EXCAVATIONS AT WHELPLEY HILL EARTHWORK, 2013 TO 2016

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With members of the CVAHS team

This paper presents the results of an investigation by the Chess Valley Archaeological & Historical Society field group of an enigmatic circular earthwork at Whelpley Hill, variously described as a 'prehistoric plateau camp' or an 'early Iron Age or medieval defended enclosure'. Geophysical survey followed by targeted excavation examined the ditch, internal bank, the entrance and areas inside the earthwork. Radiocarbon dates from the excavation place the earliest activity on the site in the Neolithic period and suggest that fortification and occupation of the site was associated with the Bronze Age.

Introduction

Between 2013 and 2015 the Chess Valley Archaeological & Historical Society field group investigated the earthwork at Whelpley Hill (Scheduled Ancient Monument 27154; Bucks Historic Environment Record 0002200000). The site lies about 3km north-east of Chesham, just west of Bovingdon airfield at NGR SP 9968 0394 (Fig. 1). It was first noted by John Sheahan (1862). It was marked as 'Camp' on the First Edition Ordnance Survey 6" sheet (Bucks XXXIX), published in 1883, and the Royal Commission describes it as "A Prehistoric Plateau Camp roughly circular and defenses consist of a single rampart and ditch…… Much denuded and in danger of complete obliteration by the plough" (RCHME 1912). The earthwork is described in the HER as a "bank and ditch, Early Iron Age or medieval, defended enclosure, 700BC to AD1539".

The Whelpley Hill earthwork is roughly circular, measuring approximately 150-160m in diameter overall. The interior is level and measures approximately 120m north west to south east by 100m south west to north east. This is encircled by a low bank, nowhere greater than 1m in height and varying between 16m and 24m in width, narrowest around the eastern part of the circumference. Slight traces of a platform or berm remain visible around the inner face of the bank. The external ditch from which material for the bank was quarried has largely been infilled, although it can still be seen as a slight depression, 8m to 12m in width, encircling the bank. There is a single entrance, located in the south-eastern part of the circuit.

In the early 19th century, the bank and the ditch were more pronounced, during which time the ramparts were lined with beech trees and referred to as 'Banks Wood'. The interior was open pasture, known as 'Round Field'. In 1860 the beech trees were removed and most of the monument was brought under plough. Ploughing continued until the end of World War II, reducing the bank to its present size, and obscuring the inner edge of the ditch.

When the site was first surveyed and recorded by the CVAHS field group (Gover 2001 & 2005), it became clear that the shape and size of the earthwork did not fit within the usual range of Iron Age fortified enclosures. It shows greater similarities with Late Bronze Age/Early Iron Age (1400–700BC) earthworks, particularly those in Eastern England, which is interesting given the relative infrequency of such sites in the area. The initial survey also identified episodes of deliberate structural degradation which included ploughing out the bank and backfilling the ditch. These activities were finally stopped in the early 20th century and the monument was scheduled.

Following this discovery, the CVAHS field group applied to Historic England and the landowner for permission to survey and excavate the earthwork. Their objectives were to establish, by means of geophysical survey and targeted exca-

