

A posthole is a posthole?

A discussion of excavation strategies and methodologies in Denmark and the UK

Ceci n'est pas un pipe. A posthole is a posthole on both sides of the sea, but how we deal with them in Denmark and the UK is very different. Why?

Introduction

This paper explores different aspects of developer funded, rural archaeology in Denmark and the UK. Plough truncated rural sites on arable land are the bread and butter work for many archaeologists in both countries, due to the large areas impacted by infrastructure projects and development. These excavations are often spatially extensive but with little depth of stratigraphy, where most features (such as post-holes, pits and ditches) are found directly below the cultivation horizon, and directly above the unmodified subsoil.

In the UK the excavation strategies employed on these sites are adapted versions of the single context methods, where the deposits in each feature are half-sectioned but removed and recorded in depositional sequence. In Denmark the features are routinely box-sectioned with little regard to stratigraphical relationships between contexts (fills). This horrifies many British archaeologists, where box-sectioning is seen as a last resort. In Denmark, on the other hand, single context excavation is poorly understood and therefore surrounded by misconceptions.

The authors have worked extensively in both countries and internationally, which has led to often heated discussions amongst ourselves and with our colleagues about how and why we do things differently. Everywhere we have worked we have encountered prescriptive, dogmatic approaches to archaeological excavation, where other methodologies are regarded with suspicion or even derision. We argue that many of these excavation methodologies are not universally applicable, and that we need to be more flexible in our approach. We must be able to change our methods to suit the nature of the archaeology and the questions we want to ask of it.

The United Kingdom – background

Legislation

The legislative framework varies across the countries comprising the UK (Scotland, Wales, Northern Ireland and England). The common basis of the legislation across the UK is an emphasis on preservation in-situ, and that any mitigation work is paid for by the developer. This is enforced through the planning system using policy guidance set by the national governments, and aside from scheduled ancient monuments archaeological sites are not protected by statutory law.

The nature and extent of any mitigation is thus determined at the planning stage. Evaluation or mitigation work prescribed as part of this process is undertaken by contractors selected by the developer using a tendering process. Larger developments often use archaeological consultants, who negotiate on behalf of the developer throughout the planning process.

Evaluation

Initial investigation of the impact of development on cultural heritage can take place either before the planning application is made, or as part of the Environmental Impact Assessment (EIA) required by the planning process. Initially a desk-based assessment is conducted using known archaeological information such as HER (Historic Environment Record) searches or aerial photography. Further investigation might include geophysical survey, fieldwalking and trial trenching.

Using this information the archaeological mitigation strategy will be decided as part of the conditions of the planning application. On the basis of this evaluation negotiation between the local authority planners and the developer will determine a mitigation strategy that minimises the impact of the development on the

archaeology and ensures the cost to the developer is minimised.

Excavation

Where significant impact on the archaeology is unavoidable the emphasis moves from attempting to preserve it in-situ to preservation by record. This means a proportion of the archaeology will be excavated and recorded before it is destroyed. This can either take the form of planned excavations in the case of areas of known high archaeological potential, or watching briefs, where archaeologists monitor ongoing work and excavate and record any archaeology as it is encountered. On the rural sites considered here this will often be 50% of each discrete feature (such as postholes or pits) and 10% of linear features. Sampling strategies for environmental and other analyses are also determined in consultation with national curatorial bodies.

Current archaeological excavation methodologies are mostly loosely based on the MOLAS (Museum of London Archaeology Service) system, which is a development of the principles of stratigraphic excavation introduced by Harris in the 1970s. This system was designed to be applied to deeply stratified urban archaeology, where the difficulty of making sense of the complex depositional sequences is of paramount importance.

This system seeks to identify and record subtractive (e.g. cuts) and depositional (e.g. fills) events, and remove them in reverse order of the sequence in which they were deposited. Each of these events is removed and the boundaries between them are followed during the process of excavation. The context is located in the overall depositional sequence using a Harris Matrix, which identifies the stratigraphic relationship of each event to the deposits above it. In true single-context excavation these contexts are recorded at their full extent in plan, so that for each context there is also an associated drawing showing only that context. However, on many rural excavations this is forgone to speed up the recording process as the features are contained within a cut, and are recorded on a multi-context plan. Each context is recorded on a standardised form. These contexts are then grouped into features using either group context numbers or, on many rural sites, the cut containing the fills of a feature is used.

