

Forty Acre Lane excavations (2021), Harting parish, West Sussex – Weekly bulletins

All grid locations refer to the National Grid within kilometre square SU 7619.

A prehistoric site has been suspected in this field north of Forty Acre Lane since a cropmark was spotted on a Google Earth aerial image of 2001. At first identified as half of a ring-ditch (thought probably to have been the ditch encircling a Bronze Age round barrow), it was later re-interpreted with the benefit of another aerial photograph by the National Mapping Programme working within the High Woods project (c. 2015; Monarch site no 200821). They interpreted the site as a denuded long barrow of Neolithic date; surprisingly, it was not noted in the synthesis report on that project (Carpenter *et al.* 2016).

A metal-detecting rally was held in the field in March 2021 under the auspices of Midweek Searchers. One of the finds made, by Mark Spinney, was a Camerton-Snowhill type dagger dating to the last phase of the Early Bronze Age (c. 1750–1550 BC); this was reported to Simon Maslin, Finds Liaison Officer, and published on the Portable Antiquities website in July 2021 (HAMP-C13678). Since such daggers most frequently accompany burials, it was desirable to see if such a context could be established in this case. The landowners kindly allowed us to undertake geophysical surveys. In the event, the main feature revealed was the ditch of a long oval enclosure, almost 100m long. This is almost certainly Neolithic, but rather than being a long barrow as such, it is more likely to have been a site of the *long enclosure* category. Inside the eastern end of this enclosure there is apparently a pit-circle (strictly speaking oval), again probably of Neolithic date. Some other large features are suggested by the geophysical plots.

A request to undertake sample excavations was acceded to by the landowners. There were two main questions to be addressed: firstly, to see whether a context for the dagger could be identified and, secondly, to characterise and date some of the Neolithic features.

Week 1 (6-10 September)

Trench 1 (672–680E/365–369N)

An area of 26m² was opened to encompass three of the five metal-detector holes identified in the area in which the dagger was found. The ploughsoil was all excavated by hand by metre square and sieved for finds. Small quantities of burnt flint and worked flint, and a few pottery sherds were found. At a depth around 0.25m chalk bedrock was reached across the whole trench. Aside from modern plough furrows cutting into the chalk in lines parallel to the hedge-line, the only possible sub-surface feature (towards the NW corner of the trench) was a small, shallow and irregular depression, undoubtedly a natural feature.

There were no indications, either in terms of cut features or particular types of find (e.g. bone, charcoal) to indicate that a burial may have lain within or close to this trench. Similarly, there are no obvious grave-like or pit-like features apparent in the geophysical surveys in the immediate vicinity.

Trench 2 (649–652E/364–373N)

A short distance to the west of Trench 1, an area of 27m² has been opened to begin to investigate the prehistoric features showing strongly in the geophysical surveys. The trench

runs north-south across the ditch of the long enclosure within its tapering east terminal and also covers a large pit-like feature to the north.

All of the ploughsoil has now been hand-dug and sieved. The quantity of finds has jumped dramatically from that in Trench 1. In addition to considerable quantities of burnt flint, there are a good number of worked flints including some tools, small pottery sherds, fragments of non-local stone, and a few pieces of unburnt potentially ancient bone. The pottery includes a handful of Romano-British sherds and rather more of earlier date, most probably Early Iron Age. Amongst the flint tools are a striker (similar to those in two graves at Petersfield Heath), at least one scraper and a denticulated piece.

The surface beneath the ploughsoil has only been partly cleaned up as yet, but already it is clear that chalk bedrock is only present immediately beneath in the far north and south of the trench. The area in between may largely be taken up by the two or more cut features showing in the geophysical survey. The surface of these features appears to be largely undisturbed by ploughing and visible in it are a number of pottery sherds and some charcoal. These features will be investigated in week 2.

Week 2 (14-16 September)

Trench 2: A one-metre transect against the west edge of the trench has been taken down by up to 0.15m depth beneath a skim with little soil variation, marked differences appeared. In particular, the upper fill of the pit-like feature in the north is now distinct from that of the main enclosure ditch. The latter is showing some slighter internal variation at this level.

Thus far the fill of the pit is a rich humic soil with little by way of chalk inclusions. Pottery is mainly Romano-British and is associated with animal bone fragments, tile fragments and iron 'hobnails'; there is very little flint, either burnt or struck. The fills removed from the ditch top are instead abundant in small chalk lumps and contain a more mixed assemblage of prehistoric and R-B material.

