EVALUATION EXCAVATION AT TWO ROUND BARROWS AT THE THORNBOROUGH MONUMENT COMPLEX, NORTH YORKSHIRE

DR JAN HARDING & MR BEN JOHNSON
SCHOOL OF HISTORICAL STUDIES
UNIVERSITY OF NEWCASTLE

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ABSTRACT

The report describes the evaluative excavation of two of the surviving rounds barrows at the Thornborough monument complex. Work was completed with the aim of provided a detailed and up-to-date assessment of the levels of preservation and the potential significance of the archaeological deposits at these sites, offering a framework which could be extrapolated to Thornborough's other barrows. Themes discussed include the state of preservation, with specific reference to the impact of ploughing, as well as the potential dating, phasing, and activities that occurred at these sites. Of particular interest are the results from the second of the excavated barrows. Originally thought to have two ditches, it proved to have three, forming a complex sequence of activity at the site. A large lithic assemblage and fragments of skeletal material, including a complete skull, were recovered from its excavated contexts.

1. INTRODUCTION

1.1 Location, topography and geology

The study area is based between SE2677-3282 and focused around the Neolithic-early Bronze Age monument complex at SE285795 (centred), which comprises three large henges, a definite cursus and a possible cursus, a long mortuary enclosure, at least nine round barrows, two double pit alignments, contemporary settlement and other features or finds of archaeological significance (Fig. 1). These sites are described in Harding and Johnson (2003).

The topography of the landscape is largely flat or gently undulates between 35 and 45 metres OD (Fig. 2). However, it rises steeply to the west, between the villages of West Tanfield and Well, to a height of over 135 metres. The River Ure lies to the south-west. The soils are typical brown earths, with calcareous brown earths to the west, and alluvial gley soils to the north. The drift geology is predominantly undifferentiated fluvio-glacial terrace deposits, with undifferentiated river terrace deposits around the River Ure and isolated pockets of till and peat to the west and north respectively. The solid geology comprises Lower Magnesian Limestone to the west, Middle Marl through the central areas, and Upper Magnesian Limestone to the east.

All the monuments lie on the fluvio-glacial terrace deposits along a slight north-south decline towards the River Ure. The primary foci of the monument complex are the three massive henges built 0.75 kilometres apart, along a north-west to south-east axis. There would also appear to be contemporary settlement areas, significantly separated from the complex, either by distance or by variations in the local topography.

2. BACKGROUND

2.1 Archaeological history

The barrows, like the other, larger monuments at the complex have seen very limited antiquarian and archaeological investigation. The earliest recorded activity was the investigation of four of the barrows, at Centre Hill and three at the Three Hills barrow group, by the Rev. W. Lukis in 1864 (Lukis 1870, 116-128). Lukis's report is cursory and no record of the extent of his excavations exists. However, he did uncover what are assumed to be the primary burials at each site, cremations in probable Food Vessels or Beakers at Three Hills, and an inhumation in a coffin at Centre Hill. No further work appears to have been undertaken until 1952 when L. Grinsell undertook a survey of the barrows (Thomas 1955, Appendix II, 443), although again the data is cursory and only briefly describes the barrow dimensions and state of preservation. The only other round barrow excavations were undertaken at three ring ditches in Nosterfield quarry in 1994, prior to gravel extraction (Roe unpub. 2002).

Topographic and geophysical survey was completed at five of the known surviving barrows in July 2003 (Harding & Johnson 2004b), prior to the excavations described here. This work provided a partial understanding of the general condition and preservation of these sites, and was used to decide which were potentially the 'best' preserved and the 'worst' preserved of the surviving barrows, the criteria by which two were selected for further evaluation.

2.2 Aims and objectives

Evaluative excavation was undertaken at two of the surviving round barrows in late summer 2003 as part of the Thornborough Project, funded by English Heritage through the Aggregate Levy Sustainability Fund. The aim was to ascertain the archaeology's general condition, preservation, date, potential and significance, following topographical and geophysical survey.

There is no detailed or up-to-date record of the six surviving round barrows at Thornborough. All but one continues to be ploughed and their deterioration as a resource has been noticeable over the last ten years. One of the worst affected of these monuments is now a flattened mound surrounded by a crop and soil mark of two concentric ditches. Surface collection has found sherds of Grimston ware in the ploughed-out fill of its ditches. Three of the other barrows were subject to limited antiquarian excavation (Lukis 1870).

