

# Must Farm, Whittlesey 2010

Site 4 Archaeological Investigations



Interim Statement

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November 2011

Report No. 1011

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*A programme of archaeological excavation and recording prior to mineral extraction was undertaken within Site 4 of Must Farm quarry between September 2010 and April 2011, on behalf of Hanson UK. A total of 4.344 hectares were machine-stripped under controlled archaeological conditions to expose a bank and ditch and potential features associated with earlier buried soil deposits.*

*The investigation produced a large quantity of surface artefacts, predominantly lithic, which often coincided with darker charcoal enriched areas of buried soil and in some cases artefact rich spreads. These spreads were typical of midden deposits, yielding either Beaker or Collared/EBA Urn pottery, although these two types never occurred together within the same spread. An abundance of cattle and deer tracks were identified across Site 4, which in places were very dense trample zones, overall they appeared to converge towards the north-west corner of the excavation area.*

*Twelve hearths were identified across the entirety of Site 4, the majority of which were associated with multiple stakeholes either around their edges or in some cases within. Three large pit/wells were present - all of which contained well preserved waterlogged wood - as well as a further six smaller pits.*

*A Middle Bronze Age bank and ditch, which was constructed after the initial formation of peat, stretched the entire length of the stripped area from south to north, meandering gently in places but bending sharply in others. The ditch itself consisted of a series of smaller joined segments, which created one continuous up-cast bank with no breaks or gaps along its length. This is unlike Phase 3 where it was found to have been segmented. A number of earlier trackways and dark spreads encountered in the vicinity were also found to extend beneath, and therefore pre-date, the bank and ditch.*

Site 4 (TL 231 972) was situated to the immediate north of Phase 3 (Knight & Murrell 2011) and northwest of Phase 2 (2009 investigations), Figure 1. Site 4 can be divided into five feature types (see Figure 2):

- dark spreads (Collared/EBA Urn and Beaker)
- hoof prints and tracks
- hearths and their associated features (Collared/EBA Urn)
- watering holes and other small pits
- the bank and ditch (MBA)

Excluding the bank and ditch, which was slightly elevated by the initial accumulation of peat, all feature types were situated on the '0m OD terrace' more specifically between 0.5m OD (north west) and -0.3m OD (south east). The site was covered with a sequence of peat and plough soil, measuring between 0.4 and 0.7m, similar to Areas 1 and 2 of Phase 3.

### *Buried soil*

The buried soil was less patchy and thin than Area 1 of Phase 3, and was between 0.05m and 0.25m thick. However, higher patches of gravel up-cast from fallen trees were still visible across Site 4, which in turn created deeper tree throw holes. Often thicker, darker buried soil accumulated within these tree throw holes, which were usually capped by the later inundation of peat. Distinct A and B horizons were visible within the buried soil, particularly underneath the bank and ditch where preservation was at its best. The thickness and clarity of the buried soil in comparison to the thinness of Area 1 of Phase 3 is potentially a result of controlled soil stripping rather than a difference in environment.

The quality of buried soil is reflected in the quantity of surface finds obtained from Site 4. Again, unlike Area 1 of Phase 3, an abundance of material culture was unearthed, predominantly worked flint (with a high tool to waste flake ratio), with occasional Collared/EBA Urn pottery, occasional burnt stone, and rare animal bone fragments (Figure 3). This is reflected in the higher density of features and activity within Site 4. An extensive field walking programme identified finds clusters or activity points which when investigated proved bountiful. Often these finds clusters were associated with zones of enriched buried soil or burnt spreads, as discussed below, however the survey also identified scatter zones which were otherwise not visible. This was followed by a sampling programme comprising sieved 90 litre buried soil samples taken at 'sample points' on a 50m grid across the site. These revealed very few artefacts due to their non-targeted position, most of which hit patches of very thin buried soil or gravel up-cast.

### *Spreads*

The spreads can be split into three broad types: 1) artefact and charcoal rich midden deposits which contained Collared/ EBA Urn pottery; 2) charcoal rich areas of buried soil which sometimes contained Collared/ EBA Urn pottery; 3) an artefact and charcoal rich deposit which contained Beaker pottery. These deposits were always

thicker than the surrounding buried soil, between 0.08m and 0.20m, indicating a much quicker depositional rate. The 1m by 1m squares excavated in transects demonstrated that finds were always denser towards the centre, in the thickest part of the spread. The collared Urn pottery was the latest pottery present within Site 4, representing an end date to activity prior to the inundation of peat.

