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ANIMAL ARCHITECTURE:
an integrated approach to the built environment of the
Early Neolithic in Yorkshire

Thesis submitted for the degree of
Doctor of Philosophy,
Birkbeck, University of London

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2022

This thesis is the result of my own investigations, except where otherwise stated. A bibliography is appended.

ABSTRACT

The modern county of Yorkshire represents a ‘forgotten landscape’ in contemporary Neolithic studies; this is in part due to a relatively poor publication record (over the last sixty years) and limited descriptions from the estimated 1500 barrows dug by antiquarians during the nineteenth century. Although in recent years archaeological projects with the aim to construct chronological models for the region have begun to shine a light (Gibson *et al* 2009, Gibson and Bayliss 2010, Griffiths 2011), our understandings of Early Neolithic animals and their relationships with people and architecture (including long barrows, round barrows, pits and settlement scatters), remain still in the dark. Also by bringing animals to the fore it questions the nature of architectural types themselves.

In this thesis new research concerning the nature of human-animal relationships across different types of architectural settings is presented. At its foundations I apply an evidence, contextual-based understanding of the archaeological record. I achieve this through detailed re-examinations of both the material and paper archives (antiquarian records, correspondences, photography, grey literature, field diaries, context sheets etc), building on successful methodologies employed elsewhere (Thomas and McFadyen 2010, Parmenter *et al* 2015, Banfield *et al* 2019, Shepherd 2021). Multiple faunal assemblages are analysed, including the Calais Wold 275 round barrow; the Rudston 62 settlement scatter; Corner Field, Site 11 pit; and the Willerby Wold, Raisthorpe and Kilham long barrow sites. With this new reading and understanding of the archaeological evidence and its formation, I explore the process of multidirectional histories, overlapping spaces and ephemeral assemblages connecting animals (including archaeological wildlife), landscape and the built environment of the Early Neolithic in Yorkshire.

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1

INTRODUCTION

The Early Neolithic marks a moment in time when human-animal relationships are re-negotiated and re-shaped in significant ways, making way for multiple co-domestication events across the British Isles and within my study region of Yorkshire. Through the careful re-examination of faunal assemblages of the newly introduced domesticated animals (cattle, sheep/goat and pigs) alongside the ever-ongoing interactions with local wild animals (red deer, roe deer, aurochs, wild boar, fox etc), the material evidence of human-animal relations can begin to be identified and understood. There is however a problem with things as they currently stand. The archaeological record for the Early Neolithic in Yorkshire is dominated by mortuary architecture (monuments in the form of round barrows and long barrows), and traditional understandings of these sites as ritual archaeology (with a traditional focus on human remains), have treated animals as of secondary importance (and at times failing to mention them in any capacity – note Calais Wold 275 (Coombs 1976, 130)). In contrast, the faunal assemblages from settlement archaeology (or everyday archaeology) is given greater significance, and allows archaeologists to interpret taphonomy and cultural practice in relation to human and wild:domesticated animals, subsistence practices and mobility patterns (note the work of Parmenter *et al* 2015 at Etton causewayed enclosure).

Chapter one introduces the reader to the aims of this thesis. I want to study animal remains and the practices they relate to in their own right across the built environment (long barrows, round barrows, pits and settlement scatters), exploring both the role of animals within human life but also (along the lines of multispecies archaeology) from the animal's own perspective (chapter 6 aims to re-write 'intrusive' faunal remains within our archaeological narratives). Animal architecture brings together the focused study of animals with an understanding of architecture as non-static but representational of space, time and movement (Grosz 2001), with animals driving Early Neolithic life, not structures. I want to come to understand the archaeological evidence for animal-human relationships across round barrows and long barrows; and to apply the detailed re-examination of faunal assemblages from settlement archaeology (scatters and pits), to consider whether these actually are sites with different taskscapes. I will query

whether our traditional categories of ritual and domestic architecture are appropriate. This is no simple task due to the fragmentary nature of Yorkshire's archaeological archives, a lack of archaeological research engagement in the region (described as a 'forgotten landscape' in Neolithic studies (Frodsham 1996)) and where excavation has been undertaken, a poor publication record. My aim is to correct this through visiting archives and re-examining faunal assemblages and coming to understand the processes inherent in the formation of these archives (an archaeology of the archive – to borrow from Baird and McFadyen 2011). Only through coming to understand the history of these archives and the detailed re-examination of their animal bones will the histories I wish to write be discovered.

1.1 Research collection methods

As part of this thesis, I completed a systematic and comprehensive survey of available published and non-published sources for the Early Neolithic in Yorkshire. These included:

- The key archives under investigation include the unpublished Calais Wold 275 round barrow (This private archive is held at Historic England, Helmsley, and was visited in February 2020); the Rudston 62 settlement scatter (This private archive is held by Peter Makey and was visited in February 2020); the Corner Field, Site 11 pit (This private archive is held by Peter Makey and was visited in February 2020); and three long barrow sites – the unpublished Raisthorpe long barrow (This archive is held at Hull Museum and was visited between November and December 2021); Kilham long barrow (This archive is held at Sewerby Hall Museum and was visited in September 2021) and Willerby Wold long barrow (This archive is held at Sewerby Hall, Bridlington and was visited in September 2021).
- I loaned from Terry Manby the paper archives which included unpublished draft reports for the Kemp Howe and Raisthorpe long barrow sites (I collected these archives in September 2021 and returned them in November 2021).
- I requested the digital Historic Environment Records from the following administrations – West Yorkshire (provided in November 2019); Yorkshire Dales National Park (provided in November 2019); South Yorkshire (provided in January 2020); City of York (provided in January 2020); North York Moors

National Park (provided in November 2019); North Yorkshire (provided in January 2020) and Humber (provided in December 2019).

- Hull and East Riding Museum online catalogue (began in November 2019 and ceased in April 2022).
- I searched the Archaeology Data Service (www.archaeologydataservice.ac.uk) databases for grey literature sources; search terms included ‘Yorkshire’, ‘Early prehistory’ and ‘Later prehistory’ (began in November 2019 and ceased in July 2021).
- The key regional journals used included Yorkshire Archaeological Journal, Prehistoric Yorkshire and East Riding Archaeologist.
- The key national journals used included the Proceedings of the Prehistoric Society, Cambridge Archaeological Journal, Oxford Journal of Archaeology and Antiquity.

1.2 Defining the temporal extent of the thesis

This work is primarily concerned with architecture that spans the Early Neolithic period. Although I explore the traces of animal-human relationships evident from the material and paper archives (to understand their formation and impact on interpretation), which take us on many journeys from these early farmers, 19th century antiquarians, modern archaeologists and my own individual story, these entangled paths always return us to the building works of the Early Neolithic. The definition of the temporal extent of the Early Neolithic in Yorkshire is troublesome to define, with national and local chronologies undergoing regular refinement and debate (Whittle *et al* 2011). In the area which the modern county of Yorkshire is situated, ceramic and flint typologies characterised by Terry Manby have traditionally proved the primary source for the chronological understandings of the region (Manby 1975, 1988, Manby *et al* 2003). The ceramic period groups for the fourth millennium BC are defined as Grimston Ware (classic carinated bowl), Towthorpe Ware (plain bowl and decorated bowl) and Peterborough Ware (Incised ware) (Manby *et al* 2003). Manby *et al* (2003, 42) define the Early Neolithic as between 4400-3600 BC, and Grimston ware the only ceramic style. Towthorpe ware and Peterborough ware are grouped into a Middle Neolithic period – 3600-3200/3100 BC (Manby *et al* 2003, 49). These broad date ranges have

been created from few absolute dates and concerns have been raised about inaccuracies (Carver 2011, 118). Seren Griffiths (2011, 2014) has proposed an alternative interpretation for the Early Neolithic in Yorkshire: her Bayesian model estimates the start of the Early Neolithic between 3920-3720 *cal* BC (95% probability). Within her model Griffiths includes both Grimston ware sites and Towthorpe ware sites (as there is considerable overlap), stating Towthorpe ware (plain ware and decorated ware) represents two of the four divisions of Early Neolithic pottery forms, as opposed to Peterborough ware ‘...which is regarded as appearing later than the Early Neolithic’ (Griffiths 2011, 15, see also Ard and Darvill 2015). This position has been further supported by a succession of new dates; individual SK116 (Mortimer’s burial 7) from the Calais Wold 275 round barrow site (Towthorpe ware) has been dated to 3770-3640 *cal* BC (95.4% probability) (Parker-Pearson *et al* (2019, Appendix 1) (Chapter 4). The Towthorpe 18 round barrow has a date of 3640-3490 *cal* BC (Griffiths 2014, 17). Pit 3878, Sewerby Cottage had within its fill eight Towthorpe ware sherds, flint flakes and a Niedermendig lava quern is dated 3650-3510 *cal* BC (Fenton Thomas 2009, 95), Haisthorpe Pit 3109 produced Towthorpe ware sherds and is dated 3785-3661 *cal* BC (89% probability) (Terry Manby *pers comm* 2nd January 2022) and at Nosterfield Quarry the pit feature non011307 produced 41 Peterborough ware and 25 Towthorpe Ware sherds (Dickson 2011, 84). Two radiocarbon carbon dates on charred hazelnuts gave a date range of 3360-3021 *cal* BC (BETA 249722) and 3780-3630 *cal* BC for the other (BETA 249723) (Dickson 2011, 84). It is suggested the earlier date is associated with the single Towthorpe ware vessel, which may have been curated or disturbed and damaged during later activity. Finally, the decorated Towthorpe ware bowl associated with the primary human burial (Burial K) within the shaft feature at Duggleby Howe has been dated between 3530-3480 *cal* BC (Gibson and Bayliss 2010, 68).

For clarity of discussion, I will be limiting my investigation to those sites which are associated with Grimston ware or Towthorpe ware styles, or sites which have produced radiocarbon results within the first half of the fourth millennium BC. Tentatively, I would define the Early Neolithic period in Yorkshire as spanning from 3920-3480 *cal* BC. The very early Raisthorpe long barrow date (4690-3990 *cal* BC (95.4% probability) has been excluded from this range due to concerns the charcoal sample could have derived from a very old tree (Griffiths 2011, 176, Footnote 24). This would bring the Early Neolithic in Yorkshire broadly in line with other local chronologies in southern

England (Whittle *et al* 2011), Wales (Treasures *et al* 2019) and Scotland (Rowley Conwy *et al* 2020, 404).

1.3 Defining the geographical extent of the thesis

The primary geographical focus of this study is identified as the modern county of Yorkshire. Although I recognise this arbitrary boundary would have had little relevance during the Early Neolithic, it is employed here as a helpful term to communicate the modern identity of a region.

Yorkshire represents a “no-man’s land” for recent enquiry, no doubt due to its poor publication record from recent excavations (from the last 60 years) and limited details from the 1500 or so barrows excavated by antiquarians in the latter half of the nineteenth century (Manby *et al* 2003, 38). This was famously illustrated by Whittle *et al*'s (2011, Fig 14.177) dragon ‘lurking’ over Yorkshire, representing a lack of knowledge for the county. The situation would appear little improved over the last decade. Rowley Conwy *et al*'s (2020, Fig 19.1) map (see Figure 1.1) plots the distribution of Early Neolithic animal bone assemblages (plus plant remains, lipids, manure and isotopes) across Britain. Yorkshire again remains blank. They ask the question – ‘Is this simply the result of a lack of archaeological work? Or was there a ‘leapfrog’ colonisation up the coasts that bypassed this area?’ (Rowley Conwy *et al* 2020, 418). A major component of this thesis is to correct this.

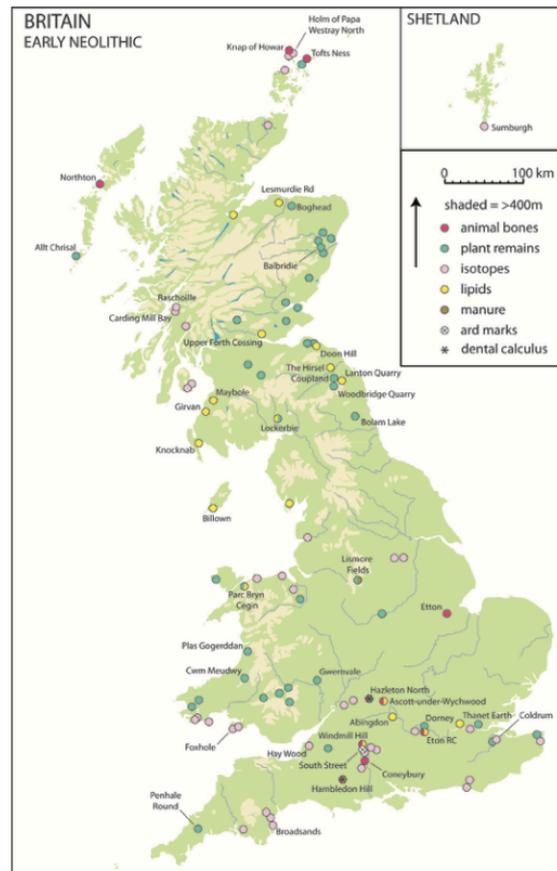


Figure 1.1. Map of Britain showing key Early Neolithic animal bone sites from Rowley Conwy *et al's* recent study (2020, Fig 19.1).

1.4 Architectures

Tables 1.1-1.4 list those Early Neolithic sites in Yorkshire where animal remains have been encountered and recovered. This includes long barrows, round barrows, settlement scatters and pits. There are no known Early Neolithic enclosures or causewayed enclosures in the region, which stands in strong contrast to other regions of England (Oswald and Edmonds 2020, 55). The interrupted ditch at Duggleby Howe shows similarities with the Stonehenge ditch, which it is broadly contemporary with (based on the dates from the primary mound-Late Neolithic) (Gibson *et al* 2009). A curvilinear ditch at Bainesse was excavated by Northern Archaeological Associates: the site remains unpublished, no animal bones are included in its HER record and the associated pottery is Peterborough Ware (HER - SMR MNY36056). There are only a few known

fourth millennium BC houses in Yorkshire. At Yarnbury a rectangular house (8m by 7m) was associated with Grimston Ware and dated to 3766-3648 *cal* BC (SUERC-57194) (Gibson 2017, 201). Structure D2, a trapezoidal building at Sewerby (Fenton-Thomas 2009) and a rectangular structure near Ossett (Speed 2015, 10) are both dated to the Middle Neolithic due to the recovery of Peterborough ware sherds. The Mill Street house in Driffield is rectangular (8m by 7m) and defined by post holes and occupation soil, which contained arrowheads, scrapers and worked flint (Darvill 1996, 105, Manby *et al* 2003, 52). Manby *et al* (2003, 52) suggest a Middle Neolithic date due to the flint typologies recovered. No animal remains have been recovered from these buildings.

Site name	Sheep/Goat	Horse	Pig	Cattle	Aurochs	Red Deer	Roe Deer	Field Vole	Water Vole	Hare	Dog	Limpet	Rabbit	Indeterminate
Kilham	/		/	/	/*	/	/*			/	/	/		
Willerby Wold				/		/		/	/					
Ayton East Field			/			/								
East Heslerton						/								
Garton Slack 37				/		/							/	
Raisthorpe	/	/	/	/	/*	/								
Kemp Howe														/
Hanging Grimston			/	/		/	/							
Market Weighton	/		/	/		/								
Eshs Barrow			/	/		/								
Cross Thorns				/							/*			
Westow				/										
Ling Howe	/			/										
Kilburn														/
Huggate 224				/										
Warter 254														/

Table 1.1. Early Neolithic long barrow/cairns in Yorkshire with animal histories. Red deer and roe deer include antler specimens. /* = possible. Indeterminate refers to animal traces but with no identifiable species. This could be the result of poor preservation and fragmentation or a lack of details in the original report.

Just beyond the geographical extent of this thesis in Derbyshire, are the Early Neolithic timber buildings at Lismore Fields, dating to 3950-3640 *cal* BC (Jones and Bogaard 2017, Rowley-Conwy *et al* 2020, 410). Again, no animal remains were recovered, however a combined study by Jones and Bogaard (2017) looking at the site plan, cereal assemblages, stable isotope analysis of the grain and soil phosphate, has led to the interpretation that animals were stalled within building IW for portions of the year, as indicated by high phosphate levels, chaff-rich deposits, and fragments of animal dung. It is suggested the animal dung could be collected from these stalls and then spread on the cultivated land as a manure (Rowley-Conwy *et al* 2020, 412), perhaps within an intensive mixed farming regime with cultivation in permanent plots; this would require the close integration of animals and crop husbandry (Jones and Bogaard 2017). There is no suggestion as to which animal species may have been stalled within building IW, however, Serjeantson (2011, 30) notes that sheep dung is better than other domestic animals as a manure. Treasure *et al* (2019) cautions against extrapolating the Lismore Field evidence to other regions as this may be atypical. There is no evidence for manuring or animal stalling in Yorkshire.

Site	Sheep/Goat	Cattle	Oyster	Indeterminate
Corner Field, Site 11		/		
Pit non011307, Nosterfield Quarry				/
Pit 1370, Caythorpe				/
Pits B, F and 7, Kilham		/	/	
Pit 017, Willows	/			

Table 1.2. Early Neolithic pits in Yorkshire with animal histories. Indeterminate refers to animal traces but with no identifiable species. This could be the result of poor preservation and fragmentation or a lack to details in the original report.

Site name	Sheep/Goat	Horses	Pig	Cattle	Red Deer	Roe Deer	Fox	Vole	Frog/Toad	Rat	Dog	Oyster Fossil	Bird	Badger	Beaver	Rabbit
Calais Wold 275	/	/	/	/	/	/	/	/				/	/			/
Whitegrounds			/	/			/						/			
Grindale 1					/											
Wold Newton	/	/	/	/	/	/		/	/	/	/		/			/
Towthorpe 18	/		/	/	/		/			/			/			
Duggleby Howe	/	/	/	/	/	/	/				/				/	
Aldro 94																/
Aldro 88			/	/	/											
Cowlam 57	/	/	/	/	/											
Painsthorpe Wold 118	/			/	/		/									
Huggate 229	/			/	/											
Hedon Howe			/	/	/		/							/		

Table 1.3. Early Neolithic round barrow/cairns in Yorkshire with animal histories. Red deer and roe deer include antler specimens.

In Easingwold a possible Early Neolithic occupation was partially sealed under a Bronze Age round barrow (Evans and Steedman 2011, 69). A rectangular building (approx. 5m by 2m) could be represented by two rows of postholes, along with a charcoal scatter (hearth?), plain and decorated sherds (the excavation of the Easingwold Warren barrow remains unpublished. Terry Manby (*pers comm* 30th May 2022) confirms the archive contains Towthorpe Ware, Peterborough Ware and Beaker sherds) and a pit containing saddle quern fragments. The sherds are described as heavily weathered and spread on the old land surface. Charcoal from one of the post holes has been dated to 3915-3650 *cal* BC (Evans and Steedman 2011, 69). Structure 18 at Street House has been interpreted as a saltern, with a range of dates between 3800-3700 *cal* BC (Sherlock 2021, 656). Lipid residue analysis on Grimston Ware sherds recovered from the site has confirmed dairy processing (Sherlock 2021, 664), acting as proxy for human-animal relations in areas where there is generally poor preservation of animal bone. Sherlock (2021, 665) also suggests the waste products from the production of salt

could potentially have been given to animals as salt licks. No animal bones were recovered from either of these two sites.

Site	Sheep/Goat	Wild Boar	Pig	Cattle	Aurochs	Red Deer	Hare	Dog	Indeterminate
Rudston 62		/		/	/	/			
Greenwell 7	/		/						
Greenwell 8				/					
Greenwell 23	/		/	/					
Greenwell 42			/	/					
Rudston 63	/		/	/			/		
Rudston 67	/		/	/	/*	/		/	
Weaverthorpe 47	/			/		/			
Heslerton 5			/	/					
Fox Covert			/	/					

Table 1.4. Early Neolithic settlement scatters in Yorkshire with animal histories. Red deer and roe deer include antler specimens. /* = possible. Indeterminate refers to animal traces but with no identifiable species. This could be the result of poor preservation and fragmentation or a lack to details in the original report.

Grimston Ware, charcoal and flint flakes were recovered from three oval pits at Corner Field, Rudston Wold – sites 6, 8 and 11 (Manby 1975, 28), but only Site 11 contained any animal remains. Six pits at Nosterfield Quarry contained fragments of animal bone described as either medium mammal or indeterminate (features – non011051, non011005, non011307, non011017, nonpx0027 and non011076) (Dickson 2011, 84), five are tentatively assigned Neolithic date due to their proximity to non011307, which contained both Towthorpe Ware and Peterborough Ware. The calcined indeterminate animal remains could either be associated with the Early Neolithic or Middle Neolithic phase of activity at this feature. Pit 1370, Field 0005 was an isolated feature containing the sherds from four Grimston Ware bowls, wheat grains, apple, pear and crab apple seeds, a fragment of a Group VI stone axe and a small number of animal bones (Abramson 1996, 10). I have tried to retrace these animal bones between Northern Archaeological Associates and Sewerby Hall, Bridlington, but it appears this archive has gone missing. The pre-barrow pits at Kilham will be explored in Chapter seven.

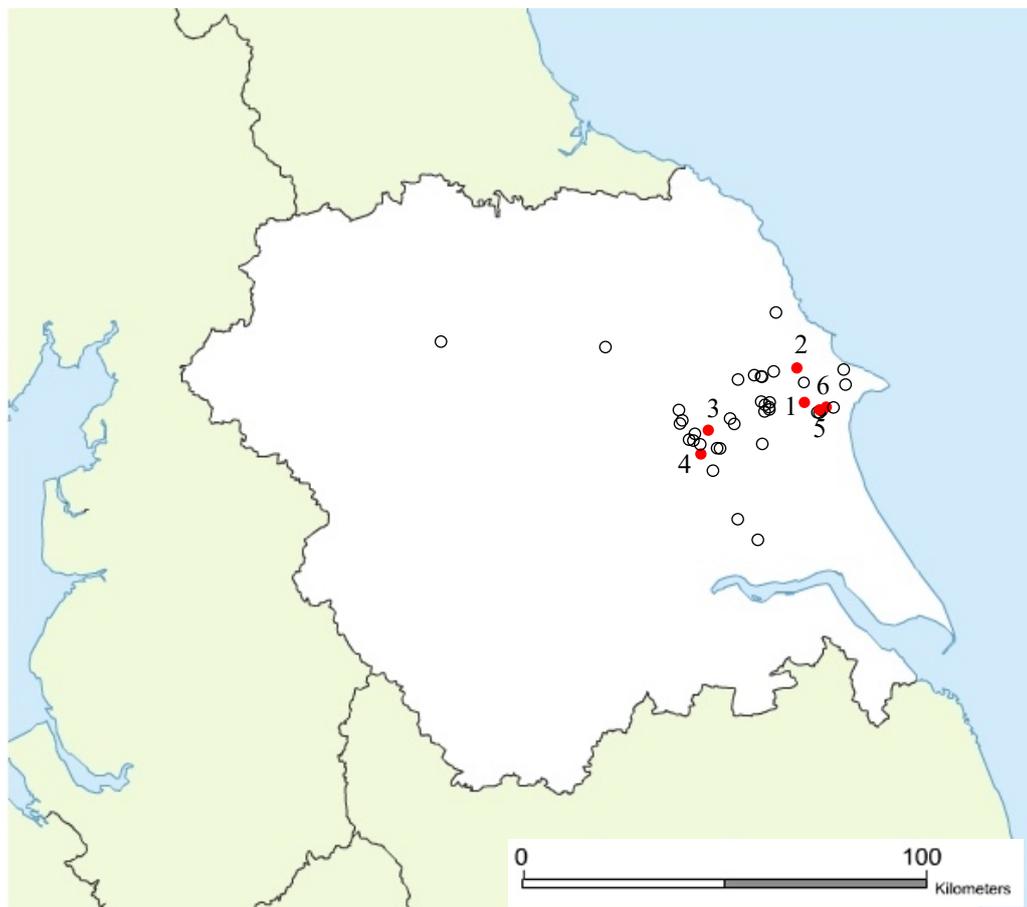


Figure 1.2. Map showing distribution of Early Neolithic sites with animal histories in Yorkshire. Sites are those included in Tables 1.1-1.4. Key sites are highlighted in red and numbered: 1. Kilham, 2. Willerby Wold, 3. Raisthorpe, 4. Calais Wold 275, 5. Corner Field, Site 11 and 6. Rudston 62 (Yorkshire and the Humber region free map. (2023) Available at: <https://map.comersis.com> (Accessed: 6 May 2023).

Allen and Clay (2007, 145) have cautiously suggested Pit 017, Willows is Early Neolithic in date due to the recovery of a flint flake described as Mesolithic-Early Neolithic in date. The presence of a cremated sheep discounts a Mesolithic date, as sheep were introduced to Britain in the Early Neolithic. It is possible this feature could be much later in date and the flint flake residual (Allan and Clay 2007, 145). A surprising discovery from this thesis is the limited evidence for animal remains from Early Neolithic pits. This will be explored further in Chapter nine.

I have excluded caves from this study due to concerns over the stratigraphic integrity of these complicated sites (Peterson 2019, Lord 2019). There are several caves with human

and animal bones which have produced fourth millennium BC dates, these include Cave Ha 3 - 3655-3040 *cal* BC, Jubilee Cave – 3695-3530 *cal* BC, Kinsey Cave – 3960-3790 *cal* BC, Lesser Kelco Cave – 3650-3520 *cal* BC, Scabba Wood Shelter – 3500-3125 *cal* BC, Sewell’s Cave – 3940-3700 *cal* BC and Thaw Head – 3950-3715 *cal* BC (Peterson 2019, 229-230). The butchered animal remains from Cave Ha 3 included domesticated cattle, sheep, pig and roe deer (Lord 2019, 14). Lord (2019, 14) describes a male wild boar (with butchery evidence) recently discovered in 2014 at the Norber cave shaft near Settle which has produced dates between 4000-3600 BC (no exact dates are offered). These cave sites are important for giving us an insight into the human-animal relationships occurring in regions of Yorkshire where the preservation of animal remains from Early Neolithic architecture is less favourable.

1.5 Research outline

I start by exploring the history of thought concerning animals and animal-human relationships during the Early Neolithic in Yorkshire (Chapter two). I present the evidence in chronological subsections, from the nineteenth century through to the present day. I demonstrate how attitudes towards faunal remains have both altered over time e.g. the role of wild and domesticated animals and in many ways remained the same e.g. secondary significance of animals within mortuary architecture. The study of the Early Neolithic in Yorkshire did not occur within an academic vacuum, but was both affected by and caused effect on, thinking elsewhere (particularly in southern England). It is therefore my aim to gain an understanding of both a local, regional, and national approach to the archaeological evidence for animals, moving between scales of thinking and practice. This provides a foundation onto which Chapter three builds, and in the words of the anthropologist Edwardo Kohn (2013, 3) ‘...create the conditions for new thoughts.’

Next, I present the theoretical approach I apply to write animal histories which are an evidence, contextual-based understanding of the archaeological record (Chapter three). I aim to achieve this through detailed re-examinations of the whole archive, both material and paper, building on successful methodologies employed elsewhere (Thomas and McFadyen 2010, Parmenter *et al* 2015 and Banfield *et al* 2019, Shepherd 2021).

With this new reading and understanding of the archaeological evidence I wish to explore the process of multidirectional histories (both human and animal perspectives) (Tsing 2015) and ephemeral assemblages (a focus on the small things (the detail)) (McFadyen and Vale 2014) connecting animals, landscape and the built environment of the Early Neolithic in Yorkshire.

Calais Wold 275 is an Early Neolithic round barrow. Undergoing a total excavation under the direction of David Coombs, the site has sadly only received a preliminary published description with the animal remains receiving no mention at all. After tracking down and visiting the archive I found that the animal remains were missing. Chapter four explores a whole archive approach to come to understand the temporal and spatial animal stories of cattle, pig, sheep, red deer, roe deer, vole and red fox, highlighted in photographs, site notebooks, context sheets and draft reports.

Chapter five investigates textual and material evidence for pits and settlement scatters in Yorkshire. This chapter collates antiquarian records and archaeological evidence for settlement scatters associated with Early Neolithic pottery to come to understand the nature of early farming in the region. The settlement scatter from Rudston 62 represents the only modern (1960) excavation of this architectural type and which produced a published report (including the faunal remains) (Bramwell 1972, Pacitto 1972). Bramwell's (1972) original findings are used to argue for an assemblage dominated by wild animals (aurochs, wild boar and red deer), which stands in contrast to subsistence practices identified in other regions of Britain. This could suggest an altogether different kind of Neolithic in Yorkshire. A thorough re-examination is required.

The Poet Laureate (and Yorkshireman) Ted Hughes, said that he thought of his poems as animals, meaning that he wanted them to have a 'vivid life of their own' (Oswald 2015, 1). Chapter six forms the first of two chapters exploring specific multispecies histories across the built environment. Considering the vivid lives of animals which hold an ambiguous status in archaeological studies ('intrusive species'), I offer a perspective considering themes of architecture and Anna Tsing's (2017) concept of 'auto-rewilding', to engage dynamically with these auto-rewilding events as the fullest expression of animal life and to reveal the 'wonder and enchantment' (Monbiot 2013) of archaeological wildlife.

Chapter seven will detail the results of an archaeology of the archive and zooarchaeological re-examination of faunal remains from three long barrows - the unpublished Tony Brewster excavation at Raisthorpe, and Terry Manby's Kilham and Willerby Wold long barrow sites. I explore the formation of these archives and the spatial and temporal animal histories encountered.

For chapter eight and the second chapter exploring specific multispecies histories, I apply the close study of animal ethology to come to terms with the lived experience of humans and animals during the Early Neolithic in Yorkshire. To shift our perspective away from how humans use-think about the red fox (technology or a role within human cosmologies), I instead lead with an 'animal geographies' approach and consider the natural rhythms of fox, humans and domesticated sheep, and their overlapping spaces.

Chapter nine will form a discussion concerning the relationships of animals, architecture, and humans during the Early Neolithic. This will be explored in three themes, which are designed to be distinct to each other but also entangling as we move between different scales of analysis. In the first discussion I present new research reviewing the animal assemblages recovered from Early Neolithic sites on a regional scale, where I draw comparisons with contemporary sites from southern England (Thomas and McFadyen 2010, Serjeantson 2011, Rowley-Conwy *et al* 2020). I will then use this evidence to inform an animal-human discussion on subsistence practices, dairying and the role of wild animals. In the second discussion I present new research following the re-examination of the animal remains and architectural evidence from Yorkshire's Early Neolithic long barrow and round barrow sites. Four different loci of deposition are considered: the 'pre-barrow' contexts; the mortuary structure and platform; the ditches; and the superstructure of the barrow ('superstructure' refers to the upcast mound). I selected these spatial locations as areas likely to represent different temporal, as well as spatial, patterns of activity (see Thomas and McFadyen 2010). In the third and final discussion I explore the role of domestic activity at Yorkshire's Early Neolithic long and round barrow sites. Typically understood as tombs for the human dead, I wish to understand the accumulation of 'pre-barrow' domestic evidence, how this evidence forms the conditions for building works, and its extension into architecture.

The final chapter (Chapter ten) will present the achievements of my study, identify limitations, and consider future research recommendations.

1.6 A note on style

Before we begin on our journey, I want to say a little on the creative and interpretive style of language employed. Firstly, in respects to the traditional zooarchaeological report, within this thesis I have chosen to integrate the reports into the main body of the text, as opposed to reducing them to an appendix. I have done this to convey the full extent of the complexity inherent in the making of an animal bone report, and I can think of no better way to lead my research than with the animals themselves.

Furthermore, you will encounter my own personal story interwoven into the archaeological evidence and discussions of Early Neolithic architectures and landscapes. This is deliberate; both these Early Neolithic peoples and I shared this same landscape and, in many respects, similar human-animal relationships. I spent my childhood on a small sheep farm within the Esk valley in the North York Moors National Park. My surname is Shepherd and I come from at least two generations of shepherds. The farm was small, maybe 70 acres, with a flock of 200 Scottish Blackface ewes, half a dozen Dexter cows, Saddleback pigs and a menagerie of other animals. My day-to-day routine, chores and the seasons were very much arranged around the care and wellbeing of these animals. A childhood very much all about the animals. I could romanticise this further but the truth was I did not take to shepherding. Rather than working alongside my father with the sheep, I would walk the fields, moorland and woodland paths in search of peace maybe, certainly I was in search of the archaeology marked on my OS map. What I am trying to convey is this thesis and the process of researching these Early Neolithic animals and people within the same landscape of my childhood has been a profound and personal experience for me. The writings and styles imposed from landscape writers such as Robert MacFarlane and anthropologists - Anna Tsing and Radhika Govindrajan have proved important to me, as they do not shy away from the entanglements of researcher and research matter, but instead embrace it, writing narratives which are personally meaningful, with their own pasts and presents

imprinted onto their subjects. As Tim Ingold (2000, 90) puts it ‘...we are not impartial observers of nature but participate within the continuum of organic life’.

Returning to my use of language, I found on reviewing my initial draft shifts in tone between a ‘passive voice’ and an ‘active voice’. These shifts would occur when moving between my scientific animal reports and my reflexive interpretation. But are these shifts in tone justified? I would argue they are not, and that they are the product of a genre problem in archaeological writing and a cultural problem in archaeological science. After all, the animal bones found within my report sections were not re-examined by a ‘passive scientist’, but by myself; I was active in the creation of these datasets and their resulting interpretations. Therefore, I argue an active tone is not only more representative of my impact on the work I have done through this piece of writing, it also gives action to the process of archaeological excavation by archaeologists; the creation of archaeological archives by archivists; and the role of animals themselves (especially archaeological wildlife) on what remains are encountered and recovered from archaeological sites.

And finally, I want to write animal histories about ‘real’ animals. I have found myself drawn to those authors who write about the encounters between humans and animals in a dignified manner, writing which places a particular significance on the sensitive treatment of the material conditions of living, both human and animal, through the integration of animal ethology (Overton and Hamilakis 2013, 135). The writings of John Berger have been important to me, and I end this chapter with a short passage from his novel – *Pig Earth* (1979, 99) –

‘I could not die until I had seen another month of May, here in the mountains. The grass grows knee-high in the meadows and down the centre of the roads between the wheel ruts. If you are with a friend, you walk down the road with the grass between you. In the forest the late beech leaves come out, the greenest leaves in the world. The cows are let out of the stable for the first time. They leap, kick with their hind legs, turn in circles and jump like goats.’

Berger 1979:99

2

EARLY NEOLITHIC ANIMALS IN YORKSHIRE: past approaches

2.1 Introduction

In this chapter an attempt is made to explore the history of thought concerning animals and human-animal relationships during the Early Neolithic in Yorkshire. In order to take you on a journey of over two hundred years of thinking, I will present these arguments in chronological subsections, from the antiquarian era through to the present day. I wish to demonstrate how attitudes towards faunal remains have both altered over time and in ways remained the same. The study of the Early Neolithic in Yorkshire did not occur within an academic vacuum, but was both affected by and caused effect on, thinking elsewhere (particularly in southern England). It is therefore my aim to gain an understanding of both a local, regional and national approach to the archaeological evidence for animals, moving between scales of thinking and practice. This I hope will provide you with a foundation, onto which Chapter three will build upon.

2.2 The antiquarian era (1790-1905)

Early writings from the late 18th-early 19th century were primarily concerned with description and the acquisition of artefact finds into personal collections (Manby *et al* 2003, 35). In Yorkshire, antiquarians wrote localised histories (Watson 1775, Whitaker 1805, 1823, Hinderwell 1790), providing limited text for pre-Roman archaeology and all failing to offer accounts of faunal material. Hinderwell (1790, 22) writing about the moorland near Scarborough, details the presence of many tumuli ‘some square, oblong, and others round’, surviving the destruction associated with the enclosure act. Describing the contexts of two such examples he notes near the farm-house of the late

William Hall, the contents of the barrow included an iron dagger, millstone and several iron plates, and at another site adjoining York road were many human bones. Although Hinderwell offers no details regarding the type of tumuli these finds were recovered from, his focus on ‘grave goods’ and human remains suggests a belief that their primary role were as tombs. In contrast, contemporaries in Wiltshire, notably William Cunnington and Richard Colt Hoare (1810) were compiling detailed records of their investigations, regularly including the general position, depth and associated soils for pottery, flint and animal bone; adhering to their humanist commitment to enlightenment thinking (Banfield 2018, 7). Although omitted from *Ancient Wiltshire* (Hoare 1810), Cunnington also sketched the position of excavation trenches, such as at King Barrow (Soc of Ants. London ms.217/ Volume IV, f76), rediscovered within the Cunnington archive held at the Society of Antiquaries, London (Eagle and Field 2004, 52).

Having proceeded to the depth of one foot, they came to a ridge of flints and large marl stones, which widened till, at the depth of five feet nine inches, they found a regular paved floor of flints which extended fifteen feet in length and six feet or more in breadth, but narrowed as it approached the east end. This floor was covered with human and animal bones, and charred wood, but the fragments of bones were so small, that it was difficult to ascertain the number of human bodies that were burned.... Amongst these bones, were those of birds; and on the top of the barrow, immediately under the turf, were several pieces of stag’s horn, and part of the head and horns of an ox, which a butcher pronounced to have been larger than ever he saw of that species of animal.

Hoare 1810: 85

The above passage (Knook Barrow) is a typical example of the description accorded animal bones in *Ancient Wiltshire* (Hoare 1810) and Cunnington’s personal communications (1806). Faunal remains where possible are identified to species and/or element but the *meaning* of the material is offered no consideration. Returning back to the north, Thomas Bateman’s publication of *Vestiges* (1848) details his excavations within the Peak District (Derbyshire moorlands). During his 1843 excavation of the Liff’s Lowe bowl barrow (which produced archaeological evidence spanning the Early Neolithic through to the Bronze Age. Derbyshire HER: Monument record MDR938), Bateman (1848, 42) records his recovery from the mound material of ‘...a few human bones, horse’s teeth, various animal bones, and two small pieces of a very thick and coarse urn’. The second stanza from Melanie Giles’s (2021, 16) poem titled *Marked*, has recently brought this act to the fore -

Bending, unbuttoned,
 To haul cist-stones from dark cavities,
 Scattering a haul of bones:
 Its final occupants – toads and voles.

Giles 2021:16

Associated with a central cist burial, Bateman (1848, 42) recovered a ceramic vessel, two polished flint knives, pieces of ochre, two flint arrowheads, two polished flint axes, two ‘...enormous tusks of the wild boar’ and an antler macehead with a cylindrical perforation. Bateman (1848, 43) provides the reader with an illustration of the antler macehead, which he interprets as a weapon. He (1848, 42) also offers his interpretation for the inclusion of the two wild boar tusks, seeing them as ‘...the trophies of some, perhaps his last, sylvan triumph.’

In Yorkshire, James Ruddock (Ruddock’s findings were summarised by Bateman in 1861) undertook a series of barrow excavations between 1849-1858 in the vicinity of Pickering, North Yorkshire (Bateman 1861, 204). Of the many barrows opened by Ruddock, Kinnes (1992, 16) has identified two long barrows near Cropton. In a similar manner to Hoare (1810), Ruddock offers the reader only descriptive records for his excavation of the Cropton 2 long barrow -

The excavation was begun at the north first, through sand; afterwards through large stones, covering others somewhat carefully arranged, on which were some animal bones.

Bateman 1861: 212

The lack of detail regarding the animal species or elements could be argued as either the result of taphonomy making identification difficult or a general disinterest in animal bones. From other sites of later, probable Bronze Age date, Ruddock exhibits considerable variation from stating simply ‘animal bones’ to identifying the animal species encountered –

On the 4th April we examined a tumulus... where we first found large stones, which, being removed, exposed the skeleton of a large dog.

Bateman 1861: 212

The lower jaws of two wild boars, armed with formidable tusks, picked out... as the most characteristic, are preserved in the collection.

Bateman 1861: 220

I suspect the variation in Ruddock's records and choices concerning incorporation into his collections is the result of a focus on the recovery of the unusual or spectacular.

Turning our attention to the latter half of the 19th century, we move into a period of history where estimates suggest some 1500 barrows were excavated in Yorkshire (Manby *et al* 2003, 38). One of the most prolific diggers was Canon William Greenwell, whom in 1877 published his great opus *British Barrows*. In order to first tackle Greenwell's position concerning the role of animals, we have to come to understand his views were based on a combination of both Neolithic and Bronze Age faunal assemblages. This error, the result of the incorporation of Early Neolithic archaeological evidence (probably the disturbing of pit features and settlement scatters) into the matrix of round barrow material as a consequence of building work during the Bronze Age (Greenwell 1877, 106). This led Greenwell to interpret the material culture associated with two distinct pottery forms as domestic (dark, plain-coloured pottery) and ritual (Beaker, Food Vessel etc) rather than Early Neolithic and Bronze Age. That being said, faunal remains securely associated with Bronze Age material culture in Yorkshire is limited and tend to be single animals or elements associated with human remains (Kinnes and Longworth 1985), rather than the instances where animal bone is recovered 'literally [by the] hundreds, placed, with flint chippings and sherds of pottery in a dark-coloured, unctuous layer, which extended throughout the whole area of the mound, on the natural surface of the ground' (Greenwell 1877, 10). This theme is explored further in Chapter 5.

Greenwell made studious notes on animal bones, where possible to species, elements encountered, age-at-death, butchery evidence (regularly noting if bones had been broken for the removal of marrow), as well as broader patterns identified in depositional practice. Greenwell also identified the absence of interpretation in earlier accounts as

problematic, a deduction also met by fellow antiquarian and contemporary Dr J. Thurnam while working in Wiltshire (1869, 161). Thurnam (1869) unlike Greenwell identified long barrows as not only architecturally but temporally distinct to round barrows, a conclusion made easier in Wiltshire due to there being no Early Neolithic round barrows. Thurnam (1869, 182-3) tackled animal bone assemblages in two dedicated subsections, 'Remains of Funeral Feasts' and 'Remains of other Animals', the former focussing on cattle remains. Thurnam notes their regular presence in long barrows (referencing each site), details the cranium and metapodials are 'most generally met with', number of individuals, sex of particular specimens, species found (both domesticated and wild), butchery evidence ('broken bones of the fleshy parts of this small ox') and interpretations of mode of death 'excepting the atlas...which [was] in two pieces, cleanly cleft as if by great violence, probably in the slaughter of the animal' (Thurnam 1869, 182). Compiling this evidence, Thurnam suggests these disarticulated bones represent feasting: cattle slaughtered at the time of burial for the supply of a funeral feast, with those elements not being consumed 'thrown' onto the barrow during its construction, perhaps as offerings to deities (Thurnam 1869, 182). The latter section is more concise and lists other animal species recovered from long barrows. He notes it is very common to find red deer antler and bone, suggesting these are trophies 'of the chase', tusks and bones of wild boar (although offers this identification in a rather fleeting fashion 'Tusks and bones of swine, perhaps the wild boar'), and the skeletal elements from birds including an entire goose skeleton recovered from Amesbury 14, which he references a statement by Caesar; 'Britons did not regard it as lawful to eat this bird, though, like the hare and the fowl, they bred it for amusement and pleasure' (Thurnam 1869, 183).

The impact of Thurnam's paper (1869) on Greenwell's thinking is significant, with regular citations of his writings within the footnotes of *British Barrows* (1877), an outcome no doubt attributed to the two men working together in Wiltshire, 1863 (Kinnes and Longworth 1985, 15). Within Greenwell's (1877, 10) introduction he notes the regular presence of animal bone scattered throughout the mound material and where bone is not recovered, he concludes the likely result is due to post-depositional practices. He states there is little doubt the bones are the remains of feasts, with the bones broken to remove the marrow, and deposited at the time of the funeral, or at some subsequent anniversary (Greenwell 1877, 10). This last statement is important because

it suggests activity at the site beyond and distinct to the burial of human remains, a theoretical position now supported with the advancement of Bayesian dating (Whittle *et al* 2007, Thomas and McFadyen 2010). Greenwell (1877, 10) references historical examples for funeral feasts and food offerings having their origin in ancestral worship, a position consistent with Thurnam. Where Greenwell begins to deviate from Thurnam and other earlier antiquarians, is his detailed investigation into the animal bone assemblages in order to gain an understanding of subsistence practices of the mound builders. In order to achieve this aim, Greenwell sought the expertise of Sir William Boyd-Dawkins, a leading authority on prehistoric British mammals and later author of *Early Man in Britain* (Boyd-Dawkins 1880). Thanks to the assistance of Ros Westwood (Derbyshire Museums Manager), I was able to identify and transcribe two letters from Greenwell to Boyd-Dawkins within the Boyd-Dawkins archive located at the Buxton Museum and Art Gallery. The first letter dating June 5th 1869, stresses ‘I fear that you will have a great deal of trouble with the bones from the barrows, in consequence of their very fragmentary state, many of them, I suppose it will be quite impossible to identify’ (DERSB: 72471). The second letter (DERSB: 70041) is in reply to Greenwell receiving Boyd-Dawkins’s animal bone report. I include the transcript in full for reference: some of the text is missing due to it being illegible to myself and Ros Westwood (Figure 2.1).

TRANSCRIPT

DERSB: 70041

Durham June [?] 2

1870

Dear Mr Dawkins

The table has come and pray accept my best thanks for it and the trouble you have had. There are one or two questions I have to ask which perhaps you will be kind enough to answer.

Kirby Underdale large dog or wolf was of course this head. You say under that barrow horse there were from the grave were two pelvic bones which could not be of horse, I feel sure they were sent, they were clean looking & of a young animal. Have they been crushed?

Rudston iv as to human fetal is there no doubt that they are bones of a child before birth. In the cist was the skeleton of a man & 2 children, no woman. Under Grimes Graves there are 3 entries, these are all in the bones sent since you had those at Jermyn Street, I suppose. In the first lot (those you had at J. Street) nearly all the _____ were _____ing over.

Young calves in the same _____ the cave with the tusks of {or is it teeth and} swine _____ are they of wild or domesticated animals? Sheep or goat it is impossible to say of which I suppose, the presumption is that they are of goats.

As you say, it is very remarkable that so very few of the bones of wild animals have been found. I should have thought that red and roe deer and wild boar would have been the most prevalent bones and there are scarcely any of them.

I have {met} with parts of deer horns which I did not send knowing what that were in some 8 or 10 instances, red in one Rudston ii roe. These people must have been much more pastoral than hunting, or it may be that this funeral feast being to show extent {?} in _____ less thing that they could not provide going in readily/easily {not sure} as the fatted calf. That scoundrel Jacob and his fitting brother with the kid is a case in point. There is no number to Brough grave which has a BL {A} adult, there are 8 Bronze barrows, which is it?

The horse is compared in the Wolds to _____ set of funeral customs, some of which were customs of later date than the _____ part of this in the Wolds. I shall have to modify part of any introduction I see.

Yours sincerely

W. Greenwell

This letter (DERSB: 70041) brings to light several significant findings. Firstly, Greenwell would seem to have omitted information from his final draft of *British Barrows*; if we consider the round barrow site of Kirby Underdale, Greenwell records an oval grave (2m length, 1.8m depth) containing at the base cremated human remains between two flint nodules. At a depth of 1m were recovered two horse pelvic fragments (Kinnes and Longworth 1985, 32). There is no mention of the age-at-death of the horse (now identified as a young animal) or the presence of a wolf or large dog. On the old ground surface and within the mound matrix was recovered flint flakes, scrapers and a fragment of greenstone axe (Greenwell 1877, 135-6). The architectural characteristics, human cremation, inclusion of animal bone and two flint nodules of this feature mirror the oval grave/pit from Calais Wold 275, an Early Neolithic round barrow located less than three miles away as the crow flies (see Chapter 4).

Secondly, it confirms Greenwell's desire for accurate information concerning species present, requesting clarification on domesticated or wild pig and if sheep and goat can be distinguished. Finally, this letter illustrates Greenwell's developed theorizing concerning subsistence practices –

As you say, it is very remarkable that so very few of the bones of wild animals have been found. I sh[oul]d have thought that red and roe deer and wild boar would have been the most prevalent bones and there are scarcely any of them.

Greenwell 1870: DERSB 70041

and

These people must have been much more pastoral than hunting

Greenwell 1870: DERSB 70041

being ‘very uncommon’ (Greenwell 1877, 109). This is very similar to my re-examination of the Rudston 62 faunal remains (see Chapter 5). The only bones of wild animals recovered are red deer, along with shed antlers from red and roe deer (he notes it is rare to find an antler taken from a slain animal) (Greenwell 1877, 109). Greenwell (1877, 109) interprets this evidence as red and roe deer forming a small part of the diet of the people, later expanding on his position – ‘...for we cannot imagine that the bones found in the barrows represent other than their ordinary and daily food’ (Greenwell 1877, 110). Greenwell’s final remark on domesticated animals moves us from our regional analysis to the site of Grimes Graves, Norfolk but I would argue it offers another insight into the detailed thinking afforded animal remains and their implications for archaeological interpretation. Greenwell writes that milk probably formed an important element of the diet, his argument being based on the very large proportion of cattle bones coming from very young animals, ‘but a few days old’ (Greenwell 1877, 115). He suggests that the slaughter of these young animals was to release excess milk for the consumption of people (Greenwell 1877, 116), an interpretation changing little in over a century (see Legge 1981, 2008).

We can also re-trace the impact of the relationship between Greenwell and his animal bone assemblages from Yorkshire and the later writings of Boyd-Dawkins. In *Early Man in Britain*, Boyd-Dawkins describes how ‘Neolithic farmers used for food the produce of their flocks and herds, and they appear to have eaten all their domestic animals, including the horse and dog; the latter animal, however probably only under the pressure of famine’ (Boyd-Dawkins 1880, 274). The final statement regarding the consumption of the domestic dog in times of famine is interesting and throws up the possibility he identified such evidence within the faunal assemblages. I particularly enjoy the reconstructed Neolithic scene –

We enter a track in the forest, and thread our way to one of the clusters of homesteads, passing herds of goats and flocks of horned sheep, or disturbing a troop of horses or small short-horned oxen, or stumbling upon a swineherd tending the hogs in their search for roots.

Boyd-Dawkins 1880: 272



Fig. 33. 5.



Fig. 34. 1.

Figure 2.2 Illustrations of worked antler (Greenwell 1877, Fig 33, 34).

Special mention is given by Greenwell (1877, 37) to animal bone which has been modified by anthropogenic agents, suggesting such items are rare because they are liable to decay. Here we find the separation of archaeological evidence under Cartesian conceptual opposites – Culture-Nature, those items modified by ‘man’ receiving extra attention and as a result extra importance; a practice which is still prevalent in archaeological research today (Figure 2.2). Greenwell continues to describe and provide illustrations of a red deer antler macehead (Kinnes and Longworth 1985, 56) recovered from the Cowlam 57 round barrow (Neolithic in date), a red deer antler pick or hoe,

associated with Burial 5 at Rudston 61 (although this example is associated with a Beaker burial, Greenwell notes the presence of these from Early Neolithic architecture). and sharpened boar tusks (not illustrated) from Rudston 64 (possibly used in the manufacture of pottery) (Greenwell 1877, 38, Kinnes and Longworth 1985, 71). There is limited animal bone surviving in the Greenwell archive located at the British Museum (a clear failure to retain the majority of the faunal remains). Those that were kept indicate a selective retention of ecofacts. Typical examples include bone pins (such as at Kirby Underdale – Early Neolithic?), antler macehead (such as at Cowlam 57), bone points (such as at Rudston 64), antler picks (such as at Kilham) and boar tusk knives (such as at Ayton East Field) (see Kinnes and Longworth 1985). It was believed all of the animal remains from Thurnam's excavations (1869) were lost (Shepherd 2021): I was able to re-trace non-worked (animal bone which did not undergo the transition from bone to tool) cattle remains from the Amesbury 42 and Tilshead Lodge long barrow sites at the Cambridge University Zoological Museum (Shepherd 2021) (Figure 2.3).



Figure 2.3 Cattle remains from Thurnam's excavation of Tilshead Lodge and Amesbury 42 long barrow sites. Archive located at Cambridge University Zoological Museum (Shepherd 2021, Fig. 4).

Unfortunately, later researchers have articulated much frustration with the excavation methodologies and recording practices of both Greenwell and Thurnam (Manby 1976, Ashbee *et al* 1979). A focus remained on the interpretations of these sites as tombs, the recovery of human remains, and the secondary importance of animal bone. J. Thurnam was a doctor by profession, with the emphasis on the collection of human skulls and their examination and measurements (Darvill 2004, 24). Greenwell likewise provided Dr Rolleston (who first met Greenwell in 1867) a section in *British Barrows* for his analysis of prehistoric crania (Greenwell 1877, 625). Rolleston oversaw the excavation of the Market Weighton long barrow, and his notes were provided to Greenwell for inclusion in *British Barrows* (Greenwell 1877, 505). Rolleston's notes on the animal bone assemblage offer no clear deviation from other authors, with the exception of his contemplation of the finding of Beaker pottery in 'apparently undisturbed material' (Greenwell 1877, 508). Concluding correctly that this pottery is in fact of later date than the primary activity at this long barrow, Rolleston theorizes –

Without supposing that an extensive disturbance had taken place, it is nevertheless by no means improbable that a badger, fox, rabbit, or rat may have been the agent by which it was thus transferred from one place in the mound to another, and this seems to me by far the most probable explanation.

Greenwell 1877: 509

In this passage, Rolleston offers other-than-humans autonomy and agency, animal histories with their own entangled stories, weaving an understanding of natural sciences and animal lifeways, in order to interpret the archaeological evidence at hand. This is quite distinct to the writings of Greenwell (1877), Thurnam (1869), Ruddle (in Bateman 1861) and Cunnington and Hoare (1810).

At the turn of the 20th century, two key publications heavily impacted archaeological understandings, but also methodologies when investigating Early Neolithic sites. In southern England, Pitt-Rivers and his meticulous work on Wor Barrow (1898) and in Yorkshire, John Mortimer's (1905) extensive text on the discoveries he made over forty years from 1860, excavating over 300 barrows on the Yorkshire Wolds. Both men knew Greenwell, Pitt-Rivers as pupil in 1867 and Mortimer as 'natural rival', a local man who very much viewed Greenwell as an interloper (Kinnes and Longworth 1985, 10).

With Pitt-Rivers's modern standards of archaeological excavation was established, the animal bones receiving detailed records of species, elements, metric data and contextual information (Pitt-Rivers 1898). The interpretation of the animal remains is however missing from the main text, with the exception of ecofacts with Pitt-Rivers focusing on classification and description. Some limitations are placed on the value of the biometry collected at Wor Barrow due to the later establishment of zooarchaeological standards, as is the case for most work prior to von den Driesch (1976). Unfortunately, as was common practice of the time, the majority of animal bone was discarded after his death (Allen *et al* 2016). His notebooks and plans which are located at Salisbury Museum could still be useful for understanding the spatial and temporal histories of the animal remains (for example see Thomas and McFadyen 2010).

John Mortimer (1905) regularly provides plans and section drawings which accurately illustrate the excavations undertaken. Noting the locations not only of ecofacts but also 'intrusive' animal nests and burrows (Mortimer 1905, Figure 1015) (Figure 2.4). When describing individual sites, I would argue Mortimer's approach was variable and sometimes inconsistent. Take for example the Early Neolithic round barrow at Calais Wold 275 (see Chapter 4). Here Mortimer (1905, 162) notes within the oval grave red and roe deer antler and vertebra the excavator believed to be from the same animal. Although contextual information is provided and valuable, his identification of animal species and elements comes across as amateurish and guess work; a stark contrast to the information provided by Greenwell (1877) and Pitt-Rivers (1898). Mortimer continues, (1905, 162) recording the faunal remains recovered from the mound material as simply 'several fragments of animal bone' (Mortimer 1905, 163), writing which echoes the work of James Riddock, some 44 years the previous. In Mortimer's (1905, xi) preface, he thanks Greenwell for permission to borrow paragraphs from *British Barrows* for use in his own text. When his introduction turns to animal bones in barrows, Mortimer simply 'copies and pastes' three paragraphs word for word from Greenwell (Mortimer 1905, xxiv), prioritising the regular occurrence of faunal remains throughout the mound and their interpretation as funeral feasts. A second subsection on 'animal bones in the barrows' introduces species found but again he makes no distinction between those found in long barrows or round barrows (Mortimer 1905, lxix). Mortimer views these two architectural forms as distinct in both system - '...their form and manor of

construction differ so widely from those of the round barrows, that it seems difficult to attribute the two forms to the same race of people'; and time – 'I am slightly inclined to consider that the long barrows of this district are more recent than the greater number of the round ones' (Mortimer 1905, xx, lxxx). This last statement seems contradictory to his writings on 'semi-globular vessels' (which is referring to the plain, dark-coloured Grimston Ware – Early Neolithic), where he describes their recovery from long barrows (possessing four sherds from the Hanging Grimston long barrow) and small sherds occurring in round barrow mounds, '...but more frequently on the old surface line under them' (Mortimer 1905, lxviii). Species are listed beginning with domestic animals (ox, pig, goat/sheep, horse and dog) and followed by wild. He notes two roe deer antlers suggest hunting due to their unshed condition (Mortimer 1905, lxix). Aurochs, beaver, and wild boar; fox is frequently found – notably Nos. 275. Mortimer (1905, 162) fails to mention the recovery of fox from the dedicated text on Calais Wold 275, but this finding does support archaeological evidence recovered from the mound in 1974 during the Coombs excavation (see Chapter 4). To Mortimer's credit his archive contains a large proportion of animal bone, including Early Neolithic un-worked specimens from Calais Wold 275, Raisthorpe, Kemp Howe, Warter 254, Aldro 94, Aldro 88, Painsthorpe 118 and Huggate 229 (possible Early Neolithic date); Esh, Hedon Howe, Cowlam Grange, Cross Thorns, Hanging Grimston and Garton Slack 37.

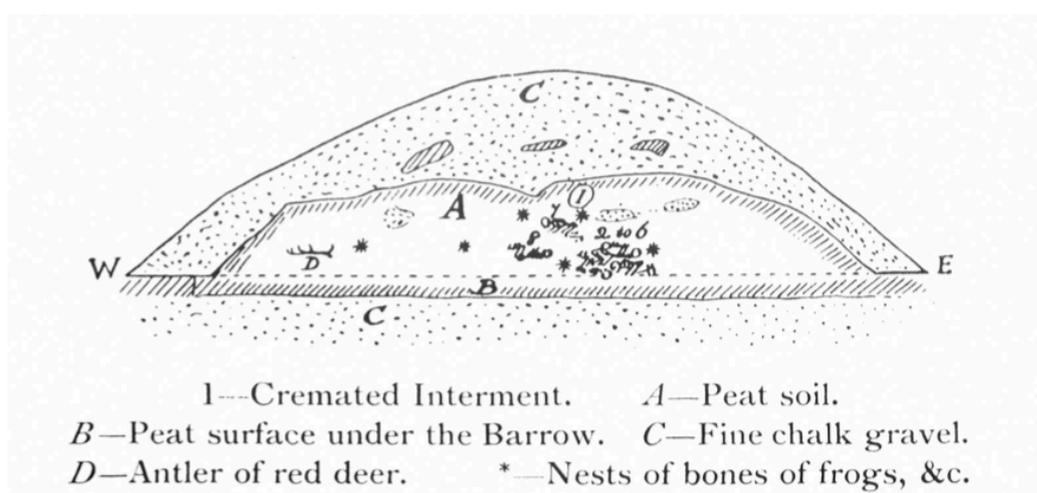


Figure 2.4 Mortimer's schematic section through Wold Newton. (Mortimer 1905, fig 1015).

2.3 Early twentieth century (1905-1960)

The first half of the 20th century sees very little archaeological investigation, in all parts a probable result of the two world wars. The work of Frank Elgee stands as exception with his 1930 publication *Early Man in North-East Yorkshire*. Elgee introduces the Neolithic as the time when ‘man’ learnt to domesticate animals, therefore able to lead a more settled existence – ‘village life began’ (Elgee 1930, 32). His animal bone assemblages coming solely from long barrows, Elgee describes the contents of Ayton East Field and Kilburn (Wass) long barrows, the former containing a limestone rubble, within which were fragments of pottery, animal and human bone (Elgee 1930, 41). The unusual artefacts included a list of Greenwell’s earlier findings (‘two boar tusks, a piece of deerhorn, probably the handle for the axes’). A focus on what Elgee (1931, 41) refers to as the ‘unusually interesting’ continues a century long tradition in archaeological enquiry, with animal bone only mentioned in any details if worked and spectacular. The latter site of Kilburn long barrow, excavated by Greenwell, Elgee re-creates a diagrammatic section of the long barrow, including the location of a deposit of sand and animal bone (Elgee 1931, 46) (Figure 2.5). When interpreting the origins of the Yorkshire long barrows, Elgee regularly cites other sites in southern England – West Kennet, Wor and Knook; and each time omitting any details concerning their animal histories (Elgee 1931, 48-51). Even when dealing with the spectacular, the very large aurochs skull from Knook long barrow being a particularly provocative example, Elgee overlooks its inclusion in his text, I interpret this as a general disinterest in this form of archaeological evidence. Expanding on ‘Long-Barrow Man’, Elgee (1930, 52) describes the animal contents of the Wolds long barrows (dog, goat, sheep, pig and ox), as the ‘relics, doubtless of ritualistic funerary feasts’ and confirmation that ‘[‘he’] was well provided with domestic animals’ (Elgee 1930, 52). Elgee’s (1930) interpretive position reflects the same Enlightenment ideals and assumptions which influenced previous investigations; this is made implicit by the unquestioned classification of long barrows

as tombs for the human dead, with again, animal remains considered of secondary importance (Thomas and McFadyen 2010).

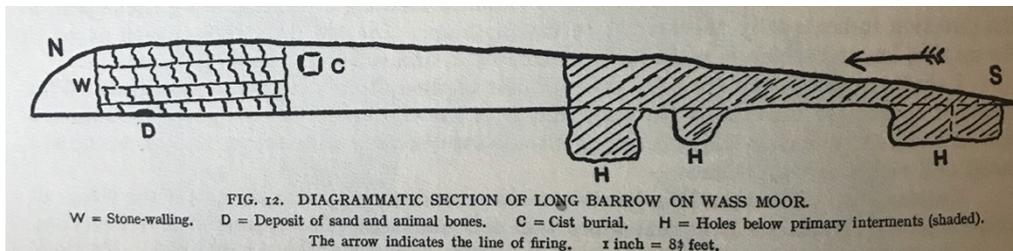


Figure 2.5 Schematic section of Kilburn Long Barrow (also known as Wass Moor) (Elgee 1931, fig 12).

2.4 Standardisation of the archaeological report (1963-2000)

The report from the 1958-60 excavation of the Willerby Wold long barrow marks the standardisation of archaeological publications (Manby 1963), following approaches developed for Neolithic monuments in southern England (Clifford 1938, Jackson 1929, Piggott 1962). We can also situate this work in relation to the iconic Early Mesolithic site of Star Carr in North Yorkshire (Clark 1954, Fraser and King 1954). Fraser and King's (1954) faunal remains report discussed the animals species by species, comparing their metrical analysis with modern and prehistoric specimens (Legge and Rowley-Conwy 1988, 4). Clark (1954) regarded Fraser and King's (1954, 70) report as being of central importance, placing it within the site monograph second after his introduction, and before the artefactual evidence. Within his discussion, Clark (1954) developed from this evidence his environmental archaeology, exploring economy and seasonality. In contrast, however, faunal remains remained of secondary significance in the site reports from Early Neolithic barrows (a result of these sites being understood as tombs for the deposition of human remains, a theme I explore further in Chapter 4).

T. Manby presents animal bones as one class of artefact among many, providing only brief mention within the general text (1963, 183). The animal report was undertaken by a specialist (D. Bramwell) detailing species, elements, metrical data and contextual information. Although no interpretation is offered on the specialist report, Manby does explore the assemblage of charcoal, pottery and animal bone as evidence of occupational debris, treating all the artefact types as equals (Manby 1963, 184). Rather

than considering the animal bone as feasting evidence, Manby (1963, 184) suggests it was collected ‘rubbish’ from nearby habitation and deliberately added to the mound during construction: an argument reached through the treatment of archaeological evidence as an assemblage rather than separately, this approach broke archaeological traditions still prevalent in southern England (Piggott 1962).

Elsewhere in Yorkshire, T. Brewster was overseeing the excavation of several long barrows, publishing brief paragraphs within the *Excavations Annual Report, Ministry of Work* – Garton Slack 37 (Brewster 1965a), Raisthorpe (Brewster 1965b), Kemp Howe (Brewster 1968a) and Whitegrounds (Brewster 1968b). Description was limited-

Present re-excavation disclosed a long barrow...with ditches 4 ft deep on the north and south sides containing ox bones, flint artefacts, charcoal and Neolithic sherds
Raisthorpe long barrow

Brewster 1965B [Raisthorpe]: 8

...a stone lined passage grave 24 ft in length with decapitated burials of a child and adult directly associated with the skeleton of a dog

Brewster 1968B [Whitegrounds]: 14

Only Garton Slack 37 and Whitegrounds would receive a full archaeological reporting (Brewster 1980, 1984), the sites of Kemp Howe and Raisthorpe have not been published.

These private rescue/research-led excavations between the 1960s-80s (pre-PPG16 era) by archaeologists such as Manby (1963, 1975), Coombs (1976) and Brewster (1980, 1984) and amateur archaeologists (I discuss the rescue archaeology undertaken on Rudston Wold by the Grantham’s (butchers by trade) in Chapter 5) have also contributed to the current distribution of archives in different locales. This lack of standardised reporting methods, a shortage of publications and difficulties accessing archives have impaired our knowledge of the prehistory in this region. I would also include the lack of any sustained Early Neolithic research by a local research-led university or institution (until the work by the University of Bradford and Alex Gibson between 2008-2017 for example) has contributed. This thesis aims to rectify this

problem, hoping through archival studies to populate what has become a no-man's land for Early Neolithic studies (I borrowed 'No-Man's Land' from the title of the same name, edited by Paul Frodsham (1996)).

The formalised approach to animal bone reports continues through the 1970's in Yorkshire (Manby 1976, Bramwell 1972, unpublished draft report by D. Coombs for Calais Wold 275) and in Wiltshire (Ashbee *et al* 1979, Ashbee 1966). In the publication on the Kilham long barrow a specialist section is reserved in the appendices for ecofacts (Manby 1976, 143) and animal bone (Manby 1976, 157). Information on animal bone includes contextual information, species, elements and variably age-at-death and condition (Manby 1976, 157). This paper offers no interpretation for the animal bone and has reverted backwards to description only, within the general text and specialist report. In contrast Bramwell's (1972, 12) specialist report on the animal bones from Rudston 62, concludes –

The interesting feature of this collection of bones is the presence of three types of oxen. The intermediate size is probably wild. Domestic animals seem to form a small proportion of the collection, which, if truly representative, suggests a large amount of animal food came from hunting of the forest forms of wild pig, wild ox and red deer. Perhaps the settlement represents an early stage in forest clearance in East Yorkshire.

Bramwell 1972:12

Bramwell's text is remarkable for the inclusion of interpretation; he posits the faunal remains inform on the significance of wild animals and theorizes its implications on subsistence strategies (The Rudston 62 animal bone assemblage is re-examined by the author – Chapter 5). Grigson's (1966, 66) account on the significance of cattle from long barrows offers a similarly distinct example.

Ashbee (1984) attempts to identify regional patterning in the animal histories of earthen long barrows across Britain. In a Chapter titled 'Artefacts and Animal Remains' a small section is offered for the latter (Ashbee 1984, 74-77). He approaches the faunal remains from a contextual position, identifying three categories for investigation – animal bones associated with human burials, within or beneath the mound and ditch fills (Ashbee 1984, 75), predating an approach advocated by Thomas and McFadyen (2010).

Description is central to his writing, offering examples scattered throughout Britain, but with a particular focus on southern England. Only previous authors interpretation is offered with Ashbee offering nothing new (Ashbee 1984, 77). Appendix 9 details Ashbee's review of modern excavation and earlier diggings, separated into context and southern-northern regions (Ashbee 1984, 158-160). Considering Ashbee's synthesis was an attempt to identify some regional patterns, only four northern long barrows are included in his text and appendix - Hanging Grimston (Yorkshire), Helporthorpe (Yorkshire), Crosby Garrett (Cumbria) and Giants Hills (Lincolnshire). It is disappointing that Ashbee's synthesis comes with an unwarranted southern bias.

Manby's (1988) synthesis on the Neolithic of East Yorkshire continues traditions established over a century earlier, with animal remains dealt with along a separation of culture-nature (developing assumption built on the norms of western society); first bone and antler as material culture (providing an illustration of the Raisthorpe bone bead (Manby 1988, Fig 4.9) and secondly faunal remains. The faunal remains include a limited corpus (certainly not complete) of sites containing cattle, pig, aurochs and red deer (other animal species are not included) from modern and earlier excavations (Manby 1988, 56). Interpretation on subsistence is offered as a single sentence – 'This body of evidence is not large and points to some hunting of wild oxen and red deer, the keeping of small short-horned cattle and probably pig' (Manby 1988, 56). The role of animals from the Early Neolithic is only considered as the material representation of subsistence, practice beyond the architecture where they were recovered. This is a striking contrast to earlier accounts which alongside interpretations on subsistence, also offered narratives for a role for animals in and around the built environment – in the form of funerary feasts – therefore entangling the perceived 'primary' focus of human burial with the visual event of slaughtering and consumption of animals. This marked absence of interpretation is also noted in southern England (Harding and Gingell 1986, Noddle 1993, Noddle 1994), Banfield (2018, 14) inviting comparison with early 19th century examples.

Ian Kinnes published two key texts relevant to this discussion, the first in 1979 *Round Barrows and Ring Ditches in the British Neolithic* and the second in 1992 *Non-Megalithic Long Barrows and Allied Structures in the British Neolithic*. Both compile

a corpus of sites under investigation, the inclusion of animal remains can best be described as inconsistent. Continuing a pattern to highlight unusual animal bone specimens, Kinnes will either omit any reference to animal remains (such as at Calais Wold 275 (Kinnes 1979, 15) and Willerby Wold (Kinnes 1992, 43)), simply describe as ‘animal bone’ (such as Kilham (Kinnes 1992, 42)), even though species are detailed in the original report; or such as at Hanging Grimston provide species details and elements (20 pig mandibles, pig scapula) (Kinnes 1992, 40). In his discussion of material remains, Kinnes (1992, 110) separates evidence along culture-nature lines, first describing the Raisthorpe bone bead, which he records as now lost and of unusual form (Figure 2.6) (This is in fact incorrect, KINCM:1942.366 is the accession number for this find, located at Hull Museum). Interpretation of faunal remains is limited to ‘might be both votive accompaniments and chamber adornments’ (Kinnes 1992, 110), cattle are considered of relative importance (referring to southern sites) and the pig remains from Hanging Grimston ‘suggesting comparable ritual’ (Kinnes 1992, 110).



Figure 2.6 Raisthorpe long barrow animal bone bead (Hull Museums Collections. *KINCM:1942.366*. Available at: <http://museumcollections.hullcc.gov.uk/collections> (Accessed: 18 July 2020).

2.5 Twenty-first century

The new millennium opened with the Yorkshire Archaeological Society's *The Archaeology of Yorkshire: An assessment at the beginning of the 21st century* (Manby *et al* 2003). Remarkably the subsection of this text on the Early Neolithic of Yorkshire is near devoid of animal reference, with the only sentence - 'sherds, animal bone and charcoal spreads are indicators of deposition associated with the facades at Willerby Wold, Kemp Howe, Hanging Grimston and Esh's Barrow (Manby *et al* 2003, 44). There is no mention of subsistence practices for the Early Neolithic, species present with the text almost exclusively focusing on architectural design and recent dating.

Twenty-two years following Ashbee's (1984) attempt to draw together a corpus of earthen long barrows from throughout Britain, and explore their animal histories, David Field undertook the task (2006). In his chapter titled 'Long Barrows, Animals and People', Field once again failed to utilise the rich archaeological evidence from northern Britain, citing only three sites; Willerby Wold (Yorkshire), Hanging Grimston (Yorkshire) and Skendleby 2 (Lincolnshire). For Hanging Grimston, Field (2006, 130) remarks on the pig remains (referencing Kinnes 1992) and repeats Kinnes's position - 'Pig had apparently assumed the importance afforded to cattle in the southern long barrows' (Field 2006, 130). If these researchers had thoroughly researched their topic, they would have discovered that cattle are the most frequently encountered animal at earthen long barrow sites and not pig. In fact, the only domesticated animal to be recovered from the Willerby Wold long barrow site (which Field cites) was cattle (Manby 1963) (see Chapter 7).

Field's (2006) text opens with the work of Tim Ingold (2000) and a focus on the changing human-animal relationships inherent in domestication and the Early Neolithic, acknowledging these relationships to be varied and perhaps regional (Field 2006, 125). Decentralising the human, Field (2006, 125) suggests these pastoralists may have given more care to their animals (as moveable wealth), supplying adequate pasture, water and new blood. Consideration of animals moves from red deer, cattle, aurochs, pig, sheep and birds; with particular sites noted. Through decentralising the human (although at the same time maintaining a anthropocentric position), Field develops 'ritualistic' roles for animals in human cosmology. Cattle skulls may have been 'supernatural protectors'

with architecture mimicking animal bodies (such as the cairn and skull at Fussell's Lodge); and horn-shaped forecourts as symbolic representations of cattle within an animistic belief system (Field 2006, 129). Field (2006, 125) draws from the work of Sharples and red deer (2000), to question the utility of discrete categories of 'wild' and 'domestic'. Rather than thinking of funerary feasts as to the benefit of humans (a 19th century position), Field (2006, 130) postulates the 'process of slaughtering and feasting on animals made certain that the supernatural process continued and ensured rebirth and regeneration'. Field's (2006) interpretations are creative, drawing from Ingold's (2000) anthropological examples; they are however all understood from the perspective of human belief/cosmology – animals are not considered as autonomous or with individual agency – perhaps this is why examples of 'intrusive' specimens have been omitted from his writings; these animals represent after all, minor, humble histories, entangled histories to be removed and forgotten (see Chapter 6).

The last decade has seen a conscious effort to engage with the archaeological evidence directly through archival studies (Whittle *et al* 2007, Thomas and McFadyen 2010, Gibson *et al* 2009, Gibson and Bayliss 2010, Gibson 2011, Banfield 2018, Shepherd 2018, 2021). Whittle *et al* (2007), Gibson *et al* (2009), Gibson and Bayliss (2010) and Gibson (2011) returned to the archives of Early Neolithic sites with the primary aim to create precise chronological histories, the re-examination of animal bone required for contextual detail, but in itself, of secondary significance. This is made explicitly clear in the specialist report for faunal remains from the Wold Newton round barrow. The animals are identified to species (field vole, bank vole, common frog, rat, common toad), all represent burrowing species and are therefore identified as '...not reliable dating evidence' (Gibson and Bayliss 2010, 83). Of more interest is the report from Towthorpe 18: here a considerable assemblage still survives in the Mortimer archive, located at Hull Museum. Mainland's (2010, 89) specialist report documents animal species, elements, age-at-death and bone condition following established practice. Her discussion centres on the red fox remains (which underwent dating), where she argues the C14 dating could indicate a special status for the fox within the Wolds and should be further explored (Mainland 2010, 89). The significance of the fox bones is very much centred on them becoming deposited by anthropocentric means (a special status) and then therefore of archaeological interest as opposed to the actions of the animal's own agency (see Chapter 8).