A band of distinct clayey soil with less frequent chalk inside the eastern baulk forms a shallow wedge tapering out westwards. Finds are relatively few. This might be the edge of a linear feature, perhaps marking one of the former north-south field boundaries evident on a 1630s map of the estate of Church Farm, Harting.

Trench 3 (635–642E/378–380N)

A new trench of 14m² (7 x 2m) was started within a very low eminence just visible on the ground and further clarified by Dom Escott's contour survey as having an oval shape projecting into the field from a lynchet alongside the hedge boundary. Its maximum height above the smoothed contours of this part of the field is at most 0.2m. This may be a well-denuded small mound. It occupies the axial line of the long enclosure towards its eastern end and partly overlies the pit circle evident from geophysical surveys.

In most of the trench the standard ploughsoil gave way to an intermittent clay-rich band sitting on the chalk bedrock. However, overall depth of both ploughsoil and the clay layer thickens westwards. Low in this layer is a spread of charcoal with small lumps of burnt clay

extending almost 2m from the western end. This deposit is clearly separated from the modern cultivation zone. It remains to be seen how it relates to the pit circle which it impinges on and the mound that may have overlain it.

Trench 4 (620–621E/358–368N)

A second new trench of 10m² (10 x 1m) has been set out north-south to cut through the main enclosure ditch in the south in an area where the earth resistance survey suggests the presence of a second, much broader feature straddling the ditch. Ploughsoil has so far been removed from 6m² to reveal that bedrock is only present at its normal shallow depth at the northern end. It is hoped that this trench will establish the extent, character and interrelationship of the two features at this point in the circuit.

Survey work

The earth resistance survey, previously undertaken across the whole of the long enclosure in the main field, has been extended into the adjacent part of the field to the north. The survey has yet to be completed, but there is already a feature showing that broadly mirror-images the in-swinging southern ditch line.

Next week work will continue on the features revealed in Trenches 2 and 3, and possibly also in Trench 4 once the rest of the ploughsoil has been removed.

Week 3 (21-23 September)

Trench 2

Having established the limits of the main enclosure ditch, a section line was laid out perpendicularly to it and thus diagonal to the trench. Good progress was made on excavating the ditch fill which is c. 4m across at the top. Finds are not dense but are consistently present; they include both Romano-British and prehistoric pottery, as well as flintwork, burnt flint and a little bone. A copper-alloy finger ring was retrieved from the base of the possible former field boundary running along the eastern baulk.

Trench 3

The charcoal-rich layer beneath modern ploughsoil at the western end was fully removed in a 20 x 20cm grid, each square being sampled in one of two ways. Three west-east rows at intervals were 100% bagged for flotation, any obvious finds having been extracted prior to bagging. Remaining squares were more finely excavated and only significant bits of charcoal bagged; these will again be processed by flotation. It is hoped that the resulting assemblage will give a near total picture of tree species composition and the growth stages of the wood. It should also reveal whether other, smaller, charred remains are present.

Finds were few but included a small number of struck flints, a couple of pieces of burnt flint, a few pieces of unburnt bone and a single pottery sherd. The latter is a rim sherd, probably of Early Bronze Age date. Beneath the charcoal spread is a patchy surface of ginger clay and chalk gravel, just above bedrock; a little charcoal is still in evidence.

Trench 4

Removal of the modern ploughsoil was completed and the underlying surface cleaned up. Aside from the bedrock previously exposed at the far northern end, the only variation was a band of more chalk-free soil between 659 and 661m N, approximately over the line of the main enclosure ditch. This proved to be a thin lens up to a maximum of 4cm thick, giving way to the chalk pea-grit soil spreading across most of the trench. Excavation of the latter is underway and at the northern end it is seen to taper out over a gently dipping chalk surface.

Week 4 (28-30 September)

Trench 2

Significant progress has been made on the two main features. The 1m-wide section across the large pit in the north was completed down to bedrock. It reaches c. 0.7m deep beneath modern ground surface. Finds became scarce in the lower chalk rubble rich layers. An old turf-line above these layers indicates a stable horizon before a deposit containing a fair amount of small chalk lumps, possibly a pre-modern ploughsoil. Above this was a thicker deposit of almost chalk-free soil containing most of the artefacts and bones, including Romano-British material; the character of the soil and the artefacts could suggest an origin in a midden. This fill sequence is then overlain by the modern ploughsoil. Although there is little to date the digging of the pit closely, the stratigraphy suggests it could be much later than the long enclosure ditch and it may not be earlier than the Romano-British period.

