A RE-EVALUATION OF GROOVED WARE IN THE MILFIELD BASIN, NORTHUMBERLAND: A VITRIFIED FOUNDATION

DANA MILLSON

A Re-evaluation of Grooved Ware in the Milfield Basin, Northumberland: A Vitrified Foundation.

By

Dana Millson

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Abstract

This thesis seeks to create a better understanding of Grooved Ware pottery in the Milfield Basin, Northumberland, England. During the summer of 2005, 599 sherds of Grimston Ware, Impressed Ware and Grooved Ware were analyzed and catalogued. Their measurements, diameters, fabrics, colours and decorations were noted and digital photographs were taken to highlight the catalogue. The different wares were compared, as well as various type sites within the Later Neolithic context and a possible miscataloguing of some of the material was identified. The material also demonstrated some cultural change over time and may give insight into the Later Neolithic – Bronze Age transition. To date, this is the only project of its kind which encompasses all of the Later Neolithic material in the Milfield Basin and considers all of the sites equally.

Acknowledgements

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Chapter I: Introduction.

The Neolithic is perhaps one of the most famous time periods in Britain. This is likely because of the enduring monuments like henges, chambered cairns and stone circles that have sparked the imagination of so many since they were built. But the Neolithic boasts more important mysteries as well. It was the time when people began to grow their own food, settle down in one home, and keep domesticated animals.

It was also the time, luckily for archaeologists, that ceramics were first made. Due to its almost indestructible nature and its constant typological evolution, pottery can be informative to researchers. The analysis of decoration and fabrics can indicate how individuals made their pots and even trade and cultural relations whilst more scientific studies, like residue analysis, indicate how the ceramics were used and what was kept in them. Consequently, the presence of this type of artifact on Neolithic sites has allowed us to know more about what people ate in the past and how they used their resources.

With the amount of work that has been done in British Neolithic studies, it can seem that there are no new regions to research; however, the Milfield Basin, Northumberland is one place that was much less studied until the last few decades. As a result, it holds a unique opportunity for those interested in the Neolithic to study the period with the latest scientific technology in an almost untouched ritual landscape. Also, with just enough excavations having been done to yield a substantial Late Neolithic Grooved Ware assemblage from a variety of sites, it is the perfect time to evaluate what has been found and how it fits together.

Therefore, this project has been conducted to create a catalogue of the Later Neolithic Grooved Ware and compare what has been found at the different sites to the Earlier Neolithic Grimston Ware and Middle Neolithic Impressed Ware. Work of this

nature has been done on the site level in the region (Ferrell 1990), and some speculation about trends in the basin have been made (Gibson 2002), but this is the first full-scale analysis of all of the Later Neolithic pottery in the Milfield Basin. Moreover, the data have been compiled into a catalogue (the appendices of this volume) which is intended to be published as grey literature on the internet within the next year. This will allow easy access for researchers to compare material and will leave the catalogue open for new additions as more pottery is found. As a consequence, this project is designed to be a foundation for future pottery studies and to aide in the dissemination of data from the Milfield Basin so that it can be further recognized as a valuable region of interest in its own right.

The results of the analysis of the data in this work, although still limited, are also informative of the use of pottery in the Milfield Basin. Even though much of the data agree with what has been inferred for the region, they also demonstrate that some previous conclusions, particularly the dates of certain assemblages, may have been incorrect. Confirmation of this will require more data as the assemblage is still quite small and fragmentary. It is hoped, however, that this work will provide the foundation needed for future work to give a clear picture of Grooved Ware in the Milfield Basin and perhaps even a glimpse of what life was like for the ancient Northumbrians.

Chapter II: The Early Neolithic

Map 2.1 Sites mentioned in chapter II

Introduction.

For over a century, prehistorians have been captivated by Neolithic remains. The Early Neolithic has been of particular interest since it marks the origins of a way of life that we, in the modern world, can relate to. The beginning of cultivation and animal herding, the first use of pottery, and more permanent houses are all things which have endured to this day. However, other practices were performed including communal gatherings in causewayed enclosures, the burial and exhumation of disarticulated human remains, and the ritual deposition of objects (such as cattle skulls and axes) in pits and watery places. Although this may seem foreign to us, there is no doubt that it is this mixture of the familiar and the exotic which has led us to be so entranced with this period.