So far the study of animal bones from the Early Neolithic has taken an unsurprising, perhaps predictable anthropocentric position. Within barrow architecture, the traditional understanding of a barrow as a mortuary structure, a tomb for the placement of human remains, has taken centre ground in archaeological investigation. If at all or when animal remains are considered, they are treated as of secondary significance. Even when regional and national synthesis of long barrows sites are attempted, limited word count and poor background research dogs' further understandings of the complex human-animal relationships. We now turn to three publications which decentralise human remains, with all three focusing almost exclusively on animal bones from long barrows, in the Cotswolds (Thomas and McFadyen 2010) and Wiltshire (Banfield *et al* 2019, Shepherd 2021), and demonstrating the success of re-examining archival evidence, rather than relying on published accounts.

The approach developed by Thomas and McFadyen (2010) is distinct in its design to decentralise human remains and instead centralise context and animal bones. Through the re-examination of six Cotswold-Severn long barrow sites, Thomas and McFadyen (2010) not only corrected the misidentification of archive samples, but also placed animal remains within a detailed contextual reading of the archaeological evidence; alongside architectural and artefactual associations. This approach allowed Thomas and McFadyen (2010, 110) to reconstruct spatial and temporal patterns of activity, identifying regionally discrete trends including disputing differential treatment of wild and domestic animals and the special status of cattle (as proposed in Wiltshire). My own work (2021) re-considered this special status for cattle from earthen long barrows in Wiltshire. Through engaging with the accumulated archive of excavated material, I applied a biometry focussed methodology in order to come to understand the social preferences for species and sex. My results (2021, 53) demonstrated a greater social preference for the Early Neolithic deposition of larger individuals such as domesticated bulls and wild aurochs at earthen long barrow sites, than recovered from local causewayed enclosures and the Coneybury 'Anomaly' pit.

Banfield *et al* (2019, 198) condense their scale of analysis from the identification of national or regional trends, to that of the biography of an individual cow (cranium B4)

recovered from the Beckhampton Road long barrow, near Avebury (Figure 2.7). Although the paper is published in the *International Journal of Paleopathology* and a particular focus is therefore on the early date for the evidence of pole-axing, Banfield *et al's* (2019, 198) posthuman perspective is new and refreshing, moving away from considering this animal as a resource for human exploitation or as a symbol in human cosmology, but instead as an individual; a being who underwent great trauma (potentially resulting in concussion, severe epistaxis and long term neurological impairment) and then lived. The skull of this individual was later celebrated in its own right and given a central position within the mound structure of the barrow.

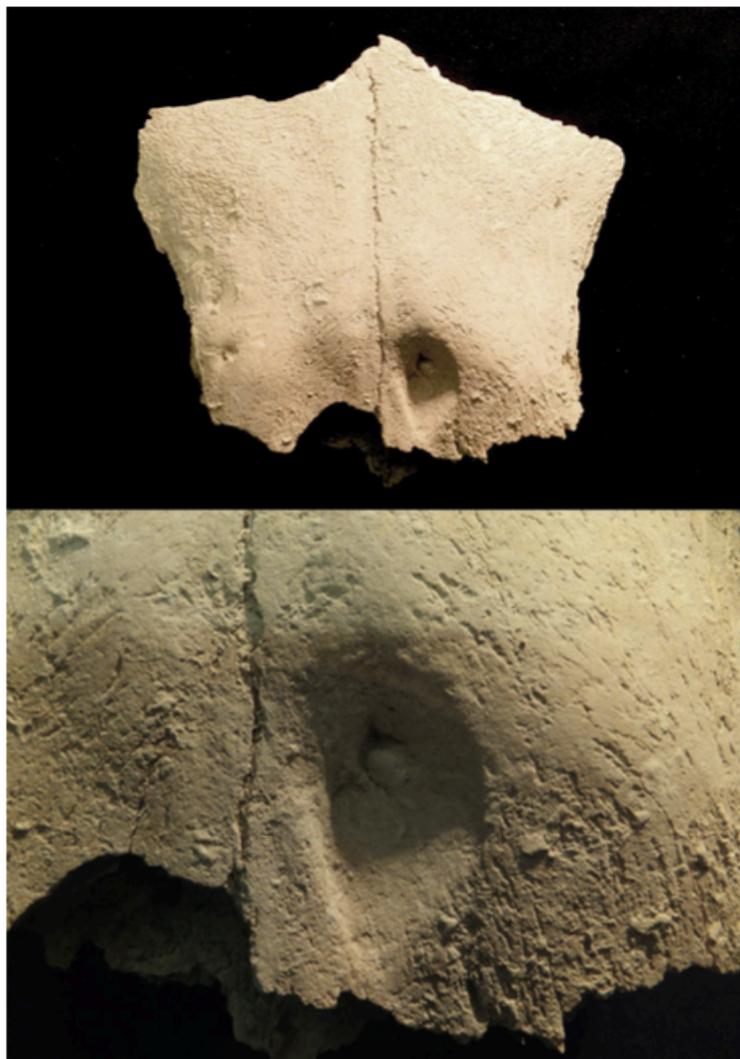


Figure 2.7 Healed depression fracture to left frontal, cattle skull deposit B4 (DZSWS.1965.13. 83a), Beckhampton Road long barrow. (Banfield et al 2019, fig 3).

2.6 Going forwards

Building on the secure foundations of the above methodologies, we now turn to the theoretical approaches applied to the archaeological evidence considered in this thesis. Theoretical concepts and philosophical approaches explored include those developed for the detailed contextual reading of excavated material (Barrett and Kinnes 1988, Evans 1988, Thomas and McFadyen 2010), archival studies (Hodgett 2019, Baird and McFadyen 2014, Morton 2009), assemblages (Delanda 2016, Crellin 2017, Fowler 2013), entanglements (Hodder 2014) and scale (Robb and Pauketat 2013, Harris 2018); social zooarchaeology (Overton and Hamilakis 2013), posthumanism (Haraway 2016), multispecies archaeology (Tsing 2015, 2019, Overton 2018, Aldred 2018, Armstrong Oma 2018), and animal geographies (Lorimer 2000, 2006, Fijn 2011, Gooch 2008 and Law 2008).

3

THE PATH THROUGH THE WOOD: writing animal stories

3.1 Introduction

Archaeologists write histories, we are storytellers. Philip Pullman, author of *His Dark Materials*, is also a storyteller and the subject matter of his 1999 conference paper (the title of which I have borrowed here, and Philip borrowed from the poet Robert Frost) was *The Path through the Wood: How Stories Work* (Pullman 2017, 75). Pullman presents two ideas, the wood and the path. The path is progressive, leading the reader from A to B along a linear journey. The path, when considering the barrows of the Early Neolithic in Yorkshire, represents archaeological narrative, with its primary focus on chronological history, mortuary architecture and human remains. As Pullman (2017, 77) remarks, the path says: “I know where I’m going, even if you don’t.” It was made. Chapter two considered the history of archaeological thought concerning the primary architecture of the region – long and round barrows. Here the build-up of archaeological enquiry over the preceding two centuries, has reinforced the academic norm of ‘barrows as tomb architecture for the deposition of human remains.’

The image of a path is apt because it is by following a path, created and maintained by generations of walking feet, that some of the dangers of the surrounding forests or mountains or marshes may be avoided.

Berger 1979: XVIII

This explains why David Coombs’s (1976) publication on the Calais Wold 275 (Callis Wold) round barrow, illustrates a plan of the mortuary structure, recovery of human remains, pottery and provides a brief site chronology (see Chapter 4). His view and that of others, was a singular focus on the path and forgetting the wild space all around, the wood, and those other-than-humans who inhabit it (Figure 3.1). Pullman (2017, 76) describes the wood as non-linear, unstructured space; a space full of possibilities. I

regularly enjoy walking in a local wood near my home. This wood is managed by Forestry England, which provide waymarked paths through its mixed woodland. Most visitors, including myself, remain on the path; we follow an embodied storyline, trusting in its structure. Maps are provided to visitors where two paths diverge, reminding travellers of the logic in design. We apply a similar trust in the archaeological narratives of barrows, narratives made on assumptions of what is and what isn't significant. There are however other forms of signage (other than the path of Pullman) leading from our path into the wild space of the wood. These paths are not illustrated on maps, they were made by animals and they are momentary and ephemeral. Dog, fox, badger, rabbit, deer and boar. I am reminded of John Berger's (2009, 27) short essay *Why look at animals?*, where he quotes the preface of the photography book, *La Fête Sauvage* by F. Rossif: 'Each of these pictures lasted in real time less than three hundredths of a second, they are far beyond the capacity of the human eye. What we see here is something never before seen, because it is totally invisible.' If I was to leave the path and follow these material histories of animal agency (broken twigs, bent grass, prints and faeces), I would encounter in the words of Anna Tsing (2012) 'a mosaic of open-ended assemblages of entangled ways of life' and as Rebecca Solnit (2001, 72) puts it '...to point out new features on a familiar route.' Tim Ingold (2016, 44) defining 'the trace', notes it is most common in the movements within the animal world, as paths and trails. Exploring the theme of ephemeral trace, landscape artist Richard Long walked up and down along a line in a field, the bent grass underfoot reflected the light, resulting in its mark appearing (Figure 3.2). What is noteworthy is that these traces of animal histories are not separate or distinct to that of the human made path, they abut, interact and cross. Due to their fleeting nature, the coming together and dispersal of connections, gain only a momentary hold before breaking. These interconnections between people, place, animals and landscape represent a 'mosaic of temporal rhythms and spatial arcs' (Tsing 2015). To notice such patterns show us potential histories in the making.



Figure 3.1 Animal paths and human paths (Rawlinson, D. (2022) *Animal paths and Human paths*. Available at: <https://duncan.co/tag/animal-paths-and-human-paths/> (Accessed: 1 May 2023).

The animal histories I seek to write are at present invisible in our written pasts, a result of their trace-like, ephemeral nature and supposed secondary significance. In order to grapple with the complexity of the evidence and overcome the clear disadvantage of omitted archaeology from published accounts, this chapter proposes an integrated and multidisciplinary approach. As a necessary response to the character of the surviving archives, I have drawn from key theoretical concepts and philosophical approaches including the detailed contextual reading of excavated material (Barrett and Kinnes 1988, Evans 1988, Thomas and McFadyen 2010), archival studies (Hodgett 2019, Baird and McFadyen 2014, Morton 2009, Parmenter *et al* 2015, Banfield *et al* 2019, Shepherd 2021), architectural histories (McFadyen 2006, 2013, Bailey and McFadyen 2010, Thomas and McFadyen 2010), assemblages (Delanda 2016, Crellin 2017, Fowler 2013) and scale (Robb and Pauketat 2013, Harris 2018). Woven into these key concepts I employ my own eco-critical perspective, building on the work of social zooarchaeology (Overton and Hamilakis 2013), posthumanism (Haraway 2016), multispecies

archaeology (Tsing 2015, 2019, Overton 2018, Aldred 2018, Armstrong Oma 2018), and animal geographies (Lorimer 2000, 2006, Fijn 2011, Gooch 2008 and Law 2008).

The chapter will conclude with my zooarchaeological standards of recording.



Figure 3.2 Richard Long. A line made by walking, England 1967.

3.2 Character of the surviving archive

The more detailed our understanding of those material contexts and of the way humans act in relation to their material worlds the better will be our understanding of the past.

Barrett and Kinnes 1988:85

John Barrett and Ian Kinnes (1988) here assert rightly that in order to gain a better insight into the actions and worldly conditions of past people's lives a thorough understanding of the archaeological evidence is required. The nature of this evidence comes first and is what everything else is about (McFadyen 2013). With this in mind, I have proposed a whole-archive approach to the archaeological evidence in question, in which an entire extant body of work is considered in context (Morton 2009, Hodgett 2019). This will include correspondences, field diaries, photography, section drawings and material-culture. Such practical knowledge of the archaeology is particular and specific, in contrast to the generalising and unspecific theoretical knowledge of the past (Barrett and Kinnes 1988). Voss (2012) argues archives represent an important source of knowledge, and archaeologists need to think beyond the trowels edge. When considering the crisis regarding the curation of archaeological evidence and its associated costs, we delve into the political domain of fieldwork for fieldwork's sake, by the reordering of archaeological epistemologies, a greater focus on the importance on the analysis and reporting of existing collections is achieved (Kersel 2018, 274). The re-examination of archive material could potentially bring to light refined details concerning a) a full consideration for the zooarchaeological evidence in contrast to relying on incorrect or partial analysis in published accounts. The last two decades has demonstrated the success of such an approach on Neolithic animal bone studies in Britain, including: Brickley and Thomas (2003) and Thomas and McFadyen's (2010) re-examination of Cotswold-Seven long barrows, Banfield *et al* (2019) and my own work (Shepherd 2021) on Wiltshire long barrows and Parmenter *et al* (2015) analysis from the Etton causewayed enclosure. b) an understanding for the interpretive influences caused not by the archaeological evidence but as a result of antiquarian/archaeologist preconceived notions of what is and what is not of importance (see Chapter 2). The archives are in themselves a biographical product of those which created them. Therefore an archaeology of the archives is required to fully appreciate

this matter. c) a better understanding of the material, spatial and the temporal medium of the archaeological evidence, resulting in a more complex and non-linear account of ‘architecture as practice’, with the dynamic ways in which animals and other materials are caught up in the temporal rhythms and tempo of making and occupation. Through a combination of the above I seek to discover histories through which humans and animals created their material worlds.

Our knowledge of the past derives from the evidence we have available

Barrett and Kinnes 1988:85

3.2.1 Architectural histories

A practical knowledge of the archaeological evidence allows the archaeologist to consider the built environment during the Early Neolithic in Yorkshire as projects, rather than in the criteria of formal architecture (Evans 1988), what Lesley McFadyen (2006) refers to as ‘monumental vision’. This is a powerful distinction. As a result of the monumental scale of these sites, there is the inclination to view their final form as given, the movement from architect conceptualisation and design to the material architecture itself (a full design approach), so ignoring the sequence of their re-definition (Bradley 1984). Architecture in archaeology is often visualised as a single built object, with plan drawings read unreservedly as blueprints. We need to ask instead, what would have been the appreciable temporal and spatial form? Bailey and McFadyen (2010) argue that excavation often reveals several phases of construction within architecture and that these cannot simply be understood in sequential terms. A position receiving recent support (Bradley 2020). The living environment of the past has no easy narrative, these sites were never static and pristine products (Evans 1988).

An alternative to ‘monumental vision’ is to consider the different temporalities that emerge from the long activity and historical conditions of Early Neolithic life at a site. Lesley McFadyen (2006) introduces the reader to the concepts of ‘quick architecture’, ‘event’ and ‘disjunction’ as parts of architecture and ‘occupying architecture’. The first stresses the physical practice of building, the speed and engagement with material culture and the human body. Secondly, Bailey and McFadyen (2010) drawing from Tschumi (1996), acknowledge the importance of gaps in the archaeological sequence

and discuss both phases of activity or in-activity as parts of architectural biographies and as conditions of past lifeways. Occupying architecture and accounts of creative users, open up design and extend design into use (McFadyen 2013). Conceptually, this emphasises space as always in the process of being made, emerging out of the rhythm and tempo of occupation. Bailey and McFadyen (2010) and McFadyen (2006) focusing on long barrow evidence in southern Britain argue that different kinds of practice are intertwined, both occupation (including animal histories) and barrow construction and how the human dead were incorporated into these sites during construction and not a finished tomb. Such archaeological evidence presents architectural categories (ritual/domestic) as unstable. We must instead watch these sites emerge through the departure and dispersal of encounters, the dynamic ways and constant interactions in which human, animal, materials, architecture and landscape react with each other. The most apt mechanisms to conceptualise these relationships is through philosophical and archaeological approaches which prioritise movement and process, including assemblage theory (Delanda 2016, Crellin 2017, Fowler 2013) and entanglements (Hodder 2014), with their commitment to tracing these gatherings in which these categories gain momentary hold.

3.2.2 *Archaeological assemblage*

The grouping of animal bones together as faunal assemblages in archaeological archives has a long history in zooarchaeology, at deposit, feature, site and regional scale. The phrase ‘archaeological assemblages’ becoming ever more present in academic literature from the 1950’s onwards (Hamilakis and Jones 2017). In his book *Understanding the Archaeological Record*, Gavin Lucas (2012) outlines to the reader two traditional definitions of assemblage. The first is a collection of one ‘type’ of material, such as the remains of *Canis familiaris* (domestic dog), as opposed to *Cervus elaphus* (red deer), a fragment of carinated bowl or a stone axe. The second defines a collection of material residues on the basis of their depositional context, such as the primary fill of a long barrow ditch or a pit deposit (Lucas 2012). As Gavin Lucas (2012) points out, both are interdependent but differ on their emphasis placed on space or type. The typological assemblage, found in the pages of the site report, separate materials into types, each type the remit of artefact specialists (Conneller 2017). This segregation of archaeological evidence is a product of a particular ‘scientific-positivist’ attitude; an

attitude which creates a particular way of engaging with the world, where experience is pigeonholed, and research outcomes become confined by their terms of analysis. The depositional assemblage represents an archaeological event, its intentionality defining past act(s) (Conneller 2017). The relational nature of these past groupings of material residues have been explored with the emergence of the concept of structured deposition (Richards and Thomas 1984; see for critique Garrow 2006; Beadmore *et al* 2010; Garrow 2012). A limitation of the structured deposition concept is its usage of the archaeology as self-contained monadic entities (Fowler 2013), as opposed to appreciating the temporal, multi-scalar and multidirectional relational nature of archaeological evidence.

3.2.3 *Philosophical assemblage*

Assemblage (agencement: translated as ‘arrangement’) is a key concept derived from the joint work of Gilles Deleuze and Felix Guattari (2004). An assemblage is a charged, ordered entity arising from complex histories of interaction, its contents being heterogenous, including animals, plants, architecture, people and things - horizontal and vertical (Fowler 2013). Reider Due (2007) defines an assemblage as ‘compositions that act’. A gathering of both material and expressive elements, these various relations may be sequential, hierarchical, integral to, or dependant on other relationships (Fowler 2013). Not defining a hermetic whole, an assemblage has permeable boundaries, its constituent parts never fixed but always in a state of coming together (territorializing) and breaking apart (deterritorializing). Parts of an assemblage can endure whilst the rest of the assemblage changes (Fowler 2013). Delanda (2006) calls these ‘relations of exteriority’, where one part can be removed from one assemblage and placed within another without transforming the part itself. An assemblage is therefore always becoming, it has a temporal dimension.

An assemblage can be a collection of objects, but the individual object can also be an assemblage of materials and forms. Assemblages are multi-scalar. In *Following the Thing: Papaya*, Cook (2004) untangles the material relations in the assemblage of the Papaya production chain, moving between scales and exploring the non-material entanglements: Papaya as data, within a database and the personal experiences of workers. The left scapula of a *Bos taurus* (domestic cattle) may form part of a burial

assemblage in an earthen long barrow; it is itself an assemblage of collagen and calcium hydroxyapatite but it also belongs to a sentient being (the cow) and the wider assemblage of Neolithic British domesticated animals. Oliver Harris (2017, 130) suggests ‘...working with assemblages is not simply about describing them at one particular moment...but rather concentrating on process, to be precise on the specific historical process through which an assemblage emerges.’

Hodder’s (2014) entanglements, Ingold’s (2011) meshwork, like assemblages are philosophical approaches which encourage the following of lines and process. It is my position that they differ in regard to scale. These authors use entanglement theory and meshworks to treat their subjects as a single whole (a line), as Ingold (2016, 83) indicates ‘the lines of a meshwork are the trails along which life is lived...the entanglement of lines’. Assemblages in contrast, encourage us to move between differing scales of analysis, avoiding the reductionist nature of single scale analysis (Harris 2017, 127). While entanglements and meshwork ‘can’t see the wood for the trees’, assemblages allow us to move between multiple scales – the tree, the wood, the forest, the mycorrhizal network connecting fungi to individual plants and so forth (Tsing 2015).

To watch the patterns within assemblages allow us to see the interplay of temporal rhythms and scales which fold across divergent lifeways (Tsing 2015, 23). This thesis will move in a non-deterministic fashion between the scales of bone, animal, context, site architecture, landscape; local and national, allowing us to de-construct and de-compartmentalising the rigid, latent assumptions about the nature of the material under investigation (Banfield 2018). Through such approaches we can begin to make connections between

human-animal-object-architecture-landscape-archive

such interwoven rhythms perform a lively temporal narrative to the archaeological evidence. It allows us to imply and follow connections beyond the immediate material. There should be no end point to what can be perceived as material culture, architecture and landscape. Animal remains extend out beyond the faunal deposits and were caught up in other material culture (pottery which acted as container for the flesh or flint which

as a tool was used to butcher the animals body), the human body (both as a vessel for the animals flesh/blood/milk but also our own agency in the chain of sequences), as part of architecture (not only as deposited material, but at times forming part of the architectural structure) and beyond into the landscape where pathways and pasture were required for the movement of people and their herds and flocks (Edmonds 1997, Hind 2004a, Hind 2004b). The temporal dimension of assemblages allows us to study archaeology's own history, the form of the archive itself, how it is organised and how it has a direct relationship to the creation and form of archaeological knowledge (Baird and McFadyen 2014).

I now want to touch upon material culture studies (McFadyen 2006, 2012, Bailey and McFadyen 2010) and the concept of 'taskscape' (Edmonds 1997, Hind 2004a, Hind 2004b).

3.2.4 Material culture studies

Within archaeology we are very good at separating things out; we tend to think of the architectural form as the framework for later human activity, in sequential terms you must have architecture in order to perform material deposition. In order to challenge this traditional line of thinking, Lesley McFadyen (2006) has used material culture studies to extend design into occupation. At Gussage Cow Down 294 and Horslip long barrow sites, McFadyen encountered the knapping of flint at the point where pits were cut to intersect, therefore joining material culture and architecture through the practice of making (McFadyen 2013). Through this work architecture and occupation are linked more closely as the result of studying material culture (McFadyen 2012). Castelo Velho is a Chalcolithic walled enclosure, in the Alto Douro of Portugal (McFadyen 2012). Through a material culture study of pottery, focusing on the pre- and post-breakage histories across the various building projects at Castelo Velho, McFadyen was able to extend design into occupation. What can be gained applying similar theoretical methodologies to the faunal remains within the built environment of Early Neolithic Yorkshire? How can we extend occupation into the architectural histories of Neolithic long barrows and round barrow sites? Material culture studies can also be used to illustrate occupation beyond the immediacy of architectural form. If I was to take my own home as an example the walls of my house act as the framework for activity;

whereby my family's material culture, through the temporal rhythm of our occupational behaviour, becomes distributed throughout. The result being a palimpsest of ephemeral assemblages (or a mess). Now with four young children, this material culture (evidence of occupation) quickly moves beyond the architectural framework and out into the landscape (the garden, down the lane, into the neighbour's garden). This is also the case in the archaeological evidence. Joshua Pollard (2019) discussed his material culture study from several causewayed enclosures in southern Britain. His work on flint scatters and the above ground activity (as opposed to ditch/pit fills) at these sites demonstrated to me how occupation was not tightly defined by the architectural framework (in this case the causewayed ditches). Occupation in the form of flint scatters were collected from within the site and beyond into the adjoining landscape. This brings me back to an earlier point, there should be no line drawn between architecture and landscape, for both are intertwined through the tasks pulling people and their herds through space and time. For it is the interconnections between these things that we must try and trace and come to recognise in the archaeological record.

Building on this idea that there should be no end point to what we perceive architecture to be, as architecture itself extends outward into the landscape, as a force goes out and on in the world (McFadyen 2011).

3.2.5 Taskscapes

Mark Edmonds (1997) discusses the structure of the 'taskscapes' that people inhabited during the Early Neolithic in southern Britain. Tasks, in temporal terms are not isolated events but connected to what has gone before and what is yet to come. Through 'taskscapes' we can start to consider the interconnections between different dispersed spaces, through following the tasks creating material biographies. Mark Edmonds (1997) follows the tasks connected with lithic biographies, concentrating on the ways people and lithics intersect through labour and how these connections are temporal; a result of the changing rhythms of people's lives. What Hind (2004a, 35) refers to as a focus on 'human *action*, not society or culture.' I would in contrast like to follow and understand the multidirectional histories of faunal remains. Animal bone assemblages offer the opportunity to follow the biographies of a number of animal species, both domesticates and wild – all with their own unique rhythms and relationships with people

during the Early Neolithic in Yorkshire. The animal bone found during excavation is the end point of a complex and potentially varied chain of operations that begin with the first contact. This first contact could vary from a shepherd lambing his flock or the chance meeting between a hunter and a roe deer on the forest edge while moving along well-worn paths that linked one place and one season to another (Edmonds 1997).

3.3 Eco-critical perspective

This is not simply a question of extending a biographical approach to an animal artefact back to encompass the life of an animal. Things do not just move through different contexts, as if cultural context were something added on to an essential material presence. Rather I suggest that things drag the effects of past encounters with them and present opportunities for future action.

Conneller 2011:54

Animals are sentient and intentional nonhumans (Haraway 2016). Possessing agency by their ability to act upon the world, animals were during the Early Neolithic in Yorkshire connected and intertwined with humans in the living world and were equally entangled in death (Overton and Hamilakis 2013, Overton 2018). Animals can be revered or feared, can act as subsistence, technology, warmth, can offer companionship, traction, can be a sign of status, can act as metaphor in social systems, in histories, legends and mythology. The roles of animals are endless with scores of examples found throughout the world, both today and in the distant past. Fukui's (1996, 320) work on East African pastoral societies describes their specific social and cultural context as '...they live their whole lives with their domesticated animals, the animals become an indispensable focal point not only for human relations within society but even their entire world view.' I would like to explore human-animal relationships from a number of theoretical standpoints. The first would apply an evidence-based interpretation to the study of faunal remains during the Early Neolithic in Yorkshire. Building on the work of Thomas and McFadyen (2010), Parmenter *et al* (2015) and Banfield *et al* (2019), much can be learnt from the re-examination of existing archives. This is especially the case for traditionally recognised 'ritual' sites where evidence for bone processing and therefore occupation is frequently understated (note example from Etton re-analysis Parmenter 2015 and Parmenter *et al* 2015). I would also like to explore the temporal and spatial locations for faunal remains. Breaking sites into discrete zones (pre-barrow, pits, ditches, super-structure, forecourt, etc) may represent different temporal activities,

which reveal the diverse range of human-animal associations. What can we learn through looking at sites from this perspective? Thomas and McFadyen (2010) were able to demonstrate from Cotswold-Seven type long barrow sites, patterns of behaviour ranging from the small but regular presence of young animals to wild animal remains. Through the generation of a regional database for the Early Neolithic in Yorkshire (pits, settlement scatters, long barrow and round barrow sites) I hope to come to understand the role of both domesticates and wild animals.

In order to offer a perspective which de-centres the human from these historically complex human-animal species relationships, I will apply a mutual, multi-species reading of the archaeological evidence. This approach allows us to consider animals 'living with' as opposed to living under humans. Such a perspective moves the narrative towards a condition of shared, mutual, e(co)-existence with humans and animals, acknowledging that 'the hybrid community sharing meaning, interests and affects is more often the norm than the exception' (Boyd 2018). Fijn (2011, p36) describes animals as 'agents who participate in a reciprocal, co-domestic relationship.' I am interested in exploring concepts of occupation rhythm and tempo from the domesticate perspective. In all likelihood people moved at the pace of their animals and at the immediate needs of their animals, as to push too hard and for too long could lead to disaster. When thinking about landscapes we tend to place humans at the centre. It was people who cleared the woodlands for their herds and flocks. While moving along well-trodden paths or along the edges of grazed pasture the roles of cattle chewing bark from trees, pigs furrowing and sheep nibbling seedlings would have had its own significance on the overall landscape ecology. We can also consider individual animal biographies. Those animals/individuals who offered companionship (dogs) and/or personal traits, stories which were known by the people of the community (see Banfield *et al* 2019).

One of the challenges of contemporary archaeology is the construction of methodologies that investigate the complex relationships between human beings and the world around them. If our writing is dull and lifeless, then the practice of archaeology will itself become dead...I believe that archaeologists have responsibilities, and an ethical commitment to writing the histories of these dead people's lives, and to imagining different kinds of humanities. This will involve moving towards much closer understandings of the lives and agencies of plants and animals, and how the flows of objects and their biographies were bound up in routine life.

Chadwick 2004: 23

I believe that to achieve Chadwick's (2004, 23) imaginings of an archaeology full of life, with greater understanding of the agencies of animals, we must incorporate more closely the fields of natural sciences and humanities. Such attempts have been made in the areas of anthropology and geography. In the former, Ingold (1990, 224) recognises the disparity in anthropological studies between a 'really natural' nature and 'culturally perceived' nature. The result driving a wedge between the human subject and the continuum of organic life. Similar conceptualisations of nature and culture have been prevalent in archaeological studies of animals (for a history of, refer to Chapter 2). Over the last twenty-five years the sub-field of animal geography has made progressive steps in integrating the natural sciences (Buller 2014, 2015), not only considering animals as beings in the world but also their 'subjective universe' (referred to in German as *Ömwelt*). Hayden Lorimer's (2006, 497) study of herding memories of humans and reindeer in the Cairngorm mountains, uses ethnography and ethology to reconstruct the multi-scalar and 'entwined biographies of human and animal subjects.' Applying a whole-archive approach ('make-do' methodology), Lorimer examines herding diaries, photographic portraits and completes field walking of the topography. When exploring the herd-herder relations, Lorimer (2006, 498) describes it as inter-dependent, with a unique bond formed through trust, reciprocity and understanding. The significance of place within the local topography is often mapped out in re-told stories through the biographies of charismatic animals (Lorimer 2006, 502). One herder suggests 'when and where you learn to think like a reindeer, an animal's appreciation of topography, time and movement can be shared by humans' (Lorimer 2006, 502). What Fraser Darling (1937) referred to as a 'phenomenal and elemental geography of the herd'. John Berger (1979) places a particular significance on the sensitive treatment of the material conditions of living, both human and animal; Berger entangles the lives of both subjects. This is perhaps no more visceral when he describes the slaughtering of a pig (Berger 1979, 41).

If we are to believe that the Early Neolithic in Yorkshire was the result of a co-domestication event between humans and animals, the effects of contextually specific human-animal relationships; and therefore the built environment was the material manifestation of interconnected processes and presence of humans and animals, the study of an animals *Ömwelt* and its appreciation of topography, time and movement is

all the more vital. While ‘culturally perceived’ understandings of animals are perhaps innumerable, particular animal species habits and behaviours are more stable, allowing archaeological methodologies to draw from the natural sciences and apply to an archaeological setting with greater confidence.

Tsing (2017) de-centres the human in her writings on the ‘auto-rewilding’ of landscapes of human disturbance, referred to as ‘weeds’, Tsing (2017) creates fresh anthropological histories focused on the autonomy and agency of animal and plant species. Clancy and Ward (2020) defining autonomy as ‘...the fullest expression of animal life, including capacity for movement, for social and familial associations, and for work and play.’ I will apply such an approach to the issue of ‘intrusive’ animal bone specimens recovered from archaeological excavation (see Chapter 6).

3.4 Zooarchaeological standards of recording

The standards used for the recording of faunal remains in my research are the following:

3.4.1 Identification

I initially identified the animal bone using the reference collection at the Institute of Archaeology in London and recorded directly onto an Excel database. When possible, I made identification to element, side and taxon. Those fragments which could not be identified to species due to the absence of diagnostic morphological markers I classified as ‘large mammal’, ‘small mammal’ or ‘indeterminate’. Those specimens which I mention in the text are followed by their identification numbers in brackets.

3.4.2 Quantification

I calculated the total number of specimens for all species (NSP) and minimum number of individuals were also calculated (MNI).

3.4.3 Measurements

I recorded each element using the zoning system outlined by Mahoney (2013). Measurements were taken on all fully fused bone following standards established by von den Driesch (1976). Proximal-distal dimension of the trochlea at its point of maximum thickness on the medial side follows Legge and Rowley-Conwy (1988). Where possible I compared measurements with those listed in publications of other contemporary sites (Albarella and Payne (2005), Banfield 2018, Brickley and Thomas 2004, Degerbol and Fredskild 1970, Grigson 1999, Gron *et al.* 2018, Legge 2008, Legge and Rowley-Conwy 1988, Mulville and Grigson 2007, Rowley-Conwy and Owen 2011, Serjeantson 2011, Shepherd 2021, Thomas and McFadyen 2010 and Wright 2016).

3.4.4 Ageing and sexing

I recorded age-at-death ranges according to Silver (1969) epiphyseal fusion criteria for animal bone. The presence of wear on all teeth was recorded. I recorded tooth wear in cattle and pig using the Grant system (1982) and an age estimate using Halstead (1985) and Hambleton (1999). Wear and age stages from red deer lower teeth were recorded following Brown (1991). I recorded metrical measurements of elements in order to detect the sexual composition of the assemblage.

3.4.5 Gnawing, butchery, burning and condition

For all identified specimens the anatomical location and character of burning was recorded following Brickley and McKinley (2004). I recorded butchery, fracture and gnawing, with butchery marks described as ‘chop’ or ‘cut’ marks (Parmenter 2014). Surface preservation was graded following Harland *et al* (2003) scale. Material which appeared to be worked, worn or polished I also noted.

3.5 Conclusion

At its foundations I propose an evidence, contextual-based understanding of the archaeological record. I aim to achieve this through detailed re-examinations of the whole archive, both material and paper, building on successful methodologies employed elsewhere (Thomas and McFadyen 2010, Parmenter *et al* 2015 and Banfield *et al* 2019,

Shepherd 2021). With this new reading and understanding of the archaeological evidence I wish to explore the process of multidirectional histories and ephemeral assemblages connecting animals, landscape and the built environment of the Early Neolithic in Yorkshire.

4

CALAIS WOLD 275: an Early Neolithic round barrow

4.1 Introduction

In the summer of 1892 (from July 27th to August 15th), John Mortimer under the direction of Sir Tatton Sykes Bart opened a mound within the Calais Wold Group, East Yorkshire; they would later come to name this mound ‘Barrow No. 275’ (SE8313355478) (Mortimer 1905, p161). Mortimer (1905) would go on to write three pages of text, which included six illustrations; the first a section of the barrow (Fig 410b), the second a plan of the excavation area (Fig 410a) and then followed by four flint arrowhead illustrations on Plate Ll (Fig. 410c, 410d, 410e and 410f). The presence of animals at Calais Wold 275 were observed by Mortimer in the form of nineteenth century rabbit digging and the burial of dead cattle by the tenants of the nearby farm; resulting in the reduced apex of the mound (Mortimer 1905, p161). Within an oval grave were detached unburnt animal bones, including six pieces of antler of a male red deer and the possible vertebra and antler fragment from a male roe deer. These were associated with eight small pieces of pottery, two large flint stones and human remains (Mortimer 1905, p162). Finally, Mortimer describes several fragments from animal bones recovered from the base of the mound and in the ‘rubbly material of the inner core’ (Mortimer 1905, p163). The barrow was re-visited in 1974 and 1975 by the Department of the Environment (Coombs 1976, p130). David Coombs of the Department of Archaeology, University of Manchester would undertake a total excavation of the site, briefly describing his findings in a short article which included a single illustration (Fig. 1. Plan of the Burial area of Barrow 275) (Coombs 1976). His only reference to animal remains is the repeated detail of detached animal bones from a pit (Mortimer’s oval grave) (Coombs 1976, p130). David Coombs would unfortunately never go on to fully publish his results. Following his death in 2002, the archive was passed onto Terry Manby of Market Weighton for storage and publication (T Manby, 2020, personal communication, 10 February). The site remains unpublished, with elements of the archive either being lost or relocated and stored at Manchester

University and under a non-official capacity at the English Heritage Store in Helmsley (S Harrison, 2019, *pers comm*, 19 November).



Figure 4.1 Calais Wold 275 (authors photograph 2020, Coombs archive E3/6).

The primary aim of this chapter is to re-trace and re-examine the faunal remains and their associated contexts from Calais Wold 275. I am interested in the complex and nuanced relationships between architecture and animal remains or to put it another way; between multispecies world making practices and the potential temporal and spatial histories revealed through a detailed contextual re-reading of the whole archive, both paper and the material archaeological evidence (for it is only in this way that previously overlooked things can be brought to the fore).

To begin this chapter, I will review the current state of knowledge for Calais Wold 275, focusing on the writings of Mortimer (1905), Coombs (1976) and the recent dating and isotope results produced by the Beaker People Project (Parker-Pearson *et al* 2019). Following the call by Baird and McFadyen (2014) for an archaeology of archaeological archives, with an active engagement with the formation of archives, I will discuss my efforts in discovering what remains of the archive; prioritising contextual/architectural details, chronological data and the faunal assemblage. In order to grapple with the

complexity of the evidence, this chapter will end with two essays designed to demonstrate the potential animal histories evident when engaging with the archaeological evidence from a multispecies, whole archive approach. The first draws from Morton (2011) and Hodgett's (2019) concepts of participant-photographer, or perhaps more apt in this case – archaeologist-archivist; and will explore the ontological entanglement between animals and archaeologist. To end, I borrow Thomas and McFadyen's (2010) contextual approach to understanding the complexities of practice between architecture and animal remains, a temporal and spatial analysis of human-animal relationships at Calais Wold 275.



Figure 4.2 Coombs archive (authors photograph 2020).

4.2 Current State of Knowledge

In 1892, Calais Wold 275 (also known as Callis Wold) measured twenty-seven metres in diameter and almost four metres high, Mortimer comments that this round mound was by far the largest of the Calais Wold Group, admiring it as ‘a fine example of the labour bestowed in the memory of the dead’ (Mortimer 1905, p161). Removing a thick covering of large fir trees on the apex, he then went about sinking a twelve by seven metre trench through the centre of the mound, encountering the damage caused by the

exploits of rabbit diggers and the remains of cattle buried by the local farm tenants (a call back to my own sheep-burying). The upper portions of the barrow superstructure produced Bronze Age material in the form of a barbed and tanged arrowhead, upper portions of a cinerary urn and the remains of three individuals, a partially cremated adult and youth (Mortimer's no.2) and the lower half of an adult skeleton (Mortimer's No.4) (see Figure 4.3).

At the base, Mortimer recovered the remains of an adult skeleton with no associated diagnostic material culture, two metres from the centre (Mortimer No.3). East of individual No.3 an oval grave measuring 1.5m wide by 1.4m deep was discovered. Two large flints and cremated adult human remains were identified from the base. Within the fill of the grave were detached unburnt human and animal remains. The faunal material consisted of six pieces of antler from a male red deer, antler fragment from a male roe deer and a vertebra, thought by Mortimer to originate from the same animal (Mortimer 1905, p162). An additional detail to the excavation account was encountered within David Coombs's archive notes (File E3, page 2 | E3/2). Mortimer's manuscripts held at Hull Museum suggest that he argued that the oval grave was 'covered over with wood and left hollow, in course of time this covering gave way and let down the rubbly earth into the grave and the clay above as far as the edge of the grave shown in section.'

East of the oval grave, running East-West was a pavement of flat Liassic stones, measuring 3.6m by 0.91m (Mortimer 1905, p162), upon which were placed at least ten human skeletons. The condition of these remains, which are described by Mortimer as 'greatly crushed and broken', meaning he was unable to draw their positions in detail or collect anatomical measurements. In addition to the ten human skeletons were scattered a number of partially cremated bones, similar to those within the fill of the oval grave and three leaf shaped flint arrowheads (Mortimer 1905, p161). Recovered from the base and 'primary mound' (David Coombs terminology) were several fragments of faunal remains, three pieces of pottery and flint material culture (Mortimer 1905, p163).

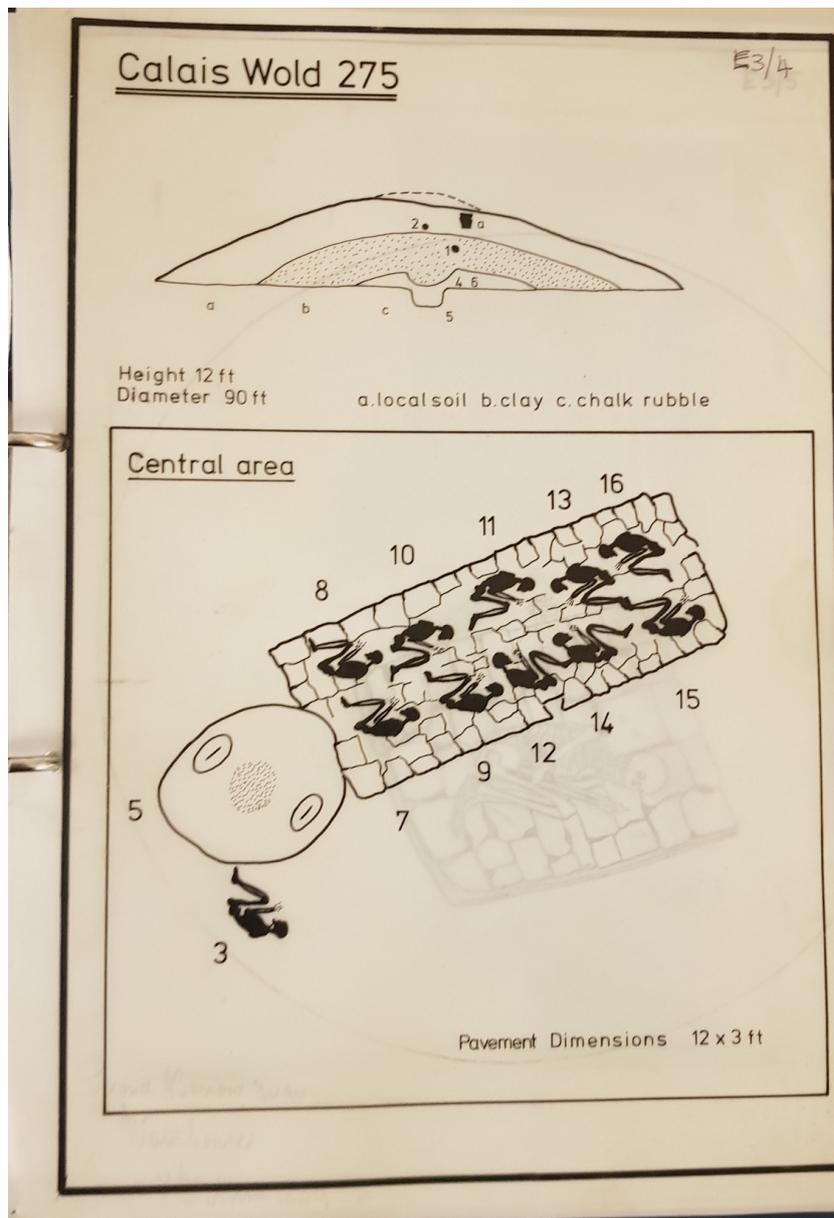


Figure 4.3. Mortimer's barrow section and plan of central area of Calais Wold 275. (authors photograph 2020, Coombs archive, E3/4).

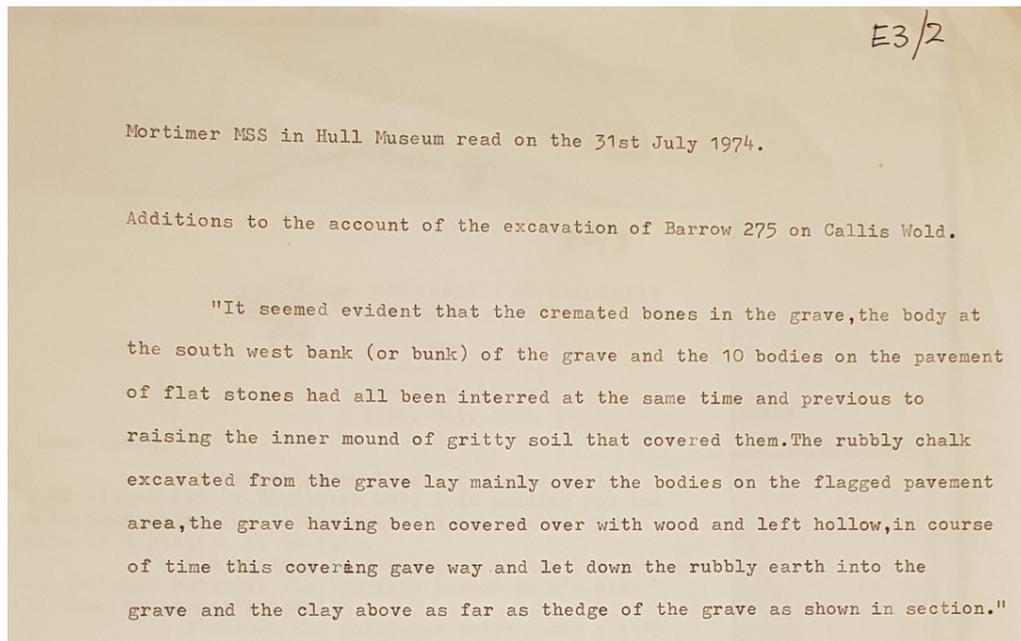


Figure 4.4 Additions to the account of Mortimer's excavation at Calais Wold 275 (authors photograph 2020, Coombs archive E3/2).

David Coombs on behalf of the Department of the Environment totally excavated the site in 1974 and 1975. Calais Wold 275 had come under pressure from farm extensions which had since Mortimer's excavation caused further damage through agricultural activity (Coombs 1976, p130). From Mortimer's excavation, a pit (oval grave) was located with only pottery fragments and human bone remaining. On the eastern side of the Liassic stone pavement Coombs revealed a D-shaped pit, containing a Lias slab (thought to be from the pavement) and human remains. Coombs comes to interpret the two pits as post pits constituting some form of mortuary architecture (Figure 4.5). In front of Coombs's 'mortuary structure' was a straight bedding trench which held upright posts and contained sherds of Towthorpe Ware pottery. To the rear a curved trench, again holding upright posts. Later, the central area was covered with the primary mound, a low circular feature (Coombs 1976, p130). Later again, there was evidence of Beaker activity in the form of ceramics, charcoal and flints. The primary mound was extended with turf stack with surrounding ditch and inner bank. To end, the mound was enlarged for a third time with a substantial surrounding ditch. Coombs's two-year excavation resulted in only two pages of published text and a single illustration of a plan of the burial area (Figure 4.5) (a focus on the mortuary structure). With the exception of

remarking on Mortimer's faunal remains from a pit, Coombs does not describe any further evidence for animal activity at Calais Wold 275.

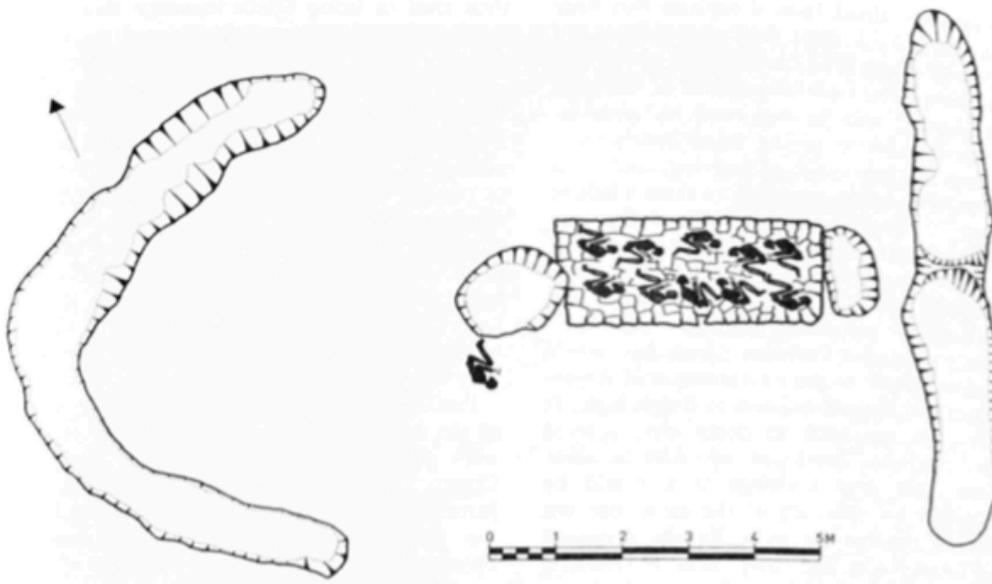


Figure 4.5. Plan of the burial area of Calais Wold 275 (Coombs 1976, Fig.1).

Over the subsequent four decades Calais Wold 275 has received limited mention, I would argue as a direct result of no publication. Ian Kinnes (1979) provides a short list of key features as a reference directory, along with a radiocarbon date from the enclosure trenches on charcoal – 2983 +/- 64 BC (BM-1170). The latest straight façade trench radiocarbon results formed part of Seren Griffiths's unpublished PhD (2012), which details the most relevant *terminus post quem* for Towthorpe Ware deposition at 3710-3490 *cal* BC (80.0% probability; BM-1167) (Griffiths 2012, p175). Manby *et al* (2003) describe the posts from the straight façade trench as charred: this is new information and likely the result of Terry Manby referencing primary data after becoming unofficial custodian of the Coombs archive. The final and most recent research concerning Calais Wold 275 comes as part of the Beaker People Project (BPP) published in 2019 (Parker-Pearson *et al* 2019). Within Appendix 1 of the BPP publication, the authors provide a small description of the features and site chronology, adding nothing new to the existing published literature. The project did conduct dating and isotopic analysis from human remains held at the University of Manchester. A date of 3770-3640 *cal* BC (95.4% probability) was recovered from individual SK116 (Mortimer's burial 7), which confirm an Early Neolithic date for the earliest phase of

activity at the site. Sulphur isotope ratios from individuals SK117 (Mortimer's burial 8) and SK118 suggest a high level of mobility during their lifetimes. These are significant revelations within a national Early Neolithic narrative supporting similar evidence from other regions, but also importantly within Yorkshire itself, where a sedentary lifeway interpretation still holds favour (Manby *et al* 2003).

What became clear to me were the limitations for zooarchaeological and contextual analysis as a result of using purely the published accounts alone. The Humber digital Historic Environment Records were equally scarce on details. Assigning the name 'High Callis Wold Farm Barrow (M275)' and ID number 8236. I have not come across this name in any other account of the site, with the M275 referring to Mortimer 275. A summary of the site is recorded as partially excavated in 1892 and then again in 1974. Monument type has three bullet points; Inhumation cemetery (Early Neolithic – Late Bronze Age), Mortuary Enclosure (Early Neolithic – Late Bronze Age) and Round barrow (Early Neolithic – Late Bronze Age). To end, the find types recovered included arrowheads and an urn. Here a deliberate choice was made not to include animal remains, which is a valid finds category within the HER (as seen for other Neolithic sites). This is a surprising exclusion considering both key publications include details of animal remains at the site. I would interpret this omission the result of either the records author referencing only Ian Kinnes's work (1979) or perhaps more worryingly a bias towards other kinds of material culture and prejudice against animal remains and their significance as archaeological evidence.

4.3 Archaeology of the Archive

After much energy expended in the search for the Calais Wold 275 archives, I eventually identified four storage locations. The University of Manchester held the human remains from the Coombs excavation and those re-deposited by Mortimer (subsequently re-discovered in 1974). Hull Museum has twelve records within its database associated with the site, all derive from Mortimer's excavation at the end of the nineteenth century. The 'accession numbers' for these finds indicate three classification events, in the years 1942, 1984 and 2016. A careful reading of these moments perhaps mirrors attitudes in archaeological discourse and the varying significance assigned to differing

archaeological evidence. In 1942 only the cinerary urn was assigned an accession number. In 1984, further pottery, stone, a single animal bone and flint implements were to receive the same status and descriptive records within the museums archive catalogue. It was not until 2016 that the remaining animal bones were credited the same privilege. With regards to the photographic database there still remains a bias towards ceramics with only KINCM:1942.687 and KINCM:1984.1786.86 being associated with photographic records. Terry Manby still holds a draft manuscript and some illustrations (T Manby, 2020, *pers comm*, 10 February). The remainder of the 1974-75 archive was later to be stored at the Historic England Store in Helmsley, North Yorkshire. It is to this latter archive that this chapter will focus. I was kindly granted permission by Terry Manby and Susan Harrison (English Heritage, Collections Department) to conduct a re-examination.

On a bitterly cold February morning, I was greeted kindly by Susan Harrison, at the Historic England Store in Helmsley. Susan guided me into the small office, where I was introduced to the small team and was directed to my archaeological evidence; four large boxes (including a recycled Cuisine de France) stacked haphazardly on the floor and upon the desk. Within these boxes, which displayed several different spellings for the site (Calais Wold, Calis Wold, Callis Wold), were numerous smaller boxes, plans, files, folders, photographs, bagged flint and trays of open, crumbling ceramic material. Susan offered an apology for the condition of the collection but stated as she had done before via phone and email, that the archive was held there as a favour to Terry Manby and in no way in an official capacity. I placed my belongings on the remaining space of the desk and quickly rummaged through the Russian doll like assemblage, exhaling, I quickly realised that there was no bone. I was to later understand the human bone was in Manchester and the animal bone had since gone missing. After travelling over 300 miles from my home on the hunch there could be something of worth, I felt dejected and frustrated. Recovering my composure after taking up the offer of a coffee from Susan I started to work through the archive. Due to the limited time available to examine this site I decided on a methodology which prioritised data collection, I was to photograph everything and continue my work further after I returned home.

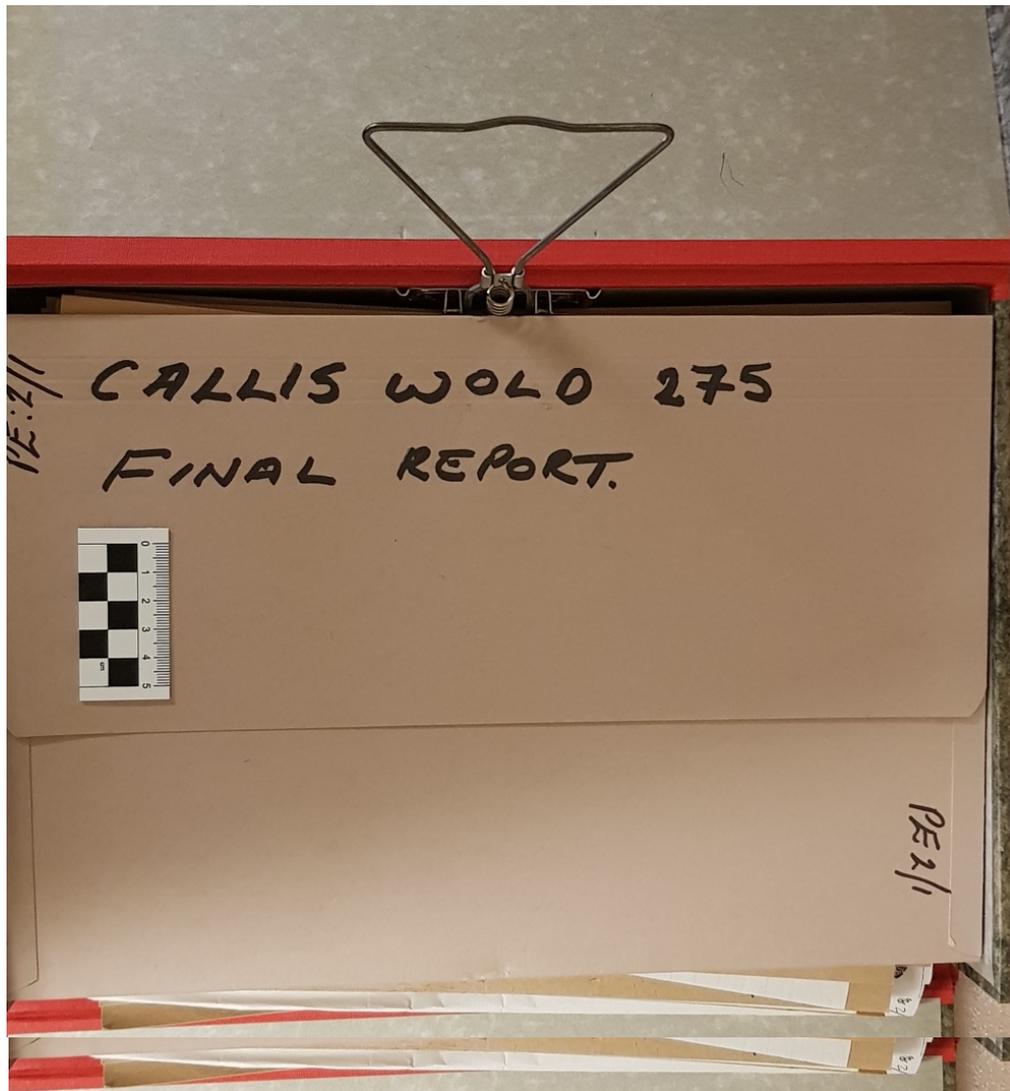


Figure 4.6 Callis Wold 275, Final Report (authors photograph 2020, Coombs archive PE2/1).

The first binder I re-examined was a red and grey cardboard ‘EMGEE’ folder with two white stickers, labelled ‘CALLIS WOLD PE2. FINDS AND SPECIALIST REPORTS’ and ‘FINAL EXCAVATION REPORT.’ Within the binder were sixteen brown cardboard files labelled PE2/1 – PE2/16. This binder demonstrates that David Coombs had in fact come very close to publication. With only the exception of file ‘Neolithic pottery PE2/5’, the remaining were present and complete, including notably the animal bone report (PE2/13). Calais Wold 275 deserves a full publication and it is not within the scope of this chapter or thesis to offer a complete account of the findings described.

To that end, I will briefly where appropriate discuss details concerning human remains but will not provide the entire report found within the archive; this will require a later publication. I will instead discuss elements of the reports which are significant when gaining a better understanding of the relationship between site chronology, architecture, animal remains and material culture deposition.

4.3.1 David Coombs draft chronology

File ‘*Excavation PE 2/2*’ provides the most complete account for how David Coombs understood the site’s formation and key chronological milestones. It consisted of twenty-five single-sided pages, with partial typed and handwritten notes. He describes the site as suffering considerable damage since Mortimer’s 1892 excavation. The northern part of the mound and ditch had been destroyed by the digging of a silage trench, with the southern part of the mound and ditch damaged by a new farm road. His chosen excavation methodology involved dividing the site into six sections and excavating by both hand and machine (Figure 4.7). Only the bedding trenches were wet sieved.

Coombs interprets the earliest phase of activity (Phase 1) as the removal of the topsoil prior to the building of the mound. This is confirmed in Helen Keeley’s soil analysis report (PE 2/15), detailing the examination undertaken in 1974 by Dr R Hartrup of The Soil Survey of England and Wales. The old ground surface revealed only human remains, in the form of fragmented and cremated long bone elements (Finds 318 and 319); possibly the femur and tibia. This detail was not included in Coombs’s draft report but retrieved from a detailed reading of the context sheets within the archive.

The second phase of activity as argued by Coombs was the construction of the ‘mortuary structure’. This consists of a singularly executed design of a Lias burial platform, two pits, Mortimer’s burial number 3, a straight facade trench and curved bedding trench.

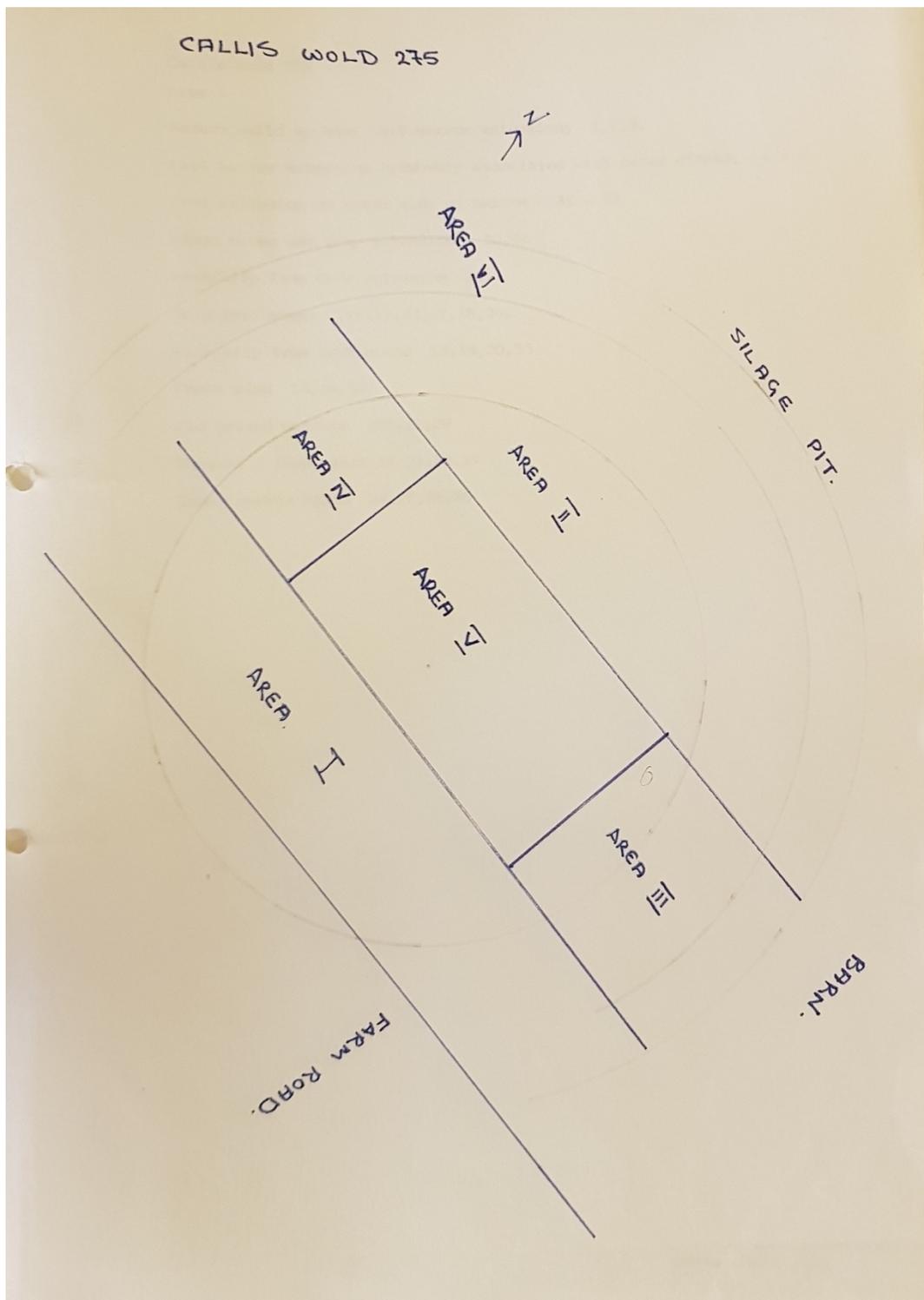


Figure 4.7 Excavation Methodology (authors photograph 2020, Coombs archive PE/4).



Figure 4.8 Aerial photograph of Calais Wold 275 (author photograph 2020. Coombs archive E2/7).

Burial platform

Coombs records the total removal of the burial platform by Mortimer, leaving only four Lias blocks (a. 25.7cm x 19.2cm x 4.7cm; b. 34cm x 26.3 x 5.3cm; c. 38.4cm x 26.3cm x 5.6; d. 50.2cm x 24.8cm x 8cm (Coombs archive PE 2/1/1)) in the backfill of the trench. The measurements for the platform remain those provided by Mortimer (1905) with no new information coming to light from the later excavation. An interesting detail (within the Coombs archive) overlooked to date is the presence of fossil shells within the Lias, which are clearly visible and evident in every case. A fifth block was recovered from the oval pit (Mortimer's Pit) and a sixth from a D-shaped pit. Geological examination by F. Galvin and J. Chambers (Coombs archive PE 2/14) of these Liassic blocks suggests a provenance two miles west from the site on the edge of the Wolds. The geology report (PE2/14) details that these blocks were of Lower Liassic origin, which contain clays, shales and limestone beds. The lowest of the limestone bands was an 'oyster bed'; it is the fossils of broken oyster shells which the blocks were largely composed of. Transubstantiation is how substances such as stone, bone, or shell, take

on forms and qualities which transgress the boundaries between types of substance (Irvine 2020). Here oyster shell has taken on the qualities of stone, transgressing its own animal boundaries. Did Early Neolithic builders recognise these fossils to be oysters? There is no evidence for oysters at Calais Wold 275 included within the archive, however, the Kilham long barrow site had evidence for limpets from Trench 19, within the quarry pit and oyster from Pit 7 (Manby 1976, 158). $\Delta^{13}\text{C}$ bone/dentine ratio (-20.6/-21.4) suggests individual SK117 had a different diet in childhood which could have included some mobility with visits near Kilham and/or the coastline (Parker-Pearson *et al* 2019, 497). Fossils have been recovered relatively regularly from British Neolithic deposits, including West Kennett long barrow (Piggott 1962, 54), fossilised shells are noted from the Blackpatch Shaft 2 flint mine (Teather 2018, 245), a Jurassic fish tooth was found at Liff's Low round barrow and from the causewayed enclosures at Maidan Castle and Etton (Teather 2018, 6). On this platform Mortimer (1905) recovered ten inhumations (1905), which consisted of adults and children, as well as scattered partially cremated bones. The only grave goods recovered were three leaf-shaped arrowheads and dark flint pieces.

Oval Pit (Mortimer's Pit)

The oval pit when rediscovered by Coombs measured 1.68m by 1.4m at its maximum and contained human bones, two flint nodules and eight pieces of pottery which were reburied by Mortimer after his excavation; the animal remains were not. The primary interment of the oval pit was a human cremation. The later pit fill contained human and animal bones along with pottery and one Liassic block from the neighbouring platform. Mortimer's plan suggests the burial platform slightly overlapped the oval pit, this could indicate that the pit predates the platform. The human remains, animal remains, and Liassic block seem to have collapsed in at a later point. There then begs the question as to why build a stone platform, which in its very design would ultimately result in its collapse? One answer is that the pit contained a post and only after the removal/decay of the post did the platform and its contents fall in. Coombs seems to wrestle with this conundrum throughout the archive. He goes from referring to the 'post pit' to 'pit' and at times scoring out the word 'post' (refer to page PE 2/2/8) and highlighting that no post pipe was identified during the excavation. With regards to the faunal remains Coombs suggests the fragments of red deer antler were the tools of digging and later abandoned.



Figure 4.9 Oval pit (authors photograph 2020, Coombs archive E3/11).

Mortimer's burial number 3

A little south-west of the Oval pit was a possible male, middle-aged adult (Parker-Pearson *et al* 2019, p497), laid on his right side, knees pulled up and hands on face. Mortimer's section illustration (Fig 410b) shows no evidence for a later grave cut through the primary mound (Phase 3), suggesting pre-mound activity. No material culture was associated with the burial.

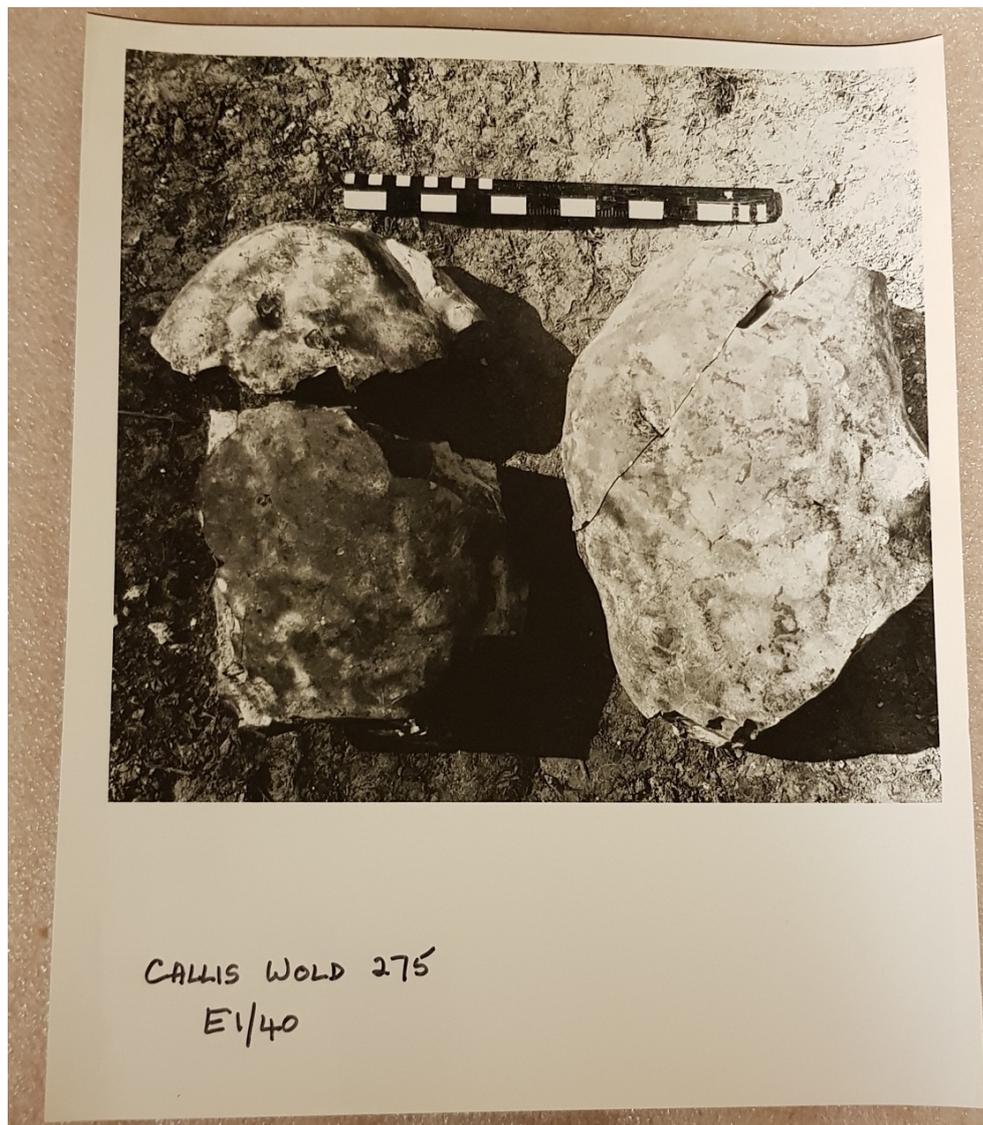


Figure 4.10. Flint nodules from oval pit (authors photograph 2020, Coombs archive E1/40).

Parker Pearson *et al* (2019) on the contrary suspect the burial may in fact be Chalcolithic/Early Bronze Age in date but offer no supporting evidence for their argument.

D-shaped pit (Southern pit or Post Pit B)

The 1974-5 excavation discovered a D-shaped pit at the opposite end of the burial platform from the oval platform (please refer to Figure 4.5). The Coombs archive describes this pit 1.4m by 0.80m at its maximum but does not provide a depth measurement. Unfortunately, there are no section drawings surviving for this feature in the archive. Tipping into the upper fills of the D-shaped pit was a Liassic block accompanied by chalk lumps and human remains. David Coombs suggests that these had collapsed into the pit from the platform and represent the burial platform; its contents and the chalk covering which originally enveloped the bodies. From the position of the block, I would interpret that the pit had already partially filled up before the block and its contents collapsed in. Figure 4.11 is a photograph recovered from the archive illustrating this feature. The human remains represent a minimum of seven individuals in fragmentary condition. Coombs argues that the majority of these remains slipped into the pit from the burial platform, the exception being a child skeleton in a fairly complete state which may have been placed directly into the pit. The animal remains from the D-shaped pit include a cattle vertebral fragment and the burnt pelvis fragment of a sheep/goat.

Curved bedding trench (back facade)

The curved bedding trench is offered no mention within the final report file (PE2/1) and excavation file (PE2/2). It is included within David Coombs's published plan (Figure 1, 1976) and described as a 'curved façade trench which again had held upright posts.' Only aerial photographs document this feature (see Figure 4.8), with no section drawings (although a section 10 is referred to on context sheet Area 1, Layer 38) or feature-focused photographs surviving in the archive. After completing a re-examination of the total archive, I identified two context sheets for the curved bedding trench; they describes two phases of activity within this feature. The first (Area 1, Layer 38) is the quick infilling of the trench with a thick 'reddish' clay with heavy chalk lumps and flint chips. There is no archaeological evidence documented as coming from this layer and the interpretation as to the nature of this deposit is as 'packing for posts'. The second phase of activity (Area 1, Layer 37) involves the collapse of a silty clay brown earth with chalk lumps, snail shells and charcoal into the post holes; presumably after the posts had either decayed in situ, burnt down or later removed. A total lack of

archaeological evidence from this feature is in striking contrast with the two already mentioned pits and the straight façade trench, suggesting more refined temporal activity.



Figure 4.11. Liassic block within D-shaped pit (authors photograph 2020, Coombs archive PE2/1).

Straight façade trench (Southern bedding trench)

The straight façade trench is located some sixty centimetres east of the D-shaped pit. Its length was measured by Coombs at 8.34m with a central berm dividing the trench into two segments. The alignment of the central berm/spine is aligned on the burial platform. The depth of the trench is not recorded in the archive. David Coombs describes the precarious nature when crossing the central berm due to its maximum width of 8cm. Coombs argues that the trench once held wooden posts, with post pipes recovered during his excavation (see Figure 4.12). These posts were packed with chalk rubble, presumably coming from the excavation of the trench. The total number of posts and

their diameter has not been described within the archive. The archaeological evidence from this trench was plentiful with human and animal bones, snail shells, charcoal and Towthorpe Ware pottery. No worked flint was recovered by Coombs, in fact the only worked flint from the Neolithic contexts were those associated with the burial platform. The report interprets the animal bone, consisting of sheep, cow and pig as ‘nothing more than food debris.’ He describes the human bone as deriving from the burial platform and accidentally finding its way into the trench. The pottery on the other hand Coombs interprets as being deliberately deposited along the length of the trench and used as packing along with chalk rubble for the posts.

Temporal relationship of architectural features from the mortuary structure (Phase 2)

David Coombs’s ground plan of the mortuary structure from Phase 2 offers the reader a static, singular creative concept (1976, Figure 1). This single act narrative is illusionary, even if these architectural features were created in a single episode of activity, one would still have had to follow the other. The Oval pit provides a strong example; this pit must have pre-dated the laying of the Liassic burial platform due to the overhang, recognised and sketched by Mortimer (1905). This is the only interpretative example of successive temporal activity from Phase 2. An alternative reading of this evidence would consider the tempo of activity. Illustrating an argument concerning decaying flesh and the instability of placed stone, Lesley McFadyen (2007) was able to draw out the differing tempos of making architecture at Beckhampton Road and Ascott-under-Wychwood long barrow sites. Calais Wold 275 can offer us the same potential when the archaeological evidence is re-considered. Contrasting the biographies of the two trenches, the curved trench represents in McFadyen’s coinage ‘quick architecture’. Here we find the builders excavating a trench and quickly refilling it with a uniform reddish clay to pack wooden posts. I would argue there was discipline during these building works not to include other material culture, even accidentally from the material culture already present at the site (back). In contrast the straight façade trench offers several context layers, with ample material culture (front). If we hypothesise that this trench was also filled with the primary aim to hold wooden posts, the subtle layering of deposited bone and pottery indicates the material representation of an idea and/or belief; an idea connecting material and one trench, rather than both trenches. This concept of depositional belief was not restricted in time either, after the posts were no

longer present at the site, these patterns of contrasting depositional practices between the two trenches persisted: this will be considered in further detail in essay two.