Continuing excavation of the ditch fill identified and then removed a gently U-shaped soil horizon representing a stable phase. At its lowest point this was c. 0.4m below chalk bedrock and c. 0.65m below ground surface. The abundant chalk in the thick overlying deposit of soil is predominantly small and this deposit is likely to be plough infill. Beneath the soil horizon is another chalk-rich deposit on which excavation has begun; the chalk here is less well sorted than above with more medium to large lumps. High in this layer and around the interface with the soil horizon were several fragments of bone/antler of moderate size and some pottery sherds datable to the Late Bronze Age.

Trench 3

The charcoal-rich spread having been removed in week 3, the base of the clayey soil remained at the western end of the trench and still contained a few charcoal patches. The latter proved to have filtered into underlying 'features', mostly pockets of clay in the chalk which were probably of natural origin, e.g. due to roots. In one case, however, against the north baulk, a deeper squarer-cut fill has emerged and this is probably a post hole. The basal clayey soil layer was bereft of artefact finds.

Trench 4

After the removal of two spits of the pea-grit soil beneath modern ploughsoil two important points were established. The broader 'feature' indicated by the geophysics proves to be the fill of a relatively shallow scoop up to 0.5m deep; bedrock has been exposed all the way along its base. Secondly, the fill of the main enclosure ditch suddenly became apparent as an interruption to this bedrock in a position corresponding with the geophysics plots towards the southern end of the trench. The unbroken layers, probably ploughsoils, across the top of the ditch indicate that the scoop was secondary to the ditch; its cutting would have truncated the topmost profile of the ditch. A start has been made excavating the ditch

fill. The bedrock exposed in the northern end of the trench, beyond the features, is much more ragged than that at the base of the scoop. It remains to be determined whether this is due to greater exposure to weathering or whether it is a remnant of chalk upcast from one or other of the features.

Week 5 (5–8 October)

Trench 2

The next deposits down in the ditch continued to contain cultural material including large animal bones, struck flints, burnt flint, non-local stone and some pottery sherds. There are also probable fragments of clay loom-weights and possible coprolites. It is not yet obvious that these deposits are significantly earlier than those previously excavated above, but there is a stony layer trapped between two clay-rich horizons suggesting a temporary change in land use alongside the ditch.

A 3 x 1m strip in the north-east of the trench (little excavated since modern ploughsoil was removed) was taken down a little to clarify the eastern end of the northern pit. The dark uppermost fill of the pit is now seen to have a clear edge against the surrounding pre-modern ploughsoil and confirms that the pit was dug at a stage when the ditch was effectively full.

Trench 3

A 3 x 2m extension was taken south from the western end of the trench in order to expose more of the charcoal-rich horizon and to find part of another feature of the pit circle revealed by geophysics. Under the modern ploughsoil a relatively thick deposit of clay had survived containing, particularly in its middle to lower parts, much charcoal. The vertical distribution of this burnt horizon was greater than in the original trench, probably as a result of greater downward movement above the earlier pit fill. In the north-west corner of the extension (abutting the original trench) was a cluster of chalk lumps embedded within the clay and undisturbed by ploughing. Charcoal and burnt clay trapped beneath included some of the largest surviving pieces, presumably due to the protection given by the chalk lumps. Although still comprising a thin distribution, cultural material including decorated EBA pottery was consistently present in this 'burnt' horizon.

Initial excavation of the clean clay underneath revealed chalk-rich surfaces of slightly varying character. An area of chalk 'gravel' of fairly consistent size is suspected to be the uppermost 'fill' of the predicted pit,

Work in the original trench was largely confined to completing excavation of the feature edge in the north-west corner. This corresponds well with the southern end of one of the oval pits of the pit-circle.

Trench 4

The ditch continued to be excavated and by the end of the week the fill was one of dense chalk rubble, presumably close to the bottom. A steep lower wall has been identified on the north side. As in Trench 2, two horizons of relatively chalk-free silty clay have been excavated, these being separated by a chalkier lens. These three deposits likewise contained

cultural material, including a dump of large flints projecting from the west baulk. They were mainly burnt flint but some were both unworked and unburnt. The base profile of these soil-rich layers was quite V-shaped, the lowest point being offset to the south.

Four test-pits dug at 1-metre intervals to the north of the trench showed that bedrock was consistently present at a shallow depth and that no make-up of chalk rubble was present.

