Archaeological Survey of the Southern and Central Thornborough Henges, North Yorkshire (1997-98)

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Table of Contents

Contents	2
Acknowledgements	3
List of Illustrations	4
1. Introduction	5
2. Conservation and Preservation	6
3. Methodology	7
4. Survey Results	7
5. Discussion	9
6. Conclusion	10
Appendix 1	11
Bibliography	13

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List of Illustrations

Figure 1	Location map of the Thornborough henge complex, North Yorkshire
Figure 2	The Thornborough henge Complex
Figure 3	Contour plan of the central henge
Figure 4	Hachure plan of the central henge
Figure 5	Contour plan of the southern henge
Figure 6	Hachure plan of the southern henge
Figure 7	The inner ditch of the central henge
Figure 8	Terminal of henge bank at the southern entrance of the central henge
Figure 9	Signs of bank material extraction on the south side of the central henge
Figure 10	Evidence of bank material extraction at the central henge
Figure 11	Depression in the topography to the north-west of the central henge, with the landfill site beyond
Figure 12	The southern entrance to the central henge, looking north
Figure 13	Scrap ironwork on the western portion of the central henge bank
Figure 14	Disturbance to the bank of the central henge
Figure 15	Inner ditch of the southern henge, looking south
Figure 16	Inner ditch of the southern henge, looking north
Figure 17	Bank of the southern henge, looking south-west
Figure 18	Bank of the southern henge, looking south

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The report describes an archaeological survey undertaken at the Thornborough henge complex, near Ripon, North Yorkshire. Work was completed with the aim of collating detailed topographic data of the monumental landscape at Thornborough. In particular, the substantial nature of the extant remains are noted, while the relatively poor state of preservation of parts of the complex are also considered.

1. Introduction

The Thornborough henge complex is situated on a gravel plateau to the north-east of the river Ure (Harding 1997;Thomas 1955). It comprises three nearly identical henge monuments, spaced an equal distance from one another on an approximately north-west to south-east alignment. There is a distance of around 550 metres between the henges, and the complex extends for 1.7km. All three of the Thornborough henge monuments represent examples of the IIA class of henge, each comprising an inner ditch, bank and outer ditch with two entrances (Harding & Lee 1987, cat. 214-216). These impressive structures comprise part of a wider palimpsest of archaeological material. The central henge was constructed over part of an earlier cursus, which runs for a distance of over 2 km, and has an average width of 44 m (Vatcher 1960; Harding 1998a; Harding 1998b). A double pit alignment is also situated in the vicinity of the southern henge, to the west and south-west, running on a north north-east to south south-west alignment for over 350 m (Joseph 1977). The remains of two round barrows are located at the northern and southern ends of this pit alignment.

A topographical survey of the Thornborough complex of henges was initiated in 1997 as part of the Vale of Mowbray Neolithic Landscapes Project. The aim was to locate the southern and central henge monuments in relation to modern topographical features and an arbitrary coordinate system, while producing a detailed contour plan of these two sites from which it would be possible to ascertain differential levels of earthwork preservation. Work in the summer of 1997 concentrated on the southern henge. In the spring and summer of 1998 work was completed on the southern henge and on the central henge. At the time of this work, an archaeological and ecological survey of the northern henge had already been completed by Ed Dennison Archaeological Services (Dennison 1996).

2. Conservation and preservation

The henge complex at Thornborough is protected by its scheduled status. It is noteworthy that part of the surrounding landscape is similarly protected, itself a testament to both the national and regional importance of the complex. There has, however, been extensive damage to the monuments as a result of agricultural activity. While there is an excellent level of preservation with parts of the northern henge, a result of its protection by a covering copse of trees, the same is not true of the other scheduled monuments. The most direct threat to these sites has been posed by a lengthy and ongoing history of intensive ploughing across the local landscape. It seems likely that this dates from at least the Medieval period and in more recent years there has been deep ploughing along with alleged but not confirmed periodic sub-soiling.

