

The Neolithic period

Regional Research Framework for the East of England

Work on the Neolithic in the East of England since 2011 has comprised new discoveries in development-led projects, the publication of a number of key excavations - some dating back to the 1980s - and new studies of previously known sites. The latter include work undertaken for the Bayesian chronological modelling project published as *Gathering Time* (Whittle et al. 2011), just after the last framework revision. Although the focus of the project was on causewayed enclosures it has changed the way we understand the chronology of the Early Neolithic in general. The publication includes an overview of this period in the east of England, and provides new dates for several Neolithic enclosures and more refined modelling of existing dates for a number of other sites. The work suggests that the first causewayed enclosure in eastern England was probably constructed in 3780-3685 cal BC (68% probability), while the primary use of the last enclosure in the region probably ended in 3265-3085 cal BC (64% probability; Whittle et al. 2011:339). The start of the Neolithic in this area probably did not begin before 3800 cal BC, so enclosures may have been part of the earliest Neolithic practices here; although this excludes the Thames estuary, where earlier sites are known.

Individually, however, the causewayed enclosures in the east of England remain less precisely dated than those in some other regions. **Etton**, near Peterborough, is one of the best dated and seems to have been in use for 400-500 years between the earlier 37th century cal BC and the 33rd or 32nd century. A complementary study has looked at the dynamics of pottery and flint deposition at Etton, indicating that activity and deposition were intermittent throughout this period and at any given time were generally focused on a specific part of the monument (Beadsmoore et al. 2010).

Of the other Welland valley enclosures assessed for *Gathering Time*, **Etton Woodgate** appears to originate about a century later than Etton, while **Northborough** seems relatively short-lived, probably starting around 3600 cal BC and going out of use before 3500. The duration of occupation at Etton contrasts most sharply, however, with the enclosure at **St Osyth**, Essex, which was probably constructed in the mid-37th century but used for only a single generation, probably no more than 20 years. The other dated Essex enclosure, at **Orsett**, has a less precise chronology but the first ditch circuit was probably built in the later 35th or early 34th century, almost certainly after St Osyth had already been abandoned. Elsewhere in the region, only rather vague chronologies could be determined for **Maiden Bower** in Bedfordshire and **Haddenham** in Cambridgeshire, though it is evident that the latter remained in use until around 3000 BC, well into the Middle Neolithic.

Since the publication of *Gathering Time*, previously unknown causewayed enclosures have been excavated near **Harlow**, Essex and **Woodbridge**, Suffolk (which was succeeded by unusual Late Neolithic enclosures), while aerial survey has recorded new sites at **Great Shelford**, near Cambridge (Small 2017) and possibly at **Thrift Hill**, North Hertfordshire (Fitzpatrick-Matthews and Fitzpatrick-Matthews 2016). The excavation of part of the enclosure at **Springfield Lyons**, near Chelmsford, which took place in the 1980s, has recently been published (Brown and Medlycott 2013): several pit-like ditch segments were excavated, with evidence for complex fills and multiple recuts, along with a scatter of Neolithic pits both within and outside the enclosure. The monument

also had an interesting afterlife and appears to have influenced the location and form of a significant Late Bronze Age enclosure on the same site.

Other 4th millennium monuments analysed for *Gathering Time* include the **Rectory Farm, Godmanchester** trapezoidal enclosure in Cambridgeshire, which although poorly dated, with a *terminus post quem* centred on 3500 cal BC, could be broadly contemporary with causewayed enclosures in the region. This unique monument, which was associated with a later cursus, comprised 24 timber posts surrounded by a bank and ditch which enclosed an area of 6.3 ha (Lyons forthcoming). Broadly contemporary were a sub-square enclosure within the main enclosure and a small ring-ditch that may have enclosed a viewing platform. The main enclosure's demonstrable solstitial alignments are unique for the Early Neolithic.

The cursus, which ran south-westwards from one end of the enclosure for over 500m, appears relatively late in date, around 3000 cal BC. The relationship between enclosure and cursus recalls that at Etton, where one effect of the long lifespan of the causewayed enclosure, as revealed by *Gathering Time*, is that the cursus also seems relatively late, belonging to the end of the 4th or beginning of the 3rd millennium cal BC.