Geophysical prospection and topographical survey was therefore completed at each round barrow, provided an accurate assessment of these badly damaged earthworks. A small evaluation trench, between 20-30 m in length, was to be excavated across the 'best' and 'worst' preserved of the round barrows to ascertain the condition, potential and date of any buried features.

2.3 Methodology

Following the results of the topographical and geophysical survey (Harding & Johnson 2004b), the barrows selected for evaluation were the Double Ring Ditch, to the south-east of the Southern Henge, and Three Hills Barrow Group 2 (previously described as the centre barrow at Three Hills, hereafter known as THBG2). Whilst Centre Hill barrow, between the Central and Southern Henges appeared to be the best preserved, its location within the area of the Stewardship Agreement means it is no longer under threat. The second best preserved was thought to be the Double Ring Ditch barrow and was chosen for excavation as the 'best' preserved barrow. Its layout makes this a unique monument at Thornborough. All the barrows at the Three Hills Barrow Group appeared very badly damaged, but it was decided that THBG2 was the 'worst' preserved of them all.

At THBG2 a trench 60 metres long and 3 metres wide was laid out using a Geotronics Geodolite Total Station, based upon the results of topographic and geophysical survey. The trench was located across the barrow ditch, visible to the south on the geophysics, and continued north across the location of a palaeochannel. At the Double Ring Ditch a trench 35 metres long and 3.6 metres wide was laid out using a Geotronics Geodolite Total Station, based upon the results of topographic and geophysical survey. The trench was located across the barrow ditches and some internal features which were visible on the geophysics. Topsoil at both sites was stripped by machine, and all features cleaned and excavated by hand. Written, drawn and photographic records were made of each feature using the single-context system. All these records were then digitised. Find locations were recorded in three dimensions using a Geotronics Geodolite Total Station. Data processing was undertaken using Landscape Survey Systems v. 8.2, AutoCAD Land Development Desktop, Jasc PaintShopPro v. 6 and Microsoft Excel and Word.

3. RESULTS

3.1 Three Hills Barrow Group 2

3.1.1 Topographic and geophysics results (fig. 3)

The barrows at Three Hills are located on a low gravel ridge that rises out of the surrounding gravel terrace to the south-east of the Northern Henge. The ridge has been cut on three sides by palaeochannel activity, leaving a triangular mound 268 metres south-west to north-east, 132 metres wide at its south-west and tapering to the north-east. It is 1.5 metres higher than the surrounding terrace, with gentle slopes all around, apart from the south-west side where they are somewhat steeper. The barrows, sited in a line on the ridge top, were located by both the contour and geophysical surveys. It is clear that all the monuments have been badly affected by ploughing.

As discussed in the report on the topographic and geophysical survey there appear to be four rather than three barrows in this area (Harding & Johnson 2004b). Of these the barrow at the north end of the ridge (THBG2) appeared to be the 'worst' preserved. No topographic trace of any earthworks survived, but the geophysics did identify a number of anomalies (Biggins 2003), located across the break in slope of the ridge. They are assumed to be the southern ditch and some internal features. The latter include a number of pits, or positive anomalies, together with some slight evidence for a small (*c*. 3 metres) negative rectilinear anomaly, or what is possibly a stone structure. This negative anomaly may be associated with linear and curvilinear features, perhaps the remains of an enclosing kerb or paving, and there is some evidence for a sub-circular pit alignment within the main outer ring ditch. Additional internal 'pits', or positive anomalies, were detected, particularly in the north-west sector of the barrow, possibly co-located with a bipolar anomaly.

3.1.2 Previous archaeological excavation

The barrow was excavated by the Rev. W. C. Lukis in 1864 (Lukis 1870), when it had been reduced to a diameter of 24 metres and a height of 1 metre. The deposits consisted of clay layers sealing a heat affected, clay lined pit 0.6 metres in diameter and 0.45 metres in depth, which was filled with charcoal and burnt bone. Only a few pottery fragments were found, above the clay layers. No other finds were

recovered. The other two barrows on this ridge excavated by Lukis produced cremation burials in 'coarse earthenware jars', associated with heat affected lithics. These appear to be Bronze Age cremation burials, possibly early in date, although it is difficult to assess from Lukis's description and illustrations whether the ceramics are Food Vessels or Beakers.