1 & 2 were widespread and often associated with hearth activity, dispersing pottery, burnt clay, burnt stone, flint, animal bone and charcoal over large areas and filling the adjacent hollows and tree bowls (Figure 5-top). Finds from within individual spreads all looked the same in both size and in their level of abrasion and burning indicating they had undergone the same taphonomic process. An additional 1m by 1m square was 100% sampled from each of the individual Type 1 midden spreads, (and type 3), in order to quantify and compare finds from different zones and periods of activity. This is a process which can be repeated in future phases to build up a greater understanding of the activity which produces these 'middens'.

As a result of features being exposed during the excavation of transects, large areas of [1642], a Type 1 spread, were removed. This revealed a large hearth pit 0.45m deep with a charcoal abundant fill and several distinct burning episodes in the centre towards the top. The hearth pit was surrounded by a series of double postholes and deep stakeholes, suggesting that it was potentially enclosed within a structure c. 5m in diameter. The vast nature of this spread is therefore a product of the intensive activity associated with the hearth.

3) The Beaker spread was 100% excavated and unlike 1 & 2, it was discrete and contained within a natural hollow beneath the bank and ditch. This spread was not associated with any cut features but with two parallel rows (one underneath the bank and ditch), of small highly degraded stake alignments. These small stakes are likely to have played a role in keeping the spread contained, or alternatively were part of an unknown activity, to the immediate north of Site 4, the by-product of which produced the spread.

### *Hoof prints*

The abundance of cattle and occasional deer hoof prints and tracks have provided a unique overview of a living landscape, imprinted into the buried soil prior to the inundation of peat. Specific environmental conditions enabled otherwise invisible activity to be traced through and beyond the boundaries of site, epitomising the vastness of animal movement in the wider area. Only when the overlying peat was removed by hand in a controlled block, (20m by 20m), did the quantity of prints become apparent, and it is likely that across the remainder of site (which was machine stripped) only the deepest, well trodden pathways are visible. This was an advantage as the visible tracks were discrete enough to show a convergence of movement towards the northwest corner. Animal tracks on the same alignment were also noted in the 2007 phase of the investigation which further confirms the extent and density of animal movement. Where tracks passed underneath the bank and ditch, preservation was excellent, and much like the controlled block, the quantity increased.

The prints were filled with a mixture of the overlying peat and occasionally the underlying gravel, which had been pulled up through the buried soil on the hooves of the animals. Very few artefacts – all flints - were found in association with the tracks, and in fact they occurred at lower densities than found in the surrounding buried soil. Scales (2007) suggests that hoof print tracks made in soils that become peat filled underestimate the size of the actual hoof which made the impression, therefore the cattle at Must Farm may have been larger than their hoof prints suggest.

### *Hearths and Associated Features*

Twelve hearths and four small areas of shallow burnt buried soil were identified within Site 4 which can be split into three types. 1) One large pit hearth (2.75m by 1.5m and 0.45m deep), which showed evidence of several episodes of burning in the centre, towards the top, it was situated underneath spread [1642] and contained within a potential posthole structure. 2) Several vertical sided, flat based hearths (between 0.6m-0.9m in diameter), with several episodes of cleaning out and subsequent burning often with an adjacent patch of burnt buried soil (Figure 3-A). 3) Several shallow, bowl shaped scoops (0.59m-1.05m in diameter) (Figure 3-B). All the hearths were associated with multiple stakeholes around and on their edges, which were formed in clusters on opposing sides, and occasionally they were cut into the base. In the large pit hearth (Type 1), eighteen internal stakeholes were cut directly into the charcoal abundant fill which had accumulated before the episodes of burning, suggesting that its primary function was different to its final function as a hearth. With the exception of Type 1, none of the hearths were contained within a house or structure.

The stakeholes were filled with a mix of dark charcoal rich buried soil, charcoal lumps and heat affected material, particularly in type 1 where burnt flint, stone, pottery, clay and tiny fragments of highly burnt bone were present, similar to that of the burnt spread above. The swirly nature of the fill is indicative of intensive burning and is likely that the stakes and any other material within the holes were burnt beyond recognition in the same process. All of the pottery from all of the hearths was Collared/ EBA urn. The stakes have a multitude of probable uses, including supports for cooking vessels and/ or wind breaks. The clustered nature of the stakes suggests they were not permanently fixed in place, but occasionally moved or adjusted when required.

Some of the hearths were situated close to, or on top of the up-cast of trees, and often the charcoal rich waste produced from the features was caught in the tree bole throw hole. It is possible that this was a deliberate selection of environment rather than coincidence, as the dryer, freer draining gravel of the up-cast (probably only visible as a slight rise in the landscape), would have been more suitable than the surrounding slightly wetter silty soil. There is a great contrast in activity between the blank space of Area 1 in Phase 3 and the busier, hearth rich Site 4 in terms of features and the resulting material culture that comes with this activity.

