

# The call for a responsive approach in Danish field archaeology

Simon Kjær Nielsen<sup>1,3</sup> and Johan Sandvang Larsen<sup>2</sup>

<sup>1</sup> Vesthimmerlands Museum, Archaeological Department, Søndergade 44, 9600 Aars, Denmark

<sup>2</sup> Department of Archaeology and Heritage Studies, Aarhus University, Moesgaard Allé 20, 8270 Højbjerg, Denmark

<sup>3</sup> Corresponding Author (skn@vmus.dk) ORCID: 0009-0005-2900-769X

## ABSTRACT

This article advocates for the formal adoption of a responsive approach in Danish field archaeology, utilising a recent case study to exemplify its practical application. In contrast to adhering strictly to predetermined strategies, responsive archaeology underscores the importance of ongoing evaluation and prioritisation during fieldwork to optimise knowledge acquisition and research potential. Despite the informal practice of a responsive approach in many museums within Danish field archaeology, it lacks formal recognition as a legitimate working approach. To accommodate the continual assessment of features, structures, and contexts throughout excavation, guiding methodological choices and preferences, the proposed solution recommends incorporating a prioritisation field into our on-site recordings and then transferring these entries into our archaeological databases and GIS repositories. This would allow archaeologists to self-assess and document the priority assigned to each target during fieldwork, for better post-excavation analysis. This adaptive approach aims to empower excavation teams, enhance transparency, and unlock new potential for future research and excavation strategies.

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## Introduction

Acknowledging ‘reflexive approaches’ and recognising the impact of personal perspectives and biases on the interpretation of archaeological findings, as highlighted by scholars like Hodder (1997), Berggren (2001), and, in a Danish context, Jensen (2005), and Borake and Beck (2006), archaeology inherently takes on a subjective nature. As archaeologists, we nominate what qualifies as significant heritage, make choices during fieldwork on what to investigate, how to conduct it, and when to cease and record. Additionally, the recent integration of digital tools, advanced sampling techniques, and increasing interdisciplinary collaborations have introduced numerous innovative methods and altered work processes. Despite these diverse influences and growing subjectivity, a prevailing emphasis on objectivity and standardisation persists in the fieldwork discourse. This is particularly evident in our data repositories, which advocate for the utilisation of extensive datasets to convey a perception of compatibility. Nevertheless, even after Madsen’s (2003a) elucidation of these challenges in Danish archae-

ology over two decades ago, the issue remains without resolution or effective addressal. In response to the ongoing challenge of balancing subjectivity and streamlined registration, we propose the concept of ‘responsive archaeology’. This adaptable practice focuses on always prioritising the archaeological ‘context potentials’ with the highest scientific potential according to the informed decisions of the responsible excavation team, utilising the excavation and sampling techniques that best align with these goals. The approach embraces a proactive inclination to adjust plans during fieldwork, should it become evident that alternative targets offer superior potentials compared to the initially prioritised ones. Key to responsive archaeology is transparency, emphasising open communication about established priorities within a clear and communicative framework. To enhance efficiency in registration, we propose integrating a novel type of information: As part of archaeological fieldwork, excavation teams should document the overall prioritisation of each feature, structure and context, in addition to all other relevant recordings that one already makes in the field. However, before delving into the implementation of



this upgrade, it is crucial to provide a comprehensive understanding of the responsive approach and elucidate its potential advantages.

## Definitions

### ***Responsive archaeology***

We introduce the term ‘responsive archaeology’ as a conceptual framework for optimising the archaeological excavations conducted by anyone engaged in archaeological fieldwork, including the Danish archaeological museums. While already informally practised across Denmark, this concept necessitates formal clarification. Responsive archaeology transcends specific methodologies; rather, it embodies a mindset wherein practitioners remain vigilant to unforeseen potentials. While a comprehensive plan is crucial, being responsive entails the ability to adapt the plan when unforeseen opportunities emerge. This may involve reallocating resources for alternative scientific analyses, collaborating with specialists beyond the original plan, or utilising all available means to extract maximum information from a context identified as having significant potential, while transparently communicating the prioritisation choices. A concrete example illustrating this adaptability during fieldwork is presented subsequently.

