

The Freston causewayed enclosure: new research on the Early Neolithic of Eastern England (Suffolk)

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ABSTRACT – *Current models view southeast England as where Neolithic lifeways were first introduced to Britain from continental Europe c. 4000 cal BC, however, there has been little work detailing this process in coastal East Anglia. In 2019, work at the Freston causewayed enclosure provided the first view of a major gathering space associated with semi-mobile farming communities of the Early Neolithic in the county of Suffolk and located on a major estuary close to the North Sea. Excavation produced a rich assemblage of worked flint and Mildenhall Ware pottery (potentially for feasting), plus evidence for the consumption of cereals and hazelnuts.*

KEY WORDS – *Britain; East Anglia; Neolithisation; Early Neolithic; causewayed enclosure; social gathering*

Frestonska ograda z nasipi: nova raziskava zgodnjega neolitika v vzhodni Angliji (Suffolk)

IZVLEČEK – *S trenutnimi modeli vidimo jugovzhodno Anglijo kot prostor, kamor je ok. 4000 pr. n. št. prvič prispel neolitski način življenja v Veliko Britanijo iz kontinentalne Evrope. Do sedaj je bilo znanih le malo podatkov o tem, kako je ta proces potekal na priobalnem območju vzhodne Anglije. Leta 2019 so nam raziskave ograde z nasipi v Frestonu omogočile prvi vpogled na velik prostor za zbiranje, ki je vezan na delno mobilne poljedelske skupnosti iz zgodnjega neolitika v okrožju Suffolk in se nahaja ob glavnem izlivu blizu Severnega morja. Z izkopavanji smo pridobili bogat zbir obdelanih kamnitih orodij in lončenino tipa Mildenhall (morda uporabljena za pogostitve) ter dokaze o uživanju žit in lešnikov.*

KLJUČNE BESEDE – *Velika Britanija; vzhodna Anglija; neolitizacija; zgodnji neolitik; ograda z nasipom; družabno srečanje*

Introduction

The prevailing view concerning the 'Neolithisation' of Britain involves an influx of migrants from continental Europe towards the end of the 5th millennium cal BC (Cummings, Morris, 2018; Brace et al. 2019), who brought with them a developed agro-pastoral regime, potting traditions, and an advanced know-how for extracting lithic raw materials and

their exchange over great distances (Miles 2016; Sheridan 2010; see also Edinborough et al. 2020; Schauer et al. 2020). While evidence for pre-Neolithic contact between continental farmers and British hunter-gatherers suggested to some that farming spread through the island via processes of acculturation, genetic studies indicate that ultimately the

indigenous population was largely replaced over time (*cf. Thomas 2008*).

A major synthesis and Bayesian analysis of radiocarbon dates from Neolithic sites in Britain and Ireland has generated a robust model concerning the introduction and spread of Neolithic activity throughout the British Isles (*Whittle et al. 2011*). Perhaps unsurprisingly, given its proximity to the mainland, the initial colonisation ('Earliest Neolithic') appears to have entered southeast England around 4050 cal BC (Fig. 1). Neolithic subsistence and other practices thereafter moved into south central England ('Early Neolithic') by the second half of the 38th century cal BC (*Whittle et al. 2011.848–861, Fig. 15.8*). This paper engages with some of these issues, with specific reference to that region of southeast Britain referred to as 'East Anglia' (here defined as the counties of Suffolk, (north) Essex, Norfolk, and Cambridgeshire). Our specific focus is the Early Neolithic [EN] 'causewayed enclosure' at Freston, on the Shotley peninsula in southeast Suffolk (Fig. 2).

sites made-up of clusters of round or oval pits containing pottery, worked and burnt flint, and charred plant remains inter alia (*Garrow 2006*). These features are interpreted as the remnants of what were short-term seasonal settlements of particular places that were likely (re)occupied over time by small-scale mobile agro-pastoral family groups, with little evidence for the construction of permanent structures. The current wisdom would not associate these sites with the Earliest Neolithic, *i.e.* the phase of colonisation, but rather the subsequent Early Neolithic [EN] period of the later 38th century cal BC onwards (*Whittle et al. 2011.875–878*).

The most well-known pit cluster site in Suffolk is Hurst Fen, Mildenhall at the western end of the county on a tributary of the River Great Ouse (*Clark et al. 1960*). The excavation of this site gave us 'Mildenhall Ware', a primarily East Anglian iteration (*Healy 2013.14–16*) of a wider EN Decorated Bowl tradition that appeared across southern Britain beginning in the 38th to 37th centuries cal BC (*Gibson*

It is not unreasonable to suggest that the introduction of domesticated plants and animals into the East Anglia area was partly achieved by waterborne movement, considering the cross-channel seafaring capabilities of the original farming populations and the proximity of East Anglian Neolithic sites to rivers (*Garrow 2006.20, Figs. 3.9–3.11; Healy et al. 2011.263–265, Fig. 6.1; Martin 1999*). Whether we are dealing with the budding-off of initial colonist populations from the south, or a direct influx of farmers from across the North Sea to the east, we suggest that their settlement of Suffolk was achieved via the major river courses (*Garrow 2006.16, Fig. 3.5*). These major rivers comprise the Orwell, Deben and Alde, with the Stour on Suffolk's southern boundary, and the Waveney to the north (Fig. 2). While this constitutes an obvious area to research the processes involved in the 'Neolithisation' of Britain, there has hitherto been little dedicated fieldwork in this part of East Anglia. Thus far, only a handful of Neolithic sites have been excavated in Suffolk, mainly in the form of occupation

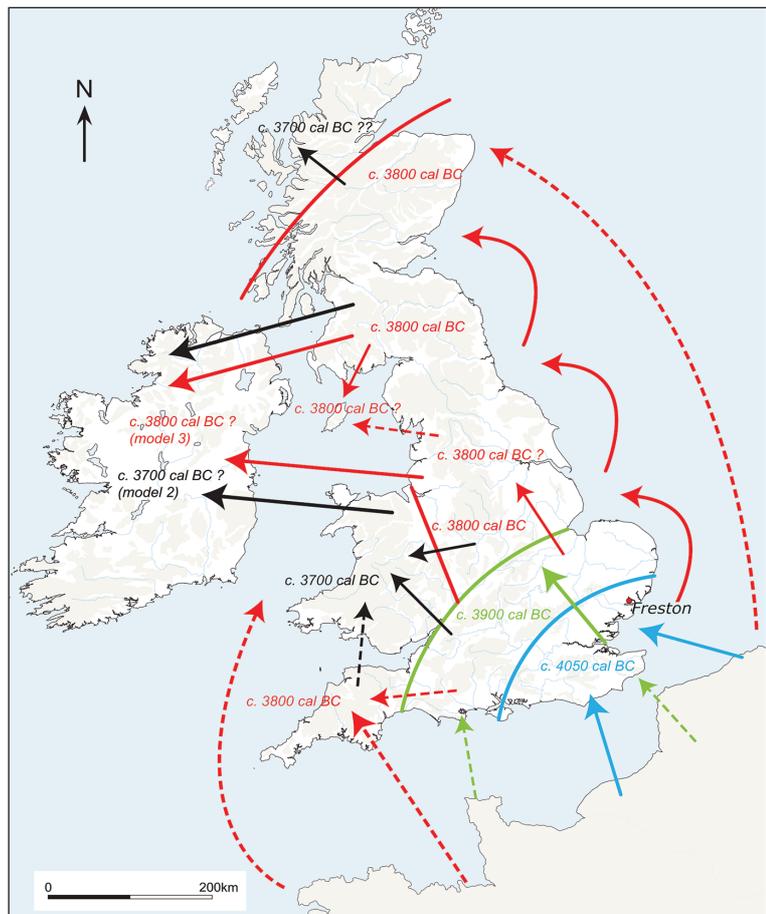


Fig. 1. Interpretive map of suggested dates, source areas and directions in the spread of Neolithic objects and practices across Britain and Ireland (modified from Whittle et al. 2011.Fig. 15.8 and reproduced with permission).

2012.73–74, Fig. 34; Smith 1956; Whittle et al. 2011.875). There is also Reydon Farm in northeast Suffolk, close to the River Blyth that runs into the North Sea, which is the only site in the county with published radiocarbon dates for the EN (Harding et al. 2017). EN pit clusters have also been excavated at Sutton Hoo, situated above the River Deben, a few kilometres inland from the coast (Hummler 2005). More broadly, pit cluster sites are now appreciated as a 'particularly prevalent' phenomenon in East Anglia compared to elsewhere in EN southern Britain (Garrow 2012.4). The largest numbers are known from the Fen edge in Cambridgeshire and Norfolk (Fig. 2), most notably the well-published examples of Sutton Gault North Fen, Broome Heath, Kilverstone, and Spong Hill (Wainwright 1972; Garrow et al. 2006; Healy 2013; Tabor 2016).

While EN British society is typified by dispersed, small-scale communities, there were times when these populations came together in formal settings to initiate and maintain social relations between groups (Edmonds 1999.80–108). From the 38th century cal BC onwards, these social gatherings began to take place at a type of monument referred to as a 'causewayed enclosure' (Whittle et al. 2011.xi). These earthworks represent Britain's earliest known enclosures of open space. Comprised largely of interrupted bank and ditch systems (often rounded in shape), the numerous causewayed entrances suggesting that their primary purpose was neither defensive, nor for corralling livestock (Oswald et al. 2001). Ranging in size from 0.4 to 26ha, the monuments' construction likely required a workforce drawn from several communities (cf. Ashbee, Cornwall 1961), whereby their very creation would have served to cement inter-group connectivity.