3.1.3 Excavation results (Fig. 4)

The removal of the topsoil revealed the plough disturbed upper fill (004) of the barrow ditch, dug into subsoil, to the south of the evaluation trench (Fig. 5). It was visible on the geophysics plot. The feature, 008, also survived to the north of the trench (Fig. 6), dug into the natural gravel, although not detected by geophysical prospection, and there was a possible internal feature, 010, thought initially to be the edge of Lukis's excavation trench. The two segments of barrow ditch visible in the trench were presumed to be part of the same feature, but recorded separately, and had a fill of loose, light brown (7.5YR4/6) silty gravel with large cobble inclusions. The ditch to the south, on the ridge summit, was 1.7 metres wide, whilst that to the north, on the slope, was only 0.8 metres wide. On excavation these features were found to have a shallow U-shape profile and the southern and northern sections were 0.8 metres deep (Fig. 7) and 0.4 metres deep (Fig. 8) respectively. No finds were recovered from the features. The ditch is interpreted as a quarry for the barrow mound, a feature still visible in the late 19th Century and also in 1955, but no evidence of which was discovered in 2003. It was partially filled as a consequence of deliberate deposition and then by natural silting, the former indicated by the presence of more cobbles in the ditch base (Fig. 9). On excavation the internal feature, an irregular feature, 1.3 metres long, 0.9 metres wide with an irregular base around 0.1 metres deep, was thought to be a natural deposit rather than a product of human action, prehistoric or modern. It contained a loose fill of yellow (10YR7/6) silt.

The location of the barrow, right on the edge of the ridge, meant that the actions of the plough were particularly clear. As the topsoil was removed, starting from the summit of the ridge and working downslope, the subsoil became less deep, until it disappeared altogether, between the two barrow ditches, and the ploughsoil sat directly on top of the natural gravel. The smaller dimensions of the northern, downslope, section of ditch are therefore a direct result of the action of the plough which, as it moves over the crest of the ridge, digs deeper into the natural gravel deposits and is slowly but inevitably destroying what remains of this barrow, as well as the ridge on which it sits. This fact is also apparent in the distribution of small finds, which were all collected from outside and downslope of the barrow ditches, within fill 002, a loose, dark brown silty gravel. These finds comprised a few tiny fragments of cremated bone and 45 non-diagnostic lithics, comprising mainly small flakes, as well as modern pottery and glass. The deposit is interpreted as an amalgamation of redeposited material from the barrow mound, subsoil and old ploughsoil.

The palaeochannel was visible on aerial photographs and on the geophysics. It was decided to continue the trench into this feature, 011, to endeavour to locate any palaeoenvironmental material or possible deposition associated with the barrow cemetery. A section of this feature, 13 metres wide, was excavated by machine down to natural (Fig. 10). It was only 0.15 metres deep, comprising a loose, brownish yellow (10YR6/6) gravelly silt. No finds were recovered, and the deposits were unsuitable for the preservation of palaeoenvironmental material.

3.2 Double Ring Ditch barrow

3.2.1 Topographic and geophysics results (Fig. 11)

The Double Ring Ditch barrow lies to the south-east of the Southern Henge, just to the north of Green Lane. It is situated on a very slight gravel ledge that rises no more than 0.5 metres above the surrounding terrace. The monument, known from aerial photography (CUCAP, CKD24), has been very badly damaged by ploughing, to the extent that it is no longer visible as an earthwork, yet in 1952, when Grinsell undertook his survey, it survived to a height of 1.5 metres. He discovered a chert flake and a flint core nearby, and fieldwalking by the VMNLP in 1997 discovered Grimston Ware pottery sherds in the soil mark of the inner ditch, suggesting ploughing was cutting into significant deposits.

The geophysical survey detected a double ditched barrow (Biggins 2003). The degree of preservation appeared to be variable, but is perhaps better conserved to the north and east. The perceived response indicates a 'beaded' effect, which might suggest an outer ditch made-up of conjoined pits. Certainly one, or possibly two 'pits' were detected offset somewhat internally from the main circumference of the ditch. The southern edge of the outer ditch is covered by the raised track. This may engender some