### ***Context potential***

In the practice of responsive archaeology analysing the potential of archaeological contexts is crucial, with the understanding that the contexts themselves do not inherently hold information. Instead, information can be harvested based on the excavation team’s priorities and methods. The potential for extraction varies depending on the scientific possibilities related to the layers’ formation, taphonomic factors, as well as the methods and expertise of the excavation teams. Therefore, seeking guidance from strategies, experts and fellow colleagues is always advisable, although the promotion of new approaches should also be encouraged. Deliberate downgrading of priority, even when high context potentials are recognised, may occur due to factors such as insuf-

ficient funds, time constraints, or the presence of other features, structures, or contexts on the site exhibiting even greater potential. This makes the decision-making process for prioritisation fluid, as different excavation teams with diverse focuses and experiences are likely to prioritise contexts differently. This underscores the subjective nature of our field, highlighting the need for flexibility, openness, and communication in guiding decisions throughout the excavation process.

### ***Nomenclature (translations of our terms)***

Responsive archaeology - responsiv arkæologi  
Context potential - kontekst potentiale

## Discussion

### ***A case-study of responsive archaeology: The Vestrup and Østerbølle Hede-excavations***

In 2013, Vesthimmerlands Museum conducted a series of developer led excavations at the village of Vestrup between Aars and Aalestrup, where the museum had previously identified two clusters of late Funnel Beaker stone heap graves (*c.*3100-2800 BCE), 600 metres apart from one another, during preliminary investigations. As is the case for all archaeological structures and complexes, special research questions are also linked to the exploration of the stone heap graves. These include uncertainties in relation to their distinctive anatomy, their construction in long rows possibly reflecting routes of transportation, their regionally constrained distribution to the NW of Jutland, and their relations to structural and thematic counterparts in contemporary cultural complexes in Central and Eastern Europe (Johannsen and Laursen 2010).

Before initiating the Vestrup excavations, the museum forged a collaborative partnership with a specialist from Aarhus University, recognised for expertise in the stone heap graves. Actively contributing to the excavation strategy and during fieldwork, this specialist concurrently authored the excavation guidelines tailored to this particular type of graves.

These guidelines were subsequently integrated into the archaeological strategies published by the Danish Agency for Culture and Palaces, highlighting, among other aspects, the approaches and methods employed at the Vestrup sites (Johannsen 2014). Based on the pre-excitation results at Vestrup a strategic decision was made to focus the investigations on the rear rectangular features of the stone heap graves. Interpreted in recent analyses as human graves, these features strongly indicate that the deceased were laid to rest within a wagon, cart, or a comparable structure reminiscent of such vehicles. The two oblong pits containing a draught pair of oxen, consistently positioned in front of the rectangular features, received lower priority. During excavation, priorities were followed as planned, and valuable outputs were recorded generating new important data. In parallel, and in relation to another key area of inquiry, the intriguing possibility of a prehistoric transport corridor emerged. This corridor hinted at a connection between the Vestrup sites and the contemporary burial sites at Østerbølle Hede, situated on the opposite side of the Lerkenfeld river valley (Nielsen and Johannsen 2014; Johannsen et al. 2016).

In prolongation to the results at Vestrup, and during a continued collaboration by the team, various targeted surveys were carried out in the following years on the other side of the river at Østerbølle Hede; the locus classicus of the stone heap graves (Vestergaard-Nielsen 1952; Becker 1960). During a campaign in 2017, four stone heap graves appeared in a row, instantly capturing the primary focus and priority among the unearthed features. From the outset it had been decided that new finds of stone heap graves should be accorded maximum priority, undergoing investigation with a similar level of detail and emphasis on their rear rectangular feature as had been applied in the Vestrup excavations. Unforeseen factors however meant that this plan was to be completely changed. Firstly, upon closer inspection, the stone heap graves at Østerbølle Hede exhibited signs of previous disturbances, resulting in a less well-preserved state compared to their counterparts at Vestrup. This made it unlikely to improve or even match the results of the previous campaigns undertaken on the other side of the river a few years earlier. Second, the location of the four