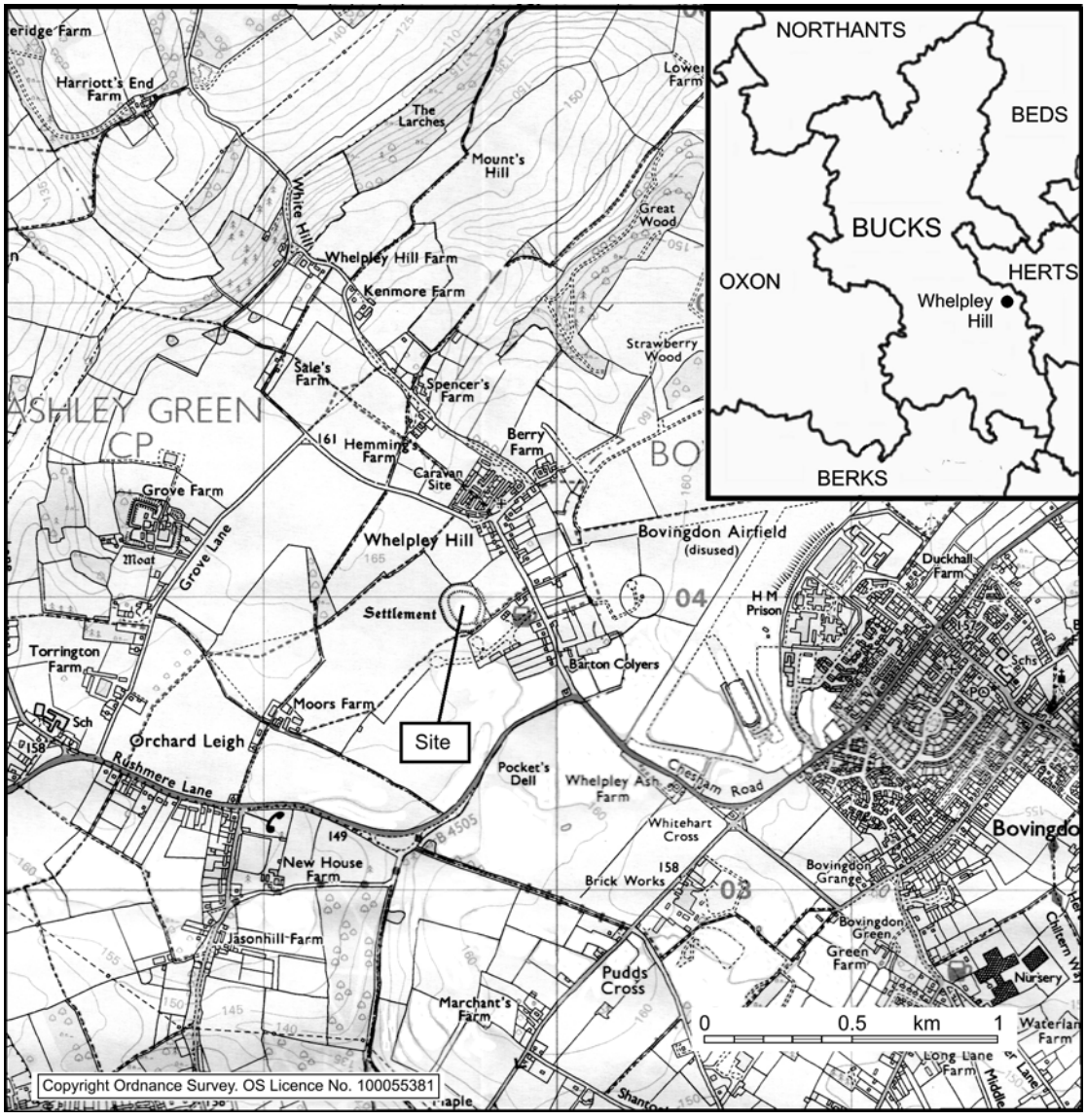

FIGURE 1 Location of Whelpley Hill Camp

vation, the dates of construction and period of occupation, to locate and explore possible entrance ways, to identify and excavate major features and to determine the original sizes of the bank and ditch. As the first stage of works, the group carried out a gridded geophysical survey across the site (Gover 2001), followed by topographical survey (Gover 2005). Excavation took place in late spring and summer of 2013, continuing into 2015.

THE INVESTIGATIONS

The major part of the enclosure was explored by means of a resistivity survey. This highlighted the positions of what appeared to be possible features for excavation. Several of these, associated with the bank and ditch, were selected for investigation: the trenches are highlighted in red (Fig. 2). Features identified as areas of low resistance are shown in

