FIRST INROADS: EARLIER BRONZE AGE ACTIVITY ON THE SUFFOLK CLAYLANDS

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Summary

Recent large-scale excavations on the Eye Airfield Industrial Estate, Yaxley, Suffolk (centred TM 1255 7461; Fig. 56*) have revealed important evidence for the occupation and clearance of Suffolk's clayland interior during the Early and Middle Bronze Age. The investigations revealed traces of a burnt mound and pond, a waterhole, and a scatter of small pits and post-holes. Supported by a series of radiocarbon dates, the results are significant in demonstrating the early utilisation of the county's heavier soils, with the environmental evidence indicating that tracts of landscape were already cleared of woodland during the early second millennium BC. Challenging conventional assumptions about Suffolk's clayland interfluves, the results give cause to think anew about the nature of prehistoric activity beyond the lighter soils of the region's river valleys.*

SITE SETTING AND ARCHAEOLOGICAL BACKGROUND

EYE AIRFIELD INDUSTRIAL ESTATE straddles the parishes of Yaxley, Eye and Brome in northern Suffolk, *c.*4km south of the river Waveney. Covering most of the former Second World War airfield, the estate lies across a broadly flat clayland plateau at *c.*46m to 48m OD, above a small river valley *c.*1km to the south of Castleton Way, in which there is an east-flowing tributary of the river Dove. The heavy soils of the area derive from glacial tills of chalky boulder clay (Diamicton) which overlay sands, silts and clays of the Crag Group.

Until recently, this clayland area of Suffolk had not been subject to extensive archaeological investigation. Though the potential ancient origins of the landscape had been widely discussed in the literature, prehistoric finds were largely confined to the lighter well-drained soils of the river valley to the south of the airfield, notably around Hartismere High School, *c.*1km to the south-east (EYE 083).[1] On the clay itself, only the odd stray find of worked flint attests to a prehistoric presence, reinforcing the received wisdom that the heavier soils were avoided prior to the later Iron Age.[2]

These ideas were put to the test between 2014 and 2018 when Oxford Archaeology East conducted a series of extensive archaeological investigations on the southern half of the former airfield and surroundings in advance of industrial development.[3] Following several campaigns of field evaluation by a combination of geophysical survey and trial-trenching (in which over 76ha of the landscape was examined), investigations culminated in two open-area excavation projects covering a total of 4.9ha. Whilst to a large extent the results of these excavations conformed to expectations, exposing evidence of Romano-British settlement and medieval activity (the former to be published separately), deposits and finds dating to the Bronze Age were uncovered at both sites (YAX 040 and YAX 041). A summary of these earlier remains forms the focus of this paper, though reports describing all the archaeology in the excavations, including detailed studies of the artefacts and environmental evidence, is freely available to download from the OA Library.[4]

