THE NEOLITHIC AND BRONZE AGE MONUMENT COMPLEX OF THORNBOROUGH, NORTH YORKSHIRE

AN ARCHAEOLOGICAL RESOURCE GUIDE

CONTENTS

1. Introduction

The monument complex at Thornborough, in Yorkshire's North Riding, is an archaeological landscape of regional, national and international significance. The unparalleled cluster of three massive henges, in association with other Neolithic-early Bronze Age monuments and traces of settlement, represent what would have been one of Britain's most important 'sacred landscapes' between 3500 and 1800 BC. Located on a vital cross-Pennine route, the complex was well positioned to serve the densely settled Ure-Swale catchment area. The complex was visited by people from as far afield as eastern Yorkshire and the Pennines, suggesting it was a regional 'hub' in the religious life of many widely separated groups. Such a role would account for the massive size of the Thornborough henges and the landscape's long and complex sequence of development. Only four sites in the British Isles are larger — all in Wiltshire and Dorset — and nowhere else are there three closely-spaced and identical henge monuments, all of a design unique to the Ure-Swale catchment area. They attest to a huge mobilisation of labour and an exception level of planning.

Mineral extraction and intensive farming have had a detrimental impact on the landscape and represent a continuing threat to its archaeology. Archaeological investigations have demonstrated the great fragility but extensive potential of the resource. Large parts of the henge monuments survive as fabulous earthworks and are associated with a quite remarkable range of buried features. Good preservation has also been demonstrated at the cursus monument, two of the surviving round barrows, a 'long mortuary enclosure', and at least one double pit alignment. The widespread distribution of stone tools (lithics) in the plough soil and excavated occupation pits illustrate the extensive remains of Neolithic-early Bronze Age settlement which still survive across much of the landscape.

Thornborough offers the opportunity to explore what are nationally and internationally significant questions about the long-term development and use of a 'sacred landscape' between 3500 and 1800 BC. These questions are central to understanding the social, political, industrial and religious experiences of those alive during the Neolithic and Bronze Ages.

2. Location, topography and geology

The area discussed 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'*, fourteen *round barrows*, two *double pit alignments*, contemporary settlement and other features or finds of archaeological significance (Fig. 1).

The topography of the landscape is largely flat or gently undulates between 35-45 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, excellent for agriculture, and the drift geology is predominantly undifferentiated fluvio-glacial terrace deposits, ideal for gravel extraction.

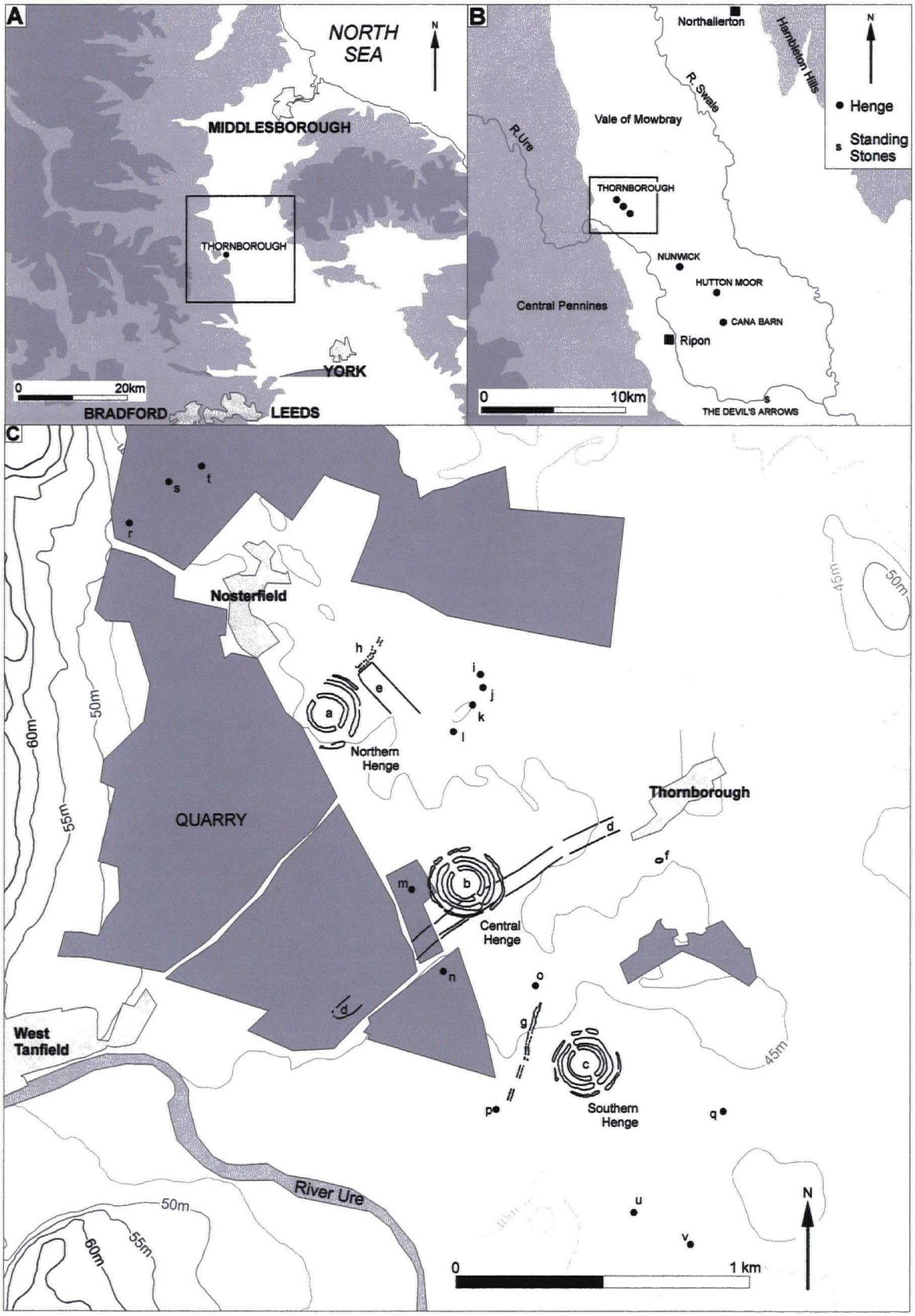


Fig. 1 The Thornborough Monument Complex, North Yorkshire

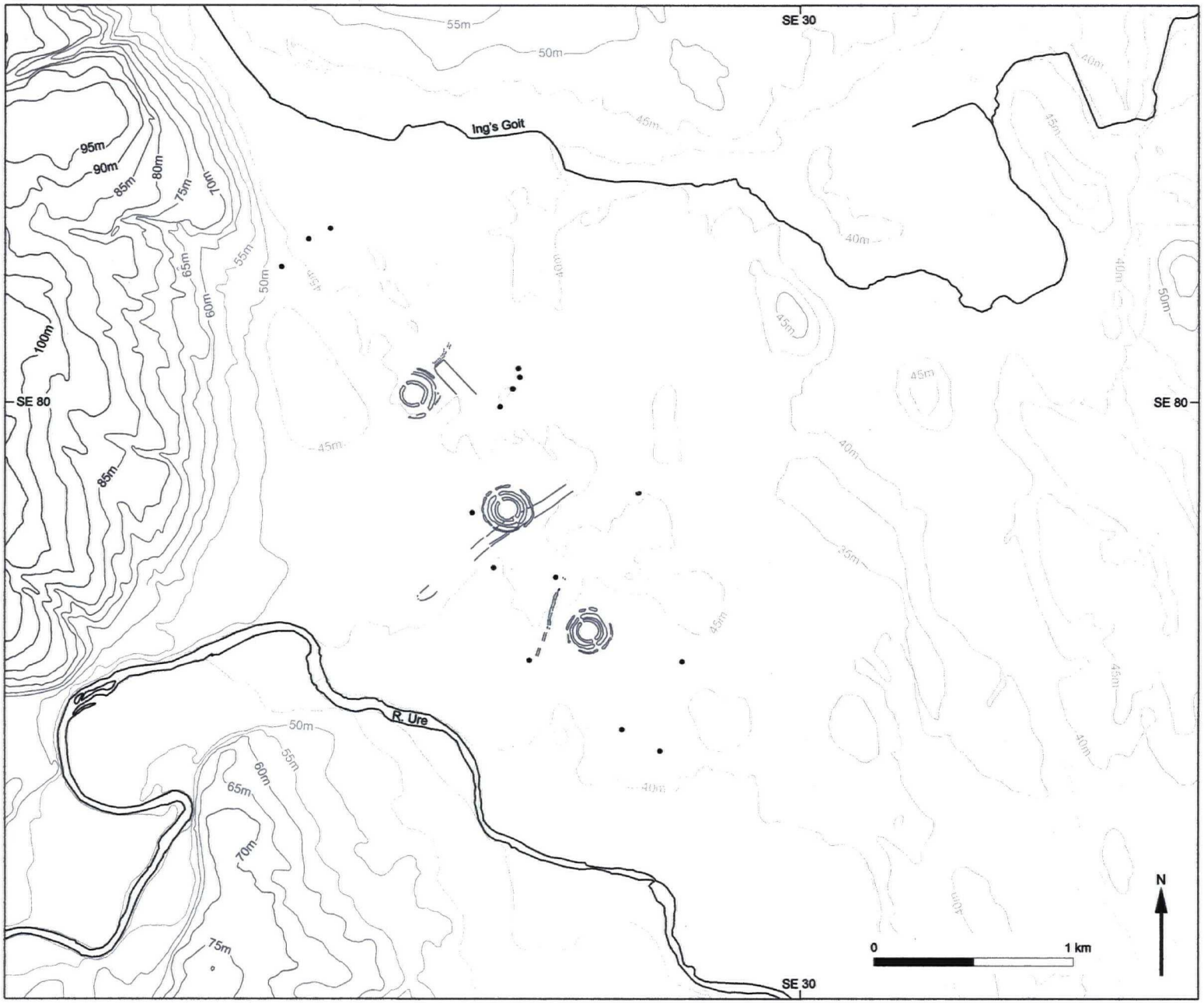


Fig.2 The topography of the Thornborough area

3. An introduction to the monuments

A number of prehistoric monuments can be found at Thornborough covering a period of over 1,700 years:

Cursus – there is one definite cursus (Fig. 1d) and a possible cursus (Fig. 1e). These sites were rectilinear monuments consisting of two parallel banks and ditches, although some had inner mounds instead of banks. They are often classified by size into a 'major' and 'minor' type, the former being at least 650 metres long and between 20-128 metres wide. The one definite site at Thornborough is a 'major' cursus, having a (known) length of 1.2 kilometres and a width of 40 metres. Their function is unclear, although it is presumed they were used as ritual processional routes during the middle Neolithic (3500 – 3000 BC).