The Early Neolithic in Britain began c. 4000 BC[1] and lasted until c. 3000 BC (Whittle 2002: 59). Although settlement was still quite mobile, as in the Mesolithic, the clearing of woodlands and maintenance of those clearings increased and pottery, axes and new forms of lithic tools began to be made. Cereals were cultivated to supplement peoples' foraging diet and monuments were built for the living and the dead. It is evident that this new way of life was successful for it lasted for a thousand years.

The Mesolithic-Neolithic Transition.

At different stages through the history of archaeology, the Mesolithic-Neolithic transition has been defined focusing on the prehistoric peoples' changes in technology, economy and ideology (Waddington 2000a: 33). Vere Gordon Childe (1958) saw the

[1] In this thesis, the use of "BC" in capital letters refers to a calibrated carbon date whilst uncalibrated dates are written with lower case letters (bc).

transition as having been caused by the arrival of "megalithic missionaries" to Britain from the Mediterranean, bringing with them new stone tools, subsistence farming and monument building. Several decades later, Renfrew felt that the surplus of food from crops allowed time for the farmers to build monuments to mark territory (Scarre 2002: 3). And in the early 1990s, Julian Thomas (1991) stated that in the fifth millennium BC, a shift in worldview caused culture to be seen as separate from nature.

However, as more data are collected, it is becoming clear that the switch to farming, sedentary life and monument building was much more gradual, spanning from the Later Mesolithic to the Early Bronze Age, and it is the way in which we have studied each period, and then tried to amalgamate the data that has made this transition seem like a great event.

Previous studies of the Mesolithic have taken processual approaches focusing on subsistence and settlements, whilst Neolithic specialists have followed post-processual ideals, considering ideology through the excavation of monuments and burials (Bradley 1998: 21; Waddington 2000a: 33). At their most extreme, processual approaches attempt to view past cultures in a completely objective way and utilize the scientific method of enquiry, studying them as a biologist would an organism. Since most Mesolithic sites largely contain the remains of mundane life, like the hunting camp at Star Carr or the shell middens on Oronsay, archaeologists have spent most of their time simply evaluating how people were exploiting their environment. The post-processual approach, on the contrary, focuses on the fact that, when studying a culture, no one can be completely objective. Post-processualists therefore approach the remains emphasizing the subjective experience of them. This sort of approach has been used at Neolithic monuments more

than at other sites because, having been built for ritual and social experience, post-processualists believe it is the best way to understand them. This discrepancy in approaches to past material culture in the two periods has caused most conclusions about the Mesolithic to be economic and those about the Neolithic to be social (Bradley 1998: 21). Coupled with few and poor dates, "…these differences [have made] it hard to discuss the transition between the two periods" since the data are essentially incompatible (Bradley 1998: 21; Edmonds 1995: 20).

To address this problem, many recent studies have attempted to understand both periods using both processual and post-processual techniques and have developed strong arguments for continuation from the Late Mesolithic to the Early Neolithic. It is now recognized that the first monuments built in Britain were actually constructed in the Mesolithic – something which should come as no surprise since hunter-gatherer groups around the world have been known to alter their landscape (Cummings 2002: 107). The remains of large mollusk shell middens can be found on the coasts of Oronsay, and pollen charts show that people burned and maintained woodlands throughout Britain (Cummings 2002: 112). Moreover, formations, like those built of stone in the Neolithic, have been found at Mesolithic sites, including a timber row at Stonehenge (dating to 8000 BC), and a large building at Portland (dating to 5500 BC) (Cummings 2002: 112). As a result, the changes we see were really, "…part of a broader process of negotiation between people and ancestral places" in a landscape already wrought with symbolism and meaning (Cummings 2002: 107).

Evidence in Cumbria (plate 2.1) supports continuation in the fourth millennium BC where, for thirty-five years, Cherry and Cherry (1996: 61) excavated lithic scatters

Plate 2.1: Landscape in Cumbria.

representing 158 sites on the coast and 149 sites in the uplands. In their evaluation of the coastal sites, they noted that Neolithic artifacts were difficult to find. Out of 80, 000 lithics collected, only 48 were leaf-shaped arrowheads and what pottery found was heavily eroded or destroyed. What they noted, however, is that at many sites, lithics were found which, although still within a Mesolithic tradition, bore Neolithic traits (Cherry & Cherry 1996: 62). At the St. Bees site, a leaf-shaped arrowhead was found and blades were made larger and larger over time and microliths became fewer and less geometric.