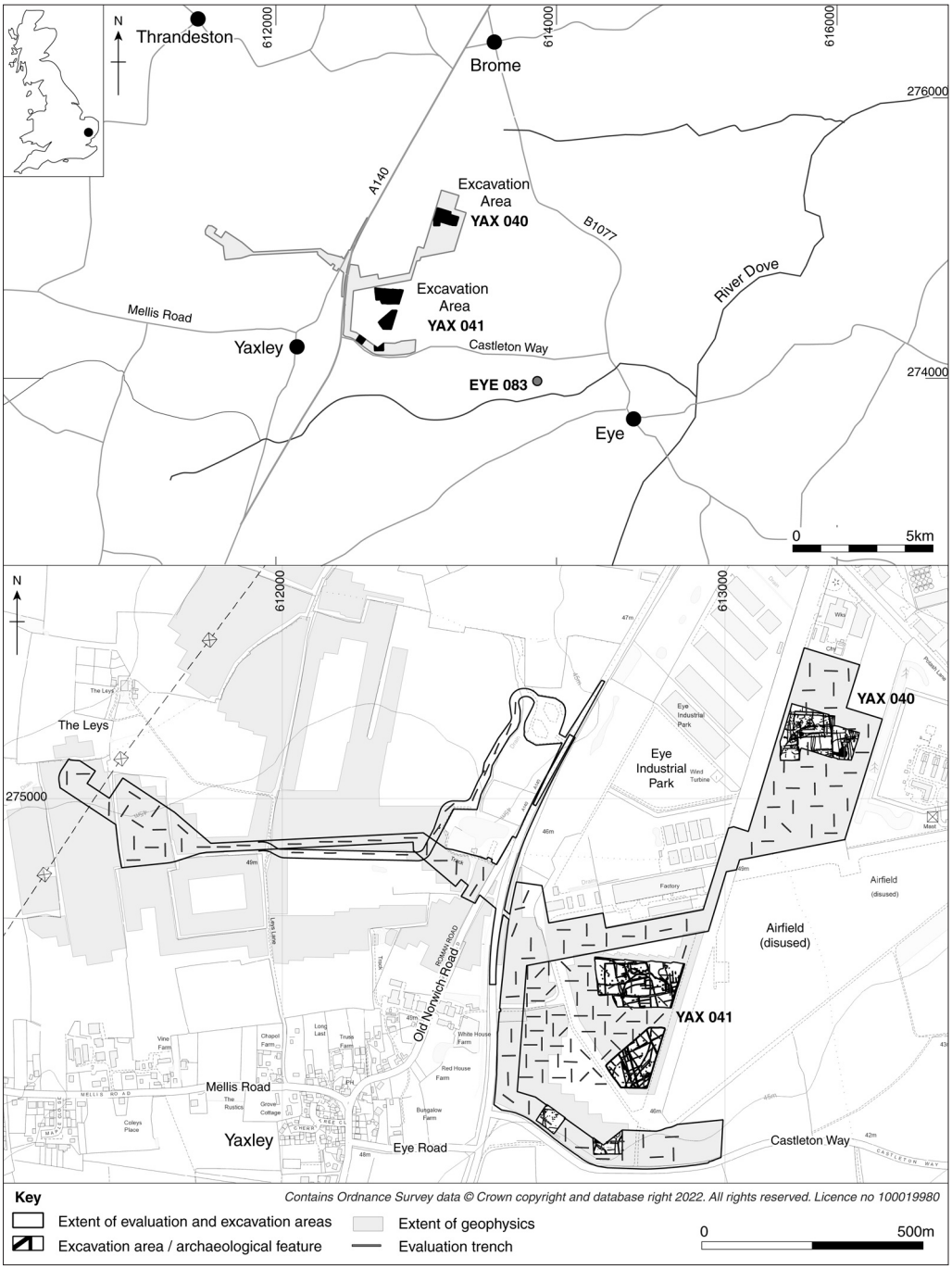

FIG. 56 – Site location.

THE PROGRESS POWER SITE: EXCAVATIONS AT YAX 040

Bronze Age activity was revealed on the eastern side of the YAX 040 excavations and was centred on pond 585 (Fig. 57). This was a large, natural, water-filled hollow (24m long, 20m wide and over 2.7m deep), likely to have been of periglacial origin, utilised and modified initially over the course of the late third and second millennium BC, with much later use and infilling also evident (Fig. 57, Section 311). It was associated with the formation of a burnt flint mound (an accumulation of heat-affected flint, fractured through contact with water) immediately to the north-east.

Remains of the burnt mound were first revealed during trial-trenching, when a localised surface scatter of burnt flint was recorded in the ploughsoil. Excavation proved this to be poorly preserved, with no *in situ* deposits of calcined flint surviving truncation by later activity and ploughing. All that remained were high densities of residual burnt flint in the fills of Roman features, some accumulations up to 0.3m thick, and a darkened charcoal staining of the underlying geology. Analysis of the flint distributions suggests that the mound/spread originally covered at least 114m^2, with concentrations of residual material adjacent to the pond. Tiny flecks of burnt flint were also found in the pond fills, with the lowest exposed deposit associated with an Early Bronze Age radiocarbon determination of 2201–2033 cal. BC (SUERC-81625; 95.4 per cent probability; 3722±28 BP). The date is consistent with the known currency of burnt mounds, and a complementary radiocarbon determination of 2134–1939 cal. BC (SUERC-86051; 95.4 per cent probability; 3648±28 BP) was delivered from charcoal in a burnt flint filled pit (1933) located on the western edge of the pond.

