

**THE MESOLITHIC, NEOLITHIC AND
BRONZE AGE ARCHAEOLOGY OF THE
URE-SWALE CATCHMENT**

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ASSESSMENT SUMMARY

The report aims to provide an overview of the Mesolithic, Neolithic and Bronze Age from the catchment between the lower reaches of the Rivers Swale and Ure. It covers an area of 1085 sq.km, from Boroughbridge in the south to Catterick in the north, and from the eastern slopes of the Yorkshire Dales in the west, to the western slopes of the Hambleton Hills in the east. This is an area of rich and diverse Mesolithic, Neolithic and Bronze Age archaeology. From the massive henge monuments at Thornborough, Nunwick, Hutton Moor and Cana Barn, sites unparalleled anywhere in the British Isles, through the numerous burial monuments with their variety of mortuary practices and associated grave goods, to the chance finds of fine Neolithic stone axes from Cumbria and Cornwall, bronze axes and spearheads, and even the smallest debris of chipped flint from the Mesolithic, the area between the Rivers Ure and Swale contains one of the finest prehistoric landscapes in the country.

The report aims to collate and interpret, for the first time, all the available Mesolithic, Neolithic and Bronze Age data from the Ure-Swale Catchment and present it in a coherent and usable format. Its contents will assist in the management and development of the study area, and provide focus and direction for future research themes and priorities. Using data from public sources such as the Sites and Monuments Record, the National Monument Record and published articles, and presenting them in a synthetic and accessible format, it is hoped that the quality and quantity of archaeological data from the Ure-Swale Catchment can be properly documented and appreciated, resulting in strategic agendas for the study area in its totality. What is all too apparent from the archives is that the quality of the known data is generally poor, for which there are two major reasons. Firstly, the discovery of much of the material, and the majority of the excavations, preceded the establishment of archaeology as a vigorous discipline. As a consequence records are poor in relation to the modern scientific approach adopted by archaeologists today. Chance finds were often lost, or their present whereabouts are unknown, and it is likely that a large number of finds were never even recorded. The majority of data within the archive is therefore cursory and uncritical. As archaeological interpretation has changed many of these records remain rooted in previous, now discredited, understandings of the past and its material culture. The second problem intrinsic to the archive is that much of the recent work has been undertaken as contractor-led archaeology which, whilst providing useful information about the area of development, is not situated within a research agenda. There is a corresponding lack of cohesion to both the presentation and interpretation of results. It is surprising and disappointing that only one large research project has focused on this exciting and nationally significant prehistoric landscape.

It is essential that local, regional and national agencies or institutions provide the Ure-Swale Catchment with a better future. To this end, the report highlights particular deficiencies in our knowledge and understanding of the study area's Mesolithic, Neolithic and Bronze Age archaeology. It also makes specific proposals about future archaeological investigations. It is believed that the archaeology's national significance, and the unprecedented damage now caused by farming, mineral extraction and other modern developments, warrants the implementation of a large-scale research project as a matter of urgency. It is also believed that such work will, over the longer term, make a distinct contribution to the regional economy. The educational and recreational benefits of its archaeology remain unexploited, yet potentially match that of other successful visitor destinations like Orkney or the Wiltshire Downs. Further research will not only enhance this resource by generating a large body of additional information, but also provide a framework for the archaeology's presentation and dissemination to the general public.

1. INTRODUCTION

Location, topography and geology

The study area (SE1565-4600) encompasses the lower reaches of the Rivers Ure and Swale. It extends from their confluence at Boroughbridge as far northwards as the Swale's descent from the Pennines (Fig. 1). It is this zone which is hereafter known as the Ure-Swale Catchment. The study area also incorporates the Catchment's surrounding landscapes by way of comparison. To the west it includes part of the Yorkshire Dales and to the northeast the Hambleton Hills. The low-lying river valleys are the focus for extensive Neolithic and Bronze Age archaeology, including the monument complexes at Thornborough, Hutton Moor/Cana Barn, Catterick and Boroughbridge. A significant number of small finds and more isolated features such as burial monuments are also known.

Its topography consists of the northern Vale of York, a gently undulating landscape between 20 and 50 metres OD (Fig 1c). There is a gradual downward slope from north to south. To the west the land rises to around 350 metres OD above Nidderdale and to the northeast to around 250 metres OD in the Hambleton Hills. The River Ure flows out of Wensleydale from west to southeast, whilst the Swale flows from north to southeast. The confluence of the two rivers is at Boroughbridge in the southeast corner of the study area. The study area's topography creates a number of 'zones of transition', between upland and lowland, but also between the two rivers. Neolithic and Bronze Age communities may have placed great emphasis on such areas, as is demonstrated by other sites and landscapes across the British Isles. The large number of monuments clustered together in the Ure-Swale Catchment may reflect its general social significance.

The solid geology of the area is likely to have had little effect upon the original location and preservation of archaeology other than the possibility of different settlement and landuse patterns on the Limestone scar which forms the Yorkshire Dales and the more low-lying landscapes to the east. The drift geology is characterised mainly by fluvio-glacial gravel terracing around the rivers, with isolated pockets of till and peat formations. The soils are generally brown earths and sands, with gley and stagnogley soils around the periphery of the study area and peat formations in upland areas.

Background

1.2.1 Landscape history

The history of the study area began after the retreat of the glaciers around 12,000 years ago. Transient Mesolithic groups moved across the landscape, as evidenced by scattered flint artefacts. Its first intensive use occurred during the Neolithic period, when the creation of clearances within the heavy deciduous woodland provided space for settlement, agriculture and the building of large ceremonial monuments. That this landscape was of particular significance is demonstrated by the subsequent development of the area, during a period of over a millennia, into one of the primary foci of Neolithic and Bronze Age activity within the British Isles. Almost all of the significant monuments — the henges, cursuses, and a large number of the round barrows — lie between the two rivers, although more immediately adjacent to the Ure than the Swale.

More recent practices have had a detrimental effect upon the landscape. The two primary impacters at present are agricultural practices and large scale mineral extraction. Arable farming has traditionally been the economic cornerstone of the lowland rural economy with over 70% of the study area of either grade II or grade III agricultural land (DEFRA, English Rural Development Programme). The gravel terracing along the Ure and Swale also provides extensive sand and gravel deposits, themselves the focus for more recent economic exploitation. This material is heavily concentrated within the two river valleys, in a band usually no more than a kilometre wide in the Ure and in broken patches along the Swale. The exceptions are in the area around the Thornborough monument complex, where an area of nine square kilometres lies to the north of the present channel of the Ure, and an area of around twenty square kilometres to the west and south of Thirsk. Unfortunately, both farming and large-scale quarrying has had a devastating impact upon the archaeology of the Ure-Swale Catchment (Fig. 2). The continuing development of the A1(M) has also greatly impacted on the study area's archaeology.

Intensive agricultural practices over the last century or so have levelled or destroyed a large number of known monuments. This is particularly apparent at the henges of Nunwick and Cana Barn, the cursus at Thornborough and numerous round barrows. But it is gravel extraction that has had the most marked impact upon the landscape and its archaeological resource. This is particularly true around both Catterick and the Thornborough monument complex. At the latter, a large section of a cursus monument, parts of the northern and central henges, and at least two round barrows have been destroyed with no archaeological mitigation. Other monuments were affected around Catterick, including the Scorton cursus, which was partially excavated in 1978 prior to its destruction. Unfortunately, no systematic archaeological survey of the Ure-Swale Catchment has been undertaken and it is impossible to measure the extent and intensity of disturbance to its large number of monuments.

What is also not clear is the extent to which both these practices are damaging more ephemeral archaeological features such as settlement sites. Extensive fieldwalking at Thornborough has located the presence of substantial Neolithic and Bronze Age settlement, a finding which was reinforced by the excavation of over 80 pit and hearth features immediately to the north of the northern henge during gravel extraction. Fieldwalking around Hutton Moor has also produced settlement traces and excavations at Boroughbridge, Catterick and along the route of the A1(M) have uncovered evidence of Neolithic and Bronze Age settlement. It is obvious from the small amount of fieldwork so far undertaken that the monument complexes formed an important focus to communities living across large parts of the Catchment. Given this, it seems likely that this is a resource suffering from significant degradation by both agriculture and mineral extraction.

1.2.2 History of archaeological research

A large part of the Neolithic and Bronze Age evidence from across the study area is a product of random discovery by either amateur archaeologists or farmers. By contrast, the area under assessment has seen little comprehensive archaeological fieldwork. Many of the sites are only known from aerial photography, undertaken by the RAF or by individuals such as J. K. St Joseph who discovered features such as the double pit alignment at Thornborough in 1975. Fieldwork is mainly limited to either 19th Century antiquarian investigations, such as those of Rev. W. Lukis and the Rev. W. Greenwell, or 'rescue' excavations, as at the Thornborough cursus in the 1950s, and more recently, at Catterick, Boroughbridge, and along the A1(M) route (by Northern Archaeological Associates), and at Nosterfield by Mike Griffiths and Associates. Only at the extensive monument complex of Thornborough has a focused research framework been deployed, undertaking fieldwalking, geophysics, topographic survey and excavation. The project was begun as the Vale of Mowbray Neolithic Landscape Project (VMNLP) in 1994 by Dr J Harding and ran until 1999. This report forms part of the project's continuation, funded by the Aggregates Levy Sustainability Fund.