The past 20 years have witnessed the publication of several major works on these EN monuments, detailing their chronology, location, form, and the activities performed within them. These events included gathering, feasting, exchange, marriage, burial, and conflict (Allen et al. 2008; Clark et al. 2019; Evans, Hodder 2006; Evans et al. 2006; Mercer, Healy 2008; Neil et al. 2018; Oswald et al. 2001; Whittle et al. 2011, *inter alia*).

An early discussion of British causewayed enclosures claimed regional distinctions in where these



Fig. 2. Location map showing the main sites mentioned in the text.

monuments were situated. Those located in south-east and southwest England were conceptualized as related to the hill 'folk', while those in the east were the peoples of the rivers and coast (Piggott 1934.375). It remains true today that in East Anglia the pit cluster sites and causewayed enclosures of the EN are associated strongly with lowland river valleys on lighter soils lower than 50m OD (Ordnance Datum). While these are low-lying compared to southern British EN sites, most occupied positions that would have been elevated by local standards, usually above the floodplains of rivers (Garrow 2006.16, 26).

Compared to most of southern Britain, causewayed enclosures and other Neolithic monuments are relatively rare throughout most of Suffolk and Norfolk (Healy et al. 2011.265, Fig. 6.1). In Suffolk there are only a handful of causewayed enclosures recognised by aerial photography (Fig. 2). Two have been recognised at Fornham All Saints, then individual monuments at Freston and Kedington, plus a possible fourth at Bentley (Martin 1999; Oswald et al. 2001.154–155). We began the *Freston Archaeological Research Mission* [FARM] in 2018 in part to redress the regional research bias that had hitherto seen no excavations of the Suffolk monuments, and to initiate a longer-term project that could engage the larger debates concerning the processes of 'Neolithisation'.

Background to the site

The Freston interrupted ditch system is located 3km south of Ipswich, the modern county-town of Suffolk in eastern England (Fig. 2). The site was discovered by aerial photography in the 1960s and from the outset was believed to be a Neolithic causewayed enclosure (Palmer 1976.175; Wilson 1975.180–181). At 8.55ha, Freston is one of the largest known British causewayed enclosures (with large being defined as 6ha and above), second only to Haddenham, Cambridgeshire (8.75ha) within an East Anglian context (Evans, Hodder 2006.239, Fig. 5.1). Freston is also one of the closest of these monuments to the North Sea. Today it is located some 13km from the modern coastline, though due to intervening sea-level rises this is likely to have been c. 5km further away in the EN (Burningham, French 2011. 105–106, Figs. 1–2).

The site plan produced from the aerial photographs (Dyer 1995) indicated that the perimeter of the roughly circular monument is defined by two closely spaced, concentric and interrupted ditches (Fig. 3). The cropmarks further revealed traces of what has been interpreted as a palisade trench running between the two circuits. This feature is discontinuously traced, and best detailed in the north and northeastern part of the site, and only partly visible to the west. Just within the perimeter of the enclosure's northeast quadrant is the outline of a very large rectangular structure, measuring c. 37 × 9m, with the long sides and two internal cross-partitions defined by postholes, and the short-ends delineated by trenches (Hegarty, Newsome 2004.65; Martin 2007.1). This building has been interpreted as a possible Neolithic longhouse (Oswald et al. 2001.126), or an Anglo-Saxon hall. Either case “would make it of potentially national importance” given the rarity of such structures in Britain (Martin 2007.1), while the size of the Freston building would make it one of the largest examples of either category (Marshall, Marshall 1991; Sheridan 2013). If it were a Neolithic longhouse then it would likely relate to a pre-enclosure period of occupation at the site, given that these timber structures relate to the Earliest Neolithic in Britain, typically dating to the first two or three centuries of the fourth millennium BC (Bayliss et al. 2011.719–724; Last 2013.273–278; Sheridan 2013).

Between the structure and the enclosure ditches to the north are the outlines of what appear to be two round-cornered roughly rectangular pits which, fol-

lowing the above discussion, could be Saxon Sunken Featured Buildings (SFBs) as these are often found in association with Anglo-Saxon halls. That said, at c. 6.5 × 3m and 4.5 × 2.5m they are quite large for SFBs, and thus might instead date to the Neolithic and relate to the nearby ditch system, given they are not dissimilar in width (Hegarty, Newsome 2004.66).

The site at Freston is located on the Shotley peninsula, between two large estuaries: the Orwell less than 2km to the northeast, and the Stour c. 3.5km to the south (Fig. 2), and occupies a relatively elevated position – by Suffolk standards – around 31m OD. While Rog Palmer (1976.164) originally described the site as having a controlling position regarding movement along the estuaries, the location is much more in keeping with other British low-lying causewayed enclosures (Oswald et al. 2001.96–97). We suggest an alternative reason as to why the site was created in this locale, namely that the enclosure was centred on a spring (Fig. 3). While the significance of the spring to the monuments' construction could be viewed in functional terms, regarding the provision of fresh water to people and livestock, we suggest that this feature also had symbolic importance. There is good evidence to suggest that springs had ritual importance in the British Neolithic (Ri-

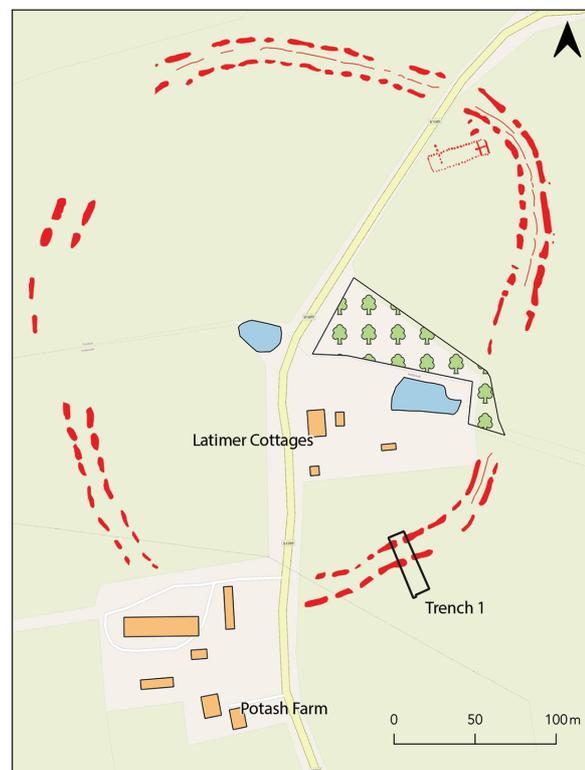


Fig. 3. The Freston causewayed enclosure showing the location of Trench 1 (modified after Dyer 1995).

chard 1996), a significance that may have derived from indigenous Mesolithic hunter-gatherer ontologies (cf. Tilley 1996:65). More generally, an association with water, in the form of rivers, has been made for several other British causewayed enclosures (Oswald et al. 2001:91–94). East Anglian examples include Fornham-All-Saints and Kedington, while at Etton local hydrological conditions likely ensured that some of the circuit ditches would have contained standing water for part of the year.

Today there is nothing to see of the Freston enclosure at ground level. The 2019 excavation suggests that the ditches were largely infilled during prehistory and their banks eventually levelled by ploughing possibly during the Iron Age or Roman period, the impact of which is documented at nearby Sutton Hoo (Hummler 2005:391–393). There is also evidence for the monument being disturbed in the early modern period. The enclosure is bisected by a road, while a farm was built atop the southwest quadrant's ditches in the 16th century, and two cottages were constructed inside the enclosure in 1875. Currently the site is located on private land, much of which has been intensively farmed, though the monument's eastern half has been left as grassland in recent years. Despite being accorded protected status in 1976, the site has only received limited formal archaeological investigation (Meredith 2007; Wightman 2011). The most important work was conducted in 2007, during which c. 2.9ha of the monument's northeast quadrant underwent a geophysical survey. This work largely substantiated what could be seen from aerial photography, while also identifying a trackway entering the enclosure through a causeway and over the corner of the longhouse (Martin 2007:4).

In 2018, we initiated work at Freston in order to characterize and date the site. Our larger research aims are to contribute to a dynamic field of research dedicated to causewayed enclosures (cf. Oswald et al. 2001; Whittle et al. 2011), and to fulfil the team's more general research interests in processes of 'Neolithisation' (Carter 2019a; Carter et al. 2013) and 'the archaeology of social gathering' (Carter et al. 2016). The first stage of fieldwork comprised the systematic survey of Latimer Field due south of the enclosure's eastern half, which produced a low density of diagnostic EN flaked stone artefacts plus a consistent distribution of Victorian pottery tile and glass that had been introduced via manuring (Carter, Aubert *in prep*; Carter 2019b). With permission from Historic England and local landowners, we

then shifted from survey to excavation the following year.

Aims of the excavation

The first excavation season was conceptualised as a pilot study for a larger project, with a relatively modest budget, team, and research objectives. Our main aim was to ground the claim that Freston was an EN causewayed enclosure, and to recover short-life organic material for AMS radiocarbon dating so we could begin producing an absolute chronology for the monument's construction and abandonment (Bayliss et al. 2011: 38–42). These data would further contribute to a larger model for the establishment of such monuments throughout Britain (Whittle et al. 2011), while expanding the number of absolute dates for EN Suffolk specifically. These aims were to be achieved by targeting ditch termini, as these are typically artefact-rich contexts at causewayed enclosures (Oswald et al. 2001:120–124). Theoretically, any pottery and stone tools would help to typologically date the site and provide an insight to the activities that took place there (cf. Beadsmoore et al. 2010; Bye-Jensen 2019; Copley et al. 2005; Garrow 2012; Saville 2002), while faunal or archaeobotanical material would reflect both subsistence strategies and the local environment (cf. Jones, Rowley-Conway 2007:407–408; Serjeantson 2011).

