

With reference to a specific archaeological project, critically assess the methods of archaeological investigation employed, and the nature of the archaeological materials/ data recovered.

Introduction

This will be an assessment of the excavation strategy employed by University of Leicester Archaeological Services (ULAS) on a project referred to as 'Land south of Soar Valley Way, Enderby, Leicestershire'. This work took place prior to a commercial development around 5km south-west of Leicester, on previously undeveloped land, and although it was initially a routine project, the main excavation phase saw the discovery of an Iron Age bark and wicker shield of a type not previously known in British prehistory (Clay, 2011:1; Kipling & Beamish, 2018:93). With the exception of the geophysical survey, ULAS was responsible for all phases of the project including the desk-based assessment, the evaluation, and the final excavation, and all of these stages will be considered in the following analysis. Some guidance documents post-dating the work will be used for reference where older documents were not accessible.

Desk-based assessment, Geophysical survey, and WSI

Work began on the project with a desk-based assessment (DBA) conducted in 2011 (Hunt, 2012). This was completed in line with the CIfA standards (2014a) and presents a clear assessment of the likely archaeological material which may be encountered. It noted that the amount of prehistoric and Roman activity in the vicinity made it likely that such material would be encountered within the development area, but medieval and post-medieval were less likely (Hunt, 2012:10). Though there was no evidence of previous development on the site, it was thought that cultivation was likely to have taken place on the land from the post-medieval period onwards, and as such the survival of archaeological remains would depend on the depth of any plough damage (*ibid*). The subsequent work in the site showed this to be an accurate assessment.

A geophysical survey of the site followed, and as ULAS does not conduct its own geophysical work this was done by an outside organisation, Stratascan. Unfortunately, it was not possible to ascertain how involved ULAS was in decisions regarding the area covered by the survey, or

the nature of the equipment used, though in this instance the entire proposed development area was surveyed meaning any lack of communication is likely to have had minimal negative impact. The survey itself showed an array of possible features within the site area (Figure 1).



Figure 1. Geophysical survey results (Stratascan, 2012)

The Evaluation Excavation Phase

With the DBA and geophysical survey having successfully demonstrated the archaeological potential of the area, an evaluation excavation was then undertaken. The evaluation's WSI (Clay, 2011) was fairly rudimentary, particularly when compared to a more recent ULAS example (e.g. Speed, 2023), and is mostly an unaltered standard template. It largely conforms to the CifA guidance (CifA, 2014b) but to the minimal level. The description of the size and quantity of the evaluation trenches to be dug and what they are targeting is reasonably adequate, but there are no references made to any possible research framework/agenda questions that the work might contribute towards.

The CifA standards are deliberately vague in their criteria for what an evaluation should entail, but their main stipulation is that it should 'determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area' (CifA, 2014b:4). Work has been done,

notably by Champion et al. (1995) and Hey & Lacey (2001), on understanding what constitutes an effective evaluation strategy, and the assessment of the effectiveness of this evaluation largely depends on the interpretation of ‘reasonably possible’.

The central criticism of the strategy adopted by this evaluation concerns the sampling strategy, both in terms of trenching and environmental sampling. Matters of budget obviously come into play when determining how extensive an evaluation will be, but even bearing that in mind, the level of investigation in this case is perhaps closer to the minimum threshold for such work than might be expected.

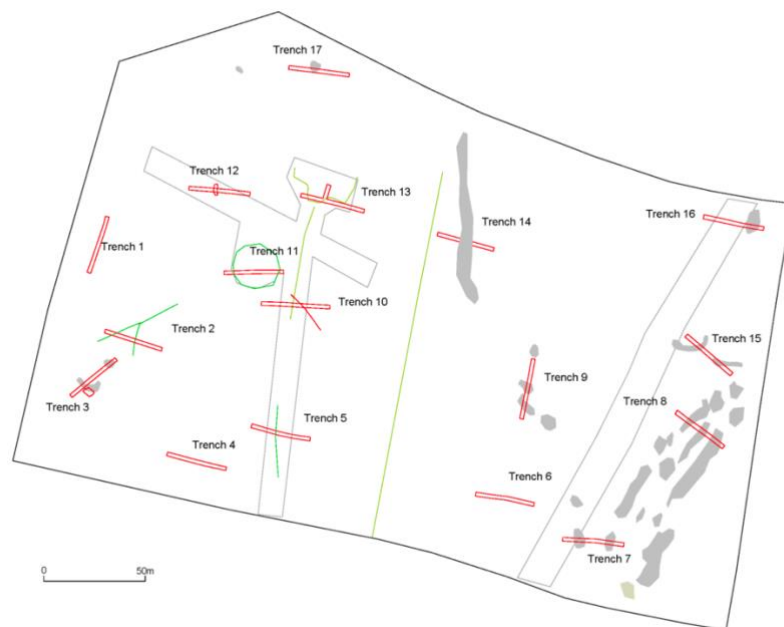


Figure 2. Evaluation trench map with cropmarks in green and geophysical anomalies in grey (Kipling, 2012)

