

EARLY NEOLITHIC ACTIVITY, A BEAKER BURIAL AND A PREHISTORIC FUNERARY ENCLOSURE AT WOOLPIT

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Summary

Excavation by Pre-Construct Archaeology found evidence of prehistoric activity on an outcrop of sand and gravel geology. Sherds of Mildenhall-ware type pottery and Mesolithic–Early Neolithic struck flints were recovered from dispersed glacial features and tree hollows, probably representing the remnants of surface scatters of occupation debris that had been incidentally caught up and preserved. One pit contained a larger, deliberately deposited, group of Early Neolithic pottery, flint and plant remains, radiocarbon-dated to 3890–3650 cal. BC. Arguably the most significant discovery was the crouched burial of an adult/elderly man (?) accompanied by a Beaker vessel and radiocarbon-dated to the Chalcolithic period. The grave was surrounded by an unusual ‘sub’-square enclosure formed by a continuous ditch and measuring 22.5m by 18.5m. Artefact evidence and two radiocarbon dates are inconclusive as to whether the enclosure was contemporary with the burial or a later feature, but comparison with the small corpus of similar enclosures known in Suffolk and adjacent counties suggests that a later Bronze Age or Iron Age date is most likely. Based on its morphology and the lack of associated features or cultural material, the enclosure is considered most likely to have had a funerary or other ‘ritual’ function. It might perhaps have been dug to reference and monumentalise an earlier, missing, cairn over the Beaker burial.

INTRODUCTION

AN ARCHAEOLOGICAL EXCAVATION was carried out by Pre-Construct Archaeology on land south of the Old Stowmarket Road, Woolpit, Suffolk (centred on NGR TL 9805 6227) between 29 June and 17 July 2020 (Suffolk Site Code WPT 054) (Fig. 185). The archaeological investigation was commissioned by RPS Consulting, on behalf of David Wilson Homes, in response to a planning condition attached to construction of new homes; the aim was to record any significant archaeological remains which might be damaged or destroyed by the development.

The excavation was preceded by an initial geophysical (magnetometer) survey and two phases of trial trench evaluation, which identified three possibly discrete areas of Early Neolithic and Early to Middle Iron Age activity in the south of the site.¹ The excavation comprised three open areas (each approximately 20m by 20m) targeting these remains (Figs 186 and 187). A small area that initially could not be excavated due to overhead powerlines was stripped in August 2021, after their diversion, to expose the remaining corner of a prehistoric ditched enclosure.

Full details of the background to the project, excavation methodologies, descriptions of all the archaeological features and deposits investigated, full specialist reports and catalogues of the artefacts and environmental remains can be found in the Excavation Report, available at Suffolk Historic Environment Record (SHER) and the Archaeology Data Service.² The site archive will be deposited at Suffolk County Council Archaeological Archive.



FIG. 185 – Site location with prehistoric sites and finds.

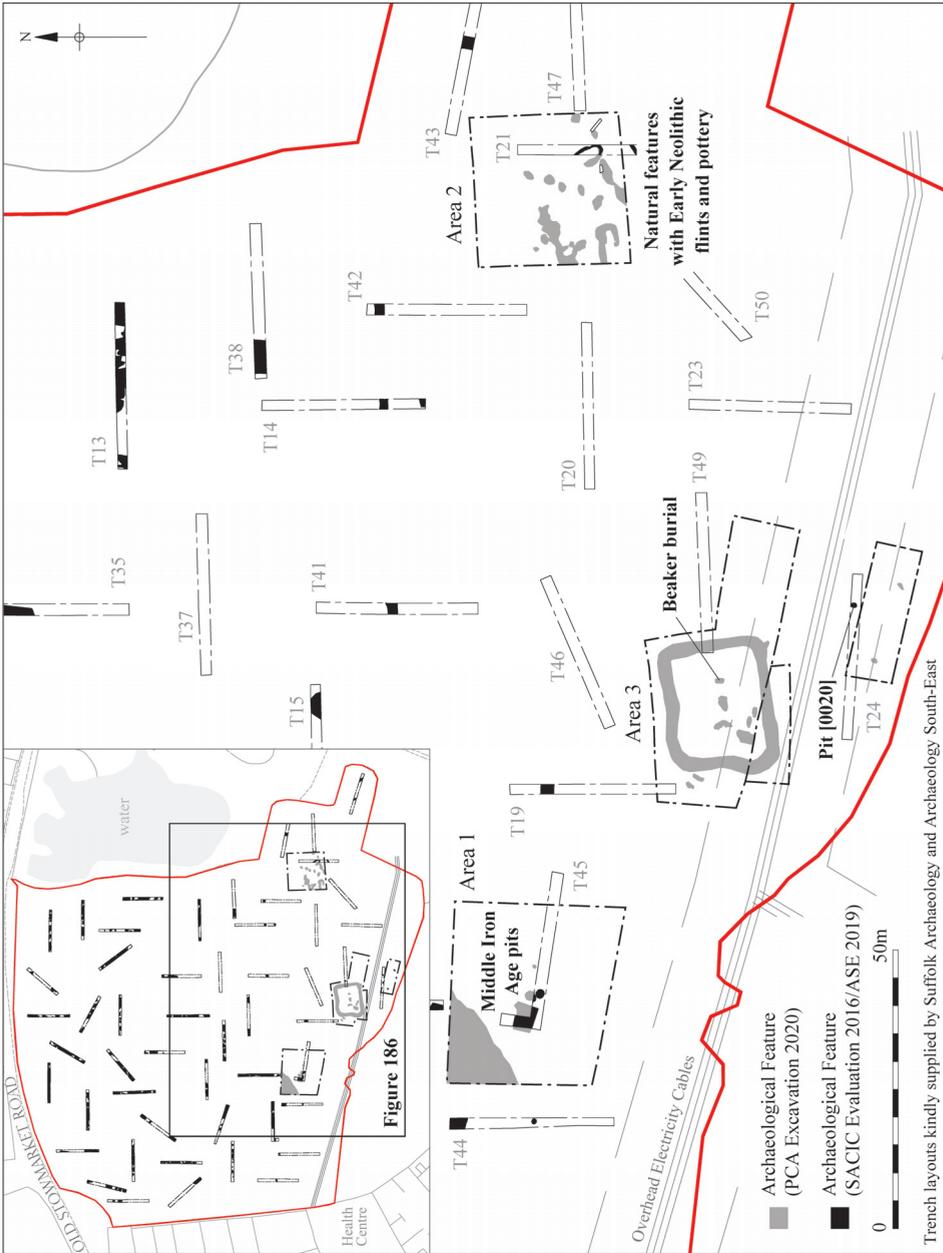


FIG. 186 – Site plan with excavation areas.

TOPOGRAPHY AND GEOLOGY

The site is on gently sloping ground, rising from c.58m AOD in the north-east to 63m AOD in the south-west. It overlooks a shallow tributary valley of the river Black Bourn to the east; the main course of the river is a mile away on the west side of the village. A spring rises at Lady’s Well, 500m north-west of the site, and flows north to join the river. Ground level falls



FIG. 187 – Aerial view of excavations, view east towards (from foreground to back) Areas 1, 3 and 2
(photo: Peter Rutt, *Lapwing Drone Photography*).

sharply beyond the site's eastern boundary, where there are disused brickearth pits from the former Woolpit Brick Company, one now a fishing lake.

The geology of the site is Crag Group sand overlain by Lowestoft Formation glacial till/outwash deposits in the west of the site and Woolpit Beds clay and silt in the east.³ The evaluation trenches found that the central and northern parts of the site had been heavily disturbed by nineteenth-century brickearth extraction, at which time the site was owned by the adjacent brickworks. This was represented by numerous broadly rectangular, steep- to vertical-sided, flat-based pits, mostly small and none more than around 5m across, which might represent the piecework of individual hired labourers.⁴ Surviving prehistoric

archaeological remains were concentrated on the higher ground, in the south of the site, where there was an outcrop of relatively light and free-draining sand and gravel. The ditched enclosure occupied a slight spur overlooking the valley to the east.

EXCAVATION RESULTS

MESOLITHIC TO EARLY NEOLITHIC OCCUPATION, c.8000–3000 BC

The earliest activity at the site was represented by a sparse distribution of amorphous features, concentrated in Excavation Area 2, but also present in Area 3. Their irregular shapes in plan and profile and the sterile appearances of their fills indicate that these features were natural in origin, probably a combination of periglacial cracks in the ground surface and hollows from fallen trees. Some of these features contained small quantities of Mesolithic–Early Neolithic struck flint and/or Early Neolithic (c.4000–3000 BC) pottery, with occasional potsherds also recovered from the subsoil in the south of the site (Trenches 44, 47). These artefacts were generally only present as one or two pieces in each feature, in fills that were otherwise sterile and non-anthropogenic in appearance. They are likely to represent remains of surface scatters of Mesolithic–Early Neolithic occupation debris that had become incidentally caught up and preserved in hollows in the ground surface. Indeed, it is possible that this sandy slope was only lightly vegetated/bare ground on which the sand was prone to shifting and leaving hummocks and depressions.

A single pit in Area 3 ([0020], Evaluation Trench 24) contained a fairly large artefact assemblage, including pottery (fifty-seven sherds; 241g), struck (forty-eight in total) and burnt flints, calcined animal bone (including bones of cattle and pig), charred wheat (*Triticum* sp.) and possible spelt (*cf. T. spelta*) grains, hazelnut shell fragments and the endocarp fragment of a fruit from the rose family (Rosaceae). The struck flint is all debris from systematic blade-based flint reduction and includes an unfinished leaf-shaped arrowhead that may have been abandoned due to flaws in the flint.⁵ Together, these clearly represent a deliberate burial of residues from Early Neolithic occupation.

Seventy-six sherds (328g) of Early Neolithic pottery were recovered from nine features and the subsoil.⁶ Fourteen sherds (31g) are made of sandy fabrics and sixty-two (297g) are in flint-tempered fabrics. Rims are present from four vessels: three bowls and one small, fine cup. The bowls have folded, rolled or in-turned rims, which are comparable to Early Neolithic vessels from Hurst Fen, Mildenhall, and the cup is simple and everted (Fig. 188).⁷ Body sherds are undecorated apart from a single angular sherd from a shouldered vessel, which has light channelling on the upper body; this motif can also be paralleled on vessels from Hurst Fen.⁸ The small assemblage is not especially diagnostic; however, the decorated angled shoulder is suggestive of a Mildenhall-ware derivation (which forms the regional variant of the wider earlier Neolithic Decorated Bowl traditions). As such, the site assemblage is broadly comparable to the pit cluster-derived assemblages at Kilverstone, Norfolk, which were radiocarbon-dated to approximately 3650–3400 cal. BC.⁹ One of the charred spelt grains in the pit fill returned a calibrated radiocarbon date of 3800–3650 BC at 94.6 per cent probability (BRAMS-4977) (see Table 1).