The project was developed in consultation with Historic England, the site's legal custodians. This relationship raised another project aim, which was to detail any damage to the site by modern farming to help update the monument's management plan (cf. Department for Culture, Media and Sport 2013). A final objective was to dialogically engage with the various groups who are personally, economically and/or intellectually invested in the site (cf. Bartu 2000; Carter 2017; Merriman 2004), a process that has involved in-person and online talks, a site tour, volunteer fieldworkers, and the creation of a non-academic website (FARM 2021).

The 2019 fieldwork season

In 2019 a small team undertook the first research excavation at Freston. The fieldwork began with a geophysical survey of the southeast quadrant, the results of which are published elsewhere (Schofield et al. 2021). Here we focused on the excavation of a 10 × 35m trench that, with the guidance of the geophysical survey, was established over two sets of

ditch termini, encompassing an area both directly within and outside of the enclosure (Fig. 3).

The Freston site was constructed on an extensive sheet of loamy soil overlaying glacial outwash gravels characterised by flint content and impeded drainage, due to the underlying London Clay (*British Geological Survey 2020; Wymer 1999a*). In the northwestern part of the trench, the archaeology was exposed directly beneath these loamy soils, while in the southeastern half there was an intervening fine-grained windblown sand, or loess, that overlaid the archaeological deposits. The trench was stripped mechanically to the natural sands and gravels at a depth of 0.4–0.5m, after which manual cleaning and excavation defined 14 anthropogenic and natural features (Fig. 4, Tab. 1). These features include our four target ditch termini (F#001–F#004), a palisade trench (F#011), as well as pits, hollows, and a curvilinear feature (F#014). All soil was sieved, and its volume tallied to quantify the relative abundance of material culture, while ≥ 40 litres of soil were taken per context for flotation and the retrieval of charred plant remains and micro-debitage (for sampling protocols see *Bogaard et al. 2013.93*). Despite concerns that modern farming had impacted

the site, only a few shallow plough scars were recorded, with the uppermost deposits of ditch F#001 producing a small amount of modern glass and iron.

The excavation focused on the two ditch termini of the enclosure's inner circuit. Feature #001 (F#001) was the western terminus, of which a quadrant was dug to natural at *c.* 2.4m, while the opposite eastern ditch Feature #002 (F#002) was excavated fully in section to *c.* 2.2m deep (Fig. 5). The slightly different depth may relate to the undulating nature of the London Clay deposits that seem to mark the base of these ditches, the material likely proving far more resistant to the Neolithic digging tools than the sands and gravels. The stratigraphic sequences of the ditches were broadly similar. The upper fills with their relatively fine-grained sandy loam and low-density finds suggest the ditches gradually silted-up after the site had fallen out of use. The subsequent layers were more compact, indicating that these deposits had sat for a longer period, with clay lenses and iron staining indicating occasional waterlogging; these strata likely represent the initial post-abandonment phase. The lowest fills comprised relatively thick accumulations of anthropogenic dumping events with clear tip-lines and artefact-rich deposits, including semi-complete ceramic vessels. The basal layers were formed of natural sand that had slumped back into the ditch, probably not long after it had been dug. In F#001, this stratum [011.06] produced significant amounts of pottery (Tab. 1) suggesting that the intentional deposition of material culture into these ditches began almost as soon as the monument was created. Work also commenced on the eastern ditch terminus of the outer circuit (F#004), wherein the upper fill produced a small amount of EN lithics and pottery. Unfortunately, the excavation of this feature could not be completed because of time limitations. Within an East Anglian context, these Freston ditches are notable for their depth, some 2.2–2.4m below the buried soil, in contrast to the shallower examples from Etton, 0.65–1.25m deep (*Pryor 1998.16, Tab. 1*), Great Wilbraham, 0.7–1.5m deep (*Evans et al. 2006.125, Tab. 2*), Had-denham, 1.1–1.9m deep (*Evans, Hodder 2006.245–265*), Kingsborough, a maximum of 1.7 and 1.3m deep (enclosures K1 and K2 respectively [*Allen et al. 2008.239–244, Figs. 4, 6*]), and St. Osyth, 0.4–1.6m deep (*Germany 2007.Fig. 15*).

Linear feature #011 (F#011) was situated due south and parallel to F#002 (Fig. 4), running 2.75m in length into the side of the trench where it was cut by a small pit (F#015). Measuring 0.4m wide and

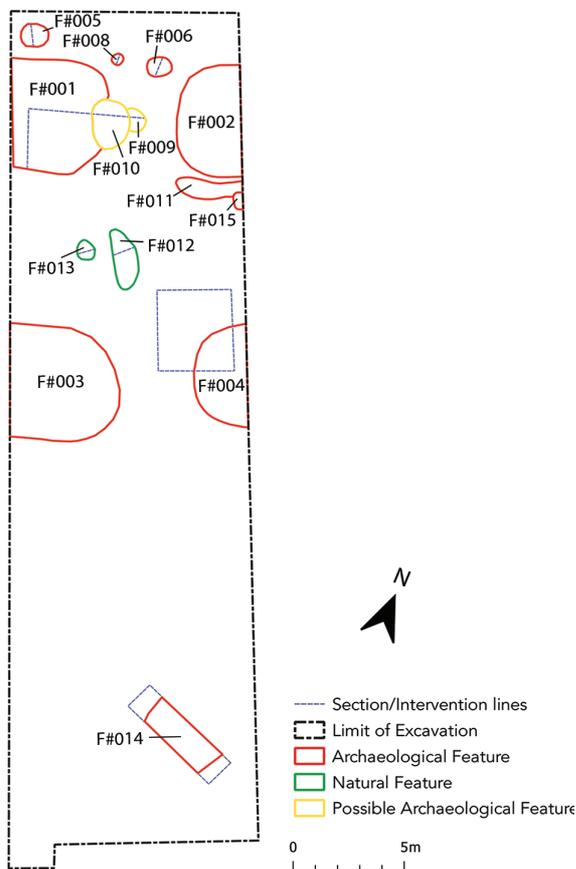


Fig. 4. Trench 1 features.

Feature	Context	Description	Vol. (L)	Pottery		Flaked Flint		Burnt Flint	
				Weight (g)	g/L	Weight (g)	g/L	Weight (g)	g/L
F#001	11.01	ditch terminus	5630	73	0.01	347	0.06	1890	0.34
F#001	11.02	ditch terminus	2055	30	0.01	123	0.06	913	0.44
F#001	11.03	ditch terminus	879	318	0.36	173	0.20	362	0.41
F#001	11.04	ditch terminus	775	4048	5.22	622	0.80	1286	1.66
F#001	11.05	ditch terminus	1490	2453	1.65	449	0.30	850	0.57
F#001	11.06	ditch terminus	1050	950	0.90	377	0.36	912	0.87
F#002	5	ditch terminus	2826	105	0.04	349	0.12	589	0.21
F#002	6.01	ditch terminus	5331	0	0	432	0.08	867	0.16
F#002	6.02	ditch terminus	1370	2946	2.15	965	0.70	0	0.00
F#002	6.03	ditch terminus	540.8	3423	6.33	1001	1.85	974	1.80
F#002	6.04	ditch terminus	2990	24	0.01	51	0.02	665	0.22
F#004	016	ditch terminus	1590	18	0.01	87	0.05	243	0.15
F#004	017.1	ditch terminus	336	7	0.02	0	0.00	119	0.35
F#005	7.01	pit	130	0	0	12	0.09	209	1.61
F#005	7.02	pit	315	0	0	12	0.04	131	0.42
F#006	13.01	pit	180	0	0	41	0.23	6	0.03
F#008	8.01	pit	109	22	0.20	1	0.01	0	0.00
F#009	9.01	tree hole/pit?	319	7	0.02	9	0.03	34	0.11
F#010	10.01	tree hole/pit?	75	0	0	4	0.05	2	0.03
F#011	19.01	palisade trench	501	33	0.07	107	0.21	452	0.90
F#014	22.01	ditch	1500	0	0	22	0.01	25	0.02
F#015	23.01	pit	50.6	0	0	4	0.08	8	0.16
			Totals	14 446 g		5188 g		10 537 g	

Tab. 1. Quantification of pottery, flaked and burnt stone by context and feature from the 2019 Freston excavation.

0.32m deep, (F#011) produced small quantities of EN ceramics and lithics and is believed to form part of the palisade trench. This section of the palisade had neither been visible in the crop marks nor prospected by the geophysics.

The excavation investigated a further ten cut features, four of which were roughly circular in form (F#005, F#006, F#008, F#015) and contained varying quantities of pottery, lithics, burnt flint, charred plant remains and wood charcoal (Tabs. 1–2). The two largest features measured 1.11m wide × 0.41m deep (F#005), and 0.80m wide × 0.25m deep (F#006). These measurements are entirely in keeping with the size of pits at other East Anglian EN sites, such as the settlements of Kilverstone (average width 0.7m), Hurst Fen (≤1.21m wide), and Reydon Farm (average 0.94m wide), and the causewayed enclosure at St. Osyth (typically 0.77–1.16m wide) (Clark et al. 1960.206; Garrow et al. 2005.141; Germany 2007.25; Harding et al. 2017.3–5, Tab. 1). While the scale of the two smaller features (F#008, F#015) might suggest that they could be viewed as ‘post-holes’ (the latter being only 0.35m wide × 0.32m deep), they lack the vertical sides and flat base usually attributed to such features in the region (Gar-

row 2006.33). Ultimately, we feel that any inference that these Freston examples relate to upright timbers and/or architecture is an interpretation that can only be put forward when we have more contextual information.