At the St. Bees 8 site, a Mesolithic blade industry was found with short, ridged blades, triangular microliths and chisel arrowheads. These artifacts looked Mesolithic, but they were only slightly patinated unlike those found under the same conditions on the same kinds of flint at the other Mesolithic sites, suggesting they were younger (Cherry & Cherry 1996: 62). Overall, the Later Mesolithic sites are indistinguishable from the Early Neolithic ones. Therefore, it is evident that in this region, people moved into the Neolithic gradually by natural cultural evolution rather than by the invasion of either a new group or drastic new ideas (Cherry & Cherry 1996: 62).

Furthermore, it has long been believed that it was with the advent of the Neolithic in upland Cumbria, that trade networks were established reaching particularly to Yorkshire and Lincolnshire, but on their upland sites Cherry and Cherry (1996: 63) found over 12, 000 artifacts made of flint, 65% of these dating to the Late Mesolithic. Of these artifacts, a large proportion was made of Yorkshire flint showing that the trade networks, which were so important in the Neolithic were established much earlier than has been assumed. Although much more work still needs to be done to fully understand the

evolution of culture from the Mesolithic to the Neolithic, what has been found has revealed that Mesolithic culture was equally unique and complex as later periods.

However, it is still important to remember that the terms, "Mesolithic", "Neolithic", and "Bronze Age" are modern terms and that during the average person's life, either within one of these periods or during the transition between two of them, life did not change drastically. Over the course of 4000 years, people chose to start to farm for their subsistence and to build permanent villages and monuments, but at any given time, these changes were only slight alterations to an existing culture. Therefore, through these first two chapters it is imperative not to think of the Mesolithic as one culture, the Neolithic as a distinctly different one and the Early Bronze Age as yet another, but to imagine all as being part of a long continuation of cultural evolution.

The Early Neolithic.

Environment.

Pollen charts show that, as people began to adopt an agrarian lifestyle, there was a decline in hardwood trees and this has been attributed to humans clearing land (Brown 1997: 134; Whittle 2002: 59). It has traditionally been thought that this denotes the beginning of large-scale farming in the Early Neolithic, but as evidence further proves that agriculture and animal husbandry was adopted gradually during the Neolithic the reason for this decrease in woodland has been questioned.

In his study of Neolithic deforestation, Brown (1997) looks into natural explanations and thinks that the pollen record is showing humans taking advantage of clearings made by natural disasters. The pollen studies which have led researchers to

conclude that Late Mesolithic and Early Neolithic people were burning forest have focused on the higher levels of atmospheric charcoal present in samples (Brown 1997: 135). However, Brown argues that since this charcoal is atmospheric, it could represent any fire burning in the surrounding region including natural fires, cremations, lightning, camp fires, or the burning of dead trees by people. The pollen charts from this period show the decline was mostly in larger trees and experiments done using Neolithic axes have shown that they could have been used to fell small trees and saplings, but they were not strong enough to have cut down mature hard woods (Brown 1997: 136).

Brown (1997: 133) argues that lightning and storms often create clearings in forests and that Neolithic people may have simply taken advantage of these events and maintained the clearings which were caused.

> …it is easier to prevent regeneration than to fell forest, and it need not be done purposely, as most agricultural practices including grazing, browsing, trampling and tillage if carried out in a clearing, will prevent regeneration by trees. (Brown 1997: 138)

Violent storms are well-known in Britain to cause major damage to forests. In October 1987, one storm in the south of England uprooted some 16, 000 trees in one day (Brown 1997: 140-141). And since 1945, there have been four storms of this type and many smaller, more local ones. Coniferous trees such as pine, which are abundant in Britain, would have been especially sensitive since they have shallow roots and are pyrophytic (Brown 1997: 135). It is therefore probable that people cleared some land, but the decline in tree pollen seen in the record is more likely to have been caused by a combination of

natural burning, storms, tree disease, human felling and human maintenance (Brown 1997: 142).

Subsistence.

As has been discussed, subsistence did not change drastically in the Early Neolithic. People continued to hunt and gather wild foods as they had done for generations but, for the first time, they added cultivated cereals and domesticated animals to their diet. At Sourhope, Northumberland, wheat was identified dating to 3224 cal BC, at Brough Law, Northumberland dates as early as 4000 BC were calculated, and in the south of England, ard marks were found under the South Street long barrow in Wiltshire, which dates to the fourth millennium BC (Waddington 1999a: 115; Whittle 2002: 61).