Figure 4.12 Straight façade trench from the West. (authors photograph 2020, Coombs archive E3/16).

The draft report and excavation notes from the Coombs archive offer from this point in the story no further detailing of the history of activity at Calais Wold 275. A single draft illustration commissioned in advance of planned publication (Figure 4.13) is the only indicator of David Coombs's thinking regarding the sites continuing biography.

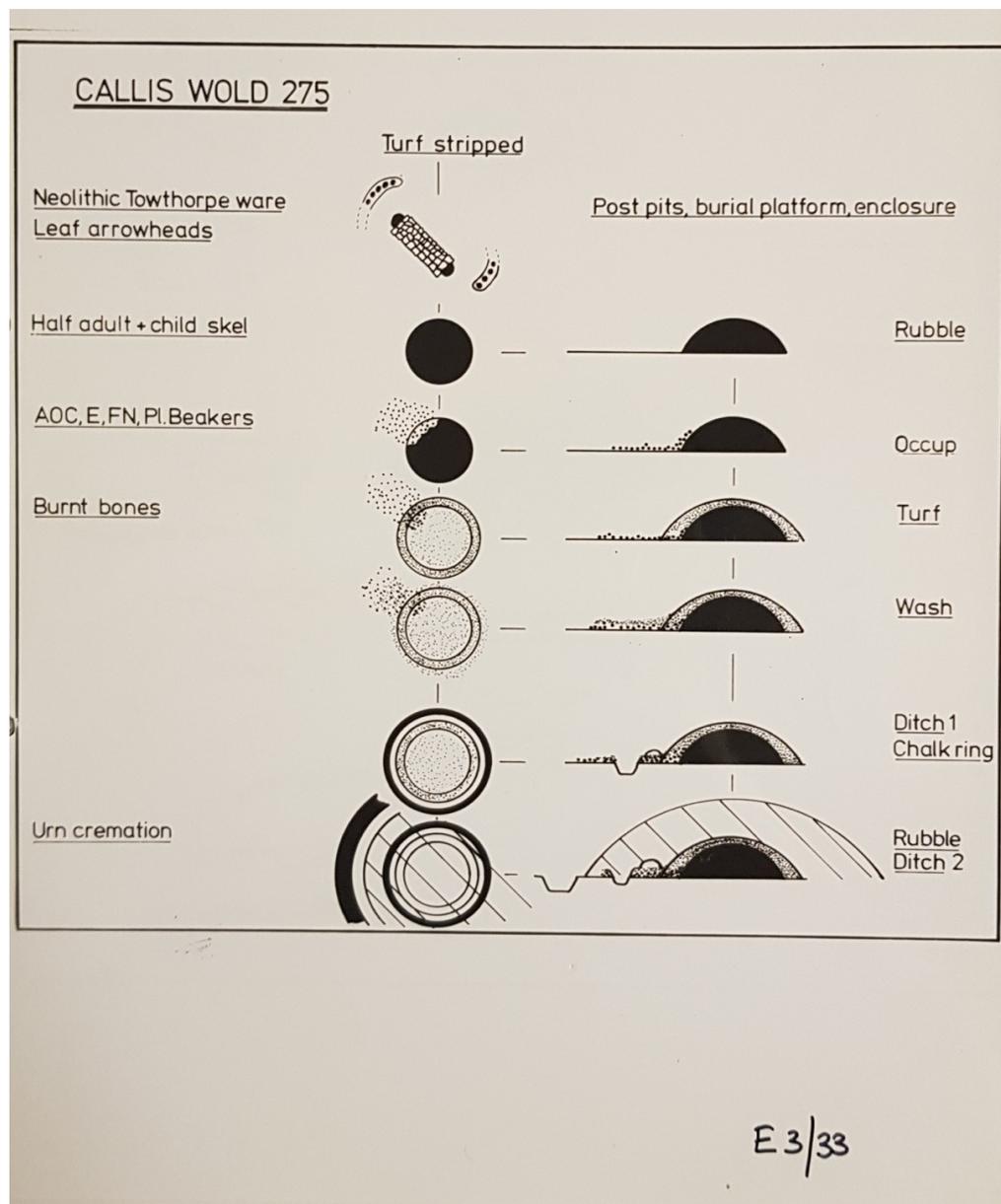


Figure 4.13 Calais Wold 275 sequence of activity (authors photograph 2020, Coombs archive E3/33).

Following the building of the mortuary structure the site is argued by Coombs to have been enveloped in what the archive refers to as the primary mound or rubble mound (Phase 3). It is not clear to me from the archive if the wooden posts were still standing at this point when the mound was upcast; archaeological interpretations tend to favour clear breaks in its chronologies (for a critique see McFadyen 2006). There are no section

drawings in the archive for this feature and my re-examination of the photographic evidence was unable to identify post pipes continuing through.

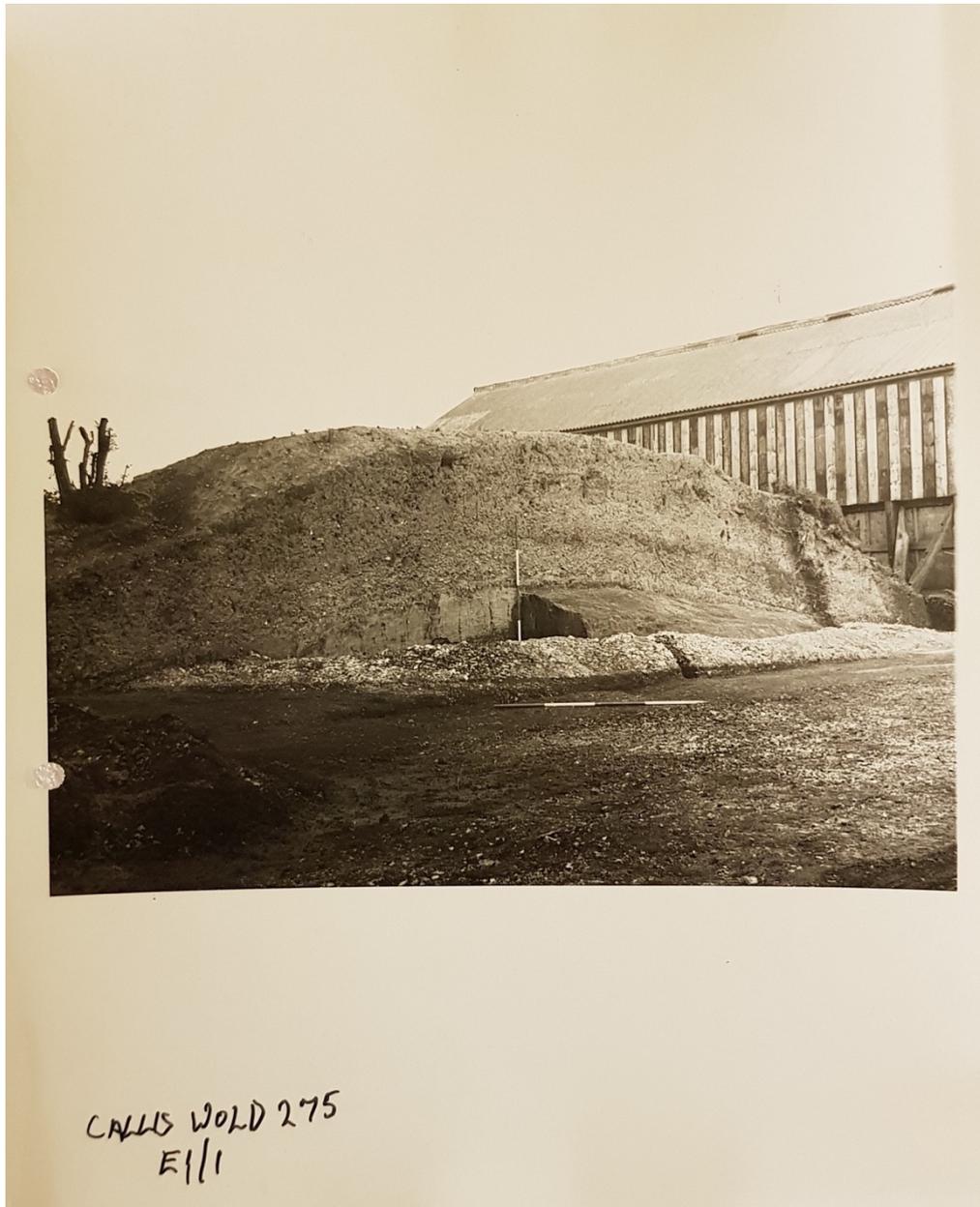


Figure 4.14 Primary Mound within main section from West (authors photograph 2020, Coombs archive E1/1).

Mortimer (1905, p163) describes this mound as being constructed of 'gritty soil', with his section drawing labelling the primary mound as chalk rubble. From Mortimer's excavation the low circular mound contained several animal bones, pottery (Figure 4.15) and flint (5 flint scrapers, 1 flake saw, 2 slingstones and 80 flakes and chips). Further examples of animal bone, flint and Towthorpe Ware pottery is recorded in the context records found within the Coombs archive.



Figure 4.15. Re-fitting of Towthorpe Ware from primary mound and straight façade trench (authors photograph 2020, Coombs archive, Area 2, Layer 19 and 34).

Coombs next argues for a significant gap in the sequence of occupation and building works. On the surface of the primary mound a sizable quantity of Beaker pottery was excavated, along with human bone, flint and charcoal. Radiocarbon results from charcoal from Area 2, Layers 31 and 29, produced dates of 2470-2030 *cal* BC (BM-1168) and 2290-1880 *cal* BC (BM-1169) placing this occupation activity to the Chalcolithic/Early Bronze Age (Parker Pearson *et al* 2019, p497). The mound is then extended with turf, followed by the first ditch and a chalk ring. This phase of construction was recorded by Mortimer as clay rather than turf but the archive describes

that ‘darker lines of the turf could clearly be seen’ (Coombs archive page 2/2/12). Only three flint scrapers were encountered during the Coombs excavation, in contrast to the human remains described by Mortimer from the same phase of build. A lack of diagnostic dating evidence makes this phase difficult to date with certainty. The closing act of prehistoric building is argued by Coombs as involving a further large extension to the mound using local soil and rubble, the deposition of an urn burial and the digging of the second ditch.

4.4 Calais Wold 275 round barrow zooarchaeological report

The round barrow site of Calais Wold 275 experienced two excavation episodes. The first in 1892 was led by John Mortimer (Mortimer 1905). The Mortimer archive which is held at Hull Museum includes four entries for animal bone. The second excavation was under the supervision of David Coombs, University of Manchester, in 1974-5. This archive is held unofficially at the Historic England Store, Helmsley. This zooarchaeological report includes the re-examination of both excavation archives.

4.4.1 The surviving faunal assemblage from Calais Wold 275, Mortimer archive

Accession no. - KINCM:2016.204.18

Animal bone; single hoof, possibly horse or cattle. Excavated by J.R.Mortimer in 1892, Barrow 275 from Calais Wold Barrow Group (Group VIII), East Yorkshire. Part of the Mortimer Collection. Bronze Age.

One intact horse 3rd phalange. No evidence for human modification and relatively well preserved. No contextual evidence is provided with the specimen but could be associated with the 19th century animal burial activity Mortimer describes near the apex of the mound.

Accession no. - KINCM:2016.204.17

Animal bone including maxilla and leg from cattle (bovine), mandible from sheep (ovine). Excavated by J.R.Mortimer in 1892, possibly from Burial 15 (No. 15), Barrow 275 from Calais Wold Barrow Group (Group VIII), East Yorkshire. Part of the Mortimer Collection. Bronze Age.

Five fragments of animal bone (5 NSP), which include two horse metacarpal fragments, one cattle humerus fragment, one sheep mandible and a cattle maxilla fragment with dentition. All are relatively well preserved. A left horse metacarpal was intact while a right horse metacarpal was represented only by the distal end, the shaft had been sawn through. The distal end of a cattle humerus was recorded as unfused, with evidence of

a helical fracture on the shaft. The dentition from a sheep left mandible suggests an adult animal. It is unlikely these specimens are associated with Burial 15 (as indicated in the accession description) from the platform and most probably were recovered from the mound material. The original packaging states ‘Calais Wold 275? Animal Bone’, it is possible these specimens do not source from this site at all.

Accession no. - KINCM:2016.204.20

Animal bone; the bone horn cores Excavated by J.R.Mortimer in 1892, Barrow 275 from Calais Wold Barrow Group (Group VIII), East Yorkshire. Part of the Mortimer Collection. Bronze Age.

Three cattle horn cores were examined. They are likely to derive from three separate animals, based on biometry. They are well preserved and probably relate to the 19th century burial of cattle Mortimer describes.

Accession no. - KINCM:1984.1786.8

Single animal bone, from leg. Excavated by J.R.Mortimer in 1892, Barrow 275 from Calais Wold Barrow Group (Group VIII), East Yorkshire. Part of the Mortimer Collection.

This fragment from the proximal end of a left cattle metatarsal is described on the original packaging as coming ‘from the body of the mound’. It is poorly preserved and has significant evidence of burning. Its appearance stands in striking contrast to the other specimens from the Mortimer archive. It could come from the 19th century cattle burials, but I would argue (based on its condition) it could be related to the Early Neolithic activity. The Coombs animal report estimates a MNI of one cow and a left metatarsal was not recovered. Its biometry is comparable to domesticated cattle from the Early Neolithic. Only through direct dating of the specimen would we be able to confirm or reject this interpretation.

4.4.2 Coombs archive, Historic England Store, Helmsley

This report details the analysis of stratified, hand-collected animal bone recovered during the Coombs excavation of Calais Wold 275 round barrow, Yorkshire. In response to destructive agricultural activity, the site was excavated in its entirety. Largely unpublished by the excavator, no mention was made regarding the faunal assemblage (Coombs 1976). After I re-examined the surviving archives for the 1974-5 excavation, it was discovered that all the faunal remains were missing and presumed lost. The Coombs archive did however offer a draft faunal report by M.R. Jarman,

within file PE/2/13. The report is undated but its inclusion of Find no. 325 suggests Jarman completed it after June 1983 (Find. no 325 was misidentified as human bone and returned to David Coombs as detailed in a correspondence between J Bayley and the excavator, 16/6/1983, PE/2/12).

My aim for this section is not to offer an up-to-date analysis of the faunal assemblage using contemporary methodologies, this will instead form the basis for my re-interpretation of the evidence in essay two; later in the chapter. Instead, my aim here is offer an archive study of Jarman's draft report as is.

The typed fauna report by M.R. Jarman comprises three pages of text and a single table showing the species representation at the site (PE2/13/11-PE2/13/14). The draft report details an assemblage comprising 164 bone fragments (NSP). Jarman describes the bones as in a poor state of preservation with much fragmentation. This being said, a relatively high, sixty-six per cent were identified to taxa, as compared to other Early Neolithic sites (Woodford G2, Wiltshire – 26% were identified to taxon (Banfield 2018, 228)). These differences I would argue are however likely the result of research methodology as both sites are described as 'poorly preserved'.

The three primary domesticated species were all present at the site. Sheep and goat bones are treated as one sub-assemblage by Jarman, comprising thirty-two specimens. Identification between these taxons is difficult but not impossible, there are diagnostic morphological markers available using standards published by Boessneck (1969). Elements include the proximal end of a metatarsal, rib fragments, teeth and the proximal end of a femur. Jarman offers a single set of measurements for the proximal metatarsal - Dp 18.3mm and Bp 18.4mm. Three specimens offer age estimates for either immature or early in maturity animals. All cattle bones are assigned by Jarman to the domesticated cow. There were twenty-four specimens, including teeth, vertebra, rib fragments, pelvis, radius, ulna, metacarpal and tibia. Jarman offers a measurement for the distal end of a single radius – Bd 71.9mm. Four elements provide indicators of age, one was older than three and a half years, another two older than two years and a fourth older than one year.

Only two specimens of pig were identified, the first recorded by Jarman as a much-fragmented juvenile skull and the second the proximal end of a scapula.

2/13/14

taxon	number of specimens	
<u>Ovis/Capra</u>	25	(5)
<u>Ovis aries</u>	1	(1)
<u>Bos taurus</u>	19	(5)
<u>Cervus elaphus</u>	3	
<u>Sus scrofa</u>	2	
<u>Vulpes vulpes</u>	14	(13)
<u>Arvicola/Microtus</u>	1	
Aves indet.	3	
<u>Bos-sized fragments</u>	5	
<u>Ovis-sized fragments</u>	11	
Unidentified fragments	56	
total	164	

Table 1. Species representation at Collis Wold. The numbers of specimens tentatively referred to a taxon are shown in parentheses.

Figure 4.16 Species representation at Calais Wold 275 (author photograph 2020, Coombs archive, PE/2/13/14).

Jarman also records wild animal remains in his draft report. Three fragments of antler from red deer. Twenty-seven specimens of red fox came from a small area of the excavation, including a skull and post-cranial elements (rib, vertebra, scapula, metacarpal, femora, tibia, calcaneum, metatarsals and phalanges). Although

numerically significant, the MNI value is one. Finally, Jarman records three specimens coming from a medium-sized bird species and a single vole (*Arvicola/Microtus*) skull, with both incisors and first molars.

Jarman offers little interpretation. He notes the presence of common domestic animals with sheep/goat and cattle dominating. He also correctly states that the antler may not indicate animals killed but could have been collected after shedding. The red fox and vole are argued as only being ‘fortuitously present in the collection, and presumably had no economic significance.’

Report limitations

M.R. Jarman’s draft animal bone report is an important discovery, without which significant details concerning the role of animals at the site of Calais Wold 275 would have been lost forever. The report offers details on species representation, taphonomy, aging profile and metrical datasets. Unfortunately, Jarman’s report offers the reader nothing in regards to butchery, burning, pathological and gnawing evidence; either the presence or non-presence of such at the site. Perhaps even more alarmingly, he treats the assemblage as a homogenous entity, removed from any temporal and spatial relationships.

My aim for the remainder of this chapter is to re-examine the faunal remains and architectural evidence in order to mature our thinking regarding the dynamic nature of human-animal relationships at Calais Wold 275.

4.5 Entangled Life: an exploration of the relationship between archaeologist and animals.

This essay is intended as a cross-disciplinary exploration of the dynamic relationship between the late archaeologist David Coombs and the animals excavated at the Early Neolithic round barrow site, Calais Wold 275, Yorkshire. Thinking through concepts of entanglement (Barad 2003, Fowler 2012, Hodder 2012), ‘participant-photographer’ (Morton 2009, Hodgett 2019); and engaging with the entire archive (Baird and McFadyen 2014), I attempt to reveal the subtle and shifting relationships between excavator and animals.

David Coombs was not a zooarchaeologist. His PhD thesis examined Late Bronze Age metalwork in southern Britain, a specialism he remained a leading authority throughout his lifetime (Stoddart and Malone 2002, p610). During the years 1974-5, Coombs directed the total excavation of Calais Wold 275 (also known as Callis Wold), on behalf of the Department of the Environment (Coombs 1976, p130). In 1976, Coombs published his only but brief account of this excavation, omitting any details concerning animal activity retrieved during his excavation. I ask of the archive; why did David Coombs not describe the presence of animals, and what were these entangled, biographical dynamics between excavator and his faunal remains during and post-excavation?

The concept of *entanglement* is helpful. The work of Ian Hodder (2012) outlines an approach to the entanglements between people and objects. In contrast with actor network theory (Latour 1999), Hodder's entanglements stress a sense of dependences between humans and things and offers an enthusing approach to how things, people, and places unfold (Fowler 2012, p40). I think Hodder's concept stops short in two important areas. Firstly, Hodder offers nothing on animal world making practice. He accounts for the role of beliefs and ideas as '...determinative factors in human action' and does not offer the same status for animals, relegating other sentient beings to the status of object. Animal ways of being, like human ones, are temporal and alter over time, changing everyone's world; bringing different multispecies lifeways together, through an entanglement of temporal rhythms and scales (Tsing 2015, p23). The second is not exploring the histories of entanglements post-excavation. What does the archaeologist's interaction with the material residues of past entanglement do? I would argue that we as observers of the archaeological record and archive are entangled within the work we produce. Karen Barad (2003) writing in terms of intra-actions rather than interactions, argues her entanglements (phenomena) 'are the ontological inseparability of agentially intra-acting components' (Barad 2003, 815) and '...the ontological entanglement of objects and agencies of observation' (Barad 2003, 309.). Moving beyond notions of the archaeologist as static, objective, independent actant, we instead need to come to terms with what entanglements are introduced to these material residues of past action at the point of excavation but also importantly, during the post-excavation process; for it is here, during these momentary holds where histories are written.

Recent work in visual anthropology (Morton 2009) and archive studies (Hodgett 2019) offers new and interesting methodologies for engaging with the archaeological record and to observe new, if humble histories. Through the examination of anthropologist E.E. Evan-Pritchard's archive of the Nuer rite of 'gorot', Christopher Morton (2009) was able to untangle and trace the movements and actions of this 'participant-photographer'; as a series of observations, photographic engagements and note-taking. Through returning to and engaging with the 'whole archive', Morton found possible a meshing of E.E. Evan-Pritchard's intention with the evidential, transforming this anthropologist observer into anthropological subject. Revealing 'messier realities of life', the work of Beth Hodgett (2019) re-excavated the presence of O.G.S. Crawford during his five-day visit to the Sutton Hoo excavation in 1939. Through retracing the temporal and spatial relationships between photographic sequences, Hodgett argues Crawford's experience was a 'gleeful' story of 'unbridled excitement'; with language to accompany – 'raced', 'frantic' and 'careering'. Once again through engaging with the archive O.G.S. Crawford was transformed from archaeologist observer into archaeological subject.

My intent for this essay is to trace the post excavation entanglements between David Coombs and the animals within the Calais Wold 275 archive; engaging directly with photography, notebooks, draft manuscripts, correspondences, material culture and section drawings. The premise is one of ontological entanglement of archive and archaeologist. David Coombs's intention and presence will be discussed from a reading of the situational contexts within the archive and his articulation of meaning sought from not only the archaeological evidence present, but also the gaps and what is not recorded.

I start at the beginning with David Coombs's concise excavation report (Coombs 1976, p130-1).

In front of the eastern pit was a straight façade trench, divided by a narrow bridge of unexcavated chalk. This trench had held upright wooden posts. In the fill of the trench were a number of sherds of Neolithic Towthorpe Ware.

Coombs 1976: 130

Within the straight façade trench fill was a considerable number of Early Neolithic pottery sherds associated with human bone and seventy-five fragments of animal bone and tooth, representing 46% of the animal remains (NSP) found during the two-year excavation. Why were these omitted from Coombs's (1976) report?

Extending a biographical approach (Kopytoff 1986) to before the excavation of Calais Wold 275, we need to explore the prevailing theoretical paradigms in Early Neolithic studies. Calais Wold 275 was a round barrow site, long and well-established views on this architectural type suggest round barrow sites were built as tombs for the deposition of the human dead. This view has generated excavation work with the near exclusive aim of retrieving architecture associated with mortuary structures (Thomas and McFadyen 2010); Mortimer's earlier excavation in 1892 was a central trench sunk through the mound, down to the original Neolithic surface with the recovery of human bone as its focus (Mortimer 1905). The prevailing view concerning the role of animals was to treat this form of archaeological evidence as secondary. Piggott (1954) discussing long barrow sites argues that animal remains are the result of feasting which was temporally and/or spatially associated with the burial of the human dead. I want to suggest that these ideas and beliefs about this classification of architecture were already entangled in David Coombs's thinking about Calais Wold 275. Therefore, going forwards, the focus of his investigation was the recording of mortuary structures and human bone; the role of animal remains was offered less critical attention and given secondary status.

The archive reveals that Coombs's own knowledge and/or interest in animal bones was limited. A brown educational series exercise book labelled with a black pen 'Callis Wold workbook' lists on individual pages the post-excavation processes for separate types of archaeological evidence (flint, pottery, (snails, animal bone and environmental sandwiched within the ecofacts)). The first page offers his thinking regarding flints (wash, mark, worked ones drawn, send for report, photograph and a later note - Richard Bradley has agreed to report on the flints). The second page concerns pottery (clean, treat, mark, reconstruct, draw, send to Manby for report, Beakers to Nobby (Alex Gibson?), photograph and analysis). The fourth page covered animal bones, and simply states 'send to Mike Jarman'. I believe this demonstrates his lack of attention paid to animal remains, along with an inexperience of the post-excavation methods involved.

The role of excavation director is a complicated task of juggling areas of archaeological research which will be both familiar and unfamiliar.

There are 104 photographs organised into four separate folders (E/1/1, E/2, E/3 and PE/4) held within the Coombs archive. None of these intentionally capture the presence or excavation of animals (I am not including in this statement modern agricultural practices, such as farm buildings and cattle sheds which are included as spatial references); instead the photographer places focus on architectural features, human remains and historical material culture. Within Folder PE/4 (labelled Finds Report) there are eight photograph duplicates, their repetition and distinct archive context suggests a special significance afforded by Coombs. One photograph captures the two Mortimer flint nodules from the oval pit at the West end of the burial platform. I would argue this represents historical material culture, archaeological evidence which obtains additional importance due to being recovered, re-deposited and referenced in antiquarian works (Mortimer 1905). The seven remaining photographs capture the D-shaped pit at the East end of the burial platform, along with the associated human bone (four photographs) and collapsed Liassic block (two photographs). This selection of eight photographs I would contend support my position that David Coombs had an entangled predisposition to focus on human bone and the central mortuary area (structural features).



Figure 4.17 Human remains from D-Shaped Pit (authors own, 2020, Coombs archive PE/4).

4.5.1 Changing relations

On the reverse of Figure 4.17, a handwritten note states 'CW74, Southern post pit showing human bones'. 'CW74' communicates to the observer that this photograph was taken at Calais Wold 275 in 1974. 'Southern post pit' was the original name during the

excavation for the D-shaped feature. ‘...showing human bones’ - at the time this photograph was taken there was the belief that the osseous material captured was a mixture of cremated and unburnt human bone. The photograph depicts the partial collapse of the burial platform into the D-shaped pit, along with its contents. Although the burial platform was totally excavated by Mortimer, Coombs seems to have been confident these bones were human, rather than animal. The previous excavation report only details human remains (Mortimer 1905) and the well-established views of round barrow sites (ideas which were entangled in David Coombs’s reading of the archaeological evidence) were as tombs for the human dead. Shortly after capturing this photograph this assemblage of bones was excavated, recorded and placed within Bag A. The context sheets describe one sample, Find no 325 as cremated human bone. Nine years later (16th June 1983) the excavator received a correspondence from Justine Bayley, Ancient Monuments Lab (PE2/12/33).

Enclosed with the letter is an animal bone, Find no. 325. Bayley voices that she is ‘...told it is a pelvis fragment of an animal the size of a sheep or dog’. This claim is reconfirmed in the Human bone report (PE2/12/15), ‘Mixed with these bones [referring to Bag A] was a fragment of animal bone from a small mammal which showed definite cut marks.’

I would suggest that upon receiving the information detailed in this letter, Coombs’s understanding of the site and the role of animals changed significantly. We can trace the effects of this new information on him as rippling actions across the archive. In the animal bone folder (P/2/13), page P/2/13/6 he later adds a handwritten detail (in blue ink) to a typed list of animal bone remains.

The same blue inked pen was used by Coombs to add a further supplementary comment on the reverse of the draft excavation report (PE/2/2/10), reading ‘...From this pit also came a vertebral fragment of a Bos Taurus and on the edge, associated with human bones the burnt pelvis fragment of sheep/goat size.’; and to convert elements of the draft report from ‘the bones’ (PE/1/1/3) and ‘the remains’ (PE/1/1/6) to ‘the human bones’, and ‘the human remains’. The addition of ‘human’ is a concession by Coombs to the reader that other, animal bone was also present at the site.

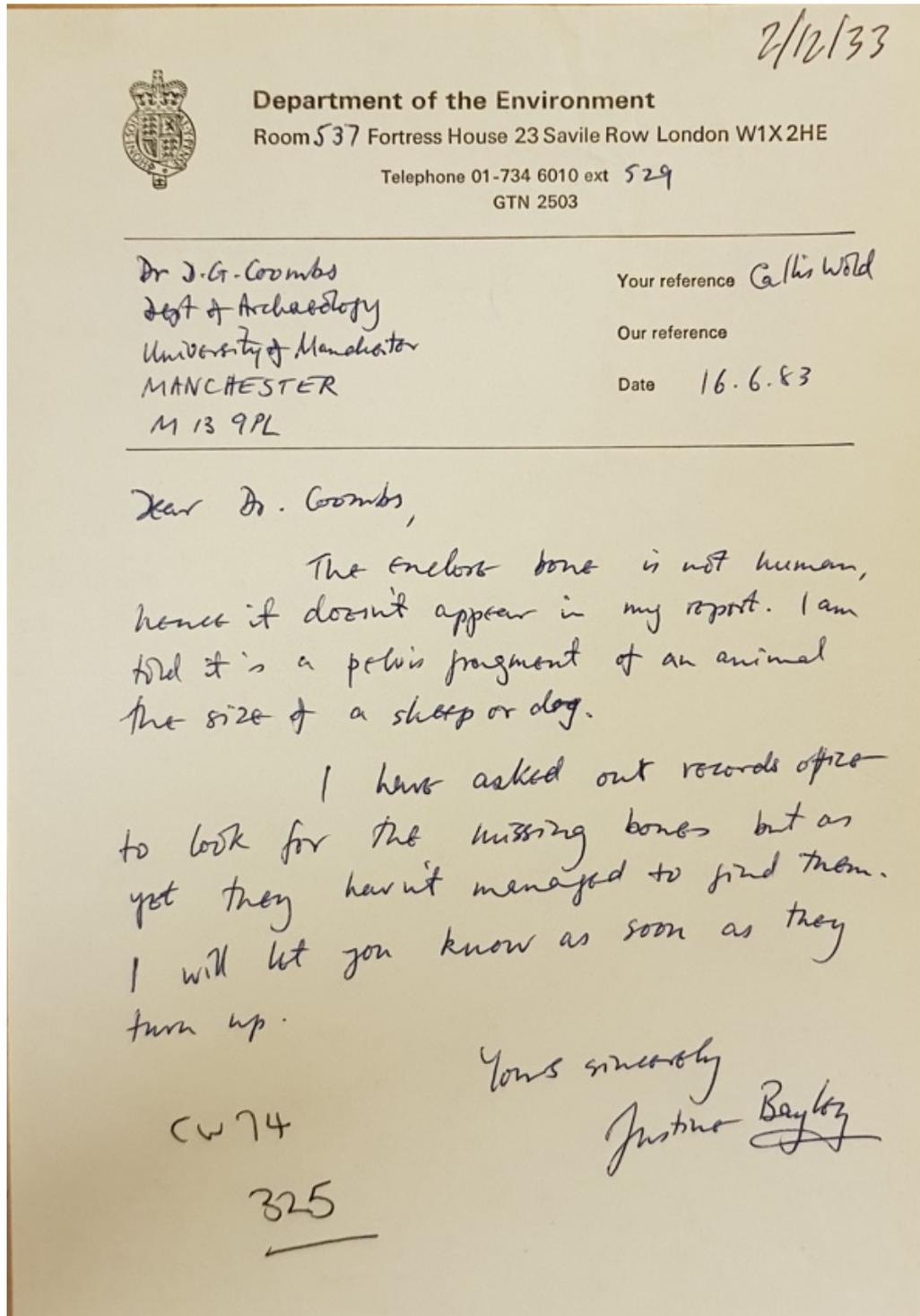


Figure 4.18 Bayley correspondence (PE2/12/33).

✓ CW 75 II	(36)	299.87	11:4.10	12:2.70	○	unidentified	5 bone fragments	front head br
+ CW 75 III	chalk ring	379	12:8.58 west	13:7.80		Bos-size	long bone fragment	chalk nails
- CW 75 VI	(8)	606				Ovis/Capra-size	humerus fragment	
+ CW 75 VI	(6)	614	F:3.5	W:3.89		unidentified	6 bone fragments	ulna slip from ass.
+ CW 75		299.143	in fill of 5th bedding trench			Bos taurus	radius	front head fragment.
✓ CW 74		325	front post pit.	11 2.32		Pelvis	size of sheep or goat.	
II 19				12 1.50				

2/13/6

Figure 4.19 animal bone list, P/2/13/6.

4.5.2 New ways of thinking

Through the re-examination and engagement of the whole archive I have demonstrated David Coombs's shifting entangled knowledge about animals at the Calais Wold 275 Early Neolithic round barrow site. In line with what was the prevailing narrative for these sites, Coombs focused his investigation on architecture associated with mortuary rites and human bone, this can be clearly seen during excavation and within the archive; the capturing of human bone within the photographic records, as opposed to animal; the detailed post-excavation breakdown of material types as opposed to simply passing on to the specialist; and the use of 'bone' in his draft manuscripts as if the reader should already imply human bone from the architectural classification of the monument. We can also actively trace the moments when Coombs's own ideas and understanding of the site were questioned and reflected upon. Upon receiving confirmation of the true animal status of Find 325, the archive tracks his movement from one page to another, with a blue-inked pen making studious corrections to his draft report, excavation notes and animal bone file, bringing into for the first time the sites history and narrative a role for animals; like O.G.S Crawford's enthused photographic sequence at Sutton Hoo (Hodgett 2019) or E.E. Evan-Pritchard's experience of the Nuer rite of 'gorot' (Morton 2009). Archive studies come face to face with the moment's archaeologists create histories and narratives for their sites. It is therefore important to study and reflect on these humble histories. Through thinking of entanglement, archive biographies and 'participant-photographer' or feasibly more fitting 'participant-archaeologist', this essay has re-traced David Coombs's own dynamic relationship with animals both from pre- and post-excavation contexts and the implications on our understanding of written archaeological histories.

4.6 Animals and architecture: space, time and movement at Calais Wold 275

4.6.1 Introduction

In this essay I present new research following my re-examination of the faunal remains and architectural evidence from the Calais Wold 275 Early Neolithic round barrow, Yorkshire. The materials under review form part of the unpublished David Coombs archive, currently held at the Historic England Store, Helmsley. Permission was kindly granted by Terry Manby and Susan Harrison. Building on the methodological approach as advocated by Thomas and McFadyen (2010), this essay will now explore the context specific human-animal relationships and the material reflections of these as deposited animal bone, antler and tooth. I have chosen three different loci of Early Neolithic deposition: 'pre-barrow' context; mortuary structure (including the pits, burial platform, curved trench and straight façade trench) and primary mound. I selected these spatial locations in order to explore the spatial and temporal patterns of activity. Identified from this work were distinct occupational episodes of the butchery and cremation of animals, a local emphasis on the selection of pig scapula and cranial elements and their deposition at the eastern end of sites, and threads of much wider reaching human-animal relationships in practice; the insertion of juvenile animals and the inclusion of animal teeth in 'blocking material'.

4.6.2 The Animal Bones

For the purposes of this essay, I undertook a re-examination of the entire archives, including site photographs, context sheets, section drawings and the draft reports including the animal bone file (PE2/13). Unfortunately, the loss of the faunal remains has impeded the level of information which potentially could have been retrieved under different circumstances, however that being said, I do believe important new insights have been recovered, opening tentatively a glimpse of the complexity of human-animal practice.

The assemblage comprises 163 bone and tooth fragments (NSP). I compiled this dataset from context sheet records and notes within the animal bone file of the Coombs archive.

This is one less than described in M.R. Jarman's draft report. I have been unable to come to a satisfactory answer regarding this small discrepancy. Coombs collected the bones by hand, a practice typically under-representing elements from smaller animals (Payne 1975). At Calais Wold 275 the level of recovery appears excellent with small mammal bones and snail shells retrieved. Identification of the anatomical elements by Jarman to taxon is described in the archive notes. There then has to be a level of trust as to the accuracy of Jarman's categorisation. Where observed, I was able to record age-at-death, burning, butchery, gnawing and sex follow standards established.

The taphonomy of the bone assemblage is characterised by Jarman as fragmented and poorly preserved. The high degree of fragmentation is further demonstrated by the presence of thirty-one loose teeth, in comparison with just two mandibles. Burning evidence is not noted upon in Jarman's draft animal bone report or within the animal bone file (PE/2/13). However, I discovered that Find. no 325 is described as cremated on the context sheet (Area III, Context 19), and as burnt within the excavation file (PE2/2), as a hand-written note by Coombs on the reverse of page PE/2/2/10. Jarman makes no record of gnawing evidence, which could indicate quick deposition of material. Alternatively, the absence of gnawing evidence may be a factor of high fragmentation and poor surface preservation of the specimens.

Finds No.	Other ref. no.	Context	Architecture	NSP	Taxon	Element	Side	Burning
325	III	19	D-Shaped Pit	1	Sheep/goat	Pelvis	-	Yes

Table 4.1. Animal Burning Evidence.

Domesticated taxa are more prevalent with Sheep/goat and cattle dominating the assemblage, accounting for 26.54% (NSP) and 15.43% (NSP) respectively. Domestic Pig accounted for only 1.23%, with only two specimens attributed to this taxon. Domestic animals account for over double as many specimens as wild animals: red fox 16.67% (NSP), vole 0.62% (NSP), red deer 1.85% (NSP) and unidentified medium-sized bird 1.85% (NSP). Although not included in this present study, John Mortimer describes finding antler from roe deer and red deer within the oval pit (Mortimer 1905, p162). The 20.99% for wild taxa is highly inflated by the near complete skeleton of a red fox within the primary mound. The nature of the agency behind the introduction of

these wild animals (be it anthropomorphic or as ‘intrusive’ species) will be discussed later in this essay (and Chapter 6).

Elements from all zones of the body are represented when the red fox (Find No. 114 and 115) is included. If we were to focus only on the domesticated animals, high meat-yield bones are well represented (forelimbs and hindlimbs) suggesting consumption; this is supported by the presence of butchery evidence in the archive. Find no. 325 is the only specimen recorded with ‘definite cut marks’, these details however were not included in the fauna report or animal bone file. The absence of significant butchery evidence I would argue could be as much a product of Jarman’s research priorities, other than a ‘true’ reflection of practice at the site. We must also be careful not to over-interpret small bone assemblages, as taphonomic factors favour the preferential survival of robust elements.

Finds No.	Other ref. no.	Context	Architecture	NSP	Taxon	Element	Side	Butchery
325	III	19	D-Shaped Pit	1	Sheep/goat	Pelvis	-	Cut

Table 4.2. Animal Butchery Evidence.

My MNI (minimum number of individuals) calculations were low and of limited value, especially if we consider the multi-phase nature of the site. There is a minimum count of six animals at site level, including one cow, one sheep/goat, one pig, one red deer, one red fox and one vole. This figure is likely overly conservative given the site spans depositional activity over at least two millennia. The MNI count for each context is higher at fifteen animals. This again could be problematic and the result of sample aggregation, whereby the bones from a single animal being moved between contexts during post-deposition. I am more confident the MNI count is stronger for the pig, vole and red fox, due to the close contextual relationships of these specimens. The central zone of the barrow was previously excavated by Mortimer (1905), those animal remains have not been included in the count, due to concerns over the contextual accuracy.

Element	Cattle	Pig	Sheep/goat	Red deer	Fox	Vole
Head						
Cranium	1	1	-	-	1	1
Mandible	1	-	-	-	1	-
Tooth	10	-	21	-	-	-
Antler	-	-	-	3	-	-
Spine						
Atlas	-	-	1	-	-	-
Axis	-	-	-	-	1	-
Cervical vertebra	-	-	-	-	-	-
Thoracic vertebra	3	-	-	-	-	-
Lumbar vertebra	-	-	-	-	-	-
Vertebra	1	-	6	-	2	-
Sacrum	-	-	-	-	-	-
Clavicle	-	-	-	-	-	-
Scapula	-	1	-	-	1	-
Sternum	-	-	-	-	-	-
Rib	3	-	3	-	11	-
Pelvis	1	-	1	-	-	-
Forelimb						
Humerus	-	-	1	-	-	-
Radius	1	-	-	-	-	-
Ulna	1	-	-	-	1	-
Metacarpal	2	-	1	-	1	-
Hindlimb						
Femur	-	-	1	-	2	-
Patella	-	-	-	-	-	-
Tibia	1	-	-	-	1	-
Fibula	-	-	-	-	-	-
Metatarsal	-	-	1	-	2	-
Feet						
Carpals	-	-	-	-	-	-
Calcaneum	-	-	-	-	1	-
Astragalus	-	-	-	-	-	-
Tarsal	-	-	-	-	-	-
Phalanx	-	-	-	-	2	-

Table 4.3 Body Part Representation Per Taxon by Element (NSP).

Context	Cattle	Pig	Sheep/goat	Red deer	Vole	Fox	Med bird	Total
Old land surface	-	-	-	-	-	-	-	0
Oval Pit	-	-	-	-	-	-	-	0
D-Shaped Pit	1	-	1	-	-	-	-	2
Platform	-	-	-	-	-	-	-	0
Straight Façade	1	1	1	-	-	-	-	3
Curved Trench	-	-	-	-	-	-	-	0
Primary Mound	1	-	1	-	1	1	1	5
Beaker Occupation	-	-	-	-	-	-	-	0
Turf Extension	-	-	-	-	-	-	-	0
Chalk Bank	1	-	1	1	-	-	-	3
Ditch 1	1	-	-	-	-	-	-	1
Final Extension	-	-	-	1	-	-	-	1
Ditch 2	-	-	-	-	-	-	-	0
No context	-	-	-	-	-	-	-	0
Total	5	1	4	2	1	1	1	15

Table 4.4. MNI per Context.

Cattle	Pig	Sheep/goat	Red deer	Vole	Fox	Total
1	1	1	1	1	1	6

Table 4.5. MNI Site Level.

With regards to the mortality profile of the animal assemblage at Calais Wold 275 I have nothing additional to add to those details in the M.R. Jarman draft faunal report. This is a result of the bone being lost/missing, denying the opportunity to complete a re-examination. The mortality profile for the pig remains is of importance and does require further discussion. Jarman's draft report suggests the much-fragmented skull comes from a young animal. The re-examination of Cotswold-Seven long barrows by Richard Thomas and Lesley McFadyen (2010), identified several incidences whereby young pigs were deposited in Early Neolithic long barrows. At Ascott-under-Wychwood neonatal domestic pigs were deposited in a pit with other occupational evidence during the 'pre-barrow' phase and at Adlestrop a young pig was deposited in the chamber (Thomas and McFadyen 2010, p110-111). The authors suggest the idea of seasonal deposition within seasonal cycles of activity across a landscape (Edmonds 1999). Could the context specific pig remains (Area II, Context 33), suggest similar

patterns of temporal acts of deposition and movement? I will return to this question a little later in the essay.

I found no mention of sex within the M.R. Jarman draft report. The red deer antler represent male animals, as only males have antlers; these could derive from the-living or dead animals. Find no. 299.143 is that of a cow radius from a securely Early Neolithic context (fill of the straight façade trench). A measurement of the distal end was offered (Bd 79.9mm) in Jarman's draft report. During the Early Neolithic two species of cattle were present in Yorkshire, the aurochs (*Bos primigenius*) and the domesticated cow (*Bos taurus*). Biometrical measurements of skeletal elements can be analysed to ascertain the species and sex of these sexual dimorphic animals (see Shepherd 2021). Find no. 299.143 can be confidently assigned as domesticated female.

Context	Cattle	Pig	Sheep/ goat	Red deer	Vole	Fox	Large mml	Med mml	Med bird	Unidentified	Total
Old Land Surface	-	-	-	-	-	-	-	-	-	-	0
Oval Pit	-	-	-	-	-	-	-	-	-	-	0
D-Shaped Pit	2	-	1	-	-	-	-	-	-	4	7
Liassic Platform	-	-	-	-	-	-	-	-	-	-	0
Straight Façade	9	2	19	-	-	-	1	-	-	44	75
Curved Trench	-	-	-	-	-	-	-	-	-	-	0
Primary Mound	2	-	23	-	1	27	1	-	3	2	59
Beaker Occupation	-	-	-	-	-	-	-	-	-	-	0
Turf Extension	-	-	-	-	-	-	-	-	-	-	0
Chalk Bank	2	-	1	2	-	-	-	-	-	-	5
Ditch 1	1	-	-	-	-	-	-	-	-	6	7
Final Extension	-	-	-	1	-	-	-	-	-	-	1
Ditch 2	-	-	-	-	-	-	-	-	-	-	0
No Context	9	-	-	-	-	-	-	-	-	-	9
Total	25	2	44	3	1	27	2	0	3	56	163

Table 4.6. Numbers and Location of Animal Bones from Calais Wold 275 (NSP).

I found no mention of pathologies on animal bone within the Coombs archive.

4.6.3 Context

Building on the methodological approach as advocated by Thomas and McFadyen (2010), I will now explore the context specific human-animal relationships and the material reflections of these as deposited animal bone and tooth. The above re-examination corrects the incomplete analysis currently available. The draft fauna report by M.R. Jarman treated the animal bone as a homogenous assemblage, such an approach denies the archaeologist the opportunity to read the true complexities of occupational practice. Moving towards an emphasis on the dynamic process of architecture, Lesley McFadyen (2006, 2007) has asked important questions regarding the complexity of building sequence, and the work of Whittle *et al* (2007) demonstrated that building activity could span at least two generations, with the building of architectural features occurring at temporal distinct moments, moments few people would have seen the results of. I have chosen three different loci of Early Neolithic deposition: ‘pre-barrow’ context; mortuary structure (the pits and burial platform; curved trench; straight façade trench); and primary mound. I selected these spatial locations in order to explore the spatial and temporal patterns of activity. I will also briefly describe the human-animal practices during the later phases of occupation at the site, to provide a thorough biographical account for Calais Wold 275.

Animals in the ‘pre-barrow’ context

The pre-barrow phase of activity produced no animal bone. Upon my initial reading of the animal bone file (PE2/13), Find No. 320 is recorded as being retrieved from Area III, Layer 15. A handwritten note states ‘OGS’. After cross-checking this information with the original context record, I discovered that this was a mistake and Find no. 320 had in fact been recovered from the primary mound (Area III, Layer 17). The Coombs archive document only human remains from the old land surface (Find nos. 318 and 319), these were cremated long bone fragments. Here the lack of animal activity could be a ‘true’ reflection of practice during this ‘pre-barrow’ phase, or alternatively, the stripping of turf prior to the building act could have removed all traces; perhaps this was a significant part of the process involved.

Mortuary Structure

- The Pits (or post pits) and Burial Platform

Research in southern England has provided compelling evidence for dynamic architecture during the Early Neolithic (McFadyen 2007, Thomas and McFadyen 2010, Whittle *et al* 2007). This work focusing exclusively on long barrow sites has produced site narratives far more complex than has been previously understood. Rather than thinking of architecture as empty, finished vessels, awaiting deposition; this work has demonstrated examples of the deliberate placement of the dead during the building act, rather than following (McFadyen 2007). Improved precision in radiocarbon dating has also demonstrated that the sequence of building could span several generations, with decades if not centuries occurring in the interval between opening of earth and the closure act (Whittle *et al* 2007). This all being said, Early Neolithic round barrows like Calais Wold 275 have not received similar attention, this is a result of poor publication availability and the regional specific nature of this type of architecture.

The temporal relationships between the individual architectural features of the mortuary structure (pits, platform and trenches) is ambiguous at best. We know they all pre-date the building of the primary mound, which offers a *terminus ante quem* for this phase of activity. I have already noted on John Mortimer's (1905) sketch of the platform and oval pit. It appears from the sketch as if the platform slightly over-laps the pit and could therefore support an argument that the platform was secondary (See Figure 4.3). I will therefore discuss the two pits and platform, curved trench and straight façade trench in that order.

I have found no bones assigned to the oval pit in this re-examination. The reasons for this are this architectural feature was excavated in its totality in 1892 by John Mortimer (1905), with no animal bones remaining for the 1974-5 Coombs re-excavation. Mortimer describes the 'soily matter filling' as having dispersed six pieces of red deer antler, an antler fragment from a male roe deer and a vertebra possibly from the same animal (Mortimer 1905). If the vertebra is from a roe deer, this would suggest the hunting of deer, rather than just the collection of shed antlers. Unfortunately, as these remains are now lost, further clarity is beyond our reach. The platform was also completely excavated by Mortimer with only human bone recorded from this context (Mortimer 1905). Among the crushed remains of ten inhumations, Mortimer describes a few pieces of 'dark-coloured burnt bones...dispersed here and there' (1905, p162).

What is the taxonomic status of this archaeological evidence? The current study may provide a potential new line of enquiry.

The D-shaped animal assemblage comprises seven bone fragments (NSP). Only 42.8% (3) of fragments were identified to taxon, including two cattle bones (vertebra fragment) and one sheep/goat (pelvis fragment). All three elements entered the feature within the same context layer (Area III, Layer 19), as part of the final sequence of deposition within the pit. There are no section drawings or plans surviving from the Coombs archive for the D-shaped pit. The context sheets describe the primary fill (Layer 26) as chalk rubble with no material culture, followed by a very fragile and loose brown clayey soil with dark staining, a flagstone, human and animal bones. Coombs argues that these bones were originally placed on the Liassic platform, thereafter one flagstone from the platform slipped into the D-shaped pit, spilling its contents into the feature. The human bone includes a near complete juvenile skeleton and elements from at least two adults. The report describes these as 'showing much erosion on the surface', however, two specimens (one metacarpal and one first phalanx) are better preserved (PE2/12/15). This suggests different post-depositional biographies, perhaps indicating temporal distinctions in occupational activity. Find no. 325 (the sheep/goat pelvis fragment) is the only specimen with evidence for butchery and burning. The cut marks to the pelvis are indicative of dismemberment and removal of the hind legs. From a spatial perspective I would argue this sheep/goat pelvis fragment offers evidence for animal bone forming part of the assemblage of activity on the burial platform, alongside three flint arrowheads and human remains. The fact it was cremated may also suggest the 'dark-coloured burnt bone' noted by Mortimer (1905) scattered throughout this architectural feature could in fact be those of animals and not humans, as previously believed (Kinnes 1979). I would also argue that this archaeological evidence emerged out of the rhythm and tempo of building and occupation. The placement of the human dead onto the platform was associated with occupational activity including the butchery and burning of animal remains. This event being temporally distinct to the building and occupation activity associated with other features from this phase, say the curved trench. This would account for why there is no further burning or butchery evidence from Calais Wold 275. Although I do not offer a linear, progressive sequence to the tempo of building/occupation, it does suggest distinct moments in time. Moments in time which differ in the types of occupation from the building of one architectural feature to another.

Such an argument would support ideas of seasonal cycles within the local landscape (Thomas and McFadyen 2010). The isotopic analysis of individuals SK117 and SK118 from the burial platform (Parker-Pearson *et al* 2019), suggestive of a certain level of mobility and movement.

- The Curved Trench

The Coombs archive records no material culture including animal bone from the curved trench. This feature was excavated in its entirety by Coombs during the 1974-5 excavation, and so the lack of archaeological evidence is not a product of antiquarian intervention like elsewhere on the site. The type of occupational activity associated with the building of this feature is quite distinct in nature. It suggests, to borrow a phrase from Lesley McFadyen (2007) the concept of ‘quick architecture’. No plans or section drawing survive in the archive, but the context sheets indicate the trench was quickly infilled with thick reddish clay with heavy chalk lumps and flint chips (Area I, Layer 38), as packing for wooden posts. I can think of two potential interpretations, the first suggests depositional practices which prohibited placement within this specific feature (perhaps an East-West bias). Alternatively, if we consider the tempo of activity could we not hypothesise a moment where the site was occupied by a small number of builders, released from their everyday material tasks in the specific undertaking of constructing this architectural feature? This would suggest a different rhythm of occupation to that associated with the burial platform and pits but also in striking contrast to that associated with the straight façade trench.

- Straight Façade Trench

The straight façade trench provides the largest assemblage of animal bone for the site, consisting of seventy-five fragments (NSP). The Coombs archive records thirty-one fragments identified to taxon (40%), all from domesticated animals. I would argue the lack of wild animals from this feature and in fact all features pre-primary mound (the exception being the red deer and roe deer remains noted by Mortimer from the oval pit, not included in this analysis) could be the result of high levels of fragmentation and poor preservation (making identification difficult) or a true reflection of occupational activity. If the latter were to be the case, this would support similar arguments made elsewhere from the built environment of the Early Neolithic in Wiltshire for the deliberate separation of wild and domesticated animals (see Whittle *et al* 1999 and

Pollard 2006); and markedly different to the pattern of activity at Cotswold-Seven long barrow sites, where a small percentage of wild animals were present in all phases of building works (Thomas and McFadyen 2010). Sheep/goat is the most numerous species (25.3%), followed by cattle (12%) and finally pig (2.6%). Jarman describes the bones as much fragmented and in a state of poor preservation. The MNI is one for all three species but this could be the result of the draft reports vagueness of detail. Other material culture within this feature include a large amount of Towthorpe Ware pottery, flint and human bone. The straight façade trench is the only architectural feature on site which has a section sketch surviving in the Coombs archive (Section 4). I have also been able to identify a photograph of the excavation trench (E3/14). I now want to look carefully at the contextual history of this feature in order to illustrate the tempo of occupation at the time of building.

Both illustrations (Figures 4.20-4.21) demonstrate that the primary role for the straight façade trench was to hold wooden posts, as shown with the post pipe in section. We can therefore argue that the infilling of layers 36, 35 and 34 were within a single episode of building. The primary layer (Area II, Layer 36 and Area III, Layer 30) was reddish-brown clayey soil with signs of yellow powdery soil. The only finds from these layers were two cattle bones, one a vertebral fragment and the other an unidentified element, this shows similarities with the primary fill of the D-shaped pit. The secondary fill (Area II, Layer 35 and Area III, Layer 32) was a very fine clayey silt, free from flint. Only sheep/goat was recovered from this context, including a metacarpal, two vertebra fragments and two teeth. Associated with the sheep/goat bones were three pieces of Towthorpe Ware pottery. The third layer (Area II, Layer 34 and Area III, Layer 18) and final layer with regards the securing of the wooden posts is the most prevalent with material culture, including human and animal bone, snail shells, flint, charcoal and Towthorpe Ware pottery. The straight façade trench is divided by a narrow causeway in the centre. A close look at the context sheets reveals that the pattern of occupational deposition is similar in both sections of the trench. The animal remains represent both cattle and sheep/goat bone. The sheep/goat bone includes femur, vertebra, rib and long bone fragments. The cattle specimens were rib, metacarpal, skull fragment, mandible, a tooth and vertebra.

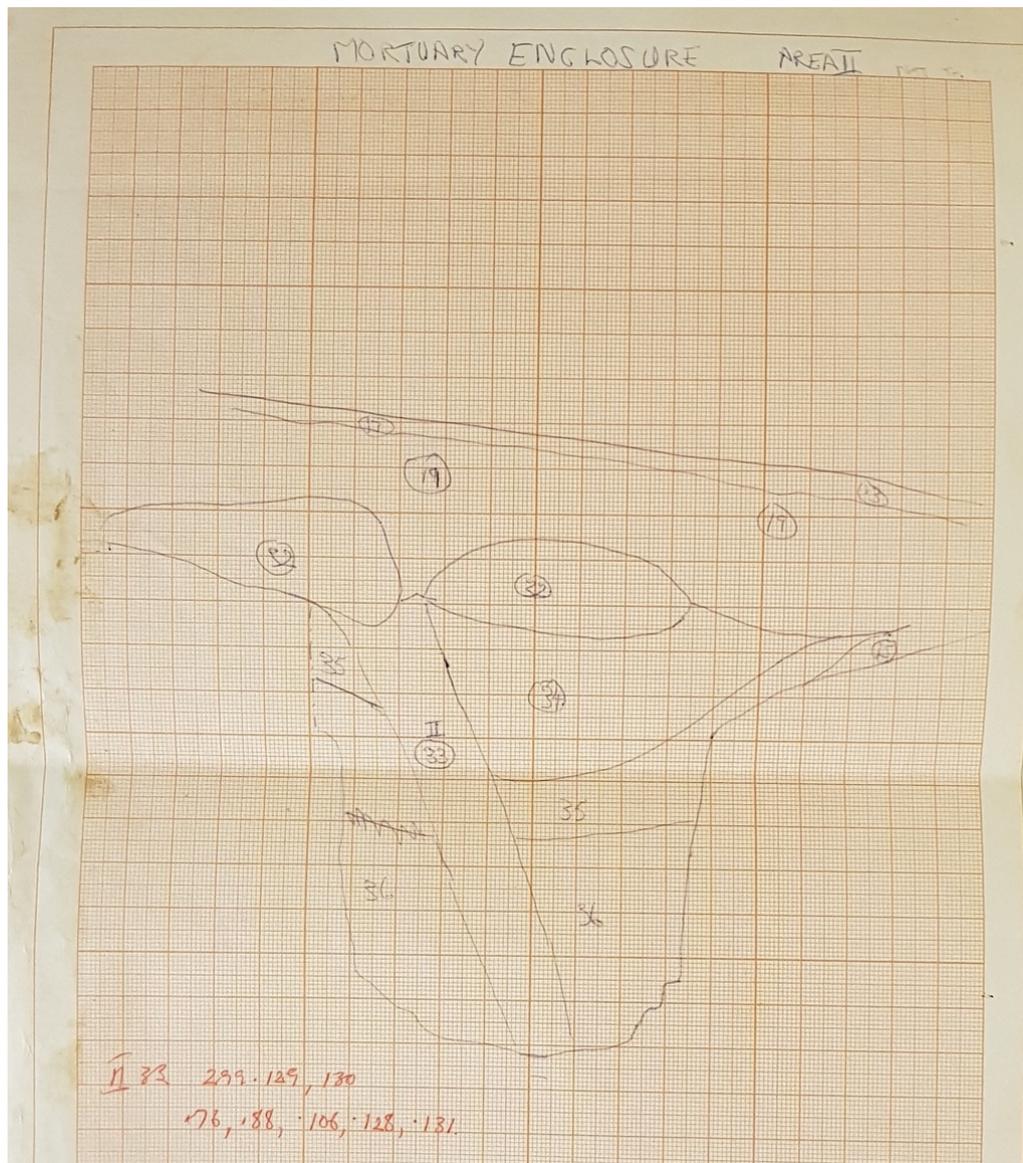


Figure 4.20 Sketch of Section 4, Straight Façade Trench (authors photograph 2020, Coombs archive, titled 'Mortuary Enclosure, Area II').



Figure 4.21. Photograph E3/14 of Section 4, Straight Façade Trench (authors photograph 2020, Coombs archive).

The presence of a skull fragment, mandible and a tooth could potentially suggest the placement of an entire skull. There are several accounts of cattle skulls being placed within long barrow sites and causewayed enclosures in southern England (Serjeantson 2011, 70). Coombs argues that the pottery [and animal bone] ‘...gives the impression of being packed around the posts, perhaps even being placed there deliberately.’

(PE2/2/14). Here we can consider the transformational act of material culture, and in particular animal bone into an element of architecture, and the frailty of classification systems within archaeology. The paucity of material culture elsewhere on the site (pre-primary mound) and its prevalence within the straight façade trench suggested to David Coombs that this material was not simply present at the site, to find its way into the feature naturally; but presents a deliberate act of deposition. His wording implies that this material was brought from elsewhere and therefore does not represent occupation at the site. I would suggest an alternative reading of this archaeological evidence. Instead of viewing these features as contemporary, and by that I mean built at the same time in a single act of building work, we should instead consider that these features were temporally distinct, each built within the seasonal movement of people's lives; under different rhythms and tempo of occupation. These gaps and phases of movement may only be weeks or months apart and therefore too narrow for radiocarbon distinction; but nevertheless separate, perhaps bringing different collections of people together.

After the wooden posts were removed or burnt down in the straight façade trench, the resulting void from the posts filled in. The primary fill from (Area II, Layer 33) the post pipe (in Section 4) was a clayey silt with charcoal, followed by brown soil with crushed chalk lumps and material culture. Within this context were two pieces of Towthorpe Ware pottery, a single flint and animal bone. The animal bone included sheep/goat and pig, the sheep/goat included rib, long bone fragments and a metatarsal. The pig formed of two specimens, a scapula and highly fragmented skull. Jarman's draft report identifies this animal as juvenile. The Coombs archive includes a land mollusca report by J.G Evans dated to 10th June 1984. The report describes that samples of snail shell were collected from the fill of voids left by wooden posts within both trenches. Sample 2 (Context III, Layer 29) and Sample 6 (Area I, Layer 38) are in situ assemblages with great species variability and in an excellent state of preservation (PE2/16/3). Evan's states that it is quite clear that these trenches '...had remained open after the posts had been removed and before the construction of the overlying mound [primary mound]'. His accompanying cover letter (PE2/16/1) makes the additional statement –

'It is absolutely convincing that the bedding trenches of the mortuary structure were left open for some time before being covered by the barrow, but I cannot really say for how long – perhaps a decade or so at least – if for any longer then I would have expected a more diverse assemblage.'

It is clear from this statement that at least one decade elapsed between the construction of the posts and the building of the primary mound. The length of time the posts were in place however is still illusive. What I can suggest however is the fills of the post pipes are a later episode of occupation from those within layers which secured the placement of the wooden posts in the first place. This is significant in understanding the temporal rhythms of animal activity at Calais Wold 275. During this gap between building work, we see the sudden arrival, although short lived, of the domesticated pig. What can we ask of these pig specimens about the spatial and temporal practices at Calais Wold 275 at this specific time? Firstly, we can recognise purposeful deposition resulting from a particular tempo of occupation. The placement of a juvenile pig skull and a scapula (potentially from the same animal? No detail within the archive) in the E (straight façade trench) trench, mirrors the actions occurring elsewhere during the Early Neolithic in Yorkshire. The site of Hanging Grimston (Mortimer 110) offers a useful comparison (Mortimer 1882, 102). Here four heaps of twenty pig mandibles associated with plain pottery sherds were deposited in its Eastern façade trench. Mortimer also found this trench had evidence for burnt post settings. A central pit on the axial line had within its fill charcoal and a pig scapula (Kinnes 1992, p40). The whole setting was later covered with a mound of chalk rubble with further pottery sherds, flint and animal bone. What is clear is Hanging Grimston (an earthen long barrow site) and Calais Wold 275 (a round barrow) experienced very similar episodes of occupation, with an emphasis on the skull, mandible and scapula. This demonstrates the weaknesses evident in thinking of the Early Neolithic built environment with ‘monumental vision’, and the strengths applied to this research and its material culture approach. The remarkable evidence from Hanging Grimston suggested to David Field that pig ‘...had assumed the importance afforded to cattle in the southern long barrows’ (Field 2006, p130). Although contextually distinct, Calais Wold 275 has potential evidence for the deposition of both a cattle and pig skull in the straight façade trench, making Field’s statement difficult to substantiate. I would add that the argument for a special status for the domesticated pig is more difficult to support at Calais Wold 275 with only two elements being recovered, representing only 1.23% NSP, although the provocative experience of viewing a skull is well attested on Early Neolithic sites; Hazleton North chambered cairn had a pig skull in the forecourt area (Serjeantson 2011, p71). The pig remains also demonstrate a continued focus on occupying the eastern side of the site. During this gap I would argue

it is significant that no material culture was added to the curved trench to the West. This is clearly a continuation of practice as either a localised depositional practice, or alternatively could we not consider the visual cues already present? Later visitors to the site would clearly see spatial occupational practice on the ground, with sherds of pottery and fragmented bone accumulated near the straight façade trench. Here I am reminded of Lesley McFadyen's work in Portugal and her argument that material culture formed the immediate environment for building work, or in her words (and better put) '... is the condition for future architecture' (McFadyen 2013, p146). At Windmill Hill causewayed enclosure, Whittle *et al* (1999) proposed that the deliberate placement of all three domesticated animals may have been symbolic of feasting. Was the later addition of pig correcting a depositional imbalance at the site, recognised through later occupation?

The Primary Mound

The primary mound represents the closing act of Early Neolithic building work at Calais Wold 275. Through constructing a mound of chalk rubble, pottery sherds, flint and animal bone, all previous architecture was 'enveloped' and removed from direct human interaction. The primary mound animal bone assemblages comprise fifty-nine specimens (NSP), with a context MNI of five. These specimens are described as poorly preserved and highly fragmented by Jarman in the Coombs archive. The inclusion of wild animals (red fox, vole and bird bone) signals a marked contrast to earlier occupation. Jarman offers a suggestion that these animals may have entered the site accidentally and not of human intent (intrusive). The lifeways of a red fox could suggest burrowing activity but with no mention of burrows in the archive context sheets this seems unlikely. As a native of the British Isles the red fox could have formed a deliberate deposit at the site (Harris 2017, p131-132). The Coombs archive offers no information on butchery evidence associated with the fox, cut marks to the skull and/or distal parts of the limb bones could indicate skinning for fur (Richter 2005). There is also no mention of re-cutting from context Area I, Layer 25, precluding the likelihood of later re-deposited material.

Also excavated by Coombs from the primary mound were sheep/goat and cattle specimens. Nineteen of the twenty-three sheep/goat remains were tooth fragments (82.6%). Although no cattle teeth are directly associated with the primary mound, eight

cattle tooth fragments are noted as being recovered from under the primary mound. The occurrence of animal teeth draws further comparison with practices at Cotswold-Seven long barrow sites (Thomas and McFadyen 2010), where animal teeth seem to be linked to blocking material or thresholds of chamber architecture (Thomas and McFadyen 2010, 108). Should we begin to consider mounds as ‘blocking material’ compositions of earth and material culture, like that of chambered tombs?

I would return to an earlier argument; material culture is the condition of future architecture (McFadyen 2013). What we might be seeing is the gathering up of existing material culture already present on the site as evidence of earlier occupation. Animal teeth are far less influenced by taphonomy than other skeletal elements and their presence at the site a decade after abandonment is possible (O’Conner 2000). This may also suggest how sherds from a single Towthorpe Ware vessel was present within both the primary mound and straight façade trench.

Figure 4.15 shows the re-fitting of pottery sherds found in the primary mound (Area II, Layer 19) and the straight façade trench (Area II, Layer 34). I would argue that alongside those sherds and animal bones deposited directly into the straight façade trench, others were deposited on the nearby land surface; a product of occupation. This material culture formed the direct and immediate environment among which later occupation and building work took place. Later and temporally distinct, the site was wrapped up into the building of the mound; this material was gathered and included in the mound matrix, blurring again for us (as researchers) and the builders, the distinction between architecture and bone or pottery.

Beaker occupation and turf extension

The presence of gaps is in itself significant when considering the complexity of human-animal relationships. There is no evidence for the presence of animals from the Beaker occupation layers and the building of the turf mound extension, although we cannot discount the contents of the pottery (isotopic analysis would be required). I would suggest this was a deliberate act with local turf selected (PE/2/15/2) and preferred over the excavation of chalk rubble and the associated material culture.

Post-turf extension

A limited assemblage of animal bones was recovered from post-turf extension contexts. Coombs's excavation of Ditch 1 recovered seven specimens, with only one identified to taxa. The chalk bank only produced five specimens, two being red deer antler. They may be indicative of building work as tools used to break into the earth. Their location within the bank rather than the base of the ditch could suggest these were actually earlier in date and may have been re-excavated in the Bronze Age and included into the bank context. Later, the excavation of Ditch 2 found no animal remains and the final rubble extension comprised of a single red deer antler fragment. The lack of animal bone and other material culture from the excavation of the second ditch (and its filling as the final extension) could suggest this was outside the spatial parameters of earlier Neolithic occupation.

The last animal histories of Calais Wold 275

Extending the 'afterlife' of the monument into more recent times, I would include Mortimer's (1905, 161) mention of the barrow being 'guttled by rabbit diggers', therefore indicating rabbit activity within the mound, and also the use of the barrow as a 19th-century stock grave 'pit'. In terms of the stock grave 'pit', through my re-examination of the Mortimer archive, I have identified the remains of cattle and horse (there were also sheep remains but I have my doubts about the provenance of these specimens), which are believed to have been buried by the tenants of the farm. The use of the barrow as a historical animal carcass repository reminds me of my own marked experience of stock burying. A series of memories I have during the winter of 2001 stick in my mind. My father was away working for the Department for Environment, Food and Rural Affairs, and my mother and I were left to manage the running of the farm. When an old ewe died, I would have to drag its body across fields, dig a hole through frozen mud and bury the animal. I was maybe 12 years old and if commitments were needed elsewhere this act would be delayed several days. It was always worse when I could not simply drag the animal across the field but would have to lift it and its cold swollen body into the back of the Land Rover first.

David Coombs (Coombs archive PE2/2/3) notes that due to the location of the barrow within the farmyard of Callis Wold Farm, it had experienced significant damage as a result of the expansion of the mixed farming regime instigated by the tenant farmer (three generations of the Stringer (2022) family have been tenants at Callis Wold Farm

since the 1940s). The southern part of the mound and ditch was destroyed by a farm road; the eastern part of the mound and ditch was destroyed by a barn (see Figure 4.8) (which has been subsequently replaced); and the northern part of the mound and ditch was destroyed by the digging of a silage trench. Silage grass and clover leys are still grown during the summer months at Callis Wold Farm (as part of a 7-year rotation of organic crops, including milling wheat, spring oats, spring barley, winter oats and beans), and used to fatten lambs during the winter months (Stringer 2022). Coombs (PE2/2/1) notes ‘...the barrow was providing a hindrance to farm expansion and this provided the reasons for the excavation’; I can confirm that subsequently two new farm buildings have been built where Calais Wold 275 once stood, these barns are used to house 420 Mule ewes (which are put to a Charollais tup) and 55-60 suckler cows (Aberdeen Angus) (Stringer 2022).

4.6.4 Conclusion

The evidence presented in this essay corrects the partial zooarchaeological analysis published and available to researchers. Building upon the successfully integrated approach of studying animal bone and architecture as advocated by Richard Thomas and Lesley McFadyen (2010). This research has highlighted the complexities inherent in the incorporation of animals at the Calais Wold 275 round barrow site and opens the window into similarity of practice between historically distinct forms of architecture; the long barrow and round barrow. This study provides a secure foundation of evidence for subsequent interpretations of the Early Neolithic in Yorkshire.

4.7 Conclusions

The purpose of this chapter was the discovery of animal histories, however humble they may appear at the Calais Wold 275 round barrow site. After the completion of a thorough literature review it became apparent to me that details concerning the archaeological evidence at this site were not openly available to researchers.

This chapter presents the results of a ‘whole’ archive approach to the Calais Wold 275 round barrow site, correcting the partial details available concerning the temporal and

spatial relationships between architecture and material culture. The results have significantly improved our understandings of the detailed contextual history of building work and occupation during the Early Neolithic. Frustratingly, the physical faunal remains are now missing, however this being said, much information has been identified from correspondences, notes, context sheets and draft manuscripts held within the archive. The Coombs archive has confirmed the presence of the primary domesticated species from Early Neolithic contexts (cattle, sheep/goat and pig), alongside and to a lesser extent wild animals (red fox, vole, red deer and roe deer).

In order to fully grapple with the archaeological evidence, this chapter concluded with two short essays. Through the re-examination and engagement of the whole archive essay one demonstrated David Coombs's shifting entangled beliefs about animals at the Calais Wold 275 Early Neolithic round barrow site. In line with what was the prevailing narrative for these sites, Coombs focused his investigation on architecture associated with mortuary rites and human bone, this can be clearly seen during excavation and within the archive; the capturing of human bone within the photographic records, as opposed to animal; the detailed post-excavation breakdown of material types as opposed to simply passing on to the specialist; and the use of 'bone' in his draft manuscripts as if the reader should already imply human bone from the architectural classification of the monument. We can also actively trace the moments when Coombs's own ideas and understandings of the site were questioned and reflected upon. Upon receiving confirmation of the true animal status of Find 325, the archive tracks his movement from one page to another, with a blue-inked pen making studious corrections to his draft report, excavation notes and animal bone file, bringing into for the first time the sites history and narrative a role for animals; like O.G.S Crawford's enthused photographic sequence at Sutton Hoo (Hodgett 2019) or E.E. Evan-Pritchard's experience of the Nuer rite of 'gorot' (Morton 2009). Archive studies come face to face with the moment's archaeologists create histories and narratives for their sites. It is therefore important to study and reflect on these humble histories. Through thinking of entanglement, archive biographies and 'participant-photographer' or feasibly more fitting 'participant-archaeologist', this essay has re-traced David Coombs's own dynamic relationship with animals both from pre- and post-excavation contexts and the implications on our understanding of written archaeological histories.

The evidence presented in essay two corrects the partial zooarchaeological analysis published and available to researchers. Building upon the successfully integrated approach of studying animal bone and architecture as advocated by Richard Thomas and Lesley McFadyen (2010), this research has highlighted the complexities inherent in the incorporation of animals at the Calais Wold 275 round barrow site. I have argued that the site began with the stripping of local turf, potentially resulting in the removal of all evidence of animal activity pre-barrow construction. Next, building works began on the construction of the mortuary structure, consisting of two pits, two trenches and a burial platform. My re-examination of the archive suggests the burial platform was the only architectural feature associated with the butchery and burning of animal remains. This conclusion is suggested cautiously as this could be the result of the research agenda of the original zooarchaeological specialist. A spatial analysis of the curved and straight trenches suggests contrasting occupational histories. The curved trench was quickly excavated and re-filled to secure wooden posts; no material culture was included. The straight façade trench was filled again to secure wooden posts with successive deposits of earth, pottery, flint, human and animal bone; this includes sheep/goat bone and cattle remains. The recovery of a skull fragment, mandible and a tooth could indicate the burial of an entire skull. The deliberate separation of wild and domesticated animals, mirrored the above occupational histories and concurs with human-animal relationships identified at long barrow sites in southern England (Serjeantson 2011, Whittle *et al* 1999, Pollard 2006). I argue that after the erection of the wooden posts, the site was open and received further occupation for at least a decade. During this time, later occupation resulted in the placement of a highly fragmented juvenile pig skull and pig scapula. This placement of young pigs mirrors practices recorded in Cotswold-Severn and Yorkshire long barrow sites (Thomas and McFadyen 2010, Field 2006). The closing act at Calais Wold 275 involved the building of a chalk rubble, flint, pottery and animal bone mound. The wrapping of sheep/goat and cattle teeth within matrix of the superstructure suggests again similarities of practice between this site and the blocking material at Cotswold-Severn long barrow sites (Thomas and McFadyen 2010). In contrast with other sites, wild animals were not present in all architectural features but restricted to the oval pit and primary mound. The inclusion within the primary mound of an almost complete red fox skeleton could either be a human act or the result of intrusion and the fox's own agency (see Chapter 6).

