Must Read

ARTICULATING BRITAIN'S LOST PREHISTORIC LANDSCAPE

What Fenland lacks in height it more than makes up for in depth; it is this quality, not wetness, which makes the archaeology at Must Farm extra special. The landscape may look flat, but its archaeology is not one-dimensional. Maybe we should change its name to deepland, as a means of expressing its incredible time-depth qualities.

A delicate chronological scale

In the fens, time covers space: it does not efface or rub away past occupations — instead it buries things deep. Fenland is a landscape that has tremendous depth as well as great breadth. It is a submerged landscape made up of sediments shaped by rising sea levels during later prehistory. Throughout the Holocene era (10,000 BC to present) the 'surface available for settlement' became less and less and consequently space was always being lost to time. Here, sequence retains or maintains a vertical as well as a horizontal dimension, with each successive occupation being elevated slightly above the last. In Fenland things are articulated in time as well as in space. For example, different aspects or facets of the Bronze Age occur at discernibly different levels.

Taken together, the deep sediment sequence and surface available for settlement act as a kind of finely tuned temporal-spatial filter, which sifts pattern into process and simultaneously articulates past movement. At Must Farm, as with Bradley Fen before, we excavate deep as well as broad, and as a consequence we think we have uncovered a fully articulated British prehistory.

Previously in Fenland, large open area excavations only happened where the cover was comparatively shallow, and where crop marks and surface scatters were also present. The majority of archaeologists subsequently focused on landscapes at the edge of the fens where evidence of prehistoric occupation was already visible.

We are now able to carry out the same large open area approach, but at greater depths. Fittingly, in an area also made famous by Francis Pryor for his innovative use of large earth-moving machinery to explore the Neolithic and Bronze Age landscapes of the fens at an appropriate scale, we have been able to do exactly the same in deeply buried zones. This is deep space archaeology.

Our investigations at Must Farm have revealed dry Neolithic and Early Bronze Age archaeology buried deeply beneath the wet fens. Importantly, these features look very much like Neolithic and Early Bronze Age features found elsewhere in the country, be it upland or lowland.

There is a significant difference, however: this prehistoric landscape is not only deeply buried now, but was also deeply buried in the past. It is often for this reason alone that the things we find survive so wonderfully intact.

Elsewhere in Britain, the cover is shallow and as a consequence much of its prehistoric archaeology has been erased by continuous occupation. Prehistorians who work in these spaces use the term palimpsest to describe the sites that they excavate and consequently

they spend the majority of their time trying to unravel thousands of years of habitation from just a few centimetres of sediment.

Deep space archaeology is different because it is invisible from the surface, its very depth making it impervious to disturbance, both now and in the past. We could call this the preservation paradox: an archaeology that is virtually undetectable but, at the same time, exceptionally well preserved. So how do we reach the exceptional? How do we go about finding intact prehistoric landscapes hidden underneath metres of sediment?

Brick-pits and time-depth

Time-depth has always been a quality of Peterborough's brick quarries. As well as generating material for making bricks, the same pits have also yielded the fossilised remains of vast numbers of ancient marine reptiles along with an impressive range of dinosaur bones. In the late 19th and early 20th centuries, local man Alfred Nicholson Leeds, with the assistance of his family, amassed a collection of fossil vertebrates that was to become world famous. The majority of the fossils came from the base of the sediment, from what has been called the 'Gryphaea and Reptile Beds' and which in the Whittlesey area are located some 30 metres below the current ground surface. As geologists Hudson and Martill have documented: 'The exposures in the extensive brick-pits have made the Oxford Clay a classic subject for stratigraphical and palaeontological research'.

The brick-pits made access to the deepest sediments feasible and, at the same time, the early methods of extraction prior to mechanisation were conducive to locating 'anomalies' in the clay. In the first days of making bricks the Oxford Clay was dug out by gangs of 'clay-getters' who were able to excavate a deep face by creating a series of steps or benches which resembled a very broad flight of stairs. Long crow-bars were used to dig or hew the clay, and the men who used the bars were adept at recognising subtle changes in strata as well as the presence of harder mineralised inclusions such as fossilised bones. Through payments or 'liberal rewards', Leeds 'induced the workmen not to dig up bones themselves, but to send notice to Eyebury', the then family home.