In addition to the unfinished arrowhead from Pit [0020], notable chronologically diagnostic flints include an edge-trimmed prismatic blade with very fine retouch/use-wear or worn serrations along one edge, found in Tree Hollow [174] (Area 3), and an edge-trimmed blade-like flake or large blade with fine, steep retouch, from Gully [0045] (Trench 21, Area 2) (Fig. 189).

Although agriculture began to be adopted in Britain from c.4000 BC alongside other

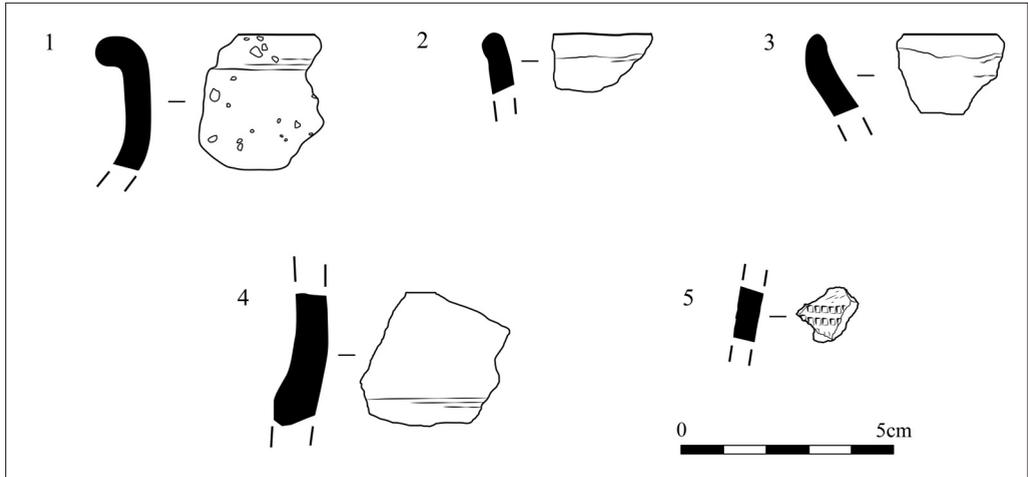


FIG. 188 – Prehistoric pottery illustrations. 1. Subsoil (002) (Trench 47), bowl with out-turned neck, Early Neolithic. 2. Pit [0020] (0021) (Area 3), bowl with plain in-turning rim, Early Neolithic. 3. Pit [0020] (0021) (Area 3), straight-sided cup (?) with slightly beaded rim, Early Neolithic. 4. Pit [0020] (0021) (Area 3), possible necked out-turning profile, Early Neolithic. 5. Ditch Slot [136] (134) (Area 3), comb-impressed Beaker sherd, Late Neolithic–Early Bronze Age (*illustrations: Cate Davies*).

significant social and cultural changes, there is evidence that some aspects of a mobile, ‘Mesolithic’, way of life persisted into the Neolithic period. Population density remained low, with people perhaps living in small extended family or kin groups and moving around the landscape exploiting the varying natural resources available in different locations. Evidence for Early Neolithic settlement in eastern England is generally limited to scatters of struck flint and sometimes pottery, which often only survive in the topsoil/subsoil or residually in later cut features. The exception to this picture is provided by the small group of excavated ‘pit sites’, these comprising clusters or loose scatters of pits and hollows containing residues — sometimes apparently carefully selected — of everyday life: broken pottery, flint tools and knapping waste, butchered animal bones and charred grains and wild foodstuffs, sometimes alongside more unusual objects. These are usually interpreted as the remains of temporary encampments, some perhaps visited repeatedly by the same, or different, mobile groups. However, it should be acknowledged that others have cautioned against assuming nomadism where non- or poor survival may be the real issue; evidence for Neolithic houses might still be found in East Anglia, while Early Neolithic finds scatters and ‘pit sites’ could be interpreted as permanent settlements.¹⁰

Pit sites have been excavated at Hurst Fen, Mildenhall, and Reydon Farm, both in Suffolk, and at Kilverstone, Spong Hill, Broome Heath, Ditchingham, and Hopton-on-Sea in Norfolk.¹¹ Sometimes there is clear evidence that the contents of the pits derived from some larger, primary body of material, having been exposed to weathering and other processes before burial. Surface middens as well as pits survived at North Fen, Sutton Gault, Cambridgeshire.¹² The low numbers of potsherds and struck flints in the natural features at Woolpit suggest the original presence of similar, though not such concentrated, surface deposits, which had become incidentally caught and preserved in dips and hollows in the ground surface.

Why only one pit was found containing a deliberate deposit of cultural material is unclear. It may be that other pits are located on the hilltop south of Area 3, just outside the site

Context	Cut	Lab code	Material	Radiocarbon age BP (before AD 1950)	Calibrated date (95.4% probability)	Period	Other dating evidence	Comments
(0036)	[0020]	BRAMS-4977	Charred grain (<i>Triticum spelta</i>)	4970±27	3890–3880 (0.9%) or 3800–3650 (94.6%) cal. BC	Early Neolithic	Mildenhall ware pottery, typologically Early Neolithic struck flint	
(149)	[148]	BRAMS-4245	Human bone (femur)	3848±25	2460–2410 (9.0%), 2410–2260 (61.7%) or 2270–2200 (24.7%) cal. BC	Chalcolithic/Early Bronze Age	Long-Necked Beaker	
(181)	[182]	BRAMS-4246	Charcoal (<i>Salix/Populus</i> (willow/poplar) timber)	381±24	1450–1522 (65.2%) or 1575–1625 (30.2%) cal. AD	Late medieval to early post-medieval	Residual Early Neolithic potsherds, Early Bronze Age pottery (residual?), Mesolithic–Bronze Age struck flint	Intrusive? Not stratigraphically secure
(183)	[185]	BRAMS-4247	Charcoal (<i>Corylus avellana</i> (hazel) timber)	3548±25	2010–2000 (0.3%), 1970–1860 (64.1%) or 1850–1770 (31.0%) cal. BC	Early Bronze Age	Residual Early Neolithic potsherds, Early Bronze Age pottery (residual?), Mesolithic–Bronze Age struck flint	Residual? Not stratigraphically secure

TABLE 1 – Radiocarbon dating.

Dating was carried out by the Bristol Radiocarbon Accelerator Mass Spectrometry Facility (BRAMS). Pre-treatment methods and their respective pre-treatment codes are described by Knowles *et al.* (2019), along with details regarding graphitisation, AMS measurement and data reduction. Results are given in uncalibrated radiocarbon years Before Present (BP). The data given are corrected for isotopic fractionation using the $^{13}C/^{12}C$ ratio measured on the AMS. The $\delta^{13}C$ value is measured on the AMS and may be subject to additional isotopic fractionation; the error associated with this value is typically $\pm 1\%$. All dates are modelled in OxCal v4.4 (Bronk Ramsey 2009; 2017) using the IntCal20 atmospheric calibration curve (Reimer *et al.* 2020).

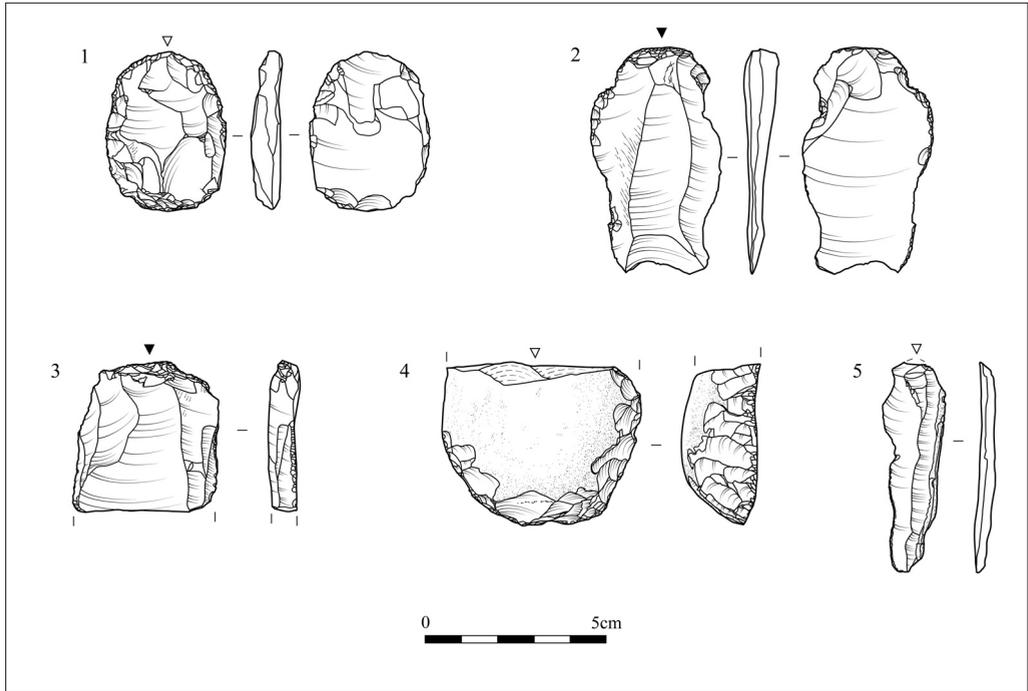


FIG. 189 – Struck flint illustrations. 1. Pit [0020] (0021) (Area 3), unfinished leaf-shaped arrowhead, Early Neolithic. 2. Pit [0020] (0036) (Area 3), narrow blade-like flake with fine bifacial retouch on right margin, Mesolithic–Early Neolithic. 3. Gully [0045] (0044) (Area 2), edge-trimmed blade-like flake or large blade with fine, steep retouch along left margin, Mesolithic–Early Neolithic. 4. Ditch Slot [136] (134) (Area 3), end scraper made on a large, mostly cortical, flake with well-executed scalar retouch, Neolithic–Early Bronze Age. 5. Tree Hollow [174] (173) (Area 3), edge-trimmed prismatic blade with very fine retouch/ use-wear or worn serrations along part of right margin, Mesolithic–Early Neolithic (*illustrations: Cate Davies*).

boundary. Indeed, it is possible that the finds from the hollows in Area 2 represent occupation material that had been washed/rolled down the slight slope from a more focal area to the south-west. Alternatively, there might be some chronological or cultural reason why pit-digging took place at some Early Neolithic occupation sites, but not others.