5

EARLY NEOLITHIC SETTLEMENT SCATTERS AND PITS: Rudston 62 and the Corner Field, Site 11 pit

5.1 Introduction

Yorkshire has no causewayed enclosures, and as such, the region lacks the large-scale animal bone assemblages recovered from sites in southern England – such as from Windmill Hill, Hambledon Hill and Etton. This has in its own way contributed to the region becoming a forgotten landscape in Early Neolithic studies. I say this in both in a generalised manner but also within the specialism of zooarchaeology, where recent research (Rowley-Conwy *et al* 2020) fails to add anything new to England’s largest county. It is the aim of this chapter to fill in this blank space, providing archaeological and textual evidence for Early Neolithic human-animal relationships; not from the many round and long barrows (which form the focus of other chapters) but from the overlooked settlement scatters and pits.

This chapter is divided into three sections, the first re-examines the animal remains from the Rudston 62 settlement scatter. Rudston 62 represents a small but significant faunal assemblage, it is firstly the only site of its type to undergo excavation within the last century and secondly, and significantly, Bramwell’s (1972, 12) original report describes an assemblage dominated by wild animals (aurochs, wild boar and red deer) – standing at odds with the prevailing evidence from southern England (except for the Coneybury ‘Anomaly’ Gron *et al* 2018). Could this suggest an altogether different kind of Neolithic society? The second section re-examines the Corner Field, Site 11 animal remains. I have only identified five Early Neolithic pits to have contained animals in Yorkshire and Corner Field, Site 11 is the only archive which is either not currently missing or

was only found to contain indeterminate bone fragments. In the final section I investigate not the animal remains themselves, but the textual traces of animals as found within antiquarian writings. A further nine settlement scatters were excavated during the 19th century by Greenwell (1877) and Mortimer (1905), this section presents a corpus of these sites, the animals they contained and presents the foundational conditions for a discussion of Early Neolithic farming practices; exploring concepts of mobility and ‘domesticated’ human-animal relationships which form an indispensable part of Chapter nine.

5.2 Rudston 62 settlement scatter

5.2.1 Introduction

Details regarding the excavation and recovery of animal bone from the 1960 Grantham excavation is vague with no written accounts of the investigation surviving in the Grantham archive. Pacitto (1972) notes an area of dark soil and charcoal was exposed by plough damage. This context which was all on or near the original ground surface was associated with flint implements (including leaf-shaped arrowheads), sherds of Early Neolithic pottery (Towthorpe Ware) and bone. It is believed then that the animal bone was recovered by hand, which typically would bias the recovery of larger elements, with smaller elements being overlooked (Payne 1972). The animal bones appear to have been reasonably well recovered by the Grantham brothers, with numerous small fragments and loose teeth. They did not however record the spatial locations of bone and other material culture.

The site archive was originally stored by the Grantham brothers of Drifffield, later to be loaned to the Sewerby Hall Museum, Bridlington. In the mid 1990’s concerns were raised about the future of the museum (rumours of closure and re-development (P. Mackey *pers. comm* February 2020)) and the archive was removed and returned to Drifffield. After the passing of both brothers the archive became the sole responsibility of a family relative, P. Mackey of Drifffield. Peter Mackey kindly provided access to the Rudston 62 archive in February 2020.



Figure 5.1. Rudston 62 animal bone archive, Box 2 (Grantham archive).

5.2.2 Results

The assemblage comprises 193 fragments of bone and tooth (NSP).

Preservation and taphonomy

The bone assemblage can be characterised as poorly preserved, with significant root damage evident on many elements. I recorded only three specimens as complete (1.55%), and 29.53% identified to taxon. The proportion of loose teeth in the assemblage (14) as opposed to only one mandible fragment containing dentition (ID:-152) further demonstrates the high degree of fragmentation. Teeth are very robust elements and survive well. The higher the proportion of teeth within an assemblage, the poorer the preservation and higher fragmentation; as a comparison the Woodford G2 long barrow assemblage contained 1.18% loose teeth (Banfield 2018), in comparison to 7.25% at Rudston 62. The exception was a human 1st phalange (ID:-159) which was complete, noticeably well preserved with no burning, gnawing or root damage. I would argue this specimen could be intrusive material and requires further investigation and discussion.

This assemblage includes sixteen specimens with evidence of burning (11.39%). The majority of the burning I have described as charred, with the exception of an extremely burnt red deer tooth (ID:-25). The calcined nature of this element is suggestive to me of high temperature processes. The local proximity of a hearth could suggest a source for the distribution of charcoal and charred bone. I recorded only one element with gnawing evidence - the distal end of a cattle tibia (ID:-2) (Table 5.1). The absence of further gnawing evidence may be a factor of poor surface preservation and high fragmentation.

Small finds no.	NSP	Taxon	Element	Side	Zones	Distal	Location
2	1	Cattle	Tibia	Right	5,6,7,8	Fused	Posterior view

Table 5.1. Gnawing Evidence.

Context	Cattle	Pig	Aurochs	Red deer	Human	Large Mammal	Medium Mammal	Indeterminate	Total
Settlement scatter	30	19	2	4	2	25	14	97	193

Table 5.2. Taxonomic representation by context (NSP).

Context	Cattle	Pig	Aurochs	Red deer	Total
Settlement scatter	2	2	2	1	7
Total	2	2	2	1	7

Table 5.3. MNI site level.

Species present

Table 5.2 presents the assemblage. The totals are the Number of Specimens (NSP); also given in Table 5.3 is the Minimum Number of Individuals total. I found the assemblage to be dominated by domestic animals with only a few identifiable wild species present. Cattle and pigs predominate, with wild species represented by aurochs and red deer. Domestic taxa account for over eight times as many specimens as wild taxa: cattle (15.54% NSP) and pig (9.84% NSP); compared with aurochs (1.03% NSP) and red deer (2.06% NSP). I encountered two human elements (1.03% NSP) within the Grantham archive, an unfused distal femur fragment and fused first phalanx. I could only identify other material in broader categories such as large- or medium-mammal, or remained unidentified. Table 5.2 shows that cattle are more common than pigs. This concurs with most Early Neolithic sites where cattle are predominant (Serjeantson 2011), but contrasts with Later Neolithic pit clusters in the Rudston area (Rowley-Conwy and Owen 2011), where pigs are more common.

The cattle: wild or domestic?

Bramwell (1972, 12) states an interesting feature from the Rudston 62 animal bone assemblage was the presence of three types of cattle, and the predominance of animal food hunted from the forest; a claim he also made for Later Neolithic sites in the region (see Rowley-Conwy and Owen 2011). It has been demonstrated successfully that such statements were erroneous on account that his 'small variety' aurochs comparative dataset from Star Carr were in fact not aurochs at all, but elk (*Alces alces*) (Legge and Rowley-Conwy 1988). Rowley-Conwy and Owen's (2011) re-examination of the Rudston Wold Later Neolithic pit clusters found counter to Bramwell's claim that aurochs were present in most pits, that there were in fact no aurochs and all specimens were from domesticated cattle. My re-evaluation of the Ruston 62 cattle is therefore needed.

ID	Element	Side	Fusion	SLC	Bd	BT	HT	GLP	SD	Dd	Bp	Dp	GB	HL
2	Humerus	R	F	-	95.48	87.23	53.03	-	-	-	-	-	-	-
3	Tibia	R	F	-	60.30	-	-	-	-	46.45	-	-	-	-
4	Tibia	L	F?	-	60.11(e)	-	-	-	42.84	-	-	-	-	-
130	Tibia	L	F	-	63.92	-	-	-	-	47.05	-	-	-	-
5	Calcaneus	R	u/f	-	-	-	-	-	-	-	-	-	54.64	67.52
113	Metatarsal	L	F	-	55.92	-	-	-	27.7	32.16	-	-	-	-
116	Metatarsal	?	F	-	-	-	-	-	25.94	-	41.67	-	-	-
122	Metatarsal	R	F	-	-	-	-	-	-	-	52.81	51.50	-	-
114	Scapula	L	F	50.57	-	-	-	63.24	-	-	-	-	-	-

Table 5.4. Cattle measurements of the bones from Rudston 62. Measurements follow the definitions of von den Driesch (1976) except were stated in the text or figure captions.

I present cattle measurements from Rudston 62 in Table 5.4. I recorded nine post-cranial measurements using a pair of digital callipers to the nearest tenth of a millimetre. It is clear from biometry analysis that domesticated cattle herds are overall smaller than their wild counterparts, with both species exhibiting sexually dimorphic traits. There is an overlap between the larger domesticated bulls and smaller female aurochs (Grigson 1969), which can complicate confidence in identification. Due to this overlap, the analysis of such material is heavily guided by the interpreter's current beliefs of the period at hand. Contrary to the findings from Rowley-Conwy and Owen's (2011) Later Neolithic pits, I have identified aurochs specimens at the Rudston 62 settlement scatter. The two specimens (ID:-2 and ID:-5) which account for 22.22% of the *Bos* post-cranial measurements include a very large calcaneus and a distal humeri. I measured the unfused calcaneus (ID:-5) greatest breadth (GB) of 54.64mm and a lateral height of 67.52mm. Comparative measurements from the British Isles is limited, however drawing on faunal assemblages from Nyrup, St. Damme and Ugilt in Denmark (Degerbol and Fredskild 1970, 114), which have previously been successfully applied (Legge and Rowley-Conwy 1988 and Rowley-Conwy and Owen 2011) it is clear to me this animal was of significant stature and most likely a male aurochs. The fused distal humerus (ID:-2) is less clear cut.

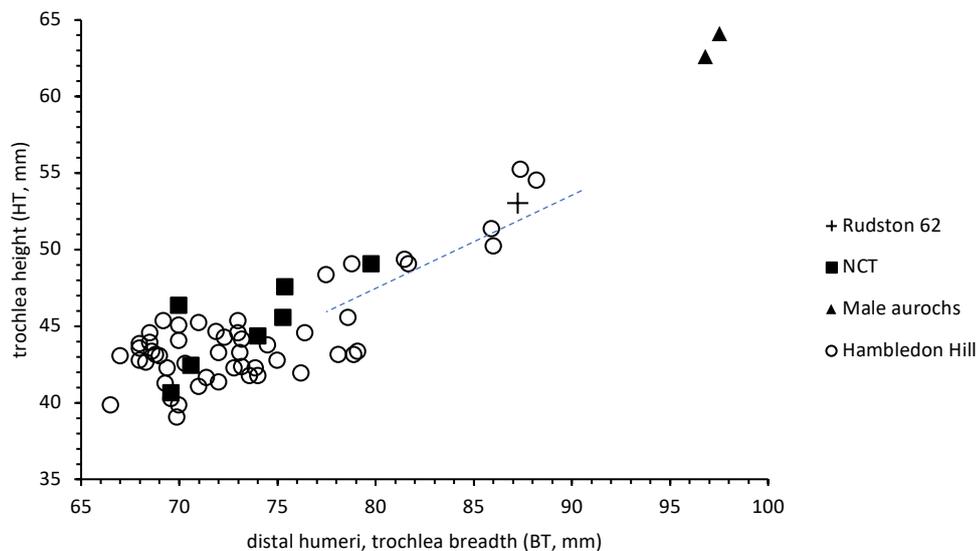


Figure 5.2. Dimension of Rudston 62 cattle distal humeri, plotting trochlea breadth (BT) against trochlea height (HT). BT is defined by von den Driesch (1976, fig. 32), HT by Legge and Rowley-Conwy (1988, 124). Dotted line marks division between female aurochs and male domestic cattle (Legge 2008, fig. 8.4). Hambleton Hill measurements from Legge (2008, table 8.27). North Carnaby Temple measurements from Rowley-Conwy and Owen (2011, Appendix 2). Aurochs from Star Carr (Legge and Rowley-Conwy 1988, table 8C).

I have plotted in Figure 5.2 a large sample of measurements from a local but later herd (North Carnaby Temple), Star Carr male aurochs and the Hambleton Hill herd which is contemporary with Rudston 62 but geographically distanced (Legge 2008). Legge (2008) collected a large sample from the Hambleton Hill causewayed enclosure and argued most were from domesticated female cattle. The dotted line is suggested by Legge (2008) to separate female aurochs from male domesticates; above the line aurochs and below the line domesticated animals. ID:-2 clusters above the dotted line, with the very largest animals from Hambleton Hill and is significantly larger than those from North Carnaby Temple. I would suggest this specimen is an aurochs female. Aurochs samples from Danish sites would support this conclusion (Rowley-Conwy and Owen 2011). I would therefore argue the Rudston 62 assemblage includes two aurochson, a cow and bull. Figures 5.3 and 5.4 illustrate measurements I recovered from metatarsal and tibia elements all clustering at the lower end of the spectrum, suggesting these animals are domesticated females. In fact, I have found all other measurements falling within the range for domesticated females. I would argue the lack of domesticated bulls at Rudston 62 supports a national narrative whereby most

domesticated males were culled at a young age, and that Early Neolithic herds were largely constructed of adult dairy cows (Legge 1981, 2008). Wiltshire earthen long barrow sites offer an alternative picture, where I have previously argued for the deliberate selection of larger individuals or those with more complex biographical histories for deposition within funerary architecture (Banfield *et al.* 2019) (Shepherd 2021).

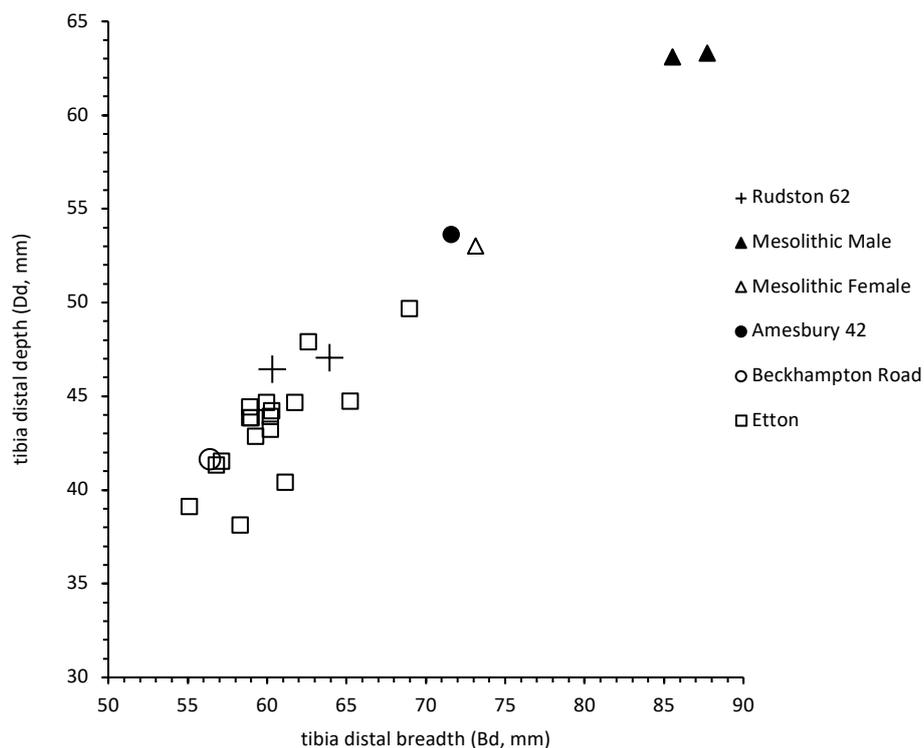


Figure 5.3. Rudston 62 cattle tibia measurements (von den Driesch 1976; from Maltby 1990 and Banfield 2018), compared to those from Etton causewayed enclosure (Armour-Chelu unpublished), and Mesolithic aurochs of know sex (Legge and Rowley-Conwy 1988).

The pigs: wild or domestic?

During the Early Neolithic both wild and domesticated pig are evident in archaeological assemblages. Wild boar however is rare along with other non-domesticates (Serjeantson 2011). Assemblages from both the Early and Late Neolithic, including Hambleton Hill (Legge 2008), Durrington Walls (Albarella and Payne 2005) and Rudston Wold pit clusters (Rowley-Conwy and Owen 2011) are argued by their authors to comprise mainly domestic pigs. This makes my re-examination of the Rudston 62 faunal

assemblage more intriguing. Here Bramwell suggests that there was only wild boar, referable from several specimens including astragali, jaw, teeth, tibia and scapula (Bramwell 1972, 11). Both wild and domestic pigs were similar in appearance, with long legs, a long snout, hairy and dark in colour (Serjeantson 2011, 26). Serjeantson (2011, 26) states that domestic pigs would have been smaller in stature. There does however seem to be some metrical crossover between the smaller wild boar and larger domestic animals; note trochlea breadth (BT) of the distal humeri (Rowley-Conwy and Owen 2011, 337). *Sus* post-cranial elements are not sexually dimorphic, therefore, biometry is not suitable for distinguishing sex (Albarella and Payne 2005).

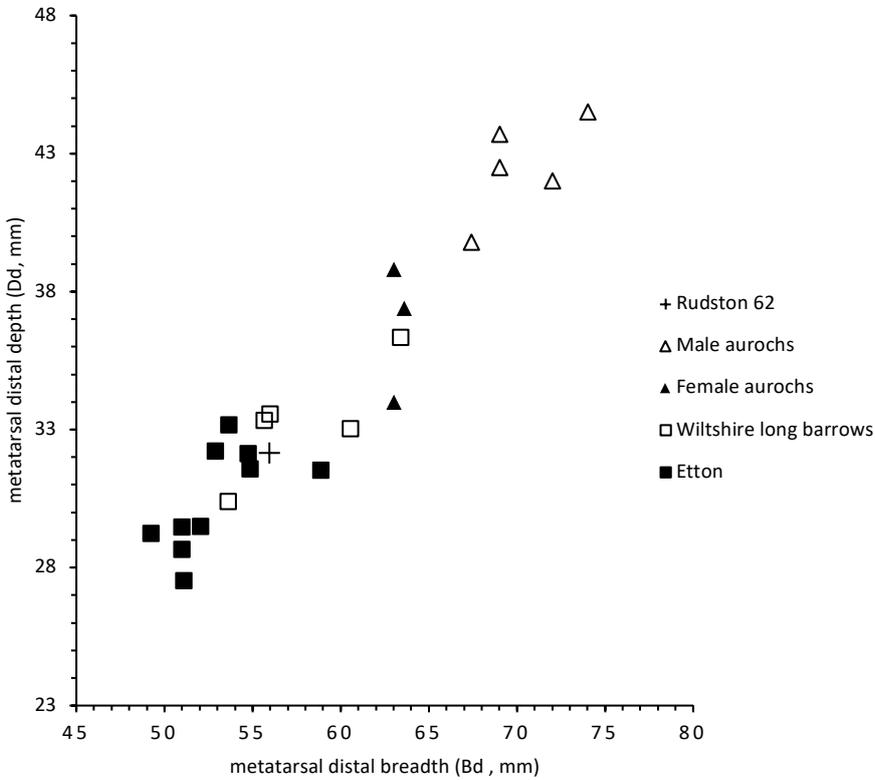


Figure 5.4. The Rudston 62 cattle metatarsal measurements (von den Driesch 1976; from Amesbury 42, Tilshead Lodge and Fussell’s Lodge archive), compared to those from Etton causewayed enclosure (Armour-Chelu unpublished), and Mesolithic aurochs of known sex (Legge and Rowley-Conwy 1988).

ID	Element	Side	Fusion	SLC	SD	L	WA	WP	GLI	GLm	D1	Bd
16	Tibia	L	u/f	-	19.05	-	-	-	-	-	-	-
8	Astragalus	L	F	-	-	-	-	-	42.87	39.27	22.37	25.53
9	Astragalus	R	F	-	-	-	-	-	45.23	40.30	-	-
130	Scapula	L	F?	21.38	-	-	-	-	-	-	-	-
153	M2	R	-	-	-	23.74	14.36	14.24	-	-	-	-

Table 5.5. Pig measurements of the bones and teeth from Rudston 62. Measurements follow the definitions of von den Driesch (1976) except where stated in the text or figure captions.

I present pig measurements from Rudston 62 in Table 5.5. I recorded four post-cranial measurements and one tooth (M2) using a pair of digital callipers to the nearest tenth of a millimetre. Figure 5.5 illustrates the plotting of length (L) and anterior width (WA) of the mandibular M2 (Payne and Bull 1988), against the Later Neolithic sites of Durrington Walls (Albarella and Payne 2005) and Low Caythorpe (Rowley-Conwy and Owen 2011). The Rudston 62 specimen (ID:-153) is larger than the Durrington Walls mean values (L = 21.8mm, WA = 13.7), and is clustered amongst the larger animals. The Rudston 62 M2 is also much larger than most samples from the local site of Low Caythorpe, with the exception of a single loose tooth (L = 25.9mm, WA = 15.0mm) (Rowley-Conwy and Owen 2011, Appendix 2, 358). The latter example is likely from a wild pig, one of only a few specimens from the Ruston Wold Later Neolithic pit clusters Rowley-Conwy and Owen (2011) assigned such a status. I would therefore tentatively suggest the Rudston 62 specimen came from a domesticated pig. This is further supported by the argument that the Early Neolithic domestic pigs were overall of larger stature than its Later Neolithic equivalent (Viner 2010, Rowley-Conwy and Owen 2011).

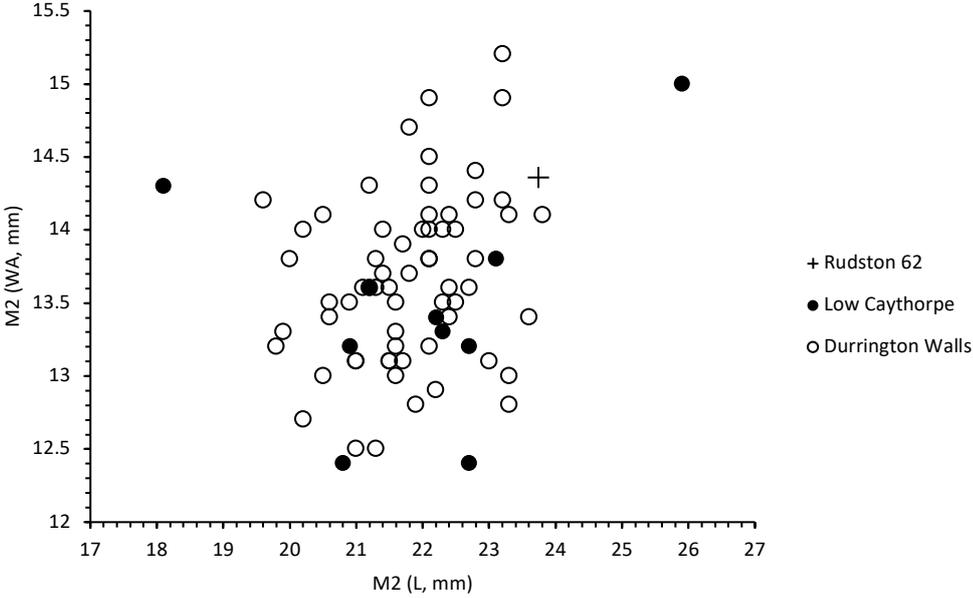


Figure 5.5. Dimensions of Rudston 62 pig mandibular M2, plotting length (L) and anterior width (WA), as defined by Payne and Bull (1988). Low Caythorpe measurements from Rowley-Conwy and Owen (2011, Appendix 2, p358). Durrington Walls measurements from Albarella and Payne (2005).

Albarella and Payne (2005) suggest when comparing assemblages, measuring astragalus lengths (GLl and GLm) can be useful. Astragali survive particularly well within archaeological assemblages and are therefore well-recovered across differing archaeological sites. Reaching near adult size at an early age and with no epiphyses, Albarella and Payne (2005, 597) state ‘astragalus lengths are probably the most useful postcranial measurements for comparing different sites or periods’.

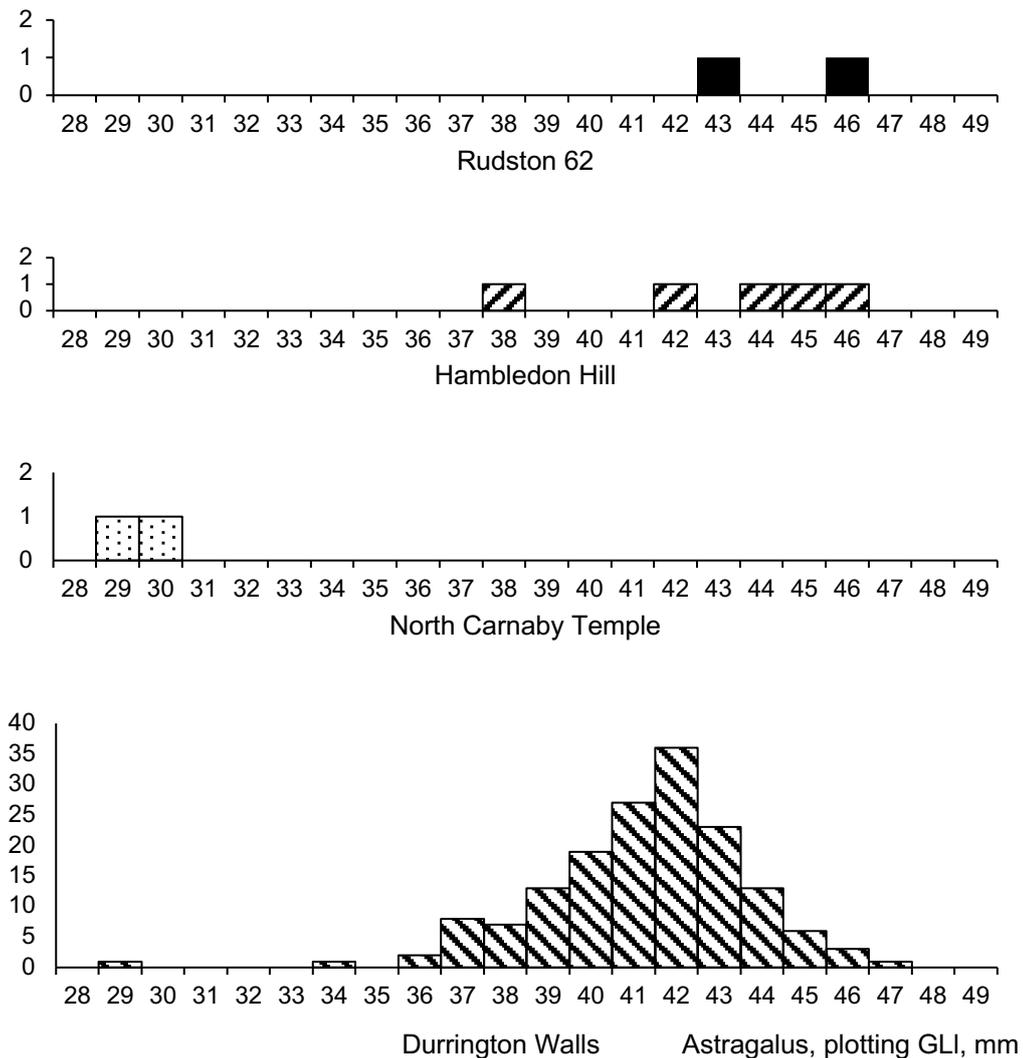


Figure 5.6. Dimensions of Rudston 62 pig astragali, plotting greatest length of the lateral half as defined by von den Driesch (1976, fig. 41g). Hambledon Hill measurements from Legge (2008, table 8.34). North Carnaby Temple measurements from Rowley-Conwy and Owen (2011, Appendix 2, p361). Durrington Walls measurements from Albarella and Payne (2005).

I identified two pig astragali in the Rudston 62 assemblage. ID 8 and 9, with GLI measurements of 42.87mm and 45.23mm respectively. Bramwell notes for the same two elements measurements of 43mm and 46mm, the difference perhaps a matter of rounding up (Bramwell 1972, 11). Figure 5.6 illustrates the dimensions of the two Rudston 62 astragali (GLI) in comparison with three other assemblages of known date. Legge suggests most pigs at Hambledon Hill are domestic, with a few wild individuals (2008); while Durrington Walls is considered by the authors as a single domesticated

group (Albarella and Payne 2005). Rowley-Conwy and Owen (2011) calculated Pearson's coefficient of variation for the three comparative datasets. The results (although in this case they were looking at tibia BT and not the astragalus) confirmed the above arguments, with a low v value for Durrington Walls (5.7) and a high v value for Hambledon Hill (8.9). Their results from Rudston Wold (including North Carnaby Temple) mirrored Durrington Walls suggesting a single domesticated group, with just two specimens belonging to wild animals (amounting to less than 1%) (Rowley-Conwy and Owen 2011). Returning to Figure 5.6, we can see that the two Early Neolithic sites of Rudston 62 and Hambledon Hill are clustered relatively well together. Both are grouped at the upper end of the range found at the Later Neolithic site of Durrington Walls. The 160 Durrington Walls astragali have a mean of 40.8mm and only two specimens (1.25%) with a larger GLI size (Albarella and Payne 2005, Table 3) than ID:-9. I would suggest with some uncertainty that the smaller specimen is a domesticated pig and the larger specimen could either be domestic or wild. What I have found of particular interest is the striking difference in astragalus GLI between the Early Neolithic site of Rudston 62 and the local Later Neolithic site of North Carnaby Temple. Rowley-Conwy and Owen (2011) state that the animals which form the Rudston Wold sample are 'definitely smaller' than their southern contemporaries at Durrington Walls, which is clearly demonstrated in Figure 5.6. These astragali are however very small, leaving me to wonder if practitioner error may be the cause. Two possible explanations come to mind, the first is that these samples are from very young animals. The astragalus has no fusion point but there must be caution not to include samples from light and porous specimens (Albarella and Payne 2005). The second explanation is they are in fact sheep and entered as pig in error. We must therefore regard the North Carnaby Temple specimens as seriously anomalous and probably the result of mis-recording.

Human bone

Bramwell describes two human specimens recovered from the pre-occupation layer excavation in 1960. These include a fragment of distal femur and a fragment of pelvis (Bramwell 1972, 12). My re-examination identified the distal femur specimen, but the pelvis was not recovered and presumed missing. I did in addition to the above identify a human first phalanx (ID:-159). The preservation of this specimen is much better than the rest of the assemblage (including the human distal femur) and does suggest this is potentially intrusive. The case is made stronger by Bronze Age funerary practices

occurring at the site. Alternatively, if contemporary this specimen may have been added to the site assemblage under different conditions, new, fresh and quick deposition rather than weathered, burnt and slow.

Body part representation

Elements from all zones are present from domesticated cattle and pig. The well represented high meat yield limb bones could suggest consumption, as is suggested from the butchery evidence (Table 5.6). The sample size is small and any conclusions must be wary of biases, such as the differential survival of robust bones. The collection by hand of the faunal material would also bias larger specimens. The two identifiable aurochs specimens come from limb bones and could suggest the slaughter and butchery occurring elsewhere, with the transportation of limb bones to the site.

MNI

Minimum Number of Individuals were low (Table 5.3). There is a minimum count of seven individuals from the pre-barrow settlement scatter: two cattle, two pigs, two aurochs and one red deer. The assemblage also contained a human MNI value of one.

Mortality profile

Table 5.7 details the seventeen specimens representing cattle, pig and aurochs evidence epiphyseal fusion. The sample size is small and any conclusions must be wary of biases. Except for a cattle distal metatarsal, all other late-fusing elements were either unfused or fusing. The fused cattle distal metatarsal suggests an age at death of above three years, perhaps no more than four years if the fusing distal radius is from the same individual. The unfused cattle scapula, alongside the unfused cattle distal metacarpal suggests the cull of a young animal or animals; probably less than ten months of age. All of the pig elements were unfused and suggest an age-at-death of less than twelve months. This correlates with the slaughtering of pigs at a relatively young age seen at Durrington Walls (Albarella and Payne 2005).

Element	Cattle	Pig	Aurochs	Red deer	Human	Large Mammal	Medium Mammal
Cranium		2					3
Mandible	1	4				2	2
Tooth	6	5		4			
Antler							
Atlas							
Axis							
Cervical vertebra						1	
Thoracic vertebra	2						
Lumbar vertebra							
Vertebra						1	
Sacrum							
Clavicle							
Scapula	2	2				1	
Sternum							
Rib	7					3	3
Pelvis							
Humerus			1				
Radius	3	1					
Ulna	1						
Metacarpal	1						
Femur	1				1	1	1
Patella							
Tibia	3	2				1	1
Fibula							
Metatarsal	3						
Carpals							
Calcaneum		1	1				
Astragalus		2					
Tarsal							
Phalanx					1		

Table 5.6. Body part representation per taxon by element (NSP).

The aurochs fused distal humerus suggests an animal older than eighteen months. Biometry suggests the aurochs humerus and calcaneus are from two different

individuals, therefore the large unfused calcaneus is from a different animal no older than four years.

In Table 5.8 I present tooth wear from six specimens. Evidence is limited but supports the above profiles. The mandibular pig M2 (ID:-153) was the only tooth still in position and suggests an age between 7-21 months. All other teeth were loose and therefore more difficult for me to accurately age. The cattle teeth all come from adult animals between eighteen months and old age. The red deer lower M2 was very worn and must have derived from an old individual.

NSP	Taxon	Element	Proximal	Distal	Age
Early fusing					
1	Cattle	Scapula		Unfused	> 7-10 months
1	Cattle	Metatarsal	Fused		< 0 months
1	Cattle	Metatarsal	Fused		< 0 months
1	Pig	Scapula		Unfused	> 12 months
1	Pig	Radius	Unfused		> 12 months
1	Aurochs	Humerus		Fused	< 12-18 months
Middle fusing					
1	Pig	Tibia		Unfused	> 24 months
1	Pig	Tibia		Unfused	> 24 months
1	Cattle	Metacarpal		Unfused	>18-24 months
1	Cattle	Tibia		Fused	< 24-30 months
1	Cattle	Tibia		Fusing	≥ 24-30 months
1	Pig	Calcaneus	Unfused		>24-30 months
Late fusing					
1	Aurochs	Calcaneus	Unfused		> 42-48 months
1	Cattle	Radius		Fusing	≥ 42-48 months
1	Cattle	Metatarsal		Fused	< 27-36 months
1	Cattle	Femur	Unfused		> 42 months
1	Cattle	Radius		Unfused	> 42-48 months

Table 5.7. Age-at-death profiles as indicated by degree of epiphyseal fusion (after Silver 1969, O'Connor 2003).

Sex

Bramwell notes the presence of red deer antler (Bramwell 1972). I did not identify this during my re-examination and is presumed missing. Red deer antler would represent a male animal. Biometry is useful for the identification of sex in sexually dimorphic species, such as cattle. The aurochs elements represent both a single male and female animals. The domesticated cattle measurements all cluster as females, with no identifiable males within the assemblage. This supports conclusions reached for other Early Neolithic sites (Gron *et al* 2018, Legge 2008). The post-cranial elements of pigs are not sexually dimorphic.

ID	Taxon	Mandibular/Loose	Side	P4	M1/2	Age
18	Cattle	Loose	Right		h	Old adult
20	Cattle	Loose	Right		b	18-30 months
21	Cattle	Loose	Right	e		30-36 months
22	Cattle	Loose	Left	b		G? adult
24	Red Deer	Loose	Right		Very worn	Old adult
153	Pig	Mandibular	Right		a	≥7-21 months

Table 5.8. Age-at-death profiles as indicated by tooth wear (after Grant 1982, Brown 1991).

ID	NSP	Taxon	Element	Side	Distal	Butchery	Location
1	1	Aurochs	Humerus	R	Fused	Chop	Across distal shaft
2	1	Cattle	Tibia	R	Fused	Chop	Across distal shaft
3	1	Cattle	Tibia	L	Fusing	Chop	helical, curving outline fracture (possible fresh bone), plus 2 surface puncture wounds possibly.
4	1	Aurochs	Calcaneus	R	u/f	Chop	Distal chop removing Z1,2. Looks new - colouring around the edges
5	1	Cattle	Radius	R	Fusing	Chop	helical, curving outline fracture from the shaft to distal anterior side - colouration suggests modern break during

							excavation. Chop across the shaft
6	1	Cattle	Mandible	L		Cut	multiple cut marks on the medial side
10	1	Large mammal	Tibia	L		Chop	2 helical, curving outline fractures from the shaft to distal anterior side
106	1	-	-	I		Chop	-
114	1	Cattle	Scapula	L		Chop	lateral proximal end
115	1	Large mammal	Unidentified long bone	I		Chop	helical, curving outline fracture
121	1	Large mammal	Unidentified long bone	I		Chop	-
129	1	Cattle	Tibia	L	Fused	Chop	-
156	1	-	Unidentified long bone	I		Cut	-
163	1	Large mammal	Scapula	I		Cut	medial face
164	1	Large mammal	Unidentified long bone	I		Chop	-
166	1	-	Unidentified long bone	I		Chop	-
168	1	Large mammal	Unidentified long bone	I		Chop	-
173	1	Cattle	Rib	I		Chop	helical, curving outline fracture from proximal to shaft anterior side
184	1	Small mammal	Unidentified long bone	I		Chop	helical, curving outline fracture
190	1	Large mammal	Unidentified long bone	I		Chop	
191	1	Cattle	Metacarpal	I	u/f	Cut	cut and polished point on posterior
192	1	Cattle	Radius	R	u/f	Chop	helical, curving outline fracture

Table 5.9. Butchery evidence.

Butchery

In Table 5.9 I present all butchery evidence coming from large mammals, with elements identified as either cattle or aurochs, with the remaining as unidentified large mammal. A single medium mammal specimen (ID:-184) displays a chop mark to an unidentified long bone fragment. I found most of the butchery is on meat bearing limb bones suggesting meat removal (Parmenter 2014, 80). The occurrence of helical fractures

(created when fresh bones are split) are indicative of marrow extraction usually regarded as domestic activity (Parmenter *et al* 2015, 1). Multiple cut marks to a cattle mandible fragment (ID:-8) could indicate tongue removal.

Pathologies

I recorded no evidence for pathologies.

Worked bone

The original report describes the presence of a bone point associated with the pre-occupation layer (Bramwell 1972, Fig.8, 20). Kinnes and Longworth (1985) provide an illustration (Figure 365) and describe it as the distal end of an immature cattle metacarpal, cut and polished on transverse slice; abraded. L 85mm, W 46mm and D 22mm (Kinnes and Longworth 1985, 65). I identified this specimen during my re-examination and support the above conclusions.

5.2.3 Conclusion

Rudston 62 offers a small but significant faunal assemblage. Bramwell's original report described a type of occupation rarely found within British Early Neolithic studies; one dominated by 'animal food [which] came from hunting of the forest forms of wild pig, wild ox and red deer' (Bramwell 1972). In recent years, Bramwell's animal bone reports have come under severe scrutiny, with significant findings of discrepancies between his reports and the archaeological evidence within the archives (Rowley-Conwy and Owen 2011); this is in part to changing zooarchaeological methodologies, larger comparative datasets and prevailing academic narratives. Rudston 62 therefore required a thorough re-examination. Contrary to the original report, I have found an assemblage dominated by the domesticated herds.

The assemblage comprised 193 bone and tooth fragments (NSP). Cattle are more prominent than pig (15.54%; 9.84%), with domesticates more than eight-fold their wild counterparts. The MNI is relatively low at seven; including 2 cattle, 2 pigs, 2 aurochs and 1 red deer. The body part representation of the domestic animals suggests the slaughtering, butchery and consumption at the site in question. In contrast the aurochs are only present as high meat yield limb bones, suggesting slaughter and the breakdown

of the carcass elsewhere, followed by the transportation of these elements to the site. Red deer are only present as teeth and one piece of antler which is now missing. Age-at-death suggests the cattle bones represent at least one calf (less than 10 months) and an adult female (more than three years). The pigs were culled at less than 12 months of age. A cull pattern mirrored elsewhere (Albarella and Payne 2005). Biometry tells me that the aurochs probably represent a male and female. The domesticated cattle are all metrically female. One large pig astragali (ID:-9) could either be a domesticated or wild animal. The biometry from Rudston 62 will play a significant role in filling in the 'blank space' for Early Neolithic Yorkshire. We now know that the domesticated pigs which constituted the genesis of farming in Yorkshire was of comparable stature to those in southern Britain, including the causewayed enclosure at Hambledon Hill.

5.3 Corner Field, Site 11 Pit, Rudston Wold

The site of Corner Field, Site 11 (TA09976595) was excavated by the Granthams in 1972, after ploughing exposed a slight hollow in the natural chalk containing a trapped buried brown soil, Grimston Ware sherds, flints and eroded ox bone (Manby 1975, 31). There are no plans or section drawings from the Grantham excavations. The archive was kindly loaned for re-examination by the archive custodian P Makey, Driffield.

Terry Manby (1975, 30) originally published the site in his paper - 'Neolithic occupation sites on the Yorkshire Wolds' and describes seventeen Grimston Ware sherds and a flint industry including a scraper, five serrated-edge flakes, forty-six flakes, seven blades and four cores. The condition of the pottery is consistent, suggesting to me a single, short-term episode of deposition. I would describe all the flint as fresh and sharp, also indicating short-term knapping activity.



Figure 5.7. Corner Field, Site 10 and 11 archives, Rudston Wold (Grantham archive). Note Site 11 is on the left.

5.3.1 Results

The assemblage comprised 18 fragments of bone and tooth (NSP).

Preservation and taphonomy

I would characterise the bone assemblage as poorly preserved, with significant root damage evident on all the elements. I recorded none as complete. I found no evidence for gnawing, which could be the result of poor preservation. I recorded no evidence for pathologies, burning or butchery activity.

Context	Cattle	Large Mammal	Indeterminate	Total
Corner Field, Site 11 pit	4	4	10	18

Table 5.10. Taxonomic representation (NSP)

Species present

Table 5.10 presents the assemblage. The totals are the Number of Specimens (NSP); also given in Table 5.11 is the Minimum Number of Individuals total. I identified four specimens as *Bos*, however, the fragmentation of the sample makes it not possible to confirm if they come from domesticated cattle or aurochs. There are four ‘Large Mammal’ specimens and ten indeterminate fragments. The MNI for cattle is one, and it is possible the entire assemblage derived from a single animal.

Context	Cattle
Corner Field, Site 11 pit	1

Table 5.11. MNI site level.

Body Part representation

The zones of the body represented include only the head and feet - two loose teeth and a skull fragment and a single metacarpal fragment. The presence of only head and hoof elements could indicate an animal was slaughtered and the zones of the body with low-meat yields were discarded. Or the heavily eroded nature of the assemblage favoured the survival of elements which are denser – such as teeth and the metacarpal.

Element	Cattle
Head	
Cranium	1
Tooth	2
Feet	
Metacarpal	1

Table 5.12. Body part representation for cattle by element (NSP)

Mortality profile

I recorded no epiphyseal fusion evidence from the assemblage, the metacarpal fragment formed part of the shaft. Table 5.13 details ID 17 is a loose cattle M2, which I estimate an age at death between 18-30 months.

ID	Taxon	Mandibular/Loose	Side	M2	Age
17	Cattle	Loose	Left	c	18-30 months

Table 5.13. Age-at-death profiles as indicated by tooth ware (after Grant 1982).

5.3.2 Conclusion

The animal bone assemblage from Corner Field, Site 11 is small, perhaps representing a single animal – most probably a cow, aged between 18-30 months. The uniform appearance of the pottery and fresh flint indicate a short-lived episode of activity. The assemblage of such activity being wrapped together and scrapped/deposited into a natural hollow. Can we imagine this pottery and flint directly involved in the slaughtering of this animal? The knapping of four blue and white patinated cores and the creation of tools used in the skinning of hide, cutting of ligaments and removal of meat? Were the sherds from at least three Grimston ware vessels used during the processing of the animal's bodily parts (as containers); or were they accidentally crushed while the animal lashed around, frightened, ultimately collapsing to the ground? I can imagine this event being important, preserved in social memory and later becoming enclosed by the banks of the Rudston Cursus 'A' monument (Manby 1975, 30).

5.4 Early Neolithic settlement scatters

In the final section of this chapter, I present a corpus of evidence for Early Neolithic settlement scatters (which contain animal bone) as discovered in antiquarian records. Alongside Rudston 62 (which represents the only site to have undergone excavation in the last century), I have identified nine further settlement scatters from the pre-barrow surface of Bronze Age round barrows. The principal excavators of these sites were W. Greenwell (1877) and J Mortimer (1905). I must stress that none of the animal remains survive from any of these nine sites, and as such we are fully dependent on the descriptions of species recovered in their original reports. This will present its own sampling bias. However, in a region deprived of large Early Neolithic animal assemblages, like those from causewayed enclosures in southern England, these textual traces could provide us with an insight into the human-animal practices of the very earliest farmers in Yorkshire (Table 5.14).

5.4.1 Fox Covert (TA09846577)

There are traces of burning on the original ground surface, with a large quantity of charcoal (Greenwell 1877, 232). At least three pits are noted (Gibson and Bayliss 2010, 94). Associated with this was a large quantity of dark, plain coloured pottery sherds (128 sherds are recorded in the archive), a flint leaf shaped arrowhead and flint chippings. Throughout the barrow were fragmented bones of ‘several oxen’, representing adult and juvenile animals and four pigs (Greenwell 1877, 232).

Archive location

The Greenwell archive is held at the British Museum. None of the animal bone has survived from the mound. Kinnes and Longworth (1985, 60) note the archive does contain a bone pin (No. 11) made from a sheep/goat metatarsal, which was associated with Burial 6 and of probable Early Neolithic date.

Site name	Cow	Pig	Sheep/Goat	Red Deer	Dog	Aurochs	Hare	No species details	Pottery	Flint	Stone	Charcoal	Deposit description
Fox Covert	X	X	-	-	-	-	-	-	X	X	-	X	-
Greenwell 42	X	X	-	-	-	-	-	-	X	X	-	X	Soft black mould
Greenwell 7	-	X	X	-	-	-	-	-	X	X	-	-	-
Greenwell 8	X	-	-	-	-	-	-	-	X	X	-	X	Chalk
Greenwell 23	X	X	X	-	-	-	-	-	X	X	X	X	Black deposit
Rudston 63	X	-	X	-	-	-	X	-	-	X	X	-	-
Rudston 67	X	X	X	X	X	X?	-	-	X	X	X	X	Dark fatty earth
Weaverthorpe 47	X	-	X	X	-	-	-	-	X	X	-	X	-
Heslerton 5	X	X	-	-	-	-	-	-	X	X	-	X	-
Rudston 62	X	X	-	X	-	X	-	-	X	X	X	X	Dark soil

Table 5.14. Table summarising evidence for Early Neolithic settlement scatters found in the pre-barrow soils or integrated into the superstructure of Bronze Age round barrows.

5.4.2 *Greenwell 42* (SE 9795 6892)

Greenwell (1877, 192) describes a ‘soft black mould (approx. 5ft by 4ft), placed on the natural surface, and varying in thickness from 2 in. to 6in.’ A second ‘black mould’ was also identified but of smaller and thinner dimensions. Within this were small grains of charcoal, numerous flint flakes and chippings, a highly fragmented plain, dark-coloured pottery vessel and many broken animal bones. A footnote details the animals as ‘a large number of oxen, some of them young ones, and two pigs. All the marrow containing bones have been split open’ (Greenwell 1877, 193).

Archive location

The Greenwell archive is held at the British Museum. A single unidentified animal tooth (No. 24) is noted from Feature A (deposit of soft black mould) associated with Neolithic bowl sherds (Kinnes, Longworth 1985, 46).

5.4.3 *Greenwell 7* (SE 9602 7475)

Upon the natural surface were the partial remains of at least eight individuals, associated with the bones of one sheep/goat, three pigs and a large quantity of fragmented plain dark-coloured pottery, spread over an area of 6 ft. squared (Greenwell 1877, 146). Manby (pers comm. January 2022) has identified this pottery as Towthorpe Ware. Three pits were encountered containing only chalk, near the north pit Greenwell describes the skull of a pig, other animal bones and a round flint scraper. Elsewhere on the natural surface was a ‘good deal of burnt earth and charcoal’ (Greenwell 1877, 147).

Archive location

The Greenwell archive is held at the British Museum. There are no animal bones surviving in the archive.

5.4.4 *Greenwell 8* (SE 9606 7476)

Greenwell encountered on the natural surface a deposit of five individuals, disarticulated and scattered, covering an area of 8ft. squared which was associated with clay and charcoal. Elsewhere was a pit filled with chalk and the bones of three oxen. South of this pit were further human remains, charcoal and plain, dark-coloured pottery sherds (Greenwell 1877, 147). The mound material contained several flint chippings.

Archive location

The Greenwell archive is held at the British Museum. There are no animal bones surviving in the archive.

5.4.5 *Greenwell 23* (SE992755)

A black deposit on the original surface of approximately 7ft by 2ft contained fragments of plain, dark-coloured pottery, flint chippings, charred sandstone splinters and animal bones, some are described as charred (Greenwell 1877, 168). In a footnote the animals are detailed as those of oxen, sheep/goat and pig. A hollow which is recorded as 4in deep, abutting the black deposit contained the remains of an adult male, large quantities of charcoal, plain, dark-coloured pottery, flint chippings and broken animal bone; the marrow containing bone was split open. The mound material contained further black, burnt matter, flint, pot sherds and animal bone (Greenwell 1877, 168).

Archive location

The Greenwell archive is held at the British Museum. There are no animal bones surviving in the archive.

5.4.6 *Weaverthorpe 47* (SE 99586869)

Throughout the barrow matrix was a significant amount of flint working, sixteen flint scrapers, a very large number of plain, dark-coloured pottery sherds and the bones of several oxen, sheep/goat and one red deer (Greenwell 1877, 202).

Archive location

The Greenwell archive is held at the British Museum. No animal bones remain in the archive, except for the two red deer antler rakes (Nos. 109-110) (Kinnes and Longworth 1985, 50).

5.4.7 Heslerton 5 (SE 9220 7499)

Throughout the mound material and on the natural surface were pieces of charcoal, some potsherds which Kinnes and Longworth (1985, 33) describe as 'Neolithic bowl', several flint scrapers, two saws, flint chippings and some broken animal bone. A footnote identifies the animal bone as cattle and pig (Greenwell 1877, 142).

Archive location

The Greenwell archive is held at the British Museum. No animal bones remain in the archive.

5.4.8 Rudston 63 (TA 0970 6568)

In the material of the mound Greenwell notes 'numerous animal bones and chippings of flint', along with a large quantity of flint and stone tools (Greenwell 1877, 251). The tools include a willow-leaf-shaped arrowhead, seven saws, thirteen round scrapers and three stone axe fragments: including one of greenstone. A footnote details the animal bones as from 'several oxen, still more goat or sheep, also of twelve pigs and two hares. The marrow bones had been broken and one cattle bone is recorded as calcined. Most of the animals were young (Greenwell 1877, 251). I must stress caution regarding an Early Neolithic date for this assemblage due to a lack of associated pottery, as is typical for other assemblages of this type.

Archive location

The Greenwell archive is held at the British Museum. No animal bones remain in the archive.

5.4.9 Rudston 67 (TA 0970 6568)

Greenwell describes a deposit of ‘dark fatty earth upon the level of the ground...attaining a thickness of 2.5ft.’ This feature was full of charcoal, a very large number of animal bones, sherds of plain, dark-coloured pottery, flint tools and chippings (Greenwell 1877, 262). The flint tools include 79 saws, 17 scrapers, 3 leaf-shaped-arrowheads, a hammerstone and a fragment of greenstone axe. The animal bones include four red deer and two teeth, twelve sheep/goat and six teeth, four horse, two dog, 65 pig and 30 teeth, 130 cow and 41 teeth. He notes the presence of a larger size of ox ‘...than has been before met with in the barrows of the Wolds’ (Greenwell 1877, 262). This latter description could be that of an aurochs.

Archive location

The Greenwell archive is held at the British Museum. No animal bones remain in the archive, except for three red deer antler tines (Nos. 132-134) (Kinnes and Longworth 1985, 76).

The above corpus brings to light a critical question. It centres on the lack of radiocarbon dates available for the above assemblages and therefore their chronological competency. The plain, dark-coloured pottery referred to by Greenwell (1877,107), or as Neolithic Bowl (Kinnes and Longworth 1985) and dish-shaped pottery by Mortimer (1905, 321) is the well documented Carinated Bowl tradition (Sheridan 2010), known locally as Grimston Ware and Plain bowl known locally as Towthorpe Ware style (Manby 1975). Greenwell (1877, 168) makes the typological connection of style between the settlement scatters at Greenwell 23, Greenwell 42, Cowlam 57 and Rudston 67. Mortimer (1905, 321) also notes the pottery from Warter 254 is of the same type as that recovered from his excavation of Hanging Grimston (Mortimer 110). The pottery sherds from Rudston 62 are from the same ceramic tradition as that found at Calais Wold 275 (Coombs 1976). Recent radiocarbon dates for Calais Wold 275 offering a date for Towthorpe Ware activity of 3770-3640 *cal* BC (95.4% probability) (Parker-Pearson *et al* 2019) and Ling Howe offers the date of 4330-3790 *cal* BC (95% probability) for Grimston Ware (Dent 2017).

5.5 Conclusion

I have presented in this chapter my re-examination of two Early Neolithic animal bone assemblages from Yorkshire. Rudston 62 offers a small but significant faunal assemblage. Bramwell's (1972) original report described a type of occupation rarely found within British Early Neolithic studies. One dominated by 'animal food [which] came from hunting of the forest forms of wild pig, wild ox and red deer' (Bramwell 1972). In recent years, Bramwell's animal bone reports have come under severe scrutiny, with significant findings of discrepancies between his reports and the archaeological evidence within the archives (Rowley-Conwy and Owen 2011). This is in part to changing zooarchaeological methodologies, larger comparative datasets and prevailing academic narratives. Rudston 62 therefore required a thorough re-examination. Contrary to the original report, I have found an assemblage dominated by domesticated animals, evidence which supports similar conclusions reached in other regions of Britain and found during the Late Neolithic in Yorkshire.

The animal bone assemblage from Corner Field, Site 11 is small, perhaps representing a single animal – most probably a cow, aged between 18-30 months. The uniform appearance of the pottery and fresh flint indicate a short-lived episode of activity. The assemblage of such activity being wrapped together and scrapped/deposited into a natural hollow. I recorded the animal bone as heavily eroded which could suggest it was rolling on the surface for a lengthy period. If correct, the filling of this hollow with old cattle bone and fresh flint and pottery could have been an attempt to entangle material with different temporal biographies.

Table 5.14 lists the ten Early Neolithic settlement scatters identified from antiquarian descriptions and animal bone archives (Rudston 62). It is evident that these sites are dominated by domesticated cattle, sheep/goat and pigs, sometimes in considerable numbers – Rudston 63. This evidence will form a foundation for the discussion in Chapter nine, however before we move on a short note on what 'settlement scatters' represent. In most cases we could be dealing with small fragments of animal bone and other material culture which was deposited (or trodden as at the Ling Howe long barrow) directly onto the ground surface, and in others we could be looking at disturbed

pits (these features being missed during the 19th century digging). An alternative interpretation is some may represent Early Neolithic middens. The Early Neolithic Cotswold-Seven long barrow sites of Ascot-under-Wychwood (McFadyen *et al* 2007, 34) and Hazleton North (Saville 1990, 14) have both produced pre-barrow depositional activity referable as 'middens'. McFadyen *et al* (2007, 34) use the term 'midden' to describe a '...more or less finite space defined by concentrated and distinct activities of deposition'. This main concentration of the midden measured 14m (north-south) by 11m (east-west), with a potential thickness of 0.11m. It is described as a dark or very dark brown loam which was associated with a marked concentration of material culture, including pottery, animal bone and flint working. The dense concentration of pottery and animal bone giving the midden its three-dimensional form. The animal bone recovered from the midden include cattle, sheep, pig, cat, dog, red deer, roe deer and fox (McFadyen *et al* 2007, 34). Saville (1990, 14) at Hazleton North refers to an area of distinct buried soil of dark-greyish brown in colour as a midden. This midden measured 9m (east-west) by 10m (north-south) and represented a marked concentration of material culture deposition including flintwork, pottery, stone artefacts, domesticated animal bone and cereal grains (Saville 1990, 14). The two middens so far considered share the characteristics of marked material culture deposition and a distinct dark context colour. I would argue that some of the above sites considered represent Early Neolithic middens; I will illustrate this position by considering Rudston 67 and Greenwell 23. The settlement scatter recovered from Rudston 67 is described by Greenwell (1877, 262) as a layer of dark fatty earth (the mound was constructed from chalk), resting on the natural surface, extending throughout the whole barrow (30m in diameter); with a thickness increasing towards the centre from 0.3m to 0.76m. This deposit was full of burnt earth and charcoal in every part; but there was more evidence of burning in that part which immediately overlaid the natural surface. The marked concentration of material culture associated with this feature included animal bone, Early Neolithic pottery, flint and stone tools (Greenwell 1877, 262). On the natural surface of Greenwell 23 was a natural hollow (0.10m deep), a male body was placed within and filled with a dark-coloured earth (the mound was constructed of earth and chalk), containing fragmented animal bone, flint workings and pottery sherds (Greenwell 1877, 167). Extending from this hollow, a black deposit measuring 2.1m (east-west) by 0.6m (south-north) contained many fragments of Early Neolithic pottery, flint and charred animal bones. Throughout the mound material was 'black matter', flint, pottery sherds and animal bone (Greenwell

1877, 168). I would argue this represents both the partial survival of an extant midden but also the disturbing of this midden into the fabric of the later superstructure. Most of the above corpus could either be interpreted as extant Early Neolithic three-dimensional middens or midden material which has undergone later disturbance by Bronze Age building works.

6

AUTO-REWILDING ARCHAEOLOGIES: producing ignored animal histories

6.1 Introduction

Today we live in what climate scientists and geologists term the Anthropocene, a moment in geological time where climate change, habit loss and species extinctions are being driven by the actions and political motives of government systems and humankind. The Enlightenment gifted us our human exceptionalism, the Cartesian conceptual opposites of culture-nature and human-nonhuman (Banfield 2018, 23). It is this dualism of philosophical thought which allows those who wish to seek profit, to pollute our atmosphere, destroy rainforest for the growing of monocrops, or treat our domesticates as slaves. If we wish to engage archaeology in this crisis of the Anthropocene, we must start by writing archaeological histories which promote the entwined human and nonhuman world-making practices we recover from our sites and offer critiques of the human exceptionalism which is totally engrained in the tradition of archaeological research.

In this chapter I want to consider those specimens which are traditionally considered 'intrusive' (red fox, badger, rabbit, vole, frogs, rats etc). The organisms which take over our sites after human disturbance.

Let us begin with the word 'intrusive' and its definition in the Oxford English Dictionary -

Of intruding character; characterized by coming or entering in an encroaching manner, or without invitation or welcome; done or carried out with intrusion.

oed.com (Accessed: 15/7/2021)

And now to consider how the negative connotations of language impact our archaeological reports. The Cotswold-Severn long barrow site of Ascot-under-Wychwood provides a typical example of an Early Neolithic animal bone report (Benson and Whittle 2007, 238). Within the chambers was recovered the bones of fox, lamb, frog and mole. Identified as ‘intrusive’ and briefly discussed in the subsection ‘Intrusive material’, the zooarchaeologist’s (Mulville and Grigson) describe the following –

Material considered to be intrusive has been excluded from the analysis. This consists of a number of fox and associated sheep bones recovered from the chambers. Foxes are known to dig into monuments and take food remains into their dens, and the combination of characteristics found in this material suggested it was...non-anthropogenic in origin.

Mulville and Grigson 2007: 238

Serjeantson (2011, 5) ‘sanitises’ her Neolithic and Early Bronze Age animal bone dataset for southern England by removing animals where the report indicates they were probably intrusive, as well as rodents and other micro-mammals which may be the prey of birds. Although I can accept the focus of Serjeantson’s report was to understand the Neolithic and Early Bronze Age animals and not the later animal histories which occurred at the sites, there is no attempt to understand if these ‘intrusive’ events are either modern or historical in nature. They are simply grouped together and excluded. Ingrid Mainland (2010, 83) reports four species were identified from the ‘nests’ in the Wold Newton round barrow archive. Field vole, Bank vole, common frog and common toad are described and concludes ‘Unfortunately, all these species can be considered intrusive’ and ‘...would not prove reliable dating evidence’. If the only aim of archaeological research is to understand the chronological histories of human world-making practices then this statement is fair and correct, but is this the only aim of archaeology?

Although it is important we understand the taphonomy and chronology of archaeological evidence within a given context or site, should we simply exclude some evidence over others due to it being non-anthropogenic in origin? I would argue the correct practice would be to complete a zooarchaeological examination of this material

and place it within the histories of the site. If deemed appropriate, such material should be considered for radiocarbon dating. In this way, we can gather the human and nonhuman trajectories together, opening the opportunity to explore the entangled experiences of the site; these animals and their contemporary relationships with humans. But for us to achieve this aim we must change our practices and perspectives, and the first step is changing our use of language. I suggest we should drop the term ‘intrusive’ and its associated negativism and instead borrow from anthropologist Anna Tsing (2017, 6) the term ‘auto-rewilding’.

Tsing (2017, 6) describes auto-rewilders as bold. They are the rewilding activities of animals themselves, as opposed to the human attempts to introduce or re-introduce species into a given landscape. Tsing’s (2017, 3) new anthropologies of landscape allow her to read landscape histories which trace the world making practice of humans and nonhumans. Looking at the auto-rewilding of a former brown coal mine in central Jutland, Tsing tells a rush of stories which assemble a diverse menagerie of animals in this landscape of ‘man-made ruin’ (red deer, raccoon dogs and wolves). Alongside animals, Tsing (2017, 6) also includes the auto-rewilding activities of plants and other organisms. Poignantly, she concludes her paper, ‘Without auto-rewilding, our disturbed landscapes would be thin and bare, devoid of organisms except those we put there.’

Rather than thinking of these animals as ‘intrusive material’, let us now instead engage excitedly with these auto-rewilding events as the fullest expression of animal life and to reveal the ‘wonder and enchantment’ (Monbiot 2013) of archaeological wildlife.

6.2 Producing an ignored evidence

The auto-rewilders discovered from the ten Early Neolithic architectures in Yorkshire are listed in Table 6.1, and include the red fox, badger, field vole, water vole, bank vole, rat, field mouse, rabbit, common frog and common toad. Notable exceptions include members of the *mustela* genus (weasel, mink and stoat) and small nesting birds, both of which were identified in the West Kennet long barrow animal bone assemblage in Wiltshire (Banfield 2018, 283). Although there is no context available for the two recorded small bird specimens, the open passage and chambers would be inviting. In

fact, if you were to visit the site today, there is the material evidence for swift habitation in the south-east chamber. An occupation (if you like) of ritual architecture! The most common auto-rewilder is the red fox, followed by rabbit and field vole. All these species can be considered indigenous, except for the rabbit which is regarded as a Norman introduction (Serjeantson 2011, 5) and the brown (common) rat (Corbet and Southern 1977). The most common monument type for the recovery of auto-rewilders is the Early Neolithic round barrow, followed by long barrows and single graves. There is no evidence for auto-rewilding from Early Neolithic house sites and pits, this can be partially explained by their being no mound feature, which is the most common context for their recovery.

The crafty, cunning, sly and clever red fox (OED definitions of ‘foxy’ [accessed 2/3/2021]) is not only the most common auto-rewilder of the built environment from the Early Neolithic, it also holds an ambiguous position in archaeological discourse. On the one hand its den building practices destroy archaeology and cause frustration to archaeologists during the process of excavation; on the other hand, its common inclusion has also led some to argue for a special status. Ingrid Mainland (2010, 89) concludes her animal bone report from Towthorpe 18 as –

...the fox bones (are) therefore of interest suggesting that they represent evidence for the special treatment of foxes during the Neolithic within the Wolds. Mortimer (1905) draws attention to the high frequency with which fox occurs in the barrows and it would be interesting to explore further the nature of this association.

Mainland 2010: 89

In the spirit of this chapter, I will investigate the auto-rewilding histories from four sites – Towthorpe 18, Calais Wold 275, Hedon Howe and Wold Newton. In opposition to those who shape the limited archaeological evidence to support arguments of foxes as fur (economics) (Serjeantson 2011, Gibson and Bayliss 2010) or cosmological actors (Pollard 2008, 57), my aim is to see and write about all these animals on their own terms; their own entangled experience with the archaeological evidence and importantly, without bringing the discussion back to us (humans).

Site name	Architecture	Feature	Red Fox	Badger	Field vole	Water vole	Bank vole	Rat	Field mouse	Rabbit	Frog/Toad
Willerby Wold	LB	1				/					
Willerby Wold	LB	2			/						
Garton Slack 37	LB	3								/?	
Calais Wold 275	RB	5	/		/?					/	
Whitegrounds	RB	7	/								
Wold Newton	RB	5			/	/	/	/	/	/	/
Towthorpe 18	RB	5	/					/			
Duggleby Howe	RB	5	/								
Painsthorpe 118	Grave	6	/								
Hedon Howe	RB	8	/	/							
Hedon Howe	RB	5	/								
Aldro 94	RB	5								/	

Table 6.1. The auto-rewilders discovered in the antiquarian accounts and archives from Yorkshire's Early Neolithic architecture. 1 = Mortuary enclosure; 2 = Façade trench; 3 = Pottery fill; 4 = Mound; 5 = Mound, 6 = Grave; 7 = Passage; 8 = Cist.

6.2.1 Towthorpe 18 round barrow

The site of Towthorpe 18 (SE89816495) was first excavated by Mortimer (1905) in 1864 and then again three years later in 1868. Alongside a cache of fox bones located southeast of the centre and 0.6m from the apex, Mortimer also recovered the teeth and bones of cattle and pig along with a 'nest' of rat bones within the superstructure. Other archaeological evidence included the human remains of six adults and one child (Gibson and Bayliss 2010, 87), two Towthorpe Ware bowls, two lozenge-shaped flint arrowheads and four leaf-shaped arrowheads. The Mortimer archive which is stored at Hull Museum was returned to in 2010 with the intention to investigate and date the Neolithic round barrows of the Upper Great Wold Valley (Gibson and Bayliss 2010, 72). As part of this project, Mainland re-examined the faunal remains surviving in the site archive, the animal species included fox, cow, pig, sheep/goat and bird (Mainland 2010, 88-89). From the cache, fifteen bones were identified to red fox, which included elements such as ribs, vertebra, skull and articulated limb bones. The bones are described as in very good-excellent condition and represent a MNI of 2. Mainland

suggests these remains are the 'remnants of complete or at least partially articulated carcasses' (Mainland 2010, 88). This supports Mortimer's (1905) earlier interpretation that the fox remains had been deliberately arranged since in one case the humeri were crossed over a skull. Mainland (2010, 88) records no evidence for human modification, suggesting these animals were not skinned for fur or consumed. Nine radiocarbon dates are now available for the site, which date the earliest activity as the primary mortuary deposit to 3640-3560 *cal* BC (87% probability Griffiths 2014, Table 1). There appears to be a later phase of activity which includes secondary inhumations which date to the end of the third millennium BC and therefore, the Early Bronze Age. The radiocarbon dates for the fox remains were not statistically consistent, suggesting to the authors that the two foxes were not contemporary with each other (Gibson and Bayliss 2010, 90). Fox B (OxA-17241) was dated to between 2470-2280 *cal* BC (93% probability) and Fox A (SUERC-13934) between 2045-1895 *cal* BC (79% probability) (Gibson and Bayliss 2010, Table 5.1). The cache is argued as representing the deliberate placement of both curated and contemporary fox remains (Gibson and Bayliss favoured explanation), around 2045-1895 *cal* BC (79% probability). Even if we were to accept the suggestion these fox bones represent a special deposit of curated/contemporary pelts or trophies, this is clearly the material expression of human-fox relationships from the Early Bronze Age associated with the later re-use of Early Neolithic architecture. Another example of Bronze Age human-fox relations can be found at the long barrow site of Amesbury 42, where recovered from the secondary silt of the flanking ditch was a fox mandible associated with fragments of Bronze Age pottery (Banfield 2018, 83).

An alternative reading of this archaeological evidence would be these adult foxes (Mortimer originally describes three but there were insufficient morphological markers to confirm this during the re-examination (Mainland 2010, 88)) entered the monument through their own agency and the act of den-building. Gibson and Bayliss (2010, 90) suggest this interpretation is less favourable due to the length of total time the den would have been in use (200+ years), however I see no reason to suggest this den needed to be in continuous use for 200+ years and could not have been returned to in a more sporadic and opportunistic manner. The red fox produces young in the spring, with a litter size of four or five, after a gestation of 52 days (Corbet and Southern 1977, 318). Evidence that a den may be in use can be indicated by unconsumed remnants inside and outside the den (Corbet and Southern 1977, 314). During the spring an adult red fox would have

a daily food requirement of 500g, with its prey including small birds, small rodents, young domesticated animals (lambs, kids, piglets) cattle afterbirths, alongside the scavenging of carrion. Returning to Mainland's report, the archive also contained 16 fragments of neonatal/ very young sheep/goats – representing a MNI of three and 13 fragments of neonatal/very young pig – representing a MNI of three, and two unidentified bird bone fragments (Mainland 2010, 88). Mortimer (1905, 9) provides a brief contextual description for the recovery of these bones– ‘...in various places in the mound, detached teeth and bones of ox and pig were found’. The condition of the sheep/goat, pig and fox bones are all described as excellent (Mainland 2010, 88). One possible explanation is that these represent the archaeological evidence for fox predation, and red fox world-making practice which can be confidently dated to a couple of centuries either side of 2000 BC.

Mortimer (1905, 10) records the recovery of rat nests (representing at least 20 individuals) on the north-east and west margins of the mound. The mound itself consisted of Kimmeridge clay (potentially sourced from 1 mile away in ‘Low Mowthorpe’) and a little soil from the surrounding land surface (Mortimer 1905, 10). During the act of burrow making, an assemblage of this soil and clay would be excavated and heaped close to the entrance, resembling a scaled-down version of the round barrow itself. Brown rats favour locating their burrows on sloping ground, such as banks or the sides of ditches, or under the cover of stones, logs or tree roots. Unfortunately, none of the rat bones remain in the site archive (Mainland in Gibson and Bayliss 2010, 88-89) and therefore we must be cautious over their identification (antiquarian accounts could have misidentified rat bones with other microfauna—such as field/water voles). The brown (common) rat arrived in Britain around 1728-29 on shipping from Russia, quickly spreading across the British Isles (Corbet and Southern 1977, 243). We can be confident with this knowledge that this auto-rewilding occurred between 1728 and 19-23 August 1864 (Mortimer 1905, 9). In rural settings, it prefers to be within 12m of its food source, eating cereals and root crops, along with weed seeds (such as dock), birds eggs and invertebrates. Mortimer (1905, 11) provides no description of his contemporary farming regime in the immediate field (Canada Fields), however the fact the local farmer chooses to destroy the barrow and spread its remaining contents across the field in 1887, suggests it was planted with cereals or roots. This might also suggest that the occupancy of the barrow was seasonal and occurred in the

summer and autumn months when food was more prevalent but return to urban settings (farm buildings/cottages) during winter and spring. The nearest buildings (Canada Cottages) are located 330m SSE from the barrow and were built as early as 1850-51, as they appear on the Ordnance Survey Yorkshire Sheet 143, published in 1854 (<https://maps.nls.uk/view/102344680> [accessed 20/5/22]). The brown rat has been recorded as having a home range of up to 400m in farmland, preferring to move at night and in dense ground cover. Dense ground cover could have been provided by the Canada Plantation (which was located less than 25m to the east of the barrow) which linked the barrow to the cottages. This plantation had been removed before 1909, as it does not feature on the Ordnance Survey CXLIII.SE. The ephemeral trace of such movement could have been seen in footprints in soft mud and accompanied tail swipes.

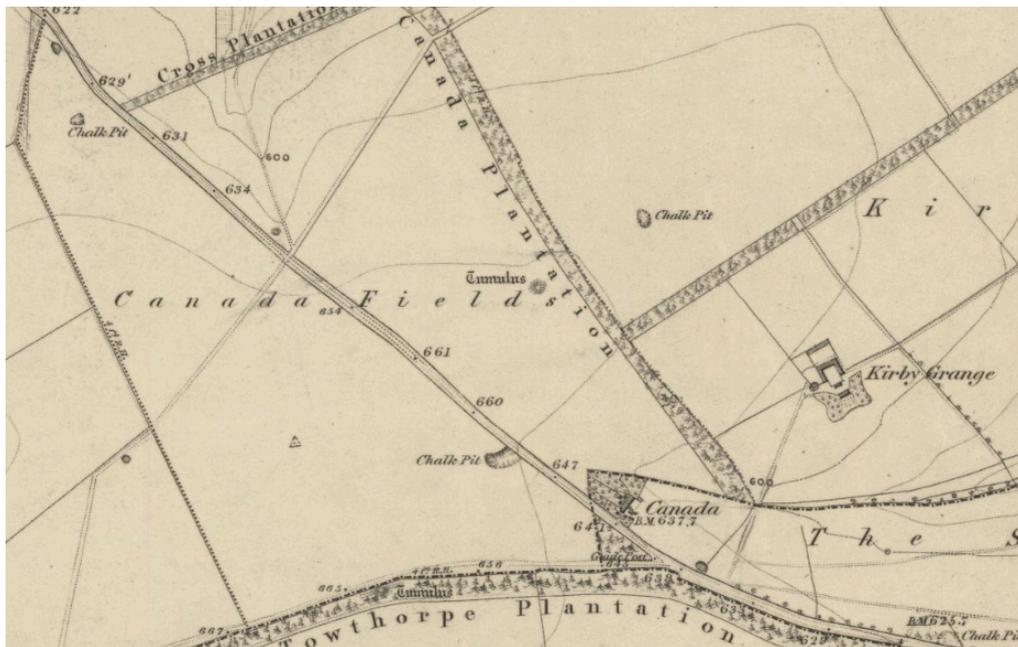


Figure 6.1. Towthorpe 18 round barrow, OS Yorkshire Sheet 143, published in 1854.

It is unknown if these nests represented a single colony or multiple, temporally distinct, and potentially short-lived colonies. A colony can be established by a single or pair of pregnant females, which can have a litter size of up to 12 young each (Corbet and Southern 1977, 243). Most of the nests are recorded by Mortimer (1905, 10) as being on the north-east margin of the barrow, which is the closest point between the mound and the plantation, with some also in the west. Were these nests connected by

contemporary runs, runs which encounter clay and soil but avoided disturbing the human cremation inserted into the barrow ‘only a few inches under the summit, or were they independent?’

6.2.2 *Calais Wold 275 round barrow*

The site of Calais Wold 275 (SE8313355478) forms the focus of Chapter four, not wanting to repeat information here, I will focus solely on the activities of the fox, vole and rabbit. Twenty-seven fox specimens (Find 114 and 115) all came from a single small area of the Coombs excavation within the primary mound. The specimens represent skull fragments, left mandible, axis, rib, right scapula and limb bones. The MNI is 1. There is no mention of human modification but as discussed in Chapter four, M.R. Jarman’s draft report does seem to leave out this information. Jarman (Coombs archive 2/13/13) suggests the fox remains ‘may well be only fortuitously present’. It is therefore not possible to confidently suggest this fox entered the primary mound via human action or that of the foxes own agency. The Coombs archive does not provide any information regarding evidence of a fox den and there is also no mention of re-cutting from context Area I, Layer 25, precluding the likelihood of later re-deposited material. There is a tantalising trace of further red fox activity from Mortimer’s (1905, lxix) introduction, where he states, ‘Bones of the fox occur rather frequently in some of the barrows, notably in Nos. 275’. Mortimer (1905, 163) leaves this detail out of his dedicated section on Calais Wold 275, which seems uncharacteristic for his writing.