Long Mortuary Enclosure – there is one probable example at Thornborough (Fig. 1f). These are also rectilinear, but very much smaller than cursuses, formed by a single earthen bank and ditch. The site at Thornborough is oval-shaped and 25 metres long by 17 metres wide. These monuments date to between 3800-3000 BC and are thought to be associated with the dead: a place where bodies were left to decompose before the bones were collected for burial.

Henge – There are three henges at Thornborough (Fig. 1 a-c). They can be regarded as a "hallmark of their age" and are generally thought to have been ceremonial gathering-places in use during the later Neolithic (3000-2200 BC). They are defined as a circular or oval earthwork of variable size, from 6 metres diameter to in excess of 500 metres. They consist of an external bank and internal ditch usually broken by one or two entrances. Henges are often divided into Class I (one entrance) and Class II (two entrance) sites. A further subdivision is that of Class IIA, characterised by a further external bank — but these monuments are only found between the Rivers Ure and Swale in North Yorkshire, specifically at Thornborough, Hutton Moor and Cana Barn. The Thornborough henges have diameters in excess of 240 metres, and in places their banks and ditches survive to over 4 metres high and 2 metres deep.

Round Barrow – there were at least fourteen round barrows located in and around the complex (Fig. 1 i-v). They are burial monuments, formed by the digging of a circular ditch around a central burial, the soil being heaped above the burial to form a mound. Round barrows usually date to the early Bronze Age (2200-1500 BC), although in Yorkshire they can also belong to the Neolithic period.

Double Pit Alignment – there are two double pit alignments at Thornborough (Fig. 1 g-h), one of which, next to the Southern Henge (Fig. 1g) is the longest in the British Isles. They are constructed of two parallel rows of pits, some of which would have contained wooden posts. They date to the early Bronze Age and are thought to have had a similar function to the earlier cursus monuments, acting as processional routes through the landscape.

All the monuments at Thornborough lie on the fluvio-glacial terrace deposits, flanking the eastern bank of the River Ure, along a slight north-south decline.

4. A brief history of the Thornborough landscape

The history of the Thornborough landscape began after the retreat of the glaciers around 12,000 years ago. Mobile Mesolithic (10000-4000 BC) groups moved across the landscape as shown by the scattered flint artefacts now found in the plough soil. Its first intensive use occurred during the Neolithic (4000-1800 BC) period, when the creation of clearances within the heavy deciduous woodland provided space for settlement, agriculture and the building of large ceremonial structures such as the cursus monument at about 5,500 years ago. That this landscape was of particular importance is demonstrated by its subsequent development over the next 1,000 years into one of the largest and most impressive ceremonial centres in the British Isles. At the height of its use the three massive, closely-spaced henges formed a religious focus for a population living as far afield as the central Pennines and the chalklands of the Yorkshire Wolds. By the Iron Age the monument complex was no longer in use, but was still a noticeable landmark, and was certainly visited during the Roman period, as shown by the discovery of a first century AD brooch at the Southern Henge. Later peoples may well have re-used the monuments. The presence of 14th-15th century AD pottery, and an associated stone structure, was discovered at the southern henge, suggesting its use as a 'fair'. The Deserted Medieval Village of East Tanfield is located just to the south of the monuments. The complex has formed an important, if periodic, focus to its surrounding landscape since its initial creation some 5,000 years ago.

More recent events and land-use have had a detrimental effect on both the monuments and their landscape setting. The Central Henge was used as a munitions dump during the Second World War and the Southern Henge was deliberately bulldozed in the 1960s, presumably in an attempt to flatten it. Of most relevance to the current landscape are intensive agricultural practices and extensive mineral extraction. The landscape possesses great potential for both, classed as Grade II agricultural land and containing extensive sand and gravel resources within its fluvio-glacial terrace deposits. The two quarries to the north and west of the monument complex have destroyed a significantly large part of the surrounding landscape.

5. History of archaeological research

The area has been little studied in comparison to the amount of archaeological fieldwork undertaken across comparable landscapes such as the World Heritage environs of Stonehenge and Avebury in Wiltshire.

The first recorded fieldwork was undertaken in 1864 by the Reverend W. C. Lukis, who discovered "certain small flint implements" across the landscape. He also opened four of the round barrows — that of Centre Hill, located between the Southern and Central Henges, and three of the four barrows at the Three Hills Barrow Group. Aerial photographic reconnaissance by Dr. J. K. St. Joseph between 1945 and 1952 discovered a number of previously unknown monuments which included the Cursus that runs beneath the Central Henge. The relationship between these two monuments, and the bank and ditch of the henge monument, were subsequently investigated by N. Thomas in 1952. His small excavation trenches were located at the south-west inner ditch terminal, and the point where the northern cursus ditch ran under the western

henge bank. He also dug two small trenches at the Northern Henge. Leslie Grinsell produced a brief description of the area's barrows in the same report. The cursus was further investigated in 1955 by F. Vatcher, who conducted rescue excavations at its western terminal prior to its destruction by gravel extraction. The Southern Double Pit Alignment was discovered by aerial photography in 1975.

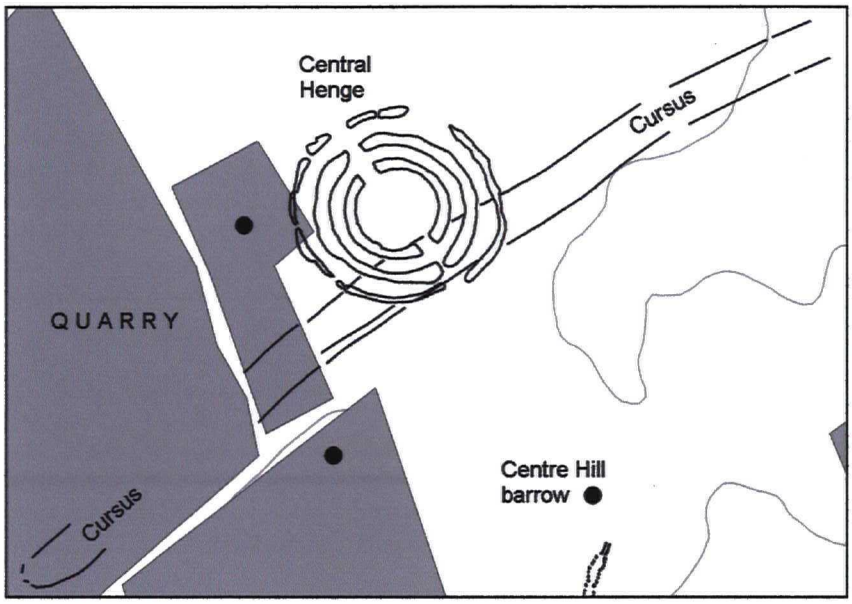
The first systematic investigations did not occur until the 1990s. Between 1994 and 1999 a programme of fieldwork was undertaken by Dr. J. Harding, based initially at the University of Reading and later at the University of Newcastle upon Tyne. The *Vale of Mowbray Neolithic Landscape Project* (known as the VMNLP) included a desktop study, geophysical and topographic surveys, excavations at the Southern Double Pit Alignment, the Oval Enclosure and the Southern and Central Henges, and a programme of surface collection across 180 hectares of the landscape in the immediate vicinity of the monuments. The programme of fieldwork was complemented by an interpretive account of Thornborough's social significance. A follow-up project, again by Dr. J. Harding, was completed between 2003-2004. It involved addition surface collection, extensive geophysical prospection, test-pitting, and the evaluation of two round barrows. The project will be fully published as a major monograph.

An additional archaeological study, by Mike Griffiths and Associates, commenced in 1995 at the Nosterfield Quarry. It focuses on the area of mineral extraction immediately to the north of the Northern Henge. The fieldwork is ongoing.

Isolated finds have consisted of a number of Neolithic and Bronze Age polished stone axes, bronze axes and spearheads, numerous flint tools and pottery fragments, and the occasional discovery of a feature, such as a burial.