On the steeper eastern side of the pond, two large pits (604 and 598) cut into the lower silts provide evidence for the active modification and maintenance of this natural feature. These pits functioned as waterholes and were dug to penetrate the water table. The fact that this was necessary implies that the pond did not retain standing water all year round, and in its natural state was probably a damp-ground hollow during summer months. The lower deposits of pit 598 have an associated radiocarbon date of 1371–1124 cal. BC (SUERC-86049; 95.4 per cent probability; 2992±28 BP), placing the infilling of this feature towards the end of the Middle Bronze Age or the very beginning of the Late Bronze Age. This date, together with that from pit 1933 and the basal fills of the pond, are likely to bracket the currency of burnt mound formation and use at the site, placing the whole 'complex' in the Early–Middle Bronze Age.

Other than burnt flint, finds from the mound and pond were limited to a single worked flint and the odd fragment of animal bone (cattle and sheep), making it difficult to determine the nature of activities from the artefacts alone. Significantly, however, pollen survived in the lower fills of the pond, and provides important information on the local environment during the earlier Bronze Age. Instead of demonstrating evidence for dense local woodland, analysis of the samples indicates a largely open, grassy landscape, colonised by plants associated with damp meadow and/or with rough ground. These signatures are characteristic of predominately pastoral landscapes sustained by livestock grazing. Moreover, the record includes fungal spores of Sordaria which are commonly found in the faeces/dung of herbivores, and might be expected in a context where livestock were utilising a pond/waterhole. Unsurprisingly, indicators of freshwater aquatic and semi-aquatic species were also identified, with proxies of trampled soils in the vicinity. Again, this would be expected around a waterhole and lends weight to the suggestion that the complex functioned as a water source for livestock, presumably cattle (which have the greatest need for a reliable water source).

The pollen record also reveals evidence of trees and shrubs in the wider landscape, with signs that pockets of mixed deciduous woodland existed, as well as woodland on damp soils. Furthermore, there are hints of arable cultivation, with cereal-type pollen possibly related to