Barclay (1998: 12-13) believes that after the first introduction to domesticated plants and animals, hunter-gatherers experimented with cultivation and animal husbandry. Over the centuries, some plants became staples in their diet along with wild plants until finally, their economic system changed to one with such a reliance on the domesticates that they could not revert back to foraging. Emmer wheat (*Triticum dicoccum)* and einkorn wheat (*Triticum monococcum*) were amongst the first plants to be grown in Britain and not long after, barley (which may have been brewed into a beer as well as eaten) and flax were added (Barclay 1998: 12). Whilst continuing to hunt roe deer, red deer, wild boar and other small game such as hare, fish and birds, the Early Neolithic people began to keep domesticated pigs, cattle, sheep and goats.

Sherratt (1981) has argued that it was in the Early Neolithic that secondary products began to be exploited. Referred to as the "Secondary Products Revolution", this

was when the first consumption of dairy products and the use of wool and traction occurred. Residue analysis was recently done on 438 sherds of Early Neolithic pottery from six sites in southern England: Windmill Hill, Abingdon Causewayed Enclosure, Hambledon Hill, Eton Rowing Lake, Runnymede Bridge and Yarnton Floodplain (Copley et al 2005). This is the largest assemblage on which residue analysis has ever been done and was very informative about the use of secondary products used in Early Neolithic Britain. Of the 189 sherds with substantial residues, 25% of them (or 57% of the lipid-containing extracts) showed high levels of dairy lipids, proving that dairying was, "…an established component of the agricultural practices" from the fifth millennium BC (Copley et al 2005: 523). Many of the sherds also had residues of beeswax. It is well-known that honey was consumed and brewed into mead in later prehistory, but Copley et al (2005: 529) think this may equally suggest the use of beeswax as a sealant. Regardless, as the first of its kind, this study shows the variability of the diet of Early Neolithic people and calls for further research in other parts of the country.

The use of wool is also apparent in prehistory. Although the first remains of woolen fabrics from Britain date to the Bronze Age, it is believed they were used from the first introduction of sheep at the start of the Neolithic (Ryder 1964: 1). The first domesticated sheep introduced into Britain are thought to have been a white-faced, horned breed most like the modern Soay type (plate 2.2) (Ryder 1964: 1-2). Swedish evidence suggests that they were bred from the wild Uriel and Mouflon types of sheep and were either of the breed *Ovis aries palustris* (turbary sheep) or *Ovis aries studeri* (Ryder 1964: 2). These were domesticated in the Near East and eventually brought to Britain around the beginning of the Neolithic. Since Soay sheep were the only breed in

Britain until the arrival of the Romans, it is this short-wooled animal that the Neolithic people kept (Ryder 1964: 3). They may have been herded more for their milk than for their wool, but wool production was so common in the Bronze Age that it is not unreasonable to think this resource was not exploited in earlier periods. Moreover, on the mainland, there has been evidence of wool from the Neolithic (Sherratt 1983: 93). In Germany, wool fibers were found on the handle of a knife dating to 2400 BC, and in Switzerland, carbonized wool fibers were found to be 4900 years old. Also, at Bronocice, several flat, narrow spindle whorls (usually associated with the spinning of wool) were found and the sheep to goat ratio was determined to be 20:1, suggesting wool production (Milisauskas & Kruk 2002: 202). If this was the case for mainland Europe, where the domesticates came from, knowledge of the use of wool most likely traveled with them as they were brought to Britian.

Technology.

Fired pottery is found on British sites from 4000 BC (Passmore & Waddington, in prep, a). Known as Grimston Ware (or Grimston-Lyles ware), it is characterized by its plain, rounded and round-bottomed bowls and shoulder carinations (plate 2.3 and 2.4) (Gibson and Woods 1990: 170). Grimston ware was made by hand using a coiling method and then burnished or grass-wiped to create a smooth, finished surface. Its fabric often has sand and grit worked in, and organic inclusions were used to bond the clay particles which, after burning out during the firing process, created a corky appearance (Gibson and Woods 1990: 170). This ware is typically undecorated, but tends to have a soapy feel to the surface and is usually black in colour. From their experiments in

Plate 2.2: Soay Sheep at Bede's World, Jarrow.

Plate 2.3: Grimston Ware.

Plate 2.4: Grimston Ware Sherd Profile.

Northumberland, Gibson and Woods (1990) have shown that these pots were fired using an open-firing method (probably just a fire in a pit) which caused the frequent black cores in the sherds. Such fast, hot firings, however, also caused the ware to be particularly hard and its quality is demonstrated in the fact that it persisted for over 500 years (Gibson and Woods 1990: 170).