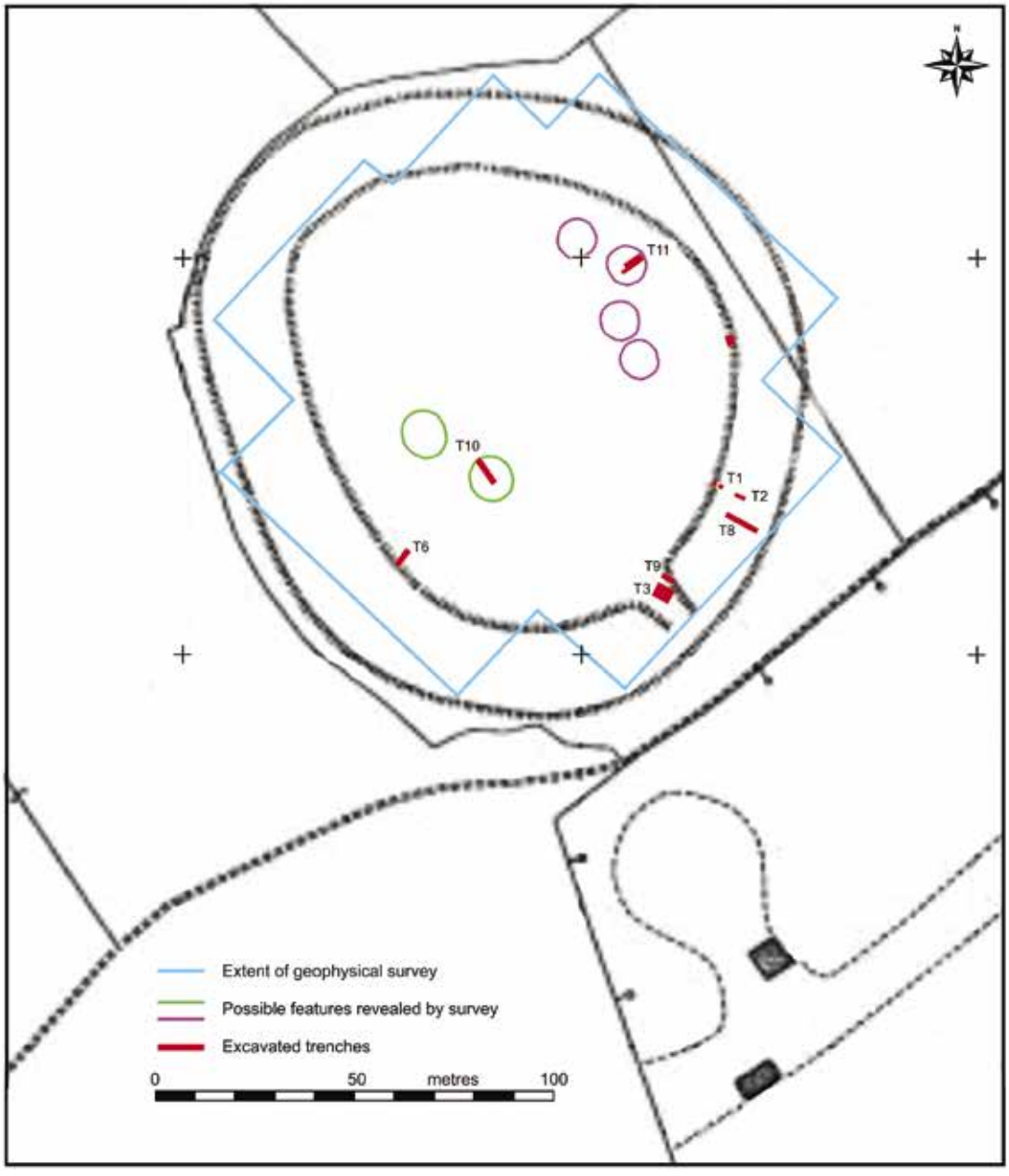

FIGURE 2 Results of resistivity survey and overall site plan

green; high resistance features are outlined in lilac. Context numbers are shown in text below in square brackets.

The Inner Bank

Ploughing in the 19th/early 20th century had considerably reduced the prominence of the earthwork bank, such that it stands today to a maximum

height of c.1m. The bank was explored by cutting a 1 x 2m trench (Trench 1) through its highest point.

A complex series of levels was uncovered (Fig. 3). Topsoil [000] sealed brown/orange clay [001] c.40cm deep, containing a localised sandy intrusion [002]. This overlay c.22cm depth of more friable grey-brown clay [003], interspersed with roughly vertical black linear streaks. Deeper contexts comprised c.30cm of friable orange clay [004] overlaying a further layer of stiff orange clay [005]. Horizontal alignment of the cut bank surface to the surrounding contemporary surface showed that the bank, as it stands today, has a height of c.80cm and is comprised of contexts [000] to [003]. The variable nature of the bank make-up indicates that it was built up in phases using material from different locations. This apparent complexity is noteworthy, since it is very likely related to the diversity of clay and sand types which are still found in the immediate area and used by modern-day brickworks. No sign of the original land surface was evident in the bank profile. This was disappointing as pollen, snails and insects preserved in the buried surfaces may have provided information about the prevailing local environment when the bank was raised. It seems likely that, as for many sites of this type, the original topsoil was removed for use elsewhere prior to the bank/rampart being built.

Excavation of a further trench (trench 6) near to the top of the bank but on the sloping inner surface uncovered brown/orange clay immediately beneath the topsoil. At c.60cm depth, significant numbers of larger flints up to 20cm in length were encountered. These might represent a localised dump made at the time of building-up the bank, or possibly the disturbed remnants of a revetment. Such protective structures have been associated with fortified enclosures of the Late Bronze Age period.