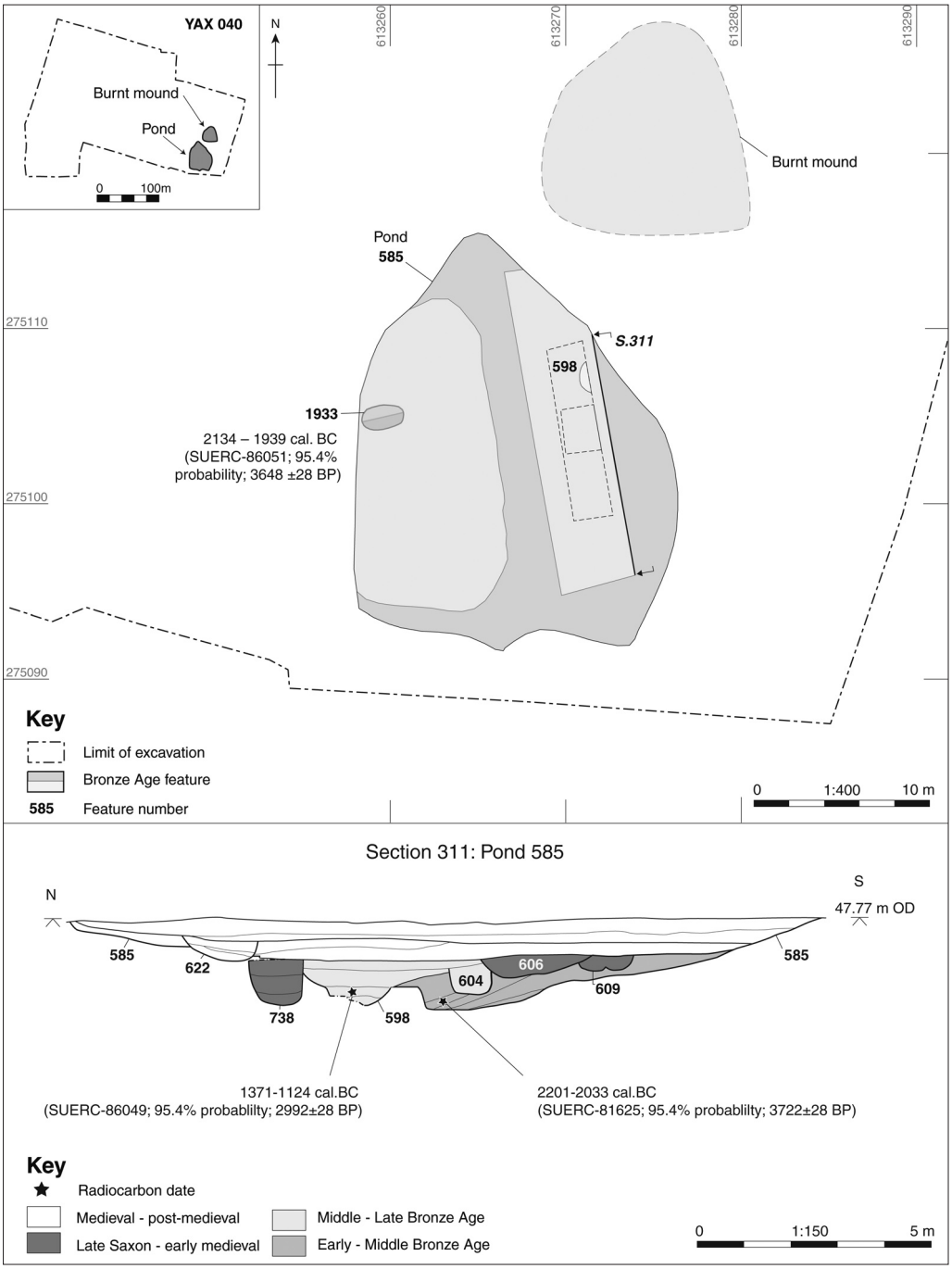

FIG. 57 – Plan and section of the Bronze Age pond at the Progress Power Plant site (YAX 040).