Another addition to the toolkit in the Neolithic was chipped and polished stone axes (plate 2.5) (Barclay 1998: 9). The lithic material used in their manufacture, usually andesite, was mined from local sources, usually from mountainous areas, and then the completed axes were traded across the country (Whittle 2002: 65). In places such as Langdale, Cumbria and Cunyan Crags in Northumberland, it has been argued that the remains of axe factories can be seen (Waddington 1999a:123). Through extensive trade, axes from these places made their way into other regions, some even hundreds of kilometers away into Scotland and further south in England.

The archaeological evidence suggests that axes hold symbolic importance as well as practical uses within Early Neolithic society. Frequently, they are found in deposits beside monuments and along pathways (Whittle 2002: 65). Moreover, some are found which show no indication of having been used, and others are highly decorated or even made too small or delicate to be useful (Barclay 1998: 27). In the Neolithic, microliths went out of use and leaf-shaped arrowheads, which were knapped on their entire surface, began to be made (plate 2.6) (Waddington 1999a: 125). The technology of the Neolithic exhibits a culture which has evolved into one which is more complex. The repertoire of tools including scrapers, axes, bows and arrows, knives, and adzes, that we find on

Plate 2.5: Early Neolithic Stone Axe.

Plate 2.6: Early Neolithic leaf-shaped arrowheads.

Neolithic sites demonstrates that over time, people were exploiting their environment in different ways and adding new items to their subsistence.

Settlement.

Since most studies of the Neolithic focused on burial and monuments, there is a lack of information about settlement (Whittle 2002: 59). Based on archaeological evidence from Continental Europe, the Neolithic used to be thought of as the time when groups established permanent territorial boundaries and settled into villages with rectangular, timber longhouses which they occupied for long periods of time (Barnatt 1996: 44; Whittle 2002: 63). However, British data simply do not support this. Across Britain, Neolithic settlements tend to show up as lithic scatters, groups of pits with domestic waste, and postholes for small, ephemeral houses (Whittle 2002: 64). This settlement pattern therefore suggests more of a 'short-term sedentism', where families would have stayed in one place for several months, or perhaps a few years at a time, but not more (Waddington 1999a: 131; Whittle 2002: 64).

A good example of an early Neolithic settlement site is the Bolam Lake site in Northumberland. In 1997, Waddington and Davies excavated a lithic scatter running along the sandstone ridge 2 km from Shaftoe Crags (Waddington & Davies 1998: 45). Under the topsoil they found more lithics of the same sort as well as Grimston Ware pottery, and stone-packed postholes suggesting a tent structure (Waddington & Davies 1998: 47). Experimental reconstruction of this tent in 1999 at Brigantium Archaeological

Centre in Redesdale demonstrated that it most likely had been covered in skins[2] and stood just under 2m high (Waddington & Davies 2002: 19). One midden pit near the tent was found to contain broken pottery, charred hazelnut shells, flint, and fire-cracked rock, and another, which was lined with clay was interpreted as having been used as a storage pit before becoming a garbage pit. Several stakes were also discovered in a row near the structure and this was interpreted as a fence to keep stock (Waddington & Davies 1998: 49).

Not far from Bolam Lake, the Milfield Basin has also given a glimpse of life in the Early Neolithic. Based on his work at several sites near Milfield, Waddington (1996a) believes that the Northumbrian evidence points to a mobile lifestyle in which the movement of herds between uplands and lowlands, and the rights of access to these lands were most important. In the Milfield Basin there are three main geographical zones: the Cheviot Hills, sandstone escarpments, and a low-lying plain in between (plate 2.7) (Waddington 1996a: 147-150). Waddington suggests the land was split up amongst people into "inscribed grazing areas", or IGAs, where rights of access controlled peoples' relationships with each other and their environment (Waddington 1996a: 156). Each IGA was bordered by a water course, included both upland and lowland areas, and was used by groups at different times of year to graze their herds. Waddington remarks that on the sandstone escarpments, where soil is poor for farming, clusters of cup-and-ring marked rock outcrops and often a burial mound mark three areas on Weetwood Moor, Doddington Moor, and Broomridge (plate 2.8). These moors were too acidic to cultivate,

[2] The team, consisting of archaeology students from the University of Newcastle, first built the structure with a sod roof, but within weeks it began to deteriorate and fall down. This is what led Waddington to conclude that the tent must have been covered with lighter roofing like animal hides (Waddington & Davies 2002: 20).

