other Scientific Techniques

3.6 Understanding the functions performed in different parts of a rural settlement are critical to our overall knowledge and appreciation of these sites. Very little application of soil chemistry (such as phosphate analysis as a means of detecting the presence of stock) and other scientific techniques is apparent from the literature review. This is probably explicable by an absence of suitable sealed deposits on the vast majority of sites examined, and perhaps the blanketing effects of the application of agricultural fertilizers. Where deposits suitable for scientific analysis are present, however, they are of major potential significance, and the utility of a suite of geo-chemical analyses should be considered. Such work can also be invaluable in assessing the character and intensity of metalworking activity in different parts of a site.

4. Analysis

Application of Absolute Dating Techniques

4.1 Dating of rural settlements (especially in southern and eastern England) frequently rests entirely on the evidence of pottery, yet this is to assume a priori that the use of pottery on a site provides an accurate reflection of the period that the site was in use. This is manifestly not the case in many parts of northern and western Britain, and also from the early 5th century onwards over the vast majority of the province. Radiocarbon dating can also be an essential tool to establish whether a settlement had a pre-Conquest origin, especially in those parts of the country where late Iron Age pottery is rare. Indeed in many parts of

northern and western Britain absolute dating techniques may be the only means of establishing whether the whole period of occupation of a settlement is attributable to the pre-Roman Iron Age. Application of Bayesian techniques, however, is still of value even in the artefact richer areas of the south and east (Bayliss 2009). The frequency with which rural sites and their associated fieldsystems continued in use well into the 5th century and beyond is of cardinal importance in hotly debated questions about the degree to which the fabric of Roman Britain persisted beyond AD 400, and absolute dating techniques (principally radiocarbon assay) are the best methods currently available of determining a chronology independent from that supplied by artefacts. The lack of precision provided by calibrated radiocarbon dates from immediately before, during and after the Roman period are well known, and a single date of (for instance) 350-550 cal AD is unlikely to get us very far. Stratigraphically 'late' isolated burials are often chosen for radiocarbon dating and sometimes return fully post-Roman dates, but their interpretation can be problematical: do they reflect the reuse for spasmodic burial of long abandoned agricultural sites, or do they signify the continuing use of such settlements well into the 5th century or beyond? While the application of absolute dating techniques to the earliest (potentially Iron Age) features and the latest 'Roman' deposits should now be routine, care needs to be expended in formulating the questions which the dating programme is hoped to answer.

5. Reporting

5.1 Presentation of data in a high level of detail in a print published form is increasingly only possible for monographs where there is more flexibility with page lengths. Many journals are no longer willing to publish full length specialist reports with their accompanying data tables and instead ask for a synthetic summary which picks out the main conclusions. This has resulted in an increasingly common twin track approach to dissemination: a summary report in a journal which presents the main findings and conclusions, with an accompanying grey literature report available on the internet that contains all necessary detail. Sometimes rather than a single pdf report, specialist data are made available as individual downloadable files (excel spreadsheets for instance). There can be advantages to the latter approach as this allows the specialist researcher to re-order data and amalgamate results from a number of different sites without the need for manual re-keying. This approach may be particularly profitable with finds, environmental and osteological data which are often presented in similar, but not always identical, formats. The print publication should always contain a summary of the quantified data so as to act as signpost to the on-line archive for the interested researcher.

5.2 This project has demonstrated that many reports do not contain key pieces of information which are essential for a full understanding of the site and its methods of investigation. Examples include a precise statement of the total area excavated; sampling and retention strategies employed (both on site and during analysis); detailed descriptions of the analytical methods adopted, and quantifications of the total recovered assemblages of finds and environmental remains. The latter is necessary if the reader is to gain a clear appreciation of whether an absence is significant or rather a product of the methodology employed. An example might be whether soil samples were checked with a magnet for metal-working debris such as hammer scale. If they were, greater confidence can be placed on the absence of such material. A set of mandatory information along these lines should be regarded as an essential component of all future reports.

5.3 Given the numbers of reports produced by commercial archaeological organisations it is inevitable that quality will vary considerably, but equally it is very difficult (if not indeed unhelpful) to be prescriptive on what constitutes a good report. Nevertheless we do maintain that it is the duty of the excavator to attempt to understand, interpret and contextualise what has been found, and to make the link between specialist analyses and overarching interpretation. While it might seem obvious that reports should always seek to relate what has been found to cropmarks, geophysical survey results or indeed the results of

neighbouring investigations, this is not always the case. The value of synthetic projects which place the results of a myriad of different investigations into a single GIS are becoming increasingly apparent (Morrison *et al.* 2014). Lengthy description without interpretation is rarely successful, and, given the volume of material now available, it will be an exceptional site indeed where others are likely to have the time (or inclination) to attempt interpretation where this is largely absent from the original account. Reports should always strive to place excavated sites in their landscape settings, and also look at the influence they may have had on the evolution of the historic landscape. For instance they should include a consideration of whether any elements of a Roman settlement or fieldsystem were reused in later periods, or whether they seemingly fixed the subsequent orientation of medieval headlands and ridge and furrow open fields (see Rippon *et al.* 2015 for a thorough investigation of this topic). As a minimum excavated site plans should be overlaid on a 1st Edition Ordnance Survey base during fieldwork to aid on-site interpretation – not every feature that contains Roman pottery need necessarily be Roman! For greater discussion of this point see the comments of Stephen Rippon in Paper 3.

Conclusions

6.1 The Roman Rural Settlement Project has demonstrated that to unlock the potential of the thousands of investigations undertaken by commercial archaeologists we need to strive for consistent and comparable data. If the results of an investigation cannot be meaningfully compared with others in the region, or nationally, the value of that piece of work is diminished and its results compromised. For finds and environmental work adherence to recognised standards is essential for future synthesis. The methods by which rural settlements are dug will inevitably vary, and no one is calling for all sites to be dug in the same way. That would be utterly stifling and counterproductive. Rather there is a case for more thought, innovation and flair to be shown in the way that investigations are designed and executed. That would make for a more invigorated research direction for Romano-British rural studies – and generate reports that are more interesting to read. While the role of the curator is critical in maintaining standards on behalf of the local planning authority that imposed the requirement for work in the first place, it would be encouraging if we could reach a situation where professional esteem, peer pressure and client recognition were also drivers for quality.

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