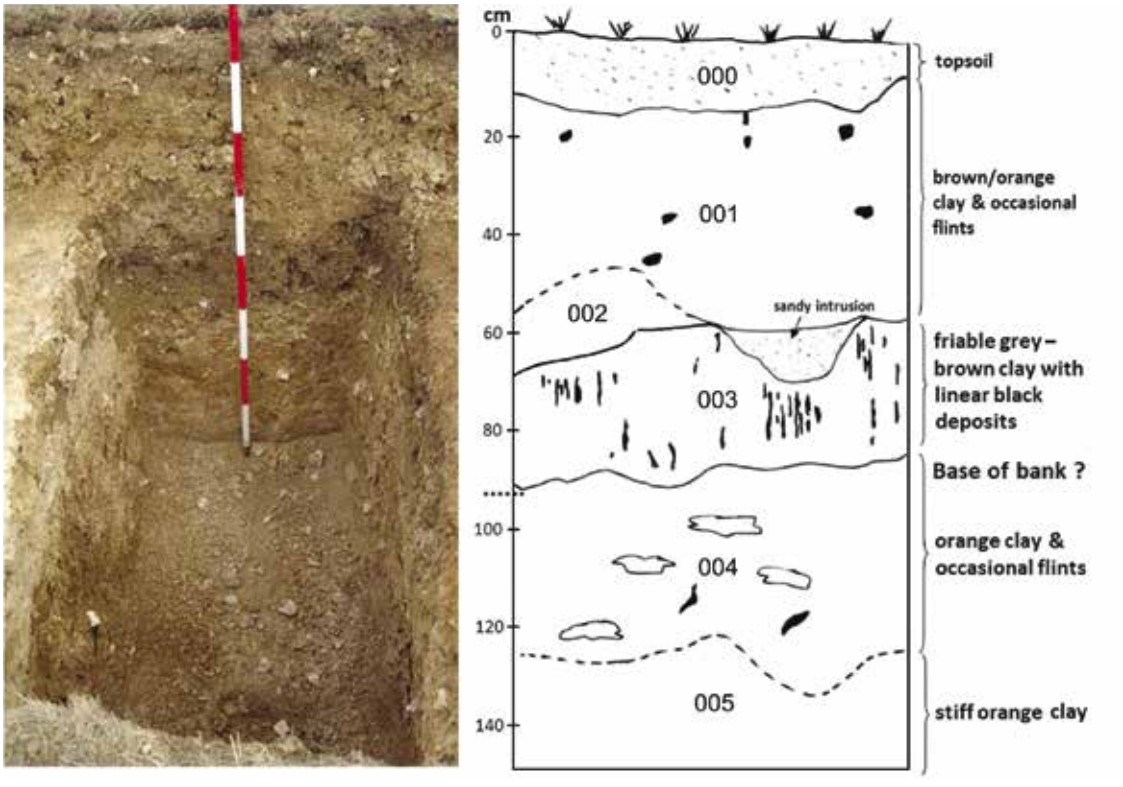

FIGURE 3 Trench 1 section through upper bank, showing stratification

The Outer Ditch

As a preliminary to full excavation of the outer ditch, the likely location of its deepest point was determined by cutting a 1 x 2m trench (Trench 2) across an outer ditch position. Three contexts were identifiable; topsoil [000] 25-30cm deep, overlaying orange-red clay [001], which varied in depth from c.75-100cm and sloped downwards across the ditch. This clay fill is likely to derive from the enclosure bank, pushed down into the ditch when it was slighted during the 19th/20th century. Beneath [001] an organic-rich deposit was clearly visible at about 1.2m depth [002], extending downwards. This established the approximate depth/position of the ditch fill.

Trench 8 (c.9.0 x 1.5m) was then opened (Fig. 2), using a mechanical excavator to remove turf, topsoil and the clay 'dump' and to expose the ditch fill. Details of the make-up of the south and north-facing sections are shown in Figure 4.

The dark organic-rich ditch fill, which underlay the material from the slighted top of the bank, was readily discernible. At least two phases of the original ditch fill were evident [002-1 & 002-2],