Between the ditches there were two cut features (F#012, F#013) that were deemed natural due their uneven form and lack of finds. These may represent the depression left in the ground where a tree was uprooted during land-clearance, or felled by natural processes or, where the roots had rotted away *in situ*, a ‘tree-throw hole/-bole’ (Evans et al. 1999; Lamdin-Whymark 2008.73–82, Figs. 29–30). Another two somewhat irregular pits containing small amounts of EN artefacts were cut into the end of ditch terminus F#001 (F#009, F#010, the former cutting the latter). Given that the stratigraphy of F#001 (Fig. 5) suggests the ditch was largely infilled by the Late Chalcolithic/Early Bronze Age (see below), it is highly unlikely that these two features are of EN date. Instead, their contents are likely to be residual, having been disturbed from the lower strata that these pits dug into. If these features are cultural then they should relate to the late 3rd/earlier 2nd millennium cal BC, or later. However, they might be tree-holes.

Remains	F#001	F#002	F#005	F#011
Charcoal (ml)	6.8	2.1	1680	10.05
<i>Triticum</i> sp.		1		1
Cereal grain indeterminate	3	3		1
<i>Corylus</i> sp.	4	3		
<i>Vicia</i> sp.		1		
<i>Veronica</i> sp.	1			5
<i>Galium</i> sp.	4			
Large grass indeterminate				1
Weed indeterminate	3	1		2

Tab. 2. Overview of all plant remains recovered from the 2019 Freston excavation.

Finally, the excavation sectioned a relatively shallow curvilinear ditch (F#014) that ran diagonally (SW-NE) across the bottom half of Trench 1. While only 2.1m wide and 0.12m deep, the geophysical survey detailed that it ran for around 70m in length (*Schofield et al. 2021.114, 116, Figs. 5–7*). The small area investigated produced only a handful of worked and burnt flint (Tab. 1). Stratigraphically, the geophysics suggests that this feature precedes and is cut by the outer ditch system of the causewayed enclosure. We tentatively suggest that this represents the flanking ditch of a long barrow (burial mound), an argument we return to below.

The pottery

The pottery from Freston has yet to be studied fully, and thus the following details and discussion are preliminary in nature. While the excavation was limited in size, it nonetheless produced a very rich ceramic assemblage of 14.5kg. To appreciate the scale of this dataset we have calculated figures of relative pottery abundance from other East Anglian causewayed enclosure ditches. This was achieved in a crude manner by dividing the mass of ceramic sherds by cumulative ditch-length excavated. Given that the two fully dug Freston ditches (total 6.26m long) are deeper than those at the other sites, the following figures will be somewhat inflated for this site. Similarly, the Freston sample – in terms of ditch length excavated – is relatively small, with no guarantee that the abundance of pottery recovered from the 2019 excavation will be replicated in other ditches, or even the remainder of those part-dug. Nonetheless, these broad-stroke comparisons do allow us to suggest that the Freston pottery assemblage is significantly ($\geq 100\times$) richer than those from Haddenham, and St. Osyth, and twice as abundant as the largest dataset from Kingsborough (Tab. 3).

Perhaps unsurprisingly, given the volume of soil removed from these features, most of the pottery (99%) came from the two ditch termini of the inner circuit (Tab. 1), while the limited investigation of the outer circuit's terminus (F#004) generated a further 25g. The remaining 62g of pottery came from the palisade trench (F#011), and the two pits F#008 and F#009, though this latter material might be residual from the ditch terminus (F#001) that it cut into. While the pits at Freston have thus far produced only small quantities of sherds, this is not always the pattern documented elsewhere. For example, at St Osyth, 70.5% of the EN pottery (33.3kg) came from such features within the monument rather than the ditches, some of which appear to have been dug specifically for pottery deposits and immediately back-filled thereafter (*Lavender 2007.68, Tab. 17*).

Upon excavation, the pottery was soft and friable, with some sherds having the consistency of wet cardboard. This may be due to the imperfect atmospheric conditions associated with the short, open firings (pits, or bonfires) of EN pottery production in Britain, where the interior of some pots may have reverted to their plastic state (*Gibson 2012.45*). There is also evidence of iron staining on the sides of the ditches, which indicates that the site was periodically waterlogged, so the pottery may have been submerged for significant periods of time. Firing regimes, vessel fragility and post-depositional processes cannot, however, explain the assemblage's overall fragmentation, as it was clear that many of the sherds had been broken prior to their inclusion in the ditch fill.

The pottery from Freston (Figs. 6–7) comprises both plain and decorated vessels consistent with the regional tradition of Mildenhall Ware (*Smith 1956; Clark et al. 1960*). Typical characteristics of this ceramic style observed within the Freston assemblage are round-based open bowls, simple straight-sided or neutral vessels ('bag-shaped' vessels), 'S'-profiled vessels with or without carinated shoulders, and

Site	Ditch Length (m)	Pottery (kg)	Richness (kg/m)
Freston	6.3	13.63	2.2
Haddenham	230	3.2	0.01
Kingsborough (K1)	34	35.6	1.05
Kingsborough (K2)	29	7.1	0.24
St. Osyth	180.4	13.7	0.08

Tab. 3. Contrasting relative abundance of pottery from Freston (F#001–F#002) and other East Anglian causewayed enclosure ditches.

small open forms described as cups (*Knight 2006a. 136, Figs. 14–16*). Rim types are simple, heavy, externally thickened, expanded, and ‘T-shaped, while decorations (Fig. 6.A) – mainly restricted to the rim, neck, shoulder, and upper body – include finger fluting, incised lines (with vertical, diagonal, chevrons and herringbone patterns), and impressed dots (*Clark et al. 1960.238, Fig. 27*). Construction techniques consist of coiling methods and clay addition to the rims, while surfaces were typically smoothed or burnished (*Pioffet, Ard 2017.13*). At Kilverstone, Mildenhall Ware bowls are reported to range between 11 to 28cm in diameter, with cups defined as *c.* 7cm in diameter; unfortunately, the highly fragmented state of most of these assemblages means that vessel sizes and profiles are often difficult to reconstruct (*Knight 2006b.30*).

While no whole vessels were found, F#002 [006.02] did produce the lower portion of a round-based bowl. It is currently unclear as to whether this vessel was complete when deposited into the ditch; it was placed at the interior edge and the very top of the primary artefact-rich fill [006.03], making it perhaps a closure deposit after the last EN use of F#002. Rim sherds seem to be particularly well-represented in the assemblage; however, further study will see if they were being deliberately selected for inclusion in these ditch fills, a practice previously suggested at the Etton and St Osyth causewayed enclosures (*Lavender 2007.69; Beadmoore et al. 2010.121*).

Some sherds have perforations beneath their rims (Fig. 6.B), which are features previously recorded in Mildenhall Ware assemblages (*e.g., Allen et al. 2008*).

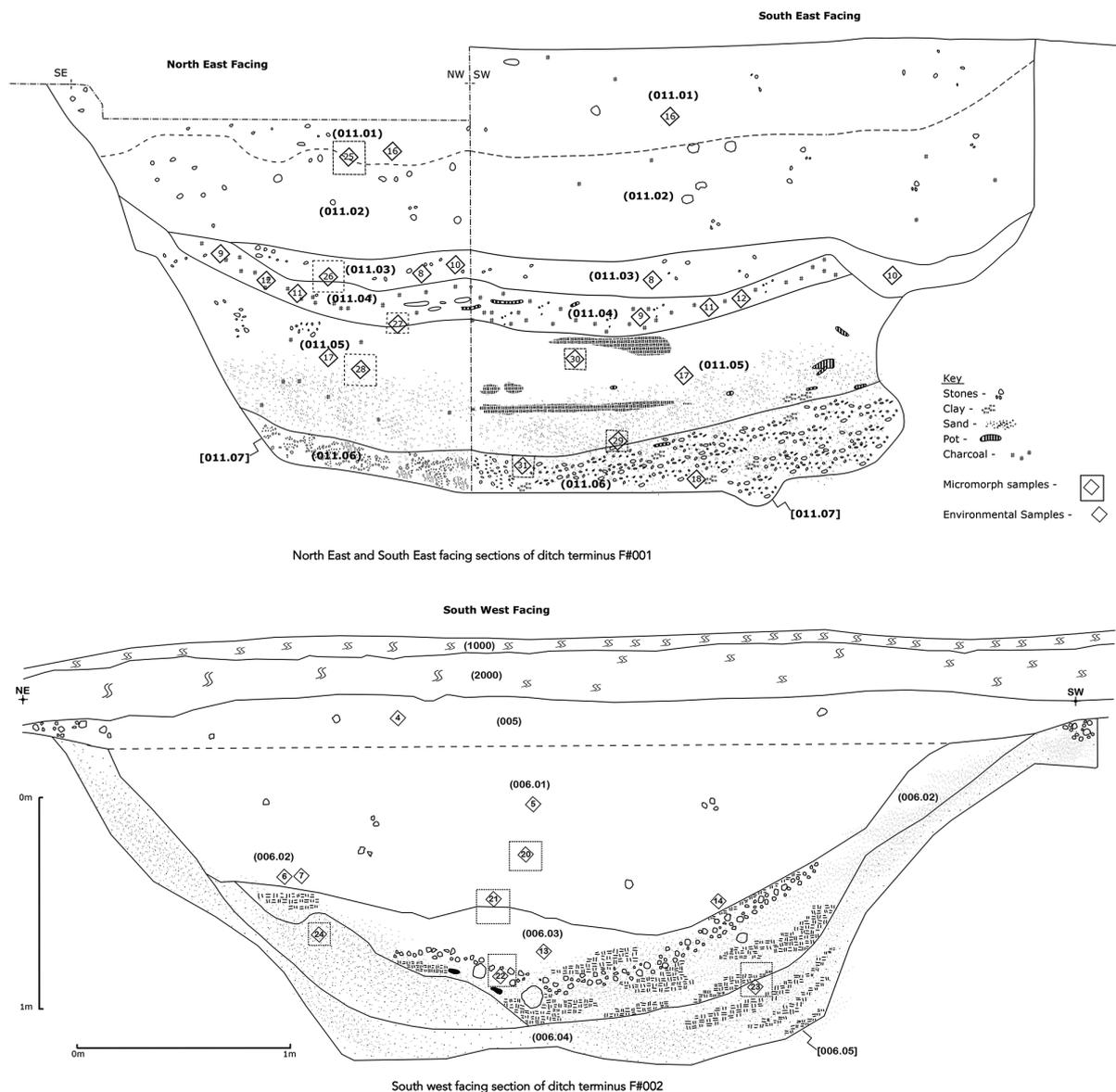


Fig. 5. Sections of ditch termini F#001 and F#002.