6. The Archaeology

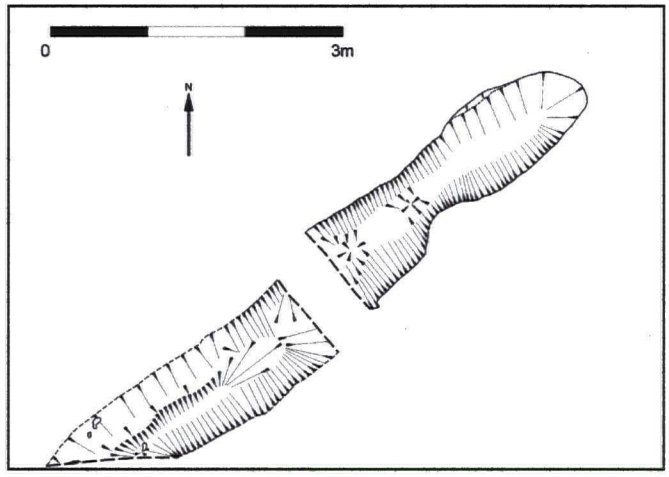
THE CENTRAL CURSUS



Description:
Linear bank and ditch enclosure
Period:
Neolithic (3500 – 3000 BC)
Original status:
A massive cursus monument in excess of a kilometre long and over 40m wide. It is not clear whether the monument had an internal, an external, or possibly both, ditches. The curved western terminal is highly unusual, and the location of the eastern end is unknown. Excavations in 1955 uncovered a Bronze Age burial close to the western terminal. Further excavations in 1998 showed that there are possible structural divisions within the monument.

Aerial photographic plot of the cursus

Current status:
The cursus has been completely levelled by ploughing, its western end has been removed by gravel extraction and the extent of the eastern end is unclear, although it appears to run into the village of Thornborough.
Surviving archaeological deposits lie 0.3m below the surface.



Excavation of internal cursus features in 1998

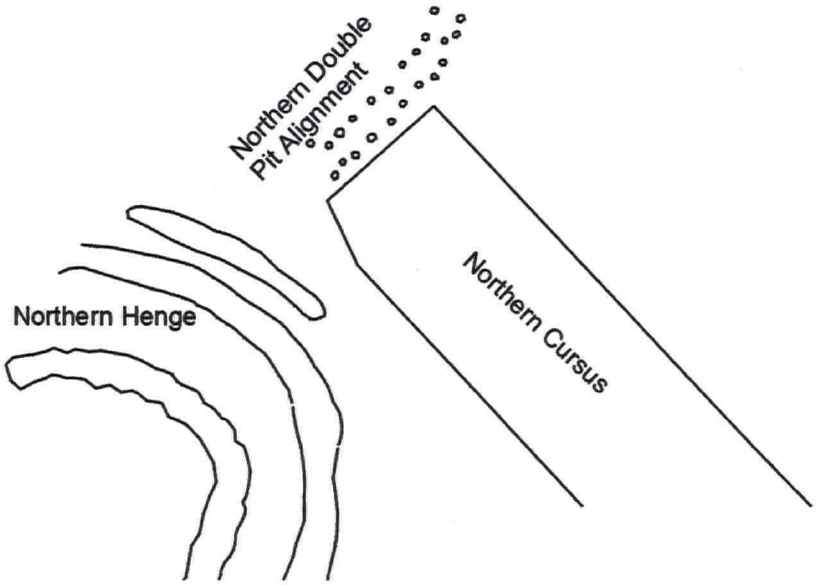
FRAGILITY / LIMITATIONS

- Extensive damage by ploughing and gravel extraction
- Completely levelled by ploughing
- Mostly destroyed by gravel extraction
- Little material culture found during excavation
- Poor preservation of organic remains

VALUE / POTENTIAL

- Potential internal structural features
- Probable survval of primary and secondary ditch deposits
- Potential presence of significant archaeological deposits, examples of which are known from many other excavated henge monuments

THE NORTHERN CURSUS



Description:
Linear bank and ditch enclosure
Period:
Neolithic (3500 – 3000 BC)
Original status:
A cursus monument at least 240m long and over 70m wide. Only known from aerial photographs the original status of this monument is unclear.

Aerial photographic plot of the northern cursus

Current status:
The current status of this monument is unknown. Continued ploughing in this area will be damaging any potential archaeological features. The depth of these features below the surface is unknown, but probably around 0.3m

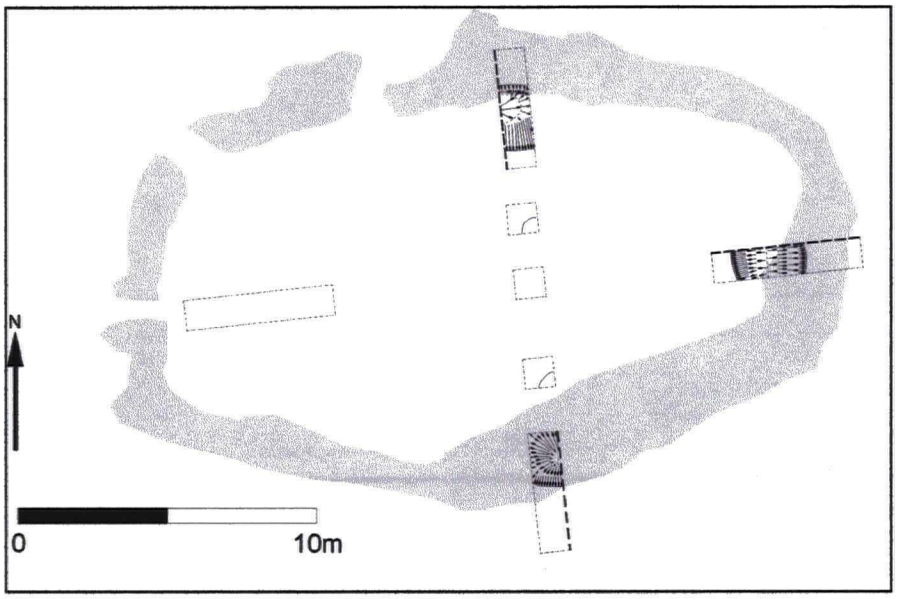
FRAGILITY / LIMITATIONS

- Banks levelled by ploughing
- Damage to archaeological features unclear

VALUE / POTENTIAL

- Potential presence of significant archaeological deposits

THE 'LONG MORTUARY ENCLOSURE'



Description:
Single bank and internal ditch enclosure
Period:
Neolithic (3500 – 3000 BC)
Original status:
An oval enclosure 17m north-south and 25m east-west. A ditch, with an entrance in the north-west portion, had a U-shaped profile 2.5m wide and around 0.7m deep, with a bank around 2.2m wide. This enclosed an area where the dead would be left to decompose, before the burial of the bones, possibly in barrows such as the triple ring ditch (Barrow P).

Aerial photographic plot and excavation at the enclosure

Current status:
Visible as a sub-oval cropmark between the village of Thornborough and Chapel Hill Farm. The monument has been completely levelled by ploughing, with only ditch deposits surviving. Significant internal features, uncovered by excavation but not fully investigated, may well hold evidence that could provide a better understanding of the use of this monument. Archaeological deposits lie 0.32m below the surface.

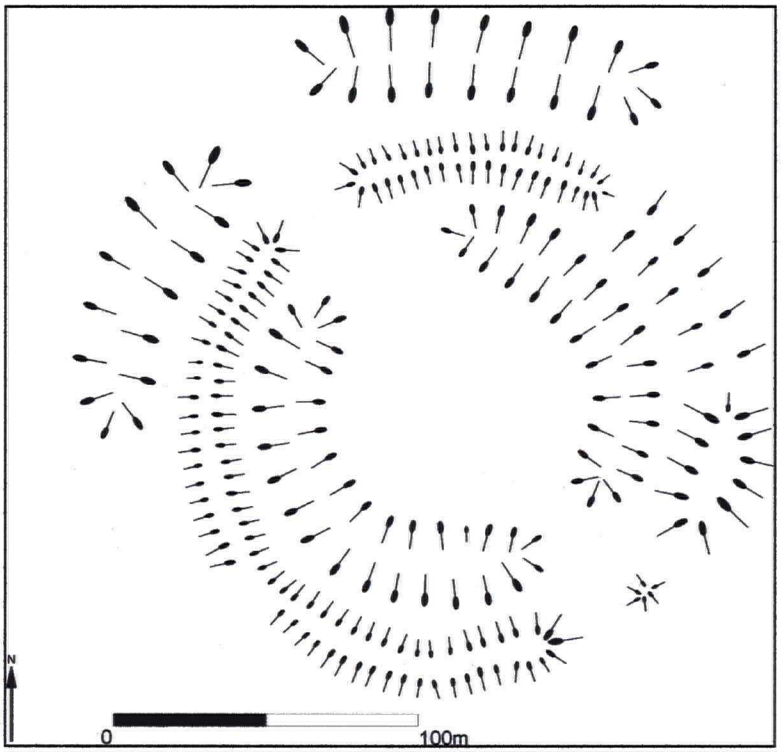
FRAGILITY / LIMITATIONS

- Extensive damage by ploughing
- Outer ditch is levelled
- Little material culture found during excavation
- Poor preservation of organic remains

VALUE / POTENTIAL

- Good survival of primary and secondary ditch deposits
- Significant internal features revealed by excavation
- Potential presence of significant archaeological deposits

THE SOUTHERN HENGE



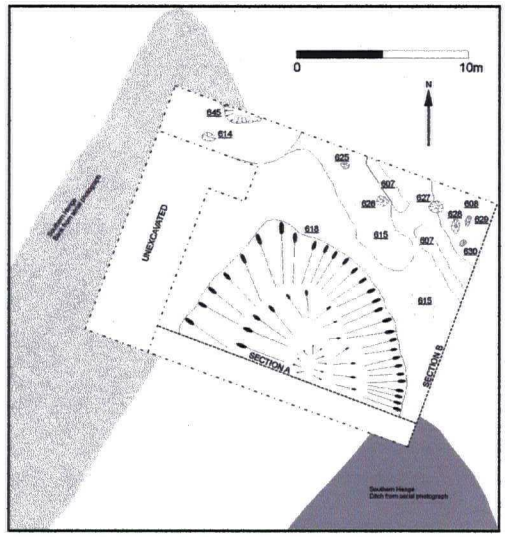
Earthwork survey of the Southern Henge

Description:
Double bank and internal ditch enclosure

Period:
Neolithic/Bronze Age (3500 – 2500 BC)

Original status:
A massive henge monument with a diameter of 250m, with a segmentary external ditch about 0.6m deep and 2.5m wide, a bank over 1.8m high and up to 20m wide, and an internal ditch 2.6m deep and 15.8m wide. It is possible that the outer ditch was dug before the inner features. There are two entrances, each 15m wide. A probable coating of white gypsum would have made the henge highly visible. A number of internal and external features suggest ritual activities. A small number of stone and bronze axes found in the vicinity suggest an important centre for meeting and exchange.