From the same small area of the primary mound was recovered by Coombs the skull of either a water/field vole (the archive does not distinguish, Find 116) and three fragments of a medium bird (Find 117). Both small rodents and birds are known to be the prey of the red fox and could indicate a den was present within the primary mound. From the same context 13 sheep/goat tooth fragments (Find 123) are described as being recovered from the edge of the primary mound (Coombs archive 2/13/4). Could these sheep/goat fragments (the archive describes all the sheep/goat remains as coming from ‘young animals’) be further evidence for fox predation and the unconsumed remnants of vole, bird and lamb/kids being deposited inside and outside the den?

An alternative interpretation would be to consider if the vole entered the primary mound through its own agency. The water vole is known to burrow, however these are generally found close to the water's edge; although they can be up to 3m away. The nearest source of water to Calais Wold 275 is the spring for Whitekeld Beck, but this is over 1km away. It would be unlikely a water vole burrowed into the mound (although there are some exceptions – note Read's Island in the Humber Estuary). Field voles are also known to burrow with tunnels centred on a nest up to 10cm in depth (Corbet and Southern 1977, 175). It would seem probable if a field vole burrowed into the primary mound, this would have occurred before the secondary mound was constructed, due to a proposed maximum burrowing depth of 1.0m, as indicated by the evidence from the Hazelton North long cairn (see Table 6.2). This is a Neolithic story.

At the long barrow sites of Nutbane, Hampshire (Mallet Morgan 1959) and Wayland's Smithy, Oxfordshire (Whittle 1991) fox remains were also recovered from the superstructure. A fox skull was recovered from the mound at Nutbane and three fox canines from the rubble of the secondary barrow at Wayland's Smithy.

Rabbits hold a somewhat special position in this chapter. Reading through the archaeological reports (both antiquarian and modern) rabbits and the world-making practices involved in their occupation of our archaeological sites is alluded to, and yet there is not a single rabbit specimen held in any of the archives. At Calais Wold 275, Mortimer describes his observations of rabbit digging which had occurred in the mound during the 19th century. Gibson and Bayliss (2010, 78) referring to the irregularity of the Wold Newton mound as being the result, in part to recent rabbit activity. At Aldro 94, Mortimer (1905, 82) puts the blame for the partial damage of a semi-globular vase (probably Towthorpe Ware) to 'rabbits burrowing in the mound'. The only bone with reference or link to rabbits was a rib fragment, '...about the size of a rabbit' recovered from the fill of a food vessel (Burial 7) at the Garton Slack 37 long barrow (Mortimer 1905, 210). As already discussed, this specimen (which Mortimer illustrated Fig.516 but sadly is no longer held in the archive) is probably not a rabbit, as this species was not introduced to Britain until the Normans (Serjeantson 2011, 5). The scarcity of rabbit specimens is also a pattern discovered in Banfield's (2018) re-examination of the animal assemblages at eight long barrows in Wiltshire. Only at the West Kennet long barrow

were nine specimens identified as rabbit and all were recovered from the chambers, even though several sites refer to evidence for rabbit activity (Banfield 2018, 109).

6.2.3 Hedon Howe round cairn

Situated on elevated ground sloping to the north, one mile west of the village of Langton, is the site of Hedon Howe (SE78466651); also known as Mortimer 281 (Mortimer 1905, 346). Almost the entire barrow was excavated in September 1893, over what Mortimer describes as ‘...seven delightful days of the most beautiful summer’. In Mortimer’s words the site began as five free-standing cists, whose orthostats were ‘fixed’ into the old land surface by 0.25m to 0.30m. Mortimer (1905, 350) continues stating there was no indication of later-cutting of the mound material, noting ‘...the slight stratification of the material composing the barrow was unbroken above all the cists’. Surrounding the five cists forming an inner cairn, was stonework of a local Coral-Rag, with stones of various sizes ‘piled to keep the sides of the cists from falling outwards’ (Mortimer 1905, 350). It would appear from Mortimer’s description that this surrounding stonework did not envelope the cists in their entirety and access was still possible from above. This can be concluded from Mortimer’s description of Cist 1, where after the cover stones were broken, the cist filled with soil, as opposed to stonework. The five cists and surrounding stonework were later enlarged to approximately 15m in diameter and 2.5m high with a ‘hazel-coloured soil covering the top and sides of the mound’ (Mortimer 1905, 346). Around the central cist (Cist 3) were two discrete deposits of articulated cattle bones; Mortimer (1905, 346) lists ‘...several leg bones, vertebra and other bones from a young ox’. Within the mound (although it is not clear if this is within the surrounding stonework or soil capping), were a few flint flakes, sherds of Early Neolithic Grimston Ware and numerous bones of cattle, pig, red deer, dog/red fox and badger. There are two accession numbers (KINCM:2017.201.8 and KINCM:2017.201.6) found within the Mortimer archive at Hull Museum which detail animal bone fragments.

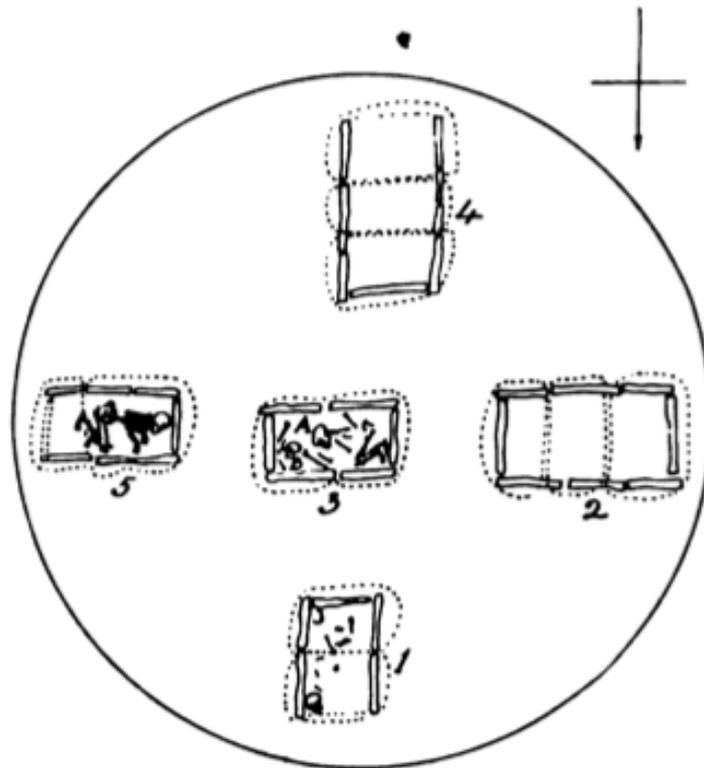


Figure 6.2 Plan of Hedon Howe (Mortimer 1905, Fig. 1010)

The five cists are described by Mortimer (1905, 347-350) as the following –

Cist 1 measured 1.62m by 1.06m, comprising six upstanding orthostats and two capping stones. The northern orthostat had been previously removed ‘...probably by persons digging for foxes or rabbits.’ (Mortimer 1905, 349). The cist contained the disarticulated remains of a single middle-aged adult, with the skull located at the north-east corner of the cist and the remaining ‘leg, arm and other bones’ found mixed at the east and south-east side. Associated with the human bones was a leaf-shaped flint arrowhead, minus its point (Mortimer 1905, Fig. 1011). This could represent a de-commissioned grave good or a projectile embed within the individual. Alongside the human bone and leaf-shaped arrowhead were two fox skulls, one badger skull and post-cranial elements from both species. Mortimer (1905, 347) suggests these animals may represent ‘intrusive’ material, noting the removed northern orthostat. Corbet and Southern (1977, 317) list examples where fox earths may be self-excavated or the re-use of abandoned badger

sets. Badgers naturally prefer habitats which can provide a food supply for all seasons, this can be achieved by having deciduous woodland/copses, pasture and arable within the home range (Corbet and Southern 1977, 361) (Figure 6.3). The modern agricultural regime would appear ideal, but it is unknown what the contemporary landscape was like when the badger inhabited the site. Entangled alongside the human bone and leaf-shaped arrowhead would be the bedding (which typically is made from grass, straw, bracken, leaves and moss) and food remnants (badgers are omnivorous). Unfortunately, without the bone we cannot examine evidence for taphonomy which would aid in our understanding of the entangled chronological relationship of the fox, badger, archaeological evidence, and human remains.

Cist 2 measured 2.8m by 1.6m, comprising eight orthostats and three capping stones. Only the lower half of the western orthostat remained, Mortimer suggesting it broken and removed. Two or three fragments of bone were recovered (Mortimer 1905, 347).

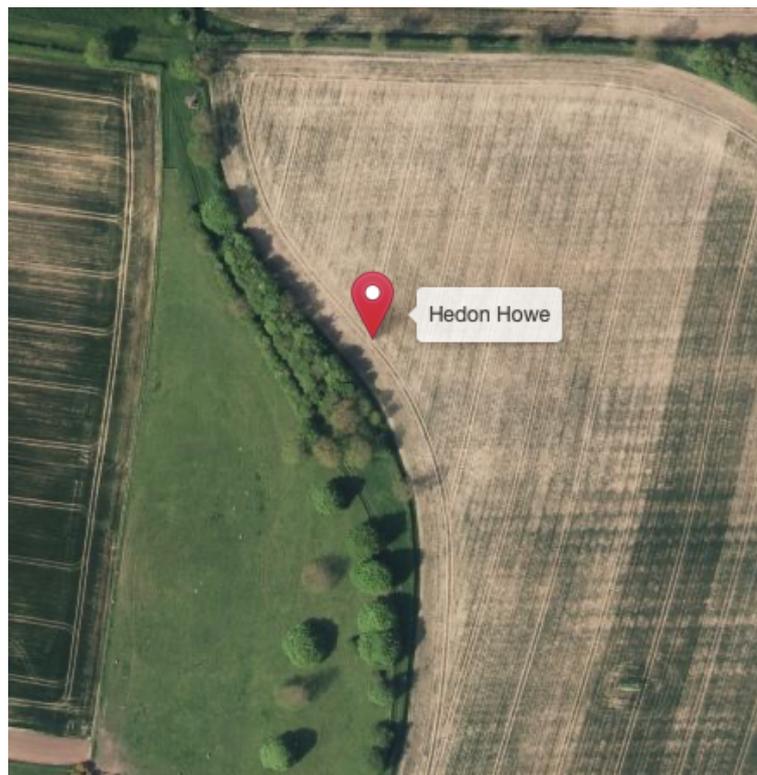


Figure 6.3. Local habitat, Hedon Howe. (UK Grid Reference Finder. (2011) <https://gridreferencefinder.com> (Accessed: 6 June 2022).

Cist 3 measured 1.8m by 0.97m, comprising six orthostats and two capping stones. At the western end of the cist was the flexed adult skeleton (a male possibly about 70 years old), which was partially disturbed (Mortimer 1905, 347). At the eastern end was a female skeleton, whom Mortimer tells us was around 60 years old. A partial third skeleton was recovered consisting of ‘...the greater part of the left arm-bone...and a section of the right lower [mandible] with all the molar teeth.’ (Figure 6.6)

Cist 4 measured 2.8m by 1.5m, originally containing eight orthostats and three capping stones. Only seven orthostats were identified by Mortimer with the most southerly previously being removed (Mortimer 1905, 349). The capping stones had broken and collapsed into the cist. There was no evidence of a deposit from this structure.

Cist 5 measured 1.8m by 1.06m, containing seven orthostats (the eastern orthostat being removed previously) and potentially only a single cap stone. The contents included the skeleton of a 30-year-old adult, laid in a foetal position on the left side. No other material culture was recovered (Mortimer 1905, 349).

The fox and badger histories from Hedon Howe are difficult to interpret with confidence. The recovery of red fox and badger from the mound material and Cist 1 could indicate multiple occasions where the site was used for the making of setts or den building. This has been argued for Deposit E from the Northern passage at Ascot-under-Wychwood long barrow, where adult and juvenile red fox remains were associated with human bones which had evidence of carnivore gnawing (Benson and Whittle 2007, 238). This is certainly Mortimer’s own feeling, accounting for the disturbed nature of Cist 1’s human remains. It is interesting that Mortimer bases his interpretation for badger/fox auto-rewilding not on evidence derived from the actions of the animals themselves but instead on the actions of humans and the removal of outer orthostats (Cists 1, 4 and 5) in the actions of fox/badger hunting. The great displacement of the bones from Cist 3, which Mortimer (1905, 348) writes ‘...in this case it seemed almost impossible for any burrowing animal to have entered the cist’, seems to imply the Early Neolithic practice of depositing disarticulated human bone (as seen elsewhere in Early Neolithic architecture).

6.2.4 Wold Newton round barrow

Situated in a field 45m south of the Gypsey Race is the site of Wold Newton (TA048726); also known as Mortimer 284 (Mortimer 1905, 350). The oval mound measures 40m SE-NW and 32m NE-SW and survives to 3m in height, with a shallow ditch around the base (Gibson and Bayliss 2010, 78). Gibson and Bayliss (2010, 78) record that the irregularity of the mound has been caused in part by recent animal scraping and rabbit burrowing. Mortimer (1905, 350) partially excavated the site in August 1894, identifying two phases of mound building (Figure 6.4). Due to the proximity of the Gypsey Race and its periodic overflow, a thin peaty soil had formed on chalk gravel (Mortimer 1905, 350). The primary mound was constructed from this peat and turf. A secondary mound consisting of white chalk gravel and without archaeological finds completed the building works. It is unknown to the length of time after the primary mound was completed and secondary phase added. Mortimer (1905, 352) describes the site as ‘...very unusual to find so large a mound raised on such low, wet ground’.

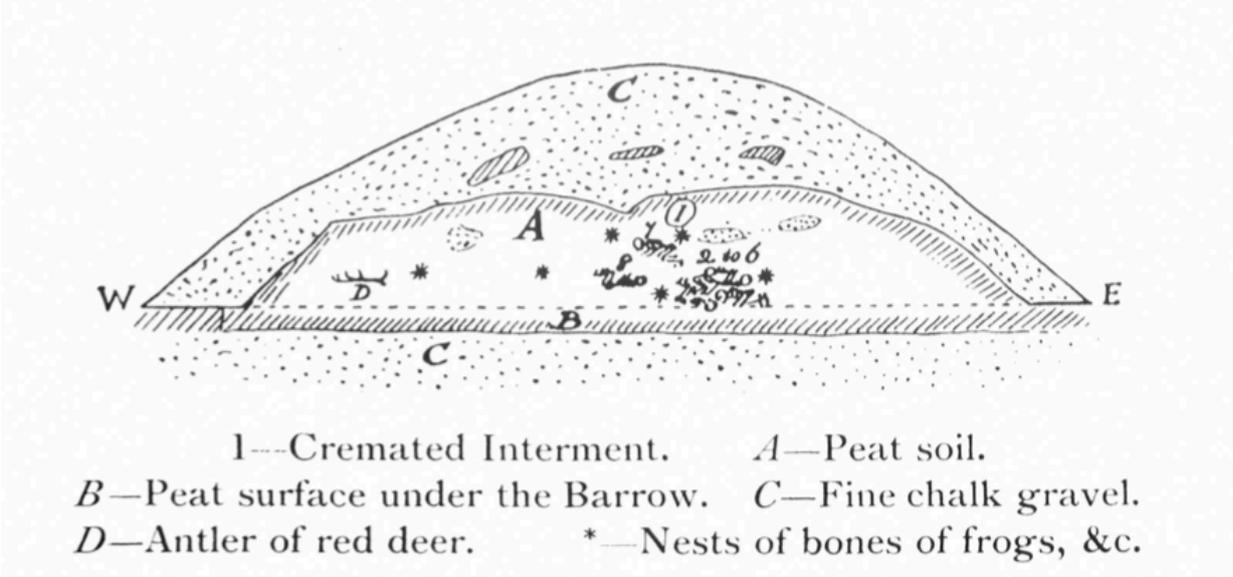


Figure 6.4. Mortimer’s schematic section through Wold Newton. (Mortimer 1905, fig 1015).



Figure 6.5. The location of the Wold Newton round barrow and recent evidence for the overflow of the Gypsy Race into the immediate field (UK Grid Reference Finder. (2011) <https://gridreferencefinder.com> (Accessed: 6 June 2022).

On the original ground surface and within the primary mound Mortimer (1905, 351) recovered the remains of several disarticulated skeletons associated with a leaf-shaped arrowhead (Burial No.7). The surviving human bone in the site archive, suggests a minimum of three adults and one child (Gibson and Bayliss 2010, 83). Radiocarbon dates from three individuals have provided Early Neolithic dates for their deposition and the building works associated with the primary mound – Burial 2 (SUERC-13937) 3820-3690 *cal* BC (87% probability), a child from the group of skeletons on the original surface (OaX-17246) 3805-3705 *cal* BC, and Burial 7 (GrA-33109) 3645-3520 *cal* BC (Gibson and Bayliss 2010, Table 5.1). The animal remains from the primary mound include cattle, pig, roe-deer, field mouse, red deer, dog/wolf, horse, Irish elk, water vole, sheep/goat and black grouse (Mortimer 1905, 352). The identification of Irish elk is doubtful, due to its extinction several thousand years earlier and the presence of horse is interesting due to it being very rare in Early Neolithic assemblages (Serjeantson 2011,

32). Mainland's (in Gibson and Bayliss 2010, 83) re-examination of the site archive identified only rat (possibly), field vole, bank vole, common frog and common toad. These five species probably represent the 'pint' of small bones Mortimer sent to E.T. Newton from the numerous 'nests' excavated in the primary mound (Mortimer 1905, 352). Mortimer (1905, 351) describes the recovery of these 'nests' from several locations (see Figure 6.4) including just above burials 2-6 '...were numerous bones of frogs and toads, in heaps varying in size from an orange to a medium-sized melon'; in the mound above burial 8 '...were many bones of frogs and toads...but there were none in close proximity to any of the skeletons'; and '...as these nests of bones must have represented several hundreds of these animals, how came they there? Either they were gathered and deposited...or the animals may have crawled into holes made by rats or other burrowing animals'.

The common toad and common frog have only been recorded at Wold Newton, however in southern England there are several examples. Both species were recovered from the Easton Down long barrow and under the bank at the Windmill Hill causewayed enclosure, a grave contained thousands of frog, toad and rodent bones (Serjeantson 2011, 86) These are interpreted as prehistoric wildlife as the grave was sealed by the later bank. Banfield (2018) records nine specimens of frog/toad from several contexts at the West Kennet long barrow and Thomas and McFadyen (2010, Table 5) note two specimens of frog/toad from the passage at Notgrove. Frogs and toads hibernate and will tunnel down into earthen/stony mounds, the common toad is often found hibernating in old rodent burrows (Inns 2009, 114). This is a seasonal behaviour which occurs between October and February. On the first warm, damp evenings of the year, toads are recorded mass migrating back to their breeding pools and ponds (Inns 2009, 112). After spring, they spend much of the year feeding in damp habitats including woodland, meadows, and tussocky grass (Inns 2009, 92). Serjeantson (2011, 86) suggests when frogs/toads are encountered in large concentrations, this is probably the result of death during hibernation.

Mortimer asks an important question here; how can a detailed reading of the natural behaviours of these auto-rewilders and a detailed reading of architecture help answer this question? Saville's (1990, 205) methodology applied at the Hazelton North long cairn, was to subdivide the bones of small animals by depth in metres below the surface

of the cairn. He hypothesised that burrowing animals rarely exceed 1m below the surface. Table 6.2 presents his results. Less than 8% of the small animal bones (and 4% of this total are from indeterminate birds) did in fact exceed 1.0m in depth and all these species are indigenous. Saville (1990, 205) suggests it is not possible to confirm exactly if each animal was ‘intrusive’ or not, but this methodology acts as a crude guide.

Species	0-0.5m	0.5-1.0m	>1.0m	Totals
Field-vole	18	20	-	38
Bank-vole	-	1	1	2
Rabbit	12	1	-	13
Shrew	-	2	-	2
Wood-mouse	-	14	2	16
Bird	-	2	3	5
Frog	1	-	-	1
Small mammal	-	2	-	2
Totals	31	42	6	79

Table 6.2. Bones of small animals from Hazelton North long cairn. Subdivided by depth in metres below the surface of the cairn (after Saville 1990, Table 81).

At Wold Newton, Mortimer (1905, 352) observes that the small animal ‘nests’ are ‘...entirely [confined] to the peaty portion forming the lower half of the barrow’. Why was this? Is there a preference in the world-making practices of bank vole, field vole, common frog and common toad to burrow into peat and turf as opposed to the clean white chalk? Or, did these auto-rewilding actions occur after the construction of the primary mound, but before the building of the secondary mound? Applying a similar crude guide to the evidence, I estimated the depth in metres of the animal nests illustrated in Mortimer’s schematic diagram. I understand this would be far from accurate, however the results are important. In respects to the height of the mound, Mortimer (1905, 350) suggests it measures about 3.65m in height. Gibson and Bayliss’s (2010, 78) topographical survey have it as 3.0m, I have decided to use this secondary measurement in my calculations. The results are detailed in Table 6.3.

Nest	Secondary mound	Primary mound
1	1.40m	0.70m
2	2.05m	0.90m
3	1.90m	0.35m
4	2.60m	1.05m
5	1.95m	0.50m
6	2.05m	1.05m

Table 6.3. Depth in metres of ‘nests’ below the surface of the primary and secondary mounds.

All the small animal bones were recovered more than 1.0m below the surface of the secondary mound, with a range between 1.40m-2.60m. Following Saville’s (1990, 205) logic, it would be unlikely then these animals burrowed into the monument after the secondary mound was built; therefore, I would argue that these animals are evidence of Neolithic wildlife. The question remains however, were these animals deposited into the primary mound during its construction or did they enter the monument through auto-rewilding? The estimated measurements suggest depths ranging between 0.35m-1.05m from the surface of the primary mound. This is within the expected range for burrowing animals. It cannot be concluded that this is the case in all examples, but it is highly likely these animals entered the monument through their own agency. A future avenue of research would be to test this interpretation through the radiocarbon dating of these animals. It would provide two insights – the first would be establishing a date prior to the building of the secondary mound but after the primary (this could be a considerable amount of time based on the diversity of small animals recovered) and at the same time, provide an absolute date for the auto-rewilding event – this would extend the remit of archaeological research from just the world-making practices of humans to that of non-humans too.

6.3 Conclusion

It has been my intension throughout this chapter to trace the vivid lives of animals which hold an ambiguous status in archaeological studies; as found in the archaeological record, archives and publications. The evidence I have presented highlights the complexity and variability of auto-rewilding found in the built environment of the Early Neolithic in Yorkshire. Although the above examples are evidence for the practices of

auto-rewilding, those at Calais Wold 275 and Wold Newton round barrows can be understood to having originated during the Neolithic. They are Neolithic stories.

Moving forwards, rather than thinking of these animals as 'intrusive material', let us now instead engage excitedly with these auto-rewilding events as the fullest expression of animal life and to reveal the 'wonder and enchantment' (Monbiot 2013) of archaeological wildlife.

7

THREE LONG BARROWS: Willerby Wold, Raisthorpe and Kilham

7.1 Introduction

Chapter seven presents three reports for the complex architecture and animal histories from three Yorkshire long barrow sites: Willerby Wold, Raisthorpe and Kilham. It is the intention of this chapter to focus in on the individual site histories, through an attention on the small details found during the re-examination of both the paper and animal bone archives. On these terms, I wish to embrace these animal architectures, these entwined animal-human histories, which meander through space and time; drawing both deep-time and ephemeral connections between archives, archaeologists, animals and Early Neolithic peoples.

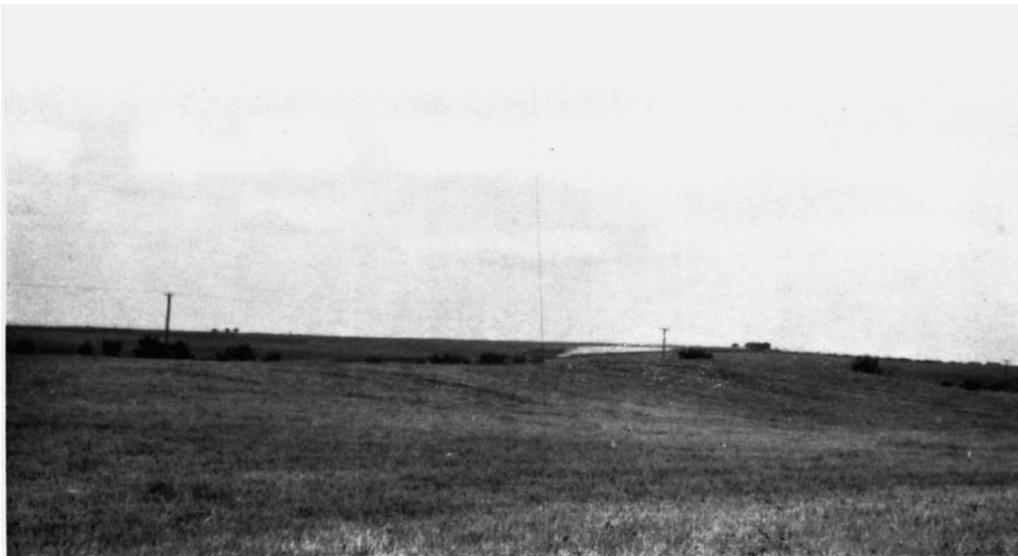


Figure 7.1. Willerby Wold long barrow from the south-west (Manby 1963, Plate XX *Upper*)

7.2 Willerby Wold long barrow site

7.2.1 Introduction

The Willerby Wold long barrow (also known as Greenwell B222) is located on the Middle Chalk of the Yorkshire Wolds some 7 miles south of Scarborough (TA02967608). It survived at the time of Manby's (1963, 173) excavation in 1958, 40.53m in length, 10.97m in width, a maximum height at its eastern end of 1.21m, and with an alignment roughly east-west (Figure 7.1). The immediate parcel of land on which the barrow sits was not brought into cultivation until the Second World War.

7.2.2 Excavation, sampling and recovery

The Willerby Wold long barrow had undergone two episodes of partial excavation. In 1864 (Greenwell archive, British Museum) Greenwell sank an irregular trench into the mound, running roughly 10.68m along the line of the crematorium deposit (Manby 1963, 175), where he encountered rabbit digging activity which had disturbed a secondary burial (Greenwell 1877, 488). Within this calcined chalk and flint deposit, Greenwell (1877, 489) describes the recovery of two Grimston ware sherds and a bone pin. Within the superstructure (some 11.58m from the east end and 0.6m above the natural ground surface) a red deer antler was identified and just above this were portions of animal bone with a single Grimston Ware sherd (Greenwell 1877, 489). All of the animal bone and antler is unfortunately no longer preserved in the Greenwell archive (Kinnes and Longworth 1985, 107). It is believed then that the animal bone was recovered by hand, which typically would bias the recovery of larger elements, with smaller elements being overlooked (Payne 1972).

The second episode of partial excavation was undertaken by Terry Manby (1963, 173) between 1958-1960. The ditches were sectioned in five locations, with the bulk of the trenching occurring in the eastern end of the mound, where Greenwell had identified the crematorium (Manby 1963, 178). Unfortunately, the available labour made it impractical for Manby to explore the barrow in its entirety (Manby 1976, 176). Manby's report makes no mention to sieving, so again we should conclude the bone was

recovered by hand, with the same sampling issues as above. My identification of *Microtus agrestis* (field vole) within the site archive, suggests a reasonable level of recovery (These bones were not included within the original report). The spatial locations of the animal bone and material culture within the site archive are labelled on the original packaging to architectural feature or discrete depositional episode, along with the date of recovery.



Figure 7.2. The Willerby Wold animal bones archive, Box WIL2

This report is concerned with the re-examination of the animal bone assemblage from the Manby excavations, the archive is held at Sewerby Hall, near Bridlington. There was some confusion with the collections, with an 'Ilford H.P.3. Plate' cardboard box discovered within the Kilham long barrow archive (Box -Kil9) containing small brown envelopes labelled 'W.W.L.B G/60'. This box containing the bones and antler of small mammals and red deer were not included in the original report (Manby 1963). I reported this discrepancy to the museum curator (David Marchant) and re-archived in 'Willerby Wold Box 2' (Figure 7.3)

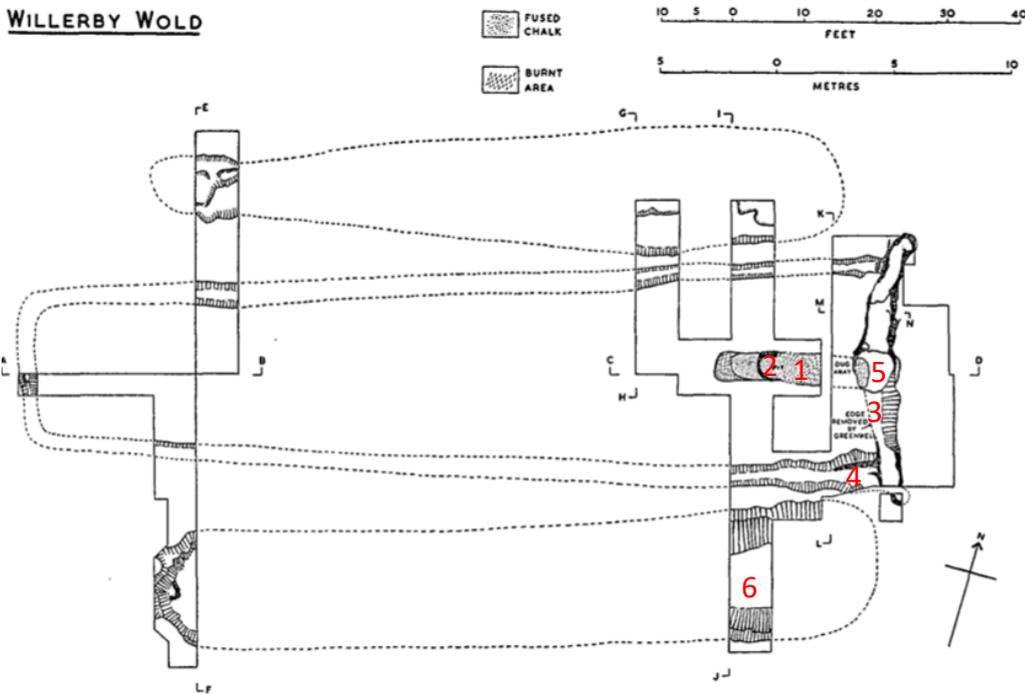


Figure 7.3. Willerby Wold animal bone recovered from the Kilham Long Barrow archive, Box KIL9.

7.2.3 Complex architecture: Manby's sequence of events

Manby reads the site as beginning with the digging of a trapezoid enclosure, 35m long, 8.22m wide at the eastern end and 6.09m wide at the western end (see Figure 7.4). At the eastern end, was a concave façade bedding trench (11.88m in length), holding a continuous line of wooden posts (as indicated by post pipes) (Manby 1963, 177). Two pits are also associated with this phase, the first is described as a 'ritual pit' (2.13m by 1.26m) located within the enclosure, some 2.13m west of the centre of the façade trench (Manby 1963, 180). The filling of this pit contained burnt chalk. The second pit (1.62m by 1.52m) was incorporated into the façade trench, the filling of this pit is described by Manby as distinct to that of the remaining façade trench, but similar to the 'ritual pit', in the fact it contained burnt material (Manby 1963, 177). No archaeological finds were recovered from either pit. Manby is correct in his claims that these features are earlier than the covering mound, but to state they are contemporary with either the façade trench or mortuary structure is difficult to confirm with certainty. The two pits could indicate earlier activity and further complexity associated with the mortuary deposits. It is interesting that all of the negative features are devoid of finds. Building works at long

barrow sites have been found to span at least two generations (Whittle *et al* 2007). Griffiths (2012, 997) has 0-220 years (94.4% probability) for the Early Neolithic activity at the Street House long cairn, and at the round barrow at Duggleby Howe there is a period of 500 years between the first digging of the shaft and the erection of the primary mound (Gibson and Bayliss 2010).



- 1. Embanked mortuary structure
- 2. Pit 1 'ritual pit'
- 3. Pit 2 'proximal pit'
- 4. Mortuary enclosure
- 5. Façade trench
- 6. Ditch

Figure 7.4. Plan of Manby excavations and architectural features (Manby 1963, Fig. 3.)

The timber façade at the eastern end is then interpreted by Manby as being burnt down, this occurs before the building of the mound and may be associated with the excarnation

of several human bodies within the enclosure (Manby 1963, 187). A date on the timber of the façade (BM-189) offers a *terminus post quem* for this architecture feature in 3820-3520 cal BC (57.1% probability) (Griffiths 2012, 177). These bones are argued by Manby to have been recovered and placed within an embanked mortuary structure (crematorium feature), supported to the north and south by a small bank of earth, chalk and turf (Manby 1963, 181). This embanked mortuary structure extended from the central façade trench following the central axis of the barrow for approximately 6.4m, although a significant portion of this was excavated by Greenwell.

The Early Neolithic builders next excavated turf, chalk rubble and brown soil from two flanking ditches to construct the mound. During this building work, a limited area at the east end of the mound included ‘occupation debris’, an assemblage of pottery sherds, animal bone, charcoal, flint, two brown pebbles (one used as a rubber), a jet bead fragment and a single piece of human bone (Figure 7.5) (Manby 1963, 183). This occupation debris extending away from the eastern edge of the mound for 1.2m, protected by a chalk rubble context (see Figure 7.5). Manby (1963, 183) describes a ‘...pipe of fused chalk extend[ing] upwards through the chalk capping at one point to the surface of the mound’, this confirming the building of the mound before the firing of the mortuary structure. Manby records the mound material as filling the mortuary enclosure and resting on top of the façade trench fill.

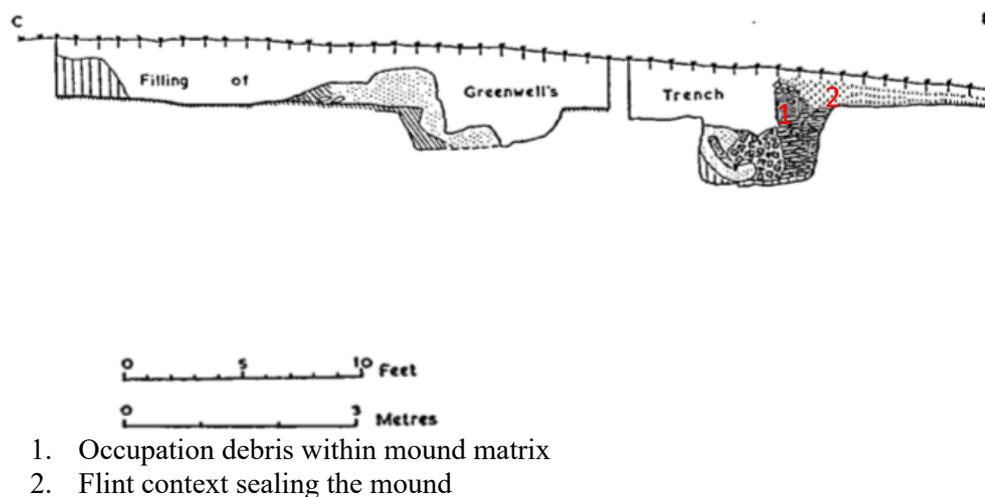


Figure 7.5. Section of mound C-D. Showing the flint capping protecting the ‘occupation debris’ (Manby 1963, Fig 4).

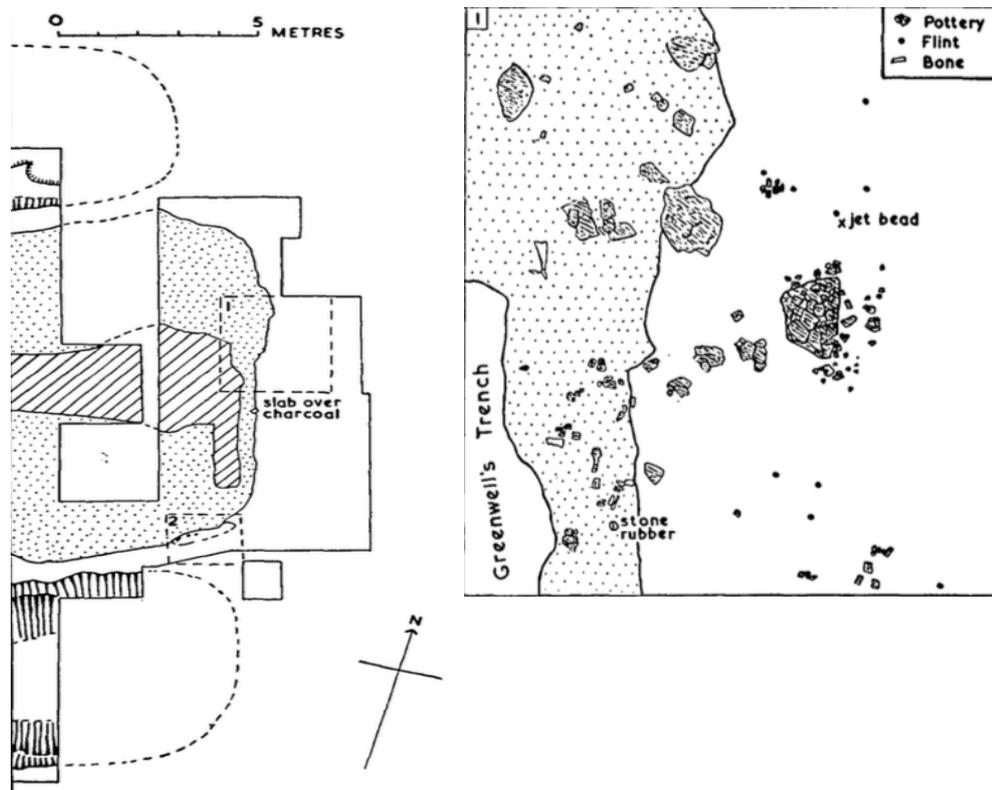


Figure 7.6. Plan of occupation debris at eastern end of the mound (Manby 1963, Fig. 6)

7.2.4 Results

The assemblage comprises 41 fragments of bone, tooth and antler (NSP).

Preservation and taphonomy

I characterised this small assemblage as relatively well preserved, with 65.85% identified to taxon and 19.51% with evidence of root damage. There is some variation between discrete episodes of activity across the site. The animal bone assemblage associated with what Manby (1963) terms the ‘occupation debris’ is less well preserved with only 39.13% identified to taxon, as opposed to the small mammal bone from the façade trench with 90% identified to taxon. The well-preserved small mammal bones likely entered the complex site architecture because of auto-rewilding, and through the animal’s own agency. The animal bones from the ‘occupation debris’ are all quite uniform in preservation, suggesting to me similar post-depositional histories.

I recorded thirteen small fragments of bone with evidence of burning (31.70%), all described as charred. I found no evidence for gnawing, which could suggest quick deposition and removal from potential carnivore activity.

Species present

In Table 7.1 I present the assemblage. The totals are the Number of Specimens (NSP); also given in Table 7.2 is the Minimum Number of Individuals (MNI) per context and Table 7.3 is the MNI site total. This small assemblage is dominated by wild species, including water vole, field vole and red deer. The inclusion of the field/water vole I would argue is likely the result of animal burrowing and auto-rewilding. The poor preservation and highly fragmented nature of the red deer antler could represent earlier occupation material on the ancient land surface that becomes a part of the mound makeup.

The largest animal bone assemblage is from the occupation debris (56.09% NSP) recovered from the eastern edge of the mound. I identified nine elements as cattle, with thirteen loosely grouped as 'Large Mammal'. These thirteen bones were highly fragmented with all showing signs of charring. It is possible these too were from cattle. Cattle as the only domesticate concurs with other Early Neolithic sites in the region where cattle are more common.

Context	Cattle	Red Deer	Water Vole	Field Vole	Large Mammal	Indeterminate	Total
Façade Trench	0	0	10	0	0	0	10
Pit	0	0	0	0	0	0	0
Mortuary Enclosure	0	0	0	1	0	0	1
Occupation Debris	9	0	0	0	13	1	23
Mound	0	7	0	0	0	0	7
Ditches	0	0	0	0	0	0	0
Crematorium Deposit	0	0	0	0	0	0	0
Total	9	7	10	1	13	1	41

Table 7.1. Taxonomic representation by context (NSP).

Context	Cattle	Red Deer	Water Vole	Field Vole	Total
Façade Trench	0	0	2	0	2
Pit	0	0	0	0	0
Mortuary Enclosure	0	0	0	1	1
Occupation Debris	2	0	0	0	2
Mound	0	1	0	0	1
Ditches	0	0	0	0	0
Crematorium Deposit	0	0	0	0	0
Total	2	1	2	1	6

Table 7.2. MNI per context.

Cattle	Red Deer	Water Vole	Field Vole	Total
2	1	2	1	6

Table 7.3. MNI site level.

Body part representation

In Table 7.4 I present the body part representation. The elements suggested as auto-rewilding events, the field vole and water vole are represented only by teeth (7 NSP) and two mandible fragments. Teeth are more robust and survive better than other elements. The total lack of post-cranial elements could suggest these bones are historic but without direct dating we can only guess at the age. Red deer is only represented by antler, which could suggest the collection of cast antler or the culling of male animals away from the site. The cattle remains from the occupation debris are only represented by lower forelimb elements and four rib fragments. The preservation condition of all these elements is similar. This could suggest the cattle were culled at the site, the lower forelimbs removed, and the remaining carcass transported elsewhere. A level of processing at the site could be indicated by the rib bone fragments. Alternatively, the rib bones may not be related to the forelimb elements and they alone were transported to the site and deposited. The assemblage size is small and we should be wary about

Element	Cattle	Red Deer	Field Vole	Water Vole
Head				
Cranium				
Mandible			2	
Tooth			6	1
Antler		7		
Spine				
Atlas				
Axis				
Cervical vertebra				
Thoracic vertebra				
Lumbar vertebra				
Vertebra				
Sacrum				
Clavicle				
Scapula				
Sternum				
Rib	4			
Pelvis				
Forelimb				
Humerus				
Radius	2			
Ulna	1			
Metacarpal				
Hindlimb				
Femur				
Patella				
Tibia				
Fibula				
Metatarsal				
Feet				
Carpals				
Calcaneum				
Astragalus				
Tarsal				
Phalanx				

Table 7.4. Body part representation per taxon by element (NSP).

drawing conclusions, also, the limited excavation of the site would in itself produce a sampling effect to the results.

MNI

Minimum Number of Individuals were low (Table 7.2 and 7.3). There is a minimum count of six individuals across the site; two cattle from the 'occupation debris', one red deer from the mound, one water vole from the mortuary trench and two field voles from the façade trench.

Mortality profile

In Table 7.5 I present the three specimens with epiphyseal fusion evidence for the cattle bone. I recorded the proximal end of a left radius (ID -6) as unfused; this animal must have died before 12-18 months of age. I recorded the distal end of a right radius (ID-1) and proximal end of a right ulna (ID-5) as fused, suggesting an age of more than 42-48 months. I would argue the epiphyseal fusion evidence confidently suggests a minimum of two individuals, one calf and at least one adult cow.

NSP	Taxon	Element	Proximal	Distal	Age
Early fusing					
1	Cattle	Radius	Unfused		<12-18 months
Late fusing					
1	Cattle	Radius		Fused	>42-48 months
1	Cattle	Ulna	Fused		>42-48 months

Table 7.5. Age-at-death profiles as indicated by degree of epiphyseal fusion (after Silver 1969, O'Connor 2003).

ID	Element	Side	Fusion	SD	Bd
1	Radius	Right	F	38.77	64.76e
6	Radius	Left	u/f	29.21	

Table 7.6. Cattle measurements of the bones from Willerby Wold long barrow. Measurements follow the definitions of von den Driesch (1976) except where stated in the text or figure captions.

Sex

I identified seven fragments of antler recovered from the mound material as red deer, along with the red deer antler identified by Greenwell are from male animals. Specimen ID 1 is the only element from the Manby excavation which I could assign to a sex based on biometry (see Table 7.5). Figure 7.7 presents the radius distal breadth of ID-1 in a histogram in comparison with specimens from two long barrow sites (West Kennet and Beckhampton Road) and two causewayed enclosures (Etton and Windmill Hill). With a Bd of 64.76mm on a fully fused bone, this animal was of a small stature in comparison with the other sites and I can confidently assign it as a domesticated female cow. I excluded two measurements from the Horslip long barrow due to being recovered from a Later Neolithic context (Ashbee *et al* 1979, 226). One specimen has a Bd of 51mm, this is significantly smaller than our dataset and likely a measurement from an unfused distal epiphysis, as the distal radius remains unfused almost until adulthood (Wright 2016, 27).

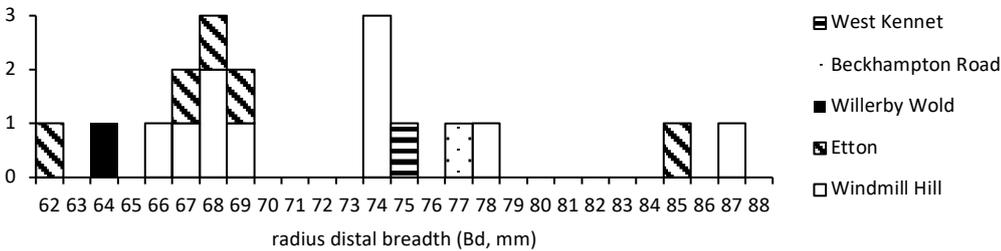


Figure 7.7. The cattle distal breadth radius measurement (von den Driesch 1976) from the Willerby Wold long barrow site, compared to those from Windmill Hill, West Kennet, Beckhampton Road and Etton (Grigson 1999; Banfield 2018 and Armour-Chelu unpublished, respectively).

Butchery

In Table 7.7 I show the evidence for butchery recorded at Willerby Wold. Both the calf radius and adult cow radius were chopped mid-shaft while the bone was fresh, as indicated by the helical curving fracture (Parmenter 2014, 85). This could have been to remove the marrow, either as a snack, to store the fat or for craft activities (Parmenter 2014, 83).

ID	Taxon	Element	Side	Proximal	Distal	Butchery	Location
1	Cattle	Radius	Right		Fused	Chop	Helical, curving outline fracture
6,7,8	Cattle	Radius	Left	u/f		Chop	Helical, curving outline fracture

Table 7.7. Butchery evidence

Pathologies

I recorded no evidence for pathologies.

Worked bone

I recorded no evidence for worked bone.

7.2.5 Conclusion

The animal remains from the Willerby Wold long barrow are limited, therefore, we must be cautious on drawing conclusions; this is especially true due to Manby's partial excavation of the site. There are three broad groupings which can be discussed. The first is the probable auto-rewilding events evident from the field vole and water vole remains from the façade trench and mortuary enclosure. Direct dating on these specimens would be required to understand the histories of these wildlife events. The second grouping is the collection of highly fragmented red deer antler recovered from the mound material. These could have been intentionally (or unintendedly) included within the mound as residual material, either from earlier occupation material on the ancient land surface or the natural casting and fragmenting of antler (between the months of February and March for red deer). Unfortunately, there is no indication to the spatial relationship of

the antler fragments and other materials recovered from the mound. The final grouping comes under what Manby (1963) describes as the ‘occupation debris’; a single episode of deposition into the superstructure during its construction, where pottery was scattered downwards from the mound material to the top of the filling of the façade bedding trench (Manby 1963, 183). The domesticated cattle bone from one adult female and one calf, being associated with Grimston ware pottery sherds, fine charcoal, two fragments of human fibula (after re-analysis) and two brown pebbles (one used as a rubber) (Manby 1963, 183). Importantly, extending eastward from this assemblage, for around 1.2m away from the monument was another assemblage (or an extension of the first one), containing charcoal, struck flakes of brown flint, Grimston ware sherds and a piece of jet, no animal bone (Manby 1963, 184). Both assemblages are protected by a chalk rubble context (see Figure 7.5). Manby (1963, 184) comes to understand these two assemblages as two distinct events. The former (with cattle bone) being ‘...occupation rubbish scrapped up from the habitation sites and deliberately included in the mound’, while the latter ‘...represent[s] offerings deposited after the building of the mound’. I see no reason why not to consider these two assemblages as a single episode of occupation, one associated with the building works of the mound; the archaeological evidence of which became integrated into the mound itself and away from its eastern edge by 1.2m. In contrast to Manby, the animal bone and Grimston ware sherds within the mound do not support the idea of the collection of random midden material (with an assemblage of wildly different preservation and depositional histories), but points I would argue in its very nature (the condition of the bones) to a singular episode and direct context; an episode of occupation which Manby (1963, 173) states as the primary motive for digging the site in the first place, ‘...the present excavations began with the sectioning of the south ditch, in search of any evidence of occupation so frequently found in long barrow ditches’. Let us instead consider this archaeological evidence as both the human and animal living, breathing, building experience of this monument.

The selection of the lower forelimb from both individuals could suggest an intentional act and mirrors practices elsewhere. At the Hazelton North long cairn, four bones from the lower forelimb of a roe deer were recovered from the passage deposit of the south chamber (Saville 1990, 105). These articulated bones (radius, ulna, carpal, metacarpal) suggest a joint and so could indicate the placement of a fleshed limb (Saville 1990, 211); the report tentatively suggests a ‘fairly low-quality’ ritual food offering. Here I am

reminded of Govindrajan's (2018, 31) writings on the ritual killing (*puja*) of goats at the Kalka temple in Gangolihaat, district of Uttarakhand, India.

The head and one hind leg of each goat was the sacrificer's to keep, and the rest of the meat was given to the family...ready to be transported back to the village where the meat would be served at the feast that evening

Govindrajan 2018: 33

The cattle rib fragments could indicate the cattle were killed at Willerby Wold and the meat divided and taken elsewhere? In contrast to the sacrificer's entire goat hindlimb or the lower forelimb from a roe deer at Hazelton North, the Willerby Wold cattle lower forelimbs were not placed in their entirety but were broken up, meat consumed and possibly marrow removed (as indicated by butchery evidence) before deposition into the superstructure. This sounds more similar to bhog or prasad, where a small portion of meat is cooked immediately and served to family members as a 'food exchange with divinities' (Govindrajan 2018, 33).

The distinctive scent of singed hair and flesh hung heavy in the air and lingered on people's clothes and in their hair.

Govindrajan 2018: 33

Returning to Willerby Wold long barrow and completing a total excavation of the site would uncover a better understanding of the complex nature of animals and architecture at this site.

7.3 Raisthorpe long barrow site

7.3.1 Introduction

The site of Raisthorpe long barrow stands on Raisthorpe Wold, in the parish of Wharram Percy (SE 85188 62497). The site was partially excavated as a round barrow (Towthorpe 3) by John Mortimer (1905, 18) in 1863 and again in 1891. It was revisited by Tony Brewster during the Spring of 1963 in advance of the barrow being destroyed due to the immediate area coming under cultivation. Unfortunately, the Brewster excavation report for Raisthorpe has remained unpublished. Only a very brief paragraph available to researchers in the Ministry of Works 'Excavations Annual Report' exists (Brewster 1965b, 8), with later reference to the site originating from this source (Kinnes 1992, 40, Manby *et al* 2003, 44, Griffiths 2012, 176).

Present re-excavation disclosed a long barrow...with ditches 4ft. deep on the north and south sides containing ox bones, flint artifacts, charcoal and Neolithic sherds.

Brewster 1965b: 8

The primary paper archives are currently held by Map Archaeological Practice in Malton, North Yorkshire. Unfortunately, these were not made available to me due to COVID-19 restrictions. A series of papers forming a second archive, which included a collection of plans, artefact illustrations, section drawings and two draft reports compiled from Brewster's notes by an A.E. Finney were loaned to me in September 2021 by Terry Manby. This secondary paper archive forms the primary source of information for my subsequent understanding of the site's complex history, both pre- and post-excavation.

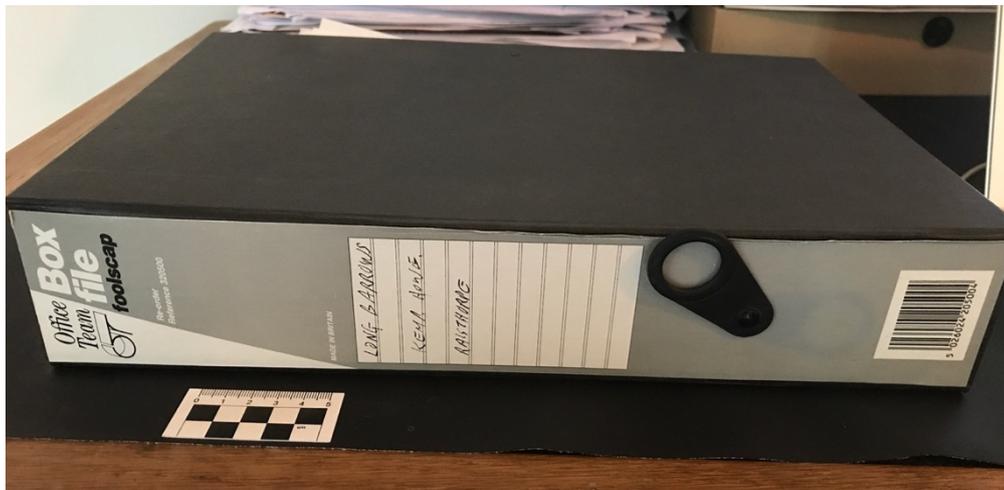


Figure 7.8. Raisthorpe and Kemp Howe paper archives (loaned from Terry Manby).

The material evidence including animal bones from the Mortimer and Brewster excavations are held at the Hull and East Riding Museum. I was given permission by the senior curator (Paula Gentil) to visit and re-examine these archives in November 2021, following the lifting of COVID-19 restrictions for visiting researchers (which had been in place for the previous twenty months).

7.3.2 Excavation, sampling and recovery

On the 19th August 1863, John Mortimer records the dimensions of the Raisthorpe barrow as 17.06m east to west, 12.69m north to south and a surviving height of 0.91m, positioned to the south of a ‘...chain of six, curious natural hollows in the ground’ (these will later be understood as the northern quarry ditch) (Mortimer 1905, 18). He sunk an irregular trench (with a width ranging from 2.13m to 2.43m) near the western edge and expanded to the centre. Recovered from the original ground level, Mortimer (1905, 18) describes the scapula of an ‘ox or deer, and a few bones of a smaller animal, mixed with wood ashes.’ This trench was expanded on a second day a further 1.82m or 2.43m to the east where he uncovered a ‘brecciated material’ (embanked mortuary structure), and within this (at the east end) was a ‘...cylindrical bead or ornament, slightly burnt, which had been made from a leg bone of a small animal’ (Mortimer 1905, 18) (Figure 2.6). This artefact was illustrated and included in Mortimer’s text (Mortimer 1905, Fig. 39), and is currently stored within the Mortimer archive, Hull and East Riding Museum,

succession number KINCM:1942.366. Mortimer would return in July 1891 but fail to discover anything more (Mortimer 1905, 18). Mortimer recovered the animal bone by hand, which typically bias the recovery of larger elements (Payne 1972). In addition to the bone bead, the Mortimer Towthorpe 3 archive contains a red deer antler fragment and two small mammal bone fragments, I have included these in the zooarchaeological report to follow.

Brewster's rescue excavation took place between March-April 1965, already at this time the levelling of areas of ground surrounding the barrow limited the scope of what was possible to excavate. He composed a grid of 3.04m by 3.04m squares, separated by 0.60m baulks (Figure 7.9). The site had originally been excavated as if it were a round barrow (as indicated by Mortimer), when it became apparent to Brewster it was a long barrow, the grids were extended to section the flanking northern and southern quarry ditches. A total length of 24.86m and width of 15.24m was recorded. Finney found inadequate information was recorded regarding the orientation of the grid in 1965 and corrects this to true north. Due to time restraints ('and the fact that bulldozers moved in') the façade trench was not excavated in full and instead stain plotted. A handwritten synopsis of unknown authorship (although the inclusion of the term 'cremation furnace' which was later rejected in the Finney draft report, would suggest Brewster's own hand) proposes 90% of the barrow was excavated.

I have found no evidence from the archive to suggest the site was sieved, therefore a bias of larger animal elements/fragments is to be presumed. The spatial locations for most of the animal bone and material culture within the archive are labelled on the original packaging to trench and section, along with date of recovery. There are two accession numbers KINCM:2010.4.50 and KINCM:2010.4.38 with no contextual information, which are labelled 'Raisthorpe No date. Bone' and 'Raisthorpe. Animal bone (no context)' respectively.

Unfortunately, the recording methodology applied by Brewster only provided a horizontal spatial understanding of the archaeological evidence, which only allows us to place the animal bones to architectural feature (such as the northern or southern quarry ditch); what it doesn't provide is a vertical contextual understanding of these features (what is the relationship between the animal bones and pottery sherds of

Neolithic, Roman and Medieval date recovered from the same flanking ditches?). I will explore this question a little further later.

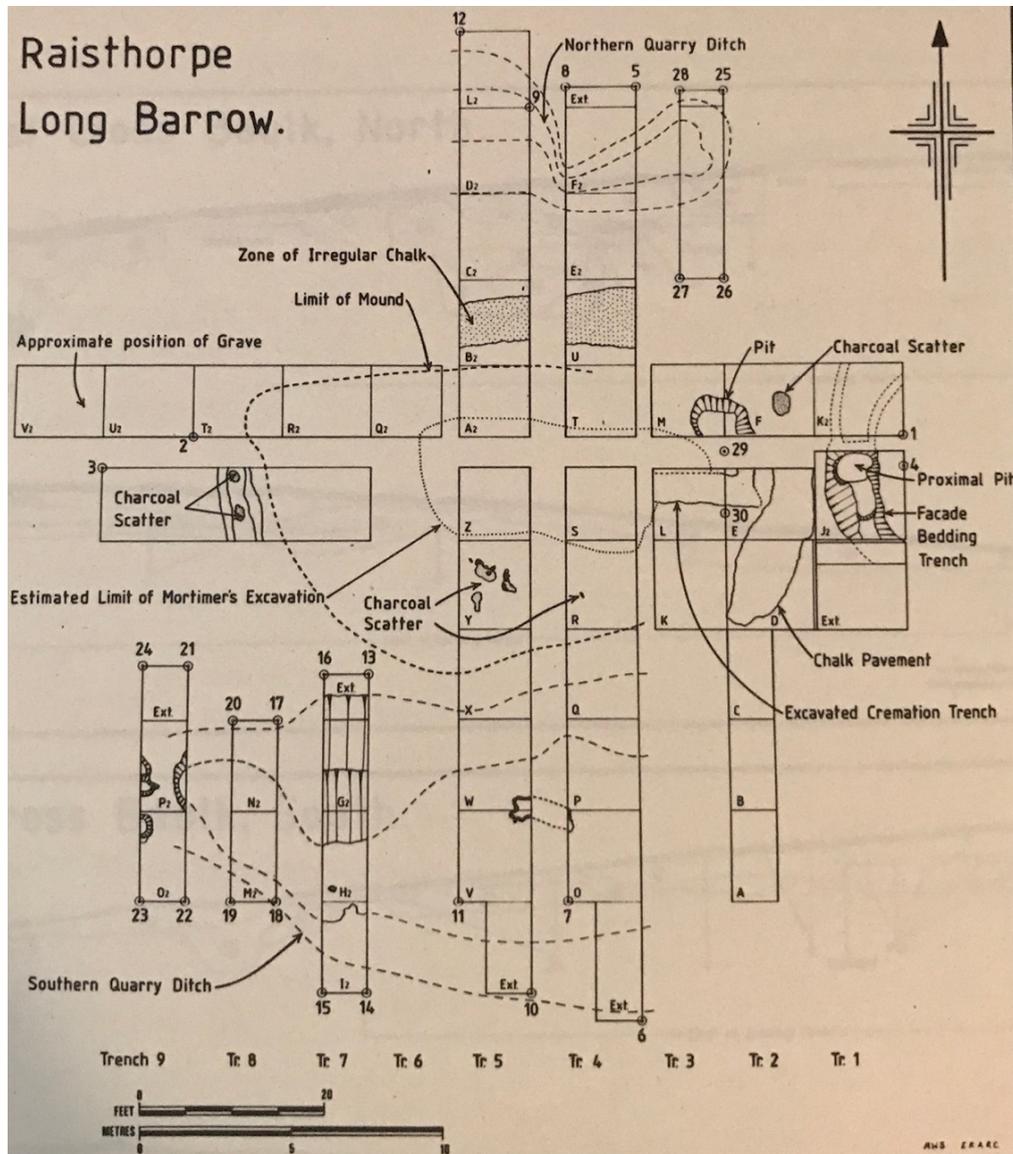


Figure 7.9. Raisthorpe long barrow plan (Archive, Figure 3. unpublished)

7.3.3 Architectural histories

Before we delve into the archives, let us first consider the available published accounts for the architectural histories present at Raisthorpe. Brewster (1965b, 8) offers no temporal interpretation to the site, but instead focuses on a spatial description of the site at the time of, or soon after the completion of the excavation in the same year. At the

eastern end he excavated an outcurved façade bedding trench with rounded terminals, and at the centre a 1.52m deep ‘cremation pit’. West of this ‘cremation pit’ was a deposit of fused flint and bone, forming part of the ‘brecciated material’ recovered by Mortimer. This cremation area is described by Brewster as paved. Under the mound material was a pit, a hearth, scattered burnt bone, charcoal and to the south the indications of a wall. At the west were also the remains of a shallow ditch, running across the mound (presumably N-S). Brewster describes the spoil from the two flanking ditches (which contained cattle bone, flint, Neolithic pottery and charcoal) which consisted of marl and chalk was used to form the superstructure. He records the long barrow as 24.86m in length and a width of 15.24m.

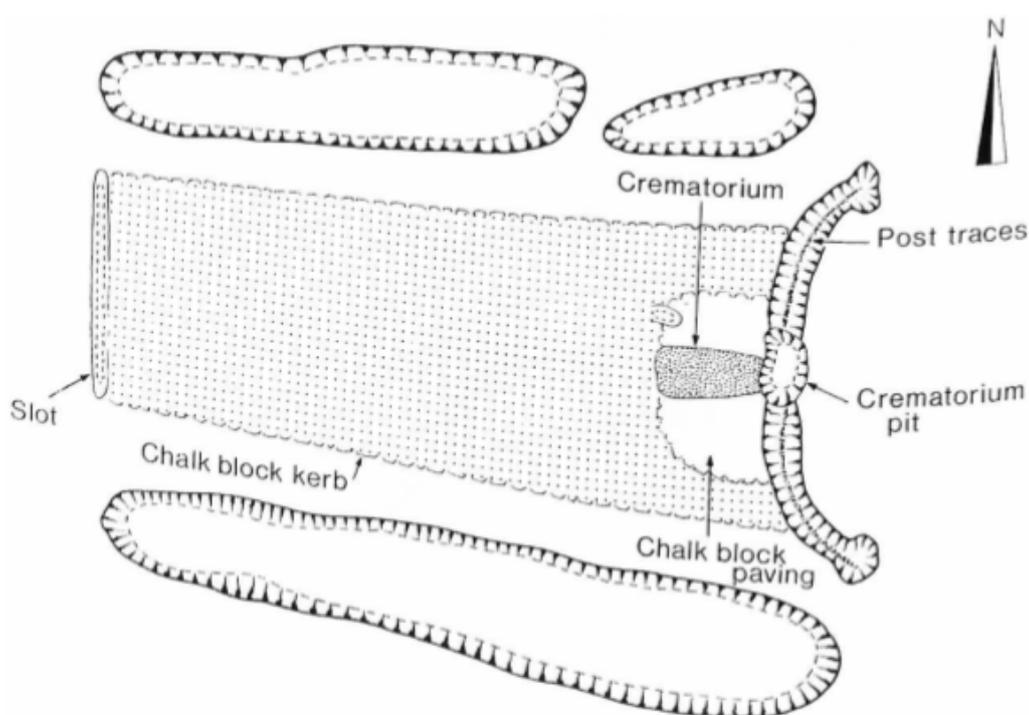


Figure 7.10. Ian Kinnes's plan of the Raisthorpe long barrow (Kinnes 1992, Fig 1D.21).

From Brewster's (1965b, 8) account, Ian Kinnes produced a schematic plan (Figure 7.10) and the following sequence of events (Kinnes 1992, 41) –

1. Mortuary enclosure of trapezoidal plan, defined by concave façade trench at east with continuous post-setting and expanded terminals (Length 18m), drystone walls at sides and shallow slot at west. A mortuary area behind the

façade, defined by chalk slab paving (Length 4m, Width 7.5m) with the bones of a minimum of four adults, tubular bone bead and a pit to the north-west (Depth 1.2m).

2. Façade burnt. Crematorium over mortuary axis.
3. Flanking ditches with chalk material forming mound. North flanking ditch formed of two segments.
4. Crematorium pit cut into the façade bedding trench, associated with bone ash and Grimston bowl sherds

Griffiths (2012, 176) provides two radiocarbon dates for Raisthorpe, for the proximal pit (proximal pit) a *terminus post quem* for pit infilling of 4690-3990 *cal* BC (95.4% probability); and from under the mound (section T) charcoal from 'pyre silt' dating to 3960-33630 *cal* BC (93.7% probability) (HAR-8781). In a footnote she shares concerns about the very early date from the proximal pit and argues it could be from a very old tree (Griffiths 2012, 176, Footnote 24). A similar concern is shared by Manby *et al* (2003, 46).

Both Kinnes (1992, 41) and Griffiths (2012, 176) omit Brewster's (1965b, 8) reference to cattle bones recovered from the flanking ditches.

Now, returning to the paper archive it became quite apparent to me that there was some confusion regarding the trench numbering used during the 1965 excavation compared with the drafted plan (see Figure 7.9). This is made clear in an undated personal communication recovered from the archive between Finney and Manby when discussing the pottery from the site (Figure 7.11).

TERRY

The details for the pot are taken word for word from the diaries. The solving of Rauschgrape's problems has meant a change in the Trench numbering. Bea should have changed the trench numbers on the pot, but she hasn't as yet changed the labels. Please ignore any confusion over trench numbers, the section letters are correct.

Anne

Figure 7.11. Personal communication between Anne Finney and Terry Manby. Undated (archive, unpublished).

Unfortunately, this renumbering of trench numbers and the subsequent changing of archaeological labels (as the above references) was completed with varying degrees of success. The trench references within the main body of the text, along with the pottery report was renumbered correctly. The flint assemblage report was mixed with five of the six worked flints changed to the new scheme, but a small flint blade recovered from the south quarry ditch retained the original. This is also the case for the worked bone, Figure 14 from the draft archive details small find KINCM:2010.4.43 with the original trench numbering (Figure 7.12). The labelling for the animal bone assemblage I found all still retaining the original trench scheme.

For simplicities sake, going forwards I will only refer to section letters as these are correct in all cases. This will allow us to move forwards without fumbling between the discrepancies in trench numbers found between the paper and archaeological evidence archives.

Superstructure

Finney's draft report describes the superstructure as greatly reduced due to plough damage since Mortimer's excavations, surviving in 1965 to just above 0.6m in height. It is composed of the earth excavated from the flanking ditches, with marl dump on the original ground surface followed by a capping of chalk. Finney mentions awaiting a radiocarbon date from charcoal derived from the centre of the mound (yellow marl), this is presumably HAR-8781 mentioned above. No finds are recorded.

Under the superstructure there are several architectural features which predate its construction but their temporal relationships to each other are less clear; this includes a pavement, embanked mortuary structure, a pit, mortuary enclosure and charcoal scatters. These will be considered in turn.

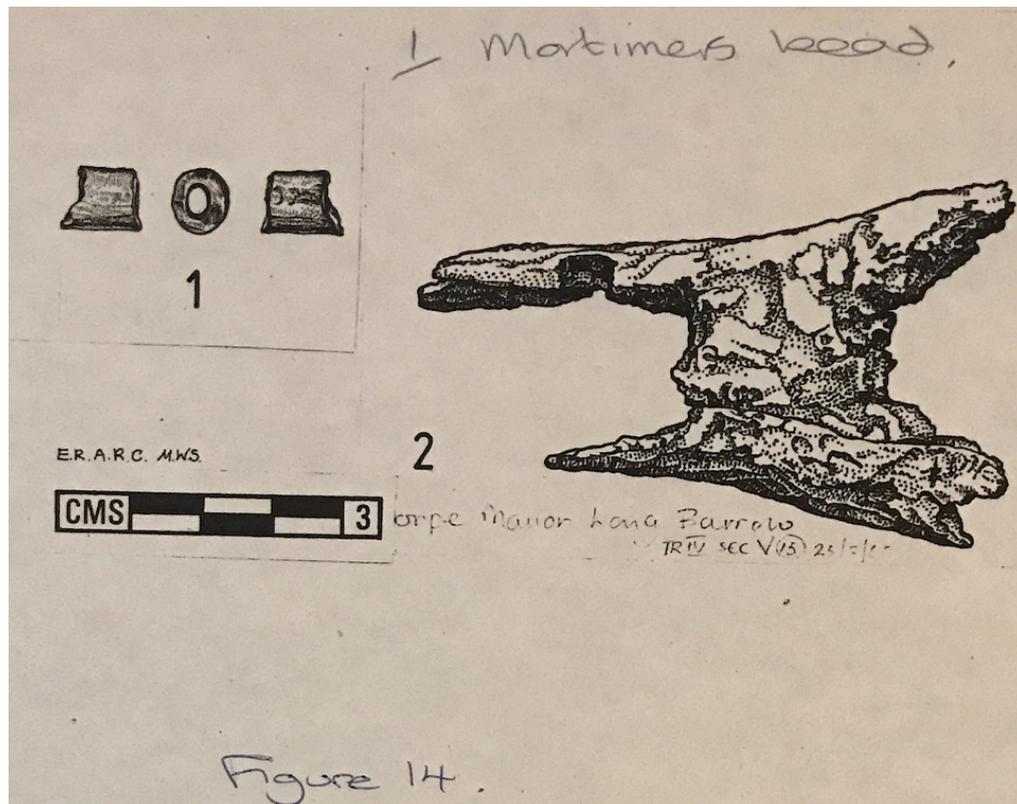


Figure 7.12. Worked bone Figure 14 from draft report. Note original trench number below specimen 2. (unpublished).

Pavement

The pavement comprises rough chalk pieces embedded into the original ground surface found in sections D and E, slightly west of the façade bedding trench (see Figure 7.13). Finney states the dimensions as 5.30m N-S, 2.13m E-W, with an alignment N-S. Figure 7.9 suggests a gap between the mortuary structure and the pavement. No artefacts are recorded as associated with this feature.

The alignment of the pavement, along with its lack of associated material culture is unusual; typically pavements are aligned along the main axis (usually E-W) and associated with human remains and other forms of archaeological evidence. This

includes the chalk pavement at the round barrow of Cowlam 57 (Greenwell 1877, 214), the limestone pavements at Calais Wold 275 (Chapter 4) and the Westow long cairn (Greenwell 1877, 491); and clay (turf) floors at the round barrows of Aldro 88 and Aldro 94 (Mortimer 1905, 58, Kinnes 1992, 87).

Embanked mortuary structure

The embanked mortuary structure (also referred to as ‘Cremation Trench’ or ‘Crematorium’) was largely removed by the earlier Mortimer excavation, but portions were still in situ and identified during Brewster’s excavation in 1965; sections E and L. It is recorded as having a dimension of 11.41m E-W and 1.34m N-S, with Mortimer indicating a height of 0.73m. It comprised a line of chalk blocks, intermixed with wood and supported to the north and south by soil banks. J.D. Dawes’s draft human bone report details at least three individuals, a robust man, ‘delicately built’ woman (both around 30 years old) and an infant. Kinnes (1992, 81) refers to this architectural feature as an ‘embanked chamber’, other examples include Willerby Wold (Manby 1963, 181), Kilham (Manby 1976), Street House (Vyner 1984) and Garton Slack 134 long barrows (Mortimer 1905, 246). Finney’s draft report stresses from photographic records (not made available to the author) the embanked mortuary structure was constructed directly onto the original ground surface, with the superstructure later erected over, as opposed to cutting into the barrow. It is then interpreted by Finney as being burnt down, presumably before the erection of the mound; other examples in the region include Heselton Wold (Greenwell 1877, footnote 488), Denby House (Greenwell 1877, 497, Gibson 2011, 7) and Market Weighton long barrows (Greenwell 1877, 505). Associated finds from this feature include human bone (burnt and unburnt), a sherd of Grimston Ware, Mortimer’s animal bone bead and a second bone bead recovered in 1965.

Except for the Willerby Wold long barrow (discussed above), all the other embanked mortuary structures (crematoriums) are believed to have been burnt down prior to the building of the superstructure; Greenwell tends to stress the contrast between these burnt wooden structures and unburnt mound material (Kinnes 1992, 83).

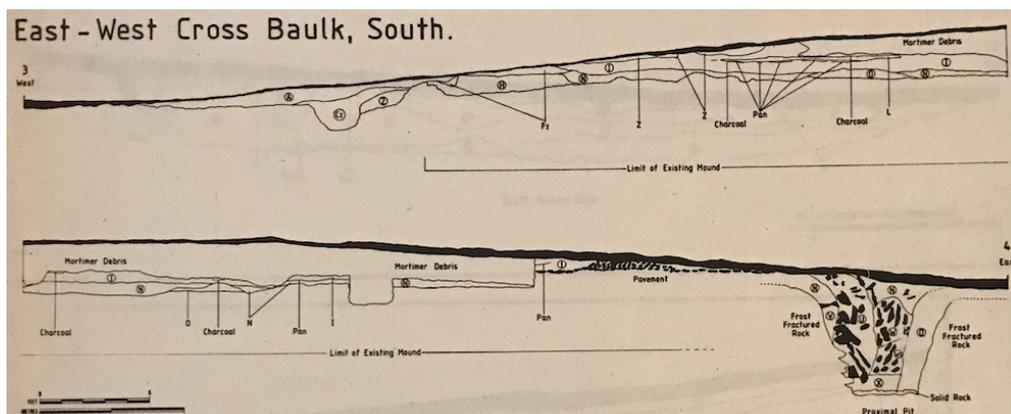


Figure 7.13. East-West cross section of the Raisthorpe long barrow (Fig 5. Archive. unpublished).

Pit

A pit which cut the original ground surface to a depth of 0.76m was identified in sections F and M (Figure 7.9). Due to the location of the central baulk, Brewster was unable to fully excavate this feature, and so the full dimensions remain unknown. It was filled with rainwash and a compact and looser fill of chalk and flint rubble, with no finds. There was no evidence for burning and Finney suggests from the photographic record it may have held a post.

Mortuary Enclosure

Finney's draft report records no evidence for a ditched enclosure like those found at Kilham and Willerby Wold long barrows. There is a shallow revetment of chalk blocks running westwards from the façade bedding trench, constructed on the original ground surface; representing in Brewster's view a stone-built enclosure, like those at Seamer Moor 2 (Manby *et al* 2003), Street House (Vyner 1984) and Great Ayton Moor (Hayes 1967). The section drawings from the archive are inconclusive and Finney provides no suggestion photographic evidence can support this interpretation (which she does for several other architectural features). I am therefore unable to confirm the drystone walls as indicated in Kinnes's plan of the site (Figure 7.10).