69, Figs. 46.29, 47.38; Clark et al. 1960.239–240, Figs. 21, 24; Knight 2006b.37–45, Figs. 2.16, 2.18; Gibson, Leivers 2008.246, Fig. 7). In cases where the perforations are found in pairs they are interpreted as repair holes (Cleal 1988.141), while rows of perforations – as seen on the Freston vessels – are believed to have been used to strain the pot's contents (PCRG 2010.34), which in the British EN might relate to dairying practices (Copley et al. 2005). Regarding colour, most sherds are various shades of brown (light reddish to dark brown [Fig. 7]); some have fire-clouded surfaces of soot from being directly exposed to fire. This could indicate that some vessels were used for cooking, though it could also have resulted from the pot directly touching the fuel during its firing (Gibson 2012.45; Hall 1983.7–10; Orton, Hughes 2013.253).

The EN pottery of East Anglia was initially grouped with the ceramic traditions of the greater southeastern region of England, referred to broadly as the Windmill Hill Complex, after the eponymous causewayed enclosure in Wiltshire (Smith 1956.7). Stuart E. Piggott (1954.74) argued that it was possible to observe three regional sub-groups of this tradition, which he referred to as Abingdon Ware (Upper Thames Valley), Whitehawk Ware (South Downs and Sussex coast), and East Anglian Ware (within the Ouse and Colne rivers). Smith (1954.224) then proposed the alternate term of 'Mildenhall Ware' for the East Anglian style, named after the type-site at Hurst Fen in West Suffolk, where an abundance of this material was recovered (Clark et al. 1960). Radiocarbon dates associated with Mildenhall Ware assemblages indicate that this pottery style was in use for roughly 230–345 years (68% probability) beginning around 3730–3665 cal BC and ending around 3450–3355 cal BC (68% probability) (Healy 2013.15, Figs. 1.10, 1.11).

Those sites that provide Freston with the largest and most comparable assemblages include Hurst Fen, Mildenhall (Clark et al. 1960), Kilverstone (Knight 2006b), Reydon Farm (Harding et al. 2017), Spong Hill (Healy 1988), as well as Etton, Haddenham and Sutton Gault in Cambridgeshire (Pryor 1998; Gdaniec 2006; Tabor 2016). While it remains true that this pottery is associated primarily with the EN sites of East Anglia (including Northamptonshire to the west),

ceramic vessels of this type have also been found as far south as Kent (Allen et al. 2008.239; Clark et al. 2019), plus Derbyshire and the Nottinghamshire/Lincolnshire border to the north (Healy 1993.114).

As to the uses of these vessels, Emilie Sibbesson (2014.286) argues that most EN pots were used for cooking both plants and animals, and that the types of meals consumed differed by context. Cattle typically dominate the faunal assemblages of causewayed enclosures, with lesser amounts of pig and sheep (Darvil 1987.89, Tab. E). The author suggested that larger animals were preferred for feasting events at these gathering places, while conversely, at pit cluster sites one tends to find the remains of smaller domesticated and wild animals (Sibbesson 2014.286). Similarly, vessels of different sizes are believed to have served different purposes. The lipid residues of larger vessels showed evidence for the cooking of animal carcasses (possibly in stews), while the residues from smaller vessels contained traces for the making, storing and/or cooking of dairy fats, such as butter (Copley et al. 2005.906). Ultimately, given the various activities performed in different causewayed enclosures, any functional attribution to

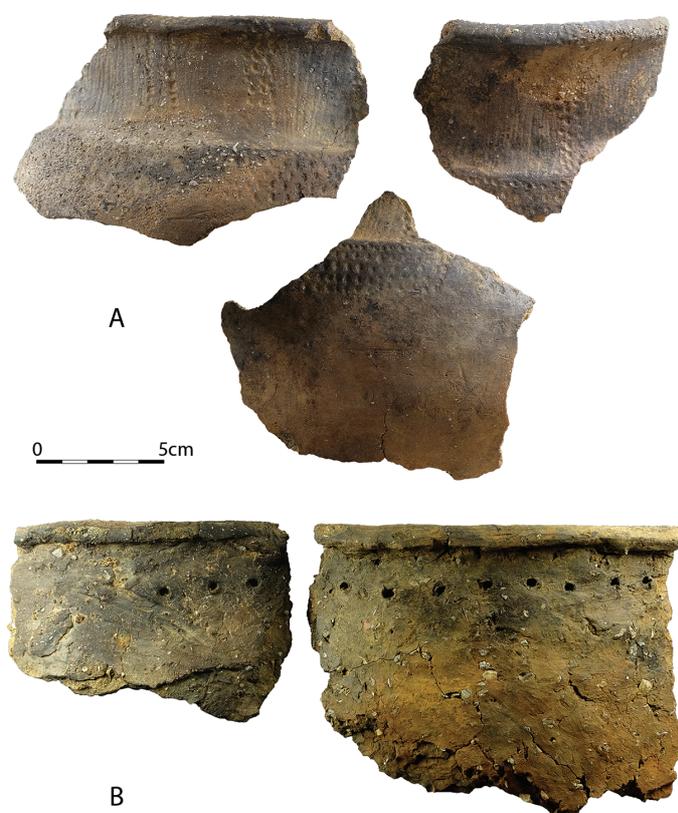


Fig. 6. A Mildenhall Ware vessel with characteristic decoration of incised lines and impressed dots from F#001 (011.04); B Mildenhall Ware vessel with continuous perforations beneath the rim from F#001 (011.04) (Cotswold Archaeology).

the Freston ceramic vessels should be based upon our own residue and contextual analyses.

The flaked stone

The flaked stone assemblage comprised 854 artefacts weighing 5290g, not including the heavy residue component from the water-sieve. As with the pottery, the richest assemblages came from the ditch termini of F#001 and F#002, both in terms of absolute quantity and with reference to the average number of artefacts per litre of soil (Tab. 1, Fig. 9). These artefacts were made almost entirely from flint, the sole exceptions being two quartzite flakes, and two part-cortical pieces of sandstone. The flint ranges in colour from dark grey to black, brown, orange, and honey-coloured, varying from opaque to translucent. The raw material is believed to be primarily local, with rounded flint cobbles a recurrent component of the Lowestoft Formation sands and gravels that underlay the topsoil at the site (*British Geological Society 2020; Rose et al. 1999*). While most artefacts were quite fresh in appearance, just under a quarter of the assemblage had patinated surfaces (n=204, 24%). This patination may relate to micro-environmental differences in deposition (*Hochella, Banfield 1995*), rather than differences in age, with staining potentially due to some the material having been deposited in standing water within the acidic, iron-rich sands and gravels. In turn, 42 pieces (4.9%) had traces of burning, as evidenced by their reddened colour, pot-lid fractures (Fig. 8.L), and/or crazed surfaces.

The Freston lithics are typical for a southern British EN assemblage in terms of how the flint was worked, the tool-types produced and the blanks they were

manufactured upon, with broadly comparable material from both causewayed enclosures, and domestic sites (*Edmonds 1995.35–48, Figs. 15, 19, 23–24; Saville 2002*). The assemblage was blade-based, the blanks percussion knapped on-site, as evidenced by the cores, cortical debris, rejuvenation pieces, and numerous end-products. Of the 54 cores, 17 related to the production of bladelets/blades, most of which were unipolar, though one had a more curved/carinated flaking surface ('Aurignacian-like'). There were also 37 multi-directional flake cores, three of which had originally been used to make bladelets. Rejuvenation pieces from blade/bladelet cores included three core-tablets, plus 31 flakes removed from the working face.

Some 12.5% of the artefacts were deliberately modified (n=107; Tab. 4) using direct and inverse retouch. The dominant forms were those pieces with simple linear retouch (n=58, 54%), followed by: scrapers (n=13, 12% [Fig. 8.L]), notched pieces (n=12, 11%), denticulates/serrated pieces (n=11, 10%), piercers (n=6, 6% [Fig. 8.J]), leaf-shaped arrowheads (n=4, 4% [Fig. 8.A-D]) plus single examples of a backed blade (1%), and a knife (1%). Just over two-thirds of these implements were made on flakes (n=72, 67%), followed by lesser quantities of modified blade-like flakes (n=18), blades (n=10), and bladelets (n=2). There was also a single end-scraper made on a bladelet core. The distribution of blanks by tool-type is detailed in Table 4, which shows that flakes were preferentially selected to make the piercers and all but one of the scrapers. Conversely, most denticulates were formed on blades, or blade-like flakes. The Freston formal tool-types and their relative proportion is broadly comparable to the patterns seen at other causewayed enclosures (*Saville 2002.Tab.*

10.1), where the dominant forms are (in descending order): scrapers, serrated pieces, edge-trimmed flakes, piercers, leaf-shaped arrowheads, and knives (see also *Bye-Jensen 2019. Fig. 215*).