Denmark – background

Legislation

In Denmark, as in the UK, commercial archaeology is developer funded. The fundamental difference is that all archaeology is protected by law. This law places the responsibility for the archaeology under regional state-funded museums.

All planning applications within a region are forwarded to the museum. An initial archival investigation of the proposed development area will be carried out. Subsequently the museum will give the developer the choice of having an archaeological evaluation by trial trenching. For areas over 5000m² this is paid for by the developer. If the developer refuses the trial trenching, the museum will instead carry out a watching brief (at the museum's cost) which gives the museum the right to stop any development for excavation (at the cost of the developer) should any archaeological remains occur. If the developer accepts an evaluation by trial trenching the museum will provide a binding statement regarding any further archaeological excavations on the site, including a maximum budget for the excavations.

The proposed budgets made by the museum will have to be approved by three parties – the developer, the museum and the Danish Agency for Culture (Kulturstyrelsen). If any additional cost should occur due to unforeseen archaeology the cost will be covered by the state, not the developer.

Evaluation

In Denmark the rural excavation practice is largely based on a phase of trial trenching, followed by excavation of areas of archaeological interest. The trial trenches will typically be 2m wide and spread systematically over the proposed development area, usually 10-15m apart and in a NE-SW alignment.

In the evaluation stage, excavation is kept to a minimum in areas with high archaeological potential which will be fully excavated at a later stage. Features are only sampled to assess the costing of the proper excavation accordingly. Areas of lower archaeological significance are excavated and released for development at this stage.

Theme: Similarities and differences

Excavation

Before any excavation usually a plan (fladetegning) of the site will have been drawn. The extents of features are recorded in plan and given feature numbers (anlægsnumre). These plans are equivalent to the British multi-context pre-excavation plans.

After planning the excavation begins usually with the 'boxing' of the features where typically 50% of the postholes or pits are dug away without following the cut to expose the section of the feature clearly so it can be drawn in section and recorded. A site register is kept with the running numbers of features, structures, finds, samples and photos.

Essentially the focus of the Danish documentation is on the feature and not the events comprising the individual fills, however these are still recorded as properties of each feature.

Hypothetical example: a posthole

Figure 1 shows a typical posthole, half-sectioned and demonstrating the difference between the Danish and British approaches. In the UK this feature would be recorded on a pre-excavation plan, and excavated in half section. The limit of the excavation follows the edge of the cut feature. Individual context numbers are issued for the two deposits filling the cut, and the cut itself. Each of these contexts is described on a separate

context sheet. The section is then drawn and the contexts are cross-referenced to the appropriate photographic, sample and drawing registers. The location of the section, the shape of the cut in plan, and the levels will be added to a post-excavation plan drawing. In total, the record for this feature comprises 3 context sheets, a section drawing, entries in several registers and at least two plan drawings.

In Denmark this posthole is planned (på fladetegningen), half-sectioned and recorded in section. Each fill is labelled with a layer number that typically begins with 1 within each feature number; the fills are thereby not labelled with a unique value. All information regarding the feature (cut, fills and interpretation) are written on the section drawing which means that all information about one feature is typically found on two sheets: 1) the section drawing (dimensions, fill descriptions and interpretation and structure number if applicable); 2) the plan drawing (levels, direction of section and structure number if applicable).

When actually excavating there is not that big of a difference between the two countries. The commercial archaeologists in both places will use spades, shovels and mattocks to rapidly get to the base of the feature and when excavating simple features (such as ditches and postholes) it is not necessarily very complicated or time consuming to follow the cut as opposed to