Trench 5 (577–580E, 377–379N)

An area of 6m² was opened at the radial centre of the neatly described semi-circular western end of the long enclosure. The contour survey suggested the possibility of a very slight rise surviving around here. However, bedrock was encountered consistently between 0.2 and 0.25m below ground surface, so the rise is apparently in the bedrock rather than being due to a thicker overburden (as seen in Trench 3). The only feature revealed was a linear one running slightly oblique to the north baulk. It was very shallow and parallel to the modern field boundary and may be a slightly deeper plough furrow made to delineate the cover-strip present on this edge of the field in the 2010s.

Trench 6 (592–594E, 379–381N)

A small area of 4m² was opened to investigate one side of the large feature or complex of features apparent in the geophysics close to the axial line in the western half of the enclosure. The practice of sieving all the ploughsoil was applied as usual and one of the resulting finds was a small pendant of Early Bronze Age date. It is circular with a broken side perforation and is probably made of shale. The face is conical, similar to EBA buttons, but somewhat unusually bears a band of three concentric grooves.

The underlying surface is mainly chalk bedrock, but two soil-filled features are present. The larger is in a position towards the east corresponding with that showing in the geophysics. Its uppermost clayey fill has produced a little pottery, yet to be dated firmly.

Survey work

The area of detailed contouring was extended to the south, west and north to give a better topographic context to the enclosure.

Week 6 (12–15 October)

Trench 1 addition (674–676E/369–370N)

Two additional metre squares were added on the north side of the trench in order to check out a possible feature suggested by the magnetometer survey. In the event, no features were present under the ploughsoil.

Trench 2

Further cultural debris was encountered in the ditch fills before the more sterile primary fills of dense chalk rubble were reached. Full emptied at the end of the week, the ditch had a more or less flat-bottomed ditch with steeply angled lower walls, the expected profile for ditches of this period. The upper walls were progressively less steeply angled due to weathering and probably also later plough attrition. The ditch is 1.7m deep, about 1.0m wide at the base and 2.5m wide near the top.

The 3 x 1m strip in the north-east of the trench was lowered further in order to show not only the northern pit cutting into the chalk bedrock, but also the inner lip of the enclosure ditch, this to give a longer alignment in the final trench plan.

Trench 3

The main task was to excavate the pit in the southern extension, or rather the greater part of it lying within the trench. On completion it was found to be 3.1m long, with probably only a little extra beyond the south baulk, and had a bowl-shaped profile reaching a depth of 0.93m below modern ground surface. The small-chalk band at the top of the fill may be a worm-sorted horizon from a past phase of stable pasture after the pit had been become filled. The underlying deposit was of pure ginger clay up to 0.27m thick. This overlay chalk-rich deposits, one of them comprising pea-gravel in an extremely cemented matrix, like concrete. This cementation was most pronounced on the side slopes. A different deposit in the centre had some larger chalk lumps and was looser. The basal fill was lumps in a chalk-silt paste. Finds were not frequent but included flintwork, unburnt bone fragments, charcoal and some seemingly vitrified fragments (distinct from the concretion already mentioned).

Trench 4

Excavation of the basal fills of chalk rubble was completed and the full form of the ditch revealed. As seen in Trench 2, the bottom is basically flat and the lower, less eroded sides fairly steeply inclined. It is however, a little less deep (1.55m below modern ground surface) than in Trench 2; its width is similar.

Trench 6 (extended: 592–595E, 378–381N)

Four further metre-squares were opened, two on the south side, two on the east. The latter extended the trench further into the feature complex. A west-east section started through the dark patch in 593/379 was dug down as several spits on the north side; the dark soil was found to run under a more chalk-rich fill. It was beginning to be clear that the two more soil-rich fills were parts of the same longer feature running SW-NE. The southern section was abandoned, a second having been set out diagonally across square 594/380 transverse to the apparent long axis. Excavation in between found side walls of variable clarity due to likely natural intrusions. The NW side was steeper and better defined but bordered by another 'fill' of light beige soil amidst dense chalk lumps. The SE side had various pockets of similar fill before reaching a weathered chalk paste, the pockets presumably being due to animals or roots. The SW end was found to be sloping but was again complicated by small recesses. A reasonable quantity of cultural debris was recovered from the darker fills.

Week 7 (18–23 October)

This week was primarily for recording sections and planning, but also involved tying up other loose ends.

The main unfinished business was the pit in ***Trench 6*** and a few diggers came to finish it. The NW side wall was eventually taken back to unequivocal chalk bedrock, this resulting in the exposure of a small 'shelf' and root-like pockets as seen on the opposite side. Remaining pockets of the comparable material on the SE side were also removed. No finds came from these deposits on either side. After full cleaning up and the recording of the diagonal

section, the remaining deposits behind were excavated, thus giving a continuous section along the north baulk, beyond which the feature continued, though possibly not far.