The interior and ditches of the central henge along with the associated cursus have clearly been badly affected and until 1994 were regularly under cultivation. It seems probable that the plough was disturbing the upper levels of the cursus monument, which is no longer extant, while the earthwork remains of the more substantial outer ditch and associated bank have in all likelihood been almost completely destroyed over the last thirty years. At the same time, it is known that the larger inner bank of this monument has been badly disturbed by various acts of destruction. Parts of the earthwork have been completely removed by World War II ammunition stores which were apparently dug into the inner side of the feature. There is also evidence at the southern henge for substantial amounts of redeposited bank material, resulting from plough damage, between the feature and the outer ditch. The appearance of this disturbance suggests that it occurred as a result of one single act of destruction. The displaced bank material may have been spread inwards over the top of the northern section of ditch. The levelling of the earthwork is also apparent on the western side of the monument. There is evidence for substantial amounts of redeposited bank material along the berm between this feature and the ditch. Furthermore, the entire circuit of the outer ditch was under cultivation until 1998. Both henges have certainly suffered from at least two decades of intensive ploughing. It is also important to note that the external edge of the bank on both the western and eastern side of the southern henge has been destroyed by agricultural activity.

3. Methodology

Survey was carried out using Geotronics Geodolite and Geodimeter Total Stations. Data were processed using LSS software versions 4.0 and 6.0. In the 1997 field season, readings were taken across the southern henge on 'intelligent' point locations. In 1998, readings were taken on an approximate grid of points outside of the central and southern henges, together with readings at 'intelligent' points across each henge, dictated by factors such as breaks in the slope of features, or depressions and rises in the topography.

4. Survey results

4.1 Central henge (SE 285 795)

The central henge of the Thornborough complex (Fig. 3) is sited on level ground which is bordered to the west by a fence boundary (Fig. 4;**A**) and to the south by a lane running between the villages of West Tanfield and Thornborough (**B**). The fence line separates the henge and surrounding agricultural land from a landfill site (**C**). The henge has a diameter of approximately 185m measured from the exterior of the bank, although the potential diameter of the monument is probably around 250m, taking into account the outer ditch. The remains of the henge monument consist of an inner ditch, bank, traces of an outer ditch and a disused quarry.

The inner ditch (**D**) is poorly preserved and has been levelled to a certain degree by ploughing (Fig.7). At its deepest, the ditch survives to a depth of 1.05m (**E**) below the top cut of the feature, at its terminal on the eastern side of the southern entrance. On average the inner ditch is 1m deep from the top of the cut. Although ploughing has levelled much of this inner feature, the shape of the two sides have been well preserved, and the ditch terminals appear to be slightly rounded. The average width of the inner ditch from the top breaks of slope is approximately 25m.

The bank of the monument (**F**) is well preserved on the western side (**G**), where it stands to a height of 3m from the berm, with an outer width of 18m, and at the western terminal at the southern entrance (Fig.8), where the bank is 4.5m in height (**H**). At the north-east and east side of the henge, the bank has been badly disturbed, probably from plough damage, and only stands 0.85m high (**I**). The width of the bank on this side of the feature is narrower, approximately 11m wide. Signs of quarrying are noticeable (Figs 9/10) on the south and south-east portions of the bank (**J**), in particular a 5.5m wide hollow in the outer side of the bank (**K**). The overall profile of the feature is steep-sided with a flat top, although this profile alters drastically on the north-east side of the monument to a shallow slope. The bank is best preserved on the western side of the monument. Excavations were undertaken by Thomas at the central henge in 1952 (Thomas 1955), both at the south terminal of the inner ditch and at two locations on the south-west section of bank. No traces

of these trenches survive for the inner ditch, and the disturbances on the bank of the henge represent episodes of disturbance from extensive quarrying of material or plough damage. No noticeable traces of Thomas's trenches could be located.

The berm between the inner ditch and bank is practically nonexistent (**L**), with the ground running in a slope from the bank to the base of the ditch. Some traces of the berm survive at the ditch terminals. The henge interior is slightly dome-shaped and around 80m in diameter (**M**). The outer concentric ditch is badly preserved, and is not evident as an earthwork for all of its circumference (**N**). A deep depression to the north-west of the henge may mark traces of the outer ditch, but it is most probable that the feature is a product of plough disturbance and quarrying (Fig.11). This is evident from the close proximity of an old quarry directly to the west of the monument, and the poor preservation of the outer henge ditch around the rest of the monument. The fence boundary truncates this feature, although a slight gradient is evident on the south-west side (**O**). Two entrances cut the bank and ditch features to the north and south (**P&Q**). The best preserved of these is the southern entrance (Fig. 12), 17m wide through the bank, and 17m wide across the inner ditch (**Q**). Scrap ironwork, probably the remains of farm equipment (Fig.13), lies on the circuit of the henge bank, on the north-east side (**R**). Some traces of recent damage to the henge bank could also be seen along the southern side (Fig.14).