graves indicated a connection to the same route or path as had been presumed in relation to the Vestrup graves. As part of a (yet not formalised) responsive approach to archaeological field work, according to which it is always sought to maximise the achievable knowledge in relation to the recognised context potentials, our attention was at this point directed to another feature at the site: an elongated indistinctive fill seven meters south of the row of stone heap graves. At first this feature had not been given much attention, but following a cleaning of the surface, it emerged as remnants of a possible sunken road cut into the subsoil and backfilled with light grey sand. A drone was employed for aerial documentation, and by following this initiative (and priority), it became clear that the elongated feature did in fact reflect traces of an old road with clear-cut traces of wheel tracks on the footage. Every plan and perspective regarding the ongoing investigation was immediately changed. Not because traces of an out of context sunken road had been located at some random archaeological site, but because traces of wheeled vehicles had now been identified parallel to a row of stone heap graves, commonly interpreted as vehicle graves, and in this particular case also linked to a potential route connecting the two sides of the larger cemetery area.

With the traces of the road now taking precedence, new decisions had to be made. As part of the new plan, it was decided to try to date the road, because even though the wheel tracks were seen parallel to a row of stone heap graves, the road itself was not necessarily Neolithic. Consequently, invitations were at this time extended to specialists from the Department of Geoscience at Aarhus University to conduct on-site examinations of our discoveries. During their visit, they proposed using the optically stimulated luminescence (OSL) method to potentially date the concealed sediments and rocks associated with the wheel tracks. Following the establishment of this new investigative priority during field work and formalising agreements with the participating labs and scientists, the excavation campaign seamlessly resumed. The road assumed primary focus, with excavations of all other features, including the four stone heap graves, proceeding with adjusted and reduced priorities compared to the original plan<sup>1</sup>.

### ***Advancing responsive archaeology: Optimising our data repositories for enhanced knowledge generation***

If we accept ‘responsive archaeology’ as a term and acknowledge that its adaptive approach is already occurring during fieldwork, we can initiate a discussion on its promotion and how to address the fact that pre-established plans and priorities are often changed during excavation. Before engaging in this discussion, however, it is crucial to clarify that the responsive approach complements rather than hinders a simultaneous reflexive approach, wherein self-awareness and critical reflection on one’s own role constitute important factors. Additionally, responsive archaeology does not conflict with problem-oriented excavations or predetermined strategies, as exemplified above in the preparations for the Vestrup excavations. Rather, any effort that enhances the given context potential(s) is considered valuable, but the core of the approach lies in the continuous assessment of potentials during fieldwork. This is why we urge excavation teams to engage in ongoing discussions on work progress, priorities, and methods, constantly debating whether certain areas of the excavation should be given higher or lower priority to maximise knowledge and the overall research potentials. Hence, from our perspective, the paramount criterion in any archaeological excavation should consistently be the generation of new scientific knowledge, further emphasising how the excavation constitutes the most important practice within archaeology. It therefore follows, that the most significant part of archaeological research does not take place behind a desk or in the museum storage facility (Madsen 1988; 2003b).

During the progression of any excavation, it consistently remains that the diverse features, structures, and contexts are excavated using varying methods and priorities. Although pre-established strategies and excavation reports routinely capture these details, there is often ambiguity for readers in discerning the specific targets that were actually prioritised (or even excavated) versus those that were not. This is especially prevalent when adhering to an approach, where existing plans and priorities are likely to be changed. Consequently, during excavation, there is an urgent need to implement a systematic