An Early Neolithic pit site has recently been discovered just 5km east of Woolpit, at Fishponds Way, Haughley, where sixty-two tree hollows and pits contained Mildenhall-type sherds, a little charred wheat and barley, hazelnut shells and nearly three thousand worked flints.¹³ The activity at Haughley was broadly contemporary with that at Woolpit and might reasonably even have involved the same group(s) of people. Early Neolithic occupation tends to be found on light sand and gravel soils near to streams and rivers; Fishponds Way is directly beside a tributary of the river Gipping. Woolpit fits this pattern, although at 500m from the spring at Lady's Well, it is somewhat further from a water source; this might perhaps explain the relatively lower level of activity compared with the pit sites described above.

BEAKER BURIAL, c.2500–2200 BC

with Petra Ivanova¹⁴ and Sarah Percival¹⁵

Area 3 contained a crouched inhumation [148] accompanied by a fragmentary ceramic Beaker placed behind the shoulders (Figs 190 and 191). The body of a mature adult/elderly man (?) Sk149 had been laid in a tightly crouched position, on its right side, and oriented broadly north–south with the head to the north, apparently facing west. The skeleton, apart from largely intact lower legs, was found in a poorly preserved and fragmented state (approximately forty per cent complete); the remaining bones are badly affected by surface erosion and root etching. A sample of bone taken from one of the individual's femurs returned an AMS date of 2460–2410 (9.0 per cent), 2410–2260 (61.7 per cent) or 2270–2200 (24.7 per cent) cal. BC (Table 1), the Chalcolithic period.

The form of the grave is potentially interesting, the body lying in an irregular hollow, possibly natural in origin, the main part of which was roughly oval in plan with moderately sloping but irregular sides, a very uneven base (1.83m long by 1.12m wide by 0.29m deep) and a homogeneous fill of mid-greyish-brown silty sand with flint inclusions that was similar in appearance to the fills of the other natural features. Alternatively, it is possible that an originally regular-shaped shallow, oval grave cut may have been severely disturbed by later rooting or burrowing, accounting for the irregular 'extension' of the grave to the north-west, which had an indistinguishable fill, and for the incomplete and poorly preserved condition of the skeleton and Beaker. The grave fill contained a small, possibly struck, flint flake. A soil sample <106> taken from the area of the feet contained a fossil shark's tooth, which may either have been a deliberate burial or, probably more likely here, an incidental inclusion deriving from the underlying Crag.¹⁶

Due to the absence of features important for sex identification, the attempt to assign a sex to the individual was based on measurements of the right talus bone. Since this is normally used only as an additional method, helping with identification of unknown individuals or used in commingled contexts, the result must be viewed with caution.¹⁷ The measurements of the talus bone are consistent with a male individual (Table 2).

Maximum length	Maximum width	Body height	Maximum length of trochlea	Maximum width of trochlea
0.56mm	0.44mm	0.33mm	0.38mm	0.34mm

TABLE 2 – Measurements of the right talus of Sk149.

Age could only be evaluated through assessment of wear on the remaining dentition, consisting of three incomplete teeth. The degree of wear on two molars is extensive (graded as '5++'), the occlusal surface being worn out and broken in some areas. The age estimate based on this is about 45+ years.¹⁸ The number and completeness of the available teeth are clearly very limited, and no other features important for age analysis are present, so the suggestion that this individual was a middle/old adult, at least forty-five years old, is tentative. As average life expectancy prior to industrialisation and the advent of modern medicine and health care was approximately thirty to thirty-five years, relatively few individuals over this age are found in the archaeological record.¹⁹ An individual forty-five years or more old would have been venerable by Late Neolithic–Early Bronze Age standards.

Slight formation of calculus, created when plaque is calcified on the tooth surface, was

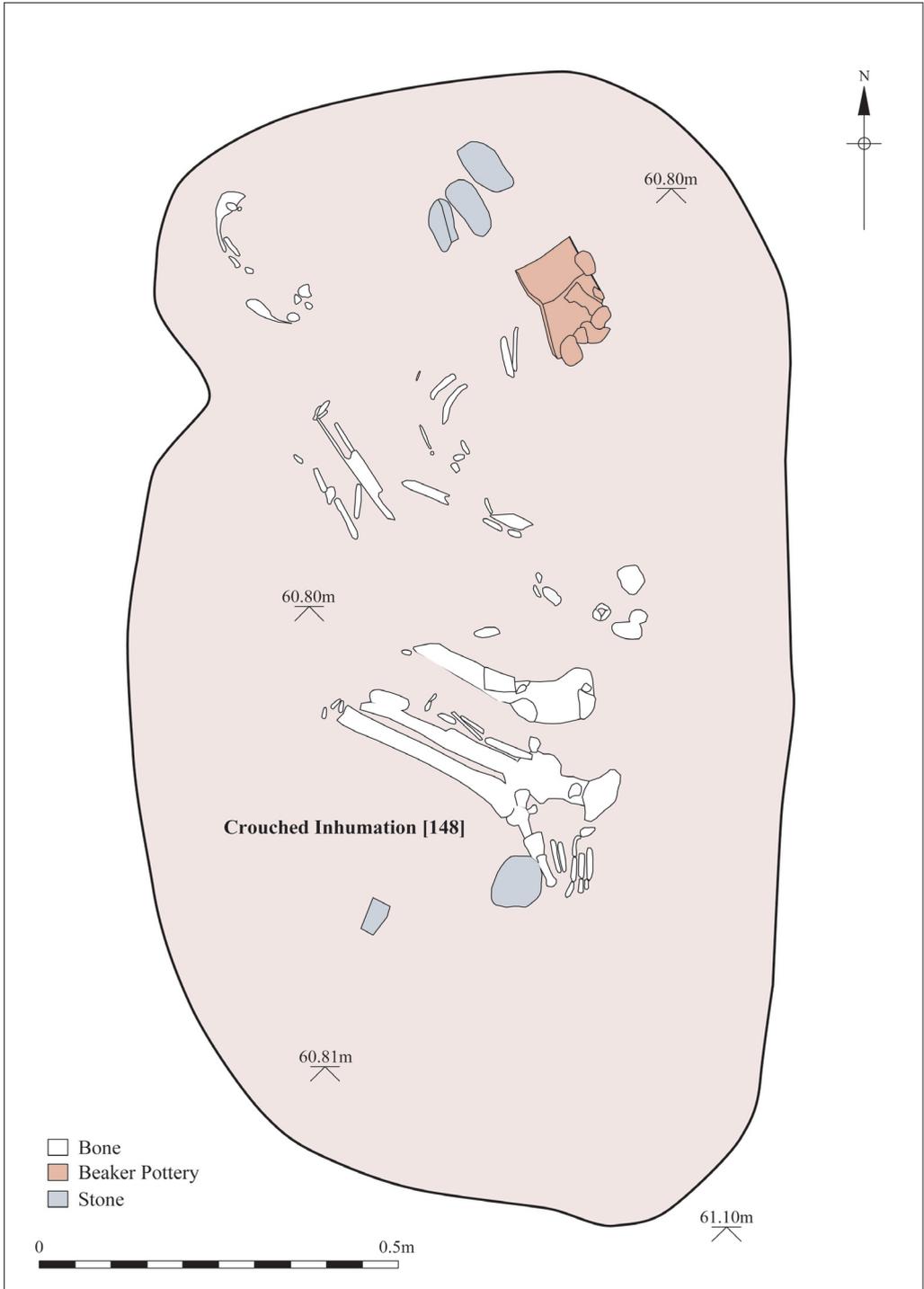


FIG. 190 – Beaker burial.



FIG. 191 – Beaker burial (north to top; 1m scale) (photo: Jon House).

observed on a premolar and on both molars in the supra-gingival form. This, together with the extensive tooth wear observed on the dentition, indicate that the dental health of this individual may have been undermined by an abrasive diet and poor oral hygiene.

Bone formation, measuring 0.7cm, was detected on the superior aspect of the right inferior articular facet of a lumbar vertebra (Fig. 192). This indicates that the individual suffered from a facet joint osteoarthritis, a condition which causes pain in the lower back. This pathology may have been a reaction to an injury, or it may have occurred over time as a response to the ageing process.²⁰

The Beaker is made of fine fabric with sparse fine grog inclusions and rare fine flint inclusions in a fine clay matrix. It has a long, straight neck terminating in a direct, flat rim. The diameter at the rim is c.140mm and around 25 per cent of the rim survives. The lower body and base are missing, but the body appears to be rounded. The profuse decoration



FIG. 192 – Bone growth on the superior aspect of the inferior facet of a lumbar vertebra. Anterior side is up (*photo: Petra Ivanova*).