Examination of the trench locations (Figure 2) in respect to the geophysical survey results shows that a good number of features detected are being sampled in some way. However, the 16 trenches dug totalled an area of c. 864 square metres (Kipling, 2012:7), which for a site of 7.7ha equates to c 1.1% of the total area, well below the level of between 3 and 5% suggested in Hey and Lacey’s (2001:51) research as the threshold for effectively characterising a site. The issue is exacerbated by a reliance on the cropmarks and geophysics results in an area with a notable proportion of clay geology, something which is known to produce lower quality results of both (Campana, 2008:10; Clay, 2002; Schmidt, 2008:70). This meant that by under-

sampling the site, there was a high potential for missing features. Placement of only 3 of the trenches in ‘blank’ areas has to therefore be considered an insufficient level of sampling for potentially revealing anything not detected by the geophysics.

Along with a lower than ideal number of trenches, the environmental sampling strategy also saw only one context sampled, an approach which is highly unlikely to provide a representative picture of the environmental potential of the site. English Heritage’s guidance (2011:7) makes it clear that even for evaluations, environmental sampling strategies must be suitable for providing data which will contribute to the understanding of the site in the equivalent manner of a full excavation.

Although arguments have been made that evaluations ‘consistently underestimate the range of different finds and feature types’ (Champion et al., 1995:41), and that too much trenching can potentially disturb a site in ways that lessen what can be learned from later excavation (Barker, 1993:56), without the guarantee that this project would progress to full excavation, the strategy employed during this phase was a gamble. It verified the presence of archaeological features within the site, but it returned very little in the way of environmental evidence or finds, particularly ones that could securely date contexts (Kipling, 2012). It also missed two of the three main features revealed by the main excavation (a pit alignment, and a metallised surface and watering holes). The strategy therefore risked mischaracterising the nature of the site and could have resulted in the loss of archaeological material of national significance had the planning archaeologist been of a different mind and decided full excavation was unnecessary.

The Main Excavation

The approach to the main excavation stands in contrast to the evaluation and was generally a much more thorough piece of archaeological work, producing a report significantly above CIfA’s baseline standard (CIfA, 2014c; Kipling & Beamish, 2018). Firstly, it would appear as though there was some level of recognition of the inadequacies of the evaluation strategy, as prior to the commencement of the larger scale excavation, a second round of evaluation trenches were dug (Kipling & Beamish, 2018:5). These totalled c. 434m², increasing the area ‘evaluated’ by around 50%. Though still a limited portion of the total area, one of these extra trenches (24) (Figure 3) seems likely to have been an important factor in concluding the

necessity for further investigation of the southwest corner of the site, the area from which the bark shield was recovered.