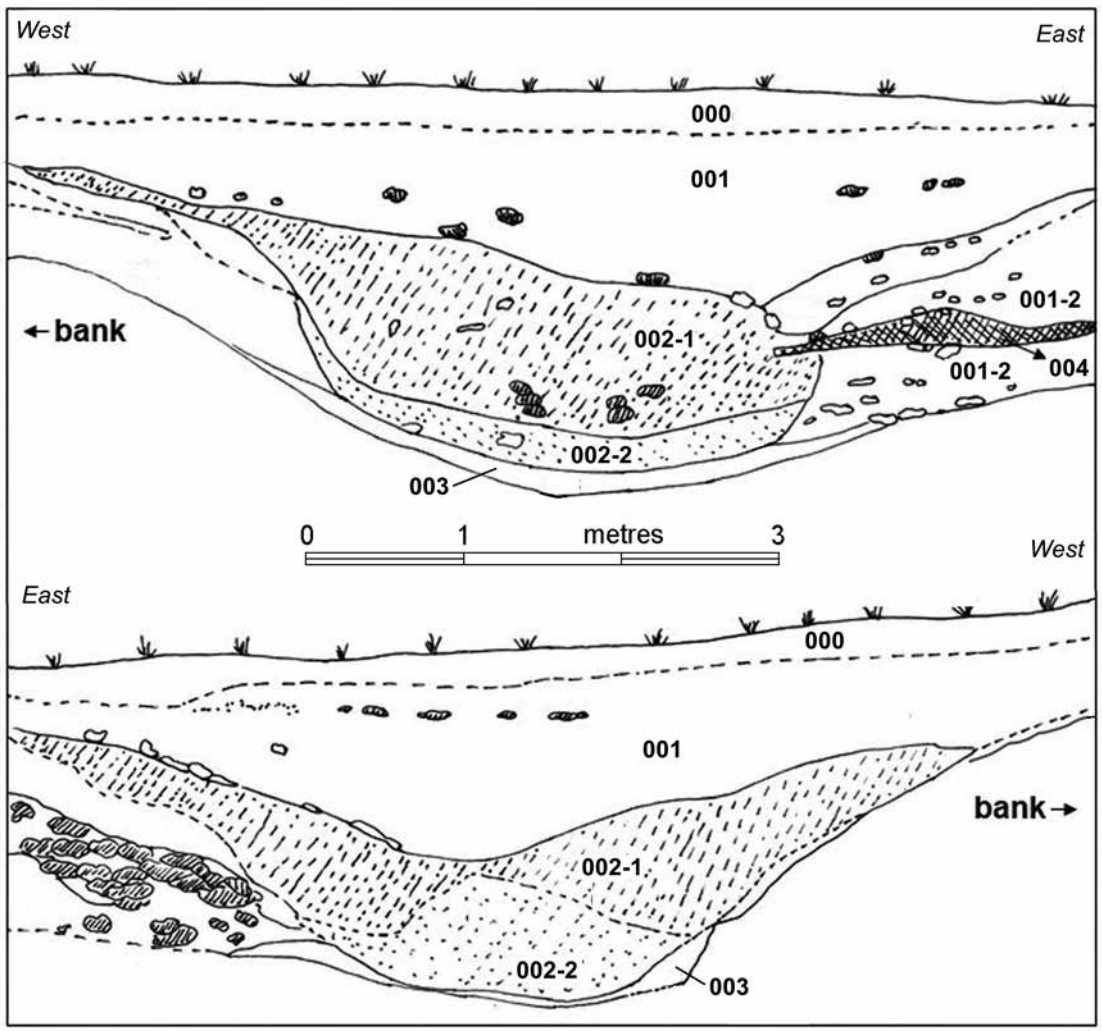

FIGURE 4 Trench 8: Sections through outer ditch

which appeared to vary in their deposition pattern. Together, these deposits were 2m deep. At some point, coal ([004], south-facing section) had been dumped on the outer side of the ditch. This deposit was placed before the bank top was pushed into the ditch and appears to have subsequently sunk into the damp ditch fill. A later body of brownish clay with chalk nodules [001-2] also appears to have slid down the outer side of the ditch.

The lowest point of the ditch cut was c.3.2m from the modern land surface and its approximate width at the surface was c.10m, indicating that the outer ditch was a significant feature. Samples were collected from the organic-rich ditch fill in the hope of obtaining some environmental data from pollen, mollusc shell, carbonized seeds and charcoal remains, but none was forthcoming.

The Enclosure Entrance

Detailed topographic survey of the outer bank indicated a possible entrance on the south-east side of the enclosure. Trench 3 (5 x 5m) was excavated across an area where the bank on either side appeared to slope downwards (Fig. 2). On the west side of the probable entrance, the downward sloping surface of the bank was encountered, overlain by disturbed red clay and topsoil (Fig. 5).

The entrance floor aligned with the base of the bank slope at about 1m depth. The largest area of floor surface was uncovered on the east side, where the compacted surface was interrupted by an isolated cluster of large flints which appear to have been dumped, or placed as part of a revetment to inhibit movement or slippage of the bank into the entrance. There was no evidence for features such as postholes, which might have pointed to a gated or defended entrance. The excavated area did not extend to the bank slope lying to the east of the enclosure entrance, so Trench 9 was opened to the north-east of Trench 3 (Fig. 2). This trench uncovered the west-facing bank slope, which was identical in general make-up and profile to that on the opposite side of the entrance.

On the south side of the entrance a large pit, 2.2m in diameter and c.2m deep, had been dug through the entrance floor into the natural solid red/brown clay. The pit fill comprised dark topsoil throughout and contained the articulated skeletons of a calf at about 0.8-1.2m depth and a mature sheep c.0.3m below this (Fig. 6). The many fragments of household pottery recovered from the fill indicated that this feature was infilled sometime in the 19th century.