degree of protection. The inner ditch is similar in form to the outer, with a possible deliberate interruption to the south-east. Within the central area of the barrow a third 'ditch', or at least circular feature was detected. To the north of this feature there appears to be two pairs of double pits, set upon different alignments. Directly south of these anomalies, and towards the central area of the barrow, were located a line of three pits, set some 1.5 metres apart. In the centre of the barrow a rectilinear structure was detected which was some 5 metres by 2.8 metres in size, its longer axis aligned east-west. It is possible that the feature represents the major or primary funerary feature within the monument. The structure itself comprises six major postholes or pits, with a pit located on each corner and two placed equidistant between them on the longer axis. It would appear that these pits are located within a rectangular trench. A single 'pit' was located centrally, slightly offset towards the east. Another single circular positive anomaly, some 1.5 metres in diameter, was located 2 metres west of the rectangular complex. Towards the eastern edge of the outer ditch was a possible gap. This appeared to lead towards an area between the inner and outer ditches with a strong negative response. It was sub-rectangular in shape, was some 2.4 metres in length and 2 metres in width, and had three small circular negative anomalies located some 1.5 metres towards the north. A circular positive anomaly was located contiguously towards the south-east. This perhaps separated, or was central to, a similar negative anomaly in line towards the south-east. This latter negative anomaly was not as magnetically unresponsive, suggesting slightly lesser structural integrity or depth. The nature of the response in terms of negative responses (i.e. absence of soil) may indicate the location of stone structures, perhaps cists or kerbing. This suggests a barrow of great complexity and probably of several phases which may include satellite or secondary inhumations or deposits.

Whilst the topographic survey suggested that the barrow has been completely denuded and ploughing is causing severe damage to the archaeological deposits the geophysics results tend to suggest that substantial dug features remained extant. The complexity of the site indicates it could potentially be the most archaeologically significant of the Thornborough barrows.

3.2.2 Previous archaeological excavation

No previous archaeological excavation had been undertaken at the site.

3.2.3 Excavation results (Fig. 12)

The removal of the topsoil revealed the plough disturbed upper fills of a number of features: a silty gravel deposit, 012, containing a spread of bone fragments; an outer and inner linear feature, 020 and 018 respectively, in the eastern part of the trench, separated by a berm; and two features at the western end of the trench, 006 on the north side and 004 on the south side, separated by a causeway. Plough marks were very visible along the length of the trench, and features to its western end were more heavily truncated than those to the east. There was no subsoil or remnant mound material in the western extent of the trench, on the slope of the small ridge, where the ploughsoil sat directly on top of the natural. The ploughsoil averaged 0.29 metres deep. The spread and heavily disturbed mound material was removed and revealed a number of further features. That it appeared to cover some features and not others, irrespective of their apparent sequence in the phasing of the monument (see below), is due to the heavy disturbance and almost complete destruction of this feature by the plough.. Those it covered, or appeared to cover, comprised: a linear feature, 023, beginning in the centre of the trench, but curving out on the north side; a small oval pit feature, 015, near the centre of the trench; two badly plough damaged pit features, 024 and 031, cut through the mound material near the centre of the trench; two features, probably ditch terminals, to the north, 047, and south, 028, of the western edge of the trench, cut into by 019, at the western end of the trench; a linear feature, 038, cut by 047, 028 and 019 at the eastern end of the trench; two further features, 026 to the west of 006 and 042 to the west of 004; and a further linear feature, 034, to the west of these features. The further excavation of 031 and 012 revealed a final pit, 037, cut into the natural gravel (008).

The earliest activity at the site is represented by the extensive lithic assemblage with a substantial Mesolithic component. Among the most diagnostic artefacts are three microliths, an opposed platform blade core, a bladelet core weighing only 2 g, and ten bladelets. Beyond these, there is every reason to think that the Mesolithic element is substantial, perhaps more so than from any other area so far examined in the Thornborough landscape. Linear and punctiform butts are most frequent here, as are core rejuvenation flakes, reflecting more systematic care in core maintenance and blade production. Similarly, while the most obviously early Neolithic artefacts are two leaf arrowheads, a considerable amount of the debitage may be of the same date. Nothing is necessarily later. An overwhelming proportion of the material is till-derived, on brown and especially grey flint, although there is a higher

incidence of chert usage compared to elsewhere at the complex. The flint artefacts from the prehistoric ditch and pit fills are in variable condition and are difficult to distinguish from those from other contexts, such as the plough scars, in terms of the frequency of breakage, post-depositional damage, cortication and other surface modifications. It remains a possibility that almost all of the collection, excluding the chert, pre-dates the monument. The chert may well reflect the opportunistic knapping of pieces found whilst the ditches were being dug. The only possible feature associated with this early activity is a small stake hole, 041, which is 0.09 metres long, 0.05 metres wide and 0.09 metres deep. This feature was dug into the natural gravel and had been covered by the mound. It is possible though that it dates to the earliest phase of construction at the barrow. It contained no finds.