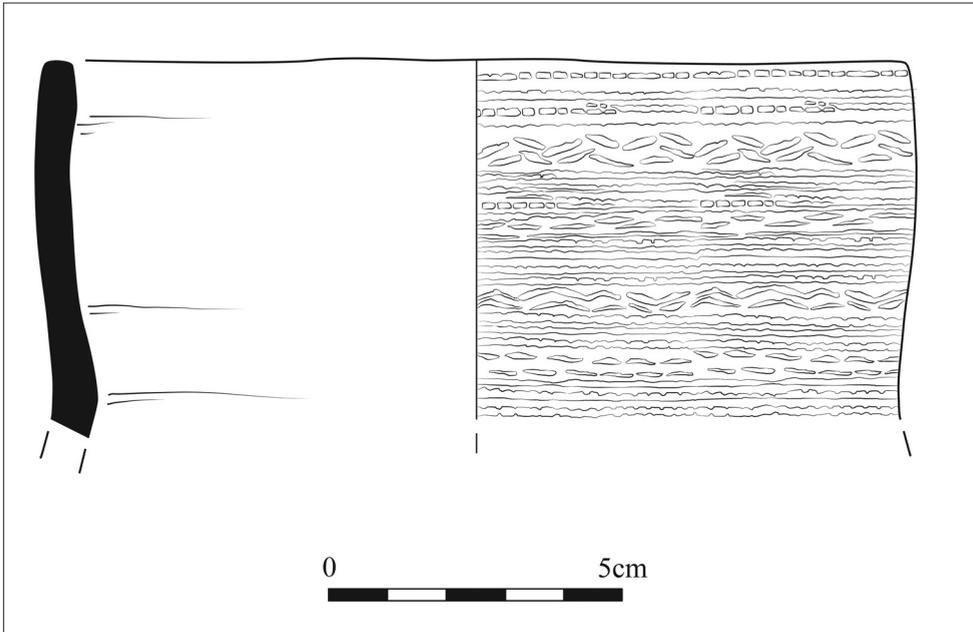


FIG. 193 – Beaker illustration (*illustration: Cate Davies*).

features square-toothed comb-impressed bands, some filled with a double zigzag motif, others with lenticular impressions, possibly from a fingernail, covering the entire neck of the vessel (Fig. 193). The Beaker probably falls within Needham's Long-Necked type as the decoration displays the deep zones emphasising the vessel shape that are characteristic of this form.²¹ Long-Necked Beakers are thought to have been in use in burials from the twenty-second century BC or earlier, suggesting that the date of the burial may fall towards the younger end of the calibrated AMS range.²² The Beaker does not match previous finds from the parish, but it has similar decorative motifs to a Beaker from an inhumation at Brantham Hall Farm.²³ Further small sherds of Beaker, from another vessel based on the different comb impressions (Fig. 188.5), came from Enclosure Ditch Slot [136], and undecorated sherds in similar fabric came from Ditch Slot [142] (see below).²⁴

A number of inhumation burials accompanied by Beakers have been excavated in Suffolk, including, for example, at Blood Hill, Bramford, the aforementioned Brantham Hall, Risby Poor's Heath, Flempton, Boss Hall, Ipswich, and Flixton.²⁵ Some of these were associated with barrows or ring-ditches, but others lacked associated funerary monuments. The crouched arrangement of the body and positioning of the Beaker within the grave at Woolpit are typical.

Finds of bronze metalwork and cropmark ring-ditches normally constitute the most archaeologically visible evidence of Bronze Age occupation in a landscape and are taken as a proxy for the generally less visible remains of settlements and field systems. Cropmarks of two possible ring-ditches, one around 20m in diameter, and potentially representing the remains of Bronze Age burial monuments, can be seen on aerial photographs 600m south-east of the site.²⁶ Metal detector finds of Late Bronze Age date are recorded 500–700m north and north-west.²⁷

A Beaker has previously been found in Woolpit, presumably disturbed during quarrying activity, in 'Seaman's Stone Pit'.²⁸ The description on the Ipswich Museum card suggests that the vessel was broken, but could be reconstructed; this state probably indicates that it came from a funerary rather than domestic context (where potsherds would typically be broken, abraded and mostly not capable of being refitted). The illustration of the vessel in Clarke's corpus can best be classified as an 'S'-profile Beaker, a form which had a long currency.²⁹ The Seaman's Stone Pit example is probably later in the range, displaying both 'slender mid-bellied' and some 'globular' characteristics. Slender mid-bellied Beakers are in Needham's phase 3, c.1800–1700 BC; globular forms start earlier, broadly c.2100 BC.³⁰ Other finds of Bronze Age metalwork are recorded from the parish, but most of the objects were found in the nineteenth or early twentieth centuries and the exact locations of the find-spots are not recorded. These include a Middle Bronze Age socketed basal-looped spearhead,³¹ two probably Late Bronze Age annular 'amulets' with suspension loops, possibly pendant harness fittings,³² and a bronze sword found close to Woolpit Bridge, near to the Black Bourn.³³ Recent large-scale evaluation and targeted excavation on the north side of the village has found remains of a Bronze Age 'burnt mound' associated with a spring.³⁴

Overall, there is good evidence for Bronze Age occupation and activity in Woolpit and adjacent parishes, including in Elmswell, to the north, and Drinkstone, to the south-west, which provides a context for the Beaker burial. However, understanding of the temporal and spatial nature of settlement certainly needs to be enhanced. The sparser distribution of Bronze Age evidence in the landscape south of Woolpit may be genuine, but it could at least partly reflect fieldwork bias: many of the sites discussed above have come to light because of gravel extraction or recent development in villages with good transport links. The smaller villages and hamlets on the 'High Suffolk' clay, to the south, have seen less modern expansion and thus fewer opportunities for archaeological investigation; this geology is also less conducive to cropmark formation.

A BRONZE OR IRON AGE FUNERARY ENCLOSURE?

The Beaker burial was within a broadly rectangular/'sub'-square ditched enclosure, aligned roughly east–north-east to west–south-west and measuring 18.5m by 22.5m (externally), with internal dimensions of 17.5m by 14m and an internal area of 272m². The enclosure was formed by a continuous ditch, through which eight 2m slots were dug at intervals to ascertain the ditch's profile and nature of infilling, and to recover dating evidence and any finds that might help to characterise the enclosure's function (Figs 194 and 195). The positioning of slots was slightly skewed by the presence of an evaluation trench cutting the east side of the enclosure and by the circumstances under which the south-west corner was excavated, that is, separately from the main part of the enclosure and after that area had been backfilled and built on.

The ditch measured between 1.9m and 3m wide and 0.5–0.8m deep, with moderately sloping sides and a concave to 'V'-shaped base (Fig. 194). Where better preserved, it contained between two and three observable fills, which were mostly sterile in appearance and derived from natural infilling with runoff silt and slumped sand from the ditch sides; the shallower, south-western, part of the ditch contained only one homogeneous fill. The sterility of the ditch fills no doubt accounts for its invisibility on the magnetometer survey. There was no obvious evidence for a slumped bank in the ditch fills, nor any sign that it had ever been scoured out or recut. The apparent slight kink in the south-western part of the enclosure circuit might be somewhat exaggerated by the poorer preservation of the ditch there.

The ditch fills were artefact poor, containing in total just six 'crumbs' (5g) of Late Neolithic–Early Bronze Age pottery, including comb-impressed Beaker sherds (different comb impressions to the vessel from the burial; Fig. 188.5) and four residual sherds (20g) of Early Neolithic pottery, possibly of Plain Bowl type (in addition to a 1g pottery 'crumb' which is not closely datable). The Beaker sherds were found in Slots [136] and [142], in a middle fill and a lower fill, respectively. Struck flints (twenty-eight in total) were recovered from Slots [114], [136], [142] and [185]. These are a mix of flakes, chips and a few blades/blade fragments, the latter likely Mesolithic–Early Neolithic, but the former including several squat and/or badly detached examples that are more in keeping with later prehistoric flint-working. Slot [136] contained a large and well-made end scraper (Fig. 189.4), which could be Neolithic or Early Bronze Age.

The only features within the enclosure were the Beaker burial and five tree hollows that are likely to have been either earlier than the enclosure (Early Neolithic) or possibly broadly contemporary. Two of these that were approximately central to the enclosure were fully excavated in case they contained human burials, but no human remains or associated material were found.

Taking into account the sterile appearance of the ditch fills, scarcity of artefactual material, lack of an entrance, absence of associated features (*e.g.* structures, pits) and its small size, a function as a settlement enclosure, or agricultural use (for example, as a stock pen), both seem unlikely. A function as a funerary 'monument' or mortuary enclosure is most plausible, with the surrounding ditch perhaps being dug at broadly the same time as the interment of Sk149, although the non-central position of the grave within the enclosure (offset to the east) is not easy to explain unless the central space was occupied by one or more trees (*e.g.* Tree Hollows [172] and [174]).

Alternatively, the enclosure of the slight spur on which the burial was positioned could have been a later event, perhaps intended to 'monumentalise' an earlier burial place. With this scenario in mind, it can be noted that there was a marked concentration of fairly large flint nodules (100mm–150mm) in the subsoil above and around the crouched burial, on the

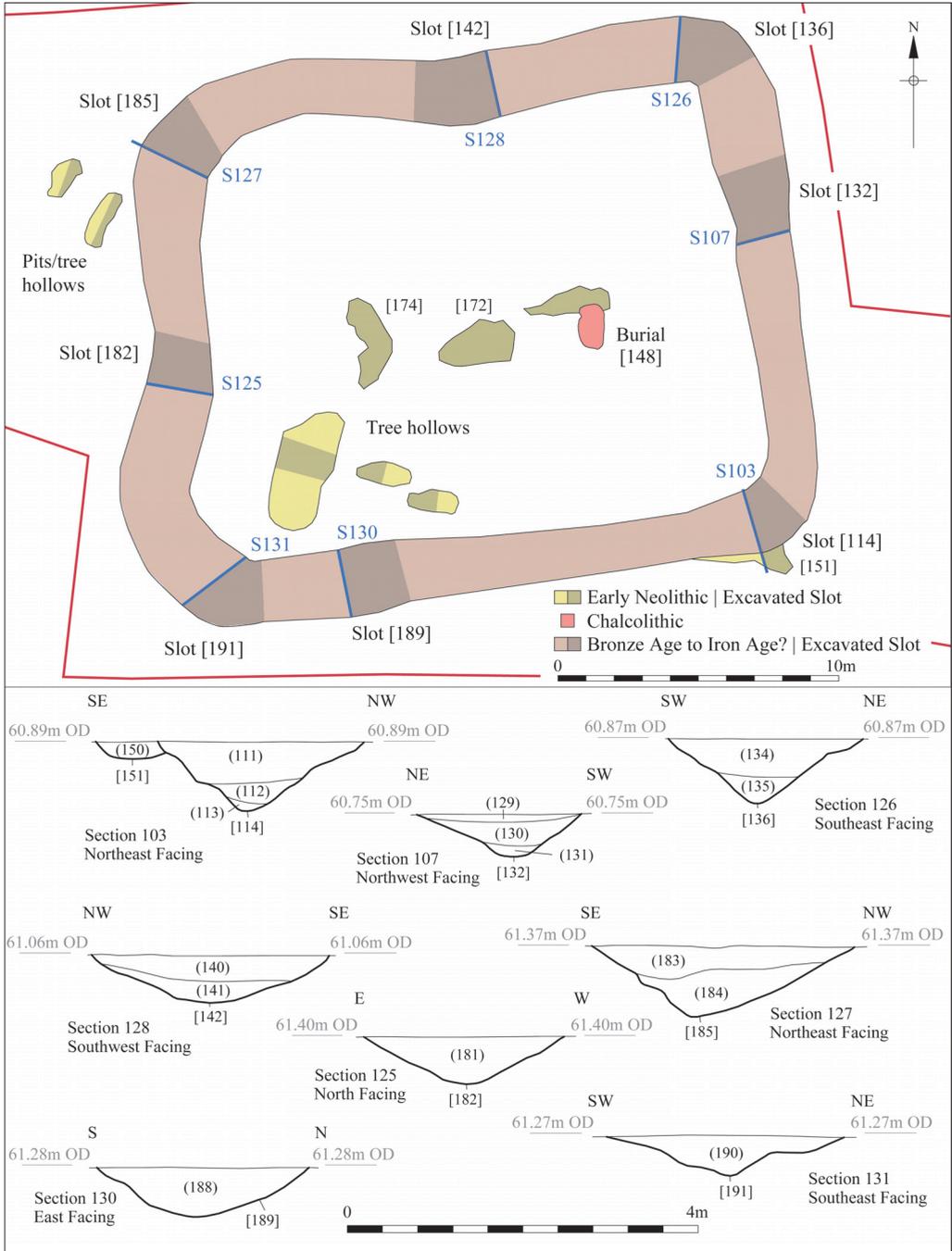


FIG. 194 – Plan of prehistoric enclosure and ditch sections.