Current status:
The henge is under a Stewardship Agreement to protect it from further damage, although substantial erosion of the monument has already occurred. The external ditch has been levelled by ploughing. In places the bank has been reduced to 0.3m high and 30m wide, whilst the internal ditch survives to a maximum depth of 0.6m and is 16m wide. Significant internal and external features survive, in addition to the preservation of the ditch deposits. They consist of pits, postholes and other associated features.



Excavation at the external ditch in 1998

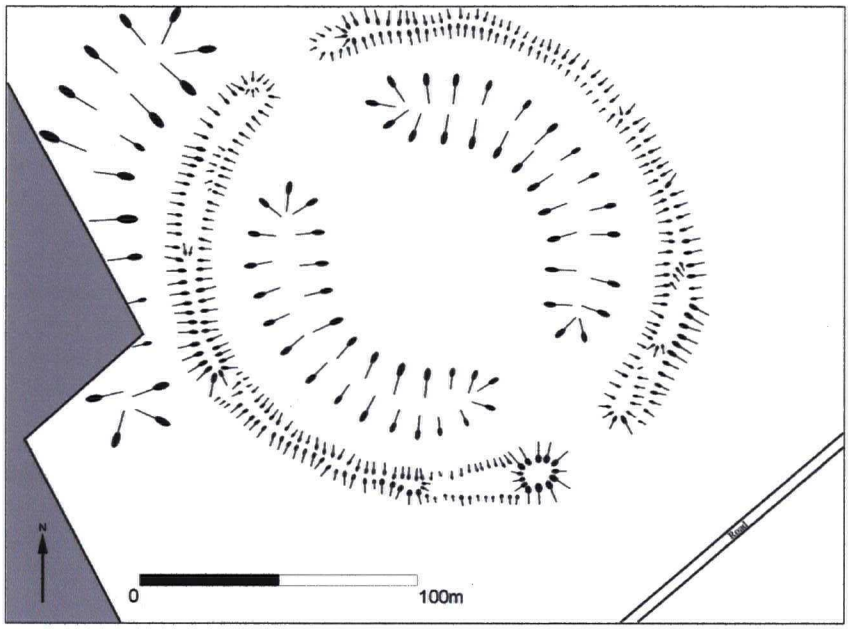
FRAGILITY / LIMITATIONS

- Extensive damage by ploughing and gravel extraction
- Outer ditch is levelled, inner ditch severely reduced and bank heavily eroded
- Little material culture found during excavation
- Poor preservation of organic remains

VALUE / POTENTIAL

- Good survival of primary and secondary ditch deposits
- Significant internal features revealed by geophysical prospection
- Significant internal features revealed by excavation
- Potential presence of significant archaeological deposits

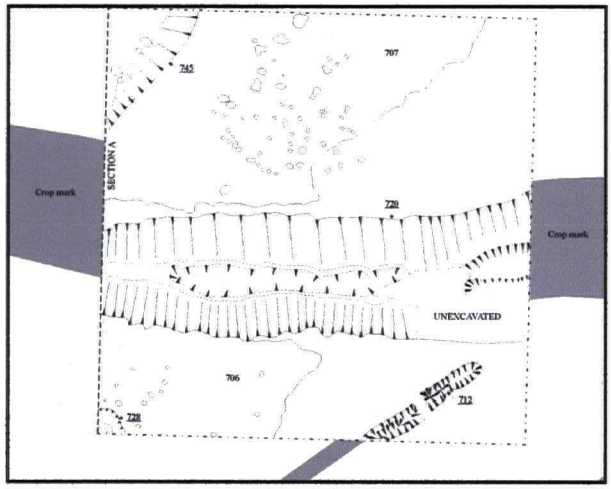
THE CENTRAL HENGE



Earthwork survey of the Central Henge

Description:
Double bank and internal ditch enclosure
Period:
Neolithic/Bronze Age (3500 – 2500 BC)
Original status:
A massive henge monument with a diameter of 250m, with a segmentary external ditch about 1.3m deep and 6m wide, a bank over 4.5m high and 18m wide, and an internal ditch 2.1m deep and 17.6m wide. It is possible that the outer ditch was dug before the inner features. There are two entrances, each 16.2m wide. A probable coating of white gypsum would have made the henge highly visible. A number of internal and external features suggest ritual activities. A small number of stone and bronze axes found in the vicinity suggest an important centre for meeting and exchange.

Current status:
The henge is under a Stewardship Agreement to protect it from further damage, although substantial erosion of the monument has already occurred. The external ditch has been levelled by ploughing, and partially removed by gravel extraction, prior to any archaeological fieldwork. In places the bank has been reduced to 0.85m high and 11m wide, whilst the internal ditch survives to a maximum depth of 1.05m and is 25m wide. Significant internal and external features survive, in addition to the preservation of the ditch deposits. They consist of a series of postholes and other associated features.



Excavation at the external ditch in 1998

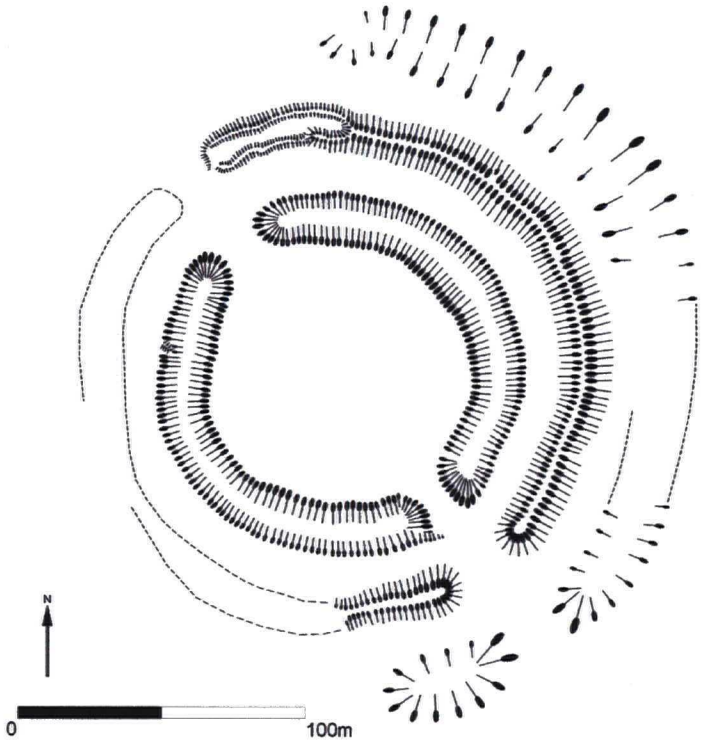
FRAGILITY / LIMITATIONS

- Extensive damage by ploughing and gravel extraction
- Outer ditch is levelled, inner ditch severely reduced and bank heavily eroded
- Little material culture found during excavation
- Poor preservation of organic remains

VALUE / POTENTIAL

- Bank seals previous archaeological features
- Good survival of primary and secondary ditch deposits
- Significant internal features revealed by geophysical prospection
- Significant external features revealed by excavation
- Potential presence of significant archaeological deposits, examples of which are known from many other excavated henge monuments

THE NORTHERN HENGE



Earthwork survey of the Northern Henge

Description:
Double bank and internal ditch enclosure

Period:
Neolithic/Bronze Age (3500 – 2500 BC)

Original status:
A massive henge monument with a diameter of 250m, with a segmentary external ditch, a bank over 1.5m high and 17.5m wide, and an internal ditch still surviving 2.5m deep and 20.4m wide. This is the best preserved henge monument in the country. There are two entrances, each 15m wide. A probable coating of white gypsum would have made the henge highly visible. A small number of stone and bronze axes found in the vicinity suggest an important centre for meeting and exchange.

Current status:
The henge is currently situated within a copse, a position which means that the internal ditches of the monument are extremely well preserved, and the banks survive to a substantial degree. The actions of roots and animal burrows will have had, and will be having, a considerable impact upon more ephemeral features, such as those known from the Central and Southern Henges.