It is not currently possible to create an absolute chronological sequence for activity at the site, and it is possible that the early Neolithic assemblage is closely associated with the first act of monument construction. This earliest phase would appear to include the digging of pit 036 (Fig. 13) and at least features 038, 004 and 006. Whilst these three latter features were recorded separately it is very probable that they are part of the same ditch, separated by at least one causeway to the west. The fill was virtually the same in each feature, a loose, brown (7.5YR4/3) silt containing large cobbles. They each had a shallow, flat-bottomed U-profile. They were also very similar in dimension at around 1.8 metres wide, and between 0.24 and 0.4 metres deep. Later recuts, 045 cut into the east side of 004, 047 cut into the north side of 038 and 028, were present to the south, with fills very similar to those they cut. Indeed the recut in 004 was only visible in section. It is not thought that these recuts were much later in construction than the original ditch and can probably be ascribed to the same general phase. The pit feature, 036, was filled with a loose silt and had gypsum around the edge, presumably as a lining. The pit was sub-oval in plan, 1 metre long, 0.55 metres wide and 0.35 metres deep. It contained a cranial vault fragment and an intermediate hand phalanx, but no lithics. The later disturbance of this feature by pit 031, a feature which also contained human bone (see below), suggests that more skeletal material may well have been present in this feature, but was redeposited within the later pit. It is therefore unclear whether the material in this pit was articulated or not. The presence of a small hand bone suggests the former, or at least partial articulation, but basing this interpretation on one bone fragment is considered dubious. It was also perhaps too small for such deposits. Pit 037 was presumably then covered by the mound material, 012, upcast from the surrounding ditch.

It would appear that the central ditch was opened next, as it cut into the inner ditch in the eastern part of the trench. This comprised three features, 018 (Fig. 14), 026 and 042, although, as with the inner ditch, it is highly probable that they are all part of the same ditch, having a very similar fill of loose, brown (7.5YR5/3) silt. Ditch 018 was 3.8 metres wide and 1 metre deep. The terminals, 026 and 042, were 2.1 metres wide and 0.67 metres deep and 0.8 metres wide and 0.38 metres deep respectively, all having a shallow V-shaped profile with a rounded base. The basal fill of 018 consisted of large cobbles (Fig. 15), with many voids, filling the bottom 0.6 metres of the ditch. Large cobbles were also present in the base of 026 and 042, although not in the same quantity. This is interpreted as an episode of deliberate backfilling. The reason for this is unclear, as is it position within the sequence of construction at the monument.

It is possible, although thought unlikely, that the outer ditch was opened at the same time as the central ditch. This comprised two features, 020 in the eastern part of the trench (Fig. 16), and 034 in the western part (Fig. 17), recorded separately but, as with the other two ditches, believed to be part of the same feature. It was not broken by a causeway at its western side, hence why it is thought to post-date the central and also therefore the inner ditch, as it would have rendered the causeways in these ditches obsolete. In addition, the upper part of the fill lay over part of the upper ditch fill in the central ditch, 018, meaning that the central ditch was completely silted up before the outer ditch was, and therefore suggesting it is a later feature. The fill of these two features was very similar, a loose, brown (7.5YR4/3) silt with a few cobbles throughout. Feature 020 was 2 metres wide and 1 metre deep, although it was irregular in profile, varying from a shallow U-shape in the north to a V- shape in the south, whilst feature 034 was 1.5 metres wide and 0.6 metres deep with a steep sided U- shape profile throughout. Such variation could result from the ditches being gang dug.

It is therefore suggested that the three ditches were the product of three different phases of activity at the monument. This could also possibly mean three phases of mound construction, but the badly plough damaged condition of this feature makes such distinctions impossible. How the internal features cut through the mound relate to this presumed mound sequence is also unclear.

Sequencing the remaining internal features is problematic, as there is no stratigraphic relationship between them. They comprise linear feature 023 and three pits, 024, 015 and 031. All these features lie near the centre of the barrow and are cut through the mound (012).

Feature 023 (Fig. 18) was a shallow ditch, 1.1 metres wide and 0.48 metres deep, with a shallow U shaped profile. A section some 2.25 metres in length was present in the trench, running out on the north side. It was filled with loose, dark brown (7.5YR3/3) silt with many cobbles and pebbles, some of which showed evidence of burning, and one very large, deliberately placed stone. The fill also contained a large amount of charcoal, but very little lithic material. None of the material appeared to have been burnt *in situ*. The function of this ditch is unclear.