With the information from Trenches 3 & 9, we can conclude that the enclosure entrance was originally c.5m wide and c.6m long at ground level (Fig. 7) and the original bank was likely to have been at least 7m wide at its highest point.

FIGURE 5 Trench 3: Sections through south-east entrance to enclosure

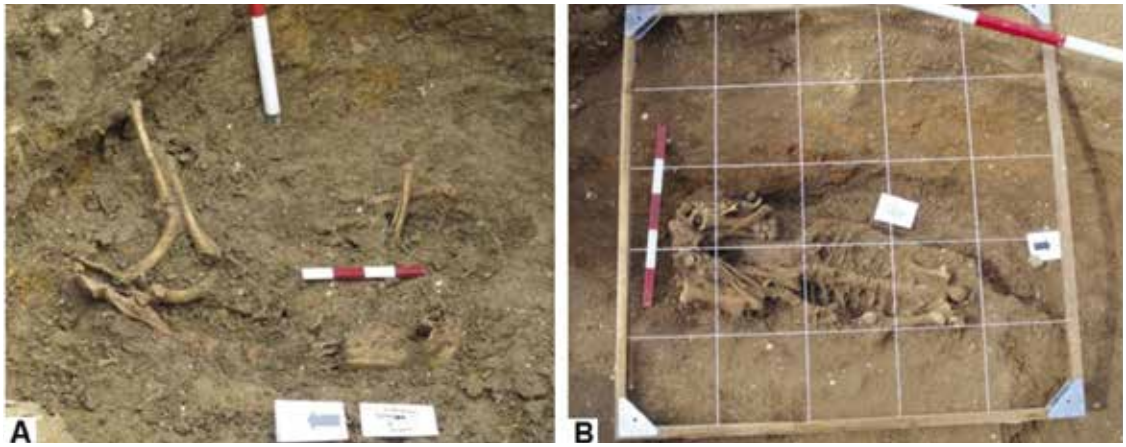

FIGURE 6 Trench 3: pit within the entrance, containing animal bone and 19th-century ceramics

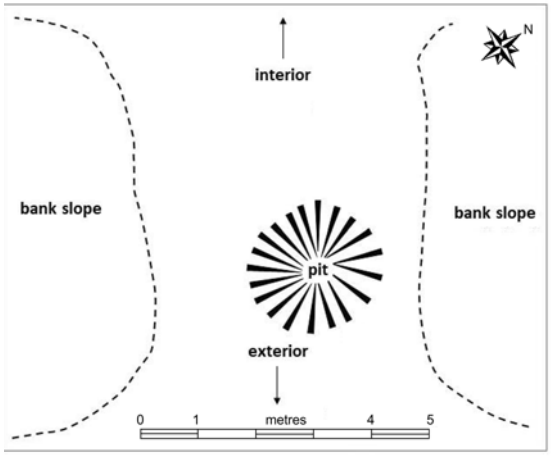

FIGURE 7 Schematic plan of Trench 3: entrance and associated features

Possible Eastern Entrance

On the eastern side of the earthwork enclosure, an outer bank showed an apparent break which was also highlighted by the geophysical survey. A possible interpretation was that this represented a second entrance. Excavation of a 4 x 1.5m trench running roughly north to south (Fig. 2, not numbered) was employed to explore this possibility. In the centre of the trench at a depth of c.20cm, was a large burnt area with grey ash and charcoal fragments, presumably the remains of a fire. In the eastern corner, stiff orange clay was encountered. Below this level, the stratigraphy comprised crumbly orange clay up to c.80cm depth. At this level, a scatter of large/medium flints was found, lying on top of solid red clay. These findings suggested that the depression in the bank represented an area where some attempt had been made to level this feature in recent years. There was no evidence for an entrance.

Low Resistance Features within the Enclosure

Excavation was undertaken of one of three areas of low resistance revealed by geophysical survey, two of which are outlined in green in Fig. 2. Trench 10 (12 x 3m), aligned NW-SE, was excavated from the edge of the feature to its centre. Solid orange clay, representing the natural base of this feature, was encountered at c.40cm depth, c.2m from the north-west end of the trench. Thereafter, the sections showed a deepening profile towards the south east, to a maximum depth of c.1.6m below the modern ground level.

The full-depth stratigraphic profile (Fig. 8) revealed that immediately below the topsoil (c.40cm deep) was dark brown silt, c.40cm deep, with very few inclusions. This overlay yellow-brown silt with occasional flints (c.50cm), beneath which was a damp darker silty deposit, c.50 cm deep. Red clay was encountered here at around 2m depth and the profile confirms that this feature had been deliberately dug out, probably as a pond. This feature was one of three of a similar size within the enclosure. The pond deposits were acidic (c.pH5.5); unsurprisingly there was no evidence for bones depos-

ited here. This feature did not yield any dateable finds, apart from charcoal.