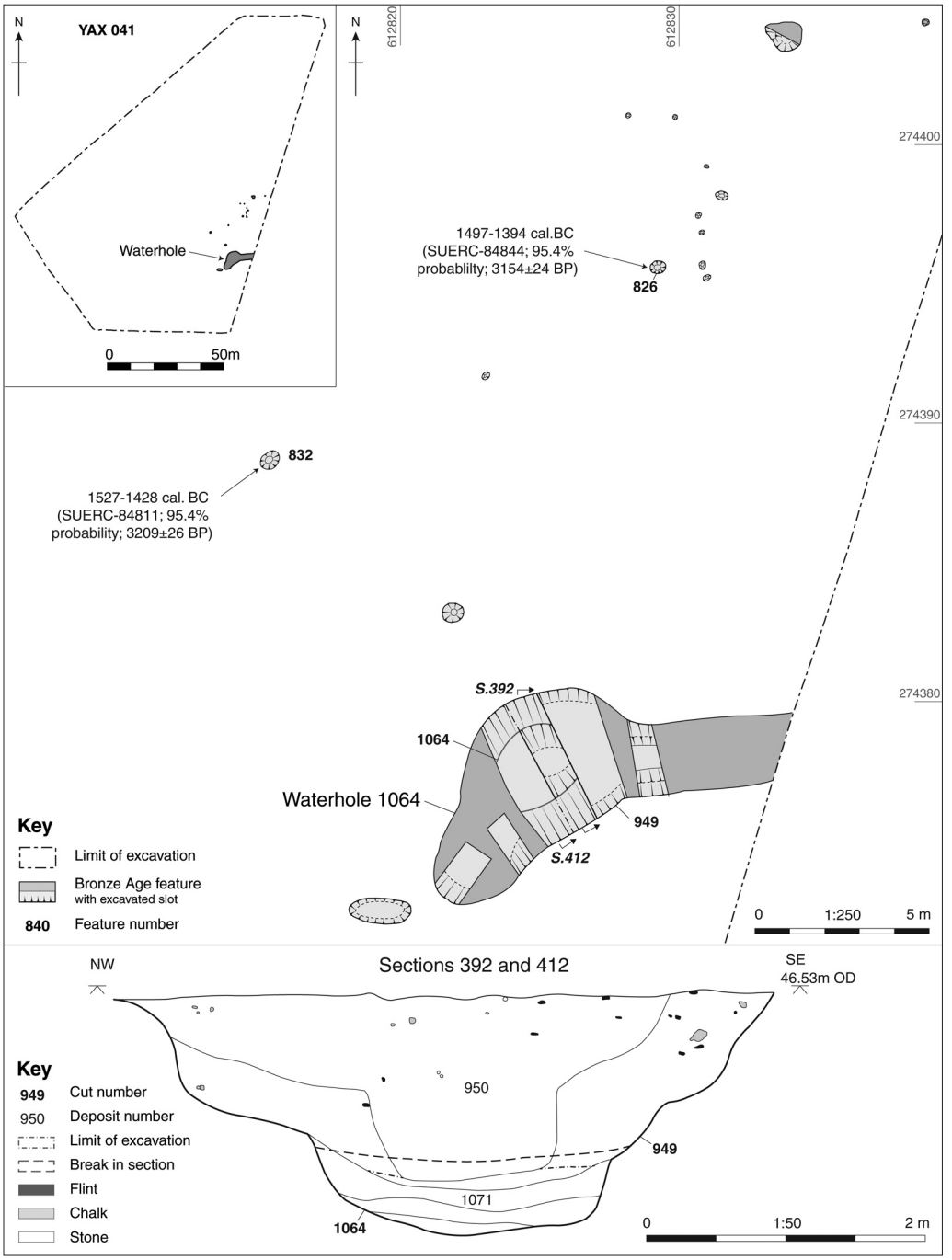

FIG. 58 – Middle Bronze Age features at the Cranswick site (YAX 041).

the growing of barley and wheat/oats. These suggest that the wider landscape was more of a mosaic in the earlier Bronze Age, though the immediate setting was principally open and grassy, and not wooded as conventionally thought on the heavy clay soils of the area.

THE CRANSWICK SITE: EXCAVATIONS AT YAX 041

The Bronze Age remains revealed in the YAX 041 excavations were more extensive, but had many characteristics in common. Whilst finds of residual burnt and worked flint from medieval features in the north of the excavation area suggest a wide swathe of activity, with some localised concentrations, cut features of the period were largely confined to the south of the excavations and were centred upon a waterhole (1064) of more modest proportions than the larger pond at YAX 040 (5.2m in diameter and 1.6m deep; Fig. 58).

Elongated in plan, with steep sides, the lower fills of the waterhole comprised bands of grey silty clays covered by slumps of yellow silts and sands from the weathered edges of the feature. These were capped by further deposits of grey silt that had gradually accumulated in the abandoned waterhole (Fig. 58, Section 392/412). Finds were relatively plentiful and included forty-eight sherds (426g) of Middle Bronze Age Deverel–Rimbury pottery (dated *c.*1600–1150 BC; Fig. 59), together with thirty-seven worked flints, a piece of saddle quern, scraps of