FRAGILITY / LIMITATIONS

- Damage to external ditch on the west by quarrying
- Outer ditch is levelled
- Extensive damage to ephemeral features by root and animal action

VALUE / POTENTIAL

- Best preserved henge monument in the country
- Good survival of primary and secondary ditch deposits
- Potential presence of significant archaeological deposits, examples of which are known from many other excavated henge monuments

ROUND BARROW I

Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
A round barrow around 15m diameter. The original height is unclear but was probably around 2m. It contained a primary and a secondary cremation. There could have been other inhumations or cremations, undiscovered by the excavator in 1872. The primary burial was within a burnt pit, whilst the second, probably a woman and child, were in 'coarse earthenware jars'. The location of this barrow, in close association with two others suggests that these were an important grouping of burials.

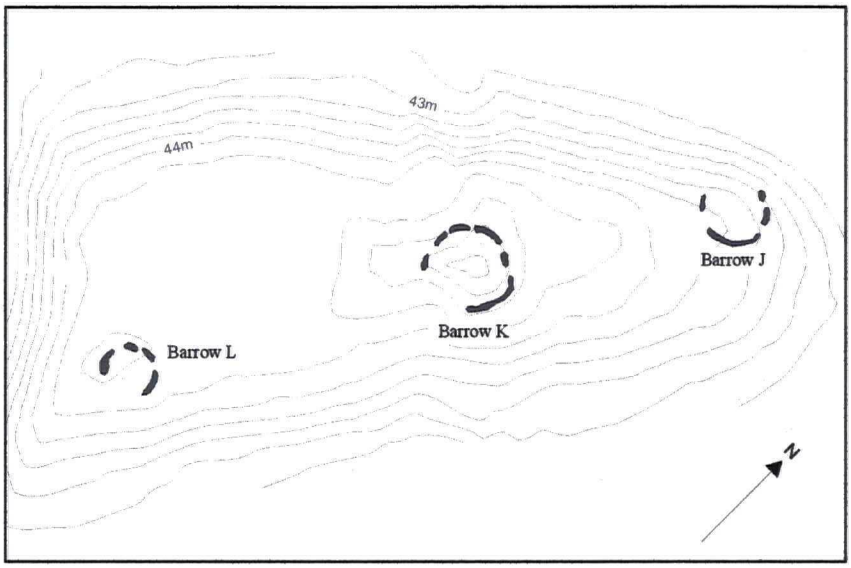
Current status:
Fieldwork undertaken in 2003 failed to find any trace of this barrow. It is assumed it has been destroyed by ploughing.

FRAGILITY / LIMITATIONS

- Destroyed by ploughing
- Already at least partially excavated in 1872

VALUE / POTENTIAL

ROUND BARROW J



Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
A round barrow 15m diameter. The original height is unclear but was probably around 2m. It contained a primary cremation. There could have been other inhumations or cremations, undiscovered by the excavator in 1872. The burial was within a burnt pit sealed with clay. The location of this barrow, in close association with at least three others suggests that these were an important grouping of burials.

Topographic survey and geophysical interpretation of the barrow

Current status:
The barrow is currently under the plough, and significant damage has been done to archaeological deposits, particularly at its northern extent. The mound no longer survives as a feature. Geophysical survey suggests that this barrow will be destroyed within ten years by ploughing. Excavation suggests that significant deposits survive at this site. Deposits survive 0.3m below the surface, but the location of this barrow on the ridge edge mean that the ploughsoil is constantly being moved down hill and therefore each ploughing event is removing more of the surviving archaeology.

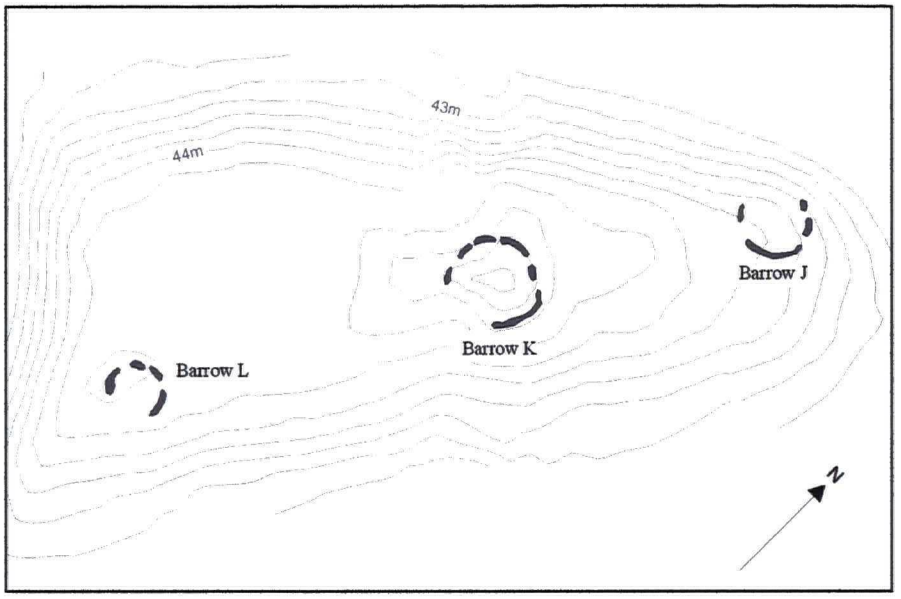
FRAGILITY / LIMITATIONS

- Completely flattened by ploughing
- Already at least partially excavated in 1872
- Continuous ploughing is rapidly destroying this feature

VALUE / POTENTIAL

- Survival of ditch deposits
- Potential presence of significant secondary archaeological deposits, examples of which are known from many other excavated barrows, but not recovered in 2003

ROUND BARROW K



Topographic survey and geophysical interpretation of the barrow

Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
A round barrow 23m diameter. The original height is unclear but was probably around 2.5m. It contained a probable primary and a secondary cremation, neither of which were associated with any finds. There could have been other inhumations or cremations, undiscovered by the excavator in 1872. The location of this barrow, in close association with at least three others suggests that these were an important grouping of burials.

Current status:
The barrow is currently under the plough, and significant damage has been done to archaeological deposits. The mound only survives as a feature 0.5m high and has been spread to 45m diameter. Geophysical survey suggests that this barrow will be destroyed within ten years by ploughing. Excavation at Barrow J to the north suggests that significant deposits survive at this site. Deposits will survive around 0.3m below the surface, but the location of this barrow on the ridge means that the ploughsoil is constantly being moved down hill and therefore each ploughing event is removing more of the surviving archaeology.

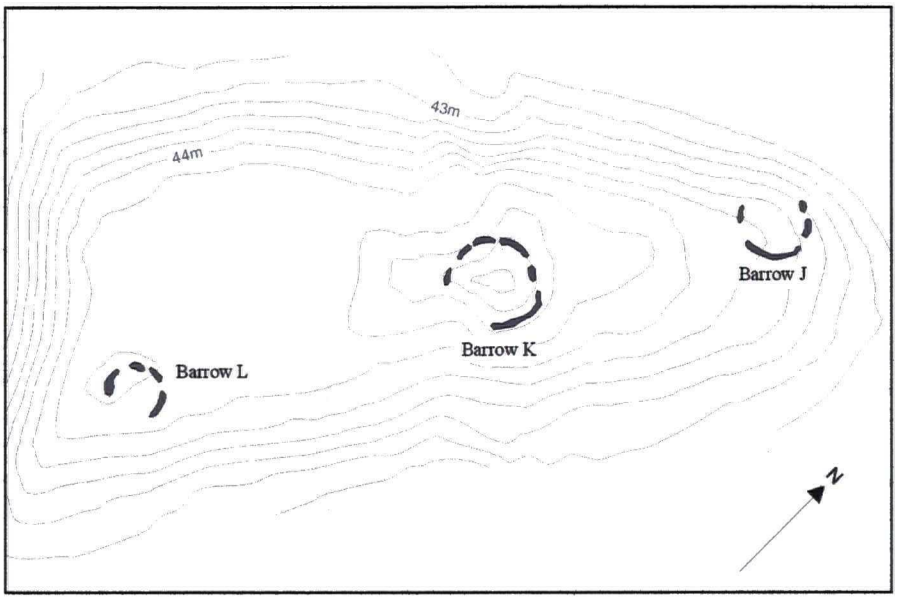
FRAGILITY / LIMITATIONS

- Largely flattened by ploughing
- Mound survives as low bank
- Already at least partially excavated in 1872

VALUE / POTENTIAL

- Survival of ditch deposits
- Potential presence of significant secondary archaeological deposits, examples of which are known from many other excavated barrows

ROUND BARROW L



Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
Only known from aerial photographs and geophysics. A round barrow 16.6m diameter. The original height is unclear but was probably around 2m.

Topographic survey and geophysical interpretation of the barrow

Current status:
The barrow is currently under the plough, and significant damage has been done to archaeological deposits. The mound only survives as a feature 0.15m high and it is unclear how far it has been spread. Geophysical survey suggests that this barrow will be destroyed within ten years by ploughing. Excavation at Barrow J to the north suggests that significant deposits survive at this site. Deposits will survive around 0.3m below the surface, but the location of this barrow on the ridge means that the ploughsoil is constantly being moved down hill and therefore each ploughing event is removing more of the surviving archaeology.