High-Resistance Features within the Enclosure
Four areas of high resistivity were identified by the geophysical survey in the north-east quarter of the enclosure: these are shown in lilac in Fig. 2. One of these areas was chosen for exploration. Two adjoining areas, together designated Trench 11 (Fig. 2), were opened, initially to a depth of 16-17cm. At this level, a layer of 18th/19th-century waste material associated with a clay-rich soil and multiple chalk flecks was encountered. This is likely to represent chalk scattered by farmers in the past to enrich the soil. Immediately below this layer, two parallel narrow linear features were encountered crossing the trench, 1.6m apart, on an east-west alignment. Further excavation revealed these to be the remains of 'ploughing grooves' associated with early farming. Apart from the ploughing grooves, the only cut feature noted at this depth was F5, a posthole c.0.4m in diameter, with some evidence of flint packing. At about 22cm depth a small copper-alloy 'double hook' fastening and another copper-alloy fragment were found (Fig. 9).

Further excavation to c.48cm depth revealed a number of features. At the centre of the trench was F7, a sub-circular feature about one metre in diameter, with an outer ring of packed flints and a central, stone-free centre, c.0.6m across. It is possible that this was a large posthole with stone packing. South-east of F7 was a pit (F6) containing a charcoal-rich fill, c.32cm deep. Just to the south of F7 was a concentration of stakeholes, ranging in depth from 4-8cm. A similar concentration was noted in the north-east corner of the trench. To the east of F6, a meandering gully (F13), was identified. A cut across this feature towards the south side of the trench revealed a broad gully c.30cm deep with grey silty fill, but which terminated about half way across the trench, suggesting it was naturally formed. At the south-west end of the trench, a large, uneven gully (F11), about 2m long was encountered. This was lined along its western edge with medium large flints and varied in depth from c.15cm at the south end to c.26cm to the north.

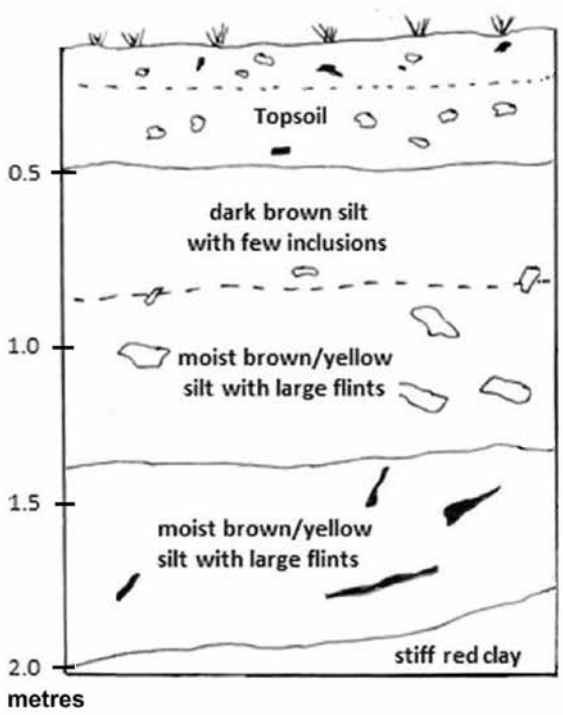

FIGURE 8 Trench 10: pond stratigraphy

RADIOCARBON DATING

Three charcoal fragments from the Whelpley Hill excavations were submitted to the Oxford Radiocarbon Accelerator Unit for radiocarbon dating. The following dates were obtained:

Trench 10, pond: $\delta^{13}C$ 5008-5105, which calibrates to 3,700-3,900 cal BC.
Trench 1, bank: $\delta^{13}C$ 2444 +/–34, which calibrates to c.740-400 cal BC.
Trench 2, ditch: $\delta^{13}C$ 2272 +/–33, which calibrates to c.740-400 cal BC.