4.2 Southern henge (SE 290 789)

The southern henge is sited on an area of ground which is predominantly level (Fig. 5), but slopes to the south and west beyond the circumference of the outer ditch of the monument (Fig 6; **A**). Extensive disturbance as a result of plough damage has affected many parts of the monument, particularly on its eastern, southern and western sides.

The inner ditch is poorly preserved (Fig.15) in relation to the inner ditch of the central henge (**B**). This is possibly a result of a single event of disturbance from heavy plant machinery (**C**). Such an explanation may account for disturbance of the henge bank (Fig.16, see below). The inner ditch is approximately 0.6m deep on the south side (**D**), and slightly shallower to the east (**E**), with a width of between 15m and 17m. The ditch profile forms a shallow U-shape, and appears to be best-preserved on the south-west side of the monument.

The henge bank is moderately well preserved, particularly on the north-west side of the henge (**F**), where it stands to a height of 1.8m, at a width of 20m (Fig.18; **G**). However, the bank has been badly damaged on the east and south-east sides (Fig.19; **H**), where the feature is over 30m wide, and stands in places to a height of 0.3m. The bank remains seem to suggest past disturbance from some form of mechanical earth-mover along the bank and berm on the eastern side of the monument (**I**). An account of bulldozing

activity in the 1960s may relate to this (Harding 1998a). The profile of the bank is more shallow-sided than that of the central henge, with a broader bank top. The general bank profile contrasts sharply with the remains on the south-east side of the monument, where damage has almost obliterated the feature, leaving a broad, shallow bank profile.

The berm between the inner ditch and bank is relatively flat and around 12m wide (**J**), although it has been disturbed along the eastern side (**K**). Indeed the bank and inner ditch are not distinct from one another along the eastern side of the monument. The henge interior is slightly rounded and approximately 85m in diameter (**L**). Traces of the outer concentric ditch appear to survive to the north and north-west (**M&N**), although not to a substantial degree, marked by a shallow hollow of between 0.2 and 0.25m depth. Two entrances cut the bank and ditch features to the north (**O**) and south (**P**). Plough damage has disturbed the bank terminal to the east side of the south entrance, making any indication of an entrance width difficult. The north entrance is 19m wide at the bank, and 24m wide at the ditch. This may potentially reflect the unusual character of the eastern ditch terminal, either as a result of construction or post-depositional disturbance.

5. Discussion

The extant earthworks represent part of a more complicated structural relationship across the complex (Harding 1998b). Excavated evidence from fieldwork in 1996 and 1997 suggests a broad chronology of henge construction in the late Neolithic with different structural phases. The outer ditches of the henges, particularly the central and southern examples, may represent an early phase of construction prior to the building of the inner ditch and bank of each henge.

The structural remains also relate to surrounding and underlying archaeological features as witnessed in the aerial photographic record for the study area. It appears that the cursus monument underlies the structural remains of the central henge, suggesting an earlier phase of ritual activity in the immediate vicinity of the henges. Results of the topographic survey indicate both the substantial scale of the surviving extant remains of each henge, and the monumental size and nature of the complex as part of the ritual landscape. Topographic survey of the central and southern henges at Thornborough, and comparison with the detailed archaeological and ecological survey undertaken at the northern henge, highlight the substantial and widespread nature of the extant archaeological remains of the henge complex. The survival rate of the inner ditch of the northern henge (Dennison 1996), and the bank of the central henge illustrate this.