Alfred Nicholson Leeds and his family maintained a palaeontological watching brief on the brick pits of Peterborough for almost half a century (1868-1917). They monitored each new pit, followed each new face, and perfected new ways of retrieving skeletons from the clays. Their part in the story of the stratigraphy and palaeontology of the Oxford Clays was the excavation and articulation of the fossilised remains of ancient creatures, whilst the part played by the brick works, was the landscape-wide exposure of fantastically deep sediments.

The right types of clay for making bricks corresponded with the right type of clay for finding fossil vertebrates, and therefore access to the 'Reptile Beds' was made relatively straightforward. Best of all, the deposits were visibly stratified. Simply by stepping back and observing the great depth of the geological sequence, the temporal position (or time-depth) of the marine reptiles and dinosaurs was made strikingly evident. The relationship between giant sea-dwelling monsters and the rural outskirts of Victorian Peterborough could not have been articulated more clearly.

Uniquely, the brick pits of Whittlesey have made it feasible for us as archaeologists to investigate the fens at depth. Not as deep as Leeds and his family but deeper than has ever been explored before.

The terrestrial landscape

Our first encounter with deep dry spaces occurred in 2001 at Bradley Fen. There, we identified an old land surface just ten centimetres above modern sea level, with large quantities of Neolithic and Early Bronze Age worked flint. Further detailed exploration revealed a circle of postholes, with a porch arrangement and a central hearth. We found fragments of Beaker pottery and an impressive collection of finely retouched tools, and charred logs from the central hearth yielded a radiocarbon date of 2200–1950BC. Here was a Beaker house situated at the bottom of the Flag Fen basin, and nearly one metre below what had been considered to be the contemporary fen edge. The finding of the hearth changed our perspective completely. Ever since it has been a priority to see just how deep things can go.

Currently we are investigating yet deeper old land surfaces at Must Farm, situated at 0.0m, -1.0m and -2.4m OD. We have found many more hearths, large watering holes, burnt mounds, fence lines, cremations and, for the first time, intact monuments including two Neolithic oval barrows. There is a mixture of both wet and dry features and sometimes the intrinsic temporality of the landscape reveals itself. A wonderfully preserved, waterlogged wooden fence line skirts by an intact burial mound that itself had long since dried out by the time this part of the landscape had become saturated.

As we go deeper, the archaeology moves further back in time, and us with it. We are excavating our way down what Grahame Clark and the Fenland Research Committee of the 1930s once described as a ‘delicate chronological scale’. Taken to its furthest extent, this would lead us (as it did Clark) to the bottom of the North Sea and to the world of Doggerland, submerged before 6000BC — if ever there was a landscape which exemplified the transformation from the terrestrial to the inundated, then surely it is this.

As Vince Gaffney and others map ‘Europe’s lost world’ under the North Sea, and generate palaeogeographic models of its submerged terrain, we are mapping the drowning of the Flag Fen basin. The reconstructions we are developing also echo the work of Martyn Waller and the Fenland Project, who modelled the land surface of the Fenland basin up to the end of the last ice age, mapping freshwater and marine sediments through time. Unlike Waller’s maps, ours show the character and extent of land rather than sediments, but the principle is the same: both series represent ‘surface available for settlement’ models (to make use of another of Grahame Clark’s descriptions). What is instantly obvious from the new reconstructions of the Flag Fen basin is how the river, and not the fen, was the main focus of early occupation.

Rising waters

Shortly after 1300BC the Flag Fen basin would have been discernible as a small fen embayment off the western Fen edge. Its formation fragmented the landscape, as easy passage became increasingly circumvented by the drowning of large areas of low-lying land. The fens were rapidly transforming a place once connected by a major river into a series of islands. The river itself had gone through many different manifestations, including periods of being estuarine and tidal. Now it returned to freshwater, only perched up high within the run of an old tidal creek or roddon.

Critically, routes that were once straightforward were broken. Mobility and access were becoming dependent on keeping both people and animals above the rising water. The earliest phases of the Flag Fen and Must Farm timber constructions overlapped with the waning of the field systems, but coincided very closely with the arrival of hundreds of bronze weapons. We know this because it was only after the lower fields had been covered by peat that the alignments were erected and metalwork was deposited. Spears and swords accompanied raised wooden architecture into the fen, and for the first time there was an outright relationship between people and a waterlogged landscape.

In this space, and at this time, our Bronze Age and Iron Age archaeology can legitimately be characterised by its proximity to the fens. For this period, the presence and preservation of architectures and things were contingent on wet conditions in the past much more so than on wet conditions in the present. Thus when we excavate these features, we find other evidence of wetland such as the bones of fish, otter, beaver and water vole. These remains are not there because conditions favour their preservation; they are present because of historical context. Accordingly, an absence of similar Fenland species or waterlogged remains from Early Bronze Age monuments tells us something about context, not preservation.