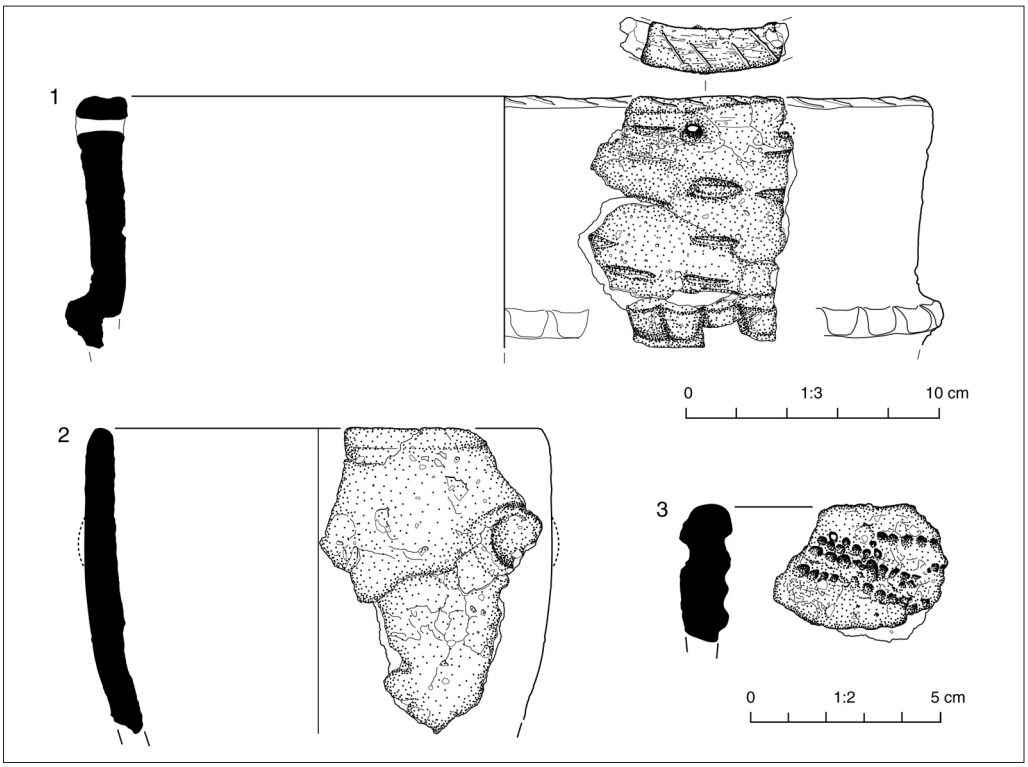

FIG. 59 –Middle Bronze Age pottery from Waterhole 1064 at the Cranswick site (YAX 041): 1. Large decorated urn/vessel with diagonal linear tool impressions on rim-top, horizontal linear tool impressions/stab marks on the neck and a cordon adorned with fingertip impressions; grog and flint fabric, context 950; 2. Comb-impressed sherd; grog and flint fabric, context 950; 3. Small stunted urn/vessel with bosses below the rim; grog and flint fabric, context 1071.

animal bone (cattle, sheep and pig) and over 7kg of burnt flint and stone. Forming a swathe in the vicinity of the waterhole was a group of fifteen pits and post-holes, all but one being located to the north. Covering an area measuring *c.*30m by 30m and with some variation in dimensions (diameter range, 0.2–0.71m; depth range, 0.1–0.36m), there was no clear patterning in their layout. The features had similar fills to the capping of the waterhole and yielded a combined total of six worked flints and over 10kg of burnt flint and stone. Radiocarbon dates were obtained from two of the features in this group (826 and 832), delivering Middle Bronze Age determinations of 1527–1428 cal. BC (SUERC-84811; 95.4 per cent probability; 3209±26 BP) and 1497–1394 cal. BC (SUERC-84844; 95.4 per cent probability; 3154±24 BP).

The radiocarbon results complement the typochronological phasing of the pottery from the waterhole. Moreover, they overlap with the inferred currency of activity at the burnt mound and pond at YAX 040, suggesting a broad level of contemporaneity (albeit with the YAX 040 sequence starting earlier and potentially finishing a little later). This is important because the environmental indicators from the waterhole at YAX 041 are remarkably similar to those from the pond at YAX 040, implying a consistency and continuity in both ecology and stewardship at a landscape scale. Pollen from the basal fills of the waterhole at YAX 041 was poorly preserved, but the signature was again one of a cleared landscape of open, grassy spaces suitable for grazing. Cereal-type pollen was also recognised within the samples and could suggest nearby crop cultivation or crop processing — an interpretation supported by the occasional presence of charred wheat and barley grains from the Bronze Age pits, together with the recovery of a saddle quern. As at YAX 040, woodland is not entirely absent, but is in the background of the record, reversing assumptions about the character of the clayland in this period.

DISCUSSION

An enduring concept in the interpretation of Suffolk's prehistory is that the clayland interior of the county was heavily wooded in the earlier Bronze Age and was not subject to widespread clearance or occupation until the later Iron Age.[5] Despite growing evidence for Bronze Age activity on the clay in Essex and Cambridgeshire, the story of Suffolk's early prehistory has been one of life played out along the river valleys and the cleared, more easily cultivated lighter soils of the county.[6] The results of the excavations at Eye Airfield go some way to challenging this conventional picture. They have not only revealed traces of earlier Bronze Age activity, but have provided environmental evidence that this stretch of clayland was substantially cleared and largely given over to pasture during the first half of the second millennium BC. The active and sustained stewardship of this landscape can therefore be backdated by around a thousand years, with the chronology supported by a series of radiocarbon dates and artefact associations.

To some extent the results from Eye Airfield serve to realign the environmental sequence from the clayland with that emerging from Suffolk's river valleys. A series of detailed studies here have shown that woodland clearance was already at an advanced stage in the Early Bronze Age.[7] At a local level, the results also resonate with the pollen sequence from the Oakley palaeochannel at Scole in the Waveney Valley, just 4km to the north, which suggests that woodland was cleared wholesale from the valley floor by the Middle Bronze Age.[8]