1.3 Methodology

Data was collected from a number of resources:

- Data collected by the VMNLP
- The National Monuments Record – held and maintained by English Heritage
- The Sites and Monuments Record – held and maintained by North Yorkshire County Council
Comprises Ordnance Survey reference cards, aerial photographs, rectified plots of aerial photographs, records of finds, fieldwork and other miscellany by Parish, and a digital archive which collated elements of the above.
- Other aerial photographic data not held by the SMR, most importantly the Cambridge University Collection of Aerial Photographs (CUCAP)
- Published material from journals and collected works. A full listing can be found in the Bibliography
- Unpublished reports from a number of sources, notably excavation reports from archaeological units such as Northern Archaeological Associates and Mike Griffiths and Associates

All data was checked, referenced and entered into a Microsoft Access database. This resource contains all known Mesolithic, Neolithic and Bronze Age archaeology from the study area and has been used to produce the textual and visual information presented within the assessment report.

The various accessed resources possessed varying levels and standards of data. The National Monuments Record provided an extensive printout of all the data held, which, although containing high quality data of a consistent nature (i.e. all the data fields were comprehensively filled in, unlike the SMR), lacked a number of sites and isolated finds. The Sites and Monuments Record was extremely variable in quality. Recent fieldwork and finds had been partially entered into a digital archive, which also contained an incomplete record for some, but certainly not all, the other sites and finds. The Ordnance Survey reference cards, held by the Sites and Monuments Record, provided the most extensive and comprehensive catalogue, although there were elements of missing data. The 1:10,000 maps for the area had been overlaid with rectified aerial photograph data, although this was inconsistent in quality and interpretation. Parish records contained records from miscellaneous sources such as newspaper articles, as well as the results of fieldwork prior to and during large-scale acts of archaeological destruction such as gravel extraction. Aerial photographs were comprehensive, and when combined with others from the CUCAP provided an excellent data source, even if limited in its interpretative potential. Journals, in particular that of the Yorkshire Archaeological Society, provided a wealth of information about excavations and finds in the late nineteenth and early to mid-twentieth centuries.

2. ASSESSMENT RESULTS

For convenience of reference and to provide a manageable framework for interpretation the data has been divided firstly by period and secondly by a descriptive typology. It should be noted that whilst this report includes the Bronze Age no attempt has been made to identify the settlements, enclosures or field divisions of this period from the available aerial photographs. Such a large and problematic exercise has been deliberately omitted. This obviously results in the latter part of the Bronze Age being under-represented when compared to the high visibility monuments of the Neolithic and early Bronze Age.

It is apparent from the distribution maps that there is a distinct bias of information towards those areas known to have a distinct concentration of monuments and along the A1 corridor where much of the rescue archaeology from across the study area has been undertaken.

N.B. All NGR's are prefixed by SE.

2.1 Mesolithic (Fig. 3)

2.1.1 Lithics (Table 1)

Description	Easting	Northing	Period	References
Collection: Lithics	28000	79000	Mesolithic	Material collected during fieldwalking by the VMNLP
Collection: Lithics	15350	71440	Mesolithic	CBA Res. Rep. 20, p391
Findspot: Lithics	22000	76000	Mesolithic	CBA Res. Rep. 20, 386
Findspot: Lithics	15750	69520	Mesolithic	CBA Res. Rep. 20, 386
Findspot: Lithics	17000	71000	Mesolithic	Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), p39
Findspot: Lithics	45400	97800	Mesolithic	CBA Res. Rep. 20, 366
Findspot: Lithics	15500	71400	Mesolithic/Neolithic	CBA Res. Rep. 20, 391
Findspot: Lithics	33000	76000	Mesolithic/Neolithic	YAJ, 1, 116-8: CBA Res. Rep. 20, 365
Findspot: Mace Head	37000	70000	Mesolithic	YAJ, 42: CBA Res. Rep. 20, 386
Pit Concentration	28350	80450	Mesolithic	AOC unpub. Report

Table 1: Mesolithic finds

Lithic information from across the study area is variable. The most informative single assemblage is from recent fieldwalking and excavation at Thornborough. The data, recovered during fieldwalking between 1994 and 1997, includes a small but significant number of finds from across the gravel terrace area at Thornborough. The pieces, which comprise around 7 or 8 percent of the total material collected, are rarely diagnostic, but microburins, triangles,

pyramid cores, edge blunted points and various forms of scraper are present. This material most likely represents small scale, episodic activity, in keeping with a general Mesolithic hunter-gatherer model of mobile family groups. There is a suggestion of a slightly higher amount of Mesolithic material than has been found in other, comparable areas. If this is the case it is possible that the landscape around the later complex was of higher significance to communities than elsewhere in the Ure-Swale Catchment. The evidence for this is very tentative, however, and could just reflect the greater extent of work undertaken at Thornborough when compared to other areas.

The remainder of the Mesolithic evidence is mainly from isolated, badly provenanced finds and is of limited interpretative potential. There are only seven or eight (some material is described as Mesolithic/Neolithic) scatters, one pebble macehead, and a “collection”, presumably from a number of locations. The nature of the evidence allows little to be said about the Mesolithic of the wider study area, other than to note likely biases upon the data. Unlike later periods there are no large-scale structures built during the Mesolithic, and the lithics themselves are usually very small, meaning they can easily be overlooked during fieldwork. However, it is known from other, similar landscapes, that the gravel terraces, which are such an important feature of the study area, are places of often intense Mesolithic activity. This certainly appears to be the case at Thornborough. The period spanned six thousand years and there must be a great deal more evidence to be found from across the study area.

2.1.2 Other sites (Table 1)

The only reportedly Mesolithic site was discovered during rescue excavations at Nosterfield quarry, which uncovered two pits, containing “ a few flints and charred nut”. The ephemeral nature of the archaeology makes its discovery by anything other than non-intrusive archaeological techniques almost impossible. The development of an understanding of Mesolithic occupation and land use from across the study area is therefore based upon sparse and scattered evidence.

2.2 Early Neolithic (Figs. 4 & 5)

2.2.1 Cursuses (Table 2)

Description	Name	Easting	Northing	Period	References
Cursus	Thornborough Cursus	28500	79300	Neolithic	YAJ, 38, 429-34; YAJ, 40, 169-182; RCHME(1960) A matter of time, 24-7; Harding and Lee, 1987, Henge monuments and related sites...., 314
Cursus		35500	72700	Neolithic	
Cursus		30770	80070	Neolithic	
Cursus		28260	80110	Neolithic	
Cursus	Scorton Cursus	24300	99999	Neolithic	YAJ, 54, 7-21

Table 2: Cursuses

A total of five cursuses have been recorded from the study area. The two excavated sites at Thornborough and Scorton are definite, whilst the others are possibilities. These sites represent some of the earliest known forms of prehistoric monumental architecture and could be impressive in their overall size. The Thornborough cursus was over 1.2 km long (its eastern end runs under the present village of Thornborough) and 43 metres wide and that at Scorton 2.1 km long and about 44 metres wide.

The cursus at Thornborough was first discovered in aerial photographs of the henges, by Dr J. K. St. Joseph, taken between 1945 and 1952 (Thomas, 1955, Plate II), and partially excavated in 1952 (*ibid*) and 1955 (Vatcher 1960). The cursus at Scorton was discovered in 1949 by Dr J. K. St. Joseph, and a small part excavated in 1978 prior to gravel extraction (Topping 1982) and ditch sections recorded under salvage conditions in 1996 (Harding unpub). The vast majority of the Scorton cursus and the western end of Thornborough were destroyed by gravel extraction without adequate archaeological investigation. The result is poor quality data, especially unfortunate given that Scorton was a highly unusual cursus. Uniquely its southern length was flanked by a pair of ditches on both sides, rather than the more typical one, although the outer ditch appears discontinuous, and it possessed a wide internal mound or bank, as well as the more normal external bank. Thornborough was enclosed by a single ditch, but recent excavation has identified what could be an internal palisade and other associated

features. It is unclear where the bank lay, but it is likely that two existed, both internally and externally. It had a convex western terminal, a very rare feature, although it is unclear how the eastern end terminated. Scorton had the more usual squared-off end. The Thornborough excavations produced no dating evidence, although soil analysis of basal ditch deposits suggested a wooded environment, interpreted as being of Neolithic date. The Scorton cursus also produced no direct dating evidence, although Beaker pot sherds from the primary fill of the western ditch at the north-west end of the monument suggest a late Neolithic date.