### *Watering Holes and pits*

Three large watering holes and a further six smaller pits were identified within Site 4, of which the pottery recovered from the smaller pits was Collared/EBA Urn connecting them with the hearth and spread activity. Two circular steep sided pits were associated with the cluster of hearths immediately west of the bank and ditch, these were sterile. In comparison, the row of four small pits, (0.3m-0.9m in diameter), sub-circular and steep sided, situated close to hearths towards the north of Site 4 were filled with large sherds of pottery along with burnt clay, burnt flint, burnt stone and bone. This is likely to correlate with the type of hearth they are associated with: the sterile pits with the shallow 'one use' hearths and the finds-rich pits with the hearths that show multiple episodes of burning.

Of the three watering holes, two were very similar in form with a simple deep shaft (1.05m-1.35m deep), and contained little artefactual material, although well preserved wood was found within the silt rich basal fills. The largest of the three was not so simple, with an almost vertical deep shaft on one side (undercut through water erosion at the base), and a stepped, shallow slope on the other. This watering hole contained a larger quantity of wood than the others, which were mostly branches and twigs within the silty basal deposits which filled almost one third of the feature. It is possible that the life of this watering hole was longer than the others due to the volume of wood and the depth of the silt, hence the need to adapt its shape from a steep shaft to a gentler slope. Or perhaps its primary function was different. The cut of the larger watering hole was ambiguous, as the sides were particularly concreted and the uppermost fill was very similar to the surrounding buried soil in which it was cut. This implies that the buried soil continued to form post watering hole and suggests an early date for the feature itself.

### *Bank and Ditch*

The bank and ditch (Figures 4 and 5) were naturally separated from the other features within Site 4 by the onset of paludification. The peat, which elevates this phase would have initially been thicker when the ditch was cut through it and the up-cast bank was placed onto it. However, due to the draining of the site through the formation of fenland dykes and more directly, field drains within Site 4 and the weight of the bank itself, the height on the top of the initial peat formation now sits at -0.05m OD (predominantly), and is between 0.02m and 0.2m thick. In fact the bank and ditch follows the 0m OD contour line. As with Site 3 the brushwood which lay underneath the bank also suffered the effects of drainage as it was desiccated and fragmented, in stark contrast to the excellent preservation of brushwood beneath the bank at Bradley Fen. Plough scars were also visible as lines cut into the bank. Despite all this, the bank and ditch retained its form and profile very well and in fact was also an excellent preserver of the earlier features which passed underneath.

Very few artefacts were located within the feature, all of which were a result of re-deposition from digging through the underlying features when the bank and ditch was constructed; nearly all of these artefacts were associated with the portion of the bank and ditch above the Beaker spread. Although assumed to be Middle Bronze Age in date due to its physical relationship with underlying features and overlying deposits, a

secure and more accurate date for the construction and demise of the bank and ditch could be obtained from the rich sequence of organic peaty deposits within.

The ditch itself was a series of small adjoined segments which created one continuous up-cast bank with no breaks or gaps along its length. By opening large sections of the bank and ditch in plan it was possible to see the relationship between the segments, which were predominantly 2.3m long, (with extremes ranging from 1m to 4.6m). These segment ends were often situated at corners and bends within the feature. The sinuous nature of the feature within Site 4 is similar to that at Bradley fen where the bank and ditch was continuous and meandered around earlier features in the landscape such as trees. This is in contrast to the interrupted nature of the bank and ditch in Phase 3 and validates the idea that the breaks identified there were indeed deliberate and were interrupted as causeways or pathways through. Very subtle differences in topography within Site 4 led to a variation in the depth of the ditch; where the ground surface was higher, the ditch cut was shallower and conversely, where the ground was lower, the ditch cut was deeper. This meant that the height (OD) of the base of the ditch was not consistent along its length; however the height of the top of the bank varied only slightly along its length from 0.30m to 0.35m OD despite the variation in topography. The segmented nature of the ditch also suggests that it was not constructed in order to allow water flow from one end to another; instead it is likely that the segments would have held water. Therefore the primary function of this feature was to create a level up-cast bank as a dry walkway or route through an otherwise difficult to traverse landscape.

### *Palaeoenvironmental Investigations*

Preliminary assessment of selected bulk environmental samples from a range of Beaker/Early Bronze Age and Middle Bronze Age contexts has been undertaken. Of these, the Beaker and Collared/EBA Urn spreads produced charred grains of naked barley and emmer wheat alongside arable weeds indicating cultivation of the surrounding area. Samples taken from the ditch of the Middle Bronze Age bank and ditch produced well preserved waterlogged plant remains of species that grow in wet mud or shallow standing water and reflect a wet or seasonally waterlogged local environment.