Final checking of a suspected root hole against the north baulk of **Trench 3** showed that it is in fact a possible post hole. It is 0.5m wide (W-E) and cut 0.23m into bedrock. It lies a little outside the charcoal-rich spread.

Spade-size test-pits were dug at 10m intervals all along the axial line of the enclosure extending beyond its limits. A further four such pits were dug at 30m intervals along a parallel line to the south of the enclosure. These served for the recording of bedrock depths to add to those seen in excavated trenches, thus allowing interpolation of the underlying bedrock contours.

Sampling day (24 October)

Palaeoenvironmental specialist Professor Martin Bell and his team visited the site in order to take appropriate samples for environmental analysis. The main ecofacts expected in a calcareous environment such as this are mollusc shells which can represent numerous species, many of them very habitat specific. Discussions involved such issues as the speed of initial chalk-rubble infill of the ditch; the angle of repose possible for such primary fills (bearing in mind also later compaction); post-depositional alteration of side-wall deposits due to calcareous precipitation – this including extreme effects such as the concretion encountered in the Trench 3 pit; the potential duration of the stable soil horizons under a long-term pasture regime; the puzzle of the origin or formation process of the thick clay deposits in the Trench 3 pits; possible explanations of the Trench 6 pit – is it entirely a tree-throw hollow or is there a dug feature within.

Sample columns were taken through the full sequence (to modern ground surface) of: the enclosure ditch (Trench 2), the Romano-British pit (Tr 2) and the Neolithic pit/EBA horizon (Tr 3). Two bulk samples were taken from the internal darker fills of the LBA pit or tree-throw hollow (Tr 6).

Summary

With 31 digging/recording days and a total of 232 person-days on site we have achieved much and established a sequence covering much of the Neolithic to Romano-British period with several well dated horizons. This will provide an invaluable cultural and palaeoenvironmental sequence such as is not yet known from any other site in the region. Outline of the sequence:

- 1 Primary silts of long enclosure ditch with much chalk rubble and sticky chalk silt layers (Trenches 2 & 4); there is a possibility that the eastern end (Tr 2) was added later to the main enclosure (Tr 4), but we have no close dating evidence as yet for either.
- 2 Fills of pits within the internal pit-circle (Tr 3); most of one has been exposed while a second is just exposed at one edge. Lower fills are chalk-rich, some of which is highly concreted; above is a thick fill of pure clay; finds are few but present and all of the fills are sealed below the EBA horizon.
- 3 EBA horizon with much charcoal, some pottery, flints and unburnt bone fragments, all sealed within a clay layer over the chalk which has escaped

- damage from cultivation (Tr 3). An important EBA shale pendant was recovered from ploughsoil in Trench 6 to the west.
- 4 More stable horizons of enclosure ditch including buried soils (Tr 2 & 4). Presumably first established in the Neolithic, but with a nice scatter of later BA material (animal bone, pottery etc) at one level.
 - 5 Large pit/tree-throw containing earlier first millennium BC (provisional) pottery, bone, flintwork (Tr 6).
 - 6 Upper fills of enclosure ditch comprising early ploughsoils; possibly starting in LBA then running through Iron Age and possibly into the Romano-British period (Tr 2 & 4).
 - 7 A pit flanking the ditch in Trench 2 cuts the uppermost of the ditch layers so is very late in the sequence. However, the pit's top fill is a loamy 'garden' soil containing much R-B material (and earlier residual stuff). The R-B material is almost certainly not in secondary context, thus suggesting that the Neolithic enclosure had been totally levelled by this period.
 - 8 In Trench 4 a broad shallow scoop was cut into the chalk bedrock to either side of the enclosure ditch. This too appears to have happened at a stage when the ditch was full or virtually so.
 - 9 A shallow linear gully (Tr 2) crossing the ditch fill may be associated with a field boundary (?hedge) seen on a 1632 map of the area.
 - 10 Modern ploughsoil.

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The digging team comprised: Dom Escott, Ineke Allez, Ken Mordle, Mark Ruutel, Jane King, Sabine Stevenson, Chris Wilkins, Andy King, Henry Wakefield, Dawn Cansfield, Carol Hartzenberg, Terry Clemens, Tony Douglas, Brian Tomkinson, George Anelay, Lesley Johnson & Will O'Kelly.

Stuart Needham, on behalf of the People of the Heath team
25 October 21