Perhaps broadly contemporary is the enigmatic circular enclosure at **Melbourn**, Cambridgeshire, which recalls other monuments of the Middle/Late Neolithic transition, like Stonehenge I. It remains unexcavated but was recently subject to geophysical survey (Brittain et al. 2014). Interestingly, this monument may be one of a pair, based on another recent aerial discovery (Knight et al. 2018, 29).

Also included in *Gathering Time* is the **Haddenham** long barrow, where construction of the plank-built mortuary chamber probably dates to the 36th century. The Norfolk long barrows at **West Rudham, Harpley** and **Ditchingham** have all seen geophysical survey (Carey and Ashby 2016a and b; Carey 2017). Elsewhere, however, the diversity of Neolithic burial practice is gradually becoming more apparent. At **Trumpington Meadows**, overlooking the river Cam near Cambridge, two adjacent circular monuments were excavated (Evans et al. 2018). One of these comprised a multiple burial in a timber chamber that was subsequently sealed by a round barrow, while the other was a simple ring-ditch enclosing a truncated burial pit. Radiocarbon dates for both monuments centre on the first half of the 37th century cal BC, though one skeleton in the multiple burial appears to be a century or two younger. Much later, the monuments became a focus for some Early Bronze Age burials.

Similar monuments were revealed during further work at the **Biddenham Loop** next to the Great Ouse near Bedford (Luke 2016). Four sub-circular Neolithic enclosures were investigated, two of which were associated with burials that probably span at least 400 years from before 3700 to after 3350 cal BC.

At **Flixton Park Quarry** in Suffolk (Boulter and Walton Rogers 2012) a number of possible mortuary features were found, including a long barrow or mortuary enclosure, a small Early Neolithic ring-ditch, and a Late Neolithic timber 'circle' (actually sub-square) which enclosed a small rectangular structure and was associated with a number of Grooved Ware pits; it was subsequently partly overlain by an Early Bronze Age round barrow.

A number of small henges (c 20m in diameter) have emerged in recent years, often succeeded by Early Bronze Age barrows and burials. These include an example with two opposed entrances from **Ashwell**, north Hertfordshire (Greef 2015), which was associated with a number of pits. Finds

were scarce but a cremation burial from a terminal of the henge ditch has reportedly been dated to the Bronze Age, suggesting the monument remained significant for a lengthy period. A henge of similar form and size was found at **Barleycroft Farm/Over**, Cambridgeshire, overlain by an Early Bronze Age round barrow (Evans et al. 2015). Another henge of similar size with two entrances is reported from recent fieldwork on the **A14** near Huntingdon (Sherlock 2018), though claims of multiple henges should be treated with caution at this stage, given the temptation to label any penannular ring-ditch a henge. Investigation of another north Hertfordshire henge, at **Norton**, has a more unusual double-ditched form (Fitzpatrick-Matthews 2015). An incomplete, possibly Late Neolithic rectilinear enclosure at Biddenham is not as convincing as the earlier ring-ditches and oval barrows (Luke 2016).

A key dating project for the Late Neolithic concerns the **Grime's Graves** flint mines, where a new chronological model has addressed questions about the origins and duration of mining at the site as well as its spatial development (Healy et al. 2014). The model suggests that mining at the site probably began in 2650-2620 cal BC (68% probability) and the main phase of extraction in the galleried shafts probably lasted for over 200 years, until 2420–2385 cal BC (68% probability; Healy et al. 2014:55), implying that on average one or two mines were excavated per year. The analysis also showed that mining continued into the Early Bronze Age in some areas.

Discoveries of Neolithic pits in larger or smaller numbers have continued apace. The well-known pit site at **Kilverstone** was analysed for the Gathering Time project, which showed that it was occupied for around 150 years between the mid-37th and mid-35th centuries (Whittle et al. 2011, 333-6). The authors suggest that in areas lacking enclosures extensive pit sites like this could have served as equivalent aggregation sites. While for ease of discussion we can retain a heuristic distinction between 'settlements' and 'monuments' any real distinction is elided by the comparable nature of deposition at sites of different type and the similarity of the features that were excavated, particularly evident at enclosures like Springfield Lyons which are composed of pit-like segments.