Pit 015 (Fig. 19) was sub-oval in plan, 0.25 metres long, 0.2 metres wide and 0.15 metres deep, with an irregular U shaped profile. It was filled with a loose, dark brown (7.5YR3/3) pebble and silt deposit. It contained no finds. The function of this feature is unclear.

Pit 024 (Fig. 20), although cut through the mound, was very badly plough damaged and only distinctive at a lower level. Sub-rectangular in plan, it was 0.8 metres long, 0.45 metres wide and 0.3 metres deep, with a shallow U-shaped profile and flat base. Filled with a loose, dark brown (7.5YR5/2) gravelly silt deposit, it contained over 160 bone fragments, including cranial pieces, long bones, ribs and hand bones. Due to the fragmentary nature of the remains, and the difficulty in establishing the definite cut for the deposit, it is impossible to ascribe definite numbers of individuals, but it is suggested that the majority of this bone comes from one individual, an adult male, over 45 years of age. This conclusion is based on many of the surviving long bone fragments being quite large and robust with pronounced muscle attachments, characteristics that are more likely to be seen in males than females. The wear patterns on some of the teeth suggest the age, as does the presence of osteoarthritis in several of the vertebrae and areas of new bone growth at the muscle and ligament attachment sites. These changes are seen in some older adults, and can be caused by high levels of physical activity or repeated stress or trauma to a muscle. There are, however, bones from other individuals scattered within this material, comprising two other adults, one represented by several teeth and bone fragments, the second by a vertebra and one juvenile, represented by a tooth and a pair of fragmentary clavicles. It is suggested that the feature is the remnant of a heavily truncated burial of a single individual, the other individuals coming from separate burials, possibly ones which intercut this, but have all been destroyed by ploughing. It is apparent that much of the bone had been freshly broken, due to ploughing, and often material from the ploughsoil refitted with other pieces from this spread pit feature.

Pit 031 (Fig. 21) was cut through the mound and into pit 036. Sub-oval in plan, it was 0.7 metres long, 0.5 metres wide and 0.3 metres deep, with a steep sided, flat bottomed profile. It contained a loose fill of light brown, gravelly silt. It contained 24 pieces of bone, including a complete skull (Fig. 22), five other cranial vault fragments and hand and rib fragments. The complete skull was from an individual between 40 and 60 years old, with a cranial index of 75. The cranial index for Neolithic material averages about 71 and for Bronze Age skulls it is about 78 (Mays, 1998: Table 4.2). Both Neolithic and Bronze Age crania are known with cranial index values resembling that for the skull in context 32. However, a male skull with an index value of 75 would be more typical of the Bronze Age than of the Neolithic (Brodie, 1994: 59). No charcoal and only one lithic, a flake fragment, presumed to be residual, was found. It is suggested that this feature represents a burial pit, possibly that of a crouched inhumation (Simon Mays, *pers. comm.*). That it so neatly intruded on the earlier pit, 036, is either extremely fortuitous, or meant that this earlier pit was either known about through social tradition, or possibly marked in some way.

Interpreting all these features and finds is somewhat problematic, primarily due to the small scale of the excavation, but also because of the lack of absolute dating material. The following discussion should therefore be seen as tentative and further excavation may well require it to be revised or replaced. What is apparent is a number of different phases of activity at the site. Mesolithic and early Neolithic activity, represented by the extensive lithic assemblage and possible stake hole (041), appears to be residual within the excavated deposits at the barrow. The first phase of monument building is likely to have been the excavation of the inner ditch, broken by a causeway to the west, to provide mound material to cover the burial in pit 036. This inner ditch was then at least partially recut, during a second phase of activity, presumably only a short time after its initial construction. Whether this recutting was combined with the excavation of the central ditch, also with a causeway to the west, is presently unclear, but not thought likely, due to it cutting into at least part of the inner ditch on its eastern side.