registration of prioritisation levels. This documentation should capture the subjective ranking employed during fieldwork, offering transparency regarding the prioritisation processes. Our suggestion is that this task can be most effectively carried out by closely associating it with the individual archaeological features, structures, and contexts, subsequently integrating this information into the database(s) containing the excavation’s archaeological data. This addition would not only serve to streamline report-writing by visually conveying prioritisation levels, but also empower other users navigating the extensive datasets, enabling them to immediately identify contexts with inherent potential for comparison. For instance, if intending to study the stone heap graves, our current database searches on existing platforms<sup>2</sup> often come up short, providing only basic information. These searches typically offer rudimentary presence-only data, or, at best, the number of documented stone heap graves found at specific sites. Consequently, researchers intending to create a map showing the spatial distribution of stone heap grave cemeteries on the Jutland peninsula can do so, utilising the clusters of graves from both Vestrup and Østerbølle Hede, as mentioned earlier. However, for a targeted examination of the specific anatomy of the stone heap graves, it would be beneficial for the examiner to immediately identify instances where the excavating teams, based on their own assessments, carried out highly prioritised investigations on the relevant structures. Consider in turn, the potential to distinguish between Bronze Age cooking pits or Pre-Roman Iron Age house plots as part of a database search, facilitating the concentration of attention solely on the features and structures that were highly prioritised by the excavation teams during field work. A further derived effect of this would allow for excavation teams and researchers to seek out and explore current methods and practices according to the different levels of prioritisation; just as we would be given the possibility to ascertain from our data what types of archaeological features, structures, and contexts are mostly prioritised in Danish field archaeology and which types only seldom receive such focus, making it possible to adjust methods and focus more intelligently.

In our proposed solution, we strive to avoid the imposition of new regulatory or bureaucratic



measures. Instead, we advocate for a system that enables excavators to articulate and display their prioritisation during field work, meeting both internal needs and contributing to the broader research community. While acknowledging the challenges of retrospectively applying these registrations to older materials, we underscore their potential to significantly enhance future data. Our straightforward proposal involves enhancing our databases by introducing a new field, or drop-down menu, specifically designated for registering priority in relation to the features, structures, and contexts investigated during archaeological excavations. This addition would allow individuals to indicate priority, ranging from No/Minimal priority (1) to Low priority (2), Medium priority (3), and High priority (4). This highly subjective approach would empower archaeologists and excavation teams to assess and highlight their efforts within a simple ranking system. To optimise utility and streamline the process, we further recommend integrating the prioritisation rubric into the GIS data tables (which would also be an easy and effective way to start<sup>3</sup>). This inclusion would enable categorised searches directly within our spatial data, enhancing accessibility, maximising the value of the collected information, and providing a concise summary of the prioritised elements as well as those that were not. Notably, the decision not to register methods alongside the respective priority-levels is based on the inherent complexity and impracticality of managing such information easily in databases (see Berggren and Gutehall 2019).

## Conclusion

In conclusion, our paper advocates for embracing the inherent subjectivity of our discipline to a greater extent. We introduce a novel perspective, labelled as responsive archaeology, emphasising the recognition and management of subjectivity through a mind-set that continually assesses and prioritises

among the various context potentials uncovered during fieldwork. Although many archaeologists and museums across the country already follow this practice intuitively, it has yet to be widely acknowledged as a valid working method. Consequently, we advocate for a systematic on-site registration and integration of priority levels into our archaeological recordings, databases, and GIS. By adopting this approach, we aim to advance archaeology towards a more dynamic direction, effectively addressing one of the challenges posed by the subjectivity in our field seen in relation to the stereotyped big data that we generate.

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## Notes

- 1) A paper exploring the dating of the road is presently in the active stages of development.
- 2) Including in a Danish context 'Fund og Fortidsminder', the upcoming 'SARA', 'MUD', or other local equivalents.
- 3) To enhance efficiency, we recommend automating the assignment of 'No/Minimal priority' (1) to each feature documented in the GIS, while allowing for priority level adjustments as excavation progresses. Ideally, these adjustments should occur in real-time during fieldwork, leveraging for instance the MuseumsGIS app for seamless digital data recording (<https://www.museumsgis.dk/>). Implementing this initiative, or a similar standardised framework for the GIS-tables (including a prioritisation level rubric), could also fulfil another requested objective in Danish archaeology: enabling better cross-case searches between different excavation campaigns (e.g. Løvschal 2016).

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