Early Neolithic pits also feature at the inter-tidal site on the Essex coast known as the **Stumble**, but significantly they were augmented here by the preservation of an old land surface. The fieldwork mentioned in previous iterations of the RRF but now published (Wilkinson et al. 2012) was undertaken in the 1980s but harks back to an even earlier era of coastal exploration associated with Hazzeldine Warren and other pioneers. Dense Early Neolithic artefact scatters are suggestive of the former presence of buildings as well as external areas, though no ground plans could be ascertained. A few pits were also encountered, similar to those at dryland sites. Middle and Late Neolithic evidence was rather different in character, comprising a number of burnt flint mounds; by this time the site was already probably in a shoreline or saltmarsh environment. The important assemblage of plant macrofossils includes the first Neolithic cereal remains to have been directly radiocarbon-dated in the region, from both the Early (mid-4th millennium) and Late Neolithic (earlier 3rd millennium). The authors suggest that the site is a corrective to 'the general experience that charred crop remains are rare at British Neolithic sites' (cf. Stevens and Fuller 2012). The Stumble shows both the potential of the intertidal zone for Neolithic remains of a type and quality rarely found on dryland sites, and its vulnerability to erosion.

The Cambridgeshire Fens are another area where land surfaces may be preserved alongside cut features. At **North Fen**, Sutton, both Early Neolithic pit clusters and artefact scatters preserved within buried soil horizons were found (Tabor et al. 2016). The site was probably occupied over

just two or three generations within the 35th century cal BC and there were interesting differences between the ceramic assemblages associated with the pits and scatters, though they belong to the same Mildenhall tradition. Differing from sites like Kilverstone in the morphology of the pit clusters, depositional practices and the tempo of occupation, the North Fen evidence shows there is no single model of activity that fits all Neolithic pit sites. It also provides an interesting contrast between Early and Late Neolithic activity, since the latter period was characterised by an extensive flint scatter, with little pottery and just one pit. Evidence for arrowhead manufacture might indicate a specialised site, perhaps associated with hunting (Tabor 2015).

To the south, one can follow the Great Ouse upstream past the Haddenham monuments to the **Barleycroft Farm/Over** landscape, where another important recent project has shed light on Neolithic activity in the southern Fens (Evans et al. 2016b). This work focussed on the gravel ridges within the floodplain, revealing, amongst multi-period occupation, some further contrasts between Early/Middle and Late Neolithic activity. In this case, while the earlier pottery nearly all derived from surface contexts, the Grooved Ware was largely contained in features, which also showed some continuity of activity into the Beaker phase of the Early Bronze Age. On the other hand there was a contrast between the lack of evidence for arable production from the Grooved Ware pits and its presence in the Early Bronze Age features.

Frances Healy (in Hills and Lucy 2013:12-21) has revisited her earlier work on the Neolithic pits at **Spong Hill**, Suffolk, reiterating earlier conclusions that Early Neolithic (Mildenhall) pits were rapidly backfilled with occupation material, while later features contained selected objects, such as semi-complete pots, with lithic material predominantly discarded on the surface, leading to greater visibility in the modern ploughsoil. A new dating model for Mildenhall ware is set out, suggesting it had a currency of around 300 years from c. 3700 to 3400 cal BC. A small but important assemblage of Carinated Bowl is also discussed in the context of the earliest Neolithic in the region.

Neolithic pit sites elsewhere include groups from **Watton-at-Stone**, Hertfordshire, though dating evidence was limited (Boyer et al. 2015) and **Reydon**, Suffolk (Harding et al. 2016). While most of these sites do not directly reference earlier monuments, an exception is the cluster of Late Neolithic and Early Bronze Age pits that were dug into the Godmanchester Neolithic enclosure (Lyons forthcoming). Though predating our period, it is also worth noting the group of very late Mesolithic (late 5th millennium) pits from **M1 Junction 9** near St Albans, which demonstrate that the practice of pit-digging in the region originated before the Neolithic (Stansbie et al. 2012).

Neolithic environments have been studied at Biddenham, where there is evidence of an opening up of the landscape for pasture and cereal cultivation by the Early Neolithic, which is maintained through the Late Neolithic and Early Bronze Age (Luke 2016, 28). In contrast at Godmanchester the enclosure and cursus appear to have been constructed in a locally cleared landscape but woodland regenerated in the later Neolithic (Lyons forthcoming). At Trumpington, molluscan evidence also suggests local clearance for the monuments and later regeneration of woodland (Evans et al. 2018, 79).