While the flint recovered from the pit and ditch fills clearly indicates that stone tools were being made and used at the site, we cannot be certain that this all took place within the causewayed enclosure, as some of the material could be residual and relate to a pre-monument phase of activity (*Saville 2002.91*). As to these implements' functions, recent use-



Fig. 7. Mildenhall Ware rim sherds showing various colours and rim types from F#002 (006.03) (Cotswold Archaeology).

wear analyses indicates that various tasks relating to the preparation of foodstuffs and craft-working were being undertaken at causewayed enclosures (*Bye-Jensen 2019; Hurcombe 2000*). Scrapers seem to have been multi-purpose tools, employed for working hides, wood, and bone/antler (*Bye-Jensen 2019.261–272, Fig. 212*), while the function of the serrated implements remains uncertain, as the British examples do not display the ‘sickle gloss’ (*Meeks et al. 1982*) that one often associates with Neolithic denticulates in continental Eurasia (*cf. Jensen 1988; Unger-Hamilton 1985*). Instead, it has been suggested that they were used for cutting fibrous plants, potentially for making rope, which could have been employed in raising a timber palisade, for example (*Bye-Jensen 2019.59, 261–272, Fig. 212*).

Particularly distinctive are the four leaf-shaped arrowheads with covering bifacial retouch (*Fig. 8.A-D*), projectiles long associated with bow and arrow technology (*Clark 1963*). While these weapons were no doubt often employed to hunt wild animals such as deer, aurochs and boar (*Serjeantson 2011.37–47*), there is also good evidence for inter-personal violence in the British EN (*Smith 2013*), with skilled archery likely an emblem of status (*Edmonds 1995.46*), and good evidence for several causewayed enclosures having been attacked by archers. These include Carn Brea (Cornwall), Hembury (Devon), and Hambledon Hill (Dorset), with over 400 leaf-shaped arrowheads associated with the destruction of Crickley Hill (Gloucestershire), while projectiles have been found embedded in human bone at Hambledon Hill, Ascott-under-Wychwood (Oxfordshire), and Fengate (Cambridgeshire), amongst other sites (*Dixon 1979.188; Edmonds 1995.46; Smith 2013.115, 119*).

The Freston worked flint finds good comparanda from East Anglian causewayed enclosures, and pit cluster sites alike. The former includes Etton, Great Wilbraham and Haddenham in Cambridgeshire (*Evans et al. 2006.130–134, Figs. 12–13; Middleton 1998; 2006*), plus St. Osyth and Orsett in Essex (*Hedges et al. 1978.255–259; Martingell 2007*), the latter comprising Hurst Fen and Reydon Farm, Suffolk (*Clark et al. 1960.214–224, Figs. 7–16; Harding et al. 2017.9–11, Fig. 4*), Kilverstone, and Spong Hill

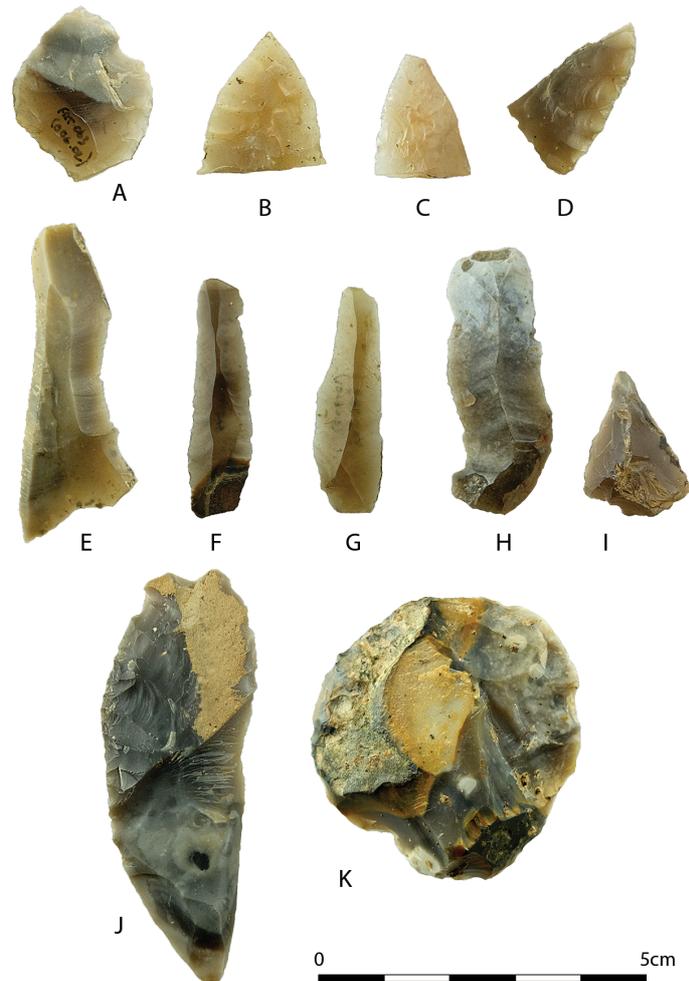


Fig. 8. Worked flint implements from F#001 and F#002: A-D leaf-shaped arrowheads; E barbed-and-tanged arrowhead; F serrated blade; G-I blades; J piercer; K retouched knife; L burnt scraper (Cotswold Archaeology).

Norfolk (*Beadsmoore 2006; Healy 1988*), and the Stumble, Essex (*Holgate 2012*). When one contrasts the average number of flaked flints per metre of excavated ditch from the 2019 excavations with the figures from Haddenham and the two Kingsborough causewayed enclosures (*Tab. 5*), we gain the impression – highly provisional – that the Freston termini are much richer, to the factor of at least six times.

While most of the flaked stone dates to the EN, the uppermost fill of F#001 (011.01) produced a complete barbed-and-tanged arrowhead (*Fig. 8.E*), a type associated with the Chalcolithic – Early Bronze Age in southern Britain (*Edmonds 1995.143–145; Green 1980.117–144*). This projectile most closely resembles earlier variants, being under 3cm long, and with short barbs ($\leq 7\text{mm}$ long), arguably closest to Type 32 in the recent typo-chronology of Nicolas (*2017.257–259, Fig. 11, 257*), which are generally dated to Period 2 as defined by Needham (*2012*),

c. 2300–1950 cal BC. That said, one can also find slightly earlier (Period 1, c. 2450–2300 cal BC) parallels from the well-known Chalcolithic ‘Amesbury Archer’ burial near Stonehenge in Wiltshire (*Harding 2011.90–91, 99–101, Fig. 30* [e.g., 6712]). Closer to Freston, a comparable arrowhead is reported from West Row Fen (*Martin, Murphy 1988*), an Early Bronze Age settlement on Suffolk’s fen-edge, a site that has produced both Beakers and later Collard Urns (E. Martin pers. comm.).

Alongside the 42 flaked stone artefacts with traces of burning, the excavation also generated 1004 pieces of unworked burnt flint weighing 10.73kg, the bulk of which again came from the ditch termini, albeit with a significant bias towards F#001 (Tab. 1, Fig. 9). Such material is recurrently documented at EN sites in the region (e.g., *Evans et al. 2006.Tab. 3; Harding et al. 2017.9*), not least the pit cluster site of Kilverstone which produced 46.88kg of burnt flint (*Garrow et al. 2005.145, Tabs. 1–2*). Flint may have been collected to be heated on fires for use as pot-boilers for cooking (cf. *Thoms 2008*), the material then being swept up with other burnt debris and dumped into the ditch termini or pits. One such example is F#005, which produced 49 pieces plus notable quantities of charcoal (Tabs. 1–2). Although the excavation produced no polished stone artefacts, axes made of both local and exotic raw materials have been recovered as surface finds from the site (J. Marriot and S. Plowman pers. comms.), and within the parish (*FRT 058 2020*).

Subsistence and environmental data

No animal or human remains were recovered from the 2019 excavations. While in theory the lack of bones might be due to differential depositional practices (cf. *Evans, Hodder 2006.325–329*), i.e. they were being buried elsewhere, it is more likely that such material simply did not survive due to the high soil acidity. Alas, this is an all too common problem for sites in this sandy region (cf. *Bethell, Carver 1986; Harding et al. 2017.3*). Indeed, a recent survey of animal exploitation in Early-Middle Neolithic Britain included no faunal assemblages from east of the East Anglian Chalk ridge (*Serjeantson 2011.Fig. 1.1*). As such, we can currently say

Tool	Total	%	Flake	Blade-				Core	Unknown
				Like Flake	Blade	Bladelet			
Retouched piece	59	55	42	12	4	1			
Scraper	13	12	12					1	
Notched piece	12	11	9	2		1			
Denticulate	11	10	2	4	5				
Piercer	6	6	6						
Leaf-shaped point	5	5	1					4	
Backed piece	1	1			1				
Totals	107	100							

Tab. 4. Flaked stone retouched tool types and blank choices from the 2019 Freston excavation.

nothing about on-site meat consumption or the pastoral regimes of those visiting the monument. Ultimately, it might be necessary to analyse residues from the pottery (*Copley et al. 2005; Reber et al. 2019*) or try to extract ancient DNA from the soil (*Smith et al. 2015*).