FIG. 195 – Aerial view of enclosure, Area 3 (south to top)
 (photo: Peter Rutt, Lapwing Drone Photography).

stripped ground surface in and adjacent to the south-eastern part of the enclosure, and in the fills of Enclosure Ditch Slots [114], [132] and [142]. These stood out to the excavators from the general background of flint in the natural substrate, both in terms of their frequency and in their greater than average size. While this evidence is by no means conclusive, it could indicate that there was once a flint mound or cairn over the grave. If so, the location of the burial might have only been approximately indicated by an eroded/slumped mound by the time the ditch was dug; this could explain why the grave was not centrally positioned.

A third possibility is that the siting of the enclosure in this location was a later event that had no relation to and in no way referenced the presence of the Beaker burial. However, under this scenario, there would still be a need to explain the function of an enclosure of this small size, without an entrance, and lacking clearly associated settlement evidence.

Small pieces of wood charcoal found in bulk samples taken from two of the enclosure ditch fills were sent for AMS dating. These samples returned widely varying dates, one in the Early Bronze Age (2010–2000 [0.3 per cent], 1970–1860 [64.1 per cent] or 1850–1770 [31.0 per cent] cal. BC) and one in the late medieval to early post-medieval period (1450–1522 [65.2 per cent] or 1575–1625 [30.2 per cent] cal. AD) (Table 1). Due to the absence of suitable organic material in any of the lower fills of the ditch, both samples were from single/upper fills. Furthermore, given the sterile appearance of all the ditch fills and the scarcity of associated cultural material, this charcoal is likely to represent incidental and potentially residual (especially given the presence of residual Early Neolithic pottery) or intrusive inclusions, rather than deliberate deposits contemporary with a particular stage in the infilling of the ditch. As such, neither date is a reliable indicator of the age of the ditch or the time period during which it was filling in.

Bronze Age burial architecture is characterised by a diverse range of circular monuments. These include small (*c.* 4m–12m diameter) ring-ditches, common in Middle to Late Bronze Age ‘Ardleigh-type’ cremation cemeteries in north-east Essex and south-east Suffolk,³⁵ but also found in association with cremation burials elsewhere in the county, for example, at Ingham Quarry, Fornham St Genevieve.³⁶ At the opposite end of the scale, very large ring-ditches are known at some sites, for example, the *c.* 80m diameter outer ditch of the circular ‘monument’ at Hopton-on-Sea, Norfolk.³⁷ However, the overwhelming majority of barrows and ring-ditches, frequently known from cropmarks rather than upstanding remains or archaeological excavation, tend to fall into a broad size range of *c.* 20m–40m across. At 18.5m by 22.5m, the Woolpit enclosure would therefore be fairly typical in size compared to other Bronze Age burial monuments. However, its rectangular/sub-square form would be highly unusual: as far as can be ascertained, there are currently no known British parallels for Chalcolithic/Bronze Age funerary monuments or mortuary enclosures with this morphology.

A small number of square/sub-square enclosures of similar size to that at Woolpit (typically not more than *c.* 20m on a side), mostly known only from cropmarks, are recorded in Suffolk Historic Environment Record (Fig. 196). They are generally provisionally assigned a broad Iron Age date, apparently based on their perceived similarity to, and potential association with, Middle Iron Age (*c.* fifth to first century BC) Arras Culture square barrows. These are best known from the large excavated cemeteries in the East Riding of Yorkshire,³⁸ but were certainly part of a more widespread monumental tradition, as cropmark remains of similar features are known across the East Midlands and eastern England, down to Essex and Kent.

In Suffolk, a cropmark interpreted as a possible Iron Age square barrow, 7m in diameter, is recorded to the south-east of Red House Farm, Falkenham, close to the river Deben (Fig. 196.2).³⁹ Another similar cropmark to that at Falkenham has recently been investigated a few miles up the Deben valley at Martlesham (Fig. 196.3).⁴⁰ Excavation at this site has revealed three square enclosures, each approximately 5m across, two of them with continuous, conjoining ditches, and the third with an entrance on its east side, all surrounding central burial pits containing traces of coffins and, in one case, organic staining from a body. The ditches and burials contained residual struck flint and a little Late Bronze Age pottery, also considered by the excavators to be residual; one of the enclosure ditches was cut by a late Saxon pit. These ‘square-ditched burials’ were interpreted as most likely being of Iron Age date, although the evidence was not clear-cut. They were positioned on a hilltop, close to Bronze Age and Roman cremations. In addition to these examples from south-east Suffolk, one of two cropmark ‘ring’-ditches overlooking the river Kennett in Ousden, at the western edge of the county,⁴¹ also looks rather square on recent aerial photographs (Fig. 196.4; 16m by 13m, measured from Google Earth).⁴²

Recent fieldwork in advance of development at Aldham Mill Hill, Hadleigh, beside the river

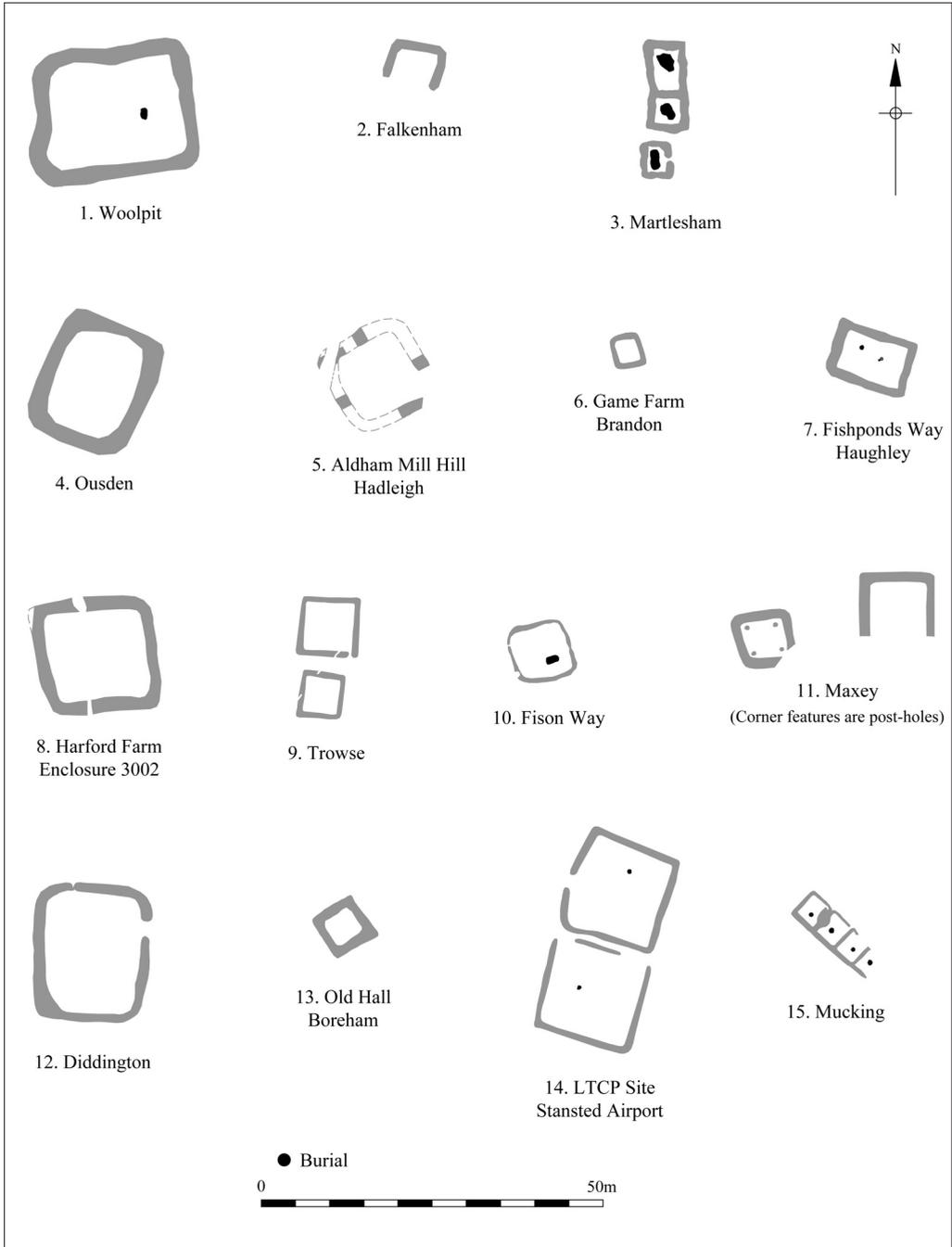


FIG. 196 – Comparative plans of East Anglian sub-square enclosures.

Brett, has investigated a similar 13m² (10.7m internally) enclosure, known from cropmarks and geophysical survey, which is suggested to have had a possible funerary/mortuary function (Fig. 196.5).⁴³ Although there is no definite evidence for this interpretation, the enclosure is spatially associated with a known Bronze Age (and potentially later) funerary landscape, including several ring-ditches and barrows located nearby.