Site	Location	Type	Comment
Land North of Bromham Road, Biddenham	Bedfordshire	Flint scatters	Excavation with limited Neolithic remains.
Podington	Bedfordshire	Flint scatters	Excavation with limited Neolithic remains.
Odell	Bedfordshire	Flint scatters	Excavation with limited Neolithic remains.
Sharnbrook	Bedfordshire	Flint scatters	Excavation with limited Neolithic remains.
Chadwell Springs, Ware	Hertfordshire	Features	HER 30164 - Neolithic features.
West of Wilbury Hill, Letchworth	Hertfordshire	Features	HER 30253-4.
Police station, Berkhamsted	Hertfordshire	Features	HER 30951.
Sperberry Hill, Ippollitts	Hertfordshire	Enclosure	HER 31052.
Box Lane, Boxmoor	Hertfordshire	Occupation layers and pits	HER 31097.
East of Hitchin Business Centre, Hitchin	Hertfordshire	Features	HER 30252, HER 31106 - Cremation.
Norton Bury, Letchworth	Hertfordshire	Henge	HER 2312.
Weeting, Compartment 3235	Norfolk	Flint mines	HER 55660.
Newmarket, Fordham Road	Suffolk	Features	Suffolk HER NKT 047.

Future research

Any research agenda needs to balance objectives that reflect both what we already know (i.e. identifying focussed questions that build on current knowledge) and what we do not know (i.e. encouraging research in areas or on types of site that have seen little work). All this while keeping an eye on both national developments that might contextualise or be applicable to work in the region and the serendipitous discoveries that ensure archaeology remains fundamentally unpredictable.

In 2011 region-wide objectives focussed on the need for synthesis, for better dating of both sites and artefact types (already anticipating the impact of *Gathering Time*), and for consistent approaches, including routine examination of the ploughzone. More interpretive questions included: the relationship between funerary monuments and settlements; the extent of settlement mobility; the nature and importance of arable agriculture; the impact of people on the landscape; and the extent of contacts with other areas of Britain and the Continent.

Within the region the apparent distinctiveness of Norfolk's Neolithic was recognised as an issue for further research, along with: the need for work beyond areas of commercial extraction to address geographical imbalances; the recovery of palaeoenvironmental sequences from wetland locations adjacent to Neolithic sites; more work on the coastal and intertidal zone; and the investigation of a sample of sites discovered by aerial mapping projects (with Hanworth-Roughton in Norfolk identified as a particular area for investigation).

Individual site types deemed worthy of further study included: Neolithic ring-ditches and other forms of burial monument; the use of tree-throws; flint mines; and site types not readily identified from the air, including flintworking sites and pit groups.

We can identify progress against some of these points and refine the questions accordingly. For example, 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. 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.

Other questions remain relevant more or less as framed in 2011, and can be reiterated. Synthesis is essential but always lags behind site-by-site reporting; collaboration with academic partners is undoubtedly required. '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 problem with most of the other objectives is that if we are reliant solely on development-led fieldwork to generate data then they will only be addressed by accident rather than design. We need academic and community projects that will actively research the landscapes, places and monuments that are not going to be touched by development. Indeed there is such an imbalance in the distribution of fieldwork that we probably need to develop bespoke research agendas for known development 'hot-spots' within the region, such as the area around Cambridge, recognising 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.

We can also identify the current national debates to which data from the region may contribute, or conversely, which might inspire more local research. 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. The debate about a decline in or even cessation of cereal use in the course of the Neolithic, as mentioned above in relation to the Stumble, 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 (cf. Evans 2015). In more interpretative terms, 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. Such a picture needs to be built up not only from these key sites but the much greater number of pits, flint scatters and stray finds that are widely dispersed across the region, including as minor components of major sites of later periods, such as Mucking (Evans *et al.* 2016a, 119). It needs to be complemented by more detailed understanding of landscape change within the region, especially the extent of both Early Neolithic clearance and later Neolithic woodland regeneration.

Other specific questions for the region include the implications of the chronologies set out in *Gathering Time* for understanding the temporalities of Neolithic settlement and monumentality in the region. It 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. In between these periods, the Middle Neolithic remains more elusive, and work to round up activity of the late 4th millennium would be useful.

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