Charcoal Scatters

Four charcoal scatters are shown in plan (Figure 7.9) and described by Finney as predominantly encountered on the original ground surface; others can be seen in section. Two large debris charcoal scatters were found in sections F and Y, with Brewster referring to

the section F deposit as a hearth (which is located near the pit). Finney's draft report suggests a fragment of animal bone was spatially associated on the original ground surface with the charcoal scatter in section Y. Finney suggests these charcoal scatters are difficult to interpret 'other than remnants of hearths used as part of the ritual associated with the long barrow or were part of the occupation debris of the site.' No other artefacts were associated with these charcoal deposits. The presence of charcoal scatters within the body of the mound indicates both occupation of the site prior to the building of the mound, but also during this phase of works.

Façade Bedding Trench

Due to time restraints, Brewster only excavated a small section of the façade bedding trench (in section J2); with sections Ext and K2 stain plotted. Brewster describes the façade as concentric (like Street House long cairn and East Heselton long barrow) and unlike the concave façades of Kemp Howe, Willerby Wold, Esh's and Garton Slack 37 long barrows. The club headed terminals are neither confirmed in Finney's draft report or site plan (Figure 7.9). The trench varied from 0.91m to 1.21m in depth, with vertical sides and a flat bottom. At its centre was a large pit (Proximal Pit). The fill of the trench indicated to Brewster upright posts which had burnt down (prior to the building of the mound), extended throughout the façade in section J2. Finds associated with the bedding trench were limited to charcoal and a sherd of Grimston Ware. It is unfortunate time did not permit the total excavation of this architectural feature, as other sites have produced complex assemblages of archaeological evidence.

Proximal Pit

A large circular pit in section J2 at the centre of the façade bedding trench (measuring 1.82m depth, 1.21m width at the top and narrowing to 0.83m at the bottom) was interpreted by Brewster originally as a 'crematorium pit', like that at the Garton Slack 37 long barrow (Brewster 1980) (Figure 7.9). Its fill contained chalk blocks, rainwash, charcoal and red ash. Finney's draft report highlights concern with this interpretation and argues convincingly that the stratigraphy and photographic record of the pit is more conducive to the rotting away of part of a large upright timber. Similar doubts were drawn about the Garton Slack 37 example, Finney imagines instead a large imposing central wooden post within the façade like those suggested at Willerby Wold, Hanging Grimston, Garton Slack 34 and Street House.

There is no indication in Finney's draft report or paper archive that this proximal pit was a later cut into the façade bedding trench, as suggested by Kinnes (1992, 41).

Northern Quarry Ditch

Brewster did not fully investigate the northern quarry ditch but did section (sections L2, D2, E2 and F2) it on three occasions; the plan (Figure 7.9) suggesting the terminals were not excavated. It appears to comprise a series of pits, which were initially interpreted by Mortimer (1905, 18) as natural features. The pits vary in depth between 0.60m and 0.91m. Section F2 was distinct for having a primary silting of black soil. Finds included animal bone, flints and pottery, the high percentage of which were recovered in the primary silting. This is confirmed in the draft section drawings where the spatial locations of the flints and charcoal are illustrated. Unfortunately, a similar care of attention was not afforded to the animal bone and pottery. Manby's draft pottery report does state that a number of small sherds of Grimston Ware were recovered from the lower layers of the Northern Quarry Ditch (sections D2 and L2). Two sherds of Bronze Age pottery, two sherds of Romano-British and Medieval pottery were also recovered in the upper fills of the ditch, in the surface of the chalk scree (Layer C – see Figure 7.14). A single flint scraper was found from section L2 (0.66m below the plough soil). Finney's draft report argues against 'squatter occupation' of the ditch and instead suggests these finds washed into the ditch from the land around.

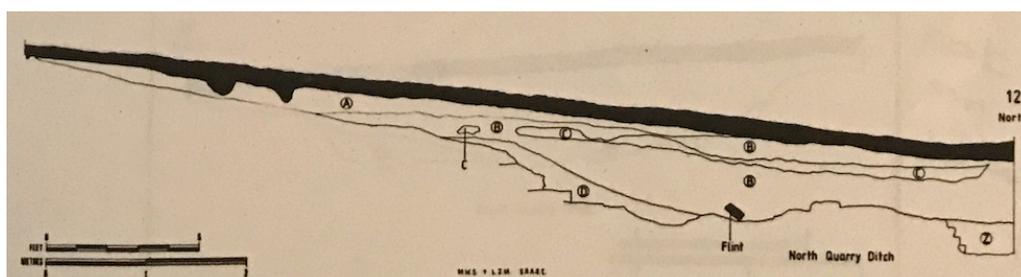


Figure 7.14. Section of Northern Quarry Ditch, Trench 5 West. Note Layer C and the stratigraphic location of later pottery. (Archive, Fig.7).

Southern Quarry Ditch

Unlike the northern quarry ditch, the southern quarry ditch was found by Brewster to be a continuous shallow U shape, suggesting a single episode of building work. It is recorded as 10.66m wide, 1.21m deep and separated from the mound by a narrow berm.

There are several pockets of black soil, like that identified in section F2. No pottery was recovered from the southern quarry ditch and no details regarding the animal bone is provided in the archive. Five worked flints were recovered –

1. Flint flake, section H2, 0.96m below plough soil
2. Small blade with heat crazing, section H2, 0.10m below plough soil
3. Small blade, section G2, 0.96m below plough soil
4. Scraper, section H2, 0.96m below plough soil
6. Scraper, section V, 1.14m below plough soil

Finney's draft report again argues against 'squatter occupation' of the ditch and instead suggests these finds washed into the ditch from the land around.

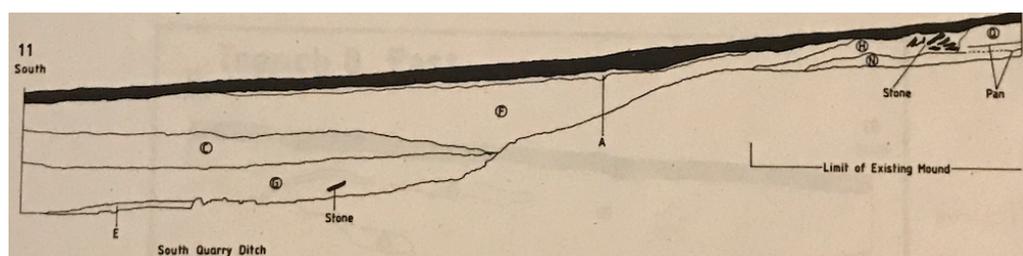


Figure 7.15. Section of Southern Quarry Ditch, Trench 5 West (Archive. Fig. 7).

7.3.4 Animal traces in the paper archive

Let us now turn our attention away from the detailed understanding of the architectural histories of the Raisthorpe long barrow site and instead examine the animal traces revealed within the paper archive. I want the reader to remember Brewster's initial report (1965b) where he states the recovery of 'ox bones'. When removing the documents from the brown envelope (which reads RAISTHORPE) we are first met by a five-page, handwritten synopsis for the 'Raisthorpe Manor long barrow'. This synopsis (which I have already suggested to be written by Brewster) lists the specialist reports and expected word count. The animal bones report reads 'to be arranged locally. c 100 words'. This is reminiscent of the Coombs archive for Calais Wold 275 (see Chapter 4). Moving through the series of draft papers we next see animal traces in the illustration of two worked animal bones (see Figure 7.12). The pencil annotation stating

‘Mortimer’s bead’ is incorrect, the illustration is a burnt animal bone bead fragment recovered from the embanked mortuary structure in 1965, associated with burnt twigs and a Grimston Ware sherd. Sadly, this bead fragment is no longer in the archive and is presumed missing. The second specimen is described as a ‘very worn long bone fragment, which was found in the southern quarry ditch (section V), at a depth of 1.11m. This specimen was identified in the archive with the reference KINCM:2010.4.43 and will be discussed later.

Next, Finney’s draft report fails to mention the cattle bones (already revealed to us earlier by Brewster) and instead offers the reader a single sentence

‘Quantities of animal bone were found on the site, but predominantly in the quarry ditches, although a fragment of animal bone was found on the old land surface near the charcoal deposits in section Y.’

It is clear the zooarchaeologist who was to be ‘arranged locally’ to examine the faunal remains never materialised. I have found no draft animal bone report or appendix. This explains why the animal bone labelling still retained the original trench scheme. It took from 1965 to 2021 for these animal bones to be examined and their histories rightfully woven into our understanding of the complex architecture at Raisthorpe long barrow. It is to this animal bone (re)-examination we now move, but before we do one final detail. Within the human skeletal report written by J.D. Dawes he describes the contamination of a human cremation sample from the embanked mortuary structure as containing ‘...modern animal bone in form of part of sheeps foot with tendons intact.’ Here we can extend the animal afterlife of the monument into relatively recent times, with the accident or loss of these specimens. I can confirm this modern animal bone was not identified in the archive and is presumed to have been removed on identification.

7.3.5 Results

The faunal remains assemblage from the Brewster archive comprises 143 fragments of bone, tooth and antler (NSP). The faunal remains assemblage from the Mortimer archive comprises 4 fragments of bone and antler (NSP). Therefore, the total surviving animal

bone NSP for the Raisthorpe long barrow is 147, and I will treat these as a single entity going forwards.

Preservation and taphonomy

I characterised the bone assemblage as very poorly preserved, with only 11.56% identified to taxon. I found no evidence for gnawing or root damage which may be a factor of poor surface preservation and high fragmentation. I identified only four loose teeth (2.72%) in the assemblage, with no mandible fragments containing dentition, further demonstrating the high degree of fragmentation. I recorded no specimens as complete. All the specimens (except for the Mortimer bead) were heavily weathered with a 'rolled' appearance, suggesting to me some could be considered derived.

I recorded 47.97% of the assemblage as 'indeterminate', this compares with the settlement scatter at Rudston 62 (50.25%), slightly less than Kilham long barrow (60.55%) and midway between other long barrow sites in southern England; Woodford G2 - 69% (Banfield 2018), West Kennet - 37.91% (Banfield 2018), and Ascot-under-Wychwood - 68.42% (Mulville and Grigson 2007).

This assemblage included 58 specimens with evidence of burning (39.45%). I described the majority of the burning as charred, with the exception of the burnt animal bone bead recovered from the embanked mortuary structure (ID:-144) (along with the animal bone bead fragment recovered in 1965 and now missing) and the distal end of a fusing pig tibia, recovered by Brewster from the south quarry ditch, section G2 (ID :-78).

Species present

In Table 7.8 I present the assemblage. The totals are the Number of Specimens (NSP); also given in Table 7.10 is the Minimum Number of Individuals (MNI) per context and Table 7.11 is the MNI site total. Domesticated taxa are more prevalent with cattle dominating the assemblage, accounting for 52.94% (NSP) of those elements identified to species, but only 6.12% (NSP) of the entire assemblage. I assigned only four elements to horse, two to sheep/goat and a single element to pig, accounting for 2.72% (NSP), 1.36% (NSP) and 0.68% (NSP) respectively. Wild taxa were only included in the form of a fragment of red deer tine (ID: - 145), which was recovered during the Mortimer excavations. I could only identify most of the assemblage to broader categories, 37.41%

(NSP) as ‘Large Mammal’, 2.04% (NSP) as ‘Medium Mammal’ and 0.68% (NSP) as ‘Small Mammal’. This concurs with the Rudston 62 and Willerby Wold faunal assemblages, along with the majority Early Neolithic sites where cattle are predominant (Serjeantson 2011).

Context	Cattle	Horse	Sheep	Pig	Red Deer	Large Mammal	Medium Mammal	Small Mammal	Indeterminate	Total
Pit	0	0	0	0	0	0	0	0	0	0
Mound	0	0	0	0	0	0	0	0	0	0
Mortuary Structure	0	0	0	0	1	0	0	1	0	2
Façade	0	0	0	0	0	0	0	0	0	0
Proximal Pit	0	0	0	0	0	0	0	0	0	0
North Ditch	1	1	1	0	0	4	0	0	14	21
OGS	0	0	0	0	0	0	1	0	1	2
South Ditch	4	1	0	1	0	43	0	0	52	101
No Context	4*	2	1	0	0	8	2	0	4	20
Total	9	4	2	1	1	55	3	1	71	147

Table 7.8. Taxonomic representation by context (NSP). *Mortimer scapula from OGS?

Only two biometry measurements are significant for our understanding of *Bos* species present (ID 29 and ID 83), which I present in Table 7.9.

ID	Element	Side	Fusion	SD	SLC
7	Metatarsal	Left	u/f	22.23	
29	Metacarpal	Left	Fused	25.54	
83	Scapula	Right	?		76.59e

Table 7.9. Cattle measurements from Raisthorpe long barrow. Measurements follow definitions of von den Driesch (1976) except where stated in the text or figure captions.

ID 29 is a fused metacarpal which I recorded the SD as 25.54mm, this is smaller than domesticated cattle specimens from the West Kennet long barrow (SD 32mm), Woodford G2 long barrow (SD 28.4mm) (Banfield 2018) and Fussell’s Lodge long

barrow (SD 30mm) (Shepherd 2021); but larger than a specimen from the Horslip long barrow (SD 20mm) (Higham in Ashbee *et al* 1979). I would suggest ID 29 comes from a domesticated female cow.

ID 83 is a fragmented *Bos* right scapula, with only the neck surviving, the neck representing the most robust part of this bone (Wright 2016, 27). The scapula fuses early at around 7-10 months and therefore its survival in the archaeological record is typically good. The width of the neck (SLC) in parts may continue to grow after the bone is fully fused, as such, its benefit for archaeological research is usually in the investigation of age (Wright 2016, 27); as opposed to determining species. The SLC estimated measurement (estimated due to the partial re-fitting of the fragmented bone) is 76.59mm as presented in Figure 7.16.

Figure 7.16 illustrates the animal from which ID 83 derived is significant in stature, a much larger animal than those found within other Early and Late Neolithic cattle assemblages in Yorkshire, the South Street long barrow and the large faunal assemblage recovered from the Windmill Hill causewayed enclosure. I would suggest (even considering the bone growth after fusion) that this animal was not a domesticated cow, but instead a male aurochs. The biometry indicates an association with the Mesolithic Danish male aurochs, the Early Mesolithic male specimen from Star Carr and the two Beckhampton Road animals (although arguably the smaller of the two (70mm) could potentially be a domesticated bull).

Unfortunately, the original description on the specimen bag and surviving paper records do not offer any contextual information; it reads 'Raisthorpe No date. Bone'. I found the bag to contain seven fragments of bone, I was able to re-fit four fragments to partially form a right cattle scapula. The remaining three fragments I grouped into 'Large Mammal'. I described the condition of these bones as poor and not dissimilar to those bones recovered from the flanking ditches. One possible interpretation is this aurochs scapula represents the same one recovered on the original ground surface, under the superstructure (close to the central axis) and described by Mortimer as 'a scapula of an ox or deer' (Mortimer 1905, 18). There were no bones matching this description within the Mortimer archive (Box 6166) and it has been noted by Alex Gibson (2011, 18) that there has been '...some confusion of the Mortimer archive during its chequered

curatorial history'; including the human bones labelled as from Esh's long barrow not matching published descriptions (Gibson 2011, 12).

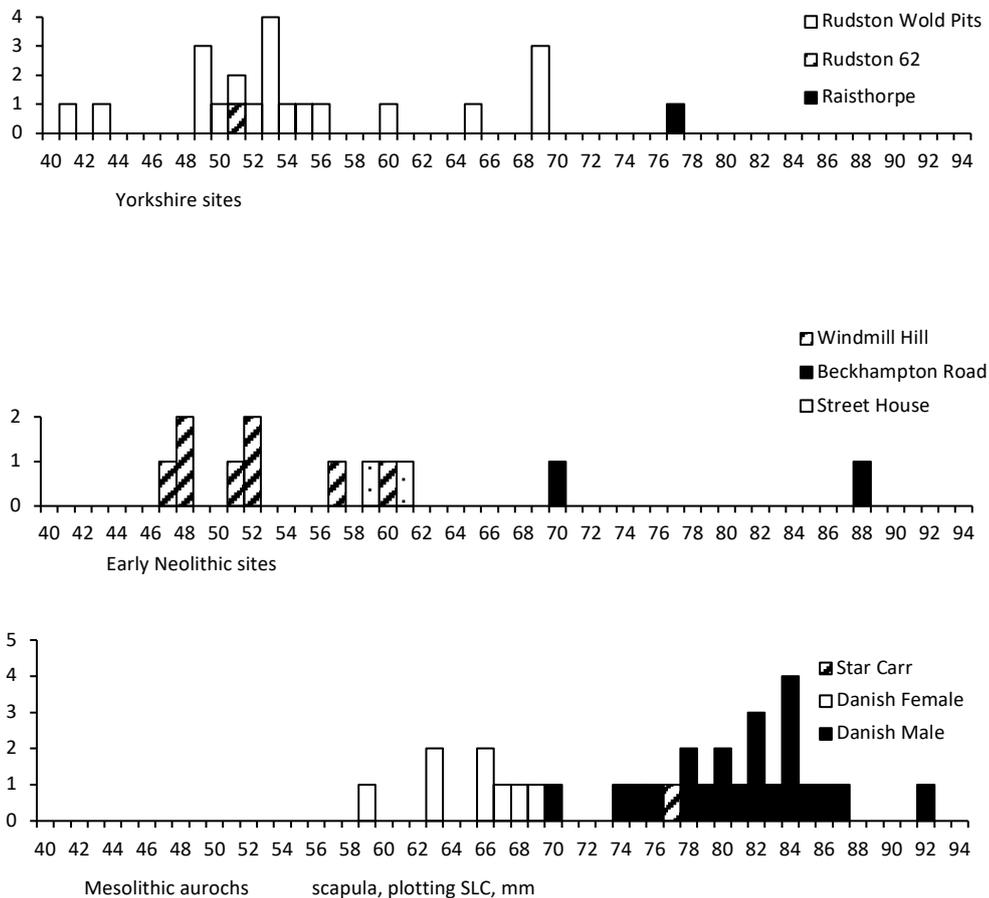


Figure 7.16. The cattle scapula smallest width of the collum measurement (von den Driesch 1976) from the Raisthorpe long barrow site, compared to those from Rudston 62 settlement scatter (chapter five), Rudston Wold Late Neolithic pits (Rowley-Conwy and Owen 2011), Windmill Hill (Grigson 1999), Beckhampton Road (Banfield 2018), Street House (Banfield 2018 – note three specimens were omitted due to not being fully fused), Star Carr (Legge and Rowley-Conwy 1988) and Danish aurochs (Degerbol and Fredskild 1970).

Context	Cattle	Horse	Sheep	Pig	Red Deer	Total
Pit	0	0	0	0	0	0
Mound	0	0	0	0	0	0
Mortuary Structure	0	0	0	0	1	1
Façade	0	0	0	0	0	0
Proximal Pit	0	0	0	0	0	0
North Ditch	1	1	1	0	0	3
OGS	1?	0	0	0	0	1
South Ditch	1	1	0	1	0	3
Total	3	2	1	1	1	8

Table 7.10. MNI per context.

Context	Cattle	Horse	Sheep	Pig	Red Deer	Total
Site Level	2	1	1	1	1	6

Table 7.11. MNI site level.

MNI

Minimum number of individuals were low (Table 7.10 and 7.11). There is a minimum count of six individuals across the site: two cattle (this includes the possible aurochs specimen), one horse, one sheep, one pig and one red deer. The MNI count for each context is higher at eight animals, but this could be the result of sample aggregation, whereby the bones from a single animal being moved between contexts.

Body part representation

The site was only partially excavated by Brewster, and the sample size is small, so any conclusions must be wary of biases. The condition of the bones also heavily impeded my efforts to identify to taxon. Red deer is present as a single antler fragment. Teeth are robust and present from cattle, sheep and horse. High meat yield limb bones could suggest consumption at the site, with perhaps the slaughter and butchery of cattle, pig and sheep occurring elsewhere, with the transportation of these elements to the site?

Element	Cattle	Pig	Sheep	Horse	Red Deer
Head					
Cranium					
Mandible					
Tooth	1		1	2	
Antler					1
Spine					
Atlas					
Axis					
Cervical vertebra					
Thoracic vertebra					
Lumbar vertebra				1	
Vertebra					
Sacrum					
Clavicle					
Scapula	1+3*				
Sternum					
Rib					
Pelvis				1	
Forelimb					
Humerus	1		1		
Radius	1				
Ulna					
Metacarpal	1				
Hindlimb					
Femur					
Patella					
Tibia		1			
Fibula					
Metatarsal	1				
Feet					
Carpals					
Calcaneum					
Astragalus					
Tarsal					
Phalanx					

Table 7.12. Body part representation per taxon by element (NSP). *possible aurochs.

The presence of the horse lumbar vertebra and pelvis fragment could indicate a different practice. Unfortunately, a lack of contextual information in the Brewster archive and Finney's draft report concerning the recovery of animal bones from the flanking ditches, leaves me unable to confirm when these bones were deposited at the site.

Mortality profile

Table 7.13 details four specimens representing epiphyseal fusion evidence for the cattle bone. I recorded the proximal end of the metacarpal as fused, which occurs prior to birth. ID 86 was bagged with ID 83 (an aurochs scapula) and could be a fragment of the same bone, if so I recorded it as fused with a minimum age of 10 months. The humerus and metatarsal are both unfused on the distal end, suggesting an age-at-death of less than 18 months and 36 months respectively. I recorded the distal end of the pig tibia (ID 78) as fusing, suggesting an age-at-death around 24 months. This age correlates with pigs from the Rudston 62 settlement scatter (Chapter 5).

NSP	Taxon	Element	Proximal	Distal	Age
Early fusing					
29	Cattle	Metacarpal	Fused		<0 months
86	Cattle	Scapula	Fused		<7-10 months
32	Cattle	Humerus		u/f	>12-18 months
7	Cattle	Metatarsal		u/f	>27-36 months
Middle fusing					
78	Pig	Tibia		fusing	24 months

Table 7.13. Age-at-death profiles as indicated by degree of epiphyseal fusion (After Silver 1969, O'Conner 2003).

In Table 7.14 I present the tooth wear from two specimens. Although difficult to accurately age due to their loose nature both the cattle and sheep teeth suggest older animals, therefore I would argue ID 65 probably came from a different animal to the unfused humerus (ID 32) and metatarsal (ID 7) elements. Without contextual information for the recovery of these teeth from the flanking ditches, they both could perceivably have been associated with the upper fills of the ditch. The sheep tooth (ID

82) was recovered from the northern quarry ditch, section D2, the same section as sherds of Bronze Age, Romano-British and Medieval pottery.

ID	Taxon	Mandibular/Loose	Side	M1/2	M3	Age
65	Cattle	Loose	Right	h		Old adult
82	Sheep	Loose	Right		g	Old adult

Table 7.14. Age-at-death profiles as indicated by tooth wear.

Sex

A single red deer antler tine was recovered by Mortimer and is from a male animal. I recorded both the sheep and pig elements as not fully fused and so unsuitable for biometry. As already discussed above, the slender cattle metacarpal could be from a domesticated female and the large scapula possibly from a male aurochs (Table 7.9).

Butchery

Table 7.15 shows the evidence for butchery recorded at Raisthorpe long barrow. Three specimens are recorded in the Brewster archive as coming from the flanking ditches with two from fragments of unidentified long bones, so representing potential meat bearing limb bones. The poor preservation of the assemblages may mask further evidence. The cut marks to the cattle (aurochs?) scapula could indicate filleting.

ID	Taxon	Element	Side	Proximal	Distal	Butchery	Location
7	Cattle	Metatarsal	Left		u/f	Cut	Along the length of posterior
76	Large Mammal	Unidentified long bone fragment				Cut	vertical cut marks along the length of the specimen
77	Large Mammal	Unidentified long bone fragment				Cut	vertical cut marks along the length of the specimen
83	Cattle	Scapula	Right			Cut	on spine

Table 7.15. Butchery evidence

Pathologies

I recorded no evidence for pathologies.

Worked bone

I recorded the shaft of a sheep humerus with a circular hole, 4mm in diameter. Unfortunately, the original packaging provides no context (KINCM:2010.4.38) and being associated with horse pelvis and vertebra fragments could suggest later depositional activity. In contrast, ID 40 represents an unfused right cattle radius and is recorded as coming from the southern quarry ditch (Section V) at a depth of 1.11m (Figure 7.12). Consulting the section drawings, I would suggest it was recovered from the primary fill - Soil Key G, a dark brown marl with small chalk. Its use is unknown.

Two bone beads have been recovered from the mortuary structure at Raisthorpe. Unfortunately, the specimen illustrated in Figure 7.12, which was discovered during the Brewster excavation was not found during my re-examination of the archive and is missing. The second bead (Mortimer's bead) was also recovered from the mortuary structure and is very similar in form (see Figure 2.6). This artefact was identified in the Mortimer archive (KINCM.1942.366). I was unable to identify the taxon or element, due to its heavily modified appearance, however, its polished condition could indicate considerable use-wear.

7.3.6 Context

This section will lead with a feature focused examination of the relationships between the animal remains and different architectural foci. It is hoped this will reveal both spatial and temporal patterns of human-animal activity.

Original Ground Surface

No faunal remains have been labelled as being recovered by Brewster from the OGS, there is a reference in Finney's draft report suggesting '...a fragment of animal bone was found on the old land surface near the charcoal deposits in section Y'; however, this was not encountered during the re-examination. Mortimer (1905, 18) describes the scapula of an 'ox or deer, and a few bones of a smaller animal, mixed with wood ashes'. A potential candidate for this scapula I have argued as the male aurochs specimen (ID 83). If so, its location along the central axis of the monument is reminiscent of the pig scapula at Hanging Grimston long barrow (Mortimer 110). In the Mortimer archive were two fragments of animal bone, the first from a 'Medium Mammal' and the second

‘Indeterminate’; there was no context provided on the plastic specimen bag, but this could represent the fragments associated with the scapula and wood ashes.

Charcoal Scatters

Several charcoal scatters are recorded in Brewster’s draft plan as being excavated on the OGS. These could be contemporary with the pre-mound building works or represent earlier occupation of the site. The charcoal scatter is said to be associated with a fragment of animal bone (not identified by me in the archive) and Mortimer describes his recovery of a scapula and a few bones of a smaller animal mixed with wood ashes. Both examples are likely to have been within 3-4m of each other, and so could form a single large charcoal scatter?

I would argue these charcoal scatters represent episodes of burning which are temporally distinct. Along with those identified on the OGS, there are several recorded in section from the superstructure (see Figure 7.13). None of these mound charcoal scatters were associated with animal remains.

Pit

The pit feature from sections M and F was only partially excavated by Brewster and provided no evidence for animal remains.

Facade Bedding Trench and Proximal Pit

Due to time constraints during the Brewster excavation, the façade was not fully investigated, with only the proximal pit being explored. This is unfortunate, as other long and round barrow sites have shown the façade trench to be rich in material culture (note Calais Wold 275 – Chapter 4) and animal bone. The excavation of the proximal pit produced no evidence for animal bone, although the presence of charcoal could present a sampling effect.

The Embanked Mortuary Structure

Both the Mortimer and Brewster excavations produced a single bone bead from the burnt material of the embanked mortuary structure. Sadly, the Brewster bead is now missing. I identified the Mortimer bead in the archive. The similar style of both beads (as indicated from the illustrations found within the archive) could indicate they were

originally part of the same artefact, perhaps a necklace. Although not described within Mortimer's original report (1905, 18), I did identify a red deer antler tine fragment (ID-145) with a broken tip, in the archive (KINCM:2017.388.3) with the labelling 'Towthorpe 3. Found with human bone (jaws)'. Mortimer (1905, 18) records the recovery of three adult mandibles and a femur from the western end of the embanked mortuary structure (brecciated mass). The above, along with the presence of charring on the antler fragment strongly suggests to me a spatial relationship between the red deer specimen and the embanked mortuary structure. Its broken tip suggests use as a tool in the building works. Its probable location at the western end of the embanked mortuary structure would also suggest a close spatial and possible temporal relationship with the aurochs scapula (the scapula of large mammals are often found discarded as building tools – spade like instruments) on the OGS. Was the selection of wild animal bones (aurochs and red deer) deliberate?

Mound

There was no animal bone recovered from the mound material in both Mortimer and Brewster's excavations. This may have been a sampling effect, but the presence of no animal bone is unusual. This could be interpreted as the deliberate exclusion of animal remains from this feature of the monument, although the accidental wrapping of material culture already present on the site would be difficult to reduce. It is more likely there was little material culture prior to the erection of the mound. This can be supported by no flint work and pottery being recovered from mound itself. The overall scarcity of pottery and worked flint at the site up to the completion of the mound building, could also suggest a short history of building works.

Flanking Quarry Ditches

The flanking quarry ditches represent the largest animal bone assemblage from the site, with 122 fragments (NSP). The north ditch having 21 fragments (NSP) and the south ditch with 101 fragments (NSP) of animal bone. Due to the excavation methodology to only section the ditches, we can assume animal bone was missed and our assemblage represents a partial sample. I identified four taxa from the ditches, including domesticated cattle, sheep, horse and pig. I loosely grouped most of the animal bone as 'Large Mammal' or 'Indeterminate', due to poor preservation and high fragmentation. Although we can temporally associate the cutting of these ditches with the construction

of the mound, their fills could represent deposits spanning thousands of years. This is demonstrated by the presence of Bronze Age, Romano-British and Medieval pottery sherds in the upper fills. Unfortunately, the original labelling of the animal bone and paper archives offers few indications of their vertical context within the ditch fill. The Finney draft report notes a high percentage of the artefacts were recovered from the primary silting, but this leaves us unable to come to terms with the individual histories of each animal bone specimen.

There are two exceptions. The first is a worked fragment of an unfused cattle radius (ID-40), which perhaps due to its worked (unusual/special) nature is recorded as coming from the southern quarry ditch (Section V) at a depth of 1.11m (Figure 7.12). Consulting the section drawings, I would suggest it was recovered from the primary fill - Soil Key G, a dark brown marl with small chalk. In this instance I would argue for a cattle history associated with the site shortly after the building of the mound and excavation of the southern quarry ditch. Finney's report argues against 'squatter occupation' of the ditches and instead favours the archaeological evidence (including the animal bone) being washed into the ditches from the nearby land surface. The lack of material culture within the mound itself would indicate either material culture was introduced to the site only after the erection of the mound or occupation activity was only present beyond the excavated area, such as south of the southern quarry ditch.

Secondly, in respects to the 'squatter occupation' argument, a concentration of 51 (NSP) highly fragmented 'Large Mammal' and 'Indeterminate' animal bones, 78.43% which I described as charred or burnt and a single piece of charcoal was recovered from on a rock (spanning sections W and V) in the southern quarry ditch could indicate just such an activity. The rock or stone seen in Figure 7.15 is not an earth fast boulder but was deposited/placed into the ditch within its primary fill (therefore dating the concentration of animal bone). This discrete episode represents 68.96% of the burnt animal bone at the site. Perhaps to avoid a strong northerly wind, these Early Neolithic farmers 'squatted' in the ditch to cook and consume meat on a rock which they placed there for this very function. The close spatial and temporal association with the worked cattle bone fragment (ID-40), could also suggest the 'Large Mammal' fragments were probably also from a cow. Could we consider while they whittled away time waiting for

their meat to cook and the wind to calm, they also whittled away on a fragment of bone close to hand?

7.3.7 Conclusion

To conclude, let us start with what we know. We know that the Raisthorpe long barrow was only partially excavated with those architectural features which typically produce a rich assemblage of material culture being missed – most of the flanking quarry ditches and façade bedding trench. This is unfortunate. It is also frustrating that the same care which was given to the pottery sherds, worked bone and flint was not also given to the animal bone. Confident interpretations of the flanking ditches are sadly not possible without a vertical understanding of their depositional histories.

We know that different human-animal relationships were expressed at different times and in different spaces. Prior to the building of the mound, small animal bone fragments, unidentified animal bone and a possible aurochs scapula were deposited in association with charcoal scatters. These could be contemporary with a large wooden post, which may represent the earliest architectural feature at the site. The scapula and red deer antler fragment with its tip broken could be interpreted as tools used in the construction of the embanked mortuary structure and other pre-mound features. Was the selection of wild animal bones significant here and was their final deposition along the main axis important and meaningful?

We also know that the cylindrical animal bone beads were recovered associated with human remains in the embanked mortuary structure. At least with the Mortimer bead, he describes its close association with the mandible belonging to a young female. If we knew the species of the animal, could this tell us about specific human-animal species relationships, ones deemed appropriate to entangle with Early Neolithic expressions of human status and identity?

And finally, after the building works, the firing, the digging and erection of earth; the actions of a wider family network, a community. We witness a short-lived, momentary, ephemeral fire which was lit on top of a rock. A rock which was purposely placed in the primary fill of the southern quarry ditch, amongst the derived weathered animal bone

and a flint scraper; perhaps to evade a strong northerly wind. Here meat was cooked and consumed, not as the actions of a community but on a smaller, more intimate scale. Perhaps a herder passing by, moving between one known pasture and another?

7.4 Kilham long barrow site

7.4.1 Introduction

The Kilham long barrow (also known as Greenwell B234) is located seven miles west of Bridlington (TA056673), with views east-west across the Wolds; including down the Great Wold Valley towards the coast (Manby 1976, 112). The local field system during the Manby excavations in 1965-1969 had been in constant cultivation since their creation in the mid-nineteenth century. Most of the site had been protected by its location within a plantation of conifers which ran alongside the road, only the western end lay in the neighbouring field (Manby 1976, 113). Manby (1976, 113) notes the field is known locally as 'The Old Walk'.

7.4.2 Excavation, sampling and recovery

Greenwell excavated the site in 1868 after local workmen recovered human bone while uprooting trees from the mound (Greenwell 1877, 553). The mound already reduced by later cultivation measured 51.81m long, a maximum of 18.22m wide and a maximum height of 1.21m (Greenwell 1877, 553). Except for Food Vessels associated with Bronze Age burials (2200-1700 BC, Sheridan 2010), Greenwell notes no pottery and little evidence for the working of flint from the mound material. Charcoal occurred in considerable quantity, along with a few 'small ox' bones and two roe-deer antlers (Greenwell 1877, 556). Under the mound were recorded several holes, 0.6m deep and ranging from 0.45m – 0.66m in diameter (Greenwell 1877, 554). Kinnes and Longworth's (1985, 111) catalogue for the Greenwell archive held at the British Museum illustrate (Plate 234) and describe a single antler fragment from the mound of the Kilham long barrow; - 'a red deer beam with bez tine, beam cut and broken from transverse incisions'. The cattle bone and roe deer antler (if this is in fact not the red

deer antler fragment already noted) are no longer in the Greenwell archive. It is believed the animal bone was recovered by hand which would bias the recovery of larger elements, and those elements from larger animals (Payne 1972).

The second episode of partial excavation was undertaken by Terry Manby between 1965-1969 (Manby 1976). The majority of the mound area was excavated by Manby, however, the flanking ditches were sectioned only; this was done on six occasions (Manby 1976, 116). These sections were positioned on the eastern ditch terminals, unfortunately the western ditch terminals were not sectioned (perhaps due to an underestimation of the total length of the monument). Manby's report makes no mention to sieving, so again we should conclude the bone was recovered by hand, with the same sampling issues as above. The presence of fragmented bone in the archive, such as ID130 (which was recovered from Pit B and measures only 3mm) suggests a reasonable level of recovery. I found the spatial locations of the animal bone and material culture within the site archive are labelled on the original packaging to varying degrees of success. Most have site name, year of excavation, trench and date, some small finds include soil key indication and species/element descriptions; while others have no information at all. I excluded two specimens (ID 4 and 5) from the re-examination due to concerns over the integrity of their curation histories. Both specimens were re-labelled in 1996 (as indicated by the Museum small finds numbers 1996/1193) and have the description 'KLB 1958-60, 2 pieces of red deer antler'. Kilham long barrow was excavated between 1965-69, it was Willerby Wold which was excavated between 1958-60. The presence of the small mammal bone and antler fragments within the same archive discussed earlier in this chapter could indicate a similar entanglement of the two archives.

The material evidence including animal bone from the Manby archive is held at Sewerby Hall near Bridlington, this was made available to me in September 2021. The paper archive is held by Terry Manby but this was not made available.



Figure 7.17. The Manby archaeological archives held at Sewerby Hall, Bridlington (Willerby Wold, Kilham, Grindale 1 and Boynton 1).

7.4.3 A methodological approach to understanding the animal histories from the flanking ditches

I recorded a total of 350 fragments of animal bone, tooth and antler as being recovered from the flanking ditches at Kilham, representing 81.2% of the sites total NSP. Therefore, understanding when these animals became entangled with the monuments own history is important; this is particularly the case when the archaeological evidence suggests both ditches silted up over more than a millennia, with Early Neolithic, Bronze Age, Romano-British and Medieval pottery being found. Unfortunately, the animal remains were not recorded by Manby to a particular context within the ditches, and the original labelling on the packaging was highly variable. Some specimens have labels offering small finds number, date (d/m/y), trench code and a description of the soil code (pieces of ox rib in primary silting of ditch – ID 426); others however simply state the year, trench number and ‘Ditch Fill’ (in the example of ID 256).

In order to come to terms with the vertical histories of these 350 specimens, I applied a methodology which cross-checked small finds numbers (It was thought that small finds numbers would broadly follow date of recovery –lower numbers within the upper fill etc), date of recovery (d/m/y), Bramwell’s original report (Bramwell 1976, 157 – here Bramwell describes some of the specimens as being from a secondary or primary fill, this information was not apparent from the archive labelling and must have come from

another source – perhaps the excavator or field diaries), soil descriptions and section drawings. Table 7.16 shows the results for Trench S19.

Small finds no.	Date	Bramwell report	Original archive description
7	7/9/67	-	Trench 19. S, 7th September, 1967, fragment of animal tooth
14	-	-	T.19. S, 'ox tooth' small chalk rubble thrown soil of ditch filling
15	15/9/67	-	KLB67, T. S19, 15th Sept
16	-	Secondary Fill	K.L.B 1967, T.19S, Ox bone, from chalk rubble below brown silt of ditch filling
17	-	-	KLB 1967, T19S, Ox epiphysis, from small chalk rubble below dark brown silt of ditch filling
19	-	Secondary Fill	KLB 1967, T.19S, Tooth from brown soil and rubble layer of ditch
21	-	Secondary Fill	KLB. 1967, T.19aS. Top of small chalk rubble, below ditch silt
25	16/9/67	-	K67, S19, 16/9/67, Bone from loam soil of ditch
26	16/9/67	-	K67, S19b, 16/9/67, ox bone
27	16/9/67	Secondary Fill	K67, S19b, 16/9/67, Ox tooth in brown ditch silt
28	-	-	KLB 1967, T19b S, Ox bones, Brown ditch and silt
29	16/9/67	-	K67, 16/9/67, Ox bones in brown ditch silt, S19b
30	-	Secondary Fill	S19, Ox tooth worn down by rubbing, brown soil layer of ditch
31	16/9/67	-	K67, T19bS, 16 Sept, Ox tooth in brown ditch silt
32	-	Secondary Fill	S19 unidentified bone in brown ditch silt
33	-	-	K67, T19bS, Bones scattered in brown ditch soil
34	-	Primary Fill	K67, TS19b, Ox horncore
35	17/9/67	-	K67, S19b, 17/9/67, pieces of ox rib in primary silting of ditch

Table 7.16. Showing the vertical distribution of animal remains from Trench S19, Kilham long barrow.

7.4.4 Architectural histories

It is the aim of this section to introduce the building works in the form of different architectures as discovered during Manby's excavations (1976). In addition, I will draw upon more recent developments concerning research at Kilham (Kinnes 1992, Griffiths 2012, Schulting 2017).

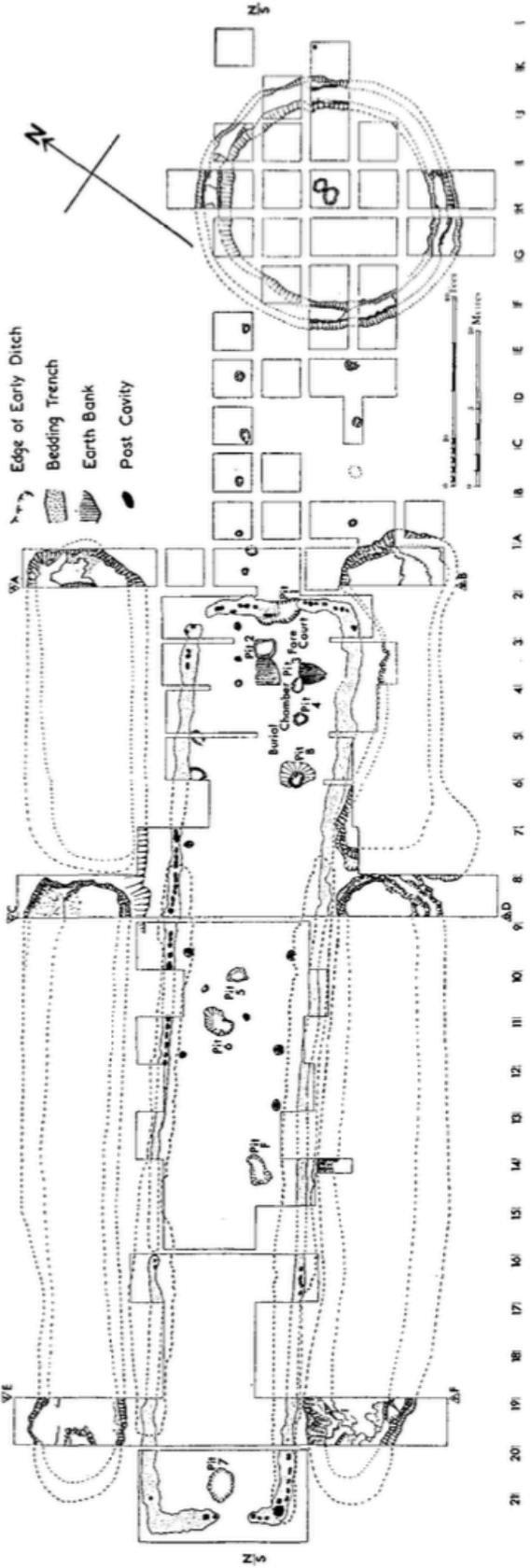


Figure 7.18. Kilham plan (Manby 1976, 116, Fig 3)

Mesolithic pits

Manby's excavation of the pre-barrow surface underlying the superstructure revealed a spread of Mesolithic flints over an area 21.5m long (Manby 1976, 117). This Late Mesolithic flint industry was found to be concentrated towards the eastern end of the Early Neolithic mortuary enclosure and spatially associated with three hearth sites (charcoal scatters) and six potential Mesolithic pits (Pits A-F). Manby notes the Mesolithic flint distribution was destroyed by the building of the embanked mortuary enclosure and flanking quarry ditches, and that the recorded distribution is partly the result of soil being removed from elsewhere to build the earthen banks (Manby 1976, 117). The pre-barrow soil is also suggested as the source for the Late Mesolithic flints recovered from the filling of the mortuary enclosure, the early ditches and flanking ditches (Manby 1976, 133). The Late Mesolithic flints are recorded by Manby as distinct in appearance (compared to the Early Neolithic flint industry), with a dense grey-white patination (Manby 1976, 134). The pre-barrow soil produced 8 microliths, 16 cores, 58 rejuvenation flakes, 89 flakes, 11 blades, 4 graters and 119 chippings (Manby 1976, Table 1). Pit A was rectangular and later cut by Pit 1, it contained a small quantity of charcoal and four flint flakes (Manby 1976, 117). Manby states some doubts here by later referring to the '...probable Mesolithic Pit A' (Manby 1976, 119). Pit B was oval, measuring 1.6m by 2.1m. It had been partially excavated by Greenwell, however the extent of this is unknown; no profile is provided (unlike other pit features). The plan suggests Greenwell's excavation was extensive (see Figure 7.17). Animal bone and Late Mesolithic flints were recorded from the lower chalk layer and charred hazelnut shells and flint flakes from a soil layer. The flint assemblage is recorded as 2 microliths, 4 cores, 14 rejuvenated flakes, 67 flakes, 3 blades and 58 chippings (Manby 1976, Table 1). Bramwell reports the animal bones as two large ox horncore fragments, the proximal end of a phalange, several calcined indeterminate fragments and a shaft fragment of a human tibia (Bramwell in Manby 1976, 157). The significance of this evidence for the continuation of human (and cattle) burial practices across the Late Mesolithic-Early Neolithic transition has been stressed (Newell *et al* 1979); however, after being re-examined by Rick Schulting the tibia fragment returned a radiocarbon date of 2130-1900 *cal* BC (95.4% probability) (Schulting 2017, 35). Schulting (2017, 36) argues that the 'putative association with the microliths in Pit B must now be seen as coincidental and a product of the backfilling of Greenwell's intervention. The human

tibia fragment being probably associated with the Food Vessel burials encountered within the superstructure (Greenwell 1877, 553).

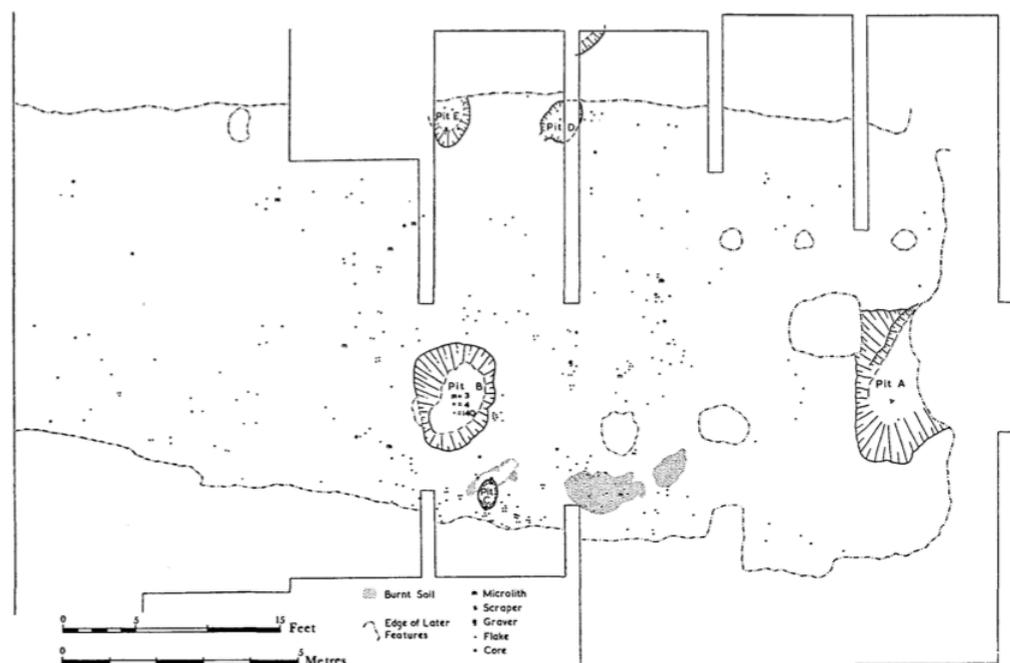


Figure 7.19. Plan showing the Late Mesolithic flint scatter, charcoal scatter, and possible Late Mesolithic pits. Note Pit F is located to the west of this plan (Manby 1976, Fig 4.)

One sherd of pottery is recorded as coming from the fill of Pit B. It is not mentioned in the text or within the pottery report but is included in Manby's plan of the embanked mortuary structure, forecourt, and mortuary enclosure (Manby 1976, Fig 7). Although just a point on a plan (and its context within the pit fill is unknown), the other sherds and their distribution can be confidently interpreted as being Grimston Ware (based on the pottery report) (Figure 7.20).

Pit C, D and E were oval, with rounded bottoms, and a depth ranging from 0.20m – 0.26m (Manby 1976, 117). All three contained some flint flakes, but there is no mention of animal remains (Manby 1976, 117). Pit C's location sealed under a charcoal scatter (hearth) tells us the digging of this feature was an earlier event. Pit F was located 25m west from Pit B, with sloping sides and a depth of 0.6m (Manby 1976, 117). Charcoal was recovered from the base of the pit, along with two flint flakes, indeterminate bone fragments and the right astragalus from a large ox (Bramwell in Manby 1976, 157).

There does appear to be some doubt in Manby's report as to the age of the Pit F feature. Under the subheading 'Ancient soil and Mesolithic site', Pit F is included (Manby 1976, 117), and in Appendix 3 where Bramwell's (1976, 157) animal bone report includes Pit F under 'Mesolithic Features'. In contrast, Manby's (1976, 144-5) discussion excludes the site from 'Mesolithic Sites' (only referring to Pits A-E) failing to mention the feature in any capacity. It is unknown if this was intentional or simply an error on the authors behalf, but the consequence of this omission leads Schulting (2017, 35) to state 'Pit B is one of a group of five pits (A-E) underlying the barrow that were attributed by Manby to the Mesolithic'.

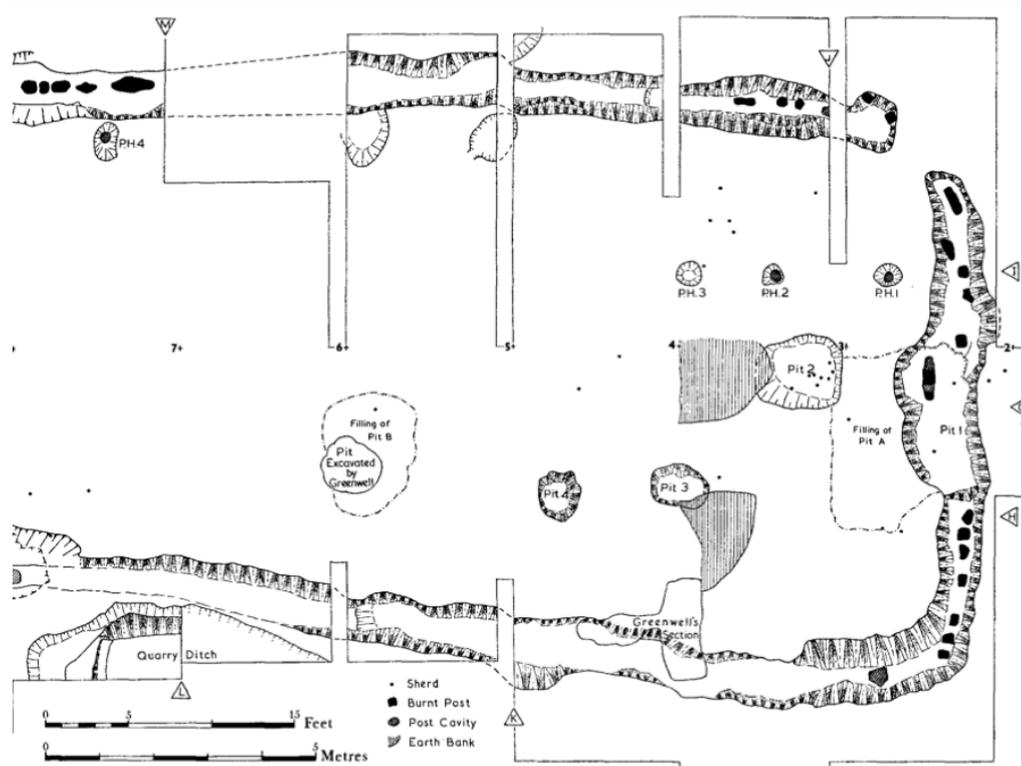


Figure 7.20. Plan of the eastern end of the mortuary structure, mortuary enclosure, pit features and pottery distribution (Manby 1976, Figure 7).

Gaps in building works

Gaps are important. Appendix 1 describes the sites immediate environment prior to the building works associated with the long barrow (Evans and Dimbleby in Manby 1976, 150). Drawing on both the buried soil profile and pollen analysis, Evans and Dimbleby (1976, 150) argue the site underwent two cultivation events during the Early Neolithic. The earliest phase of cultivation was in an open landscape, which was followed by a

period of abandonment and woodland regeneration. The second phase of cultivation took place in a large clearing of secondary forest (Evans and Dimbleby in Manby 1976, 150), before once again being abandoned, and left to bracken and other 'weedy vegetation' (Evans and Dimbleby in Manby 1976, 156).

Original Ground Surface

Bramwell's (1976, 157) animal bone report records the following animal remains from the Neolithic old surface, cattle metatarsal fragments, a pig's right humerus shaft fragment and a sheep/goat long bone fragment.

Early ditches

Beneath the western end of the superstructure, two parallel ditches were revealed, measuring 7m apart and a length ranging from 36.5m (northern ditch) to 42.5m (southern ditch) (Manby 1976, 118) (Kilham Ia). Their depths were recorded as between 1.1m-1.3m and widths of 1m-2.1m; the fluctuation on dimensions suggested to Manby they may have been built as a series of separate pits (Manby 1976, 118), mirroring practices seen at other long barrow sites and causewayed enclosures. Finds included patinated flints (described as Late Mesolithic) which included 2 cores, 3 rejuvenation flakes, 1 flake and 2 blades (Manby 1976, Table 1). and fragments of animal bone (Manby 1976, 118). Bramwell's report describes several ox horncore fragments from Trench N9 (in Manby 1976, 157). No pottery or suspected Early Neolithic flint work was recorded from this feature. It would also appear after consulting the site plan, that both early ditches do not cut any earlier/contemporary features: such as Pits 5, 6, 7 and F (Manby 1976, Fig. 5 and 6). Figure 7.21 shows a shallow pit (labelled burials) measuring 0.07m deep and adjoining the western terminal of the northern early ditch (Manby 1976, 125). The depth of the pit has been reduced by erosion which removed the topsoil and cut into the upper surface of the chalk (Manby 1976, 125). On the base (dish-shaped) of this feature were the fragmentary remains of two human skeletons, appearing to have been laid on top of each other (Manby 1976, 125). Dawes (in Manby 1976, 156) argues the upper burial (Burial 1) was probably female, aged between 25-35 years old. The lower burial (Burial 2) was a male aged between 12-14 years old. The bones were in very poor condition being partly damaged by cultivation, with no measurements recorded (Dawes in Manby 1976, 157). No material culture is associated with these burials. It is unknown to the chronological relationship between these burials

and the early ditches, their location at the western terminal of the northern ditch could indicate either they pre-date the building of the early ditches and was therefore respected by the builders (this would answer why the southern early ditch is longer than its northern counterpart); or, these burials are later in date than the early ditches (perhaps contemporary with the mortuary enclosure, which they are located within), and their location was a backwards 'nod' to the earlier building works? Figure 7.21 looks to me to show the northern early ditch cutting into the north-eastern corner of the burial feature, this could suggest the burials were in fact earlier.

The two ditches are recorded by Manby (1976, 117) as silting up to half their depth before becoming wrapped into the building works of the mortuary enclosure. The time required for the identified silting is postulated by Manby (1976, 146) at more than a century (Kilham Ib). Manby discounts occupational activities being associated with these early ditches, due to a lack of material culture (Manby 1976, 145). Instead, he likens them to the flanking ditches of other long barrow sites (such as the northern quarry ditch at Raisthorpe). Manby (1976, 145) suggests a possible long mound could have been built from the spoil of the ditches and evidence of which being removed by the Greenwell's excavations.

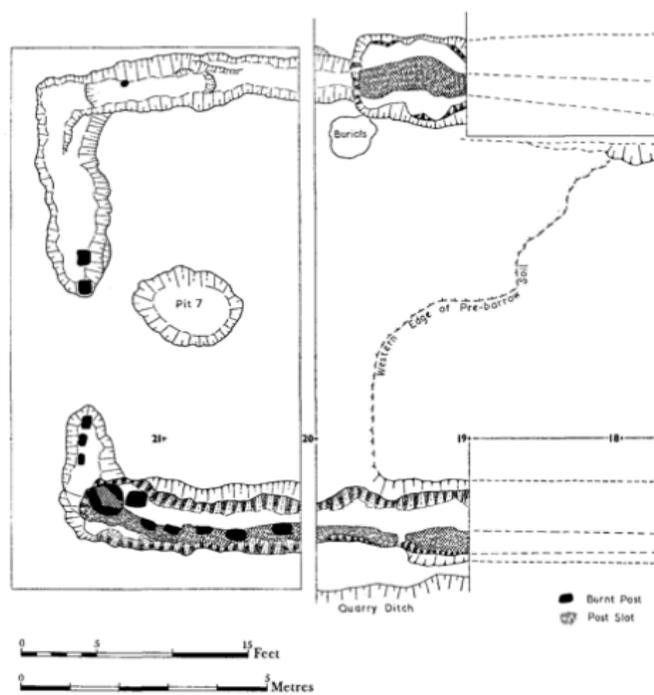


Figure 7.21. Plan of the western end of the early ditches, mortuary enclosure, Pit 7 and burials (Manby 1976, Fig 5).

Seven pits, a mortuary house, and an embanked mortuary structure (Kilham IIa, b)

Seven pits are dated by Manby to a second phase of building works, one which occurred (perhaps a century later) after the earlier ditches had silted up to half their depth (Manby 1976, 144). Pit 1 cut into the fill of Pit A and was later incorporated into the eastern end of the mortuary enclosure (Manby 1976, 119). It was kidney-shaped with vertical sides and a flat bottom; measuring 0.45m deeper than the mortuary enclosure which adjoined, and cut into the filling of Pit 1 (Manby 1976, 121). The only material culture recovered was a quartzite cobble. Pit 2 is described as a hollow, filled with brown soil and containing scattered charcoal and ten sherds of Grimston Ware (Manby 1976, 139). It was overlain by the eastern end of the northern bank of the embanked mortuary structure (Figure 7.20). Pit 3 was kidney-shaped with vertical sides and a flat bottom, its fill contained charcoal, Late Mesolithic flint (1 rejuvenation flakes, 7 flakes, 1 blade and 1 chipping) and small fragments of bone (Manby 1976, 123). It was overlain by the southern bank of the mortuary enclosure (Figure 7.20). Pit 4 (Greenwell's (1877, 554) second hole – 62 ft. east by north) was excavated by Greenwell and was located 1.2m west of Pit 3 (Manby 1976, 123). Greenwell (1877, 554) describes charcoal within two of the 'holes' identified but does not specify which ones. Its location of the plan suggests a similar spatial relationship as Pit 3 to the southern bank of the mortuary structure. An additional pit excavated by Greenwell which possibly cut into the fill of Pit B could also be associated with this phase of building works; alternatively, Manby (1976, 123) is hesitant and suggests it could have been '...a trial hole of arbitrary extent.' Manby (1976, 148) does not discount Pits 3, 4 and Greenwell's possible pit in the fill of Pit B could have held posts to form a wooden mortuary structure within the two freestanding banks, however he does re-state that the fill of Pit 3 is not convincing as a posthole. The total length of this embanked mortuary structure was not possible to determine during Manby's excavations due to Greenwell's previous digging (Manby 1976, 148). Greenwell's descriptions suggest a total length of 13.7m, with the western end terminating in line with the eastern end of the early ditches. Within this feature, at its western end, Greenwell (1877, 555) describes the recovery of three articulated human bodies, two human cremations and a Grimston Ware bowl.

Pits 5 and 6 are located between the early ditches and further west than the earthen mortuary structure, both had been partially investigated by Greenwell (Manby 1976, 125). Pit 5 had sloping sides and a rounded bottom. Pit 6 had vertical sides and a flat

bottom, with a depth of 0.91m. Two bone fragments were recovered from the top fill of Pit 6 (Manby 1976, 125). Manby interprets the spatial associations of Pits 5 and 6 belonging to building works belonging to a square feature, defined by four post holes (P.H 5, 6, 9, 10). The four posts of this structure (mortuary house?) were dug into the silted fill of the earlier ditches and are believed to have been still standing when the mound was constructed (Manby 1976, 147).

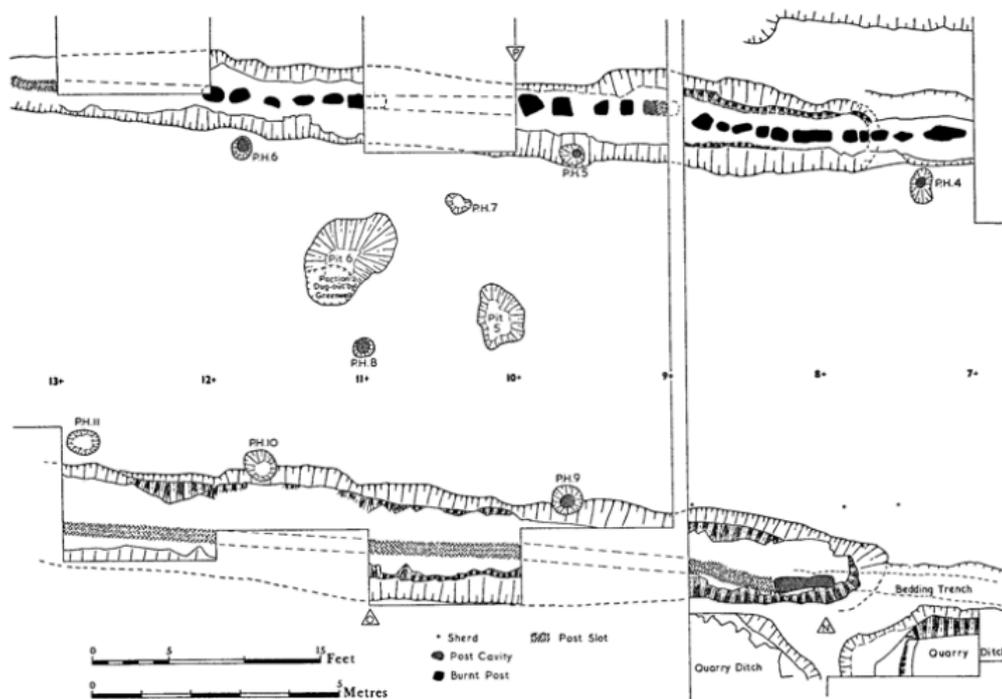


Figure 7.22. Plan at the eastern end of the early ditches and possible mortuary house (Manby 1976, Fig.6).

The final pit, Pit 7 is the most westerly and was recorded as heavily eroded, leaving only the base of an oval pit (0.12m deep) (Manby 1976, 125). Charcoal, a flint flake and the shell of an oyster were recovered (Manby 1976, 125).

I think it is important to stress that only Pit 2 produced any Early Neolithic pottery sherds and Pit 7 was the only pit to produce a flint flake which was interpreted as Early Neolithic due to only slight patination (Manby 1976, 137). It is also not possible to interpret with confidence if these pits were contemporary with the embanked mortuary structure and mortuary house or for that matter the mortuary enclosure. It is feasible these pits were earlier features associated with the earlier ditches and later incorporated

into these architectures (their presence still visible on the landscape as depressions or through the types of vegetation growth). In a similar manner we will see the earlier ditches were incorporated into the mortuary enclosure design, it would appear significant for these builders to reference earlier building works.

Avenue

Two lines of post holes were identified by Manby (1976, 126) at the eastern end of the long barrow site, with spacings ranging from 2.44m – 3.35m and continuing for 18m; cultivation removing any further eastward progression of the avenue. No material culture or charcoal was recovered from these post holes. A single pit located between postholes of the northern line (in sections N1 and NA) was described as having sloping sides and a rounded bottom, with a depth of 0.25m (Manby 1976, 126). A single patinated flake was recorded, suggesting to Manby (1976, 126) a possible Late Mesolithic date. Manby (1976, 144) places the avenue within his Kilham phase 2b, which predates the construction of the mortuary enclosure and broadly contemporary with the banked mortuary structure and mortuary house. This would appear to be supported by the continuation of the avenue on the northern line (Post holes 1, 2 and 3) beyond and into the area define by the mortuary enclosure (Figure 7.23). The southern line of the avenue being removed by the building works of the mortuary enclosure and southern quarry ditch. In the area of the avenue was recovered Late Mesolithic flints (6 cores, 6 rejuvenation flakes, 28 flakes, 3 blades, 4 chippings and a single graver) (Manby 1976, Table 1), Early Neolithic flints (4 cores, 82 flakes, 7 blades, 5 scrapers and 1 knife) (Manby 1976, Table 2) and several small sherds of Grimston Ware pottery (Manby 1976, 139).

It would appear from Figure 7.24 that Manby considered the avenue still standing when the mortuary enclosure, first two flanking ditches and the western portion of the mound was built.

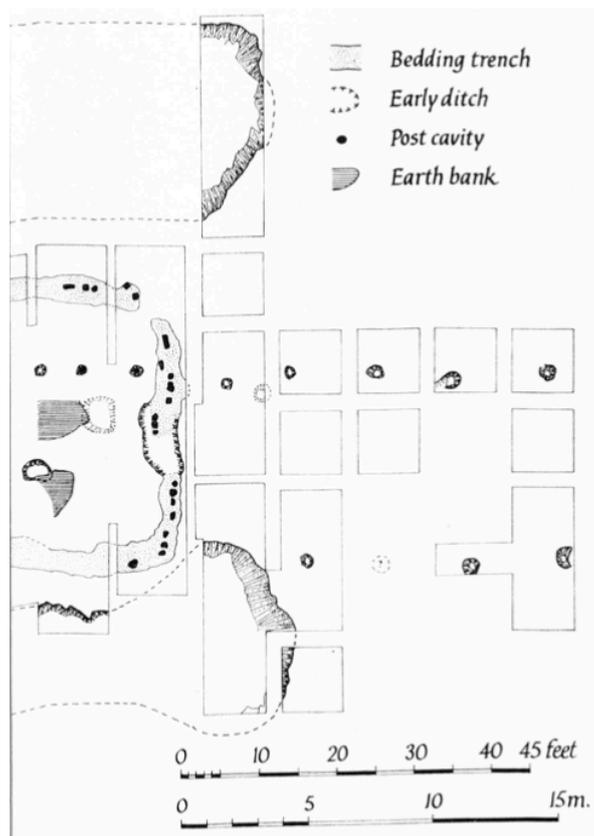


Figure 7.23. Plan of the avenue at the eastern end of the Kilham long barrow (Manby 1971, Fig.1)

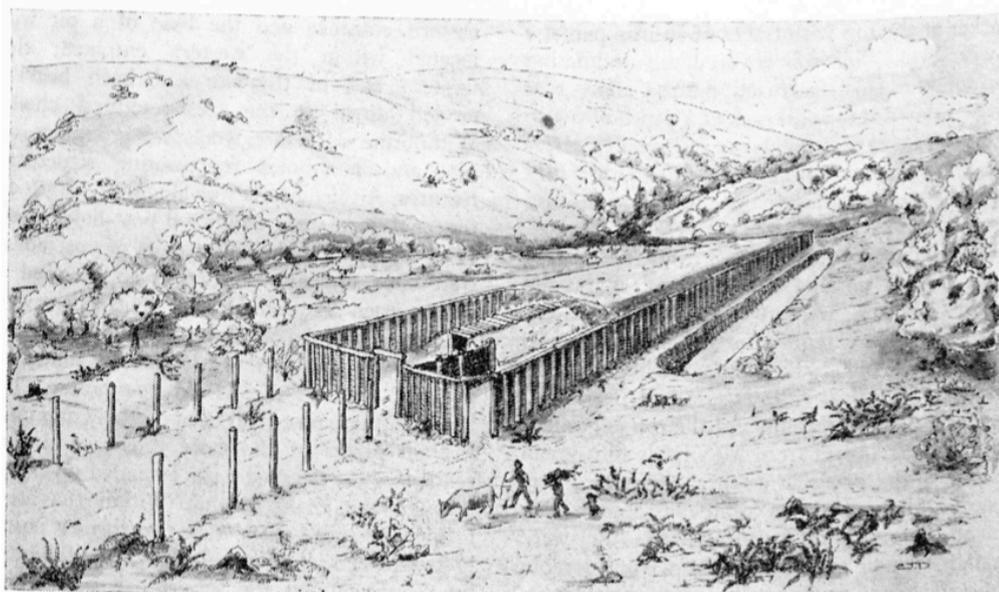


Figure 7.24. Artist interpretation of Kilham long barrow, Phase IIc (Manby 1971, Fig.2).

Mortuary enclosure

The mortuary enclosure enclosed an area 58m long, 8.55m wide at the western end and 10.7m wide at the east (Phase IIc) (Manby 1976, 119). The western end terminated at the most westerly point of the southern earlier ditch (see Figure 7.21), suggesting this was still a visible feature on the landscape. The eastern end of the enclosure extended a further 17.1m beyond the earlier ditches, perhaps to incorporate the embanked mortuary structure (if earlier); this could answer why there is a marked kink in the final 15.2m on the southern side (Manby 1976, 119). The eastern end of the mortuary enclosure cuts across the avenue (Kinnes 1992, 42). The timber posts in sections of the mortuary enclosure were identified, the firing of these posts had left the discolouring of stone and post cavities (Manby 1976, 121). Griffiths (2012, 173) offers the date 3820-3360 *cal* BC (89.9% probability) (BM-293) for unspiciated charcoal (of uncertain age) from a horizontal timber, which formed the packing material within the bedding trench of the mortuary enclosure. Three entrances are suggested by Manby (1976, 119), the first in the north-eastern corner (0.4m wide) where a block of natural chalk had been left; and the second and third centrally at the western and eastern ends (2m wide). Finds from the bedding trench of the mortuary enclosure included Late Mesolithic flints (10 cores, 13 rejuvenation flakes, 19 flakes, 10 chippings, 1 micro burin, 1 microlith and 1 graver) (Manby 1976, Table 1), two Grimston Ware sherds (Manby 1976, 139) and a single, very weathered left cattle astragalus (Bramwell in Manby 1976, 157).

Mound

Manby (1976, 125) describes the mound as consisting of heavy chalk rubble derived from the quarry ditches and resting directly on the pre-barrow soil. The eastern end of the mound survived as undisturbed material with the western end removed by cultivation (Manby 1976, 125). The mound measured 55m in length, 9.75m at the western end and 11m in the east (Manby 1976, 125). The northern extent of the mound was straight, with the southern extent following the kink identified in the mortuary enclosure. Manby (1976, Fig.2) records Greenwell's earlier excavation was easily traced within the mound. Greenwell's infilling consisting of brown soil, chalk rubble, tile, bone fragments and a clay pipe (Manby 1976, 115).

Quarry ditches

The flanking quarry ditches were sectioned by Manby on six occasions (see Figure 7.18). Both the northern and southern quarry ditches consisted of two segments, the dividing rock wall aligned on the eastern extent of the early ditches (Manby 1976, 126); I would argue suggesting this earlier demarcation of space was still important. Manby argues the two segments represent two phases of ditch digging activity (Manby 1976, 126). It would appear from Figure 7.17 that the eastern terminals from all four segments were sectioned (S8, N8, S19, N19), however the western ends were not; with sections S19 and N19 positioned slightly short of the western terminal. The earlier western ditches were 40m in length, with a depth ranging from 1.2m – 2.1m (Figure 7.24). Within the upper brown soil fill (N19, 1m+ above the floor) was recovered Medieval and Romano-British pottery and a bronze coin (Manby 1976, 128). The secondary fill consisting of chalk gravel and brown soil containing the bones of large ox, small ox, sheep/goat, red deer and a fragment of limpet shell (Bramwell in Manby 1976, 158). The primary fill consisted of angular chalk with occasional patches of reddish brown soil, contained ox horncore fragments and red deer antler fragments (Bramwell in Manby 1976, 157). Within the primary fill (S19), Manby notes the presence of a charcoal and burnt stone layer (about 0.3m above the floor).

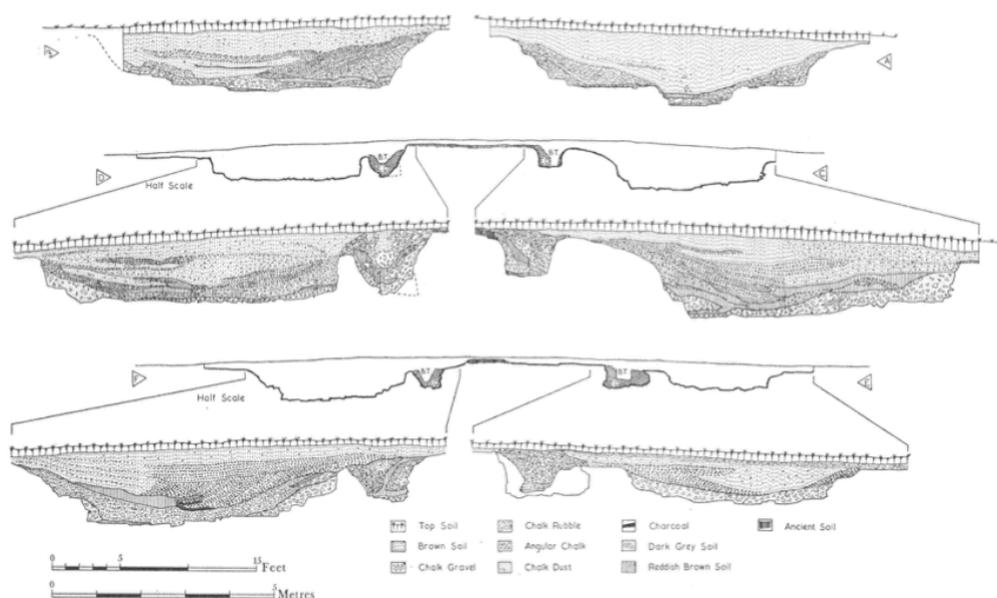


Figure 7.25. Sections of the quarry ditches, earlier ditches and mound (Manby 1976, Fig.11).

The eastern segments are recorded as 21.5m long with a depth of 1.5m (Manby 1976, 128). The primary fill was angular chalk rubble and resting on the ditch floor (S1) was a red deer antler rake (Manby 1976, 129). Directly on top of the primary fill (N1) was a layer of reddish brown soil which contained charcoal, Grimston ware sherds, flint flakes and burnt stones (Manby 1976, 129). Later in the sequence in section N1 Corded Beaker sherds were recovered 1m and Romano-British sherds 1.3m above the ditch floor (Manby 1976, 129). In section S1, the secondary fill consisted of chalk gravel and brown soil (Manby 1976, 129). Within the secondary fill (less than 1m from the floor) is a thin layer of charcoal, burnt stones and animal bones. Bramwell (in Manby 1976, 158) reports the recovery within the secondary fill of large ox, small ox, sheep/goat and hare.

Manby's (1976, 149) interpretation suggests the western segments of the quarry ditches were excavated first to create a mound which ran the length of the earlier ditches, leaving the architectural features to the east still open and available for deposits. After the primary fill had formed, the mortuary enclosure was burnt down (this represented by the charcoal layer in S19) and the mound extended eastwards (covering the embanked mortuary structure); the chalk rubble from the eastern ditch segments used for its construction. After the primary fill had formed in the eastern ditch segments, occupational debris (Grimston Ware pottery, flints and animal bones) was deposited in section N1; this being a similar practice he argued for Willerby Wold long barrow (Manby 1976, 149).

7.4.5 Results

The faunal assemblage comprises 434 fragments of bone, tooth and antler (NSP). I excluded three specimens (ID 3,4 and 236) from my analysis due to concerns over provenance (ID 3,4) or being an archaeological reproduction (ID 236). The working assemblage for this report is a fragment count of 431 (NSP).

Preservation and taphonomy

I characterised the bone assemblage as poorly preserved with no complete elements, and a high percentage with significant weathering and root damage (56.14%). The root damage being restricted to the upper fills of the flanking quarry ditches and Greenwell's

infilling. I was able to identify 22.73% to taxon, this is significantly better than the Raisthorpe long barrow (11.56%), but less than Willerby Wold long barrow (65.85%) and the Rudston 62 settlement scatter (29.53%). I identified 26 loose teeth in the assemblage, with no mandible fragments containing dentition; further demonstrating the high degree of fragmentation.