The digging-out of the central ditch is therefore thought to represent a third phase of activity. Finally, the outer ditch was cut, without an apparent causeway, during a fourth phase of activity. Whether the deliberate backfilling of the central ditch was done at this time is unclear. The monument may have therefore been enlarged and re-enlarged, becoming more complex as it does so, over a significant period of time. How the inner features relate to this sequence is unclear but it is suggested that pit 031 is part of the second phase of activity, and pits 024 and 015, and linear feature 023, are part of the third or fourth phase of activity. Evidence for this, however, is limited and based upon relative levels of truncation, and the fact that the person or persons digging pit 031, seemed to be aware of the presence of the earlier pit (036).

When this sequence began and ended is unclear, but it could have started in the later part of the early Neolithic, not continuing in use much beyond the later Neolithic. This interpretation is based upon a number of different factors. Firstly, the tradition of round barrow burials began in the Neolithic in Yorkshire, so an early date for this monument is entirely possible. Secondly, the burial tradition of collective interments is very much a Neolithic practice, as later Neolithic and Bronze Age social change is reflected most strongly in burial traditions of single individuals. Against this it could be argued that the site is Bronze Age, the primary single burial being added to by later 'satellite' burials, but two points count against this: the apparent excavation and re-burial of the primary interment, while not a Bronze Age practice, is well attested in the earlier parts of the Neolithic, where the bones of the dead were continually moved and re-worked through various social traditions; and there is a marked absence of grave goods from the site, even though Lukis demonstrated, in his earlier excavations at Thornborough, that ceramic vessels were commonplace in the early Bronze Age barrows at the complex. All the lithics are probably residual and predate the barrow construction, and unfortunately, no ceramic material was recovered, apart from a sherd of early Neolithic Grimston Ware found during fieldwalking, again presumed to be residual.

4. CONCLUSIONS

4.1 The significance of the archaeology

The evaluative excavations, in addition to topographic survey and geophysical prospection, have significantly improved our knowledge and understanding of the round barrows at Thornborough, and provided invaluable information about their levels of preservation and further potential. This is particularly true of the triple-ditched barrow, where the preservation of skeletal material and extensive lithics has produced the most sizeable assemblage of excavated material from any previous excavations at the monument complex. This material provides an insight into the changing importance of the location, from a place of occupation and knapping, to one used exclusively for the burial of the dead. Further excavation can only improve our understanding of the site, and hopefully, shed important light on the development of the complex, from its early Neolithic beginnings, through to at least the later Neolithic, and possibly, early Bronze Age.

The presence of skeletal material, a resource not thought to survive in the acid gravel soils, and previously undiscovered at Thornborough in recent years, of at least 5 individuals, from various contexts, suggests that in certain unique situations, in this case at least partially caused by the presence of gypsum within a context, allows for the occasional preservation of such fragile finds. That gypsum appears to be used at some of the monuments that comprise the complex - the Central Henge (Thomas 1955), Centre Hill Barrow (Lukis 1870) and the Triple Ring Ditch - suggest that fragile archaeological finds may well still exist at certain places within the complex.

Both evaluations confirmed the existence of well preserved archaeology across the gravel plateau. The excavations at THBG2, whilst at first glance disappointing in its failure to locate stratified material culture, did provide invaluable information about a monument thought to have been completely destroyed, and the excavations at the triple-ditched barrow exceeded all expectation.

4.2 The impact of agriculture

Agriculture has had a massive and obvious impact on the quality of the archaeology at the two round barrows and this can be extrapolated to other sites at Thornborough. Ploughing has effectively destroyed the mounds at all the barrows, although it is likely that remnant does survive at each site, apart from at THBG2. The degree of destruction does to a certain extent depend on the type of cultivation. Whilst the year on year ploughing of these sites is gradually but surely eradicating any remaining traces of archaeological features, the recent fragmentation of the skeletal material at the

Double Ring Ditch can be directly ascribed to the preparation of this area for potatoes. The location of most barrows on low ridges exacerbates the affects of ploughing, the latter gradually eroding even the geological features on which these monuments are located.

4.3 Recommendations

The further investigation of these monuments by total investigation must be seen as a priority if it is not possible to take the sites out of cultivation. The barrows have already provided a wealth of data to be used in the explanation, interpretation, conservation and management of the complex as a whole, but also in answering regional and national questions, such as those concerning the development of the Neolithic round barrow tradition in North Yorkshire. The total excavation of these sites can only improve our knowledge and understanding. This is particularly true of the Double Ring Ditch where significant archaeological deposits still remain. The actions of just a couple of years of ploughing will very significantly degrade the quality of this archaeology. It is suggested that an agreement is reached with the current farmer concerning agricultural activity at this site before it is too late.

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