These monuments are particularly significant for understanding the early Neolithic and later periods, although at present they remain enigmatic structures. Their particular positioning within the landscape, and their association with other, usually later, features, notably burial monuments, highlights how they may have acted as important foci for local populations. The possible presence of three other cursus monuments, two of which are also 40 metres wide — one in close proximity to the northern henge at Thornborough, another nearby at Kirklington, and a third on a ridge top between the henges of Hutton Moor and Cana Barn — highlights the importance of these monuments across the study area. Unfortunately, only short sections of these monuments are known from aerial photography. It is essential to improve the nature and extent of the fragmentary data currently held on these monuments.

2.2.2 Other sites (Table 3)

Description	Name	Easting	Northing	Period	References
Long Mortuary Enclosure		29170	79530	Neolithic	VMNLP, 1996, interim report
Long mound	Giant's Grave	44000	73000	Neolithic	Bogg, 1906, Vale of Mowbray I, 238; Whellan, 1857, History and Topography of the City of York and the North Riding of Yorkshire, 320
Pit Concentration		38400	69200	Neolithic	Northern Archaeology 13/14, 1996, 183-7
Pit Concentration		38200	70400	Neolithic	Northern Archaeology 13/14, 1996, 183-7
Rock Shelter	Yeadon Crag	15760	68320	Neolithic	Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript) p39
Round Barrow	Triple ring ditch	29400	78680	Early Neolithic	YAJ, 38, 442 (Grinsell No. 6); Harding and Johnson 2004
Round Barrow		24930	99550	Neolithic	

Table 3: Other early Neolithic monuments

Three of the other possibly early Neolithic sites are poorly documented. Yeadon Crag rock shelter, the 'Giant's Grave', and a round barrow fall into this category. The former two sites were excavated by antiquarians, who left extremely poor and partial records, whilst the round barrow is only referred to briefly in the SMR and it is unclear on what basis it has been dated as Neolithic. The excavation at Yeadon Crag is referred to as "surface scratching" and occurred at sometime in the early 20th century. A few burnt stones and miscellaneous flints, described by one source as Neolithic (Wood, unpub), were recovered. The Giant's Grave, either a long mound or a round barrow, was opened in 1863 and a "skeleton of abnormal size and a weapon shaped something like the blade of a scythe" (Bogg, unknown publication date) were uncovered. Later quarrying in the area seems to have destroyed the site. Very little can therefore be said about these monuments or their general significance.

There is good data from two areas of settlement discovered close to the A1 corridor in 1993 (Tavener 1996, 183-4). The first of these consisted of a large concentration of over a hundred pits found to the east of Marton-le-Moor in eight separate groups or clusters. Just over a kilometre to the south was a further group of seventeen pits. Both sites produced large quantities of pottery and lithics ranged in date from the early to the later Neolithic, suggesting the sporadic re-use of the landscape over a considerable timespan. There is similar evidence from rescue excavations at the Nosterfield Quarry, immediately to the north of the Thornborough monument complex. Whilst no report has yet been published, the excavations, which began in 1995, produced evidence for scattered pit groups, particularly just to the north of Nosterfield village and just south of Ladybridge Farm. The associated material culture included a range of pottery traditions from Grimston, Peterborough and Grooved Ware and even some Beaker sherds as well as associated lithic material dominated by domestic processing tools such as scrapers. This material is still in the process of being analysed but the great time depth of artefactual evidence is in keeping with the longevity of use of the nearby monument complex.

It is highly probable that two of the excavated monuments at Thornborough were also of early Neolithic date. The first of these is a ploughed-out round barrow to the south-east of the Southern Henge. Excavations in 2003 revealed at least three ditch circuits and inhumed human skeletal remains from its approximate centre. The majority of the lithic material collected during excavation was early Neolithic in character and the monument's design and burial practice is more usual for this period than any other. There is also an Oval Enclosure just to the south of the cursus. Limited excavation demonstrates the presence of an interrupted ditch and an inner bank. There is no indication of the site's date, but its appearance is reminiscent of the 'long mortuary enclosures' found elsewhere near to cursuses. Both of these sites could potentially be the earliest monuments at the Thornborough complex.

The recent data from Thornborough emphasises the likelihood that there is a more intensive early Neolithic presence across the Ure-Swale Catchment than has previously been thought, particularly on and around the gravel terracing. This is supported by fieldwork from other areas, such as the Milfield Basin in Northumberland, where early Neolithic activity, both monumental and domestic, is extremely prevalent on the gravel terracing around major river courses.

2.2.3 Lithics (Table 4)

Description	Easting	Northing	Period	References
Collection: Lithics	28000	79000	Neolithic	Material collected by the VMNLP during fieldwalking. Details contained within archive flint reports
Collection: Lithics	15300	69070	Neolithic	
Findspot: Lithics	15500	71400	Mesolithic/Neolithic	CBA Res. Rep. 20, 391
Findspot: Lithics	33000	76000	Mesolithic/Neolithic	YAJ, 1, 116-8: CBA Res. Rep. 20, 365
Findspot: Lithics	35920	72360	Neolithic	
Findspot: Lithics	27900	70200	Neolithic	BUASAR, 5, 21-2: Newman 1993, The Medieval Village of Studely Magna, Nat. Trust Archive Rep. MNNTYR56
Findspot: Lithics	34000	71000	Neolithic	Wood E. (unpub), 1952, Archaeology of Nidderdale, (Typescript), 14
Findspot: Lithics	35000	73000	Neolithic	YAJ, 1, 117
Findspot: Lithics	42000	82000	Neolithic	YPS, 1881, 27
Findspot: Lithics	40000	76000	Neolithic	Elgee F and HW, 1933, Archaeology of Yorkshire, 251
Findspot: Lithics	15760	68320	Neolithic	
Findspot: Lithics	33350	85700	Neolithic	
Findspot: Lithics	33350	85700	Neolithic	
Findspot: Lithics	34200	81700	Neolithic	
Findspot: Lithics	32600	85500	Neolithic	
Findspot: Lithics	27020	68060	Neolithic	
Findspot: Lithics	21500	95900	Neolithic	

Table 4: Neolithic lithics

Lithic information from across the study area is variable. The best single assemblage of early Neolithic flint and chert is from recent surface collection and excavation at the Thornborough monument complex. This data, representing around 14 percent of the total collected material, possibly suggests a small increase in population or activity when compared to the Mesolithic, across the gravel terrace area around the monument complex. It consists of leaf shaped arrowheads, polished axe fragments, a sickle fragment and various forms of scraper and retouched flakes.

The only other possible early Neolithic lithics are few and come from isolated, badly provenanced finds of extremely limited and highly dubious interpretative potential. There appears to be a general distribution of Neolithic material, consisting of a few scrapers and one leaf shaped arrowhead, from across the study area, although this is obviously biased towards areas which have benefited from some archaeological fieldwork. The extensive fieldwalking at Thornborough highlights the likelihood of widespread and extensive early Neolithic material from elsewhere in the Ure-Swale Catchment, and in particular from the gravel terraces.

2.2.4 Stone axes (Table 5)

Description	Easting	Northing	Period	References
Findspot: Axe Hammer	28450	79050	Neolithic	
Findspot: Axe Hammer	35500	80400	Neolithic	
Findspot: Stone Axe	41930	79300	Neolithic	
Findspot: Stone Axe	40400	66400	Neolithic	
Findspot: Stone Axe	32600	84980	Neolithic	
Findspot: Stone Axe	40000	76000	Neolithic	
Findspot: Stone Axe	40000	76000	Neolithic	
Findspot: Stone Axe	26800	74200	Neolithic	
Findspot: Stone Axe	32840	82810	Neolithic	YAJ, 54, 173
Findspot: Stone Axe	18000	67500	Neolithic	YAJ, 54, 170
Findspot: Stone Axe	31000	81000	Neolithic	Speight H, 1897, Romantic Richmondshire, 149-50
Findspot: Stone Axe	17000	67000	Neolithic	Lucas J, 1872, Studies in Nidderdale, 210
Findspot: Stone Axe	44220	79040	Neolithic	
Findspot: Stone Axe	31000	71000	Neolithic	
Findspot: Stone Axe	32600	82800	Neolithic	YAJ, 50, 8
Findspot: Stone Axe	36000	79000	Neolithic	YAJ, 41, 180-2
Findspot: Stone Axe	37900	75560	Neolithic	
Findspot: Stone Axe	36260	67900	Neolithic	YAJ, 36, 130: Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), p56
Findspot: Stone Axe	26000	88000	Neolithic	Smith R, 1931, The Sturge Collection, 132
Findspot: Stone Axe	23000	69000	Neolithic	Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), p18
Findspot: Stone Axe	19000	92000	Neolithic	PPS, 37, 36
Findspot: Stone Axe	19300	86800	Neolithic	
Findspot: Stone Axe	15000	65000	Neolithic	YAJ, 41, 164
Findspot: Stone Axe	37000	75000	Neolithic	YAJ, 20, 103-4
Findspot: Stone Axe	27000	78000	Neolithic	CBA Res. Rep. 67, 213, YAJ 46 1974 19
Findspot: Stone Axe	28620	77780	Neolithic	
Findspot: Stone Axe	28150	78180	Neolithic	
Findspot: Stone Axe	28500	79200	Neolithic	YAJ, 41, 14
Findspot: Stone Axe	????	????	Neolithic	YAJ, 36, 130
Findspot: Stone Axe	22000	68000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	22000	68000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	22000	68000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	32000	73000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	44000	66000	Neolithic	
Findspot: Stone Axe	28000	99000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	36260	67900	Neolithic	
Findspot: Stone Axe	32000	77000	Neolithic	CBA Res. Rep. 67, 213
Findspot: Stone Axe	34000	84000	Neolithic	
Findspot: Stone Axe	38000	82000	Neolithic	
Findspot: Stone Axe	37000	79000	Neolithic	
Findspot: Stone Axe	36000	75000	Neolithic	
Findspot: Stone Axe	33000	77000	Neolithic	
Findspot: Stone Axe	34000	77000	Neolithic	
Findspot: Stone Axe	31000	71000	Neolithic	
Findspot: Stone Axe	28100	80700	Neolithic	Ripon Gazetteer 21/12/01
Findspot: Stone Axe	32000	73000	Neolithic	CBA Res. Rep. 67, 213