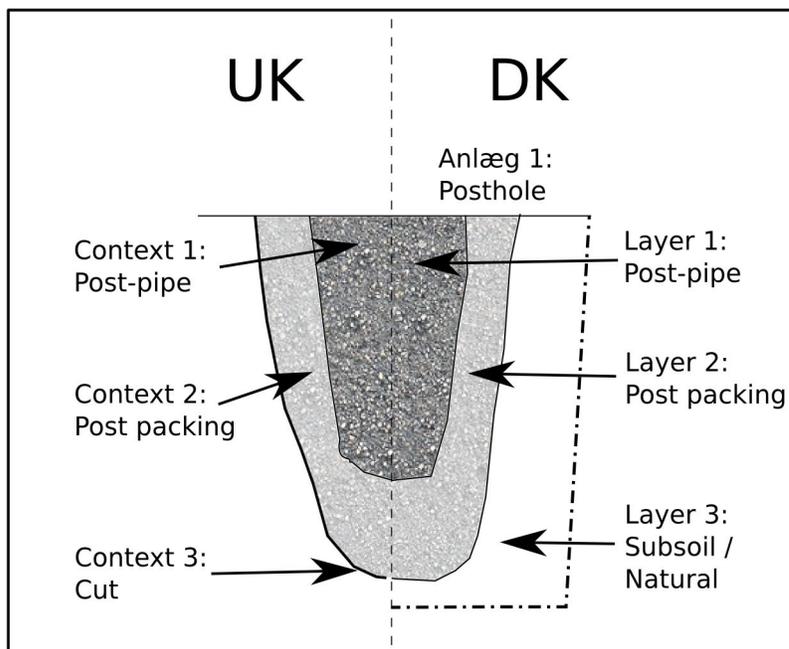


Figure 1: A posthole

'digging a box'. The frustrating part (from a Danish archaeologist's point of view) is the excess recording that takes place over multiple context sheets when applying the single context recording to simple rural features with no deep stratigraphy.

To summarise, the difference in time spent recording and issuing numbers in different registers is marked. For example, in Denmark an archaeologist would be expected to dig and record about 25 postholes in a day, whereas in the UK about half that number would be a realistic estimate.

Discussion

The interpretation of the posthole is generally what we as archaeologists care about. Both the UK and Danish methodologies record the depositional history of the posthole. What is interesting to us is whether the post, as part of a structure, has rotted away in situ, been pulled up or been burnt etc. In the UK the posthole is the sum of the contexts that comprise it. In Denmark, the interpretation of the feature as a posthole is the starting point. What is readily apparent is that there is considerably more effort expended recording the same posthole in the UK but what additional information does this provide us with?

The benefits of following the cut of the feature are open to debate, as it may provide additional information on the orientation of the post or relationships between fills not visible in section. However, the authors have found that this is rarely the case, as the box section is oriented to detect these based on what is visible in plan. Both authors believe that box-sectioning postholes is not a cardinal sin on rural sites, where the features are dug into natural. However, where there are relationships with other archaeological deposits this method is not appropriate. For example, when it comes to excavating intercutting features like pit complexes. In Denmark, these are often half-sectioned with a machine in spits (niveauer) and often these are given a single feature number, which make the relationships between pits and any phasing difficult to resolve and material from the fills difficult to provenance accurately.

In the UK inter-cutting features would be excavated stratigraphically by removing the latest deposit first until the undisturbed sub-soil (undergrund) is reached.

By removing the layers stratigraphically it becomes clear when earlier deposits are truncated. Because the later intrusions are removed in their entirety it becomes possible to record and quantify the extent to which they have disturbed the earlier deposits. This is important when it comes to understanding re-use of features. In the UK it is commonly seen that the ditches are re-cut, when they have silted up and therefore need to be emptied out so they can be re-used. The authors would argue that the re-use of features is something we should pay more attention to in Danish archaeology, especially when considering the many pit-complexes found in Danish excavations. The re-cutting and re-use of material pits is not uncommon and could be recorded more carefully in order to understand the full sequence and time-depth of these features.

Conclusion

We need to strike a balance between the information we can retrieve and the cost of doing so without compromising our understanding of the past. Applying methodologies developed for complex stratigraphy to sites where it doesn't exist, means that we expend more effort than we need to, to achieve an understanding of the archaeology in question. On the other hand, applying arbitrary excavation methods to more complex archaeology means discarding information and losing relationships that are crucial to our understanding of the archaeology.

Archaeologists need to devise excavation strategies that are appropriate to the nature of the archaeology. This is easier said than done. In the UK there is a long way between the archaeologist on site and the design of the fieldwork methodology. The methodology is predetermined by the county archaeologists and consultants acting for the developer who all work within the framework of national standards, guidance and policies. In Denmark the museums have comparative autonomy after their budget has been approved. This means that Danish archaeologists have much more freedom to test and adapt their excavation methodologies to the archaeology on a daily basis. And with those words: god arbejds -og diskussionslyst i felten!