I recorded 60.55% of the assemblage as 'indeterminate', this compares with local sites such as Raisthorpe long barrow (47.97%), Rudston 62 (50.25%), and other long barrows in southern England – Woodford G2 (69%) (Banfield 2018) and Ascot-under-Wychwood (68.42%) (Mulville and Grigson 2007).

This assemblage included 28 specimens with evidence of burning (6.49%), with examples described as charred, burnt, and calcined. Most of the burnt elements was recovered from Pit B (13 NSP), but other architectural features included the original ground surface (4 NSP), mortuary enclosure (4 NSP), mound (2 NSP) and flanking ditches (5 NSP).

Species present

Table 7.17 presents the assemblage. Domesticated animals are more prevalent with cattle dominating the assemblage, accounting for 72.44% (NSP) of those elements I identified to species and 16.47% of the entire assemblage. Those elements I identified as 'Large Mammal' are most probably the fragmentary remains of cattle long bones, this is based on the contextual relationship within the flanking ditches and the lack of other large mammals identified in the assemblage. I identified sixteen bone and tooth specimens as sheep/goat, a single bone as pig and a single tooth as domesticated dog. Red Deer was the most prevalent wild animal, with a NSP count of 7, this count which includes antler was all recovered from the flanking ditches. I identified a single hare specimen from the northern ditch secondary fill and an oyster shell from Pit 7. Bramwell (in Manby 1976, 157) records a limpet shell fragment which I did not encounter during my re-examination. In total (including antler) wild animals represent only 1.62% of the entire faunal assemblage. I could only identify the remaining assemblage to broader categories, 15.31% as 'Large Mammal', 0.69% as 'Medium Mammal' and 0.69% as 'Small Mammal'.

Context	Cattle	Sheep	Pig	Dog	Red Deer	Hare	Oyster	Large Mammal	Medium Mammal	Small Mammal	Indeterminate	Total
Pit B	2										16	18
Pit F	1											1
Pit 3											10	10
Pit 7							1					1
OGS	1	1	1								2	5
Early Ditch	2											2
Mortuary Enclosure	1										4	5
Mound								1			8	9
Ditches	61	13		1	7	1		58	3	2	204	350
Greenwell infill	3	2								1	10	16
Ring Ditch											1	1
No Context								7			6	13
Total	71	16	1	1	7	1	1	66	3	3	261	431

Table 7.17. Taxonomic representation by context (NSP).

ID	Taxon	Element	Bd	HT	BT	GLI	Bp	Dm	SD	GL
74	Sheep	Humerus		18.92	29.95				14.07	
171	Cattle	2nd Phalange	23.85				31		23.32	43.08
217	Cattle	Astragalus	50.98			75.7		47.4		
219	Cattle	Astragalus	45.63			72.15		40.96		
312	Cattle	Humerus		43.41	68.64				35.65	

Table 7.18. Measurements from Kilham long barrow. Measurements follow definitions of von den Driesch (1976) except where stated in the text or figure captions.

Five specimens provided biometric measurements and these are presented in Table 7.18. The epiphysis of the distal humerus fuses early, which improves its survival in the archaeological record (Wright 2016, 27). Figure 7.26 presents the measurements for ID

312 in comparison with *Bos* remains from, Star Carr, other Yorkshire Neolithic sites (Rudston 62 settlement scatter and Rudston Wold pits) and the Hambledon Hill causewayed enclosure (Legge 2008). Figure 7.26 compares the trochlea breadth measurements against the trochlea height, which Wright (2016, 27) suggests is useful for comparing wild/domestic status and sex variation. The Kilham specimen is on the smaller size and can be confidently assigned as a domesticated female.

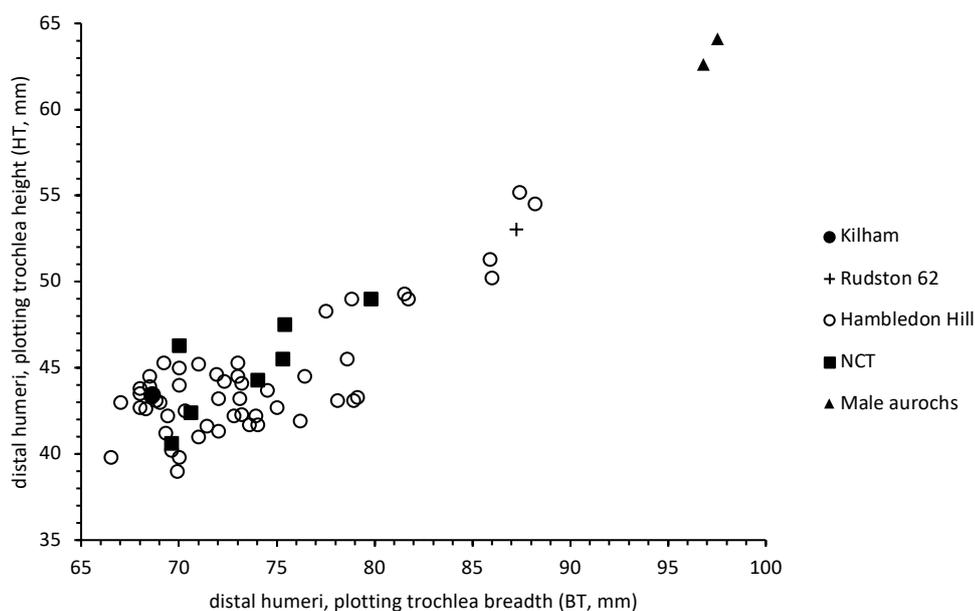


Figure 7.26. Dimension of Kilham long barrow cattle distal humeri, plotting trochlea breadth (BT) against trochlea height (HT). BT is defined by von den Driesch (1976, fig. 32), HT by Legge and Rowley-Conwy (1988, 124). Rudston 62 measurement from chapter 5. Hambledon Hill measurements from Legge (2008, table 8.27). North Carnaby Temple measurements from Rowley-Conwy and Owen (2011, Appendix 2). Aurochs from Star Carr (Legge and Rowley-Conwy 1988, table 8C).

The second phalange can be useful when assessing an animal's age, due to its early fusion. Grigson (1966, Fig 12) has argued that the proximal breadth of the second phalange is a good indicator for distinguishing domesticated and wild cattle. Wright (2016, 30) however has stressed caution, arguing differences in size could indicate forelimb and hindlimb groups as opposed to different sized animals. With caution then, ID 171 has a proximal breadth measurement of 31mm, which would group within Grigson's domesticated cattle (1966, Fig. 12).

The astragalus survives well in archaeological assemblages due to its compact shape. Figure 7.27 presents the measurements for the two Kilham specimens, in comparison with Mesolithic aurochs from Star Carr and other Early Neolithic sites in southern England. The astragalus is the least sexually dimorphic of the limb bones and is useful for distinguishing between wild and domesticated animals (Albarella and Payne 2005). This being said, there does appear to be distinct groupings of male and female aurochs within the Star Carr dataset. ID 219 groups towards the bottom of the size range and can confidently be assigned as a domesticated animal. ID 217 is more difficult to assign with any certainty; it could either be an example of a small female aurochs or a large, domesticated male. Determining the wild/domesticated status of this animal would be significant due to its recovery from Pit F. However, based on the current information, it is difficult for me to determine with full confidence.

MNI

The minimum number of individuals per context is presented in Table 7.19, and at site level in Table 7.20. The numbers are low and of limited value. Cattle are the most prominent per context with an MNI of 8, we must be cautious of sample aggregation, where the bones of few animals are moved between different architectural features (cattle bones were recovered from the pre-barrow pits, early ditch, mortuary enclosure, the Greenwell infill and the flanking ditches). Sheep/goat was only recovered from the flanking ditches with a MNI of 2. There was a MNI of 1 for pig, dog, red deer, oyster and hare at a context level. As these species were restricted to a single context. These numbers mirror their site level MNI. Cattle across the site have a MNI of 2.

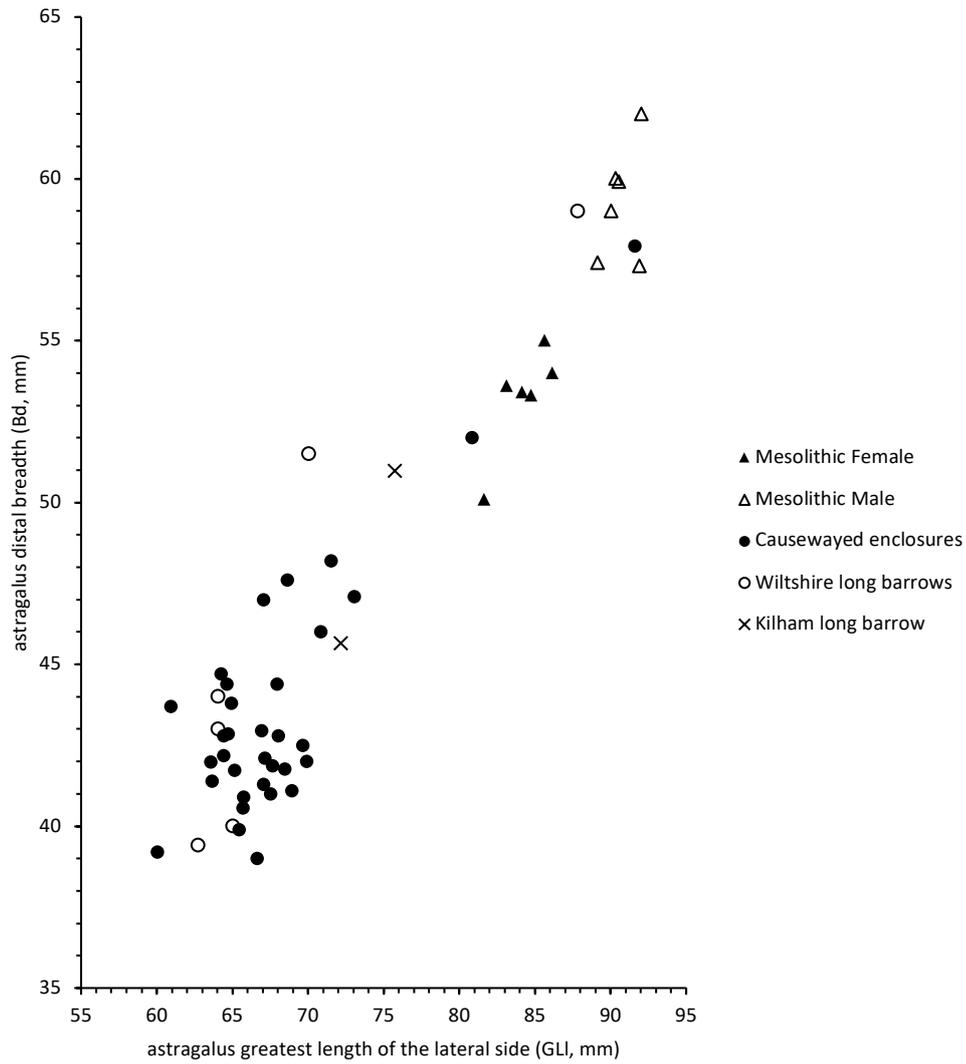


Figure 7.27. Dimensions of Kilham long barrow cattle astragali, plotting greatest length of the lateral side (GLI) against distal breadth (Bd), as defined by von den Driesch (1976). Causewayed enclosures include Hambleton Hill (Legge 2008, table 8.27), Windmill Hill (Grigson 1999) and Etton (Armour-Chelu unpublished). Wiltshire long barrows include Neveravon Blake (Banfield 2018), Horslip (Banfield 2018) and Woodford G2 (Shepherd 2021). Mesolithic Aurochs from Star Carr (Legge and Rowley-Conwy 1988).

Context	Cattle	Dog	Sheep	Pig	Red Deer	Oyster	Hare	Total
Pit B	1	0	0	0	0	0	0	1
Pit F	1	0	0	0	0	0	0	1
Pit 3	0	0	0	0	0	0	0	0
Pit 7	0	0	0	0	0	1	0	1
OGS	1	0	0	1	0	0	0	2
Early Ditch	1	0	0	0	0	0	0	1
Mortuary Enclosure	1	0	0	0	0	0	0	1
Mound	0	0	0	0	0	0	0	0
Ditches	2	1	1	0	1	0	1	7
Greenwell infill	1	0	1	0	0	0	0	1
Total	8	1	2	1	1	1	1	15

Table 7.19. MNI per context.

Context	Cattle	Dog	Sheep	Pig	Red Deer	Oyster	Hare	Total
Site Level	2	1	2	1	1	1	1	9

Table 7.20. MNI site level.

Body part representation

Although the entirety of the mound area was excavated, the previous digging by Greenwell and only the partial excavation of the flanking ditches may present some sampling biases. The poor preservation also impeded my identification to taxon. Cattle are represented by all the zones of the skeleton; this is in striking contrast to the other species identified. Sheep/goat are represented by teeth (which are robust and survive well) and limb bones. Pig was present as a single humerus fragment, Dog as a single tooth and Hare as a femur fragment. Red Deer was represented by antler, teeth and a calcaneum.

The cattle body part representation is distinct. If we consider these remains in temporal terms, moving through time from the earlier pits-early ditches-mortuary enclosure-the primary fill of the flanking ditches and the construction of the superstructure (everything

prior to the secondary fill of the ditches), we find a small but consistent pattern of deposition; one which reveals greater similarities than differences with the other animals. Within the pre-barrow pits were cattle horncore fragments, an astragalus and fragment of a second phalange. Recovered from the original ground surface was a second cattle phalange fragment. The early ditches had fragments of cattle horncore, the mortuary enclosure had an astragalus, and finally the primary fill of the flanking ditches had horncore, a single tooth and two rib fragments. Prior to the secondary fill of the flanking quarry ditches, cattle were only represented by bones from the head and hoof. This human-cattle relationship (one which could have persisted across a significant amount of time) was only disrupted and re-worked after the burning of the mortuary enclosure and the end of any further building works.

Mortality profile

Table 7.22 details seven specimens representing epiphyseal fusion evidence for cattle and sheep and Table 7.23 details the wear for eight loose teeth. The two sheep bone specimens are both early fusing, the proximal metatarsal and distal humerus suggest a minimum of 10 months of age at death. This corresponds well with the two loose sheep teeth (which were also recovered from the secondary fill of the flanking quarry ditches), which suggest an age at death between 12-24 months old.

Element	Cattle	Pig	Sheep	Dog	Red Deer	Hare
Head						
Cranium	16					
Mandible	3					
Tooth	11		10	1	2	
Antler					6	
Spine						
Atlas						
Axis						
Cervical vertebra						
Thoracic vertebra	2					
Lumbar vertebra						
Vertebra						
Sacrum						
Clavicle						
Scapula	4					
Sternum						
Rib	2					
Pelvis						
Forelimb						
Humerus	2	1	2			
Radius						
Ulna						
Metacarpal	1					
Hindlimb						
Femur	2					1
Patella						
Tibia	2		2			
Fibula						
Metatarsal	2		1			
Feet						
Carpals						
Calcaneum	1				1	
Astragalus	3					
Tarsal						
Phalanx	2					

Table 7.21. Body part representation per taxon by element (NSP).

NSP	Taxon	Element	Proximal	Distal	Age (months)
Early fusing					
2	Cattle	Metatarsal	F		<0
1	Sheep	Metatarsal	F		<0
1	Sheep	Humerus		F	<10
1	Cattle	Humerus		F	<12-18
1	Cattle	2nd Phalange	F		<18
Middle fusing					
1	Cattle	Tibia		u/f	>24-30
Late fusing					
1	Cattle	Femur		u/f	>42-48

Table 7.22. Age-at-death profiles as indicated by degree of epiphyseal fusion (After Silver 1969, O’Conner 2003). Including Greenwell’s infill.

ID	Taxon	Mandibular/Loose	Side	M1/2	Age
58	Cattle	Loose	L	g	>8-30 months
62	Cattle	Loose	L	h	Old adult
73	Cattle	Loose	R	h	Old adult
110	Sheep	Loose	L	f	12-24 months
111	Sheep	Loose	L	f	12-24 months
141	Cattle	Loose	L	b	18-30 months
183	Cattle	Loose	R	b	18-30 months
280	Cattle	Loose	R	c	>18-30 months

Table 7.23. Age-at-death profiles as indicated by tooth wear. Including Greenwell’s infill.

The cattle remains have a greater age range than those of the sheep. The two fused proximal metatarsals were recovered from Greenwell’s infill and so lack contextual integrity. The fused proximal second phalange was recovered from the original ground surface and suggests an age greater than 18 months. The loose tooth (ID 183) has a wear indicating an age of between 18-30 months and was probably recovered from the primary fill of the northern quarry ditch. The age at death of these two specimens and their close spatial proximity could suggest they derived from a single animal, the tooth making its way into the ditch through sample aggregation. A fused distal humerus from the secondary ditch fill suggests an age greater than 12-18 months, but an unfused distal tibia and unfused distal femur suggest ages less than 24-30 months and 42-48 months

respectively. Also from the secondary ditch fill were two loose cattle teeth with estimated ages at death of 18-30 months (ID 141) and old adult (ID 73). This profile suggests the cattle bones from the secondary fill of the ditches could represent an animal aged between 18-24 months old, along with a single old adult tooth. The presence of the teeth from older cattle in the upper ditch fills could suggest this specimen (ID 73) had moved into the secondary fill through post-deposition processes. Three loose cattle teeth were recovered from the upper fills of the flanking ditches and their wear suggest greater age variability – with ages ranging from less than 8-30 months to old adult.

Sex

The red deer antler come from male animals. ID 312 is a cattle distal humerus and as already discussed probably represents a female domesticated animal. The two cattle astragali are more difficult to interpret. ID 219 is probably a domesticated female and ID 217 could either be a domesticated male or female aurochs.

Butchery

Table 7.24 presents the evidence for butchery recorded at Kilham long barrow. Except for ID 245 which was recovered from Greenwell's infill, the remaining specimens are from the flanking quarry ditches. The location of chop and cut marks on limb bones indicates the processing of bones for defleshing and marrow removal. The poor preservation of the assemblage may mask further evidence.

Pathologies

I recorded no pathologies.

Worked bone

ID 61 is a cattle upper M3 with evidence for being heavily worn down with the roots broken off. Bramwell suggests it could have been used as a rubber (in Manby 1976, 143). Three specimens (ID 237, 238, 239) of red deer antler had evidence for the tines being worn down and smoothed. All three were recovered from the primary fill of the south flanking quarry ditch (sections S1 and S8). ID 237 represents two tines and part of the beam of a large antler, Bramwell describes it as a rake (in Manby 1976, 143). ID 239 is the antler and attached skull fragment of a slaughtered red deer. There are two

deep V-shaped cut marks separating the brow and bez tines, along with linear cuts along the beam.

ID	Architecture	Taxon	Element	Side	Proximal	Distal	Butchery	Location
12	North Ditch	Cattle	Tibia	Right		/	Chop	Shaft
55	South Ditch	Sheep	Tibia	Left			Cut	vertical down shaft
86	South Ditch	Cattle	Femur	Right			Chop	Shaft
89	South Ditch	Medium Mammal	Indeterminate				Chop	
245	Greenwell's infill	Cattle	Metatarsal	Left			Chop	Chop shaft
256	South Ditch	Cattle	Metacarpal	Indeterminate			Chop	Dry fracture across shaft
263	South Ditch	Indeterminate	Indeterminate long bone fragment	Indeterminate			Cut	Cut along length of shaft fragment
312	North Ditch	Cattle	Humerus	Left		/	Chop	Chop across shaft

Table 7.24. Butchery evidence.

7.4.6 Context

This section will lead with a feature focused examination of the relationships between the animal remains and different architectural foci; this will reveal both spatial and temporal patterns of human-animal activity.

Pre-barrow pits and surface

Manby separates the pre-barrow pits into two phases, the earliest consist of six pits (labelled A-F and a small pit recorded within the avenue) which are interpreted as Late Mesolithic and then after a significant amount of time (as indicated by the patination of the flint artefacts) seven pits (labelled 1-7) are interpreted as Early Neolithic. The archaeological evidence recovered from Pit B clearly had a significant impact on Manby's thinking, which included a sizable flint assemblage (with its two microliths), animal remains, human bone and a possible Grimston Ware sherd. The animal bones included cattle horncore fragments, a burnt second phalange fragment and 16 indeterminate fragments; nine of which with evidence of burning and a further three which were calcined. Unfortunately, confidence that this pit assemblage had been undisturbed has now gone due to the recent radiocarbon results for the human tibia fragment, which produced a Bronze Age date (Schulting 2017, 35). Schulting (2017, 36) argues that the 'putative association with the microliths in Pit B must now be seen as coincidental and a product of the backfilling of Greenwell's 19th century intervention. Conneller (2006, 147) casts further doubts about the remaining 'Mesolithic' pits, arguing that the '...mingling of old and contemporary materials by Neolithic people in barrow and pre-barrow architecture is not an uncommon phenomena'. In fact, two of Manby's seven Early Neolithic pits (Pits 2 and 3) contained Late Mesolithic flints, and yet it is only Pit 7 which produced any Early Neolithic flint (a single 'less patinated' flint flake). The cattle astragalus (ID 217) recovered from Pit F could have resolved this dilemma through biometry, but unfortunately, the recorded measurements are difficult to interpret as either a wild female or domesticated male. I am inclined to read the results as a domesticated male due to its position at the very bottom of the aurochs sample range, but this would not be with my full confidence. The lack of Early Neolithic pottery from Pits A-E (except for the sherd in Pit B) is also not surprising, when only one of seven of the Early Neolithic pits contained any pottery (Pit 2). Without any direct dates, I would argue that we can no longer support Manby's original interpretation, and should consider all the pre-barrow pits as Early Neolithic and probably associated with the two phases of cultivation recorded in the soil and pollen evidence.

I now want to consider the relationships between this singular architectural group of pre-barrow pits and the pre-barrow surface. The animal bone assemblage from the original ground surface was small, with only five fragments – one is probably a

domesticated cow second phalange, a sheep long bone fragment, a pig distal humerus fragment and two indeterminate fragments. All specimens had evidence for charring (except for the sheep bone) which could be associated with the three charcoal scatters (hearths) also recorded on the pre-barrow surface. Evidence for either burnt animal bone or charcoal was recorded from Pits A,B,F,2,3 and 7 (Pit 4 was excavated by Greenwell, he recorded charcoal from 'holes' but does not offer specifics). Could the burnt bone and charcoal within these six pits also relate to the activities of these three charcoal scatters? Although we now have doubts regarding the integrity of the Pit B assemblage, the presence of a burnt cattle second phalange and the charred cattle second phalange from the old surface is interesting and could originally have come from the same animal. Along with the animal remains already described, Pit 3 produced ten indeterminate fragments and Pit 7 a single oyster shell. Although most of these pits are independent features, some offer greater temporal complexity. Pit C is recorded as being overlain by a charcoal scatter, suggesting it was dug earlier. This is supported by a total lack of both animal bone (burnt or otherwise) and charcoal within its fill. The same is true for Pit 1. Pit 1 also contains no evidence for charcoal, burnt animal bone and cuts into Pit A. This later digging is probably associated with the building works of the mortuary enclosure (as it forms the eastern terminal). Pits 5 and 6 contained no charcoal or animal bone and would also appear to have been dug at a different time, perhaps contemporary with the mortuary house they are positioned within. Pit 2 was overlain by the eastern end of the northern bank of the embanked mortuary structure.

I would argue the above archaeological evidence suggests there was a moment within the pre-barrow activities at Kilham, which brought together Early Neolithic people, pig, cattle, oyster, the lighting of fires and the digging of pits. This restricted human-animal moment would appear to come after the digging of Pit C, but earlier than the building works associated with the embanked mortuary structure and the early ditches (which contained no charcoal or charred animal bone). The digging of these pits and their resulting infill bringing both Early Neolithic human and animal participants into contact with the earlier deposits of Late Mesolithic flints. Perhaps both groups returning to this part of the landscape for its local and accessible springs.

Early ditches

The only animal remains recovered from the early ditches were two cattle horncore fragments. Could this represent the important act of depositing cattle horncore which would appear to have continued from the earlier pre-barrow pits to the early ditches? The concerns about the Pit B assemblage may suggest otherwise.

Mortuary enclosure

Only five specimens were recovered from the bedding trench of the mortuary enclosure. Four are indeterminate fragments with varying degrees of burning. These fragments could have become mingled into the bedding trench from the pre-barrow surface, but they are more likely to have been burnt during the firing of the timber forming the enclosure. ID 221 was a heavily weathered and rolled cattle astragalus, recorded from context S6. Its poor preservation was not favourable for taking measurements. There was no evidence for burning. It is possible this specimen came from the same animal as ID 217 from Pit F. Both represent opposite sides of the body and both have no evidence for burning. The right astragalus could have become mixed into the fill of Pit F, while the left remained on the surface. The recovery of ID 221 within the bedding trench in S6 marks a distinct architectural choice (See Figure 7.20), as it is here where the south trench makes a distinct kink. Was it appropriate to mark this architectural change with cattle bone from a derived context (old/ancient cattle bone, which could have been ascribed some biographical history)?

Mound

The mound had been both significantly reduced by cultivation and damaged by the earlier Greenwell excavations. Greenwell records the recovery of cattle bones and roe deer antler fragments from the mound material. There is some doubt concerning the roe deer status of this antler, as the only antler within the Greenwell archive is labelled as red deer. The Bronze Age burials within the mound also cast doubts about the moment when these animals were introduced. Nine fragments were recovered during Manby's excavations. Eight are indeterminate long bone fragments and one was a 'Large Mammal' long bone fragment. I recorded two as being burnt and could have become integrated into the mound during the digging of the flanking quarry ditches.

Flanking quarry ditches

Manby interprets the digging of the two flanking quarry ditches as two distinct events. The first was the long western segments and at a later point the two eastern segments. Within the primary fill were the remains of cattle and red deer. The cattle were represented by two horncore fragments, two rib fragments and an M2. The age-at-death estimate for the M2 is between 18-30 months. Red deer was represented by three antler fragments, one tine with a broken tip, an antler rake (again with broken tips) and an antler with attached skull fragment from a young male. There could be an intentional spatial separation of these two species; the antler recovered from the eastern ditch terminals (S1, S8 and N8) and the cattle from near the western terminals (S19). Red deer antler was recovered from the eastern terminals from both phases of ditch digging. The continued presence of head or hoof elements continues a deposition practice which stretches back to the pre-barrow pits.

The secondary fill represents a distinct change in the human-animal relations with most of the animal bone assemblage dating to this phase. The separation of wild/domestic animals identified in the primary fill is no longer present; with cattle, sheep, red deer (no antler), a single dog tooth and hare recovered from most sections. The cattle bones could represent a single female domesticated cow, with an age-at-death estimate between 18-24 months. The butchery evidence indicates this animal was slaughtered, its meat filleted, and bones broken for the marrow extraction. Two red deer teeth and one calcaneum also offer evidence for the continuation for hunting this species. A single sheep is also represented by teeth and the fore and hindlimbs, age-at-death estimates suggest an age between 12-24 months. The animal bones associated with the Grimston Ware deposit (still an Early Neolithic context) in section N1 were poorly preserved and represented 34 indeterminate fragments, a fragment of hare femur and, a cattle M2 and tibia fragment. The wear on the M2 (ID 141) indicates an age-at-death between 18-30 months.

7.4.7 Conclusion

Through my re-examination of the animal bone archives and a detailed re-reading of the archaeological features for the Kilham long barrow, it has become possible to gain new and fresh insights into its animal architectures. I have argued that before the

building works commenced on the barrow itself, there was a distinct period of occupation. This occupation was associated with charcoal scatters and soil/pollen evidence for two phases of cultivation. The animals from the pre-surface and pre-barrow pits (which are no longer interpreted as Late Mesolithic due to the wrapping of Mesolithic artefacts into Early Neolithic architecture) indicate the presence of domesticated cattle, pig, sheep and oyster. Pit 7 with its oyster shell seems to hold some significance for later building works. It is located between the two parallel early ditches and is later enclosed by the mortuary enclosure. In fact, the entrance at the western end forces participants to walk over the pit. Was this pit still visible (did the earlier occupation form the conditions for the later building works)? Did they know the pit assemblage contained an oyster shell; and, what did oysters represent to Early Neolithic people? One idea is it could represent the sea, I have also argued that the fossilised oyster shells at Calais Wold 275 (chapter 4) could have represented concepts of deep time and transformation, could this apply at Kilham?

The situated practice of depositing cattle head (horncore) and hoof (astragalus and phalange) elements within their architecture persists into the early ditches, mortuary enclosure and the primary fill of the flanking quarry ditches. The 'deliberate' placement of a heavily weathered cattle astragalus at the moment the mortuary enclosure 'kink's to the south could be significant. Before the secondary fill of the flanking ditches it would appear an attempt was made to separate wild and domesticated animals. The pre-barrow pits either contained cattle or an oyster – no mixing. The primary fill of the flanking ditches had cattle remains near the western terminals and red deer antler at the eastern terminals. Thomas (1991) and Pollard (2005) have argued for the segregation of the domestic from the wild, through the separation of pottery from red deer antler in the primary ditch fills at Horslip and Thickthorn Down long barrows, southern England. Within the secondary fill of the flanking ditches this wild/domestic separation ends, with the bones of a domesticated cow, sheep, dog, hare and red deer mingled together.

7.5 Concluding remarks

Through the thoughtful re-reading of the paper archives (with their animal textual traces), my re-examination of animal bones and architecture; this chapter has created new insights into the human-animal relationships revealed at three Early Neolithic long barrow sites. Being attentive to the small details, I have shown evidence for occupation (in the form of animal bones, charcoal scatters and pit digging) at both Raisthorpe and Kilham long barrows. The Kilham pre-barrow pits being reinterpreted as Early Neolithic building works. Following the completion of building works (or near completion) other ephemeral occupations have also been identified. Where fires were lit, animals (particularly cattle) slaughtered, and meat consumed. This material evidence then being deposited into the matrix of the mound or onto the primary fill of the flanking ditches. These short-lived occupations are best interpreted as the coming and goings of Early Neolithic peoples and their animals – conceivably as part of a mobile existence; with humans and animals moving between known pastures and visiting significant locales along the way.

8

ANIMAL GEOGRAPHIES AND OVERLAPPING SPACES: fox-sheep (human) relationships

8.1 Introduction

How does the red fox fit into our Early Neolithic narratives? There appears to be four prevalent interpretations – the first interpretation centres on the argument foxes may have been hunted as fur-bearing animals (Fox - technology) (Serjeantson 2011, 59, Gibson and Bayliss 2010, 72). Evidence for the skinning of animals is typically represented by cut marks occurring on the metapodials and mandible (see Figure 8.1), there is no such evidence from the Neolithic animal bone assemblages in Yorkshire (those re-examined during this thesis); and for that matter in southern England (Serjeantson 2011). The only fox specimens with any recorded butchery marks were recovered from the Stonehenge ditch (C42, context 3898). A humerus and radius are recorded as having cut marks along the length of the shaft. The butchery marks most likely to indicate the filleting of meat are found on the leg bones – humerus, radius, femur and tibia diaphysis (Monchot and Gendron 2011) (Figure 8.1). Serjeantson (2011, 59) interpretes these as rare examples of the consumption of fur-bearing animals (Fox - subsistence). The only date for C42 context 3898 is 2930-2610 *cal* BC (OxA-4844), but this was rejected due to its proximity to a disturbed area; possibly a badger set (Cleal *et al* 1995, 521) (Figure 8.2). Pollard (2008, 57) has suggested ‘Bones of fox are uncommon on Neolithic sites, and this may reflect their identification with spiritual agencies of various kinds, and consequent prohibitions on their encounter and hunting’; and ‘As omnivorous animals, foxes would have had contact with human corpses set out for exposure, perhaps being responsible for some of the gnawing found on human bones. Ingesting human flesh and bone, and so taking on something of the essence of people, probably made them powerful beings in the minds of Neolithic communities’ (Pollard 2008, 57) (Fox - within human cosmologies).

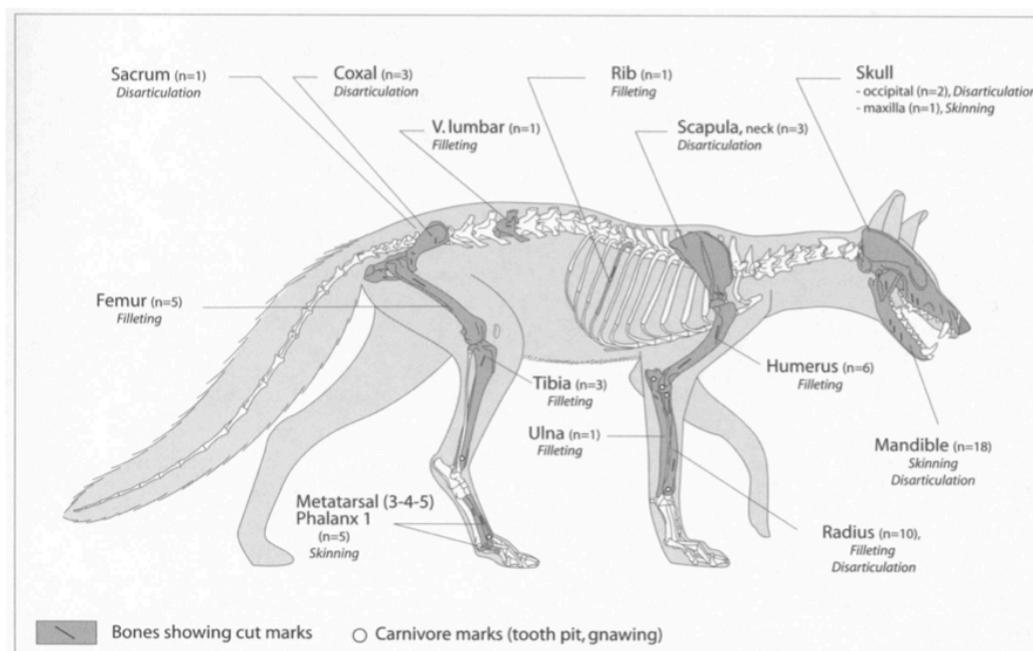


Figure 8.1. Location and function of the cut marks on the fox skeletons from Tayara, Nunavik (Monchot and Gendron 2011, Fig. 6).

Food taboos (prohibitions) may forbid the killing of an animal, meat consumption, consumption of certain parts of the carcass, or its consumption under certain circumstances (Russel 2012, 29). These taboos can be universally applied, apply to only certain members of the population (such as the ‘Prescribed Priestly Portions’) or at certain times. Russel (2012, 32) adds ‘eating of animals seen as resembling humans...or embodying human essence may...provoke feeling of cannibalism, although this does not always prevent their consumption’. Anomalous animals which do not fit well into general classifications (I would argue the red fox is such an example. It is both a wild animal but also found in proximity and familiarity), may be consumed for medicinal purposes (Russel 2012, 392). Carnivores with their strong-tasting flesh are recorded as having greater therapeutic power, and the Assyrians would use fox meat to treat chest ailments or as an aid during the process of labour (Russel 2012, 393). I must stress caution when interpreting these as Neolithic; due to the proximity of these bones to the badger set, alongside there being no direct dating. It would be worthwhile getting some direct dates on these specimens.

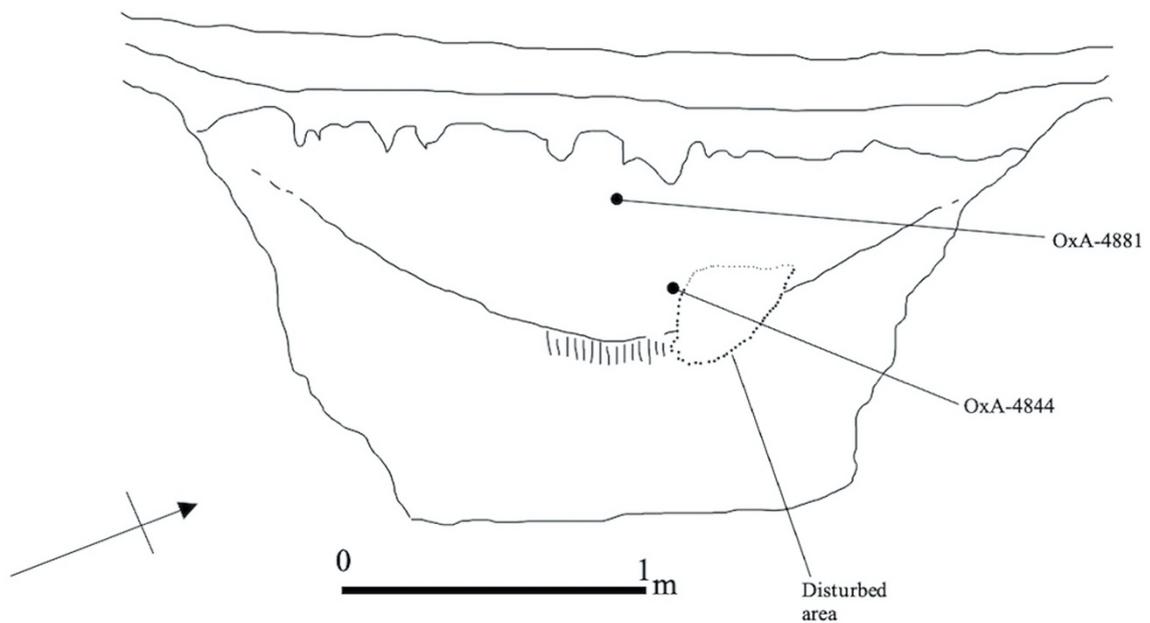


Figure 8.2. Section QR, Cutting 42 (after Cleal *et al* 1995, Fig. 266)

The fourth interpretation derives from the Early Neolithic round barrow at Whitegrounds (SE782682) (Brewster 1980, 18). Whitegrounds was excavated by Tony Brewster in 1968. Brewster (1984, 2) interprets the earliest phase of building works as the construction of an 8.22m entrance passage within an oval mound, made from sandy silt and sandstone cobbles. The deposits found within the passage grave included red fox remains, an amber bead, a long flint blade, human bone and 40 sherds of Early Neolithic Grimston Ware pottery. Griffiths (2012, 770) provides a date based on human bone for this phase of activity at 4470-3650 *cal* BC (HAR-5506 95.1% probability). Brewster (1984, 7) records the width of the passage as 0.6m, with an estimated height of 0.9m; the stonewalling made from sandstone blocks with a timber roof (Figure 8.3 and 8.4).

Brewster (1984, 10) records two groups of human remains recovered from the passage grave, indicating a MNI of eight people. The first group is the scattered disarticulated bones of two adults, two children and one of unknown age. Brewster located these disarticulated specimens throughout the passage, with a particular grouping east of the later grave cut and associated with the Grimston Ware sherds. The second group consisting of three people (inhumations) which were deposited between the western end of the passage and under the secondary grave cut. These people representing a 10-year-old child (Burial 1 and Skull 3), 30-year-old woman (Burial 2 and Skull 2) and a 25–30-year-old man (Burial 6 and Skull 1), were associated with a red fox and an amber bead (Brewster 1984, 21) (Figure 8.5). Brewster (1984, 8) argues that three people were decapitated, with an amber bead recovered close to the ‘severed neck’ of Burial 2, and the three skulls placed in a small grouping or nest.



Figure 8.3. Passage grave from SE (Brewster 1984, Plate 2).

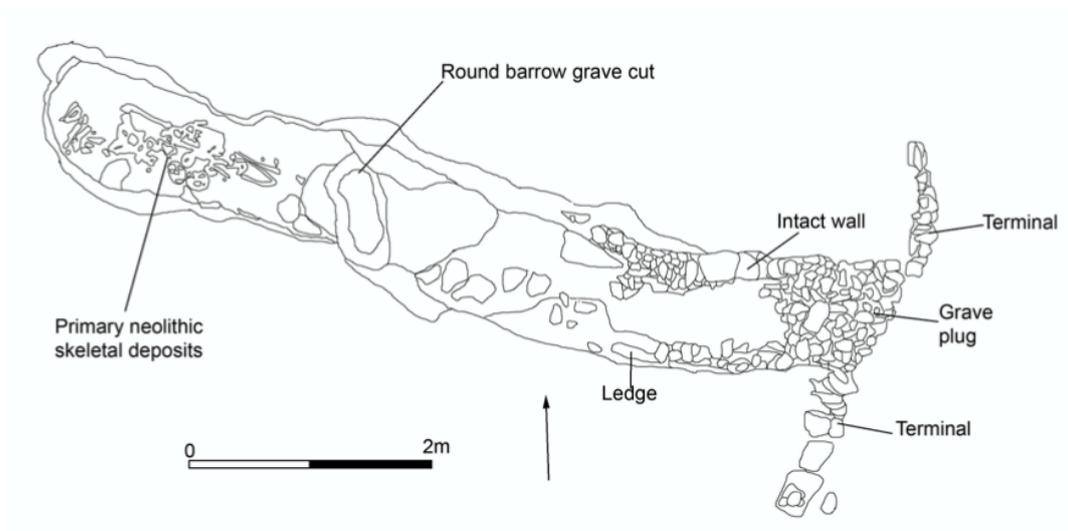


Figure 8.4. Passage grave plan with secondary grave cut (Brewster 1984, after Fig.18).

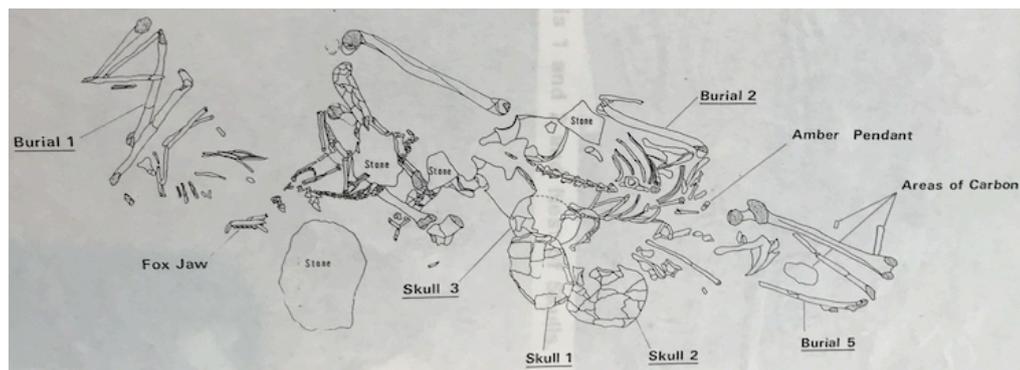


Figure 8.5. Western deposit, Entrance passage (Brewster 1984, Fig.19).

The red fox was recovered by Brewster in close association with the child burial (Burial 1), at the western end of the passage grave. Figure 8.5 marks on the plan the fox mandible but not the remaining skeleton. Riggott and Williams's (in Brewster 1984, 18) examination of the fox remains list the elements recovered as femur, humerus, pelvis fragments, foot bones, vertebrae, skull fragments and mandible. With elements representing all areas of the body they argue that the red fox was deposited whole (other sites where this practice could have existed include Calais Wold 275 and Towthorpe 18). Riggott and Williams's recorded the teeth as heavily worn, suggesting to them an old age at death (in Brewster 1984, 19). There is no recorded evidence for carnivore gnawing on the human bone (Brewster 1984, 8). Brewster (1984, 8) suggests that maybe

this fox was a pet (Fox – companion), arguing its old age would have made survival in the wild difficult. Let us explore this concept a little further. Russel (2012, 261) describes the behavioural characteristics of a pet (or companion species) as being tame and habituated to humans, but can be either domestic or wild; adding ‘virtually any animal can be a pet, at least while it is young’. The red fox generally will live up to nine years in the wild, a little longer perhaps in captivity. This could suggest a similar age between the child burial (Burial 1) and the fox. Serpall (1986, 63) argues pets stand in a position of ‘permanent childhood’; so although the fox was of old age and the human child was young, both may have been viewed by those depositing their bodies as the same. Russel (2012, 264) adds when dealing with a pet burial we are looking for the special treatment of an individual as opposed to a treatment of a particular species. Maher *et al* (2011,1) describe the human-fox burials from the Pre-Natufian cemetery at Uyan al-Hammam, Jordan (13720 BP). Here the inhumations of a human and fox body were placed in Grave VIII; later the human skull, fox skull and right humerus were exhumed and re-deposited within Grave I (Maher *et al* 2011, 8). The authors suggest the human and red fox had a ‘special relationship’, and that this link between fox and human was remembered when the grave was reopened. The movement of both of these species allowed them to remain together in the ‘afterlife’. Collins (1991, 217) adds pets were valued animals and as such, were most likely buried like humans.

These four interpretations of fox as technology, subsistence, actor within human cosmologies and companion species all share two characteristics – firstly, there is no actual archaeological evidence to substantiate them (this is important) within the context of the Early Neolithic in Britain. Secondly, they are all centred in human exceptionalism and how humans think or use fox; with concepts generated from modern or recent historical case studies. Brewster’s interpretation of the pet fox is only a small deviation from the pet dog he photographed three years earlier (1965) during his excavation of the Garton Slack 37 long barrow site (Brewster 1980,1) (Figure 8.6).



Figure 8.6. Two humans and a pet dog, photographed during the 1965 excavation at the Garton Slack 37 long barrow (Photo 33, Garton Slack 1 & 2, Brewster archive held at Historic England, Swindon).

In an attempt to write archaeological narratives which position at its centre a sense of ‘real’ human-livestock-fox experience (following the call of Overton and Hamilakis (2013, 135)); I will integrate into my archaeological histories the close study of animal ethology. Drawing insight from John Berger’s writings (including his poem ‘Ladder’), I will move away from the scenario of human thinks and/or uses fox - a position which inadvertently implies a ranking of animal species (with human animals at the very top); but instead will write histories which approach all animal species (here I include human) on level terms; using testimonials from two generations of working shepherds.

David Shepherd (Dad) is a Yorkshire born shepherd now running a flock of 2000 Scottish Blackface sheep in Perthshire, Scotland. Robert Shepherd (Grandad, now retired) worked with sheep in Yorkshire, Lancashire and the Scottish Lowlands. Alongside these contemporary testimonials, my narratives are influenced by the fields of natural sciences, applied ecology, veterinary science and environmental management.

8.2 Animal geographies

Kristin Armstrong Oma's (2010) paper 'Between trust and domination' offers a thoughtful starting point. Providing a critique of Tim Ingold's (2000) hypothesis for a dualistic model of human-animal engagement as either trust (hunter-gatherer) or domination (farmer), Armstrong Oma presents the notion of a social contract between humans and animals. This social contract is built upon the concepts of trust, reciprocity, and intimacy; as Conneller (2011, 74) notes '...relationships of proximity and distance seem important.' The shared life-space of the herder and his/her livestock (social-beings in their own right) necessitated the development of a mutual relationship based on each other's natural rhythms. Such intimacy with wild animals (Ingold (2000, 73) suggests hunters regard prey as kindred brothers) is described as doubtful, due to the nature of the episodic and unrepeated encounter (Armstrong Oma 2010, 177). I find this too simplistic. Interactions between humans and animals should be seen as varied and complex. Social contracts between humans and wild animals can be seen in the archaeological record; ones based on proximity and perhaps a level of intimacy. The potential 'pet' fox from the Whitegrounds cairn is one example (Brewster 1984), blurring our boundaries between wild and domesticated.

Both Ingold and Armstrong Oma position their arguments as the relationship between a human and an animal. Ingold writes of the perception of animals from the human point of view (animal as brother or animal as slave), it is not equal and is one-directional. Armstrong Oma provides her animals with agency (as sentient beings), but these human-animal relationships are still not of equals; they are in fact a social eco-contract of unequal partners (Armstrong Oma 2010, 178), acknowledging the rights and obligations towards each other. What happens if, as our starting point we do not begin with the question 'how did humans use/think of animals', but instead consider the life-space or the overlapping social worlds between the red fox, humans, and other sentient beings? The notion that we can discuss human-fox relations as if these are separate to the environment (other species) is false and only through considering the entanglements between multiple species can we begin to write new and radical histories. Let us return to Berger's (1979) poem 'Ladder' -

At the foot of the ladder,
 on her back,
 belly distended,
 like a grey risen loaf,
 a dead ewe,
 legs in the air,
 thin as the legs,
 of a kitchen chair,
 she strayed yesterday,
 ate too much lucerne,
 which fermenting,
 burst her stomach,
 the first snow,
 falls on her grey wool,
 a vole in the dark,
 systematically,
 eats the ear on the ground,
 at daybreak two crows,
 haphazardly peck,
 the gums of the teeth,
 her frosted eyes are open.

Berger 1979: 41

Berger here embraces a mode of description which rewrites this temporal scene as a network of times, places, persons, material, and animals. If this poem was an archaeological assemblage the presence of the dead ewe would be identified by archaeologists. My reading of David Orton (2010, 188) would suggest this ewe represents sentient property, an observation echoed by Berger in comparing it to other objects/property – ‘grey risen loaf’ and ‘legs in the air, thin as the legs, of a kitchen chair’. The role of the vole and two crows are standing in striking contrast to that of the ewe. As wild animals, Berger does not interpret them as property (further supporting the Cartesian dualism of domestic-wild), but are instead understood by him through the natural sciences and the natural rhythm of the animals; with their recognised autonomy as the ‘fullest expression of animal life’ (Collard *et al* 2014, 328). The success of this temporal scene is in the animal-animal relationships, where animals live as ‘uncolonized others’ (Plumwood 1993); these represent in Ingold’s words (1996, 119) the ‘really-natural’ nature as opposed to the ‘culturally-perceived’ nature of traditional archaeological writings. But we cannot escape the fact that this scene was witnessed or contrived by Berger and therefore animal-animal relationships during the Early

Neolithic could have also been experienced and become entangled in human life-space. It reveals their co-habitation, shared life-space.

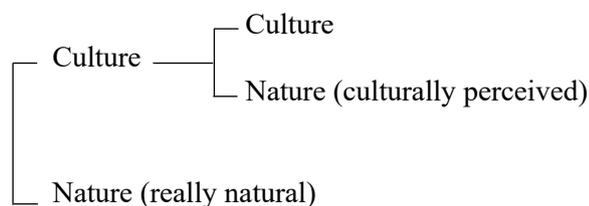


Figure 8.7. After Ingold (1996: 119).

Nick Overton and Yannis Hamilakis (2013, 135) have urged that ‘zooarchaeology ought to write the whole history of this process of mutual becoming, not just some aspects to do with human economizing and subsistence’; I will demonstrate this approach by examining the behaviour of fox predation on domesticated lambs, exploring seasonality, husbandry practices and environment.

8.3 Red fox

The remains of the red fox are infrequent but stubbornly there enough to be remarked on, even if on negative terms in Early Neolithic archaeology (as discussed in chapter 6). Its well-known appearance includes a coat which ranges in colour from sandy to henna red, black-backed ears and socks, a long horizontal bushy tail with white tip and slender muzzle (Corbet and Southern 1977, 312). A native of the British Isles the red fox has been recovered from the Early Mesolithic site at Star Carr, including cranial and post-cranial elements; which represent a single animal (Clarke 1954, 73). Clarke recorded no evidence for butchery or skinning and there is no evidence for the skinning of fox for fur from the British Mesolithic; a practice which appears to have continued into the Early Neolithic (at least from the Yorkshire evidence). This contrasts to the Later Mesolithic site of Aggersund in Denmark, which had cut marks on the distal parts of fox limb bones indicative of skinning (Overton and Hamilakis 2013, 120).

8.4 Sheep

Serjeantson (2011, 29) provides the most comprehensive review of domesticated sheep from Neolithic contexts within Britain, although her work is focused on southern England. Serjeantson (2011, 29) suggests sheep represent over 20% of the domesticated fauna from Early Neolithic sites, with occupational layers and pits being more common than long barrows and enclosures. Unlike modern sheep, the coat of Early Neolithic sheep was predominantly hairy as opposed to wool (wool as a secondary product coming in the Early Bronze Age (Ryder 1993)). Gracile and short in stature (like the modern Soay breed), their resources would include meat, milk, dung (manuring cereal crops), and skin (garments). With regards to the consumption of meat and the slaughter of the animal, sheep provide smaller quantities of meat in comparison to cattle and therefore may suit family or kin gatherings as opposed to large groups. Lipids from Early Neolithic pottery at Street House structure 18 (Sherlock 2020, 107), Kilham long barrow and Willerby Wold long barrow (Wiltshire *pers comm* 30th May 2022) have confirmed the processing of dairy products; but the milk from cattle, sheep and goats cannot currently be separated. Humans in turn provide protection, food and care.

Sheep have been recovered from the Kilham (Manby 1976), Raisthorpe (unpublished), Market Weighton (Greenwell 1877) and Ling Howe (Dent 2017) long barrow sites; the Calais Wold 275 (unpublished), Wold Newton (Mortimer 1905), Towthorpe 18 (Gibson and Bayliss 2010), Duggleby Howe (Gibson *et al* 2009), Cowlam 57 (Greenwell 1877), Painsthorpe Wold 118 (Mortimer 1905) and Huggate 229 (Mortimer 1905) round barrow sites; and the Greenwell 7 (Greenwell 1877), Greenwell 23 (Greenwell 1877), Rudston 63 (Greenwell 1877), Rudston 67 (Greenwell 1877) and Weaverthorpe 47 (Greenwell 1877) settlement scatters.

8.5 Red fox-sheep interactions

8.5.1 Seasonal behaviour

The seasonal rhythms of domesticated sheep rotate between three events, lambing in the spring, weaning in the summer, and rutting in the autumn. All three of these events

would have been observed and overseen by the Early Neolithic farmers. Sheep have been identified in the faunal assemblages from 45% (5/11) of the Early Neolithic settlement scatters, 20% (1/5) from pits with animal bone, 50% (6/12) from round barrows and 26% (4/15) of long barrows; with all these assemblages (except pit 017, Willows) also containing pig and/or cattle remains, suggesting these farmers were also entangled in the natural rhythm of these animals. Only in the spring shortly after birth are domesticated lambs liable to fox predation. Other predators during the Early Neolithic of domesticated sheep would have included wolf, badger, and birds of prey. The red fox also produces young in the spring, with a litter size of four or five, after a gestation of 52 days (Corbet and Southern 1977, 318). When adequate surface cover is available foxes do not self-excavate holes, seek rock dens or disused badger sets; with the exception in breeding season. Hedon Howe cairn (Mortimer 1905, 346) could be such an example where cist 1 (North) was subsequently auto-rewilded by a single badger and at a later/earlier point two foxes. Ascot-under-Wynwood long barrow is another such example, with Deposit E (from the northern passage) containing the bones of adult and juvenile foxes associated with lamb bones (Mulville and Grigson 2007, 238). Cist dens and Spring time. The association of lamb bones, den-building and fox cubs suggest spring activity, but the 'intrusive' nature of the material resulted in it being excluded from the zooarchaeological report. Being mainly nocturnal (although more active in day-light hours during the summer and autumn), domesticated sheep (and humans) would have been aware of their presence through prints, faeces, scent stations, management of the kill carcass, dens and intermittent high-pitched barks (1-3 hours after sunset) (Corbet and Southern 1977, 317). During the spring lamb predation would have supported a daily food requirement for adults of 500g, including small birds, small rodents, cattle afterbirths, alongside the scavenging of carrion.

8.5.2 Fox predation

Fox predation occurs during the nocturnal hours, where darkness aids in the hunt. Typically preying on small lambs either during or immediately after birth and targeting those from larger litters. Although sheep are understood to not be intelligent in western culture (with 'sheepish' having negative connotations), the work of Thelma Rowell has questioned such assumptions; recording hierarchical organisation against the threat of predation (Despret 2006, 365) and in favour of long-term social bonds between ewes

and their daughters. Ewes are naturally maternal and protective, however ewes with larger litters have greater difficulty in maintaining vigilance (White *et al* 200, 36). The rate of fox predation varies between 0.5-1.5% on a sample of contemporary Scottish hill farms (White *et al* 2000, 33) and 2.9% on sheep farms in the districts of Monaro, Oberon and Canberra in Australia (McFarlane 1964, 13). In most cases the lambs would simply disappear; White *et al's* (2000, 35) study finding 53/69 lambs killed by foxes leaving no physical material evidence. When a fox was disturbed and abandoned the slaughtered lamb, an Early Neolithic farmer would be expected to encounter teeth marks on the shoulder, crushed vertebral column, crushing of the skull or even decapitation (with the skull sometimes buried) (Corbet and Southern 1977, 314; McFarlane 1964, 13). Non-lethal injuries could include the removal of the eyes and the tongue (McFarlane 1964, 13). Although the rate of fox predation is modest, for Early Neolithic pastoralists the loss of a single animal would have a significant impact on their subsistence needs and the survival of their families. The loss or non-lethal mutilation of their young would emotionally damage the ewe and provide a visual-cue of the human-sheep-fox relationships experienced. Moberly *et al* (2003, 225) demonstrate that the perception of the red fox as a pest and perceived levels of fox predation vary across regions of Britain, with smaller farms perceiving the threat of predation as greater than other groups. This is an important point. To come to understand the 'really-natural' experience of human-fox-sheep, we need to come to terms as to the material entanglements but also the perceived threat; as Early Neolithic livestock numbers would have been low, their perception of the threat of fox predation may have been higher.

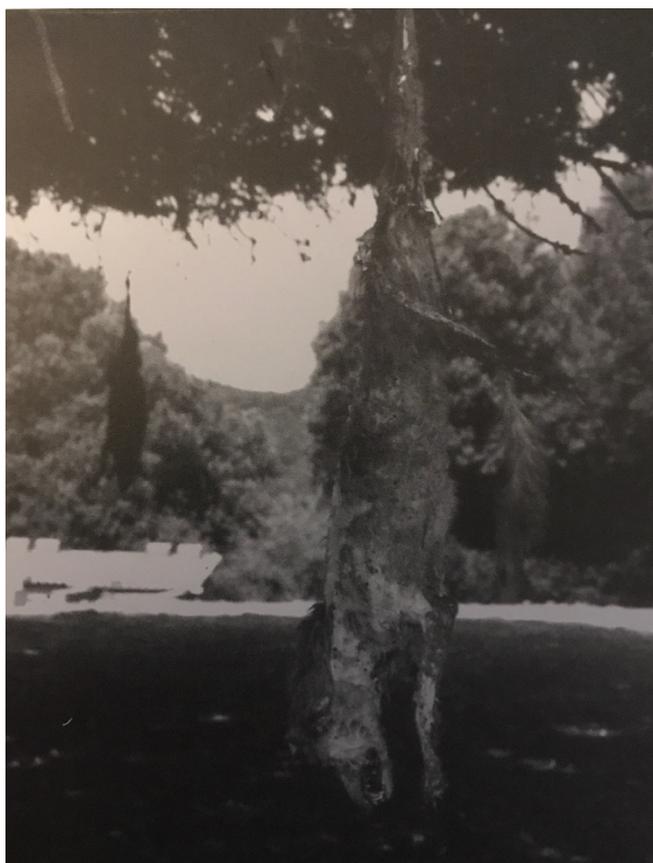


Figure 8.8. Ethnozoarchaeological study from Sardinia. Swineherds hang fox corpses on a tree with the belief it will deter further predation. (Albarella *et al* 2011, Fig 15.14).

8.5.3 Husbandry practices and environment

The economic impact on lamb numbers through predation can vary under different husbandry practices. The first measure would be through fox control. If foxes were killed as ‘pests’ during the Early Neolithic and their remains not returned to settlement sites, we are unlikely to see these in the archaeological record. The association of the red fox as a pest may have reduced the desire to use their fur for garments. Figure 8.8 offers an illustration from contemporary Sardinia where swineherds would hang fox corpses from a tree to scare away those remaining (Albarella *et al* 2011, 154). Both White *et al* (2000) and Moberly *et al* (2003) suggest indoor lambing reduces fox predation through the increased protection from humans and their domesticated dogs. There is no archaeological evidence for dedicated lambing sheds during the Early Neolithic in Yorkshire. In contrast to the Scandinavian Late Bronze Age longhouse Kopinge B14:VIII (Armstrong Oma 2010, 182), which was split into human and animal

living areas (and therefore providing potential indoor space for lambing), the Early Neolithic houses in Yorkshire were not; here I refer to Yarnbury house near Grassington (Gibson 2017, 201), dating to 3709-3646 *cal* BC (95.4% probability). This does not discount the option to lamb ewes within the human living area, or to bring the lambs inside shortly after birth. Fijn (2011, 178) describes Mongolian herders bringing those lambs/kids which were seen as vulnerable inside the home and feeding them milk from an ox horn (Figure 8.10).

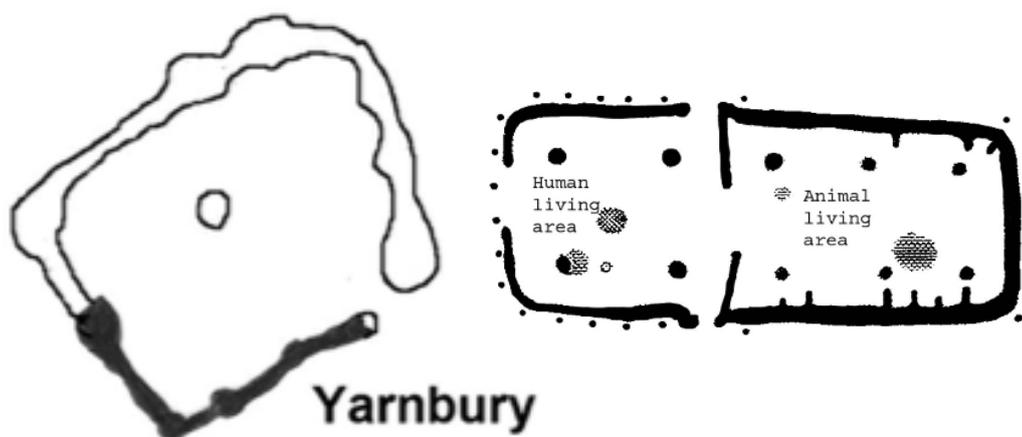


Figure 8.9. Yarnbury (Gibson 2017, Fig 16) and Kopinge B14:VIII (Armstrong Oma 2010, Fig 1) structure plans. Not to scale.

My Dad and Grandad represent two generations of working shepherds, one could expect their human-fox relationships to be similar and yet their perceptions of the red fox are opposites. My father who runs a large herd of 930 Scottish blackface ewes on the Riemore estate (which is located south of the Cairngorms National Park), perceives the red fox as ‘vermin’; stating he loses between 20-40 lambs per year to fox predation (this amounts to 2.5%, which is slightly higher than White *et al's* (2000) sample). My grandfather in contrast holds no negative association with the red fox, nor can he recount any losses to fox predation. I argue the rationale for this distinction lies in the location and the environment of their experiences; while my Dad has a hill sheep farm, my Grandad had a lowland sheep farm in the Scottish Borders. Moberly *et al's* (2003, 225) study suggests different environments prove more or less attractive to foxes, with greater pressures from predation on rough-grazing and forestry – both typically today associated with upland farms. What this demonstrates is the number of foxes and pressures from fox predation are not constant but vary under different environmental

conditions. This suggests Early Neolithic farmers would not all have the same human-sheep-fox relationship but these would be complex and personal; mirroring my families own experiences. Forestry is likely to have dominated most of Yorkshire during the Early Neolithic with sporadic clearances. A mixed woodland of hazel, pine, oak, alder and lime covering all but the highest parts of the county (Manby *et al* 2003, 28). Mesolithic forest disturbance (such as at Willow Garth and Malham Tarn) would have been joined by Early Neolithic clearance for building works, pasture and to a lesser extent arable. The Yarnbury house was constructed from mature oak and hazel (Gibson 2017,200). Willerby Wold long barrow had a pollen record indicative of construction in open grassland with nearby forest (Manby 1988, 42). Kilham long barrow provides an environmental record for two episodes of forestry clearance prior to the building works associated with the long barrow (Manby 1976, 156). Manby (1976, 156) suggests the first episode of activity is cultivation within an open landscape, followed by woodland regeneration and then another episode of cultivation (but this time, less vigorous). This suggests episodes of occupation, perhaps different forms of activity (arable vs pasture?) followed by gaps. These gaps could imply movement and husbandry practices associated with mobility – perhaps between summer and winter pastures? The levels of seasonal mobility will also play a role concerning human-sheep-fox relations.

Figure 8.10. Feeding milk to a lamb with an ox horn (Fijn 2011, Plate 2.).



A settled, sedentary existence based around an intensive mixed farming regime with cultivation in permanent plots (Rowley-Conwy *et al* 2020) would be associated with a higher level of familiarity with the local fox population.

8.6 Archaeological evidence

The animal bone assemblages from Towthorpe 18, Calais Wold 275 and Duggleby Howe represent the only sites where fox and sheep remains have been recovered from the same context – the mound. The mound was shown to be the most common context for the recovery of burrowing/den building animals in Chapter 6.

8.6.1 Towthorpe 18

The animals recovered from the mound structure during Mortimer's (1905) excavations between 1864 and 1868 included a cache of foxes, cattle, pig and 'nests' of rats. Other archaeological evidence included the human remains of six adults and one child (Gibson and Bayliss 2010, 87), two Towthorpe Ware bowls, two lozenge-shaped flint arrowheads and four leaf-shaped arrowheads. Mainland re-examined the faunal remains surviving in the site archive (Hull Museum), the animal species included fox, cow, pig, sheep/goat and bird (in Gibson and Bayliss 2010, 88-89). From the cache she identified fifteen bones as red fox, which included elements such as ribs, vertebra, skull and articulated limb bones. Mainland (2010, 88) describes the bones as in very good-excellent condition and represent a MNI of 2. Mainland suggests these remains are the 'remnants of complete or at least partially articulated carcasses' (Mainland 2010, 88). The radiocarbon dates for the fox remains were not statistically consistent, suggesting to Gibson and Bayliss (2010, 90) that the two foxes were not contemporary with each other. Fox B (OxA-17241) was dated to between 2470-2280 *cal* BC (93% probability) and Fox A (SUERC-13934) between 2045-1895 *cal* BC (79% probability) (Gibson and Bayliss 2010, Table 5.1). Gibson and Bayliss (2010, 90) argue the cache represent the deliberate placement of both curated and contemporary fox remains; a special deposit of curated/contemporary pelts or trophies (Gibson and Bayliss's favoured explanation), around 2045-1895 *cal* BC (79% probability).

An alternative reading of this archaeological evidence would be these adult foxes (Mortimer originally describes three but there were insufficient morphological markers to confirm this during the re-examination (Mainland 2010, 88)) entered the monument through their own agency during the act of den-building. Gibson and Bayliss (2010, 90) suggest this interpretation is less favourable due to the length of total time the den would have been in use (200+ years), however I see no reason to suggest this den needed to be in continuous use for 200+ years and could not have been returned to in a more sporadic and opportunistic manner. Evidence that a den may be in use can be indicated by unconsumed remnants inside and outside the den (Corbet and Southern 1977, 314). Returning to Mainland's report, the archive also contained 16 fragments of neonatal/very young sheep/goats – representing a MNI of three, 13 fragments of neonatal/very young pig – representing a MNI of three, and two unidentified bird bone fragments (2010, 88). Mortimer (1905, 9) provides a brief contextual description for the recovery of these bones– ‘...in various places in the mound, detached teeth and bones of ox and pig were found’. The condition of the sheep/goat, pig and fox bones are all described as excellent by Mainland (2010, 88). One possible explanation is that these represent the archaeological evidence for fox predation, and red fox world-making practice (den building) which can be understood as archaeological wildlife, auto-rewilding an Early Neolithic barrow, between 2045-1895 *cal* BC.

8.6.2 *Calais Wold 275*

I have identified twenty-seven fox specimens (Find 114 and 115) from the animal bone file of the Coombs archive; all of these specimens were recovered from a small area within the primary mound. These specimens represent skull fragments, left mandible, axis, rib, right scapula and limb bones. The MNI is 1. There is no mention of human modification in the Jarman draft report, but as discussed in Chapter four, this information may have not been recorded. Jarman (Coombs archive 2/13/13) suggests the fox remains ‘may well be only fortuitously present’. It is therefore not possible to confidently suggest this fox entered the primary mound via human action or that of the foxes own agency. The Coombs archive does not provide any information regarding evidence of a fox den and there is also no mention of re-cutting from context Area I, Layer 25; precluding the likelihood of later re-deposited material. There is a tantalising trace of further red fox activity from Mortimer's (1905, lxix) introduction, where he

states, 'Bones of the fox occur rather frequently in some of the barrows, notably in Nos. 275'.

SITE

Trench I Layer/Feature (25)

Description (colour, texture, composition)
Clayey salty soil with flint chips, a very little black iron-staining.
Brown 7.5YR 4/4 = II (19)

Position
Below (23) & chalk mound material.
Above (22) & (29) [old ground surface] & natural chalk.

Nature of deposit
'Crabby soil' mound - iron soil & rubble mound together with (24) (27) (28)
POSSIBLE INITIAL NEO. MOUND

Finds

Pottery

Metal

Stone

Flint

Bone 113 Bos size long bone fct. 114 } Vulpes vulpes skull 116 Arvicola / microtus sp skull.
115 }
117 Medium bird 1 bone fct. 123 avis / capra tooth fct.
undent 2 bone fct.

Samples

Charcoal Carbonised

Ash Shells

Slag Bone

Pollen Soil

Organic

Section No. 3

Plan No.

Photograph No.

Figure 8.11. Context sheet Area 1, context 25 (Coombs archive).

From the same small area of the primary mound was recovered the skull of either a water/field vole (Jarman's draft report does not distinguish, Find 116) and two fragments of a medium bird (Find 117). Both small rodents and birds are known to be the prey of the red fox and could indicate a den was present within the primary mound. From the same context, 13 sheep/goat tooth fragments (Find 123) are described as being

recovered from the edge of the primary mound (Coombs archive 2/13/4). Could these sheep/goat fragments (the archive describes all the sheep/goat remains as coming from 'young animals') be further evidence for fox predation and the unconsumed remnants of vole, bird and lamb/kids being deposited inside and outside the den?

8.6.3 Duggleby Howe

The building of the Duggleby Howe mound appears to have been completed in two phases of activity, with a primary and secondary mound (Loveday 2002, 137). The primary mound is recorded by Mortimer (1905, 30) as having three distinct contexts - 'a core of clayey soil of a hazel colour, mixed with a little chalk grit' (1.65m) (Mortimer's W), a layer of small chalk grit (1.35m) (Mortimer's X) and finally enveloped in a layer of Kimmeridge clay (0.3m) (Mortimer's Y) (Loveday 2002, 137). During the construction of this primary mound between 2915-2840 *cal* BC (68% probability), both human inhumations (Burials F,E,B,A), human cremations and animal bones were inserted (Gibson *et al* 2009, 70). A secondary mound consisting of quarried chalk surviving to a depth c. 2.9m was added later, but no direct dating is available for this phase (Gibson *et al* 2009, 50) (Figure 8.11). From the mound material Mortimer (1905, 30) notes '...about three feet above the base of the mound and in the bottom bed or core of hazel-coloured clayey soil (Mortimer's W) were most of the bones of one leg of fox, the flesh of which had probably been consumed by the mound builders, and the bones dropped where they were found.' Unfortunately, these bones do not survive in the site archive and Mortimer's claim for consumption cannot be confirmed. Parcels of animal bone recovered from various locations in the mound were sent to E.T. Newton (Mortimer 1905, 40), these included:

Parcel 2 – 'taken from the soily material at the base of the mound': species listed as human, red deer, cattle, fox and sheep/goat. Some are noted as gnawed bones. (Mortimer's W)

Parcel 3 – 'The bones were removed from the body of the mound at depths varying from 3.9m to 5.4m': species listed as human, cattle, pig, fox and sheep/goat. (Mortimer's X and W)

Parcel 4 – 'taken three feet below the bed of blue clay': species listed as fox and roe deer. (Mortimer's X)

Unfortunately, the site archive only contains red deer antler fragments and two roe deer mandibles (Gibson *et al* 2009, 60). The presence of fox within the layers W and X could indicate either these animals had been deposited into the mound or that they entered the monument through auto-rewilding. The spatial association of the sheep/goat bones could support den-making activities, if the referenced gnawed bone (Parcel 2) was the sheep/goat specimens. As discussed in chapter 6, if this evidence represented the den-building activities of red foxes and the predation of sheep/goat(?), it probably occurred before the chalk capping was added, due to the thickness of this layer exceeding 1.0m. This would date such activity as Late Neolithic, around the 29th century BC.

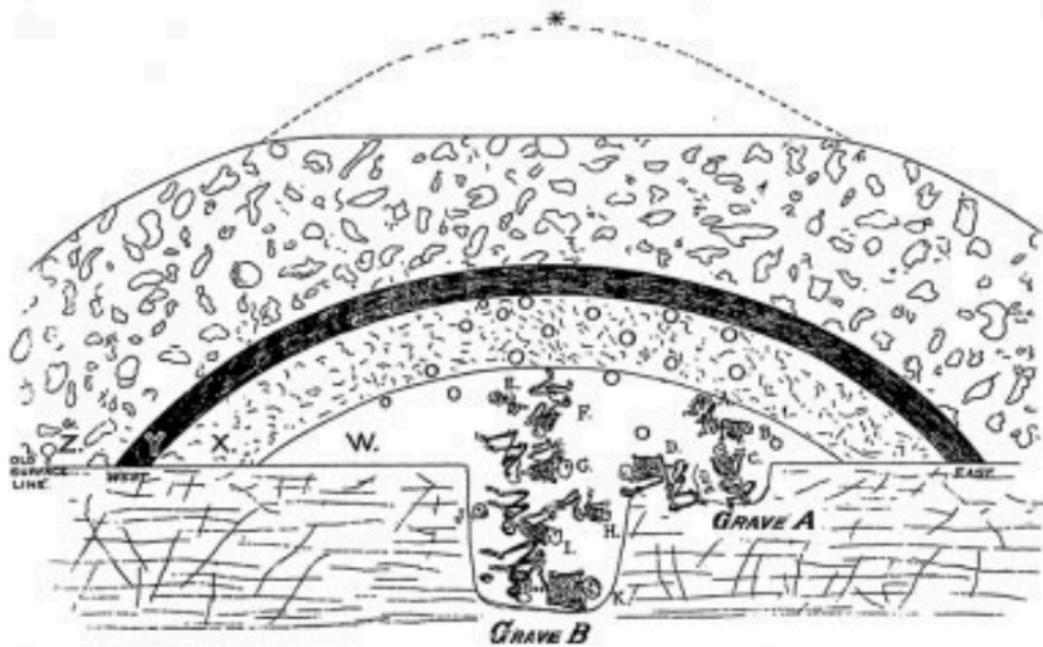


Figure 8.12. Mortimer's section drawing of his excavation (Mortimer 1905, Fig. 45).

8.7 Overlapping spaces

Through my study of the overlapping spaces of the red fox and sheep, I can also comment on the Early Neolithic human presence (or lack of it) at these barrow sites between periods of construction. I have argued for evidence for probable fox den-making practices in the mound features at Calais Wold 275, Towthorpe 18 and

Duggleby Howe round barrows, such activity suggests Neolithic peoples were not active at these sites. However, the recovery of sheep remains in close proximity indicate to me that although Neolithic people were not active at these sites, they were still living and farming nearby. So, in terms of overlapping spaces, we have both settlement (human-sheep-fox) and barrow (between acts of building) (fox-sheep).