Yet questions remain as to how widespread clayland woodland clearance might have been in this period in Suffolk. Are the results from Eye simply an anomaly? This is difficult to assess at present. Unfortunately, 'off site' pollen sequences from the claylands are rare, and those that would prove extremely useful, such as that from Diss Mere, have no radiocarbon dates.[9] The

chronology is therefore uncertain and hinges upon a set of inferred correlations which may be unfounded. In addition, extensive investigations across other clayland areas of Suffolk have failed to yield comparable results. Those published from Cedars Park, Stowmarket, for example, show no pre-Iron Age activity, with the occupation sequence here conforming to the conventional model.[10] Consequently, whilst results from Eye Airfield leave little doubt that this part of the clayland was cleared at an early date, it would be unwise to suggest that woodland clearance was necessarily uniform and universal across Suffolk's interfluves in the Bronze Age. This geology is by no means a monolithic entity and variation in sequence and trajectory should be anticipated.

In terms of the archaeological imprint of activity on Eye Airfield, what can be said is that the material residues are remarkably thin. Aside from the burnt mound, pond and waterhole, there was only a scatter of post-holes and small pits of Bronze Age attribution. Interestingly, no ditch-defined field boundaries were found prior to the mid-first century AD, which casts (further) doubt on arguments for the prehistoric origin of the Yaxley-Eye field system.[11] Concentrations of residual worked and burnt flint also hint at other localised areas of activity at YAX 040 and 041, but in neither case do the combined residues amount to Bronze Age settlement *per se*. Rather, these remains are likely to reflect the traces of short-term stays or task-specific activities within the pasture which leave a 'light' archaeological signature (one that will scarcely register outside of large-scale excavation). Such ephemeral activities were probably carried out during repeat visits to the waterhole or burnt mound complex on each site, as these features were more permanent fixtures in the landscape. Visits or stays at these water sources were likely to have been dictated by seasonal cycles, linked to the movement of livestock between blocks of summer and winter pasture; from valley side to clayland plateau during the agricultural round.

This form of earlier Bronze Age occupancy/utilisation stands in stark contrast to that on the lighter soils of the region's river valleys. This is brought into sharp relief when the results from Eye Airfield are compared to those from Hartismere High School on the river valley gravels *c*.1.2km to the south-east, or to Flixton Quarry, further afield along the Waveney Valley.[12] Here there is a far greater density of Bronze Age features, with pits, structures, burials, ring-ditches and evidence for settlement-related activity, together with an array of finds common to 'domestic' sites. More readily identifiable and comprehensible, such remains represent sustained forms of residency and investment.

Inevitably, these types of remains have tended to capture the spotlight of archaeological investigation, framing much of our understanding of the period. At a landscape level, however, the picture remains incomplete when the aperture of focus falls only on certain locales. The results from Eye Airfield begin to address this imbalance and demonstrate the potential that the clayland holds. Only when both are understood does a more rounded sense of how the Bronze Age landscape was occupied and utilised start to emerge. Much work remains to be done to clarify and extend this picture, but the first inroads of enquiry have now been made.

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NOTES

1 Martin 1999a; Williamson 1987; 1998; 1999; 2016; Hartismere High School: Caruth and Goffin 2012.
2 Several findspots of worked flint have been recorded around the airfield in the Suffolk HER, e.g. YAX 007 and EYE 128; Clarke 1960, 24–5; Davies 2009, 87; Lawson 1984, 155; Martin 1999a, 92; 1999b; 1999c.
3 Clarke 2014; Collie 2018; 2019; Collie *et al*. 2020; Gilmour 2017; Kwiatkowska 2018; 2019.
4 https://library.thehumanjourney.net/.
5 Clarke 1960, 24–5; Davies 2009, 87; Martin 1999a, 92; 1999b; 1999c; Williamson 2006, 37.
6 Essex: e.g. Cooke *et al*. 2008; Timby *et al*. 2007; Cambridgeshire: e.g. Phillips and Blackbourn 2019; Phillips and Morgan 2015.
7 Geary *et al*. 2016.
8 Ashwin and Tester 2014, 213.
9 Diss Mere: Peglar *et al*. 1989; see Wiltshire and Murphy 1999 for review.
10 Nicholson and Woolhouse 2016.
11 See Martin and Satchell 2008, 214–16 for an overview of arguments surrounding the date and origin of the field systems on Suffolk's clayland.
12 Hartismere High School: Caruth and Goffin 2012; Flixton Quarry: Boulter and Walton Rogers 2012; Boulter, forthcoming.

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