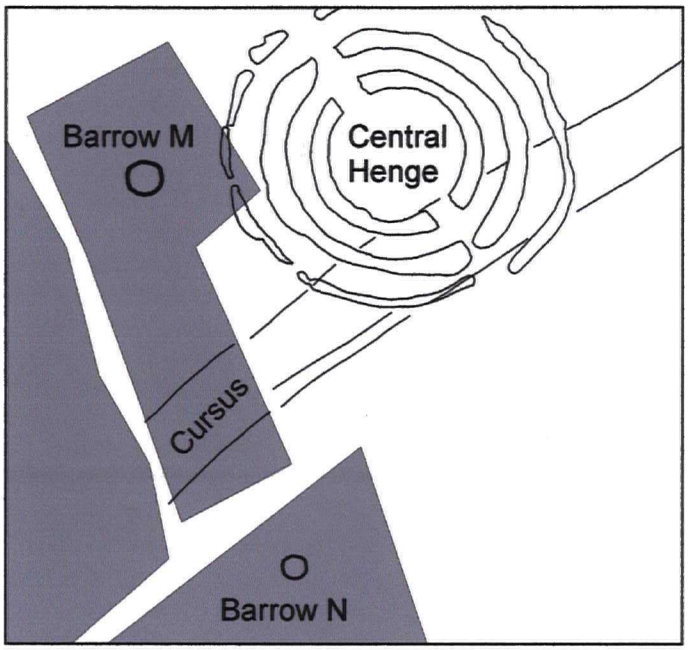
FRAGILITY / LIMITATIONS

- Flattened by ploughing
- Mound survives as low bank

VALUE / POTENTIAL

- No previous excavation
- Survival of ditch deposits and possibly primary and secondary burials

ROUND BARROWS M AND N



Aerial photographic plot of the barrows

Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
Only known from aerial photographs. Two single ditched round barrows m diameter. The original height is unclear but was probably around m. It is not known of what form the burials were. They could have been either inhumations or cremations, there may have been grave goods and there may have been primary and secondary internments. It is likely, considering the positioning of these barrows, close to the Central Henge and the Cursus, that these were significant burials of important individuals.

Current status:
The round barrows have been destroyed by gravel extraction.
No archaeological fieldwork was undertaken.

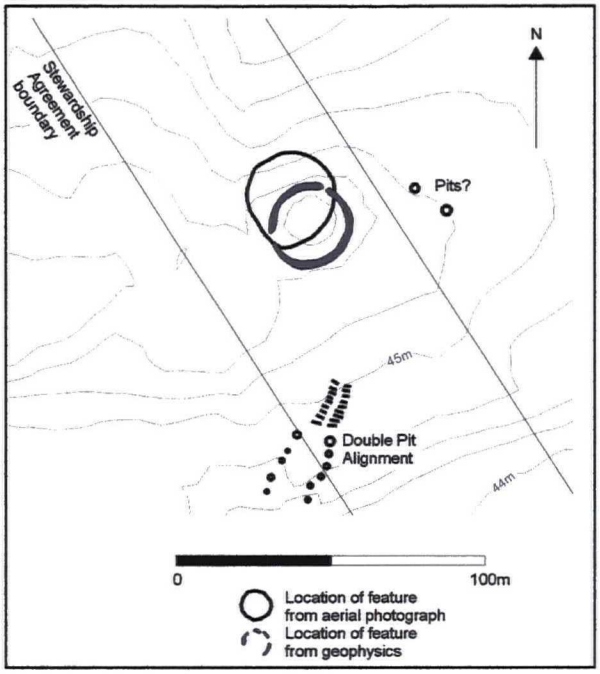
FRAGILITY / LIMITATIONS

- Destroyed

VALUE / POTENTIAL

- None

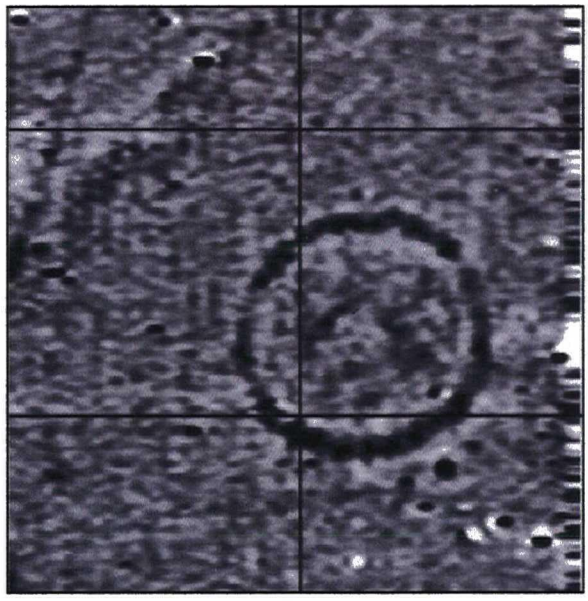
ROUND BARROW O



Topographic survey of the barrow

Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
A round barrow 24m diameter. The original height is unclear but was probably around 2.5m. It contained at least one inhumation in a coffin. There could have been secondary inhumations or cremations, undiscovered by the excavator in 1872. The primary burial was associated with a large pottery vessel. The location of this barrow, on the alignment of the three henges, and the presence of a coffin, a form of burial rarely used in the Bronze Age, suggests that this was a particularly significant individual.

Current status:
The barrow is currently within the area of the stewardship agreement and it is unlikely that further damage will occur to the archaeological deposits.



Geophysical survey of the barrow

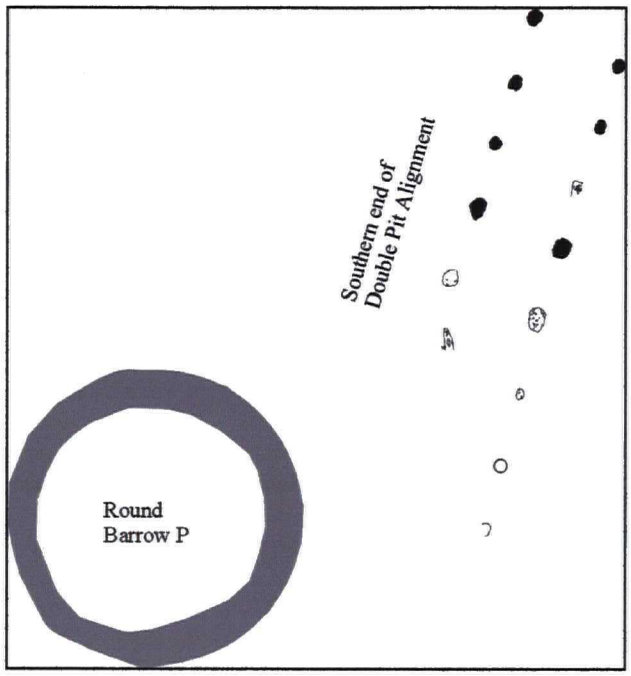
FRAGILITY / LIMITATIONS

- Flattened by ploughing
- Mound survives as low bank
- Already at least partially excavated in 1872

VALUE / POTENTIAL

- Survival of ditch deposits
- Potential presence of significant secondary archaeological deposits, examples of which are known from many other excavated barrows

ROUND BARROW P



Aerial photographic plot of the barrow

Description:
Round Barrow
Period:
Bronze Age (2800 – 800 BC)
Original status:
Only known from aerial photographs. A round barrow 30m in diameter. The original height is unclear but was probably around 3m. Its location at the southern end of the southern Double Pit Alignment suggests that this is a particularly significant barrow at the complex.

Current status:
The barrow is currently under the plough, and no traces were visible in 1999. Survey work was prevented in this area in 2003. It is unclear whether the barrow still survives as a features.

FRAGILITY / LIMITATIONS

- Flattened by ploughing
- Level of damage unclear

VALUE / POTENTIAL

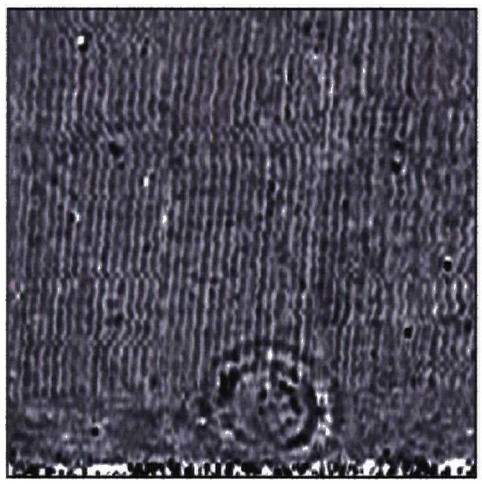
- Potential presence of significant archaeological deposits, examples of which are known from many other excavated barrows

ROUND BARROW Q

Description:
Triple Ditched Round Barrow
Period:
Neolithic (4000 – 2800 BC)
Original status:
A triple ditched round barrow 27m diameter. The original height is unclear but was probably around 2.5m. A multi-phase monument, the three ditches appear to have been constructed one after another, gradually making the monument larger and more complex. It contained the inhumations of at least six individuals, one primary, the others within the mound. It is possible that these were crouched. No grave goods were associated with the burials, suggesting their Neolithic date.

Excavation results at the Triple Ring Ditch

Current status:
The barrow is currently under the plough, and significant damage is being done to archaeological deposits. The mound has been almost completely destroyed. Excavation suggests that extremely significant deposits survive at this site, including burials. Deposits survive 0.3m below the surface, but the location of this barrow on the ridge edge mean that the ploughsoil is constantly being moved down hill and therefore each ploughing event is removing more of the surviving archaeology.