8.8 Conclusion

For this chapter I have applied the close study of animal ethology to come to terms with the lived experience of the red fox during the Early Neolithic in Yorkshire. To shift our perspective away from how humans use-think fox, I have instead led with an ‘animal geographies’ of the Early Neolithic and considered the entanglement of the red fox and domesticated sheep. I have demonstrated that the natural rhythms of these animal lives represent the coming together and dispersal of connections, which gain only a momentary hold before breaking. This hold is strong during the lambing season in spring. A contemporary predation rate of less than 2% is modest and would likely occur at night, during the birthing process or shortly afterwards, and with foxes targeting multiple births with weaker lambs. As part of the social contract between humans and sheep, the Early Neolithic farmers would offer care and protection. This could include indoor lambing, but our current evidence for house structures suggests this is unlikely. The majority of lambs killed simply disappear back to the foxes den, which I have demonstrated to occasionally include the ‘auto-rewilding’ of round and long barrow sites (chapter 6). When the fox is disturbed and the lamb abandoned, the farmers sensorial experience would have been the lethal remains of, or non-lethal mutilation of these young animals. This would account for both emotional distress on behalf of the human and sheep but also damage to economic subsistence plans. These experiences would not be universal or apply to all Early Neolithic farmers with location and environment affecting the levels of predation; such as proximity to forestry. I would expect like contemporary small-farm farmers the perceived pressure from the red fox would be greater than the reality at hand, especially when coupled with the threat of wolves, badgers, and birds of prey. We have no evidence for fox control during the Early Neolithic, however if like modern shepherds in Britain and swineherds in Sardinia demonstrate, the treatment of the red fox as ‘pest’ is certainly suggestable and is at the

very least based on the spatial and temporal overlapping spaces of humans, fox and sheep.

9

ANIMAL ARCHITECTURE: a discussion

9.1 Introduction

Let us start by first returning to Rowley-Conwy *et al*'s (2020, 418) statement that our knowledge of Early Neolithic animal assemblages (alongside plant remains, lipids, manure, and isotopes) in 'the north of England, from the Humber and the Mersey to the Tweed...remains largely blank.' It has been a major component of this thesis to correct this!

This chapter will form a discussion concerning the relationships of animals, architecture, and humans during the Early Neolithic. I will explore this in three themes, which I have designed to be distinct from each other, but also entangling as I move between different scales of analysis. The first discussion will present new research reviewing the animal assemblages recovered from Early Neolithic sites on a regional scale, drawing comparisons with contemporary sites from southern England (Thomas and McFadyen 2010, Serjeantson 2011, Rowley-Conwy *et al* 2020). This research is formed through my re-examination of surviving animal bone assemblages and the textual traces of animals identified in antiquarian records and archaeological reports. Significantly, Yorkshire's animal assemblages from the Early Neolithic can now be shown to be dominated by domesticated cattle, pig and sheep. Cattle are the most prevalent species when all forms of architectures (long barrows, round barrows, settlement scatters and pits) are aggregated; however, when each architectural form is considered separately a wide variability in practice is identified. I will use this evidence to inform an animal-human discussion on subsistence practices, dairying and the role of wild animals. The second discussion presents new research following the re-examination of the animal remains and architectural evidence from Yorkshire's Early Neolithic long barrow and round barrow sites. I have considered four different loci of deposition: the 'pre-barrow' contexts; the mortuary structure and platform; the ditches;

and the superstructure of the barrow ('superstructure' refers to the upcast mound). I have selected these spatial locations as areas likely to represent different temporal, as well as spatial, patterns of activity (see Thomas and McFadyen 2010). Although the animal remains are diverse in character, with a wide variability in practice, I have observed particular themes regarding the nature of human-animal relationships; themes which reveal both architecturally specific practices and those which appear to 'take no heed' of our contemporary architectural classifications. The third and final discussion explores the role of domestic activity at Yorkshire's Early Neolithic long and round barrow sites. Typically understood as tombs for the human dead, I wish to understand the accumulation of 'pre-barrow' domestic evidence, how this evidence forms the conditions for building works, and its extension into architecture.

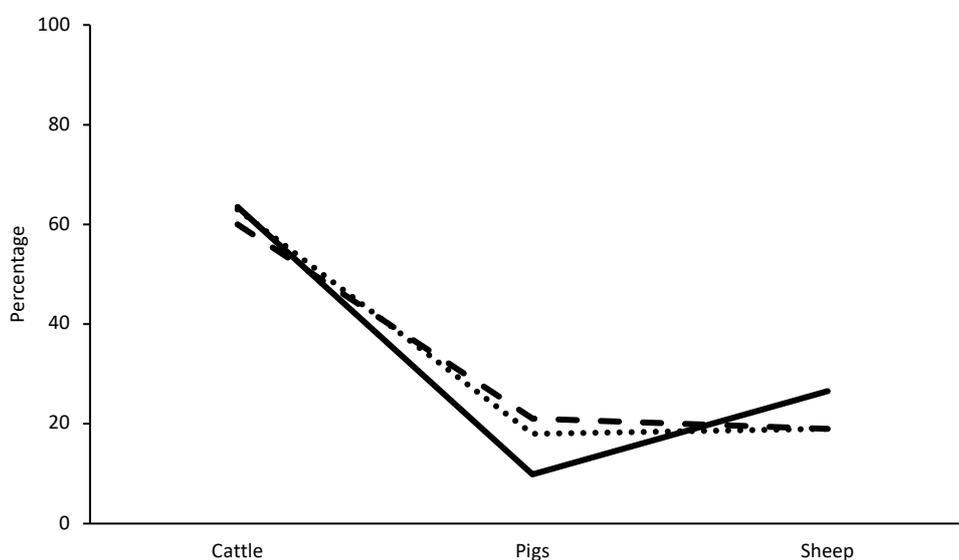
Lesley McFadyen (2007) argues an important physical relationship existed between the 'pre-barrow' midden (including animal bone) and two timber structures, two cists and superstructure of the Ascot-under-Wychwood long barrow site. Guiding the reader through the relationships of these domestic and ritual practices, McFadyen entangles these binary opposites to such an extent, that their labels become difficult to justify. A midden builds up around two timber structures, later these structures become wrapped up by the midden; the midden is then cut by two cists, and finally the midden which forms the conditions for building (and its animal bone) is caught up in the making of the barrow.

Alongside exploring the role of pre-barrow domestic activity as the conditions for building and its extension into architecture, I will also present archaeological evidence for deposits of Early Neolithic domestic activity contemporary to and after the site's role as a tomb for human remains has come to an end.

9.2. The earliest farming in Yorkshire

In Figure 9.1 I compare the percentage of domesticated cattle, sheep and pigs (NISP) from Serjeantson's (2011, 16) study of Early-Middle Neolithic faunal remains from southern England with Early Neolithic faunal remains from Yorkshire. The Yorkshire datasets are those sites with comparable NISP counts; this includes the long barrows at

Kilham, Willerby Wold and Raisthorpe; the round barrow at Calais Wold 275; and the settlement scatter at Rudston 62.



Southern England enclosures (N = 9010) – long black dash

Southern England barrows (N = 1463) – short black dash

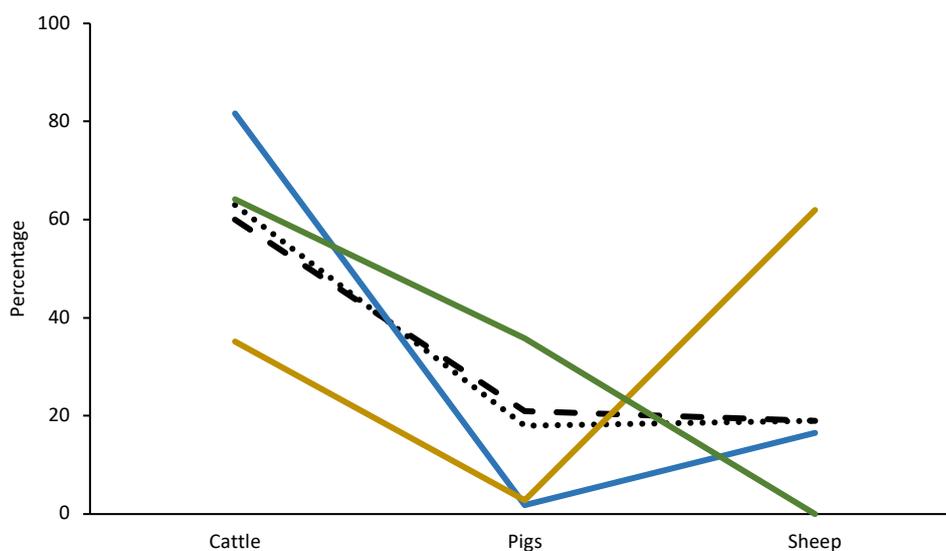
Combined Early Neolithic architectures from Yorkshire (N = 233) – black

Figure 9.1. Percentage NISP of cattle, pig and sheep from Early-Middle Neolithic assemblages from southern England and Early Neolithic assemblages from Yorkshire (after Serjeantson 2011, Fig 2.2). Southern England barrows and enclosures from Serjeantson (2011, 16).

The southern England Early-Middle Neolithic enclosures and barrows, with NISP counts of 9010 and 1463 respectively, present a very similar pattern. Cattle are the most prevalent at around 60%, with pigs and sheep approximately 20% each. There is a minor variation between the percentage of cattle and pigs between these two architectural forms but overall, they present a uniform picture. The Early Neolithic dataset from Yorkshire combines evidence from three long barrows, one round barrow and a settlement scatter; the NISP count is small at 233 and we must be cautious at drawing conclusions from smaller samples (however we must also do the best with what is available!) presents a similar ratio to southern England. Cattle are again the most prevalent, followed by sheep and pigs. The evidence suggests sheep may have been economically more significant in Yorkshire and pigs less so than southern England. This

preference for sheep over pigs echoes practices recorded in Scotland at Knap of Howar period 1 (Noddle 1983), Tofts Ness phase 1 (Nicholson and Davis 2007) and Northton (Finlay 2006).

If we however consider long barrows, round barrows, and settlement scatters separately, we find Figure 9.1 masks a wide variability in practice.



Southern England enclosures (N = 9010) – long black dash

Southern England barrows (N = 1463) – short black dash

Yorkshire long barrows (N = 109) – blue

Yorkshire round barrows (N = 71) – orange

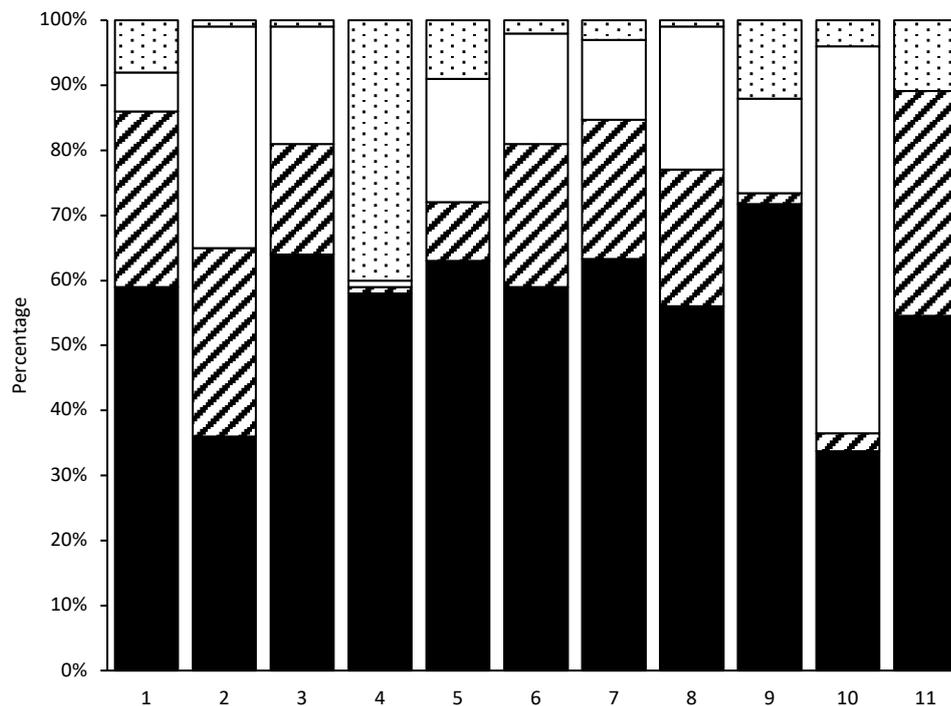
Yorkshire settlement scatters (N = 53) - green

Figure 9.2. Percentage NISP of cattle, pig and sheep from Early-Middle Neolithic assemblages from southern England and Early Neolithic assemblages from Yorkshire (after Serjeantson 2011, Fig 2.2). Southern England barrows and enclosures from Serjeantson (2011, 16).

Figure 9.2 presents the findings for Yorkshire's long barrows, round barrows and settlement scatters, immediately the results are striking. The percentages of each domesticated animal fluctuate between different site types. Cattle appear to have an increased significance at long barrow sites (supporting the idea of a 'special' role of cattle at these sites (Rowley-Conwy *et al* 2020, 404)), in contrast to pigs which are very rare, in fact there are more wild animal remains than those from pig (see Figure 9.3).

This contrasts with the positions of Kinnes (1992) and Fields (2006, 130) who have suggested ‘pig had assumed the importance afforded to cattle in southern long barrows’, this was based on the single site of Hanging Grimston (Mortimer 110). There were no sheep remains from the settlement scatter at Rudston 62, which represents ‘domestic activity’, with a greater representation of pig. The Calais Wold 275 round barrow is the only example where sheep is more prevalent than cattle, this is significantly different to all the other sites and again has more in common with the Northton site in Scotland (Finlay 2006); however, caution again must be stressed over the sample size.

Both Figures 9.1 and 9.2 provide a focus on the domesticated animals from the Early Neolithic, however, what about wild animals? How does the evidence from Yorkshire support or contrast those assemblages from southern England? In Figure 9.3 I present the percentages of wild animals (aurochs, red deer, roe deer and wild boar; excluding antler), alongside the three main domesticates from Yorkshire and eight Early Neolithic assemblages from southern England.



1. Ascot-under-Wychwood (N = 179)
2. Hazelton North (N = 245)
3. Windmill Hill pre-enc (N = 174)
4. Coneybury (N = 808)

5. Eton Rowling Course (N = 379)
6. Hambledon Hill (N = 2371)
7. Windmill Hill ditches (N = 949)
8. Etton (N = 1387)
9. Yorkshire long barrows (N = 124)
10. Yorkshire Early Neolithic round barrows (N = 74)
11. Yorkshire settlement scatters (N = 55)

Figure 9.3. Frequencies of animal bones in NISP (Number of Identified Specimens) from Early Neolithic sites from southern England and Yorkshire. Cattle (black), Pig (diagonal), Sheep (white) and Wild (dots). 'Wild' is the sum of aurochs, red deer, roe deer and wild boar. Ascot-under-Wychwood (midden below mound) from Mulville and Grigson (2007); Hazelton North (midden below mound) from Levitan (1990); Windmill Hill from Grigson (1999); Coneybury from Maltby (1990); Eton Rowing Course Area 6 from Jones (2013); Hambledon Hill from Legge (2008); Etton 1A, 1B from Armour-Chelu (1998); Yorkshire long barrows include Kilham, Willerby Wold and Raisthorpe (see Chapter seven); Yorkshire Early Neolithic round barrows is from Calais Wold 275 (see Chapter four); Yorkshire settlement scatters is from Rudston 62 (see Chapter five).

All eleven samples illustrate the dominance of domesticated animals within Early Neolithic assemblages; I find this perhaps surprising considering the proximity of the forest and the wild animals found within. It is also of note that while wild animals are less significant in numbers, there is a small but constant presence at all the sites; this is like the small but constant inclusion of wild mammals in different loci of deposition at Cotswold-Severn long barrows (Thomas and McFadyen 2010, Fig. 5). The exception is the Coneybury 'Anomaly' where wild animals represent a significant percentage of the assemblage, with roe deer dominating (although still to a lesser extent than cattle). Gron *et al* (2018) have interpreted this site as a 'special' deposit, perhaps resulting from a single feast between farmers and local hunter-gatherers.

So far, I have discussed those few sites which have undergone re-examination to modern standards (a result of this thesis), however, most sites excavated in Yorkshire have not; their human-animal relationships rather than being present in archaeological archives, in the form of bone, tooth or antler; are instead textual traces within antiquarian records, correspondences and archaeological reports. In Figure 9.4 I present the 35 Early Neolithic sites (long barrows, round barrows, pits and settlement scatters; excluding those archives which have been re-examined in Chapters 4,5 and 7) where identification to species is provided.

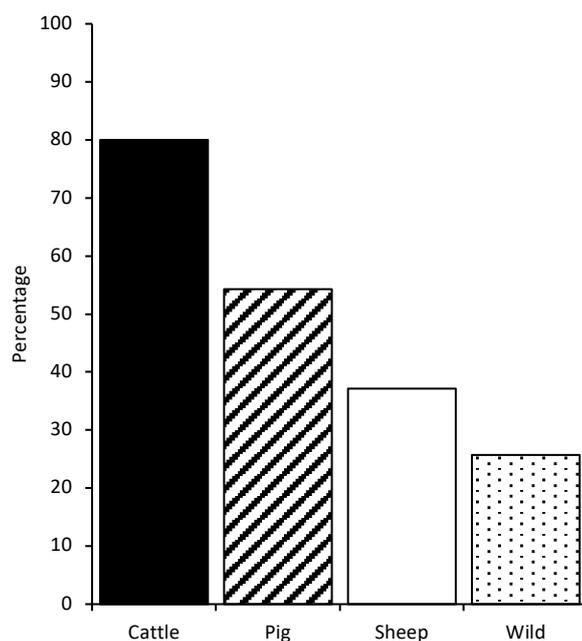


Figure 9.4. Percentage of Early Neolithic sites in Yorkshire where textual traces (antiquarian accounts and archaeological reports) provide identification to animal species, excluding those sites re-examined in Figure 9.3 (The Manby excavations are Willerby Wold and Kilham, Brewster excavation at Raisthorpe, Coombs excavation at Calais Wold 275 and Grantham excavation at Rudston 62). Cattle (n = 28), Pig (n = 19), Sheep (n = 13) and Wild (n = 9). ‘Wild’ is the sum of aurochs, red deer, roe deer and wild boar. Antler fragments have not been included due to the fact their status may have been different to other animal remains, since they were frequently used as tools.

Although crude in method, Figure 9.4 illustrates that cattle are the most encountered animal (being recovered from 80% of the sites), followed by pig, sheep and to a lesser extent wild animals. Wild animals in this case are the sum of aurochs, red deer, roe deer and wild boar; with the exclusion of antler. There are no wild boars included in Figure 9.4, due to antiquarian accounts failing to distinguish between a male domesticated pig (boar) and a wild boar. Aurochs again are likely under-represented due to a lack of details, except for the settlement scatter at Rudston 67, where Greenwell (1877, 262) records the presence of a large size of ox ‘...than has been before met within the barrows of the Wolds.’ This reminds me of my earlier reference to William Cunnington’s findings from Knook long barrow, Wiltshire (Eagle and Field 2004, 55) – where after showing the remains of the skull and horncore of a large ox to a local butcher (here there is also a nice link between this butcher and the Granthams, who were themselves butchers), the butcher replies ‘that it was larger than any ox he had seen’. What Figure

9.4 fails to represent is the total numbers of bone fragments and the number of individuals recovered.

Where estimates for the number of animals are provided, it is associated with the larger faunal assemblages from the settlement scatters (see Chapter 5). At Fox Covert, Greenwell (1877, 232) describes the fragmented bones of ‘several’ oxen, representing adult and juvenile animals and four pigs. At Greenwell 42 (Greenwell 1877, 193) the faunal remains include ‘a large number of oxen, some young ones and two pigs. All the marrow containing bones have been split open’. At Greenwell 8 a pit contained chalk and the bones of three oxen (Greenwell 1877, 147). Recovered from the barrow at Weaverthorpe 47, Greenwell records the bones of several oxen, sheep/goat and one red deer (Greenwell 1877, 202). The Rudston 67 animal assemblage appears to be the most extensive with 4 red deer bones and 2 teeth; 12 sheep/goat and 6 teeth; 4 horse bones, 2 dog bones, 65 pig bones and 30 teeth and 130 cattle bones and 41 teeth (Greenwell 1877, 262). At all five settlement scatters cattle look to be the most prevalent, followed by pig and sheep, supporting Figure 9.4 and concurring with my results from Rudston 62 (see Chapter 5). The exception is Rudston 63, where recovered was ‘several oxen, still more goat or sheep, also of twelve pigs and two hares’ (Greenwell 1877, 251).

9.2.1 Cattle dairying

The evidence for sex primarily comes from the re-examined sites which form the focus of Chapters 4,5 and 7. In this section I will focus on the biometric evidence for sex from domesticated cattle. Research has demonstrated that Early Neolithic cattle assemblages in southern England are dominated by female animals, perhaps because of a dairying economy (Legge 1981). The culling of young males is a response to maximising milk yields for human consumption. While other research has suggested these patterns may be a product of belief, ritual or social preference for sites which are not typically understood as ‘domestic’ sites, such as causewayed enclosures and earthen long barrows (Shepherd 2021). Biometric evidence is available from five Early Neolithic sites in Yorkshire – Willerby Wold, Kilham and Raisthorpe long barrow sites; the round barrow at Calais Wold 275 and the settlement scatter at Rudston 62. At Calais Wold 275 there is a MNI estimate of one cow, Jarman providing a measurement on a radius distal breadth of 71.9mm (Chapter 4). When compared to contemporary animals (see Figure

7.6), I would interpret this animal as a female domesticate. At Rudston 62 all those measurements which fall within the range of domesticated animals I interpreted as females (see Chapter 5). The same is true for Willerby Wold with a radius distal breadth of 64.73e mm, at Raisthorpe with a metacarpal SD of 25.54mm (ID-29) and at Kilham where the measurements of an astragalus (ID-217) and humerus (ID-312) indicate female animals (see Chapter 7). The only exception I found to this pattern is an astragalus (ID-217) recovered from Pit F, Kilham long barrow, which I argued as either a domesticated male or female aurochs; based on the size overlaps of these two species. If ID-217 is a female aurochs, it is possible this animal could have been obtained through restocking of female aurochs; rather than from hunting. Research on ancient DNA by Park *et al* (2015, 11), suggests a complex history of hybridisation between the wild aurochs and the ancestors of modern British and Irish cattle. Sampling of an aurochs humerus (CPC98) bone from Carsington Pasture Cave, Derbyshire (just south of the study area), Park *et al* (2015) argue that the high levels of genetic mixture between these two species (as distinct to what was occurring on the continent) may have arisen ‘through purposeful restocking with wild aurochs by early herders in Britain’ (Park *et al* 2015, 11). The evidence suggests to me an overwhelming preference for domesticated female cows in these assemblages, supporting the conclusions reached in southern England and contrary to my research from Wiltshire’s earthen long barrows (Shepherd 2021). Alongside these adult female cows, the recovery of young cattle from Willerby Wold and Raisthorpe long barrows; and their textual reference at Fox Covent (1877, 232), Greenwell 42 (Greenwell 1877, 193), Whitegrounds (Brewster 1984), Towthorpe 18 (Gibson and Bayliss 2010, 88), Hedon Howe (Mortimer 1905, 346), Rudston 63 (Greenwell 1877, 251), Rudston 62 (Greenwell 1877, 245) and Painsthorpe Wold 118 (Mortimer 1905, 125) could support arguments that Early Neolithic herds were primarily female in structure, with young male cattle culled to increase milk yields. This has recently received further support by lipid residue evidence indicating dairying from ceramics at Willerby Wold long barrow and the Street House saltern (Wiltshire pers comm 30th May 2022).

9.2.2. *Wild animals*

Wild animals represent a small but constant percentage of the animal remains from Early Neolithic contexts, both in Yorkshire and southern England. There are many

reasons why Early Neolithic people hunted wild animals, this can include food, resource buffering, skins and other raw materials, the removal of threatening animals, totem animals and social reasons (demonstration of bravery and prowess as an example) (Serjeantson 2011, 37). Let us now consider these animals individually.

Red deer

Red deer is the most encountered large wild mammal, even when we exclude antler fragments (shed and unshed antler can be used as a raw material, which can be collected or curated). At the Rudston 62 settlement scatter the red deer NSP count is 4, including one long bone fragment and three teeth (Chapter 4). From the south ditch at Kilham long barrow, a fragmented calcanium and two upper molars were recovered (Chapter 7); these could be associated with an antler from the same feature which derived from a slaughtered animal, as indicated by the attached skull fragment. Most of the antler from the assemblages under examination are small fragments or tines with broken tips. An antler fragment from the primary mound at the Wold Newton round barrow is described by Mortimer (1905, 350) as having a portion of the skull attached, and again from the mound at Garton Slack 37 long barrow (Mortimer 1905, 209). In contrast, the antler maceheads from both the adult male burials at Duggleby Howe (associated with Burial G) and Cowlam 57 (Burial 4) round barrows are described as derived from shed antler (Mortimer 1905, Greenwell 1877, 214). There is no evidence for immature deer or females, suggesting those male animals which were hunted may have been selected due to their antler. An extremely worn lower M1 (with a significant amount of mesio-distal wear), from the Rudston 62 settlement scatter could suggest an old animal with very large antler. Serjeantson (2011, 41) records evidence for the utilisation of red deer skins from the Late Neolithic Grooved Ware pit 3196, Barrow Hills; there is no such evidence from Yorkshire.

The use of antler as a raw material in the making of maceheads has interesting connotations. If we consider the natural behaviours of red deer, antlers have primarily two roles – use as weapons (during the rut which takes place in autumn) and objects for competitive displays (sexual attraction) (Corbet and Southern 1977, 418). Over time antlers develop to become larger and more complicated, these would have been understood by Early Neolithic people to represent older and perhaps even ‘wiser’ animals. If antler is selected based on the size and complexity of their structure, can we

also imagine this raw material dragging its essence of strength and sexual prowess along with it (also referred to as ‘animal affects’, see Conneller 2011, 61)? And would this raw material with its essence not provide the same connotations to the owner of such an object? Conneller (2011, 62) argues through viewing antler as affects, would extend the animal affects to the human body and allow it to act in a ‘deerish’ way. After all, a macehead is a weapon and perceivably an object of social status and/or sexual attraction (see Figure 2.2).

The frequency of red deer remains is low in Yorkshire and southern England; much lower than Early-Middle Neolithic sites in continental Europe, where their remains represent approximately 10% (Serjeantson 2011, 41).

Roe deer

The remains of roe deer have been recovered from five sites in the region (inc antler), representing 11.9% of the assemblages considered in this thesis. This contrasts with the 36% of Early-Middle Neolithic assemblages in southern England (Serjeantson 2011, 42), and six of the eight Wiltshire long barrows examined by Banfield (2018, 175). At Kilham long barrow, Greenwell (1877, 553) describes two roe deer antlers were recovered from the mound. A single roe deer antler was recovered from near the centre of the Hanging Grimston long barrow façade, approximately 1.2m deep (Mortimer 1905, 102). At Wold Newton round barrow roe deer are described as being recovered from the primary mound (Mortimer 1905, 350) and from the oval pit at Calais Wold 275 was recovered roe deer antler and a vertebra possibly from the same animal (Mortimer 1905, 161). At Duggleby Howe round barrow, Mortimer (1905, 23) records the discovery of roe deer remains (no further details) from the primary mound and just below Grave B. Gibson *et al* (2009, 60) re-examination of the archive found both a pig mandible (KINCM: 150.42) and sheep/goat mandible (probably recovered from the mound) as being incorrectly identified, and reinterpreted them as two roe deer mandibles; probably from the same individual with an estimated age of more than 1 year. There were no signs of human modification. There is no evidence for the consumption of roe deer during the Early Neolithic, in contrast to the special deposit at Coneybury (Gron *et al* 2018). There is also no mention of the hunting of these animals for their skins. There is also no account if the antler specimens were derived from shed antler or slaughtered animals; while in southern England, Serjeantson (2011, 42) records

the recovery of both. The Duggleby Howe specimens are likely to have been hunted and eaten, with Mortimer (1905, 41) describing those from the primary mound as ‘disjointed and fractured’; but their context within the mound (Mortimer’s W and X), would indicate a Late Neolithic date ~ 2915-2840 *cal* BC (68% probability) (Gibson *et al* (2009, 70).

Aurochs

I have identified aurochs at three sites under re-examination through biometry: Kilham and Raisthorpe long barrows and the Rudston 62 settlement scatter. Grigson (1999) has developed a criteria for identifying aurochs amongst assemblages dominated by domesticated cattle. This includes the least frontal breadth and basal length of the skull, the length of the 3RD mandibular molar (M3) and the absolute size of several post-cranial elements. Although aurochs bulls are significantly larger than domesticated cattle, there is a cross-over in size between female aurochs and domesticated bulls (Shepherd 2021), which leaves the interpretation to the biases held by the researcher. In southern England, aurochs were recovered at 2 of 7 Early Neolithic sites in Serjeantson’s study (2011, 43), however my recent research (Shepherd 2021) has demonstrated their occurrence varies between certain forms of architectures (earthen long barrows) over others (causewayed enclosures); the Keiller excavation at the Windmill Hill causewayed enclosure produced 4000 bones, of which only 12 could be identified as aurochs (Serjeantson 2011, 43). A single reference from Yorkshire’s antiquarian reports could be interpreted as aurochs – at the Rudston 67 settlement scatter, Greenwell (1877, 262) records the presence of a large size of ox ‘...than has been before met within the barrows of the Wolds’.

At the Kilham long barrow a single astragalus from Pit F could either be interpreted as an aurochs female or domesticated male. A very large male aurochs scapula was examined in the Raisthorpe long barrow archive. The Brewster archive provided no context information which was disappointing, however this specimen could be the scapula referred to from Mortimer’s excavation of the monument (Gibson (2011, 18) states that there has been some confusion in the Mortimer archive, during its chequered curatorial history); if so then this specimen was recovered from the original ground surface, associated with the bones from a smaller animal and wood ashes. Along with Rudston 67, my re-examination of the Rudston 62 settlement scatter assemblage produced two aurochs specimens – the fragmented right distal humerus, tentatively

interpreted as an aurochs female and a fragmented right calcaneus, interpreted as an aurochs bull (see Chapter 5). I recorded evidence of butchery on the humerus, with a chop across the shaft to remove the marrow. The male aurochs can be interpreted as being hunted, providing both a significant food resource and social prestige through the hunting of a dangerous animal (Cotton *et al* 2006). The female aurochs could have been hunted, or the purposeful restocking of domesticated herds with wild animals (Park *et al* 2015, 11), in northern England. This is suggested as unlikely by Serjeantson (2011, 45) who fears the breeding between an aurochs bull and domesticated cow would lead to difficult or fatal births. There is also the concern of milk production; would Early Neolithic farmers want to risk their milk yield by breeding in animals which would be larger in stature but historically (on the continent) are recorded as having small udders (Shepherd 2018)?

With respect to the Raisthorpe scapula, it's possible use as a tool (in the act of building) may result in it having an ambiguous status (like antler previously discussed). If we return to the idea of animal affects (Conneller 2011), would the use of this object allow these builders to use their own human bodies in aurochs-like ways? An animal which could have been understood during the Early Neolithic as powerful and respected (Serjeantson 2011, 45)?

Wild Boar

In southern England wild boar has been identified at only five Early-Middle Neolithic sites; Serjeantson (2011, 45) suggesting they provided 'little economic value' to a community or family group, and were largely ignored. When hunted, the reasoning could be the removal of threatening animals (crop destruction) and the social prestige of hunting dangerous individuals.

In Yorkshire all the antiquarian accounts fail to distinguish between wild and domesticated boar. The Hanging Grimston canine tusks are described as having the tips broken, this could have been applied to domesticated animals (Mortimer 1882, 102). Alternatively, the broken tips could have been damaged at the time of deposition – here I am thinking of the practice of deliberately breaking arrowheads/stone axes from similar contexts. The only site I found to produce possible wild boar remains is the Rudston 62 settlement scatter (Chapter 5). A mandibular 2nd molar (M2) and astragalus

cluster with the very largest specimens from the Hambledon Hill causewayed enclosure and Durrington Walls henge monument. Although I provisionally assigned them domesticated status, they could also be wild animals.

9.3. Animal architectures

We will now adjust our perspective from thinking in regional terms and instead consider the similarities and differences in the patterns of deposition throughout the history of the same site and between different long barrow and round barrow sites. I consider four different loci of the deposition of animal remains: ‘pre-barrow’ contexts, mortuary structure and platform, the ditches, and the superstructure of the barrow. These locations will not only represent different spatial locations, but also likely different temporal patterns of activity (Whittle *et al* 2007, McFadyen 2007, Thomas and McFadyen 2010, 101).

It should be noted that there is significant variation to the extent in which the barrow superstructure and possible features underneath the barrow have been investigated across our sites.

9.3.1 Animals in ‘pre-barrow’ contexts

Thomas and McFadyen (2010, 101) found four Cotswold-Severn type long barrows with evidence for animals from pre-barrow deposits. At two sites, Hazelton North and Ascott-under-Wychwood they suggest these faunal remains represent ‘domestic’ middens. The Hazelton North Early Neolithic middens (located to the west of the later chambers) were dominated by domesticated animals (cattle, sheep and pig), which were slaughtered and consumed close to the site of deposition (as indicated by the condition of the bones – many burnt and broken for the removal of marrow) (Thomas and McFadyen 2010, 101). Thomas and McFadyen (2010, 102) recommend that rather than viewing this material as of ‘domestic activity’, we should instead search out the connected practices between this earlier activity and its intentional extension into architecture.

Although in Yorkshire we have evidence for Early Neolithic settlement scatters and/or middens, none of these occur at Early Neolithic long barrow and round barrow sites; they are instead entangled with the barrow building activities of Bronze Age people. The evidence for animals from the pre-barrow deposits at long barrow and round barrows is restricted to four sites. At the Grindale 1 round barrow Manby (1980, 24) records a pit containing an indeterminate animal bone fragment and fourteen flint flakes, however he provides no indication to the temporal relationship of the central pit and activity found elsewhere at the site. Recovered from the original ground surface at the Raisthorpe long barrow was a cattle/deer (possible aurochs scapula (see Chapter 7)), bones from a small mammal and wood ashes. The association with wood ashes and the likelihood the scapula was used as a tool in the act of building, could suggest its deposition was temporal linked with the building of the mortuary structure and its subsequent burning. The Raisthorpe paper archive (Finney draft report, chapter 7) notes the recovery of a fragment of animal bone near a charcoal deposit in section Y, this was not noted during reanalysis. I have argued at Kilham long barrow that all the animal remains from the pre-barrow pits and those recovered from the original surface should be considered Early Neolithic (Chapter 7). The main three domesticates are represented (cattle, sheep and pig), as well as a single oyster shell from Pit 7. In Pit B (which has some contextual concerns (see Chapter 7)) cattle horncore fragments, a burnt fragment of a cattle second phalange and sixteen indeterminate fragments (9 burnt/calced) were noted. Five animal fragments were found on the original ground surface, including a cattle second phalange, sheep long bone fragment, the distal end of a pig humerus and two indeterminate fragments (all with evidence for burning, except for the sheep long bone fragment). In Pit F, I interpreted an astragalus as deriving from either a domesticated bull or female aurochs, and in Pit 3, ten indeterminate fragments were recorded. The two early ditches from Kilham could also be interpreted as 'pre-barrow' activity, from which two fragments of cattle horncore was noted. At the Ling Howe long barrow site, Dent (2017, 1) notes twenty-one animal bone fragments from the original ground surface. Cattle are represented by fragments from the skull, rib, long bones and a metatarsal. There is a probable sheep humerus fragment and pelvis fragment. The pelvis fragment is described by Dent as calcined, another indeterminate fragment as burnt and a third as 'heavily abraded'.

In some respects, the Yorkshire long barrow and the Cotswold-Severn long barrow sites share some similarities, they are all dominated by domesticated animals and the bones are in varying states of condition (fragmented, burnt and abraded), suggesting the accumulation of bones with distinct depositional biographies; they differ however (and in a significant way) in the size of the assemblages. Where the animal bone assemblage from the ‘pre-barrow’ features at Ascott-under-Wychwood have a NISP of 2015 (Mulville and Grigson 2007, 238), the total numbers for Yorkshire’s long and round barrow sites is very small (around 63); how do we come to understand this difference? One interpretation is the building of long and round barrow sites in Yorkshire was not associated with previous settlement activity – built on ‘green field’ sites. This however does not sit easily with the evidence from Kilham, where environmental evidence suggests a significant period of activity at the site prior to the building works associated with the long barrow (see Chapter 7). An alternative interpretation (and my favoured) is instead of trying to connect the world making practices of barrow building and earlier activity, there was instead the careful and deliberate removal of this evidence – perhaps through a ‘cleansing’ act. At the Ling Howe long barrow, Dent (2017, 6) describes how the turf and topsoil was deliberately stripped prior to the monument’s construction. It can be imagined that along with the turf, any animal bone on the surface would also be removed; leaving only the small fragments of animal bone which had become trodden into the new surface. Coombs (see Chapter 4) also describes the deliberate stripping of turf from the Calais Wold 275 round barrow site prior to the monument’s construction. No animal bone was noted as being recovered from this new, artificial surface. This idea that the ground could have been prepared before construction has been proposed elsewhere. At the Late Neolithic site of Silbury Hill in Wiltshire, Leary and Field (2010, 95) suggest the pre-barrow activity included the removal of turf, upon which were found patches of charcoal, charred hazel nutshells and two burnt pig teeth.

9.3.2 Animals in mortuary structures and platforms

The mortuary structures and platforms are here meant to represent those architectures with a close spatial and presumably temporal relationship with the deposition of human remains. I include features (as referred to throughout the thesis) such as chalk/clay platforms, mortuary enclosures, embanked mortuary structures, façade/bedding trenches, and pits (which together may represent a wooden structure), cists, individual

graves and passage graves. I interpret these to represent a similar context to the animals in chambers at Cotswold-Severn long barrows (Thomas and McFadyen 2010, 102). One of the most striking contrasts between this evidence in Yorkshire and that in southern England is the impact and destruction of fire. This has resulted in some sites providing limited insight into the animals encountered during excavation, such as at the Kilburn long barrow where Greenwell (1877, 501) recovered a single fragment of indeterminate bone from the burnt mortuary structure; at the Warter 254 long barrow four fragments of indeterminate animal bone were recovered along with burnt wood and Grimston Ware sherds from what I interpret as a façade bedding trench (Mortimer 1905, 321); the façade trench at Westow long barrow is recorded by Greenwell (1877, 493) as containing burnt earth, stones, charcoal and ‘...calcined bones, not certainly human, were met with close to the east end, but not in any quantity and much scattered’; and the burnt mortuary structure from the East Heselton long barrow included a few indeterminate animal bones (Greenwell 1877, 142). Fortunately, the impact of fire was less total at other sites in the region and I have discerned some noticeable patterns from the animal assemblages.

The first pattern of deposition I wish to explore is the association of human and cattle remains from Early Neolithic barrows. Cattle bones have been recovered within the mortuary structures/platforms at Garton Slack 37 (Mortimer 1905, 209), Market Weighton (Greenwell 1877, 505), Cross Thorns (Mortimer 1905, 333), and possibly Hanging Grimston long barrows (Mortimer 1882, 102); and the Towthorpe 18 (Mortimer 1905, 9), Calais Wold 275 (see Chapter 4), Hedon Howe (Mortimer 1905, 346) and Whitegrounds round barrow/cairns (Brewster 1984, 19). At the Market Weighton long barrow there are three separate cattle deposits associated with the 20m long chalk and wooden mortuary structure (Greenwell 1877, 505). The skull of a child and adult were deposited along with cattle bones 3.5m west from the eastern end of this feature (Greenwell 1877, 507). A further 5.5m west, a pit (1.1m by 0.5m) was encountered by Greenwell (1877, 507), within it was a child’s skull, child’s mandible and a sherd of Grimston Ware. Directly above this pit was a chalk slab cist, containing an adult’s mandible and some cattle bones (Greenwell 1877, 507). Another 0.6m west was another pit (1m by 0.6m) containing two adults and the bones of cattle (along with goat(?) and red deer). Unfortunately, Greenwell offers no descriptions of which elements were recovered. At the Garton Slack 37 long barrow, an adult male (Burial

12), dating to 3710-3530 *cal* BC (95% probability, SK-123 (Parker-Pearson *et al* 2019, Appendix 1) was deposited with a cattle mandible close to the left shoulder (Mortimer 1905, 209). My reanalysis revealed this to be a left cattle mandible fragment, with an estimated age-at-death between 21-27 months (see Appendix 8). This pattern associating human remains (near the skull or scapula) and cattle mandibles has also been noted at Painsthorpe 118 (Mortimer 1905, 125) and Whitegrounds (Brewster 1984, 19). Under the Painsthorpe 118 Bronze Age round barrow, Mortimer (1905, 125) describes an oval grave, within which was an adult male with animal vertebra and a fragmented calf mandible with dentition placed behind his skull. There are no direct dates for this individual, however the recovery of a Peterborough type jet slider suggests a comparable date to the Whitegrounds phase 2 burial. The phase 2 adult male inhumation at Whitegrounds has been dated by Griffiths (2012, 771) between 3530-3310 *cal* BC, and was associated with a Peterborough type jet slider, flint axe, a pig humerus, and a calf mandible (Brewster 1984, 19). Brewster (1984, 19) recorded the pig bone as immature and the right calf mandible fragment as less than one month old. Both were laid near the skull/scapula of the human burial.

This leads us onto a theme identified from the chambers at Cotswold-Severn long barrows, the presence of partial skeletons and isolated elements from young animals (Thomas and McFadyen 2010, 102). Thomas and McFadyen (2010, 102) describe a partial calf skeleton (aborted foetus) and young sheep bones (one humerus was perinatal in size, and another was from a foetus) at Notgrove; a three month old partial pig skeleton at Adlestrop; a calf pelvis fragment, with an estimated age between 7-10 months at Burn Ground; the dog skeleton (aged between 6-7 months) from West Tump; perinatal sheep at Hazelton North; and partial calf skeleton at Bown Hill (Thomas and McFadyen 2010, 102). Alongside the already mentioned examples from the Painsthorpe 118 grave and Whitegrounds round cairn, young animals have also been recovered from the mortuary structures at Wold Newton (Mortimer 1905, 350), Aldro 94 (Mortimer 1905, 82), Calais Wold 275 (see Chapter 4), Hedon Howe (Mortimer 1905, 346) and Hanging Grimston (Mortimer 1882, 102). Thomas and McFadyen (2010, 111) have argued that the deposition of young animals could indicate the importance of barrows (with an emphasis on round barrows in Yorkshire) ‘...within seasonal cycles of activity across the landscape as Edmonds (1999, 62) has suggested’; these seasonal patterns of activity however do not need to simply imply transhumance, as seasonal depositional

practices can be achieved if you are moving or standing still. A sedentary farmer can limit their seasonal activities at round barrow sites, without the need to be mobile in the process. At the Wold Newton round barrow, the skull and other bones from a young pig (Mortimer 1905, 350) were associated with multiple human deposits (burials 2-6), potentially on a platform on the natural surface; Burial 2 has been dated by Gibson and Bayliss (2010, 84) to 3820-3690 *cal* BC (87% probability). At the Aldro 94 round barrow a clay platform with two human burials, black flint and Towthorpe Ware pottery was excavated by Mortimer (1905, 82); at either side of this platform were two 'trenches'. Located within the east trench (façade?), on the floor towards the centre was an unfused sheep scapula, suggesting an estimated age of less than 6 months (Silver 1969). From the façade trench at the Calais Wold 275 round barrow, the Jarman draft report (see Chapter 4) notes three sheep specimens as animals either early in maturity or immature. It also describes the much-fragmented pig skull as coming from a juvenile animal (see Chapter 4). The Hedon Howe round cairn had prior to the building of the cairn, five freestanding cists; this drawing architectural comparisons with sites like the Ascot-under-Wychwood Cotswold-Severn long barrow (Mulville and Grigson 2007). Laid on and around the central cist (Cist 3), Mortimer (1905, 346) records several legs bones, vertebra and other bones from a calf. These bones are mostly in articulation and associated with Grimston Ware sherds (Mortimer 1905, 346). This partial skeleton of a calf, drawing further similarities with the Cotswold-Severn tradition and in particular the animal remains from Notgrove (Thomas and McFadyen 2010, 102).

Serjeantson (2011, 82) suggests the deposition of partial animal skeletons could indicate either a sacrifice of food; or if there is no evidence for consumption (butchery marks), it could be an animal sacrifice for a special occasion such as a foundation sacrifice. At the Hanging Grimston long barrow Mortimer (1882, 102) recovered from the façade trench four heaps of pig maxilla and mandibles. He estimates them to represent a minimum of 20 individuals and as coming from 'chiefly young animals'; the tips of the canine tusks being broken off prior to deposition (Mortimer 1882, 103). What is interesting here is that only at Early Neolithic round barrow sites was there a preference for the close spatial and temporal deposition of humans and young animals; that is except for Hanging Grimston. What I have so far shown is the animal remains from Hanging Grimston long barrow are the exception, not the rule for the Early Neolithic in Yorkshire; and demonstrates the failings in drawing broad regional conclusions from

spectacular individual site assemblages (Ashbee 1984, Kinnes 1992) - ‘Pig had apparently assumed the importance afforded to cattle in the southern long barrows’ (Field 2006, 130). Rather than having more similarities with other long barrows in the region, or even those sites which also produced Grimston Ware sherds, Hanging Grimston has more in common with round barrows, and in particular – the Towthorpe Ware site of Calais Wold 275 (see Chapter 4). The only published date for Hanging Grimston from a pig canine tusk is provided by Kinnes (1992) as 2760 \pm 90 BC (HAR-2160). Mark Knight and Cambridge Archaeological Unit (*pers comm* 26th August 2022) have provided a OxCal calibration of this date, which suggests a date between 3697-3123 *cal* BC (95.4% probability). This could suggest both Hanging Grimston long barrow and Calais Wold 275 round barrow are contemporaries (Calais Wold 275 has been dated to the Early Neolithic - 3770-3640 *cal* BC (95.4% probability) (Parker-Pearson *et al* 2019). Although these two sites do not share ceramic styles or barrow typology, they are located near each other (6km in a straight line), they are similar in their builder’s preference for depositing young animals, the selection of isolated elements (both sites have pig skull/mandible and scapula) and the inclusion of both red deer and roe deer antler and/or bone.

In addition to the above, the recovery of wild animal bones (excluding antler) is rare from the mortuary structures. A deposit (9.3m from the eastern façade) at Market Weighton long barrow is described by Greenwell (1877, 507) as containing the bones of red deer, cattle and goat. From various locations in the Hanging Grimston façade trench, red deer scapula and leg bones are noted by Mortimer (1882, 103), along with a possible red deer/cattle vertebra. At the Hedon Howe round cairn, Cist 1 contained human remains and the bones from two red foxes and a badger (Mortimer 1905, 346). As previously discussed, (see Chapter 6) it is possible these animals entered the cist through their own agency and the act of auto-rewilding. At the Calais Wold 275 round barrow a possible roe deer vertebra was recovered by Mortimer from the oval pit (see Chapter 4). At the Cross Thorns long barrow, Pit 3 (which I have reinterpreted as a façade trench terminal, with Pit 2 forming the other terminal) contained the maxilla and mandible from a ‘large dog’ (Mortimer 1905, 333). Unfortunately, these specimens no longer survive in the site archive, but they could possibly come from a wolf (Clark (1996) has developed new criteria for separating the bones from Neolithic dogs and wolves). The remains of wolf are rare during the Early Neolithic, but they have been

recorded in southern England from the causewayed enclosures at Abingdon and Hambledon Hill (Serjeantson 2011, 46). From the passage grave at Whitegrounds (Brewster 1984, 19) an adult red fox was associated with human remains (see Chapter 8) and finally Mortimer (1905, 125) identified a red fox mandible from the fill of the oval grave at Painsthorpe 118.

9.3.3. *Animals in the ditches*

While mortuary structures have received most archaeological investigation over the last two centuries, other architectural elements have been largely ignored. I have identified only three sites which provide evidence for animals in the ditches of Early Neolithic long barrow and round barrow sites; none of which were the result of antiquarian excavation. The phase 1 ditch at Grindale 1 (Manby 1980, 25) round barrow was sectioned (and so partially excavated), with Manby (1980, 27) recovering a large red deer antler beam fragment from the marl floor in Section N. An absolute date by Griffiths (2012, 979) on this antler, alongside its association with a nearby Towthorpe Ware spread from the pre-barrow soil, dates this building works between 3970-3370 *cal* BC (HAR-269).



Figure 9.5. Grindale 1, phase 1 ditch with antler fragment on floor (Manby 1980, Plate 4).

The remaining two sites are the Raisthorpe and Kilham long barrows which I have already re-examined in detail in Chapter 7. The primary fill from Kilham presents some significant findings, deposited on the floor of the eastern ditch terminals were two horncore fragments, a lower M2 (estimated age between 18-30 months) and two rib fragments; all from cattle. From the primary fill of the western terminals were three red deer antler fragments, two with clear signs of tool use (broken or worn-down tips) and a third from a slaughtered young male (as indicated by the attached skull fragment). The latter specimen I have recorded as having V-shaped cuts to the outer surface but no evidence for tool use (see Chapter 7). Is this the intentional separation of wild and domesticated animals; the separation of animal and tool or a product of excavation methodology? The secondary ditch fills included the bone and teeth (but no antler) from cattle, red deer, sheep, dog and hare. I found no separation of wild-domesticated animals and some of the cattle remains are associated with a deposit of Grimston Ware sherds within the N1 section. Like Kilham and Grindale 1, the ditches at Raisthorpe were only sectioned, and therefore we should be mindful that we are working with a sampled assemblage. Unfortunately, the paper archives from Raisthorpe long barrow provide no indication of the vertical context of the animal remains recovered from the north and south ditch. After reanalysis, I can confirm the presence of cattle, horse, sheep and pig (all domesticated animals), but I am unable to say with confidence if these animals entered these features during the Early Neolithic. There are two exceptions, a worked unfused cattle radius and a discrete deposit of highly fragmented, burnt animal bone – both approximately 1.1m deep and possibly from the primary fill/ shortly after the primary fill. These three sites suggest a pattern for the deposition of red deer antler and cattle remains shortly after/ during the digging of the ditches.

9.3.4. Animals in the superstructure of the barrow

We might expect there to be some similarities between the animals in the superstructure of the barrow and those recovered from the primary fills of the flanking ditches. This is best illustrated at the Kilham long barrow, (which as we know had cattle remains and red deer antler in the primary fill) where Greenwell's (1877, 553) excavation of the mound identified two antler fragments and '...some bones of a small ox'. Elsewhere long barrows appear to continue a preference for the importance of cattle, such as at Huggate 224, Willerby Wold, Westow and Market Weighton. This is strikingly different

to Early Neolithic round barrows which show a much greater variation. From the primary mound at Wold Newton, Mortimer (1905, 350) notes the presence of cattle, roe deer, red deer, pig, dog or wolf, horse, sheep/goat, black grouse and bird. Observing the occurrence of cattle in the superstructures however does not necessarily imply the same human-cattle relationships are being performed. At the Huggate 224 long barrow a deposit of human and cattle bones are recorded from the chalk grit and soil barrow matrix. Mortimer (1905, 301) describes the human bone as unburnt and including fragments of skull, a femur and other long bones. The cattle bones were also unburnt and included fragments of skull, a femur and other bones. Is this evidence for the same burial rites for both humans and cattle? At the Westow long barrow only cattle bones were recovered by Greenwell (1877, 491) from the barrow matrix. This time from a secondary earthen barrow, within which was a cist and just above the level of this cist and a little to the east, were cattle horncore fragments and other bones. There are no absolute dates to confirm the age of this secondary phase of barrow making, however Greenwell (1877, 491) notes the recovery of flints and plain dark pottery. Willerby Wold long barrow has been discussed and examined in Chapter 7 and reveals a discrete episode of deposition at the eastern end of the barrow, containing cattle bones, charcoal and Grimston Ware sherds. Darvill (2004, 119) contends that the mound 'was not treated as a location for artefact deposition, ritual or otherwise', however, evidence from Willerby Wold, Hanging Grimston and Kilburn long barrows might suggest differently. The Kilburn long barrow unlike most long barrows in Yorkshire is aligned N-S, with the mortuary structure at the south, as opposed to the east (Greenwell 1877, 501). Towards the northern end of the superstructure, Greenwell (1877, 501) notes a discrete deposit of white sandy soil, containing charcoal and several portions of animal bones. Within the gritty chalk and soil barrow of Hanging Grimston, some 4m west of the façade trench, Mortimer (1905, 104) describes a highly fragmented Grimston Ware bowl (Vessel D), which he suggests had been placed on its side and associated with a fragment of pig mandible, teeth and a long bone fragment from the same animal. This continues the significance of pig remains (in contrast to other long barrow sites) at Hanging Grimston and connects the depositional practices from the earlier building of the mortuary structure to the later making of the barrow.

The recovery of animal teeth from the superstructure also marks out Hanging Grimston as the exception, as no other long barrow site have teeth been noted from this feature.

In contrast, both the Towthorpe 18 and Calais Wold 275 round barrows have had teeth recovered from the superstructure. At Calais Wold 275, 82.6% of the animal remains from the primary mound were teeth (see Chapter 4). From Towthorpe 18, Mortimer (1905, 9) describes detached cattle and pig teeth from various places in the barrow. Gibson and Bayliss's (2010, 88) reanalysis of the site archive found five teeth (1 upper molar and 4 upper permanent premolars) and a heavily weathered atlas from an adult cow. Thomas and McFadyen (2010, 105) have identified the regular deposition of animal teeth within the blocking material of Cotswold-Severn long barrows. Examples include the 155 fragments of both domesticated and wild pig teeth from the blocking material at Nympsfield; and the jaws and teeth of wild boar at Uley Barrow. I have argued in Chapter 4, that some of these specimens could have entered the blocking material, not as the result of deliberate inclusion, but because of these teeth forming the conditions for future architecture. At Calais Wold 275 the presence of cattle and sheep teeth in the primary mound, could be related to the same animals being slaughtered at the site almost a decade earlier. Their teeth (which survive better than bone) and other material culture (sherds of Towthorpe Ware) being scattered on the surface and wrapped into the matrix of the barrow (and the act of closing down a site). At Towthorpe 18 there is an interesting contrast between the heavily weathered adult cow atlas and adult teeth and those bones in 'excellent condition' from a very young calf, one neonate and two very young pigs; and one neonate and two very young sheep/goats (Gibson and Bayliss 2010, 88). Mortimer (1905, 9) notes the recovery of a cattle rib from the original surface and associated with human remains, which I interpret as a platform, associated with a mortuary structure. This rib indicates earlier cattle activity at the site, prior to the construction of the barrow. What we have is the wrapping together (perhaps incidentally or purposely?) of animal bones into the barrow matrix, old and young animals; but also elements with different temporal histories – old, weathered bone, (bone which connects both mortuary structure and barrow) and new, fresh bone.

9.3.5 Patterns of activity

While the faunal assemblages are diverse in character, common themes hint at animals being intimately related to particular areas or aspects of construction – which I argue as representing different spatial, as well as likely temporal patterns of deposition. Patterns of activity which I have observed across Early Neolithic barrows include: the deliberate

removal of animal remains from pre-barrow contexts at both long and round barrow sites; the deposition of partial remains of cattle within the mortuary structures of long barrows, in contrast to partial remains of foetal and young animals within the same context at round barrows; the deliberate separation of wild and domesticated animals in the primary fill of long barrow ditches; and, the use of teeth within the mound material of round barrows. There is clear evidence for the importance of cattle at long barrows, with the famous pig remains from Hanging Grimston long barrow (Grimston Ware) now being understood as the exception, as opposed to the rule; sharing more in common with the human-animal relationships found at contemporary round barrow sites (Towthorpe Ware).

9.4 Domestic activity and its extension into barrow architecture

At the beginning of this chapter, I touched on the idea that previous domestic activity can form the conditions for building works associated with long or round barrows. In this case, I drew on the archaeological evidence from Cotswold-Severn long barrows (Thomas and McFadyen 2010), where animal remains from midden deposits, hearths, pits and buried soils were accumulated together and extended into architecture (McFadyen 2007). Drawing on this evidence (and returning back to Yorkshire), we find there are some immediate, and significant contrasts. I have found no evidence for midden deposits from the pre-barrow contexts of either long or round barrow sites. This could be the result of the deliberate removal of such material prior to the commencement of barrow works, or those locations with pre-existing domestic activity were excluded from later building activity (note Ling Howe long barrow and Calais Wold 275 round barrow). We do have evidence for several Early Neolithic settlement scatters but these have been recovered from the pre-barrow soils/mound material of Bronze Age round barrows. To mature our thinking on this topic, we must first come to understand the nature of Early Neolithic domestic archaeology in Yorkshire.

To start with there is very little evidence for Early Neolithic domestic activities in Yorkshire, which includes the recovery of animal remains. For the whole of Yorkshire, there are only four sites, and all are either dated by their association with Early Neolithic pottery (Grimston Ware or Towthorpe Ware) or being recovered from pre-barrow

contexts. At the Corner Field, Site 11 pit (see Chapter 5), Manby (1975, 31) describes the pit fill as containing a brown soil, seventeen Grimston Ware sherds, flint and weathered cattle bones. My reanalysis suggests the accumulation of materials with different depositional biographies – the cattle remains were all very weathered, many indeterminate and those which I identified to element included skull fragments, teeth and a metacarpal fragment; the sherds were all consistent and suggestive of a single episode of deposition; and the flints are all fresh and sharp. The fill from Pit 1370, Field 0005, Caythorpe (Abramson 1996, 10) included an organic rich deposit on the base, which included the sherds from four Early Neolithic vessels, a fragment of Group VI stone axe, a small number of animal bones and environmental evidence for wheat grains, apple, pear and crab apple seeds. At the base of Pit non011307, Nosterfield Quarry (Dickson 2011, 85) was a burnt organic material which included charcoal (derived from ash and oak), burnt hazelnut shells, three joining sherds from a Towthorpe Ware (as we as Peterborough ware sherds) vessel and four calcined animal bone fragments. These animal bone represent rib and long bone fragments and are all less than 10mm in size (Dickson 2011, 328). Two radiocarbon dates (from hazelnuts) suggest two phases of deposition in this feature - 3780-3630 *cal* BC (BETA 249723) and 3360-3020 *cal* BC (BETA 249722); the earlier likely to be associated with the Towthorpe Ware activity and the latter with the Peterborough Ware. From the pre-barrow contexts at the Kilham long barrow site, I have identified four pits containing animal bones (see Chapter 7). Pit 3 had within its fill derived Mesolithic flints, charcoal and ten heavily weathered animal bone fragments. In the fill of Pit 7 was an oyster shell, charcoal and a single flint flake. Within Pit F was a cattle astragalus, several small animal bone fragments (not noted during my re-examination) and charcoal. And finally interpreting Pit B is made difficult due to the digging activities of Greenwell and the mixing of later materials (note the human tibia dated by Schulting (2017, 36) between 2130-1900 *cal* BC (95.4% probability), it contained sixteen indeterminate fragments of animal bone (twelve with evidence of burning), a fragment from a cattle second phalange (charred) and a cattle horncore fragment, derived Mesolithic flints and a possible Grimston Ware sherd (see Chapter 7).

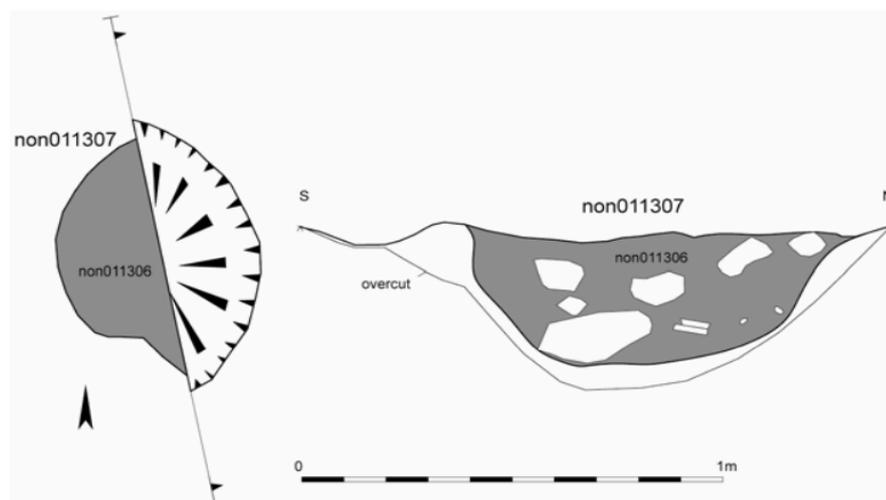


Figure 9.6. Pit non011307, plan and section (Dickson 2011, Fig. 65)

Archaeological evidence for domestic activity would appear (from the above examples) to consist of an assemblage of both fresh/new and weathered/old materials; materials which include charcoal, sherds of pottery (which on occasion can be re-fitted), organic evidence (hazelnuts, wheat, apple seeds etc), flints (either fresh Early Neolithic flints or derived patinated Mesolithic flints), stone tools and heavily weathered, fragmented, and at times burnt animal remains (those which can be identified coming from those elements which have an increased density and more likely to survive – metacarpal shaft, teeth, second phalange).

I now wish to explore three discrete themes; domestic features and their extension into barrow architecture; domestic activity during the making of a barrow; and domestic activity after those rites associated with the barrow have ended.

9.4.1 Domestic features and their extension into barrow architecture

Let us consider the enduring importance of pre-barrow pits in the building works of long barrow sites, emphasising the connection between pits and barrows, rather than separating them out. At the Kilham long barrow site, I have argued that Pits A-F and Pits 1-7 should be understood as Early Neolithic in construction but containing residual earlier Mesolithic flints. Looking at the site plan (see Figure 7.17), it is likely these pits were either still visible (through a depression or the growing habits of overlying

vegetation) and/or maintained in social memory during both the construction of the early ditches and mortuary enclosure. The early ditches appear to respect the spatial locations all of these domestic pits and seems to continue the same patterns of activity – in the act of depositing cattle heads or hoof remains. A century later, the building of the mortuary enclosure re-works and re-negotiates this earlier defined space, and continues to respect the pre-barrow pits; through the integration of Pit A into the east façade bedding trench and the positioning of the western entrance, which looks to direct those entering the monument to move directly over the top of Pit 7.

9.4.2 Domestic activity during the making of a barrow

Returning to the ‘occupation debris’ from the east end of the Willerby Wold long barrow mound, Manby (1963, 183) describes the scaping up of rubbish from habitation sites and its deliberate inclusion into the mound during its construction. Manby’s (1963, 183) interpretation that this archaeological evidence should be considered as domestic activity agrees with my previous observations; an assemblage of archaeological evidence which includes - pottery sherds, animal bone (both charred and uncharred), fine charcoal, two brown pebbles and human bone (Manby 1963, 184). On closer inspection however, there is something about this assemblage which is unusual. In Chapter 7, my reanalysis of the animal remains found them to likely represent the radius and/or ulna from a young cow (less than 1 years old) and an adult female cow (more than 42 months old). These elements are not those expected from domestic activity. I found no evidence for animal gnawing (suggesting quick deposition), all elements showed evidence for butchery and elements from both individuals are consistent, displaying similar degrees of weathering. In blunt terms, they do not look like random bones selected from a midden or ancient land surface (Brophy and Wright 2021), but instead look to have been selected intentionally as the partial skeletons of a young cow and an adult female cow (and so similar to the practices in cists and on platforms). Assembled with these cattle bones were the partial remains of several Grimston Ware vessels, again none are deposited complete, but the condition of all is consistent, suggestive of similar depositional histories.



Figure 9.7 Grimston Ware vessel from Willerby Wold, mound material (Authors photograph from site archive, Sewerby Hall).

Two brown quartzite pebbles are assembled into this discrete deposit, one is interpreted by Manby (1963, 183) as a rubber. Finally, this deposit included two human bones, my reanalysis has identified these as heavily weathered human fibula (long bone) fragments. This deposit draws connections between different times and materials. The utilised pebble looks backwards or to an earlier time. The human fibula fragments again are suggestive of looking backwards, towards the past – as a derived or curated object. However, through the choice to include human leg bone fragments, there is drawn a connection with the same elements selected from the young cow and adult cow. These bones are not old, they are not suggestive of varied histories. Instead, they suggest fresh, recent activity. The slaughtering of cattle, the breaking down of animal bodies, their partial consumption and deposition. A burial practice which could be representational of the contemporary dairy economy. The evidence for the production of milk (and meat) as indicated by the lipid analysis of pottery sherds (Wiltshire *pers comm* 2022). These vessels are likewise broken down (like a body) and partially deposited. The consistent condition of these sherds connecting the partial bodies of these vessels with the partial cattle skeletons. This is the deliberate assembling and negotiation of different materials and different times.

9.4.3 Domestic activity after those rites associated with the barrow have ended

The mortuary structures and chambers of Early Neolithic long and round barrow sites typically have entertained the most attention from both antiquarian and archaeological investigation. Wanting to try and recognise the importance of other architectural features, I have identified on two occasions the short-lived, ephemeral traces of post-construction domestic activity. Both have been recovered from long barrow sites (Kilham and Raisthorpe) and both would have been altogether missed if the flanking ditches were not excavated (although only partially).

At the Kilham long barrow site, Manby (1976, 129) recovered from the primary fill of the eastern terminal of the north ditch (section N1), 39 sherds of un-weathered Grimston Ware, flint flakes, charcoal flecks, burnt stones and animal remains. Manby (1976, 149) interpreting this discrete episode of deposition of occupation debris as being similar to that found at Willerby Wold. After my re-analysis, 37 fragments of bone and tooth were noted as probably being those associated with this deposit; 34 as very small indeterminate fragments, one cattle tibia fragment, one lower second molar (M2) and one hare shaft fragment. I describe the condition of these bones as heavily weathered, with only one long bone fragment showing evidence for burning. This assemblage of evidence is more similar to domestic pit sites discussed; with charcoal, high frequency of indeterminate animal bone (some burnt), flints, stones and pottery sherds. There also appears to be the continued contrast between the heavily fragmented, weathered, and partial animal bone; and the consistent, partially refitted pottery sherds. Rather than thinking of this deposit as the scraping together of habitation rubbish from elsewhere (a living site as opposed to a ritual site), I suggest we instead consider this as a short-lived episode of occupation of the barrow itself; perhaps directly on top of the primary layer (angular chalk rubble) itself.

At the Raisthorpe long barrow, 51 fragments of highly fragmented 'Large Mammal' and 'Indeterminate' animal bones were recovered by Brewster (Chapter 7); all from a discrete location within the primary fill (dark brown marl with small chalk) of the southern ditch. This deposit was recovered at a depth of approximately 1.1m, from on top of a large rock. From the same section (V) and depth was recovered a flint scraper (1.14m) and a worked animal bone (1.1m). ID-40 is a worked, weathered fragment of

an unfused cattle radius, suggesting this was a young animal (less than 12 months). I have described 78.43% of this animal bone as charred or burnt and a single piece of charcoal was recovered. The rock or stone seen in Figure 7.14 is not an earth fast boulder but was deposited/placed into the ditch within its primary fill (therefore dating the concentration of animal bone). This domestic activity represents 68.96% of the burnt animal bone from the whole barrow. This episode of domestic activity is similar to the pit assemblages in its highly fragmented, burnt animal bone, flint and charcoal evidence. This discrete deposit contained no pottery, its absence could imply a level of occupation which did not accommodate the transportation of pottery. I can imagine if a solitary shepherd or herder was moving his/her animals along well-trodden paths between known pastures, they would not be carrying pottery along with them on the journey.

How can this archaeological evidence help us to think or rethink settlement and barrow architecture? Through focusing on animal bone (both animals which were incorporated by people, and those which auto-rewild sites) and their related tasks, times and spaces (Grosz 2011), we can infer the seasonal presence of humans at barrow sites. Let us consider again, the overlapping spaces of humans and the red fox. If settlement activities incorporated the ephemeral, seasonal occupation of barrow sites (camping within the ditches) during the winter/spring months we would not expect to find the evidence for den-making (human-fox). The presence of humans and their animals would deter the auto-rewilding efforts of foxes. This is perhaps why we have no evidence for foxes from all of the long barrows in Yorkshire. In contrast, if settlement activity didn't include the occupation of barrows, with winter/spring representing a gap in human activity, we could expect wildlife to enter on their own terms. This is what we have possibly seen by foxes at the round barrows of Calais Wold 275, Towthorpe 18 and Duggleby Howe (see Chapter 8). We know that people and their animals were living nearby these barrows during the spring (as indicated by the contextual relationships of fox and lamb bones), but there is a distinct separation between settlement and barrow, a separation which does not appear to be the case at long barrows; where the related tasks, times and spaces of settlement and barrow are more complex and entwined.

I have argued throughout this thesis for a recognition of the importance of the small histories, the ephemeral, humble histories from our distant past. These are the histories which traditional researchers have overlooked and/or simply ignored. Through fully

considering zooarchaeological, artefactual and architectural evidence within my theorised methodology advocated in Chapter three (with a particular emphasis on the writings of Anna Tsing), I have been able to highlight new and significant human-animal relationships and how animals became incorporated into the built environment of the Early Neolithic in Yorkshire.

10

END NOTE

10.1 Achievements of the study

This study has produced:

- The reanalysis of seven Early Neolithic faunal assemblages (see Appendices 2-8) to contemporary standards, significantly reworking our understandings of the corpus of these sites.
- Five standard zooarchaeological reports on data suitable for the dissemination to a specialist audience (Chapters 5 and 7).
- Digitised datasets of the faunal remains from seven sites studied (Appendices 2-8).
- The generation of a digital dataset for Yorkshire's Early Neolithic animal remains identified and their architectural context from antiquarian records, archaeological reports, grey literature, and unpublished archives (Appendix 1).
- New understandings of animal-human relations from the unpublished archaeological and paper archives of Calais Wold 275 round barrow (see Chapter 4) and the Raisthorpe long barrow (see Chapter 7).
- A new calibrated date range for the deposition of pig canine tusks at the Hanging Grimston long barrow (see Chapter 9).
- An awareness of animal agency, the understanding auto-rewilding activities are historically meaningful, and an appreciation of writing narratives for archaeological wildlife (see Chapter 6).

- Through the close study of archaeological wildlife and their overlapping spaces with domesticated animals, we can now identify the presence of Early Neolithic peoples in the environs of barrow sites during gaps and disjunctions in the sequence of building works (see Chapter 8).
- Awareness of fundamental problems arising from post-excavation taphonomy, partial datasets and their potential for inaccuracies in archaeological narratives.
- New interpretations on the role and meaning of animal remains from the built environment of the Early Neolithic, undertaken through an integrated approach of studying both faunal remains and various architectural contexts.

10.2 Limitations

With regret there were some disappointments while researching this thesis and they all relate back to the impact of COVID from March 2020. In many ways this thesis sits in the unique position of being a COVID thesis – one impacted by social distancing, the closure and denied access to museums, site archives, libraries and the zooarchaeological reference collection at the Institute of Archaeology, UCL. My first regret was not being able to sit down and investigate the archaeological archives and pick the mind of Terry Manby to a greater extent. A combination of poor health and COVID restrictions reduced us to a brief socially distanced, facemask wearing encounter on Terry's doorstep in September 2021. I believe this thesis could have only benefited from his expertise on the Early Neolithic of Yorkshire. I would have also liked to have visited and re-examined the Hanging Grimston long barrow archive, Hull and East Riding Museum, however this was not made available to me on my visits. The George Rolleston archive stored at the Ashmolean Museum, Oxford, may hold notes/correspondences concerning his excavation of the Market Weighton long barrow – unfortunately my appointment was cancelled due to COVID, and external researcher access had been heavily restricted ever since. Finally, I would have like to have found the Pit 1370, Field 0005, Caythorpe assemblage (Abramson 1996, 10). There appeared to be some confusion as to its present location between the commercial unit Northern Archaeological Associates and Sewerby Hall, near Bridlington; it still remains missing.

With these disappointments, however, comes the opportunity for future research.

10.3 Recommendations for future research

The first recommendation would be the correction of the above failings of this thesis. Locating and examining the archaeological and paper archives for the Hanging Grimston long barrow, Market Weighton long barrow, Pit 1370, Field 0005, Caythorpe and the vast material held by Terry Manby in his capacity as Chairman of the East Riding Archaeological Research Trust. This is not only to release me from my pang of regret but has the potential to contribute significant new information to our understandings of the Early Neolithic in Yorkshire.

The second recommendation has to be the publication of unpublished excavation reports. Excavation without publication, is simply destruction. This would require working with those who curate the archaeological material and paper archives. Early Neolithic sites in Yorkshire which require urgent publication include the David Coombs excavation of the Calais Wold 275 round barrow, the Tony Brewster excavations at Kemp Howe and Raisthorpe long barrows (all three paper archives are curated by the East Riding Archaeological Research Trust, and Simpson's excavation at Seamer Moor 2 (archaeological archive currently with Alex Gibson). Although I am aware that some traditional components of a site report are missing (such as at Calais Wold 275), I believe to allow researchers access to what there is, rather than access to nothing.

The third recommendation would be a dating program for several sites discussed in this thesis. The dating of the Rudston 62 settlement scatter would be informative, as further dates from Towthorpe Ware sites will only assist in gaining an improved understanding of the chronological relationships between these sites and other ceramic assemblages (private archive stored by P Makey, Driffield). Dating the cattle astragalus from Pit F, Kilham long barrow will help to either confirm or reject my argument that the pre-barrow pits are Early Neolithic in construction (with residual Mesolithic flints), and not Mesolithic as previously suggested (archive stored at Sewerby Hall). I would also date the finds from the oval grave at Painsthorpe 118 (archive stored at Hull and East Riding

Museum), which will confirm if this burial (and its associated animal remains) is Early Neolithic, as proposed.

The fourth and final recommendation is for the extension of the scope of this research into other regions. Alongside Thomas and McFadyen (2010) this work (with its integrated approach of studying animal remains and different architectural contexts) provides a secure foundation and further evidence for subsequent interpretations. A region in the north which has not received much archaeological attention in recent years would be Lincolnshire – the re-examination of its Early Neolithic architectures (notably Giant's Hills 1 and 2 long barrow sites (Kinnes 1992, 37) would be both exciting and informative.

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APPENDICES

The appendices supporting this thesis are available in digital format.

Appendix 1 - Textual traces

Appendix 2 - Rudston 62 settlement scatter zooarchaeological dataset

Appendix 3 - Corner Field, Site 11 zooarchaeological dataset

Appendix 4 - Raisthorpe long barrow zooarchaeological dataset

Appendix 5 - Kilham long barrow zooarchaeological dataset

Appendix 6 - Willerby Wold long barrow zooarchaeological dataset

Appendix 7 - Calais Wold 275 zooarchaeological dataset

Appendix 8 - Garton Slack 37 zooarchaeological dataset