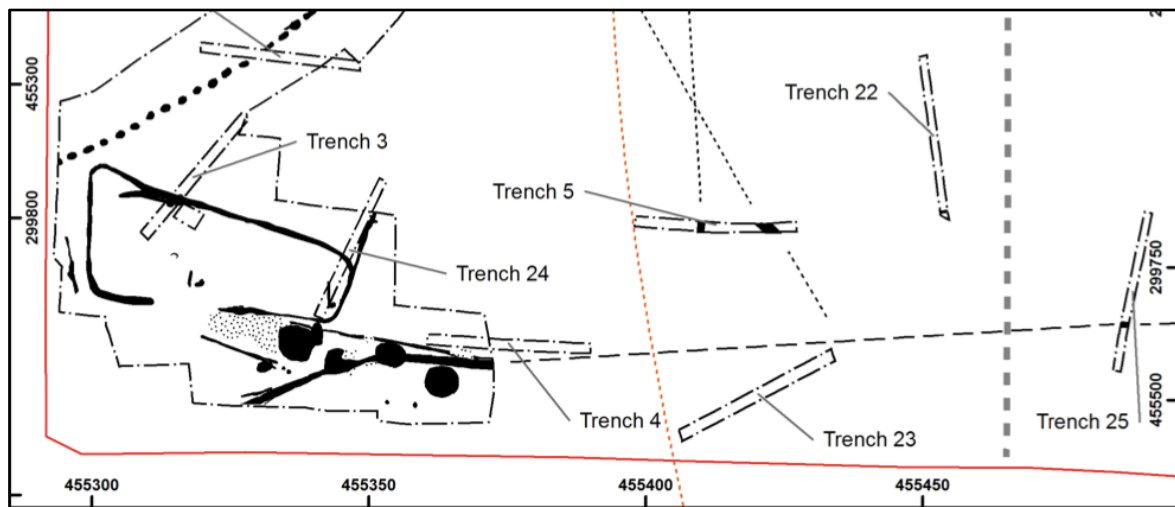


Figure 3. Cropped map of trench locations showing southern enclosure area (adapted from Kipling & Beamish, 2018:9)

The planning for this phase, in contrast to the evaluation, also considered how the project could contribute to the regional research framework, along with English Heritage's critical research priorities, specifically aspects relating to the Roman period (Clay, 2015; Kipling & Beamish, 2018:5). This consideration of the framework evidently seems to have helped inform the focus of the initial trench plan of the main excavation, which chose to concentrate on the two areas which earlier work had indicated contained the most significant Roman features on the site: a set of potential enclosures in the northern area, and a potential settlement focus in the southern area (*ibid*).

It was during the work on the potential enclosures in the northern section that it was discovered that the western portion of this area contained part of an extensive pit alignment, likely part of a prehistoric landscape boundary (Kipling & Beamish, 2018:140). The original investigation area was then extended to expose the full extent of the alignment contained within the development area. Of the 62 pits found, 29 were excavated (Kipling & Beamish, 2018:10), which, considering this was an unexpected set of features, is a reasonable level of investigation and can be regarded to have provided a good representative sample of the alignment as a whole. This area also contained a pair of intersecting ditches and a number of pits, dated along with the pit alignment to the mid to late Iron Age, which were likely part of an extensive prehistoric agricultural landscape (Kipling & Beamish, 2018:140). Slots were excavated into the ditches

roughly every 10m, whilst the excavated pits were 50 percent-ed. The eastern portion of this trench contained a significant amount of Roman activity in the form of a series of enclosure ditches, quarrying pits, and a double ditch feature. As with the Iron Age features, these were comprehensively investigated with a similar pattern of slots and 50 percent-ing of pits, though the slots through the enclosure ditches were closer together at roughly 5m apart. As with the pit alignment strategy, there isn't much that can be critiqued with this approach, as it seems likely to have provided as good a representation of this area as could reasonably be expected.

The southern area continued with a very similar approach, with the main large Roman enclosure having slots excavated roughly every 10m, and the smaller pits 50 percent-ed. The three large 'watering' holes were excavated to varying degrees, up to 100 percent. No explanation is provided for these choices, but the percentage appears likely to have been governed by the discovery of additional features that required further exposure. A slot was also cut through the metallised surface and the adjacent enclosure ditch to give a better understanding of the phasing of this area of the site (Kipling & Beamish, 2018:49). Again, this approach tackled the exposed features in a way that provided a good representation of the area and allowed solid conclusions to be drawn about its usage and phasing.

The aspect of the southern area excavations that deserves the most attention though was the uncovering of the Iron Age bark shield, found in one of the watering holes (Figure 4). The significance of the find was luckily recognised immediately and so the subsequent work involving its analysis, conservation, and eventual display appears to have been undertaken to the highest possible standards. The excavation and recording of the shield adhered closely to English Heritage's guidance for the treatment of Waterlogged Wood (2010) and Historic England's Waterlogged Organic Artefacts (2018), both on site and in the post-excavation procedures. A comprehensive record including on-site photogrammetry, acetate tracing, and CT scanning at a local hospital, was completed before a selection of external wood specialists were employed for expert cleaning, analysis, recording, and conservation purposes (Kipling & Beamish, 2018). 3D prints of the shield were also produced which were used as part of the use-wear analysis performed by a member of the University of Leicester's Archaeology department, and a reconstruction of the shield was commissioned to illustrate how it would have originally looked and has since been used in outreach work (Adams, 2024; Kipling & Beamish, 2018). Following the completion of this analysis and the conservation processes, the

shield was donated by the landowners to the British Museum, where it can now be seen on display in the ‘Britain and Europe 800 BC- AD 43’ exhibit (Adams, 2024).



Figure 4. Recording of the bark shield in situ (Kipling & Beamish, 2018)

Though largely well conducted, the one small negative that can be found in the approach to the main excavation phase is once again an under-sampling of the environmental evidence. Five of the fifteen samples taken came from the ‘watering’ holes, and only two samples were taken from any of the ditches, meaning much of the site went unsampled. The results of the environmental sampling from the watering holes did however provide a significant amount of information about the surrounding area, so the argument could be made that a higher sampling rate may not have been necessary, recent comments by the environmental team on general sampling levels would argue otherwise though (Forward, 2023).