Geophysical survey at the Triple Ring Ditch

FRAGILITY / LIMITATIONS

- Flattened by ploughing
- Extensive damage to burials within mound
- Little material culture found during fieldwalking in vicinity

VALUE / POTENTIAL

- Survival of ditch deposits
- Significant archaeological deposits survive, including burials
- Potential presence of other significant archaeological deposits, examples of which are known from many other excavated barrows

ROUND BARROW R, S AND T

Description:
Round Barrows
Period:
Bronze Age (2800 – 800 BC)
Original status:
Three ring ditches excavated in Nosterfield Quarry. One was 4.9m diameter, a second 7.5 metres diameter and a third 17m diameter. It is unclear whether any of these features had mounds, and only the latter definitely held a burial, an un-urned cremation.

Current status:
All these barrows have been destroyed by quarrying

FRAGILITY / LIMITATIONS	VALUE / POTENTIAL
• Destroyed by quarrying	• None

ROUND BARROWS U AND V

Description:
Round Barrows
Period:
Bronze Age (2800 – 800 BC)
Original status:
Only known from aerial photographs these barrows lie 540m and 710m south-east of the centre of the Southern henge, on and near the axis of the alignment through the henges. Barrow U is 15m diameter and Barrow V 23.6m diameter, the heights would have been around 1.5m and 2.5m respectively.

Current status:
These barrows are currently under the plough and it is unclear if they still survive as archaeological features.

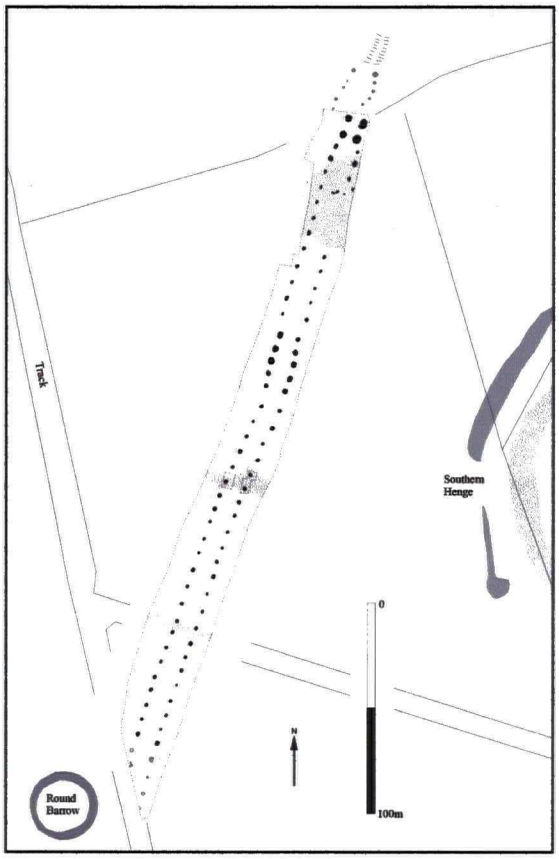
FRAGILITY / LIMITATIONS

- Flattened by ploughing
- Level of damage unclear

VALUE / POTENTIAL

- Potential presence of significant archaeological deposits, examples of which are known from many other excavated barrows

THE SOUTHERN DOUBLE PIT ALIGNMENT

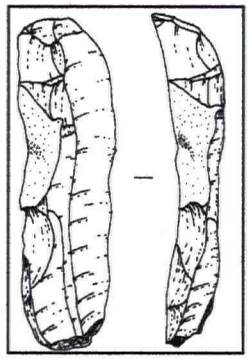


Excavation at the Southern Double Pit Alignment

Description:
Double row of pit features

Period:
Bronze Age (2800 – 800 BC)

Original status:
Known to be 350m long, with over 88 pits, spaced every 5 metres to 7 metres. The rows of the alignment are between 10 metres to 11 metres apart. These varied in size from 0.75 metres diameter and 0.35 metres deep to 4 metres diameter and 1.8 metres deep. The existence of post-pipes and stone packing suggested that most contained post settings. There was a gap of c 30 metres in the eastern line of pits, where it passed closest to the northern entrance of the Southern Henge. At the northern end are two, closely set, parallel lines of nine trenches, each about 3 metres long.



Flint 'fabricator' from the Double Pit Alignment

Current status:
This monument was partially excavated in 1999. The northern and southern extents were never uncovered and some pits were only half excavated. No traces of the monument survive above ground and intensive ploughing had in some cases nearly destroyed some of the pits, particularly towards the northern end of the alignment where the deposits are only 0.31m below the surface. Towards the southern end of the alignment however the depth of overburden increases to over 0.5m, significantly improving the potential for preservation.

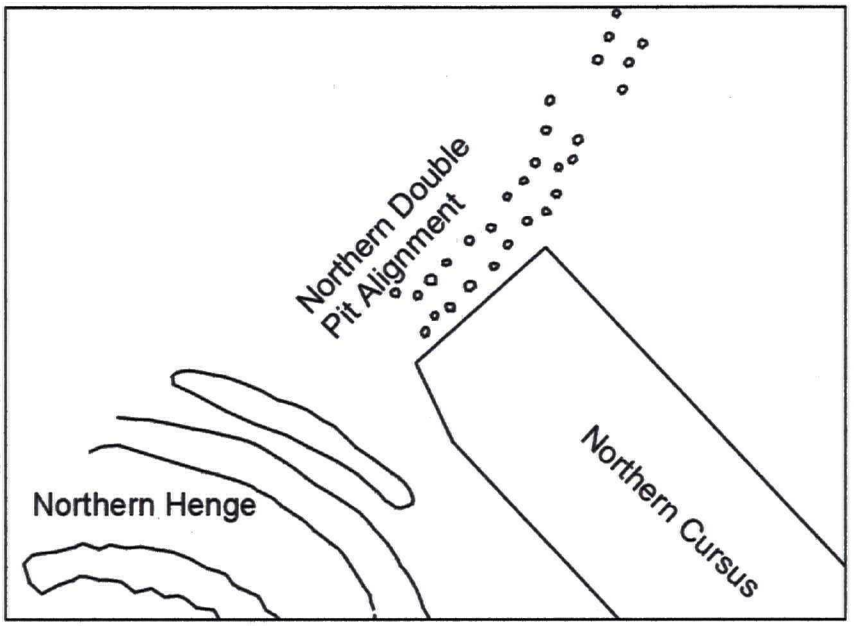
FRAGILITY / LIMITATIONS

- Extensive damage by ploughing
- No traces survive above ground
- Little material culture found during excavation
- Poor preservation of organic remains

VALUE / POTENTIAL

- Good survival of primary and secondary pit deposits
- Significant features revealed by excavation
- Potential presence of significant archaeological deposits to the north and south, un-recovered by previous excavation

THE NORTHERN DOUBLE PIT ALIGNMENT



Description:
Double row of pit features
Period:
Bronze Age (2800 – 2500 BC)
Original status:
A cropmark to the east of the Northern Henge, running south-west to north-east for a distance of 132 metres, immediately to the north of the northern cursus terminal. The two lines of pits are c 9 to 10 metres apart. There is a pit every 10 metres along these rows. The pits themselves appear to be around 2m in diameter. It is probable that these pits held substantial timber uprights, forming a processional avenue.

Earthwork survey of the Central Henge

Current status:
The current status of this monument is unknown. Continued ploughing in this area will be damaging any potential archaeological features. The depth of these features below the surface is unknown, but probably around 0.3m

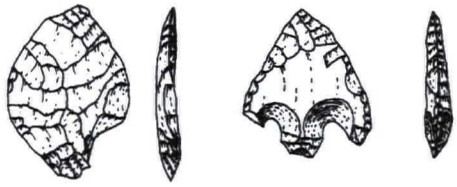
FRAGILITY / LIMITATIONS	VALUE / POTENTIAL
• Damage to archaeological features unclear	• Potential presence of significant archaeological deposits

LITHIC SCATTERS

Description:
Scattered stone tools
Period:
Mesolithic to Bronze Age (8000 – 800 BC)

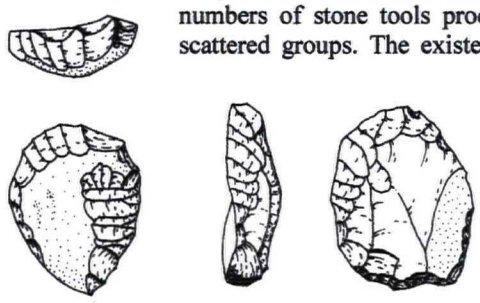
Late Mesolithic microliths (actual size)

Original status:
There is a great variety in the stone tools recovered from the Thornborough landscape and they cover a period of over 6000 years of activity in the area. They are usually a product of all past human activity over a long period rather than specific occupation sites or activity centres, as shown by the presence of material from 7000 years ago being found very close to material from 3000 years ago, and are the remnant of hunting activities, occasional campsites and chance losses. At Thornborough though there are specific areas that do show evidence of continued occupation and re-use of a specific part of the landscape. The Mesolithic and early Neolithic are characterised by a low density spread of material across the whole landscape, from the limestone ridge in the west, across the gravel plateau to the till ridges in the east, with a possible increase in activity at two places where barrows were later built, the Three Hills Barrow group and the Triple Ring Ditch site. Material belonging to the later Neolithic and early Bronze Age suggests areas away from the monument complex were the specific focus for activity, with no 'domestic' action around the monuments themselves. There are three main areas for this activity, in the fields immediately east of Chapel Hill Farm, between Mire Barf Farm and Rushwood Hall, and to the east of West Tanfield village, immediately north of the River Ure. These appear to be areas of domestic and industrial activity, very different to the 'ritual' monuments of the complex, and pit features and hearths, may well be buried below the ploughsoil in these areas.