These dates suggest that the Whelpley Hill earthwork was used, perhaps intermittently, over a considerable period of time. The early date for the pond is intriguing, although this information derived from Quercus sp. (oak) charcoal which might have predated the pond by one or two hundred years. Ponds of this date suggest an initial period of 'open area' within a Neolithic farming settlement and often contain deposited pot fragments. Surveys in Buckinghamshire have identified several locations where such early occupations persisted for many centuries, for example East Street, Chesham (Collard 1990, 18) and the Late Neolithic to Early Bronze Age site at Chessvale

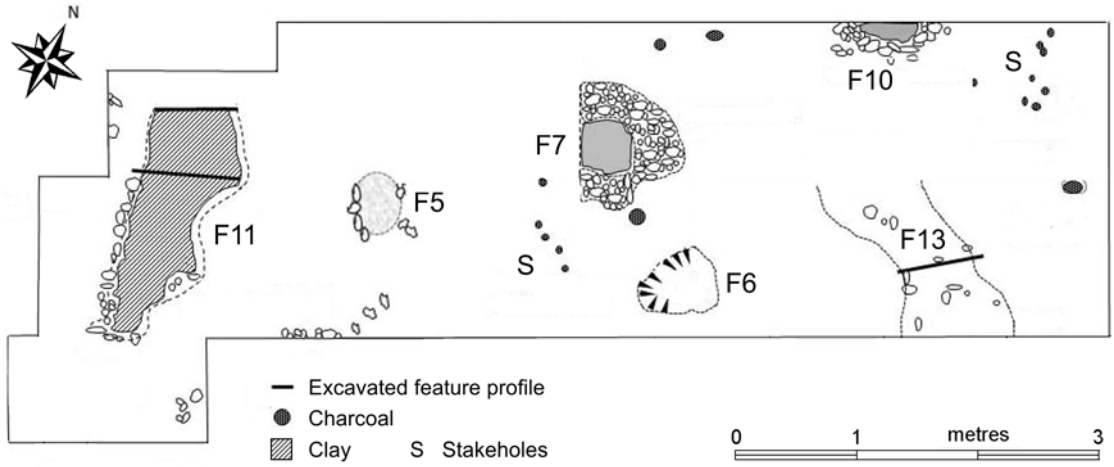

FIGURE 9 Trench 11: principal features

Bowling Club (Halsted 2006, 23-8). It is perhaps likely that fortification of the site was a later addition associated with the Bronze Age.

The more recent date range, c.740–400 cal BC, correlates with the likely 'round house' occupation and a Late Bronze Age/Iron Age settlement. The Late Bronze Age is generally considered to have come to an end c.800BC, though iron working did not become widespread until after 500BC. The layout of the Whelpley Hill earthwork suggests a late Bronze Age/early Iron Age settlement associated with the fortified enclosure. However, it is notable that finds associated with metal working were not encountered during the CVAHS excavation, suggesting abandonment of the site prior to c.500BC. It would be interesting to determine whether this variation is related to site size, location in the landscape, vulnerability and nature of the local soils.

Discussion & Conclusion

The information gained from excavations at Whelpley Hill has determined that this enclosure was a man-made feature designed to provide security to incumbent human families and their animals. Four circular features, possibly round houses, clustered in the north-eastern area of the earthwork are much the same size as those described at other Bronze Age and early Iron Age sites (Upex, Mudd & Hart 2010; Kidd 2005), some of which have drip gullies c.12m in diameter and dwellings c.10m in diameter. However, the Whelpley Hill excavation did not yield the prehistoric pottery or finds that might have been expected from the occupation of what seems to have become a fortified enclosure. This would have been informative and useful, considering the dating that was obtained. The absence of Late Bronze Age/Iron Age finds at Whelpley Hill is surprising, unless we have by chance excavated in 'cleaned' areas of occupation; it is possible that there may be dumps of household waste, perhaps in scattered inner ditches, now covered by deliberate bank collapse. It is also notable that most surveys have not identified pits which would have been associated with grain storage, pottery and animal bone waste dumps etc. (Ellison & Drewett 1971; Ferraby, Johnson & Millet 2007).

Reported depths of the outermost ditch at Late Bronze Age earthwork enclosures are not dissimilar to those at Whelpley Hill, where the outer ditch was c.3m in depth. Other enclosures show some variation. For example, at Mucking the depth of the outer ditch was 1.5m, at Springfield Lyon about 2m, while the Thwing outer ditch was 3.5m deep (Buckley & Hedges 1987; Jones & Bond 1980; Ferraby, Johnson & Millet 2007).

Ram's Hill enclosure (Berks) is a useful comparator when considering structural evidence at Whelpley Hill. There the enclosure had a single ditch and internal bank with three entrances, with a total area of c.1.5 hectares. The excavators commented that by the Middle/Late Bronze Age, 'structures were ephemeral, marked only by postholes' (Reid 1987) and that evidence for more

substantial, larger timber structures appeared within a double-palisade enclosure (Bradley & Ellison 1975).

Finally, it seems appropriate to quote the comment made by David Gibson, Archaeological Manager of the Cambridge Archaeology Unit, that "Usually at a Later Bronze Age/Early Iron Age period site you get pits, postholes and maybe one or two really exciting metal finds. Convincing people that such places were once thriving settlements takes some imagination".

Acknowledgements

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