Table 5: Stone Axes

A total of 46 Neolithic stone axes, including four made of flint, are known from the study area, the majority from either Nidderdale or between the rivers Ure and Swale, reflecting most likely a greater incidence of chance finds in two of the better known archaeological landscapes. The sources of some have been identified, with five finds from Group VI (Langdale, Cumbria) and one each from Group I

(Mounts Bay, Cornwall), Group IX (Tievebulliagh, Ulster), and Group XXVI (North Yorkshire). The sources of the others are unknown, although it is noteworthy that four were made of greenstone and two of metatuff. Only a handful have been discovered around the Thornborough and Hutton Moor-Cana Barn monument complexes, despite both being a focus for far more surface collection than elsewhere in the study area. This raises some interesting possibilities about their relationship with contemporary monument complexes.

Only three of these stone axes have been discovered in an excavated context — two polished stone axes and one polished flint axe from the pit groups at Nosterfield — and have not yet been analysed. It is therefore impossible to distinguish between those dating to the early or later Neolithic.

2.2.5 Other finds

Other finds of possible Neolithic date are limited to two quernstones. Their provenancing is uncertain.

2.3 Later Neolithic (Figs. 4 & 5)

2.3.1 Henges (Table 6)

Description	Name	Easting	Northing	Period	References
Henge	Class IIa, "Thornborough North"	28050	80050	Late Neolithic	Harding and Lee, 1987, Henge monuments and related sites..., 314: YAJ, 38, 425-445: Dennison E, 1996, Archaeological and ecological survey,...EDAS report 1996/25R.01
Henge	Class IIa, "Thornborough Centre"	28540	79460	Late Neolithic	Harding and Lee, 1987, Henge monuments and related sites..., 314: YAJ, 38, 425-445: VMNLP unpub 1997, Interim report
Henge	Class IIa, "Thornborough South"	28950	78850	Late Neolithic	Harding and Lee, 1987, Henge monuments and related sites..., 314: YAJ, 38, 425-445: VMNLP unpub 199, interim report
Henge		23040	98540	Late Neolithic	AJ, 6, 346-7: RCHME: Catterick Project: CA, 148, 128-32
Henge	Class II; "Nunwick"	32290	74840	Late Neolithic	YAJ, 41, 98-107: BAR 175, 310-313
Henge	Class IIa: "Hutton Moor"	35260	73530	Late Neolithic	BAR 175, 301-10: YAJ, 29, 364-5
Henge	Class IIa: "Cana Barn"	36080	71850	Late Neolithic	BAR 175, 304-6

Table 6: Henges

The later Neolithic henges form the most important and significant group of monuments within the study area. Of the 7 known sites, all but one are definite and are Class IIa monuments, the exception being that at Catterick. They are characterised by an external as well as an internal ditch, and a pair of entrances. Remarkably, they also all have an almost identical external dimension of about 240 metres. This clearly recognisable type of henge is unique to the Ure Valley with the exception of Dorchester-on-Thames in Oxfordshire. The only henge from the study area which does not appear to conform to this distinctive layout is at Catterick, but the status of this site is open to interpretation. The only surviving section of this monument lies within the boundaries of the modern racecourse. Originally built of a simple cobble bank with no ditch the monument is identical in construction to the Mayburgh henge at Penrith. It is possible that the monument is a Roman amphitheatre, but the incorporation of a Neolithic barrow into its structure, the similarity in construction to Mayburgh on the other side of the Stainmore Gap across the Pennines, and the distance of the site from the Roman garrison at Cataractonium favours the former interpretation. It is far more likely that the site was reworked as a Roman amphitheatre.

There is some variation in the preservation of the known henges from the Ure-Swale Catchment. They have all been damaged by agricultural practices, with Nunwick and Cana Barn largely levelled by the plough, and the external earthworks of all three henges at Thornborough greatly reduced. The inner banks at Thornborough have also been damaged by gravel extraction, the creation of a munitions dump at the central henge, and bulldozing at the southern henge. Fortunately, earthwork surveys at all three Thornborough henges provides an accurate record of their current state of preservation (Harding and Strutt 1997), but the same can not be said of the other sites.

Fieldwork, like that undertaken around the similarly impressive henges of Stonehenge and Avebury, has been negligible. Only the complex at Thornborough has seen the deployment of a research driven archaeological strategy. Small-scale excavations took place at the central and northern Thornborough henges in 1952 (Thomas 1955), examining a small part of the inner ditch, and at Nunwick in 1961 (Dymond 1963), also examining a small area of the internal ditch and a strip through the bank. An inner ditch terminal and a segment of the outer ditch of the southern Thornborough henge were excavated in 1997 and 1995 respectively, and a section of the outer ditch at the central henge in 1998. Aerial photography and geophysical prospection have produced evidence for a number of possible internal features within these henges. These include: a large pit and linear ditch in the southern entrance of the central Thornborough henge (Horsley, unpub 1999); a large V-shaped feature within the southern Thornborough henge; internal features at Nunwick (Dymond, 1963); and a large H-shaped feature within Cana Barn (Harding and Lee 1987). This data concurs with the excavation of significant internal features at sites such as Durrington Walls, Avebury, Stonehenge and a significant percentage of other known henge monuments. None of the features have been excavated.

The exact dating of these henge monuments is problematic, as excavation has produced no quality dating material (the single radiocarbon date from the inner ditch of the southern henge at Thornborough is considered unreliable). Accepted theory and evidence from a number of other henges place them firmly within the third millennium BC, or later Neolithic, but little is known as to whether henge variability reflects chronological change. The dating of these henges is of particular interest given that the three at Thornborough, and by implication the other sites from the Ure Valley, possess a segmented outer ditch, a form of construction reminiscent of early Neolithic causewayed enclosures. The association between the cursus and central henge is crucial in terms of understanding Thornborough's chronological development, but unfortunately, excavations in 1998 were inconclusive. The linear feature discovered by excavation may have been associated with the cursus, but if so its termination just short of the outer henge ditch suggests either broad contemporaneity between both sites, or the unlikely possibility that the cursus post-dated the henge. On the other hand, excavations in the 1950s indicate that the cursus ditches were fully silted prior to the construction of the much more substantial inner bank and ditch. It must therefore remain a distinct possibility that the henges were the product of at least two major phases of activity, the external ditch and bank preceding the more substantial and morphologically different internal bank and ditch. Furthermore, excavations at the outer ditch of the southern henge suggest that the earthwork was the product of two minor phases of construction. Questions of chronology and monument development make Thornborough uniquely important.