Damage to the fabric and structure of the henge monuments has not been restricted to any one period or portion of the complex. Extensive plough and

quarrying damage has occurred across the complex, particularly at the southern henge, and with the bank of the northern henge. Even where disturbance has altered the structure of the henges, the monumental scale of the features in the complex has allowed the continuing existence of traces of earthwork remains, where more ephemeral features have long since been erased as surface features. From the results of the survey it is apparent that the results of topographic survey, together with the data from geophysical survey and excavation, will broaden an understanding of the diversity of the ritual landscape at Thornborough. This picture is at present dominated by the extant remains of the three henge monuments.

Signs of post-medieval quarrying across parts of the northern and central henges are evident. Most noticeable is the plough damage to sections of the complex, particularly at the southern henge, where damage is most extensive, and signs of ploughing around the exterior of the northern henge, and outside and within the central henge bank. In addition, waste material has been dumped or left at points across the complex, particularly at the northern and central henges. Some signs of damage from mammalian activity were noted, probably as a result of burrowing by rabbits. The initiation of a preservation area around the henge complex, protected from the surrounding farm and quarry land by a hedgerow (Fig. 11) may prevent further disturbance to the structure of the complex in the near future.

6. Conclusion

Survey of the central and southern henges of the Thornborough complex has enabled the location of these monuments in relation to the surrounding topography, and an account of the scale of the individual monuments and their state of preservation. Archaeologically, the survey illustrates the scale of the henge complex in relation to the surrounding terrain. Comparison of the contour survey with excavated evidence indicates the more complicated relationships between features underlying the extant remains.

The varied state of preservation over the complex is also highlighted from the survey. Damage and disturbance have affected different sections of the complex, either through prolonged effects of ploughing or through periodic acts of destruction.

Appendix 1 Control Station Coordinates and Data Set Lists

Central Henge

All of the station coordinates are based on an arbitrary grid system, with the coordinates for station 1 based at 1000 Eastings, 1000 Northings and 100 Elevation.

Station Coordinates

Station	Eastings	Northings	Elevation
1	1000.000	1000.000	100.000
2	1025.000	1009.100	99.856
3	1070.032	1056.799	103.765
4	1032.295	1136.017	100.179
5	1122.093	1027.030	99.452
6	1236.429	1124.775	99.358
7	1047.733	1345.497	100.552
8	1026.463	1327.078	100.547
9	775.405	1100.551	100.389
10	802.266	1050.513	100.851
11	1004.262	935.143	99.619

Data Sets

Job File	Load File	Data
TH08191	***HENGE.001***	***STN3***
TH08192	HENGE.002	STN4
TH08091	HENGE.003	PTS
TH0812	HENGE.004	PTS
TH08201	HENGE.005	PTS
TH08211	HENGE.006	PTS
TH08212	HENGE.007	PTS
TH08231	HENGE.008	PTS
TH08232	HENGE.009	PTS
TH08241	HENGE.010	PTS
TH08242	HENGE.011	PTS
TH08243	HENGE.012	STN5
TH08251	HENGE.013	PTS
TH08252	HENGE.014	STN6

TH08253	HENGE.015	PTS
TH08261	HENGE.016	PTS
TH08262	HENGE.017	STN7
TH08263	HENGE.018	PTS
TH08264	HENGE.019	PTS
TH08271	HENGE.020	PTS
TH08272	HENGE.021	STN8/PTS
TH08273	HENGE.022	STN9/STN10
TH08274	HENGE.023	PTS
TH08275	HENGE.024	PTS
TH08281	HENGE.025	STN11/PTS
TH08282	HENGE.026	PTS
TH08283	HENGE.027	PTS
TH08284	HENGE.028	FIELD BOUNDARY
TH08285	HENGE.029	ROAD LINE
TH08286	HENGE.030	ROAD LINE

Trench 7 and Geophysics Grid

Station Coordinates

Station	Eastings	Northings	Elevation
1	75.000	90.000	100.000
2	100.000	99.100	99.856
3	145.032	146.799	103.765
4	107.295	226.017	100.179
5	197.093	117.030	99.452

Data Sets

Job File	Load Files	Data
TH08191	***EXC98.001***	***STN3***
THGR01	EXC98.002	GEOPHYS/TRENCH GRID POINTS
THGR02	EXC98.003	GEOPHYS. GRID POINTS
TH08192	EXC98.004	STN4
TH08243	EXC98.005	STN5

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