Conclusions

Assessing the strategy of a project from the outside, and from a position of limited archaeological experience, is a tricky endeavour. A consequence of the tendering process is that it inherently places limitations on any work that can be done, and so it is perhaps unsurprising that in certain situations hands are tied in terms of what is possible within a budget. What the analysis illustrated though is that some stages in the process, such as evaluations, are perhaps considered more perfunctory than others. Though it may simply be that ULAS staff have a familiar enough relationship with the planning archaeologist to know when an

evaluation is merely a formality before full excavation occurs. Nevertheless, this is a risky way of working, and is extremely dependent on close working relationships between the two, which cannot always be relied upon going forward. Overall though the project must be considered a success. It revealed a good amount of new information about the area, showed the progressive development of an agricultural landscape spanning two eras, and uncovered an artefact of high enough importance to warrant display in the British Museum. Not a bad outcome really.

Word Count: 2,199

Bibliography:

Adams, S. 2024. *How to make an Iron Age shield (out of bark)*, British Museum. Available at <https://www.britishmuseum.org/blog/how-make-iron-age-shield-out-bark> [accessed 02/01/24].

Barker, P. 1993. *Techniques of archaeological excavation*. Routledge: London.

Campana, S. 2008 'Archaeological site detection and mapping: Some thoughts on differing scales of detail and archaeological 'non-visibility'' in Campana, S. and Piro, S. (eds.) *Seeing the Unseen. Geophysics and Landscape Archaeology*. CRC press: Boca Raton. pp. 5-26.

Champion, T., Shennan, S., and Cuming, P. 1995. *Planning for the past, volume III: decision-making and field methods in archaeological evaluation*, Southampton University and English Heritage: Southampton.

CIfA, 2014a. *Standard and guidance for historic environment desk-based assessment*, Chartered Institute for Archaeologists.

CIfA, 2014b. *Codes of Conduct Standards and Guidance for Archaeological Field Evaluation*, Chartered Institute for Archaeologists.

CIfA, 2014. *Codes of Conduct Standards and Guidance for Archaeological Excavation*, Chartered Institute for Archaeologists.

Clay, P. 2002. *The Prehistory of the East Midlands Claylands: aspects of settlement and land-use from the Mesolithic to the Iron Age in central England*. University of Leicester: Leicester.

Clay, P. 2011. *Written scheme of investigation for archaeological work, Soar valley Way, Enderby, Leicestershire*, ULAS WSI 12/608.

Clay, P. 2015. *Written scheme of investigation for archaeological work, Soar valley Way, Enderby, Leicestershire*, ULAS WSI 15/687.

English Heritage, 2010. *Waterlogged Wood Guidelines on the recording, sampling, conservation and curation of waterlogged wood*, English Heritage.

English Heritage, 2011. *Environmental Archaeology 2011 A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)*. English Heritage.

Forward, A. 2023. End of year ULAS lecture. 13 December 2023.

Historic England, 2018. *Waterlogged Organic Artefacts Guidelines on their Recovery, Analysis and Conservation*, Historic England.

Hunt, L. 2012. *An archaeological desk-based assessment for land south of Fosse Park, Enderby, Leicestershire [NGR: SP 554 998]*, ULAS Report 2012-170.

Kipling, R. 2012. *An Archaeological Evaluation on Land to the south of Soar Valley Way, Enderby, Leicestershire* [NGR: SP 554 998], ULAS Report 2012-059.

Kipling, R. and Beamish, M. 2018. *An Archaeological Excavation on Land south of Soar Valley Way, Enderby, Leicestershire* [NGR: SP 554 998], ULAS Report No 2018-108.

Lacey, M. and Hey, G. (2001). *Evaluation of archaeological decision-making processes and sampling strategies*, Oxford Archaeology: Oxford.

Schmidt, A. 2008. 'Electrical and magnetic methods in archaeological prospection' in Campana, S. and Piro, S. (eds.) *Seeing the Unseen. Geophysics and Landscape Archaeology*. CRC press: Boca Raton. pp. 67-82.

Speed, G. 2023. *Written scheme of investigation for archaeological evaluation, Land off Humble Lane, Cossington, Leicestershire*, ULAS WSI 24/126.

Stratascan, 2012, Geophys and Cropmarks.jpg (Image sourced from internal site archive).