The ditch at Aldham Mill Hill is similar in size (*c.*2m wide by 0.8m–0.9m deep) and profile to the enclosure ditch at Woolpit, with some slight evidence for a slumped bank, though it is unclear whether this would have been internal or external. Small sherds of broadly Early Iron Age (*c.*600–400 BC?) handmade flint- and quartz-sand-tempered pottery were found in three of the excavated slots, though all were recovered from upper fills or surface cleaning (thirteen sherds; 36g). Similar material was recovered during the first phase of evaluation, except that the presence of some non-flint-tempered sandy fabrics and a single diagnostic sherd suggested a *c.*Early/Middle Iron Age date, these sherds deriving from a middle fill of the ditch. Overall, the pottery could reflect a date at any time during the first half of the first millennium BC, but it only provides a date for the filling in of the upper levels of the enclosure ditch. Around fifty per cent of the internal area of the Aldham Mill Hill enclosure was exposed and the only interior features seen were three small pits or post-holes, two undated and one late Roman and associated with a known later phase of activity at the site. The enclosure has been tentatively interpreted as an Early/Middle Iron Age funerary monument, such as a mortuary enclosure or barrow, continuing a tradition of ritual and funerary activity represented by the Bronze Age round barrows located at the southern end of the site. However, no definite evidence of burials or other ritual activity associated with the enclosure was found in either phase of evaluation.

The evidence from Aldham Mill Hill and the Martlesham site could suggest that at least some of the small ‘square-ish’ enclosures known from cropmarks in Suffolk are indeed of Iron Age date, although their function remains poorly understood and the lack of well-stratified dating evidence means that earlier dates of construction cannot be ruled out. Nor does this necessarily help to understand the origin and context of the enclosure at Woolpit, with its rather larger dimensions and internal Chalcolithic burial. With regard to the possibility of pre-Iron Age origins, it should be noted that there was a similar square enclosure (albeit only 5m across and surrounded by a shallow ditch) within the Middle to Late Bronze Age settlement/subdivided landscape at Game Farm, Brandon (Fig. 196.6).⁴⁴ The Brandon enclosure was tentatively dated to the Late Bronze Age based on its shared alignment with field boundaries of that date, although the ditch contained only a struck flint and a little burnt flint; no internal features or evidence of a mound or bank was present.

It is also interesting to note that a slightly smaller (12m by 8m) but otherwise similar enclosure to that at Woolpit has recently been excavated at the Fishponds Way, Haughley site.⁴⁵ The Haughley enclosure (Fig. 196.7) was rectangular in plan and surrounded by a continuous ditch; on the interior were three mid- to late first-century AD cremation burials, one of them accompanied by a ring-necked flagon, a Langton Down-type brooch and a pair of hobnail shoes. There was no other evidence of Roman activity at the site. It appears that the enclosure was located in the agricultural outfield of a fairly high-status Roman settlement or farmstead somewhere in the area, though no other evidence of this conjectured settlement was seen.

A number of similar square-ditched enclosures to that at Woolpit, typically between 7m and 16m in diameter, have been identified in Norfolk through cropmark mapping projects.⁴⁶ They generally occur either as small groups or as isolated monuments; many have a pit visible in the interior, which may be a grave or cremation burial. As in Suffolk, they have been provisionally interpreted as Iron Age to Roman square barrows or mortuary enclosures.

Small square-ditched enclosures, of similar size to these cropmarks and with evidence for eroded low inner banks, were excavated on the route of the Norwich southern bypass at Harford Farm and Trowse (Figs 196.8 and 196.9).⁴⁶ They were tentatively interpreted as Late Iron Age/Roman funerary monuments, although the only grave was an isolated early first-century cremation burial some distance outside one of the enclosures at Harford Farm and it was acknowledged that the extremely limited stratigraphic and artefactual evidence could feasibly indicate a date at any time between the *c.* Early Iron Age and the Anglo-Saxon period.⁴⁸ The six enclosures at Harford Farm were spread out over around 100m in a north-south line, oriented on the cardinal points, and on the site of an earlier Bronze Age barrow cemetery on locally high ground overlooking the Yare valley. The southernmost of the exposed group was sited within the circuit of the ring-ditch of a Bronze Age barrow and was surrounded by an outer fence or post-in-trench wall that gave it an overall appearance similar to a Romano-Celtic temple or shrine. The larger features, for example, square-ditched enclosure 3002 at Harford Farm (*c.* 14m diameter; Fig. 196.8), compare quite well in terms of overall size and ditch morphology with the Woolpit enclosure.

Another possible example of an Iron Age square barrow or mortuary enclosure, measuring 10m across and with a central pit measuring 2m by 1.5m, was excavated in advance of aggregate extraction at Salter's Lane, Longham, Norfolk, close to the Launditch, a probable Iron Age earthwork.⁴⁹ No evidence of an inhumation or cremation was found in the central pit, perhaps because both this and the enclosure ditch had been heavily eroded by ploughing. The feature was thought to probably be of Middle to Late Iron Age date.⁵⁰ One of a number of small ring-ditches in the large Iron Age to Roman site at Fison Way, Thetford, was later surrounded by a sub-square ditched enclosure, measuring 8m by 7.5m (Fig. 196.10), with an internal grave-shaped pit containing early Roman pottery, and with phosphate levels suggestive of a decomposed body.⁵¹

In Cambridgeshire, two square-ditched enclosures, 6m and 8m across, have been excavated at Maxey in the Welland valley, adjacent to a Neolithic henge and a small, oval Middle Bronze Age barrow (Fig. 196.11). The smaller enclosure had an internal post-hole at each corner; there was no other evidence of internal features or graves, although it was felt that this could have been a result of severe surface stripping levels. Remains of gravel mounds or internal banks were possibly indicated.⁵² Despite extensive sieving of fills, no artefacts were found in either the enclosure ditches or the post-holes. Stratigraphic evidence suggested an earlier Iron Age date and the features were interpreted as possible square barrows. Another sub-square-ditched enclosure, measuring 9m by 7m and dated to the Middle Iron Age, has been excavated in Cambridgeshire at Diddington, in the Ouse valley (Fig. 196.12). It was provisionally interpreted as a square barrow, though there was no evidence of burials.⁵³

In Essex, where a number of similar small, square enclosures are recorded as cropmarks, excavations at Old Hall Reservoir, Boreham, near Chelmsford, have investigated a small square enclosure of probable Early/Middle Iron Age date (Fig. 196.13). The enclosure was located within a Neolithic, Bronze Age and Iron Age 'ritual' landscape that included a henge, four round barrows and a small Middle Iron Age round barrow over an inhumation.⁵⁴ The square enclosure was 7.2m by 7.6m across and was surrounded by a continuous ditch up to 1.3m wide and with a surviving depth of 0.4m; there were no internal features and no evidence for an associated mound. The ditch had a consistent three-fill deposit sequence; one sherd of Middle Iron Age pottery and some residual worked flints were recovered from a secondary fill.⁵⁵ The feature was interpreted as a possible mortuary enclosure where bodies were left for defleshing prior to interment of the skeletal remains.⁵⁶

At the LTCP Site, Stansted Airport, two adjacent square-ditched enclosures were found within a field system associated with a Late Iron Age/early Roman settlement.⁵⁷ They were

similarly aligned and measured approximately 13m wide; the surrounding ditches were relatively shallow and one of them had a well-defined entrance. Each enclosure contained a single urned cremation burial, positioned off-centre (Fig. 196.14). A row of three adjoining mortuary enclosures were found on the edge of another nearby Late Iron Age/early Roman settlement.⁵⁸ These enclosures were slightly smaller, measuring up to 11m wide; the surrounding ditches were shallow, with no obvious entrances. One enclosure contained five urned cremation burials. Of these, one was placed centrally and was probably the primary burial, while the others (possible satellite burials) were apparently randomly dispersed across the enclosed area. Further examples of square-ditched burials include several at Mucking, Essex, including a row of four adjoining 4m by 4m 'square barrows' surrounded by narrow, shallow ditches, which each enclosed a Late Iron Age cremation burial (Fig. 196.15), and, over the Thames, the square ditches that surrounded two Late Iron Age warrior burials at Brisley Farm, Ashford, Kent.⁵⁹

This rapid survey of the currently available evidence suggests that small (*c.*5m–15m diameter) square/sub-square enclosures, with no obvious settlement-related or agricultural function, and at least sometimes associated with burials, are fairly widespread in East Anglia, with known examples in Suffolk, Norfolk, Cambridgeshire, Essex and further afield. The majority are known only from cropmarks and have not had intrusive investigation; the cropmark examples are generally assigned provisional Iron Age dates and a suggested funerary/burial function based on their ostensible morphological similarity to Arras Culture square barrows and other excavated examples.

Even where excavated, secure evidence for the date and function of these East Anglian square-ditched enclosures often remains elusive. Excavations in Suffolk and neighbouring counties have provided some support for broad Iron Age dating, certainly extending into the early Roman period, although artefactual evidence at many sites is limited and usually derives from secondary fills of the enclosure ditches. The presence of a morphologically similar enclosure in the midst of the Middle to Late Bronze Age settlement at Game Farm, Brandon, might hint at later Bronze Age origins for some. Despite their suggested funerary function, evidence for graves is frequently absent, although the recently excavated enclosures at Martlesham provide one good example in support of such an identification. Other mortuary/'ritual' activities (for example, excarnation of bodies prior to burial) might leave no archaeological trace. Moreover, if interior mounds were originally present — as the evidence from some sites suggests — graves cut into the mounds or human remains placed on the ground surface and then sealed beneath them could be easily lost to later plough damage. Overall, understanding of this class of 'monument' in East Anglia is in its early stages and requires much further research.

The Woolpit enclosure shares the sub-square morphology of these excavated parallels, is located in a similar topographical context (locally high ground overlooking a river/stream valley) and, in common with many of them (*e.g.* Aldham Mill Hill, Martlesham, Harford Farm, Maxey, Boreham), it may have been deliberately sited close to an earlier burial monument. However, there are differences: most notably the Woolpit enclosure is rather larger than any of the excavated examples described above, and many of those known from cropmarks.

MIDDLE IRON AGE OCCUPATION, *c.*350–50 BC

Evidence for an Iron Age settlement somewhere near to the site would provide a possible context for the digging of the enclosure at that time.