2.3.2 Other sites (Table 7)

Description	Name	Easting	Northing	Period	References
Cairn	Catterick	23040	98540	Late Neolithic/Early Bronze Age	AJ, 6, 346-7: Moloney <i>et al</i> unpub, Catterick Racecourse, North Yorkshire: CA, 148, 128-32
Standing stone	Devils Arrows	39096	66530	Late Neolithic/Early Bronze Age	AJ, 79, 365: Elgee F and HW, 1933, Archaeology of Yorkshire: Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), 9: YAJ, 63, 1-24: Burl A, 1993, "From Carnac to Callanish:..." 157-159
Standing stone	Devils Arrows	39118	66452	Late Neolithic/Early Bronze Age	As above
Standing stone	Devils Arrows	39073	66586	Late Neolithic/Early Bronze Age	As above
Pit Concentration	Nosterfield	27900	80890	Late Neolithic/Early Bronze Age	Field Archaeology Specialists Ltd, unpub, Preliminary statement of results from Nosterfield Quarry
Pit Concentration		23040	98540	Neolithic/Early Bronze Age	AJ, 6, 346-7 Moloney <i>et al</i> unpub, Catterick Racecourse, North Yorkshire: CA, 148, 128-32

Table 7: Other late Neolithic monuments

Other possibly later Neolithic sites are the three standing stones known as the Devil's Arrows at Boroughbridge, and a cairn and pit concentration at Catterick, closely associated with the henge. Little is known about the three remaining standing stones, described by Burl as "one of the most astonishing megalithic settings in western Europe" (Burl, 1991, 1) and they could quite conceivably be of Bronze Age date. Antiquarian references suggest that there were possibly five stones and at least four are

mentioned by the antiquarian Leland (Leland, 1770). Only one standing stone in the British Isles is taller than the tallest (6.9 metres), that in Rudston churchyard (7.8 metres) thirty miles to the east, whilst the second tallest is the same height as the surviving upright of the Great Trilithon at Stonehenge (6.7 metres). The smallest, at 5.5 metres, is still impressive and the stones increase in height from north to south as they climb the slight rise on which they sit. A few lithic pieces have also been found around the monument. The location of these stones is of considerable interest. They follow the same north-west to south-east alignment as the henges at Thornborough and Nunwick, and are the only monuments of the period located outside the area enclosed by the Swale and the Ure. In addition, the closest parallels in monument form lie on the other side of the Pennines in eastern Cumbria, where a variety of stone rows, many of which have now been destroyed, were recorded up until comparatively recent times. Whether the same communities erected stone rows on both sides of the Pennines, or whether the tradition was transferred from one side to the other along the axe and flint trading routes is not known, but the role and function of the monuments was obviously significant. Their role remains unclear.

Over 80 pits and hearth structures were excavated at Nosterfield quarry in advance of gravel extraction. The presence of lithic and ceramic debris of a domestic nature suggests that this area was the focus of extensive and long lived settlement activity from the communities who built and used the monument complex at Thornborough.

The cairn and pit cluster at Catterick were excavated in 1995 (Moloney *et al* unpub.) and are closely associated with the henge monument. The cairn, 38 metres in diameter and revetted with river boulders, predates the possible henge and had been incorporated into the bank of the monument. It contained nine small burial chambers, which had been disturbed in the Roman period and contained no finds. The seven pits, to the north-west of the cairn, contained late Neolithic/early Bronze Age pottery, burnt animal bone and flint tools.

2.3.3 Lithics (Table 4)

Only one lithic assemblage, other than that from Thornborough, was described in the archives as diagnostically later Neolithic, and the presence of a barbed-and-tanged arrowhead in the collection means that this designation is possibly incorrect, although they may be additions to a chronologically earlier assemblage. It is probable that a percentage of the groups described as 'Neolithic', 'Bronze Age', 'Prehistoric' or 'Uncertain' contain material which can be ascribed to this period and it is due to the poor quality of information concerning these data that there is a scarcity of late Neolithic/early Bronze Age lithic material.

As with other periods the greatest volume and quality of data comes from the area around the Thornborough monument complex. As lithic traditions remained very similar into the Bronze Age, the discussion of the lithic material from that period will also be considered here. The majority of the lithics discovered at Thornborough are later Neolithic/early Bronze Age in character. Most of this material is undiagnostic of a specific period, but finds such as two barbed-and-tanged arrowheads can be ascribed to the early Bronze Age. Other finds include a fabricator, a serrated edge blade, knife fragment and numerous scrapers of various forms and retouched flakes and blades. It would appear that there is a greater division of the landscape at this time as the large monument complex begins to take shape. There is a separation between the monument complex, where very little lithic material has been found, and areas over half a kilometre away where the extensive scatters are found (Harding 2000). This is perhaps reflected within the wider landscape where there seems to be a preponderance of monuments towards the River Ure and "settlement evidence", in the form of scatters, axes and so on, towards the River Swale. It is equally possible, however, that this distinction is based upon the lack of extensive data from across the study area. Only further fieldwork can resolve the wider applicability of such a distinction.

2.4 Bronze Age (Figs. 4 & 5)

2.4.1 Round barrows (Table 8)

Description	Name	Easting	Northing	Period	References
Burial	Beaker burial	26000	77900	Bronze Age	YAJ, 46, 143: YAJ, 58, 1-4
Round Barrow	Gospel Hill Tumulus	22780	86200	Bronze Age	YAJ, 40, 442 (Grinsell No 24)
Round Barrow		35480	72970	Bronze Age	YAJ, 38, 442 (Grinsell No 13)
Round Barrow		35590	72630	Bronze Age	YAJ, 38, 442 (Grinsell No 15)
Round Barrow		35440	72860	Bronze Age	YAJ, 38, 442 (Grinsell No 14)
Round Barrow	Sixpenny Hill	35450	74340	Bronze Age	YAJ, 38, 442 (Grinsell No 8): BAR 75 (ii), 304
Round Barrow		34810	72400	Bronze Age	YAJ, 38, 442 (Grinsell No 12)
Round Barrow		36940	76690	Uncertain	YAJ, 43, 177
Round Barrow		33880	75520	Bronze Age	YAJ, 40, 442 (Grinsell No 17)
Round Barrow		34800	75430	Bronze Age	YAJ, 1, 121 (VII): YAJ, 40, 442 (Grinsell No 20)
Round Barrow		34680	75550	Bronze Age	YAJ, 1, 121 (VI): YAJ, 40, 442 (Grinsell No 19)
Round Barrow		34450	75700	Bronze Age	YAJ, 1, 121 (V): YAJ, 40, 442 (Grinsell No 18)
Round Barrow		22540	94910	Bronze Age	
Round Barrow		28450	79170	Bronze Age	YAJ, 38, 442 (Grinsell No. 4)
Round Barrow		23060	95060	Bronze Age	
Round Barrow		36230	72050	Bronze Age	YAJ, 38, 442 (Grinsell No 16)
Round Barrow		23490	88600	Bronze Age	YAJ, 40, 442 (Grinsell No 2)
Round Barrow		24280	89320	Bronze Age	YAJ, 40, 442 (Grinsell No 3)
Round Barrow	Binsoe Hill Tumulus	25080	79920	Bronze Age	
Round Barrow		19980	99640	Uncertain	RCHME: Catterick Project
Round Barrow	"Three Hills" - Central	28550	80070	Bronze Age	YAJ, 1, 120-1 (IV): YAJ, 38, 442 (Grinsell No 27)
Round Barrow	"Three Hills" - North	28590	80130	Bronze Age	YAJ, 1, 120-1 (III): YAJ, 38, 442 (Grinsell No 26)
Round Barrow	"Three Hills" - South	28480	79980	Bronze Age	YAJ, 1, 120-1 (II): YAJ, 38, 442 (Grinsell No 25)
Round Barrow		28350	79480	Bronze Age	
Round Barrow	Centre Hill Barrow	28780	79100	Bronze Age	YAJ, 1, 119: YAJ, 38, 442 (Grinsell No. 5)
Round Barrow		23950	98040	Bronze Age	
Round Barrow		20100	99600	Bronze Age	
Round Barrow		21000	65000	Bronze Age	Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), p28: Elgee F and HW, 1933, Archaeology of Yorkshire, 11: Speight H, 1906, "Upper Nidderdale", 218
Round Barrow		20100	75500	Bronze Age	
Round Barrow		28630	78700	Bronze Age	
Round Barrow		34340	79560	Bronze Age	
Round Barrow		34120	76610	Bronze Age	
Round Barrow		33880	75520	Bronze Age	
Round Barrow		34360	70680	Bronze Age	
Round Barrow		33960	72110	Bronze Age	
Round Barrow		34460	72640	Bronze Age	
Round Barrow		35730	73210	Bronze Age	
Round Barrow		35010	73210	Bronze Age	
Round Barrow		35180	73190	Bronze Age	YAJ, 38, 442 (Grinsell No 10)
Round Barrow		24930	99550	Neolithic	
Round Barrow		35350	73240	Bronze Age	YAJ, 38, 442 (Grinsell No 11)
Round Barrow		32930	91590	Bronze Age	
Round Barrow		40550	73780	Bronze Age	
Round Barrow		44000	78700	Bronze Age	
Round Barrow	Rabbit Hill	41410	96860	Bronze Age	
Round Barrow	Pudding Pie Hill	43700	81020	Bronze Age	Whellan, 1857, History and Topography of the City of York and the North Riding of Yorkshire, 706
Round Barrow	Stapley Hill	32320	81650	Bronze Age	YAJ, 38, 442 (Grinsell No 22): YNQ, 1, 146-7: YAJ, 43, 175-7: Page, 1914, The Victoria History of the county of Yorkshire, North Riding, Vol I, 372