The archaeobotanical remains recovered from the 2019 season comprise four main categories, namely: (i) cereal grain material, (ii) *Corylus* sp. (hazelnut) shells, plus (iii-iv) the remains of several weed/wild taxa (Tab. 2). Overall, the densities of plant material were low with an average of 0.31 items/litre of soil. This is not unusual for British Neolithic sites (*Jones, Rowley-Conwy 2007.399–400*) and may be due to various taphonomic issues, not least the soil acidity. The identification of *Triticum* sp. (wheat) grains and *Corylus* sp. (hazelnut) remains are typical for a site of this period, with both clearly important components of human diet throughout EN Britain (*Treasure et al. 2019; Wilkinson et al. 2012*), with the latter being one of several wild resources that continued to have been exploited from the Mesolithic (*Ray, Thomas 2018.59–60*). Hazelnut shells dominate many British EN assemblages (*Stevens 2007.377; Treasure et al. 2019.199*), likely due to their durability, especially when charred, which they often seem to have been either from intentional actions (cooking, kindling) or through accidental exposure to fire (*Jones, Rowley-Conwy 2007.400–401*).

It has long been debated as to why so few cereal remains have been recovered from these sites. Some suggest that to all intents and purposes the subsistence practices of the British EN were “*still formally Mesolithic*”, with cereals initially having more of a symbolic significance than economic, being that they were consumed in primarily ritual contexts – such as causewayed enclosures – rather than domestic spaces (*Thomas 1993.388*). This view has since

Site	Ditch Length (m)	Worked Flint (n)	Richness (n/m)
Freston	6.3	720	114
Haddenham	230	474	2
Kingsborough (K1)	34	588	17
Kingsborough (K2)	29	144	5

Tab. 5. Contrasting relative abundance of worked flint from Freston (F#001–F#002) and other East Anglian causewayed enclosure ditches.

been challenged by Jones and Rowley-Conwy (2007.399–407, Tab. 23.1), who argue that (a) the rarity has been over-stated (see also *Treasure et al. 2019. 213*), (b) cereals will be underrepresented in EN assemblages because people would have avoided charring them thus decreasing their survival in the archaeological record, and (c) proxy isotopic data from human remains clearly indicates regular cereal consumption. Overall, the evidence suggests that while cereal cultivation and consumption were relatively widespread in Britain from the Earliest Neolithic, it was only in the Middle Bronze Age (mid-2nd millennium cal BC) that agriculture came to play a major subsistence role (*Stevens, Fuller 2012*).

While cereals are now attested from various EN domestic contexts, it remains the case that their consumption formed part of the activities taking place at causewayed enclosures, some of which may be more special or ritual in character (*Jones, Rowley-Conwy 2007.407–408*). At Freston the material thus far derives primarily from the two ditches (n=7/9 samples), with the palisade trench (F#011) producing the only other two cereal grain remains (Tab. 2). Concentrations of cereal remains – along with pottery, bone and lithics – from ditches at Windmill Hill are suggestive of deliberate deposition (*Fairbairn 1999.149, Fig. 107*), as are the notable quantities of charred cereal grains from pits dug into the enclosure ditches at Haddenham (*Jones 2006.314–315, Tab. 5.28*). Unfortunately, the meagre quantities of material documented in Table 2 do not allow us to currently put forward a similar hypothesis for the Freston charred plant assemblage. In turn, it is quite apparent that cereals can be

recovered from a variety of contexts at these sites, with the character of assemblages attesting variously to bulk processing, food preparation and discard (*Jones, Rowley-Conwy 2007.407–408*). Hazelnut shells were also recovered from the ditch termini at Freston (Tab. 2), for which we have contextual parallels from Etton, Haddenham and Hambledon Hill, though notable concentrations of *Corylus avellana* are also recorded from hearth and pit contexts at the same sites (*Jones 2006.314, Tab. 5.28; Jones, Legge 2008; Nye, Scaife 1998.292–293, Tabs. 66–67*).

Focusing on the charred plant remains recovered from EN sites closest to Freston (Fig. 2), we again see clear evidence for mixed economies of cultivated and wild resources. The Kilverstone pit clusters produced *Triticum dicoccum* (emmer wheat) and *Hordeum* sp. (barley) alongside potential weeds of arable cultivation, and significant quantities of hazelnuts (*Ballantyne, Roberts 2006.71*). Meanwhile at The Stumble, identified crop remains are dominated by emmer wheat, with small quantities of *Triticum aestivum/durum* (free-threshing wheat) and *Triticum monococcum* (einkorn wheat), along with abundant hazelnut remains and smaller quantities of fruits, roots, rhizomes and tubers (*Wilkinson et al. 2012.70–91*). At Spong Hill, impressions of grain and spikelet fragments of wheats, including emmer (*Triticum dicoccum*), plus a single example of barley, were documented on sherds of Mildenhall Ware, while flotation yielded wheat chaff and hazelnut shells (*Murphy 1988.103*). At Hurst Fen and Reydon Farm the archaeobotanical remains were almost exclusively composed of charred hazelnut shells, though

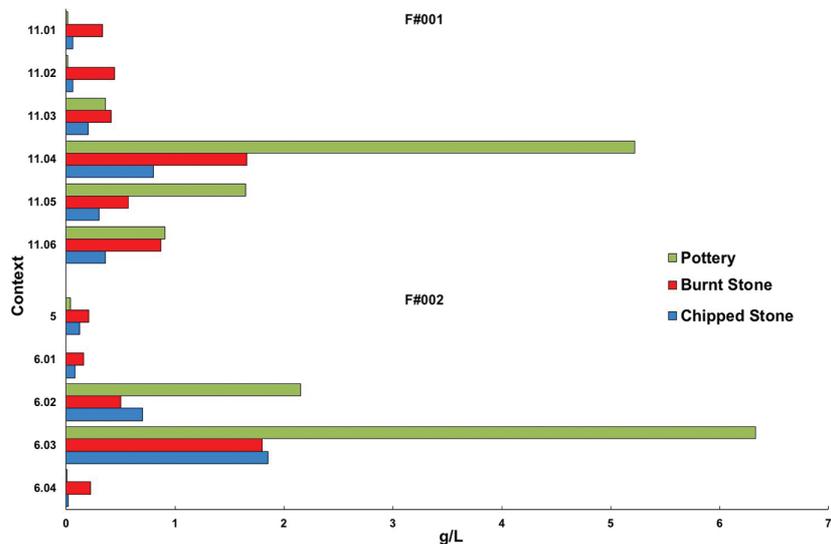


Fig. 9. Quantification of the main artefact types from the two Freston ditch termini (F#001, F#002) by stratigraphic layer (data from Table 1).

grain imprints on pottery attest to the presence of emmer and barley at the former site, while the latter produced evidence for emmer and/or *Triticum spelta* (spelt) (Clark et al. 1960.213, Pl. XXV; Wyles 2017.11–12).

Whether the plant remains from the Freston causewayed enclosure are the result of ritual burning, the deliberate deposition of domestic waste, or aeolian transported material, remains an open question for now. Ideally, further work will produce greater quantities of archaeobotanical material allowing it to be more securely situated within the British Neolithic agricultural economy and the exploration of questions regarding ‘ceremonial’ vs. ‘domestic’ plant use.

Of the weed/wild taxa recovered, *Veronica* sp. (spedwell) and *Galium* sp. (bedstraw) are typical of cultivated or waste ground habitats (Stace 2010); the low numbers recovered, however, prevent species identification. Wood charcoal was also recovered from every Freston sample (Tab. 6) and was present in variable quantities, ranging from 0.1 to 1680ml (Tab. 3). Most of the charcoal was identified as *Quercus* sp. (oak), with additional identifications of *Alnus glutinosa* (alder), *Betula* sp. (birch), *Corylus avellana* (hazel), Maloideae (hawthorn, apple, whitebeams/rowan etc.) and a single fragment of *Ulmus* (elm) or *Cytisus/Ulex* (broom/gorse). The condition of the charcoal was generally poor, with strong occlusions of sediment and, in some cases, iron and vivianite staining, which is characteristic of deposition in seasonally waterlogged environments. These conditional elements hampered identification to species level and the determination of maturity in oak. Where possible, maturity was assessed by the presence of roundwood (evidence for bark, pith or strong ring curvature) and presence or absence of tyloses in oak, which indicates heartwood or sapwood, respectively. A suite of eight short-life samples – mainly *Quercus* (sapwood and roundwood) and *Corylus* – from the two ditch termini (F#001, F#002) and the palisade trench (F#011) have been selected for radiocarbon dating.

While some of the charcoal might represent wind-blown and waste material accumulated in the ditches during the monument’s lifetime, the >1.5 litres from pit F#005 (Tab. 2) suggests the deliberate dumping of charred material, perhaps from a hearth. Oak provides a highly calorific fuelwood that is suitable for most activities, including cooking, pottery firing (cf. Ali 2015; Campbell 2007; Murphy 2001), and cremation (as at Etton [Nye, Scaife 1998.298, Tab.

71]). Oak-based fuelwood was also found to be the predominant taxon in the charcoal assemblages from the Kingsborough causewayed enclosure (Gale 2008).