Excavation Area 1 contained a cluster of three pits with dark fills, two of which contained

residues from occupation, including pottery (total: twenty-four sherds weighing 195g), daub, cereal grain, and a small group of bones from cattle, sheep, pig and other, unidentifiable, medium–large mammals.⁶⁰ The presence of both meat-bearing and non-meat-bearing elements, as well as some cut marks, indicate butchery of carcasses. The charred plant remains include hulled barley (*Hordeum* sp.), possible wheat (*Triticum* sp.), hazelnut shells, oak (*Quercus* sp.) charcoal and weed seeds.⁶¹ The pottery is handmade and sand-tempered and includes part of the rim of a slack-shouldered jar and another rim sherd from a fine cup or small jar, the former with incised vertical scoring. The fabric and forms are typical of Middle Iron Age (c.350–50 BC) ceramic assemblages in the region, including, for example, that from the settlement at West Stow.⁶² A few of the daub fragments have wattle impressions.

These pits and their contents suggest the presence of a Middle Iron Age settlement in the vicinity, probably to the south/south-west of the site. A Roman pottery scatter recorded during fieldwalking south of Heath Road, approximately 250m in this direction, included a high proportion of probable first-/second-century types; the presence of early Roman pottery suggests that this site could have Iron Age origins.⁶³ The only other previously recorded Iron Age find in Woolpit is a gold *stater* recovered from the area north of the village.⁶⁴ Iron Age finds have also been recovered to the north, in Elmswell.⁶⁵

CONCLUDING REMARKS

The absence of evidence of Roman, Anglo-Saxon or medieval activity at the site (excepting an unstratified silver long cross penny of Edward III (1327–77) and the low probability that the enclosure was of Roman or later date) is in keeping with the sort of low-intensity land use that would be expected in an area of heathland.⁶⁶ The site was close to the edge of Woolpit Heath in the late eighteenth century.⁶⁷ The extreme scarcity of medieval pottery and metalwork at the site would suggest that it was grazing land at that time. Had it been arable, the common practice of manuring cultivated land with nightsoil from settlements would likely have deposited more cultural material, particularly this close to the village.

There is a common pattern in sand and gravel areas of East Anglia for land that was quite intensively utilised in prehistory to be given over to grazing by the Roman period. This might have something to do with the well-drained and easily worked character of the region's sand and gravel soils, which could be cultivated using ards and other prehistoric agricultural equipment and were therefore favoured for early settlement and farming. By the Middle to Late Iron Age, and certainly by the Roman period, population growth and the introduction of iron tools, probably including heavier, mouldboard ploughs enabled expansion of farming onto the more nutrient-rich and productive clays. Some less fertile, sandy soils were given over to grazing, nevertheless an important resource in an increasingly arable landscape.

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NOTES

- 1 Geophysical (magnetometer) survey: Schofield 2016; trial trench evaluations: Cuthbert 2016; Heard 2020.
- 2 Woolhouse and House 2021.
- 3 British Geological Survey 2020.
- 4 Heard 2020, 71–3.
- 5 Lithics analysed by Barry Bishop.
- 6 Pottery from the excavation analysed by Sarah Percival; pottery from evaluation features assessed by Anna Doherty (2020).
- 7 Clark, Higgs and Longworth 1960, 248.
- 8 Clark, Higgs and Longworth 1960, plate XXIV.
- 9 Garrow 2006, 72 fig. 2.49.
- 10 Medlycott 2011, 13–14.
- 11 Hurst Fen, Mildenhall: Clark *et al.* 1960; Reydon Farm: Harding 2017; Kilverstone: Garrow 2006; Spong Hill: Healy 1988; Broome Heath, Ditchingham: Wainwright 1972; Hopton-on-Sea: Morgan-Shelbourne, Hogan and Woolhouse 2015.
- 12 Tabor, Billington, Healy and Knight 2016.
- 13 SHER HGH 060; Mlynarska and Woolhouse 2020.
- 14 Osteoarchaeological analysis.
- 15 Analysis of prehistoric ceramics.
- 16 Faunal remains from the excavation analysed by Kevin Rielly.
- 17 Steele 1976.
- 18 Brothwell 1981.
- 19 Brothwell 1981, 71.
- 20 Aufderheide and Rodriguez-Martin 1998, 96; Waldron 2009, 24–45.
- 21 Needham 2005, 196.
- 22 Needham 2005, fig. 13.
- 23 Clarke 1970, fig. 401, corpus no. 961; Clark 1932, plate XXVIII, fig. 5; Clarke 1970, fig. 106, corpus no. 856.
- 24 Too small to be effectively illustrated.
- 25 Blood Hill, Bramford: SHER BRF 068 and Sommers 2008; Brantham Hall: SHER BNT 004 and Gilmour 1974; Risby Poor's Heath, Flempton: SHER FMP 002, Vatcher and Vatcher 1976 and Martin 1981, 69–74; Boss Hall, Ipswich: SHER IPS 400 and Everett 2000; Flixton: SHER FLN 061 and Boulter 2012, 267–8.
- 26 SHER WPT 031.
- 27 SHER WPT 016; WPT 017.
- 28 SHER WPT 065, precise location not known.
- 29 Clarke 1970, 330, 498 (ill.), Corpus 961.
- 30 Needham 2005, 198–200 and 206.

- 31 SHER WPT 067.
 32 SHER WPT 071.
 33 SHER WPT 003.
 34 SHER WPT 059; Desrosiers-Whalley 2023.
 35 Crummy 1977; Brown 1999; Clarke and Lavender 2008.
 36 Newton and Mustchin 2015, 344–5.
 37 N[orfolk] H[istoric] E[nvironment] R[ecord] no. ENF139716; Albone, Massey and Tremlett 2007b, 38; Cooper 2018.
 38 Stead 1979; 1991.
 39 SHER FLK 059.
 40 SHER MRM 173; Thomas 2019, 21, 39, 116–18, figs 24, 25 and 51.
 41 SHER OUS 012.
 42 Google 2020.
 43 SHER HAD 160, MSF37158; Alexander 2018, 36–7, 64, figs 2, 3 and 26; Heard 2019.
 44 Gibson 2004, 23–5.
 45 SHER HGH 060; Mlynarska and Woolhouse 2020, 39–42, fig. 9, plates 18–21.
 46 Albone, Massey and Tremlett 2007a, 17; 2007b, 54–9; 2008, 43–4.
 47 Harford Farm: NHER 9794; Trowse: NHER 9589.
 48 Ashwin and Bates 2000, 117–25, 137–9, 180–3 and 190.
 49 NHER 13025.
 50 Ashwin and Flitcroft 1999, 253.
 51 Ring-ditch 2b: Gregory 1991, 34–7 and 55–7.
 52 Pryor and French 1985, 63 fig. 44, 73–7.
 53 Jones 1997.
 54 Germany 2014.
 55 Germany 2014, 59 and 60 fig. 16.
 56 Germany 2014, 82.
 57 Cooke, Brown and Philpotts 2008, 95–6.
 58 Cooke, Brown and Philpotts 2008, 98–100.
 59 Mucking: Evans, Appleby and Lucy 2016, 336–44; Brisley Farm: Stevenson 2013.
 60 Faunal remains from evaluation features assessed by Hayley Forsyth-Magee (Archaeology South-East; 2020).
 61 Plant remains from the excavation analysed by Kath Hunter Dowse; plant remains from evaluation features assessed by Anna West (Suffolk Archaeology) and Mariangela Vitolo (Archaeology South-East; 2020).
 62 West 1989.
 63 SHER WPT 009.
 64 SHER WPT 076, PAS MSF38867, location confidential.
 65 SHER EWL 023, PAS MSF28702, location confidential.
 66 Identified by Ruth Beveridge.
 67 SHER WPT 078; Dymond 2003.

BIBLIOGRAPHY

- Albone, J., Massey, S. and Tremlett, S., 2007a (PDF version 2011). *The Archaeology of Norfolk's Broads Zone. Results of the National Mapping Programme*. English Heritage Project No. 2913. Gressenhall.
 Albone, J., Massey, S. and Tremlett, S., 2007b (PDF version 2011). *The Archaeology of Norfolk's Coastal Zone. Results of the National Mapping Programme*. English Heritage Project No. 2913. Gressenhall.
 Albone, J., Massey, S. and Tremlett, S., 2008. *The Archaeology of Norfolk's Aggregate Landscape. Results of the National Mapping Programme*. English Heritage Project No. 5241MAIN. Gressenhall.
 Alexander, J., 2018. *Land off Aldham Mill Hill, Hadleigh, Suffolk: archaeological evaluation*.