Description	Name	Eastings	Northing	Period	References
Round Barrow		31680	80210	Bronze Age	YAJ, 38, 442 (Grinsell No 7)
Round Barrow	Quernhowe	33810	80450	Bronze Age	AntJ, 31, 1-24: YAJ, 38, 442 (Grinsell No 1)
Round Barrow		36100	72600	Bronze Age	YAJ, 49, 29
Round Barrow	Burtree Hill	35290	74330	Bronze Age	YAJ, 38, 442 (Grinsell No 21)
Round Barrow	Bowl barrow	35060	73510	Bronze Age	YAJ, 38, 442 (Grinsell No 9)
Round Barrow		21200	74640	Bronze Age	
Round Barrow		35030	73350	Bronze Age	

Table 8: Bronze Age round barrows

Round barrows dominate the monumental record of the Bronze Age. At least 55 are known from the study area, most, but by no means all, from between the Rivers Ure and Swale. They are clustered in two main areas, with twenty around Hutton Moor-Cana Barn and eight, or possibly eleven, around the Thornborough complex. Most of the others from the catchment can be found to the north of Thornborough, along the eastern edge of the Pennines, although a few sites lie close to the River Swale. There is also a dispersed concentration around Nidderdale, to the west of the Ure-Swale Catchment. A number have been excavated, usually by antiquarians such as Lukis, who opened eight, four at Thornborough, three at Hutton Moor/Cana Barn and one at Sixpenny Hill in the later 19th Century (Lukis 1870). Three other barrows, at Pudding Pie Hill (Whellan 1857), Stapeley Hill (Page 1914) and Quernhowe (Waterman 1951) were excavated in 1855, 1909 and 1945 respectively.

Characterising such a large number of monuments is difficult, especially since many have only cursory documentation, usually amended by ‘destroyed by ploughing’. The monuments vary greatly in dimension, although it is unclear how much of this variety is due to differing levels of destruction, and how much to their original size. As an example, the Centre Hill barrow at Thornborough was surveyed in 1864 at 18 metres diameter and 1 metre high (Lukis, 1870), whereas in 1952 it was described as 27.5 metres diameter and 0.9 metres high (Thomas, 1955) and in 2003 at 28.8 metres diameter and 0.3 metres high (Harding and Johnson, unpub). Four of the round barrows at Thornborough were opened in 1864 (Lukis, 1870). The quality of recorded data is poor. It is unclear, for example, whether Lukis merely sunk a pit into the centre, or opened up a larger trench, and it is entirely possible that there is still more information to be gained from these sites as excavations in 2003 discovered surviving buried archaeology when the barrows had previously been classed as ‘destroyed by ploughing’. Lukis did find a primary interment in each, associated with ‘coarse earthenware’, or what are possibly Food Vessels or Beakers. The whereabouts of only one of these pottery vessels is known. The other mounds opened by Lukis contained similar cremation burials although only one within a pottery vessel. He also found a small pottery vessel that appeared to have a stone cover and was finely ornamented.

Other significant round barrows, such as Quernhowe in the A1 corridor, have produced evidence for cremation burials, although at sites such as the massive Pudding Pie Hill it appears only the secondary cremations were found. A number of barrows have associated lithic material. Perhaps most significantly, of the 55 known barrows only 11 have had even the most cursory excavation undertaken. Only three other barrows, apart from those mentioned above, have names, at Burtree Hill, Binsoe Hill and Gospel Hill, with eighteen barrows recorded in the documentation with merely a grid reference. Off these, 8 have been classed as destroyed and most have extensive plough damage. The poor quality of the data from the study area needs addressing.

2.4.2 Double pit alignments (Table 9)

Description	Name	Easting	Northing	Period	References
Double Pit Alignment	Thornborough	28700	78900	Late Neolithic/Early Bronze Age	Harding and Lee, 1987, Henge monuments and related sites..., 315-317: <i>Antiquity</i> , 51, 143-5
Double Pit Alignment	Marton le Moor	37740	71300	Neolithic	Northern Archaeology 13/14, 1996, 183-7
Double Pit Alignment	Marton le Moor	38700	66900	Neolithic	Northern Archaeology 13/14, 1996, 183-7
Double Pit Alignment		28200	80230	Uncertain	

Table 9: Double Pit Alignments

Double pit alignments have only been recognised relatively recently, largely due to an increase in aerial photographic coverage. A total of four are known from the Ure-Swale Catchment.

The double pit alignment adjacent to the southern Thornborough henge is the longest known in the country and its investigation represents the single most important contribution to the understanding of this monument category. It is at least 350 metres in length, with pits every 5 to 7 metres. The rows of the alignment are between 10 and 11 metres apart. At the northern end are two, closely set, parallel lines of nine trenches or closely spaced postholes, each about 3 metres long. About 80 metres north-east are two further large pits that align on the early Neolithic triple ring ditch noted above. Geophysics and excavation was undertaken on the monument in 1995 and 1998-1999 respectively. The limited geophysics was towards the southern end of the alignment. It confirmed a double row of sub-circular features (Harding *et al* unpub. 1999b). Subsequent excavations uncovered 88 pits. 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. One of the excavated pits contained the upper half of an inverted Deverel-Rimbury vessel and another three sherds of Collared Urn. A total of 66 worked lithic pieces were discovered, including 3 cores, 2 scrapers and 2 microliths. The majority of this material was of later Neolithic-early Bronze Age date and type. A radiocarbon date of 3385 ± 38 BP (OxA-11009, 1750-1590 Cal BC) was obtained from a small charcoal fragment in the post-pipe of one pit, whilst others of 2716 ± 37 BP (OxA-11010, 925-800 Cal BC) and 2761 ± 35 BP (OxA-11033, 1000-825 Cal BC) were from a small fragment of charcoal in the top of a pit's recut.

Three double pit alignments were discovered within the A1 corridor in 1995, all significantly smaller in terms of post dimensions and spacing than that at Thornborough, although their extent was never fully assessed (Tavener 1996, 185-6). The first of these consisted of two closely spaced and parallel rows of postholes found near to the Dishforth Airfield, extending across the 50 metres wide motorway corridor. It produced a single date from charcoal of 3980 ± 50 Uncal BP (OxA-5577). Two similar pairs of parallel post rows were also found just 200 metres to the west of the Devil's Arrows. Charcoal in their post-pipes produced the complementary dates of 4234 ± 80 BP (RCD-1596) and 4314 ± 87 BP (RCD-1597), suggesting that these are later Neolithic as opposed to Bronze Age.

2.4.3 Bronze finds (Table 10)

Description	Easting	Northing	Period	References
Findspot: Bronze spear	26000	84000	Bronze Age	BCAGMAGB, 7, 10
Findspot: Bronze sword	27000	70000	Bronze Age	Walbran J, 1857, "Local Miscellany - Guide to Ripon etc", 4
Findspot: Bronze Axe	26000	84000	Bronze Age	BCAGMAGB, 11, 106
Findspot: Bronze Axe	37000	75000	Bronze Age	YAJ, 20, 103-4
Findspot: Bronze Axe	38000	76000	Bronze Age	Elgee F and HW, 1933, <i>Archaeology of Yorkshire</i> , 166
Findspot: Bronze spear	37000	75000	Bronze Age	YAJ, 29, 359-60: Wood E, (unpub), 1952, <i>Archaeology of Nidderdale</i> , (Typescript), 49
Findspot: Bronze axe	35000	78000	Bronze Age	Elgee F and HW, 1933, <i>Archaeology of Yorkshire</i> , 244
Findspot: Bronze Axe	37000	70000	Bronze Age	Elgee F and HW, 1933, <i>Archaeology of Yorkshire</i> , 249
Findspot: Bronze Axe	38000	82000	Bronze Age	Elgee F, 1930, <i>Early Man in NE Yorkshire</i> , 166

Description	Easting	Northing	Period	References
Findspot: Bronze Axe	37000	84000	Bronze Age	Elgee F, 1930, Early Man in NE Yorkshire, 166
Findspot: Bronze spear	36100	94100	Bronze Age	Elgee F, 1930, Early Man in NE Yorkshire, 166: YAJ, 24, 106-8: YAJ, 42, 18
Findspot: Bronze Axe	36000	93000	Bronze Age	Elgee F, 1930, Early Man in NE Yorkshire, 166
Findspot: Bronze Axe	40000	76000	Bronze Age	Elgee F and HW, 1933, Archaeology of Yorkshire, 251
Findspot: Bronze Axe	45000	75000	Bronze Age	
Findspot: Bronze Axe	42000	72000	Bronze Age	Elgee F, 1930, Early Man in NE Yorkshire, 167
Findspot: Bronze spear	37000	75000	Bronze Age	YAJ, 20, 103-4
Findspot: Bronze Axe	37000	75000	Bronze Age	YAJ, 29, 359-60: Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), 49
Findspot: Bronze Axe	36100	94100	Bronze Age	
Findspot: Bronze spear	36100	94150	Bronze Age	
Findspot: Bronze spear	36000	94000	Bronze Age	
Findspot: Bronze Axe	36100	94100	Bronze Age	
Findspot: Bronze Axe	44000	67000	Bronze Age	
Findspot: Bronze Axe	31000	71000	Bronze Age	
Findspot: Bronze Axe	31000	71000	Bronze Age	
Findspot: Bronze Axe	31000	71000	Bronze Age	
Findspot: Bronze spear	31000	71000	Bronze Age	
Findspot: Bronze Axe	36000	75000	Bronze Age	
Findspot: Bronze Axe	37000	79000	Bronze Age	
Findspot: Bronze Axe	35500	80400	Bronze Age	
Findspot: Bronze Axe	25200	74400	Bronze Age	

Table 10: Bronze Age metalwork

The substantial number of bronzework from the study area can be ascribed to a significant Bronze Age occupation, but also to their ‘obviousness’ as archaeological artefacts. Whilst these finds represent chance occurrence there is also a number of items found within burial mounds, such as a bronze sword located in 1787, or a gold torc. These discoveries, from the 18th and 19th centuries, are mentioned all too briefly in the archives, usually with the qualifier ‘whereabouts of finds unknown’. The most emblematic of these entries relates to a large bronze sword, discovered before 1846 and amazingly thrown away by the finder.