A pristine landscape

The distribution of early monuments and settlement at Must Farm appears to be equivalent to the Nene valley, so resembling later prehistoric occupation of many other major river valleys in southern England.

There is one major difference — and this brings us back to the attributes of deep-space archaeology — in that the occupation of this low-lying stretch of a prehistoric river valley was cut short or terminated around 1500BC. The onset of conditions that encouraged peat growth coincided with the end of the early Bronze Age: this stretch of the river had already disappeared before field systems were built and Middle Bronze Age Deverel-Rimbury pottery had come into use. The land beneath the peat was unenclosed, and its features yielded impressive assemblages of Grooved Ware, Beaker and Collared Urn pottery but nothing later. In many ways, this part of the Nene survives as a pristine late third and early second millennium BC landscape, unadulterated by subsequent human activities.

The absence of rigid, earth-fast enclosure was made apparent in many ways, but perhaps one of the best indicators of an open landscape was the presence of animal tracks. As we exposed the top of the old land surface, we were able to identify hundreds of hoof prints. These had been made by large ungulates, including cattle, deer and pigs, and occurred either in large groups around the fringes of watering holes, or as linear tracks or paths. The pathways were the most visible manifestation of the movement of animals, created as they criss-crossed large areas of the lower contours in a series of narrow runnels. In some sections these runnels retained obvious hoof impressions. In others they had been overlaid or augmented by narrow metalled pavements, showing that the tracks were as much about the movement of people as animals.

Pollen work and analysis of the soils by Rob Scaife and Charly French indicate a patchwork of woodland and grassland at the time of the paths, although the pollen also suggests a wider background of cereal, perhaps coming from the surrounding high ground. Occupation was extensive rather than intensive, and overall there was a sense of mobility rather than permanent residency.

Like the monuments, it seems, the community was almost certainly distributed at the scale of the river, as opposed to the scale of the local site. The impression coming from these excavations is of a place made up of cumulative practices dislocated by extended periods of inactivity. Land was used and then left fallow for long periods, before being used again.

Parallel Histories: Must Farm & Flag Fen

It was in the summer of 1999 that decaying timbers were discovered protruding out of the southern face of the old quarry pit at Must Farm. Subsequent investigations in 2004 and 2006 revealed the site to be later Bronze Age (1300-800BC) and to comprise a succession of large timber structures spanning an ancient watercourse. In its earliest form the channel was crossed by a series of massive, square cut oak piles (25cm by 25cm) made from trees that had been felled at the same time as the first two rows of the nearby Flag Fen post alignment (around 1300–1250BC). The size and orientation of the piles seemed to be completely out of proportion to the stream, as if they also related to something much larger in the landscape. A thin accumulation of silts had formed around the base of the uprights when the structure partially collapsed, crushing a fish trap beneath it. Water — indicated by freshwater snail shells — inundated the buckled structure before brand new sets of posts were inserted.

These posts included a large encircling palisade made up of tightly spaced, 7–15cm diameter ash poles that appeared to choke the flow of the stream. It was not too long before catastrophe struck again, when a major fire, dating to sometime between 920 and 800BC, seems to have brought a sudden and unanticipated end to the site, plunging its smouldering superstructure along with most of its contents into the depths. Fire, water and yielding silts guaranteed the preservation of all manner of things including finely woven textiles made of plant fibres, glass beads, bronze tools and implements, and whole pots replete with ‘vitrified’ food, and on one occasion, a wooden spatula still stirring its contents. In one fell swoop an entire prehistoric ‘household’ was plummeted to the bottom of the stream where it was safely encapsulated in layers of organic mud. And there it remained, undisturbed, for almost 3,000 years until clay was needed for brick making, and quarrying commenced in the late 1960s.

The circumstances of the discovery, context and chronology of the Must Farm platform have a great deal in common with Flag Fen, where excavation directed by Francis Pryor began in 1982. Timbers from both sites were first exposed in the sides of pre-existing landscape features (a dyke and a quarry), and although separated by 2km both were located in the same fen-edge embayment. A combination of radiocarbon and tree-ring dating has shown that the two features were built and used at the same time. However, the most striking parallel was the degree of preservation.