- Archaeology South-East Report No. 2018172 (unpublished).
- Ashwin, T. and Bates, S., 2000. *Excavations on the Norwich Southern Bypass, 1989–91. Part I: excavations at Bixley, Caistor St Edmund, Trowse, Cringleford and Little Melton*. E. Anglian Archaeol. 91. Gressenhall.
- Ashwin, T. and Flitcroft, M., 1999. 'The Launditch and its setting. Excavations at the Launditch, Beeston with Bittering, and Iron Age features and finds from its vicinity', *Norfolk Archaeology*, 43 (2), 217–56.
- Aufderheide, A.C. and Rodriguez-Martin, C., 1998. *The Cambridge Encyclopedia of Human Paleopathology*. Cambridge.
- Boulter, S., 2012. 'The excavations at Flixton and their wider context' in S. Boulter and P. Walton Rogers, *Circles and Cemeteries: excavations at Flixton, Vol. 1*. E. Anglian Archaeol. 147, 263–70. Bury St Edmunds.
- British Geological Survey, 2020. *Geology of Britain Viewer*. http://mapapps.bgs.ac.uk/geologyofbritain/home.html?&_ga=2.245193537.55525773.1601028783-619450362.1584439804 (Last accessed 25 September 2020).
- Bronk Ramsey, C., 2009. 'Bayesian analysis of radiocarbon dates', *Radiocarbon*, 51, 337–60.
- Brothwell, D.R., 1981. *Digging Up Bones: the excavation, treatment, and study of human skeletal remains*. Ithaca, New York.
- Brown, N.R., 1999. *The Archaeology of Ardleigh, Essex: excavations 1955–80*. E. Anglian Archaeol. 90. Chelmsford.
- Clark, J.G.D., 1932. 'Notes on the Beaker pottery of the Ipswich Museum', *Proc. Prehist. Soc. E. Anglia*, 6 (4), 356–61.
- Clark, J.G.D., Higgs, E.S. and Longworth, I.H., 1960. 'Excavations at the Neolithic site at Hurst Fen, Mildenhall, Suffolk (1954, 1957, 1958)', *Proc. Prehist. Soc.*, 26, 202–45.
- Clarke, C.P. and Lavender, N.J., 2008. *An Early Neolithic Ring-Ditch and Middle Bronze Age Cemetery: excavation and survey at Brightlingsea, Essex*. E. Anglian Archaeol. 126. Chelmsford.
- Clarke, D.L., 1970. *Beaker Pottery of Great Britain and Ireland*. Cambridge.
- Cooke, N., Brown, F. and Philpotts, C., 2008. *From Hunter Gatherers to Huntsmen. A History of the Stansted Landscape*. Oxford.
- Cooper, A., 2018. *Early to Middle Bronze Age, 2500–1150 BC*. Draft research agenda produced as part of review of the Regional Historic Environment Research Framework for the East of England. E. Anglian Archaeol. ALGEO/Historic England/East Anglian Archaeology. <http://eaareports.org.uk/algao-east/regional-research-framework-review> (Last accessed 6 November 2020).
- Crummy, P., 1977. 'A Bronze Age cemetery at Chitts Hill, Colchester, Essex', *Essex Archaeol. Hist.*, 9, 1–16.
- Cuthbert, M., 2016. *Old Stowmarket Road, Woolpit, Suffolk, WPT 054. Archaeological Evaluation Report*. Suffolk Archaeology CIC Report No. 2016/053 (unpublished).
- Desrosiers-Whalley, L., 2023. *Land off Bury Road, Woolpit, Suffolk. Post-Excavation Assessment and Updated Project Design*. Pre-Construct Archaeology Report No. 15725v2 (unpublished).
- Doherty, A., 2020. 'Prehistoric pottery' in K. Heard, *Archaeological Evaluation: land at Old Stowmarket Road, Woolpit, Suffolk*. Archaeology South-East Report No. 2019356, 52–4 (unpublished).
- Dymond, D. (ed.), 2003. *Hodkinson's Map of Suffolk in 1783*. Dereham.
- Evans, C., Appleby, G. and Lucy, S. with Appleby, J. and Brudenell, M., 2016. *Lives in Land. Mucking Excavations by Margaret and Tom Jones, 1965–1978: prehistory — context and summary*. Oxford.

- Everett, L., 2000. *Morrison's Supermarket, Boss Hall, Ipswich (IPS 400): archaeological excavation and monitoring report*. SCCAS Report No. 2000/93 (unpublished).
- Forsyth-Magee, H., 2020. 'Animal bone' in K. Heard, *Archaeological Evaluation: land at Old Stowmarket Road, Woolpit, Suffolk*. Archaeology South-East Report No. 2019356, 60–3 (unpublished).
- Garrow, D., 2006. 'Earlier Neolithic activity' in D. Garrow, S. Lucy and D. Gibson, *Excavations at Kilverstone, Norfolk: an episodic landscape history*. E. Anglian Archaeol. 113, 8–83. Cambridge.
- Germany, M., 2014. 'Continuity and change in the mid-Chelmer valley — archaeological excavations at Old Hall and Generals Farms, Boreham, 2007', *Essex Archaeol. Hist.*, 4 Ser. (5), 45–86.
- Gibson, C., 2004. *Lines in the Sand: Middle to Late Bronze Age settlement at Game Farm, Brandon*. E. Anglian Archaeol. Occasional Paper 19. Hertford.
- Gilmour, R.A., 1974. 'Beaker and Bronze Age burials at Brantham Hall', *Proc. Suffolk Inst. Archaeol.*, 33, 116–30.
- Google, 2020. *Google Maps*.
<https://www.google.co.uk/maps/place/Ousden,+Newmarket+CB8+8TP/@52.205525,0.5176138,185m/data=!3m1!1e3!4m5!3m4!1s0x47d84521f532eff3:0x1d010d2af00a5055!8m2!3d52.204437!4d0.553416> (Last accessed 6 November 2020).
- Gregory, T., 1991. *Excavations in Thetford, 1981–1982, Fison Way*. Vol. 1. E. Anglian Archaeol. 53. Gressenhall.
- Harding, P., 2017. 'Excavations at Reydon Farm: early Neolithic pit digging in east Suffolk', *Proc. Suffolk Inst. Archaeol.*, 44, 1–18.
- Healy, F., 1988. *The Anglo-Saxon Cemetery at Spong Hill, North Elmham. Part VI: occupation during the seventh to second Millennia BC*. E. Anglian Archaeol. 39. Gressenhall.
- Heard, K., 2019. *Archaeological Evaluation: land off Aldham Mill Hill, Hadleigh, Suffolk. Addendum: the square enclosure*. Archaeology South-East Report No. 2018172b (Addendum) (unpublished).
- Heard, K., 2020. *Archaeological Evaluation: land at Old Stowmarket Road, Woolpit, Suffolk*. Archaeology South-East Report No. 2019356 (unpublished).
- Jones, A., 1997. 'An Iron Age square barrow at Diddington, Cambridgeshire. Third interim report of excavations at Little Paxton Quarry, 1996', *Proc. Cambridge Antiq. Soc.*, 86, 5–12.
- Knowles, T.D.J., Monaghan, P.S. and Evershed, R.P., 2019. 'Radiocarbon sample preparation procedures and the first status report from the Bristol Radiocarbon AMS (BRAMS) Facility', *Radiocarbon*, 61 (5), 1–10. doi:10.1017/RDC.2019.28.
- Martin, E.A., 1981. 'The barrows of Suffolk' in A.J. Lawson, E.A. Martin and D. Priddy, *The Barrows of East Anglia*. E. Anglian Archaeol. 12, 64–88. Norwich.
- Medlycott, M. (ed.), 2011. *Research and Archaeology Revisited: a revised framework for the East of England*. E. Anglian Archaeol. Occasional Paper 24. Chelmsford.
- Mlynarska, J. and Woolhouse, T., 2020. *Land West of Fishponds Way, Haughley, Suffolk: post-excavation assessment*. Pre-Construct Archaeology Report No. 13998 Rev1 (unpublished).
- Morgan-Shelbourne, L., Hogan, S. and Woolhouse, T., 2015. *Land North of Hall Road, Hopton-on-Sea, Norfolk: archaeological excavation*. Pre-Construct Archaeology Report No. 11835 (unpublished).
- Needham, S., 2005. 'Transforming Beaker Culture in North-West Europe: processes of fusion and fission', *Proc. Prehist. Soc.*, 71, 171–217.

- Newton, A.A.S and Mustchin, A.R.R., 2015. 'Archaeological excavations at Ingham Quarry, Fornham St Genevieve', *Proc. Suffolk Inst. Archaeol.*, **43**, 337–69.
- Pryor, F.M.M. and French, C.A.I., 1985. *The Fenland Project, No. 1: archaeology and environment in the Lower Welland Valley, Vols 1 and 2*. E. Anglian Archaeol. 27. Cambridge.
- Reimer, P., Austin, W., Bard, E., Bayliss, A., Blackwell, P., Bronk Ramsey, C., Butzin, M., Cheng, H., Edwards, R., Friedrich, M., Grootes, P., Guilderson, T., Hajdas, I., Heaton, T., Hogg, A., Hughen, K., Kromer, B., Manning, S., Muscheler, R., Palmer, J., Pearson, C., van der Plicht, J., Reimer, R., Richards, D., Scott, E., Southon, J., Turney, C., Wacker, L., Adolphi, F., Büntgen, U., Capano, M., Fahrni, S., Fogtmann-Schulz, A., Friedrich, R., Köhler, P., Kudsk, S., Miyake, F., Olsen, J., Reinig, F., Sakamoto, M., Sookdeo, A. and Talamo, S., 2020. 'The IntCal20 Northern Hemisphere radiocarbon age calibration curve (0–55 cal. kBP)', *Radiocarbon*, **62** (4), 725–57.
- Schofield, T., 2016. *Old Stowmarket Road, Woolpit, Suffolk, WPT 054. Geophysical Survey Report*. Suffolk Archaeology CIC Report No. 2016/031 (unpublished).
- Sommers, M., 2008. *Archaeological Excavation Report, Blood Hill, Bramford*. SCCAS Report No. 2008/177 (unpublished).
- Stead, I.M., 1979. *The Arras Culture*. York.
- Stead, I.M., 1991. *Iron Age Cemeteries in East Yorkshire: excavations at Burton Fleming, Rudston, Garton-on-the-Wolds and Kirkburn*. London.
- Steele, D.G., 1976. 'The estimation of sex on the basis of the talus and calcaneus', *American Journal of Physical Anthropology*, **45**, 581–8.
- Stevenson, J., 2013. *Living by the Sword: the archaeology of Brisley Farm, Ashford, Kent*. Portslade.
- Tabor, J., Billington, L., Healy, F. and Knight, M., 2016. 'Early Neolithic pits and artefact scatters at North Fen, Sutton Gault, Cambridgeshire', *Proc. Prehist. Soc.*, **82**, 161–91.
- Thomas, S., 2019. *Land off Waldringfield Road, Waldringfield, Suffolk (MRM173c; Site 29c): archaeological excavation*. Archaeology Wales Report No. 1791 (unpublished).
- Vatcher, F. de M. and Vatcher, H.L., 1976. 'The excavation of a round barrow near Poor's Heath, Risby, Suffolk', *Proc. Prehist. Soc.*, **42**, 263–92.
- Vitolo, M., 2020. 'Environmental samples' in K. Heard, *Archaeological Evaluation: land at Old Stowmarket Road, Woolpit, Suffolk*. Archaeology South-East Report No. 2019356, 64–66 (unpublished).
- Wainwright, G.J., 1972. 'The excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk, England', *Proc. Prehist. Soc.*, **38**, 1–97.
- Waldron, T., 2009. *Palaeopathology*. Cambridge.
- West, S., 1989. *West Stow, Suffolk: the Prehistoric and Romano-British occupations*. E. Anglian Archaeol. 48. Bury St Edmunds.
- Woolhouse, T. and House, J., 2021. *Land at Old Stowmarket Road, Woolpit, Suffolk: archaeological excavation report*. Pre-Construct Archaeology Report No. R14325Rev2 (unpublished).