Chance finds of bronze axes and spearheads dominate these records, with twenty-two of the former and seven of the latter, described variously as winged, socketed, and flanged, representing the range of developments in bronze working traditions. This excludes the most impressive of these finds, a hoard of 36 looped and socketed axes, a spearhead and a fragment of a sword hilt, found whilst draining Eller’s Field, close to Willow House near Kirkby Malzeard c.1887. In addition a small number of gold objects have been discovered, including the torc mentioned above, and a ‘bow shaped gold ornament with terminal cups’. Both objects are now lost. Placing an interpretation on these decontextualised finds is impossible, as they must represent a palimpsest of all activities in which the objects functioned including ornamentation, ritual deposits and weapons of war. The metalwork would have been amongst the most important artefacts in Bronze Age life, a position particularly emphasised by their deliberate burial as hoards, but that import is difficult to establish and assess with the current poor quality of data.

2.4.4 Lithics (Table 11)

Description	Easting	Northing	Period	References
Findspot: Lithics	17000	67000	Bronze Age	Lucas J, 1872, Studies in Nidderdale, 210
Findspot: Lithics	38400	82200	Bronze Age	YAJ, 51, 2
Findspot: Lithics	34870	81820	Bronze Age	
Findspot: Lithics	15800	65600	Bronze Age	
Findspot: Lithics	20400	71600	Bronze Age	

Table 11: Bronze Age lithics

There are few diagnostic Bronze Age collections from the study area. The only significant dataset comes from Thornborough and, due to the problems of differentiating between late Neolithic and early Bronze Age lithic traditions, are discussed above in 2.3.3

2.4.5 Stone axes (Table 12)

Description	Easting	Northing	Period	References
Findspot: Axe Hammer	29400	79300	Bronze Age	
Findspot: Battle Axe	15000	65000	Bronze Age	PPS, 32, 240
Findspot: Axe Hammer	17000	85000	Bronze Age	Elgee F and HW, 1933, Archaeology of Yorkshire, 62 & 248: Evans J, 1897, The ancient stone implements, weapons and ornaments of Great Britain, 204
Findspot: Battle Axe	31000	71000	Bronze Age	YAJ, 42, 245
Findspot: Battle Axe	38000	73000	Bronze Age	HTY, 2, 717: PPS, 32, 240
Findspot: Axe Hammer	31000	81000	Bronze Age	Evans J, 1897, Ancient Stone Implements, 209: Smith R, 1931, The Sturge Collection, 114
Findspot: Battle Axe	36000	93000	Bronze Age	PPS, 32, 240
Findspot: Axe Hammer	34200	81700	Bronze Age	YAJ, 54, 174
Findspot: Battle Axe	15800	65600	Bronze Age	
Findspot: Axe Hammer	39000	70000	Bronze Age	
Findspot: Axe Hammer	32760	78570	Bronze Age	
Findspot: Macehead	32000	81000	Bronze Age	
Findspot: Macehead	34000	84000	Bronze Age	
Findspot: Axe Hammer	34260	81770	Bronze Age	
Findspot: Battle Axe	32900	82450	Bronze Age	
Findspot: Stone Axe	17000	71500	Bronze Age	Wood E, (unpub), 1952, Archaeology of Nidderdale, (Typescript), p28: Elgee F and HW, 1933, Archaeology of Yorkshire, 77
Findspot: Axe Hammer	23000	74000	Bronze Age	CBA Res. Rep. 67, 213
Findspot: Axe Hammer	32000	77000	Bronze Age	CBA Res. Rep. 67, 213

Table 12: Bronze Age stone axes

The stone axes of this period are characterised by axe-hammers and battle-axes, generally larger, heavier implements than preceding Neolithic types. There are nine axehammers, two maceheads and six 'battle axes'. Records are poor for these finds, with little or no mention made of their material or dimensions, whilst the designation of the type of axe has been inconsistently applied.

2.4.6 Other finds

The only other Bronze Age find from the area is a poorly provenanced quernstone.

2.5 Other sites (Figs. 4 & 5)

Other sites of unknown date from the study area consist of mainly possible round barrows, single pit alignments or other pits. Most of the round barrows are of dubious origin, including a possible barrow group suggested by a field name, and 1st edition OS map features such as a 'pile of stones'. These dubious sites need a thorough review before their significance can be effectively addressed.

Single pit alignments are usually thought to be Iron Age landscape divisions. However the eight examples from the study area are of short lengths of only a hundred metres or so, and seven of these are closely associated with the Thornborough monument complex and one with the Hutton Moor/Cana Barn complex. Four alignments lie to the north of the northern Thornborough henge and appear to converge upon it, although these features have been the focus of currently unpublished rescue excavations, so interpretation is presently impossible. Another short line appears to run east from this henge. To the east of the southern henge an alignment of over 190 metres length appears to be associated with a circular feature, and a further alignment lies a kilometre to the south of the southern henge but across the axis of the monuments. Finally there is an alignment known from aerial photography on Hutton Moor. Little is known about any of these features, although some information may be forthcoming from the Nosterfield quarry excavations once published. As a class of monument they should be properly investigated.

A number of other pits are known from the general vicinity of the Thornborough complex. There are two pairs, one to the north of the northern henge and one between the central and southern henges. There is also a group of at least three to the north-west of the excavated triple ring ditch. The former of the pair were excavated as part of the quarry development but recovered no artefacts and no evidence for what the pits were for. The latter pair has never been investigated, but they are aligned with what is likely to be the remains of an early Neolithic barrow to the south-east of the southern henge. One of the three definite pits, near to the triple ring ditch, has recently been excavated. It was a substantial feature, three metres in diameter and a metre deep. Curiously it was half filled with gypsum.

There have also been a number of cremations, discovered in the late 19th Century, which include a description of a cremation ground somewhere around Eavestone Moor, known because ploughing constantly turned up bone fragments and bronze artefacts, a 'hollow dish containing burnt bones' and 'several peculiar small stones'. No other information concerning these locations or finds exists.

2.6 General comments

Whilst the archaeological evidence has been sub-divided to produce a cohesive structure for presentation and discussion, there are chronological and spatial relationships between all the data. To fully appreciate the significance of the archaeology it must be viewed as a cohesive and structured whole. When this is done a number of points are apparent. Firstly, there is a clear bias in the evidence towards those more obvious monuments and towards areas, notably Thornborough and the A1 corridor, which have benefited from fieldwork. But it is also apparent that the Ure valley may have been selected, above all other locations, for the construction of the major monument complexes. The only known exception to this pattern is the cursus and possible henge at Catterick, to the north of the study area.

3. DISCUSSION AND RECOMMENDATIONS

The Mesolithic

The nature of the few, poorly provenanced artefacts, and the one excavated 'site' dating to the Mesolithic, limits the discussion of this period. There is simply not enough evidence to define the nature of Mesolithic occupation across the study area, but the relatively large lithic assemblage from the well-investigated Thornborough landscape suggests that similar evidence must exist elsewhere in at least the Ure-Swale Catchment. If so, it attests to the extensive use of the study area. The general dearth of Mesolithic archaeology must therefore be ascribed to the lack of any coherent fieldwork rather than a 'real' absence of occupation during this period.

It is important to understand the Mesolithic archaeology of the study area for it will help to define how and why the Ure-Swale Catchment became such an important focus for Neolithic and Bronze Age activity. The Mesolithic-Neolithic transition is a particularly noteworthy and problematic area of research and the further investigation of the Mesolithic archaeology from the Ure-Swale Catchment would form a body of data complementary to the study of its Neolithic and Bronze Age monument complexes.