The two sites were waterlogged, and as a result wooden posts and wooden objects survived in abundance. This magnificent preservation was due first and foremost to the environment the features were erected in. Crucially, it was wet when they were built, it was wet during their use, and it was also wet for a long period afterwards: from the very onset these were wetland constructions. Both sites comprised large wood engineering projects that spanned

the low-lying zones of an increasingly saturated Flag Fen basin. There was a clear-cut relationship between context and preservation. If these things had been built on dry land, we would be describing hundreds of postholes but very little else.

What was especially interesting about the Must Farm timbers, and has major implications for how we might now understand the context of Flag Fen, is that these were in the small river channel located stratigraphically towards the top of a long sequence of deposits. This sequence included old land surfaces, as well as the more familiar succession of freshwater and marine sediments. At Must Farm there was a 'verticality' which belied the conflated character or overwhelming flatness of the surrounding landscape. This depth suggested that the sites of the timber constructions already had long histories, passing through a whole series of different environments.

In short, it seems we were investigating what palaeoecologist Rob Scaife has described as a 'negative hydrosere': changes in plant pollen reflect a succession that went from terrestrial to underwater environments, rather than the other way around. The ever rising sea had gradually transformed a low lying, dry terrain into a saturated embayment. Must Farm and Flag Fen were constructed right at the wet end of this spectrum.

The back story to this basin-shaped landscape, criss-crossed with raised timber structures, was much deeper and much dryer than we had anticipated. Before, we had only scratched the surface. After all, this is a space without the usual crop marks or surface artefact scatters, and well beyond the reach of orthodox geophysical survey. Similarly, its prehistory tends to be extensive rather than intensive, and therefore extremely difficult to evaluate effectively using routine trenching patterns. Fortunately for us, our access into this landscape came via the developer. Hanson UK also needed to go deep and at a huge scale.

The tip of the iceberg

Hanson's Must Farm quarry has unearthed a fleet of eight beautifully preserved prehistoric logboats. The boats survived deep within the waterlogged sediments of a later Bronze Age/earlier Iron Age watercourse (1300–400BC) that once meandered across the southern half of the Flag Fen basin. The same sediments preserved the hurdles and posts of a run of V-shaped weirs which divided up the channel into roughly uniform segments. Funnel-shaped baskets or fish traps occur with even greater regularity, as do metalwork finds such as swords and spears: when plotted alongside the boats and weirs these objects further strengthen the impression of a once bustling waterway.

However, whilst the weirs and traps were more or less permanent fixtures (things to return to and maintain), the scuppered logboats and immersed weapons represent relics of past mobility. The boats once carried people and things to and from this 150 metre-long stretch of channel, demonstrating connections to places well beyond the immediate catchment. Similarly, the types of swords and spears recovered are the same as weapons found elsewhere, comparable to those associated with the famous Flag Fen post alignment.

From the context of the watercourse perched within a roddon or levee, we can envisage a natural causeway that flanked a small stream and that made its way through a saturated landscape of marsh and reed swamp. The people who navigated up and down the channel could also have walked along its banks.

The pattern of deposition suggests that if we were to continue excavating along the channel, we would keep finding more of the same. There is every possibility that our discovery has come about because of circumstance rather than good fortune. Furthermore, the deep sediments of the fens are yet to be explored at the scale of our current investigations. This is just the tip of the iceberg.

Developer, curator and contractor

Must Farm is changing the way Fenland archaeology is viewed. Once regarded as a barren landscape with little to offer, the emergence of deep space archaeology is revealing artefacts that are surprising in both their quantity and quality.

Credit to the success at Must Farm must, however, be jointly shared with Hanson UK. The brick pits at Must Farm exist because of Oxford Clay and its use in the production of bricks. The clay is reached by open cast extraction, after the surface deposits or overburden have been removed on a very large scale. And it is this extraction that first revealed the Bronze Age treasures we are now discovering.

The Cambridge Archaeological Unit, University of Cambridge, has been working at the pits since 1994, in close collaboration with Cambridgeshire county council's Historic Environment Team, Hanson UK and its own archaeological consultants, SLR Consulting Ltd.

During this time we have evolved a close working understanding with the earthmoving team (Fox Ltd) responsible for gaining access to the clay. Our skill is in identifying and articulating archaeology. The skill of the developer and its contractors is in the progressive removal of vast quantities of soil and all that this kind of operation entails.

Together, we are able to access the archaeology in a safe and structured manner and, most importantly, at a scale sympathetic to past occupations of these spaces. The project's success is completely dependent on the cooperation between developer, curator and contractors.

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