

Neolithic research topics and priorities

Methods and approaches

While a key purpose of research frameworks is to ensure development-led fieldwork contributes to research objectives, the location of development is not determined by those objectives, so there is always a geographical imbalance in the distribution of fieldwork and a high degree of serendipity in what is encountered. To overcome this disparity we need, firstly, academic and community projects that will actively research the landscapes, places and monuments that are not going to be touched by development; and, secondly, to develop more specific research agendas for known development 'hot-spots' within the region, such as the area around Cambridge. Our objectives also need to recognise that open-area excavation is going to produce different levels and types of data compared to, say, a programme of coastal monitoring, fieldwalking or small-scale assessment funded by a research or HLF grant.

Specifically for the Neolithic, targeted programmes of sedimentological, palynological and macrofossil analyses of sediment sequences in river valleys, lakes or the inter-tidal zone, adjacent to known archaeological sites, are needed to determine the date and nature of changes, such as woodland clearance, associated with the initial adoption and subsequent development of farming.

More work is needed on the coastal and intertidal zone, which makes an important contribution to regional character and ensures we attend to links across the North Sea. We need to gain a better understanding of the coastal environment during the Neolithic period, and how this relates to eroded deposits or those which now lie below sea level. In addition, the value and potential of sites currently located in the intertidal zone to preserve remains rarely found on 'dryland' sites needs to be explored in the future.

Sampling strategies employed during an excavation are also critical to the sorts of remains that are recovered, with some arguing that sites have been under-sampled in the past. Palaeoenvironmental sampling strategies need to be strengthened for deposits of this period, e.g. 100% flotation of well-sealed pits, etc., to maximise recovery. Integrated investigations may also be of value to understand the use of a settlement, including how the space was organised and used, and if the settlement was in continuous or episodic use. Traditional approaches could be complemented through the use of geochemical and palaeoenvironmental assessments as well as micromorphology to investigate any micro-refuse present on site.

There needs to be a greater emphasis placed on the routine examination of the ploughzone, both in development-led fieldwork and academic/community research projects, as many Neolithic sites have been plough-damaged and/or are only represented in the plough-soil.

It has been suggested that the investigation of a sample of sites discovered by aerial mapping projects would be beneficial to our understanding not only of individual sites and categories of site, but also of how aerial mapping methodologies and their limitations influence our understanding of this period. The results of the National Mapping Programme have contributed significantly to our understanding of the Neolithic period in the region, but there are still many sites for which the air photo transcription is the only archaeological assessment.

There is a need for better methods of dating both sites and artefact types, including more consideration of the roles that taphonomy and site formation processes play in the interpretation of an assemblage.

The increasing potential for scientific analysis of human and animal mobility, migration and ancestry in the Neolithic makes any well-preserved remains of particular value, but it is important to balance this with continuing study of 'traditional' material culture and palaeoenvironmental assemblages, since methodological novelty does not guarantee interpretative sophistication.

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Specific research questions

Specific questions for the region include the implications of the chronologies set out in *Gathering Time* for understanding the temporalities of Early Neolithic settlement and monumentality in the region.

Gathering Time also throws into focus the need to do something similar for the Late Neolithic, especially since the work on Grimes Graves now provides a useful fixed point for the region. Greater emphasis should also be placed on the other flint mines within the region to provide a context and/or contrast for Grimes Graves itself.

The Middle Neolithic remains more elusive, and work to bring together activity of the late 4th millennium would be useful.

The apparent distinctiveness of Norfolk's Neolithic was recognised as an issue for further research in 2011, and this has yet to be explored in more detail, in particular the extent to which this is a reflection of fieldwork rather than the reality of prehistoric activity.

Neolithic ring-ditches and other forms of burial monument warrant further study. The identification of the Trumpington ring-ditches as Early Neolithic and recognition that some Early Bronze Age round barrows began as or were preceded by Late Neolithic henges or timber circles, shows the need to anticipate complexity and longevity for ring-ditches and round barrows, rather than assuming they are simple, single-phase Bronze Age burial monuments.

The relationship between funerary monuments and landscapes and related settlements needs to be explored in more detail, which should be greatly aided by technological advancements in the last decade.

The use of tree-throws in the Neolithic is a phenomenon which has yet to be fully explored, although lots of examples have been excavated and recorded during development-led fieldwork.

More attention should be given to site types not readily identified from the air, including flint working sites and pit groups. Similarly, an increasingly sophisticated understanding of the variability between pit sites and their relationship to enclosures and other monuments on the one hand, and to surface spreads and ploughzone scatters on the other, should ensure more focussed and nuanced approaches in the future.

Integrated studies are needed to investigate questions about the diet and economy of the Neolithic period in more detail. For example, in addition to the 'traditional' evidence used to investigate the presence/absence of cereal cultivation (plant remains, querns, storage pits etc.), stable isotope signatures preserved within dentine can allow dietary changes to be investigated over relatively short timescales, which may allow hypotheses about the sporadic uptake of cereal cultivation to be investigated using complementary lines of evidence.

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The wider context

In 2011 region-wide objectives focussed on the need for synthesis, and this remains essential, but always lags behind site-by-site reporting. How might it be facilitated?

'Big data' projects have largely overlooked the Neolithic so far, and there is huge potential for mining the grey literature in order to build understanding at a landscape level.

The extent of settlement mobility and the transition from shifting, semi-permanent settlement in the Neolithic to a more settled landscape of fields and farms in the Bronze Age remains an area of interest.

The nature and importance of arable agriculture needs greater appreciation, with a particular emphasis on the domestication of plants, as our current understanding of the subject is relatively poor; the debate about a decline in or even cessation of cereal use in the course of the Neolithic remains a live issue and needs to be integrated into wider studies of subsistence and animal/plant relationships, including questions of pastoral economies/transhumance and the exploitation or avoidance of wild resources. The extent of contacts with other areas of Britain and the Continent needs further study, including monument comparisons, stone axe trade, other artefact types, animal and horticultural introductions, etc. As such, we need to identify and be more aware of the current national debates to which data from the region may contribute, or conversely, which might inspire more local research.

Ray and Thomas (2018) have recently outlined a model of 'house societies' in the Neolithic, which throws into relief the relative absence of excavated timber halls, longhouses, long barrows and the like in the region. In this kind of overview and synthesis the region tends to be reduced to a few key sites: Etton, Haddenham, Kilverstone. What is needed is a better sense of the structure and diversity of wider Neolithic landscapes, and the affordances of different geologies, soils and topographies for occupation. It needs to be complemented by more detailed understanding of landscape change within the region, including the extent of both Early Neolithic clearance and later Neolithic woodland regeneration, changing patterns of alluviation, woodland management, etc.