Conclusion

In conclusion, the results of the 2019 excavation have clearly determined that the Freston interrupted ditch system is an EN causewayed enclosure, as evidenced by the chronologically diagnostic ceramic and lithic assemblages. While we await the radiocarbon determinations, a date for the site can be hypothesized with reference to established chronologies for the local EN pottery tradition, and the model for causewayed enclosure development across southern Britain. Mildenhall Ware, which is present in the basal layers of both ditch termini (almost a kilo in F#001), is estimated to have been produced in East Anglia from 3730–3665 cal BC to 3450–3355 cal BC, a range of 230–345 years (all dates expressed as 68% probability [Healy 2013.14–16, Tabs. 11.1–11.2]). The only two radiocarbon dates from an EN context in Suffolk derive from a pit containing Mildenhall Ware at Reydon Farm, which at 3710–3640 cal BC (at 95% probability) falls within the established range of this pottery tradition (Harding et al. 2017.13, Tab. 6). Further chronological resolution is provided by Whittle, Healy and Bayliss (2011.263–347, Fig. 6.1) via their evaluation of radiocarbon dates from the causewayed enclosures of Eastern England closest to Freston (Fig. 2). Their findings suggest that these monuments may have all been constructed in the 37th century cal BC, including Etton, Haddenham and Northborough in Cambridgeshire, and St Osyth in Essex.

What is much less clear is how long the monument at Freston was maintained and used as a formal gathering place. The range of dates for causewayed enclosures elsewhere in Britain spans from 300 years to as short as a few decades (Whittle et al. 2011.xi). Both inner ditch termini appear to contain significant amounts of material culture that relate to at least two depositional events prior to the site’s abandonment. Neither of the ditches showed evidence of recutting, which suggests that they were left open throughout their use. However, the depth of the artefact-rich deposits varies between the ditches, with (F#001) being 2.43m deep and having close to a metre of material culture, while (F#002) is 2m deep and has about 50cm of anthropogenic fill. The pottery was concentrated within the lower strata of the ditch fill, with F#001 [011.04] and F#002 [006.03] having the richest assemblages (Tab. 1, Fig. 9), po-

tentially the refuse from group feasting (cf. *Smith 1965.19*). Conversely, the upper fills of the termini contained very few artefacts, perhaps due the site being abandoned at which point the ditches silted up naturally or were deliberately backfilled and the banks levelled (cf. *Smith 1965.15–18*). Alternatively, the lesser quantities of finds in these uppermost strata might be due to changes in depositional practice, with material culture being dumped somewhere else on the site. Ultimately, we hope that the integration of radiocarbon dates with the micromorphological studies will detail the temporal depth and character of these ditch infill sequences (cf. *French 2006*).

It is suggested tentatively that the Freston enclosure was abandoned *within* the EN, or more specifically the period we associate with the Mildenhall Ware tradition (before the 35th–34th centuries cal BC [*Healy 2013.15*]), as we have yet to recognize any examples of Peterborough or Grooved Ware vessels, *i.e.* products of the Middle and Late Neolithic, respectively (*Gibson 2011.78–87; Thomas 2010; Worley et al. 2019.2*). This statement should however be tempered by an acknowledgement that the 2019 excavation exposed only a *tiny* area of the monument, a mere ~2.2% of its ditch system and the pottery has not yet been studied intensively. Indeed, there is a great deal that remains to be clarified concerning the site’s establishment, development and abandonment more generally. For instance, it cannot be assumed that the two ditch systems and palisade were all built at the same time (cf. *Oswald et al. 2001.75–77*), with the latter feature potentially relating to a later, more defensive reconfiguration of the site. This is something we see at other causewayed enclosures, such as Crickley Hill in Gloucestershire (*Dixon 1979*), and the Stepleton enclosure on Hambledon Hill (*Mercer, Healy 2008.760–761*).

Nor is the relative date of the pits clear; they could be associated with a pre-enclosure phase of settlement and/or pertain to activities that took place during or after the monument’s life.

Another major question concerns the existence of any significant pre-enclosure activity, and the reasons as to why the site was originally established at this location. Starting with the latter issue, it is suggested above that the spring was the monument’s central feature, both physically and spiritually. Planned excavation and palynological coring at the spring will hopefully provide us with more insight as to whether the site was established and cleared by incoming agro-pastoralists or if it represents the appropriation of a culturally significant place of an indigenous hunter-gatherer population. In turn, aerial photography and geophysical survey have revealed traces of two features at the site that *might* represent Neolithic activity that pre-dates the causewayed enclosure. These comprise the potential long-house in the monument’s northeast quadrant (Fig. 3), and a possible long barrow ditch that appears to be cut by the enclosure ditches of the southeast quadrant (*Schofield et al. 2021.116, Fig. 7*). Aside from the potential stratigraphic relationship of the latter feature, both structures are associated primarily with the first centuries of the 4th millennium cal BC, *i.e.* the Earliest Neolithic phase that precedes the era of causewayed enclosures (*Bayliss et al. 2011.719–724; Ray, Thomas 2018.114–122*).

By the Late Chalcolithic/Early Bronze Age (later 3rd-earlier 2nd millennium cal BC), we believe that the enclosure had been long-abandoned and the ditches naturally infilled by silt, hence the fact that the barbed and tanged arrowhead was recovered from the uppermost fill of F#001. The nature of this later activity at the site remains unclear, although another

projectile of the same type was found in 1985 on the ground above the ancient ditches (*HER FRT 005 2021*). We further note the traces of four ploughed-out round barrows of likely similar date *c.* 625m east of the monument suggest that there was a ‘Beaker Culture’ settlement nearby (*Historic England 2015*). With Beaker pottery having been recovered in the upper levels of ditches at several other causewayed enclosures

Context	Description	Identifications
F#001 (011.03)	Ditch terminus	<i>Quercus</i> x 1 (cf. sw)
F#001 (011.04)	Ditch terminus	<i>Quercus</i> ++ (hw)
F#001 (011.06)	Ditch terminus	<i>Quercus</i> x 4 (hw); <i>Corylus</i> x 1
F#002 (006.01)	Ditch terminus	<i>Ulmus</i> or <i>Ulex/Cytisus</i> x 1, <i>Quercus</i> ++, <i>Alnus/Corylus</i> +
F#002 (006.02)	Ditch terminus	<i>Quercus</i> ++ (cf. sw), <i>Quercus</i> ++ (cf. sw, hw), <i>Betula</i> sp. +
F#002 (006.03)	Ditch terminus	<i>Quercus</i> +, <i>Alnus</i> +, Maloideae +
F#002 (006.04)	Ditch terminus	<i>Alnus/Corylus</i> ++, <i>Quercus</i> + (hw), <i>Corylus</i> x 1
F#005 (007.01)	Pit	<i>Quercus</i> +++ (hw + burr), <i>Alnus/Corylus</i> +
F#011 (019.01)	Palisade trench	<i>Quercus</i> x 17 (hw), <i>Quercus</i> ++/+ (sw)

Tab. 6. Overview of the charcoal recovered from the 2019 Freston excavation.

(including Etton, Hambledon Hill, Maiden Castle and Windmill Hill), this suggests that the Late Chalcolithic/Early Bronze Age human presence at Freston formed part of a larger cultural tradition of engaging with these ancient spaces (Oswald et al. 2001: 137–139; see also Kinnes 2006).

Looking ahead, one of the key research interests concerns how many groups of people gathered here, and where they came from. With the monument notably larger than some of the East Anglian causewayed enclosures (8.55ha), such as Etton (>3ha) and Great Wilbraham (2.5ha) (Evans et al. 2006; Pryor 1998), might it follow that Freston was constructed by a greater number of people who came together from a wider area? While isotopic studies of faunal and human remains have been used to help reconstruct the catchment areas for causewayed enclosures and later Neolithic henges (Evans et al. 2019; Madgwick et al. 2019; Neil et al. 2018), at Freston it may be necessary to focus on sourcing the pottery and lithic assemblages to generate such information, given what appears to be the poor bone preservation at the site. The ceramic vessels may also provide evidence for the plants and animals consumed on site, by way of the organic residue analysis of the macroscopic encrustations recorded on the interior of several sherds on their interiors (Copley et al. 2005), matter that can also be employed for short-life radiocarbon dating (Berstan et al. 2008; Casanova et al. 2020). In turn, use-wear studies of the worked flint can help reconstruct other activities performed at the site, with woodworking, textile manufacture, and food preparation all documented previously at such sites (Bye-Jensen 2019).

Ultimately, the project aims to take a long-term perspective on the Mesolithic-Neolithic transition in Suffolk, as a means of contributing to larger debates regarding the dynamics of ‘Neolithisation.’ Such investigations would engage with the emergence of new ontologies involved as much as shifts in subsistence bases and the organization of production (cf. Thomas 1988:63–64). While Mesolithic activity in the county is relatively well documented, including a few surface finds from the Shotley peninsula (Wymer 1999b), we have few absolute dates for this period. Furthermore, those sites that do have radiocarbon determinations are significantly earlier than the late 5th/early 4th millennium cal BC (Jacobi 1984; Wymer et al. 1975), *i.e.* the period when we might have the interaction between indigenous hunter-gatherers and incoming farmers (Brace et al. 2019).

At Freston it is hypothesized that the causewayed enclosure’s spring-based location *might* attest to an appropriation of indigenous landscape uses and cosmologies (cf. Davis 2012; Jacques et al. 2014; Tilly 1996:65), while hazelnut consumption and pitting can also be suggested as practices that have their heritage in local Mesolithic traditions (Milner 2009; Overton, Taylor 2018). In turn, the longhouse *might* relate to the phase of Earliest Neolithic colonisation, prior to the construction of the causewayed enclosure. Overall, there remains much to be clarified, hopefully in the forthcoming excavation seasons.

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