### *Acknowledgements*

The excavation was funded by Hanson Building Products Ltd. and monitored by Kasia Gdaniec of the Historic Environment Team, Cambridgeshire County Council.

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522800/297400



Figure 1. Area location

524000/296500

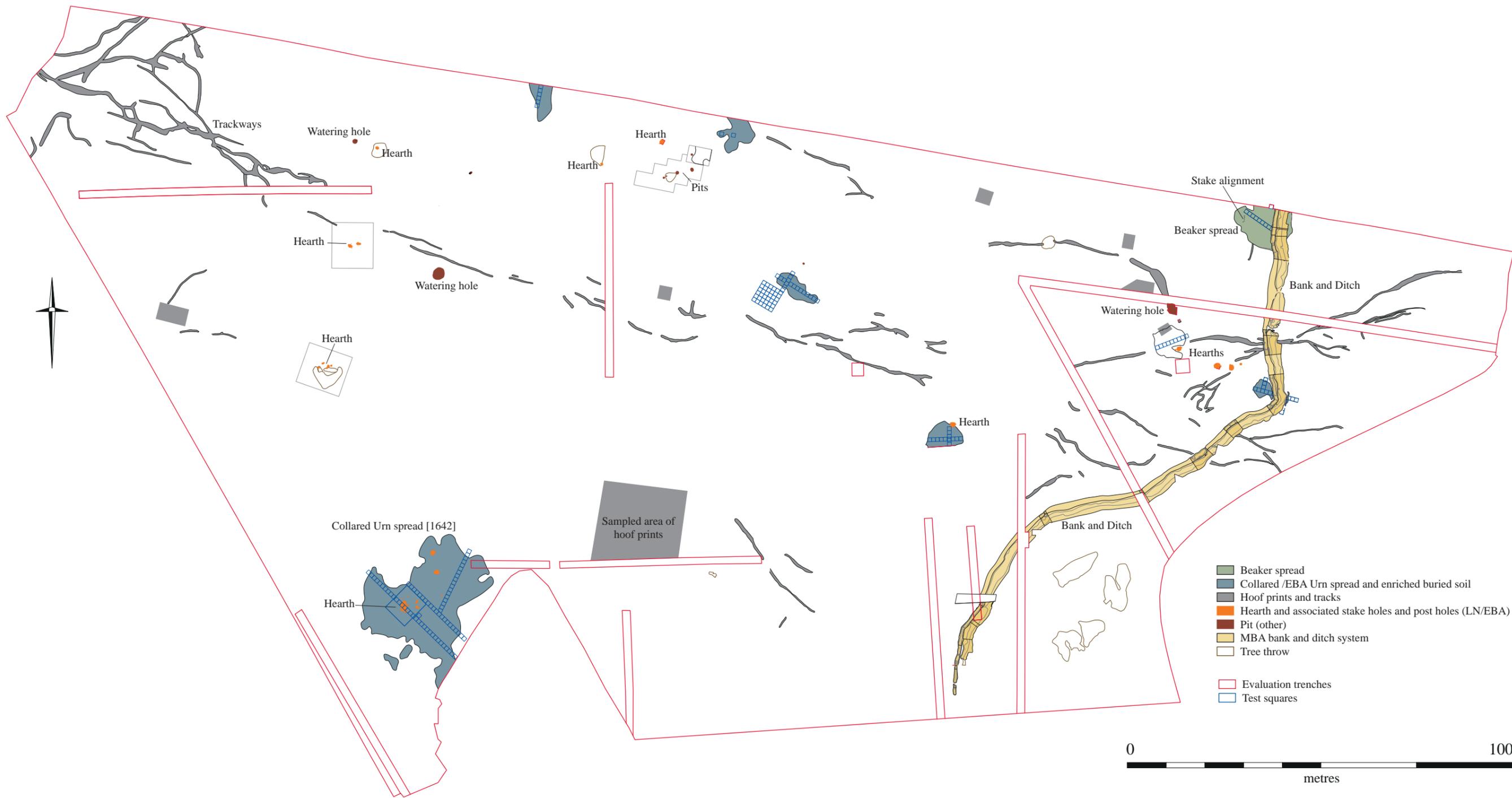


Figure 2. Plan of Site 4.



A



C



B



D

Figure 3. A) Hearth F.450, B) Hearth F.553, C) Collection of flint surface finds, and D) Pottery from a square of Burnt Spread.



Figure 4. Bank and ditch.



Figure 5. Bank and ditch.