Early Neolithic and early Bronze Age arrowheads (actual size)

Current status:
The current status of many of these areas is unclear. Excavations on Chapel Hill failed to uncover any features of archaeological significance in what is the most dense concentration of lithics from the landscape. However excavations were small, and it is probable that these features were just missed. Excavations at Nosterfield Quarry, another area of high numbers of stone tools produced evidence of over 80 Neolithic and Bronze Age pits and hearths in scattered groups. The existence of these stone tools in the plough soil is a direct result of ploughing archaeological features, which are far more fragile than the barrows, cursuses and pit alignments which have already been extensively damaged. It is likely though that pits, hearths and possibly the remnants of dwellings still exist below the plough horizon.



Later Neolithic scrapers (half size)

FRAGILITY / LIMITATIONS

- Extensive damage by ploughing and gravel extraction
- Very small features are difficult to find by conventional archaeological methods

VALUE / POTENTIAL

- Large number of lithics recovered
- Potential survival of domestic features, different from the monuments of the complex

7. A sacred landscape

The monuments at Thornborough exist as part of a wider landscape of Neolithic-Bronze Age monuments and settlements. Six henges, three at Thornborough and one each at Nunwick, Hutton Moor and Cana Barn, are located along a 12 kilometre stretch of the River Ure, or what would have been a natural routeway and a powerful natural symbol. These henges are not only closely-spaced but share exactly the same design. The presence of three at Thornborough, along with the only definite early Neolithic cursus monument, suggests its unique importance. Here there developed the largest of the local monument complexes, and the reasons for this have formed the focus for research. The 'sacred landscape' can be regarded as a focal point, or hub, for local patterns of activity across the Ure-Swale catchment.

It story of Thornborough began around 5,500 years ago, with the construction of the huge cursus monument, which, at over a kilometre long, was probably used as a ritual processional route. The sky may have also been important to religious belief for the monument points towards the midsummer sunrise and the stars of Orion's Belt. At the same time the dead were being left to decay in the nearby 'long mortuary enclosure', before remains such as skulls and long bones were taken for burial in a nearby round barrow known as the Triple Ring Ditch. The living meanwhile roamed the landscape, as shown by their scattered flint tools and hearths, keeping cattle, growing crops, and hunting and gathering in the wild woodland.

About 5,000 years ago these monuments were replaced by the far grander henges. The three almost identical and equally-spaced earthworks were built in a line, the central site deliberately located over the cursus. To have three like this is completely unique and is all the more impressive when we consider they are some of the largest henges in Britain. Their scale and complexity demonstrates a massive commitment of labour and an impressive degree of planning. Within these sites people practised their religion.

We can only guess at their beliefs. The henge's circular shape provides a clue for it is commonly associated throughout the world with fertility, reproduction and social continuity. The sky may have also been important. The large banks block all but the view above and in plan the henges mirror the position of the three stars of Orion's Belt. This, of course, could be fortuitous, but the southern entrances framed these stars at the very moment when Sirius, the sky's brightest star, first appeared above the horizon. The effect must have been striking — particularly since the banks were probably coated in gypsum, making them shimmer silvery-white in moonlight.

The complex may have been the final destination for people visiting the other nearby henge monuments. Its role has been likened to that of a key shrine or temple on a pilgrimage route. But why did this particular landscape become so important? Henges are often close to rivers, indicating their links with communication and movement, particularly the exchange of polished stone axes. The case is especially well made for Thornborough, for high quality axes from the Lake District would have likely followed the River Ure as one of the most accessible routes across the Pennines. Some of these axes were even deposited in a marshy basin immediately to the north of the

henges. Such a potentially important routeway may have continued to the other three henges not far downriver.

Perhaps the area attracted pilgrims, who, like their historical counterparts, travelled to seek spiritual guidance and salvation. A pilgrimage route would certainly explain the similarity of the other nearby henges for such centres of worship tend to closely resemble each other by replicating the key site or shrine.

The area immediately around the henges was kept clear of everyday occupation. Few flint tools have been found in the ploughsoil of neighbouring fields and it is only at distances of over half a kilometre that these finds become common. The small, temporary camps of those visiting the henges were located at the terrace edge and across the ridges which surround the plateau on which the monuments are located.

The complex continued to change through time. About 4,000 years ago the henges were no longer used and round barrows were built close by. Impressive double rows of posts were also erected, including one, next to the southern henge, which runs for over 350 metres and connects two round barrows. They possibly played a role in funeral ceremony.

About 3,000 years ago Thornborough had become an agricultural landscape. We can see this important change at the nearby Nosterfield Quarry, where a Bronze Age field system was discovered. But Thornborough continued to be a place of ceremony, for three small circular ditches and burials were found amongst the fields. The farmers clearly felt the need to bury their dead close by, continuing a tradition begun over 2000 years before.

Thornborough is the best preserved and most thoroughly studied of the local archaeological landscapes. The evidence shows a cycle of monument construction which began around 3500 BC, and increased dramatically between 3000 and 2000 BC, before dwindling away. The increase in monument construction is matched by higher levels of occupation and a more complex pattern of landscape organization. Taken together, the evidence suggests the social, political and religious sophistication of those communities occupying or using the Ure-Swale catchment during the Neolithic and Bronze Age.

8. Thornborough's regional significance

The Yorkshire Wolds have long been seen as a 'core zone' of later Neolithic occupation and activity. By contrast, little importance has been attached to the Ure-Swale catchment, despite the presence of what is the largest concentration of Neolithic and Bronze Age monuments from across the county. Both the size, density and uniqueness of these sites is unrivalled across the length and breadth of the British Isles, with the exception of the Wessex chalkland, as is the existence of three henges forming a single ceremonial complex. The available evidence from Thornborough emphatically illustrates that the Ure-Swale catchment was in no way secondary to eastern Yorkshire. Indeed, it is far more likely that it was more important than the latter as an area of later Neolithic occupation and settlement. These low-lying vales were certainly intensively settled during the historic periods and formed a vital north-

south route on the eastern side of the Pennines. The same is likely to have been true of earlier periods.

The Thornborough monument complex was therefore of regional significance and used by people from far afield. Part of its importance may have been its location next to the banks of the River Ure as its course bends southwards and descends from the central Pennines into the low-lying Yorkshire vales. If both Langdale axes and Yorkshire Wolds and coastal flint were being moved across the Pennines then one of the routeways is along the River Ure and through Wensleydale. Such a route would take you directly past Thornborough. It was therefore well placed to act as a regional focus: and that it played such a role is suggested by the wide range of raw materials present in the surface lithics, including Yorkshire coastal flint, chalk flint from the Yorkshire Wolds, and Pennine Chert.

9. Thornborough's national and international significance

General accounts of the Neolithic focus on southern England at the expense of other parts of the British Isles. The bias reflects the spectacular nature of the Wessex chalkland monuments and the relatively high levels of fieldwork. The Thornborough complex presents an opportunity to develop our understanding of the Neolithic and Bronze Age in northern England. Its size and complexity indicate a level of development similar to the Wessex chalkland, while both the quality and quantity of its evidence should encourage the future study of the Ure-Swale catchment, which was clearly a 'hot spot' for Neolithic society.

Recent evidence from Thornborough provides a unique insight into specific research questions. Our understanding of the long-term development of Neolithic-early Bronze Age monument complexes is extremely limited. The sequence at Thornborough — with its emphasis on long-term continuity and episodic construction — is highly informative. Of similar value is what Thornborough tells us about occupation in and around a monument complex. It suggests the importance of mobility and short-term settlement, contradicting prevailing models of later Neolithic settlement, and the ways in which religious beliefs and domestic activity were expressed as part of everyday life.

The later Neolithic of the British Isles is well known internationally for its monument complexes. The World Heritage Sites of Avebury and Stonehenge in Wiltshire, or the Boyne Valley in Ireland, are acclaimed cultural achievements. Thornborough is the equal of these 'sacred landscapes'. Only the four giant 'henge enclosures' of the Wessex chalkland are larger than Thornborough's enclosures, and nowhere else do three henges form a single alignment. Thornborough also possesses the chronological depth which so characterises these World Heritage Sites, its sequence of building extending over as much as two thousand years.

It is unfortunate that such a large expanse of the Thornborough landscape has been destroyed by quarrying. Its archaeological significance, and the large amount of damage done hitherto, highlights the importance of protecting the monument complex from further destruction. It is also in the nation's interest that at least some of the complex be opened to the general public. The spectacular and highly informative

nature of the archaeological resource makes it particularly well-suited to public dissemination, and the existence of a Stewardship Agreement offers an important foundation for the complex's future presentation and management. The alternative of continuing obscurity and degradation benefits no one.

The nature of the archaeology at the monument complex is, in places, very fragile. Banks and mounds, at the barrows and cursus monuments, have been damaged and destroyed, taking with them valuable archaeological information. Quarrying has removed vast areas of the landscape, much of which has never been the subject of archaeological investigation, and at least two barrows, parts of the cursus, and presumably areas of settlement have been destroyed, again wiping out an irreplaceable resource. In addition, a great deal of archaeological information simply hasn't survived, due to the acid nature of the gravel soils, which destroys bone, wood, leather and environmental information. Despite all this, archaeological research over the past decade has revealed a wealth of information concerning the complex. Substantial evidence survives below the reach of the plough, although not beyond the reach of quarrying, and this can develop our understanding and interpretation of this extremely important, completely unique and highly intriguing complex, providing a fascinating insight into how people lived 5,000 years ago.

Further information
More information on the Thornborough complex can be found at
http://thornborough.ncl.ac.uk