Neolithic and Bronze Age monument complexes

The henge monuments known from along the Ure valley are the largest in the British Isles (with the exception of the four giant 'henge-enclosures' of Avebury, Marden, Durrington Walls and Mount Pleasant). Of these sites the three from Thornborough are the best preserved. Although gravel extraction and ploughing — as well as other less obvious practices such as an account of bulldozing at the southern henge or the creation of a munitions dump within the central henge — have caused considerable damage it is still possible to establish how these monuments may have appeared when first built. The inner bank and ditch of both the northern and central henges continue to survive as impressive earthworks. Of particular note is the ditch at the northernmost of the monuments, which has retained much of its original profile. This is undoubtedly one of the best preserved henge earthworks in the British Isles. The outer ditch fills of each of the three henge are also largely undisturbed. Their long-term preservation has been greatly enhanced by the implementation of the Stewardship

Agreement. The Thornborough landscape lies between SE2677-3282 and is focused around the Neolithic-early Bronze Age monument complex at SE285795 (centred), consisting of three large henges, a definite cursus and a possible cursus, a 'long mortuary enclosure', at least eleven round barrows, two double pit alignments, contemporary settlement and other features or finds of archaeological significance. All the monuments lie on the fluvio-glacial terrace deposits along a slight north-south decline towards the River Ure.

The henges at Hutton Moor (SE35267353) and Cana Barn (SE36087185) are located on opposite sides of a higher ridge and associated with seventeen round barrows close by and a further five just to the north, as well as a 'long mortuary enclosure' or cursus on the ridge-top between the two henges. The henges are extraordinarily similar to those at Thornborough in terms of their dimensions and appearance, but their location, on opposite sides of a ridge, is radically different to those at Thornborough. Neither site has been the subject of any archaeological investigation other than aerial photography and Cana Barn is now largely flattened by ploughing.

Nunwick henge (SE32297484) is situated on a low-lying gravel terrace near the River Ure and, unlike the other henge monuments in the area, has no other known associated monuments. In itself, this is of interest. It is a very poorly recorded site, but its inner bank and ditch are very similar, if slightly smaller, than the inner banks and ditches at the Thornborough henges. A small excavation was undertaken in 1961 (Dymond, 1963), through the western part of its inner bank and ditch as well as a small area of the interior. The trench in the interior was sterile, and aerial photographs do not show any internal features, whilst a longer trench revealed the ditch surviving at almost 14 metres wide and 1.75 metres deep, whilst the bank originally was around 20 metres wide but, at the time of excavation, survived to a height of only 0.45 metres.

The standing stone alignment of the Devil's Arrows, a unique monument for the area (*Section 2.3.2*), and other monuments such as the double pit alignment known between Boroughbridge and the Hutton Moor-Cana Barn complex (*Section 2.4.2*), must also be part of this larger tradition of monument building and rooted in the shared social consciousness that led to the development and use of these landscapes over a period of some two thousand years.

It is highly likely that the entire Ure valley between Thornborough and Boroughbridge acted as a focus for large-scale ceremonial practices during the Neolithic and Bronze Age. The striking similarity in the design of all the henges, as well as the close association of such a variety of other monuments, almost unknown from the wider study area, implies that these sites must not be considered in isolation, but as part of an extensive and complex landscape, or even pilgrimage route (Harding 2003, 96-9). The contrast in the location of the henges at Thornborough and Hutton Moor-Cana Barn suggests that each of these complexes may have been associated with differing or complementary roles. The number and size of these monuments makes the Ure corridor the most outstanding ceremonial landscape in the country while the unique character of its archaeology radically alters our conventional view of this period (Harding 2003, chapter 4). The clustering of round barrows around both complexes highlights how their significance continued into the Bronze Age.

Other sites

Other monuments, away from these complexes, are almost exclusively round barrows. Unlike the monument complexes, these are likely to represent the actions of more localised communities, presumably placing their mark upon the landscape to define communal and individual identity. The lack of excavation of, not only these monuments, but the settlement and other sites associated with these communities makes further interpretation difficult. Only 15 of the 55 barrows are not closely associated with a monument complex, which emphasises just how important these locales were, both for the communities who built and used them, and as 'hotspots' in the archaeological resource by which we understand these communities.

The small finds

It is difficult to assess the large quantity of isolated finds or lithic scatters known from across the study area. The quality of data concerning each entry is extremely variable, depending upon its source, date, and chronicle. There are also a number of biases within the data which include the location of fieldwork or amateur interest, the presence of conurbations, the nature of agricultural practices, and the presence or not of mineral extraction. These factors obviously affect the preponderance of, for

example, highly recognisable bronze axe heads, as opposed to small flint artefacts. Nonetheless, the available evidence suggests the intensive occupation of at least the Ure-Swale Catchment during the Neolithic and Bronze Age. The concentration of bronzework around the River Swale is particularly noteworthy. It may suggest that while the Ure was associated with large-scale monument construction the Swale was especially connected to other types of activity, including perhaps everyday occupation. The possible contrast between these two river valleys, and their association with either the ‘sacred’ or the ‘profane’, should be a priority for future investigations.

Recommendations for research, management and tourism

The monuments which cluster together in the Ure-Swale Catchment between Boroughbridge and Thornborough make this a nationally important landscape, yet its research lags well behind that of smaller and less impressive complexes in southern England. A large-scale project, focussed principally on establishing a better record of the area’s archaeology and finding out more about the principal sites, would provide the first step in overcoming this unfortunate north-south divide. It would establish a sound baseline of knowledge and understanding, and hopefully, give rise to additional projects with more specific aims and objectives.

Most of the known monuments in the Ure-Swale Catchment are being destroyed at an alarming rate by modern agricultural practices. Therefore, it is vital to provide a detailed record of what presently survives. Large-scale contour survey and geophysical prospection should be undertaken immediately at the henges of Cana Barn, Hutton Moor and Nunwick, to provide an accurate record comparable to what is now available for Thornborough. The largely flattened state of Cana Barn and Nunwick may also necessitate evaluative excavations to establish the state and condition of their buried archaeology. Most of the known round barrows are also poorly recorded and it would be greatly beneficial to complete contour survey and geophysical prospection at those concentrated around and near to the Hutton Moor-Cana Barn complex. Such an exercise has been recently completed at Thornborough and provides an accurate record of what is a fast diminishing resource.

It is also a priority to accurately assess the full extent of monument construction across the Ure-Swale Catchment. A detailed analysis of the current aerial photograph archive would undoubtedly generate additional information, particularly in regard to smaller monuments like round barrows, ring ditches and pit alignments. Geophysical prospection and small-scale excavation could be effectively combined at selected locations. Especially worthwhile investigations could be undertaken at the eastern end of the Thornborough cursus, to ascertain whether the monument continues under the modern village, and at the three possible cursuses, to assess if they are indeed examples of this monument type. The discovery of additional cursuses would only add to the exceptional value of this landscape. Of similar worth would be geophysical prospection and small-scale excavation around the Devil’s Arrows at Boroughbridge, the landscape setting of these three standing stones presently devoid of Neolithic-Bronze Age archaeology with the possible exception of two double pit alignments. This is likely to be a totally false impression, with other contemporary archaeology awaiting discovery.

The recent programme of surface collection around the Thornborough monument complex highlights the enormous potential of the technique in building-up a detailed understanding of Mesolithic, Neolithic and Bronze Age settlement. Unfortunately nothing is known about occupation patterns around the other monument complexes, or indeed, across the wider Ure-Swale Catchment. Additional fieldwalking around both the Devil’s Arrows and the Hutton Moor-Cana Barn monument complex would significantly improve our understanding of this most important of themes, especially if also undertaken in a transect across the Swale valley, enabling the further consideration of the suggestion, made here, that either river was associated with different types of activity. Such a programme would result in the Ure-Swale Catchment being one of the best studied of all Mesolithic, Neolithic and Bronze Age landscapes in the British Isles. At least some of the surface collection could be completed as community-based projects.

The implementation of the above proposals would result in a more systematic approach to the management of the environmentally fragile Ure-Swale Catchment. The area contains one of the largest concentrations of Neolithic and Bronze Age monuments in the British Isles, yet is under increasing threat from deep-ploughing, road and house building, and most notably, mineral extraction. A systematic fieldwork programme, when combined with the current state of knowledge and understanding, could result in the better management of these threats by characterising this nationally

important landscape into areas of high, medium and low archaeological potential. Too much archaeology has been destroyed in the post-war period for the current situation to continue.

The educational and recreation potential of the Neolithic and Bronze Age archaeology from the Ure-Swale Catchment should not be underestimated. The current situation can only be described as lamentable, with little information presently available to the general public, and with the exception of the Devil's Arrows in Boroughbridge, no common access. An archaeological trail along the River Ure, connecting Boroughbridge and the six henge monuments, should be established, providing the general public, and local schools, with an unique opportunity to explore Britain's Neolithic and Bronze Age archaeology. The resulting boost to North Yorkshire's tourist industry would offer considerable financial advantages to local communities and the archaeology could even become a unique selling point for the Hambleton District, in much the same way that Orkney's Neolithic archaeology is intensively exploited to shape the islands image to the outside world. The creation of a dedicated heritage centre should be a long-term ambition.

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