Plate 2.7: Milfield Plain showing the three topographical zones: the Cheviot Hills, the lowlying plain, and the beginnings of the Fell Sandstones.

Plate 2.8: An example of cup-and-ring carvings.

but would have been ideal for grazing cattle and pigs (Waddington 1996: 156). On the Cheviot slopes where soils are better for cultivation, there are only two examples of cup marks and no concentrations like on the moors, even though there are ample outcrops on which marks could have been made. Waddington (1996a: 157-158) stresses that each concentration is unique in its style and combinations of motifs and believes that each grouping belonged to a separate kinship group, each claiming rights of access to that land area.

Waddington's claim of cup and ring marks being associated with pastoralists is not unfounded. Ethnographically, cup and ring carvings are known to be linked to herders. In some parts of Scotland pastoralists have been known historically to put food offerings near the carvings to ensure a protected and healthy herd (Waddington 1996a: 160). In the Hebrides, cup marks were filled with milk in the springtime so that cows would yield more milk, and in Islay, rocks with several carvings were used in folk rituals to promote fertility (Waddington 1996a: 162).

Waddington's land use hypothesis is further supported by a circular enclosure he excavated on the Milfield Plain. The Coupland Enclosure consists of a ditch and a bank and a linear drove way which runs from the north of the valley through the enclosure right in the middle of the valley (figure 2.1) (Waddington 1999a: 134). It was first thought to be a Later Neolithic henge and cursus monument, but Waddington's work in 1995 unearthed Grimston ware pottery and C-14 dates indicating Early Neolithic origins. Phosphate analysis was done inside the enclosure and on the drove way and compared to soil samples immediately outside of it, and levels were found to be much higher inside, indicating the presence of large numbers of animals (Waddington 1999a: 136).

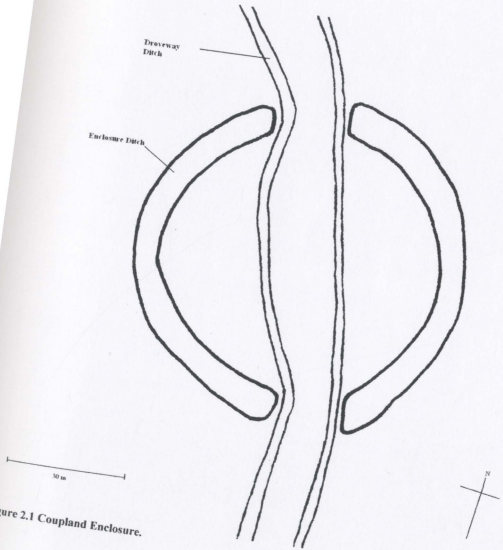


Figure 2.1 Coupland Enclosure.

Geophysical recording of the area also showed that the drove way and the inside of the enclosure was much more compressed than the outside suggesting it had been trampled, most likely by large numbers of heavy animals.

With all of this evidence, Waddington (1996a: 170) concludes that a seasonal round can be envisioned for the inhabitants of the Milfield Basin. In the summer, herds were taken into the uplands where new, revived pastures had grown since the year before and in autumn they were brought back into the basin via the drove way and into the enclosure for the harsher winter months. The maintenance of the IGAs would not have required too many people as only a few would have had to move the herds, and others could have stayed in the valley to gather and grow food and hunt (Waddington 1996a: 168). When the pastoralists returned to the rest of the community in autumn, feasts and ceremonies could take place as the community passed the winter months together.

Monumental Architecture.

Perhaps the most overt aspect of the Neolithic is the beginnings of monument construction. Some as major earthworks and others built in stone, these monuments were meant to last the ages and reflect the unique cultures who built them by their different forms. In Wales, portal dolmens dot the landscape, and along the Irish Sea coasts passage graves overlook agricultural land (Whittle 2002: 67). In the northeast, round chambered cairns face the midwinter sunrise, and all over the island, long barrows sit on the peripheries of what are thought to have been territories (plate 2.9).

Long barrows are linear, earthen features which are several meters in length and have internal chambers linked to the outside by a passage (plate 2.10). The entrance is

Plate 2.9: Silbury Hill, Wiltshire, demonstrates some of the large earthworks the Neolithic and Bronze Age people made.

Plate 2.10: Long mound near Knap Hill, Wiltshire.

usually small, giving it a porthole appearance, but is enhanced on the outside by a façade of upright stones (Hodder 1990: 252). At West Kennet in Wessex, the bodies of many individuals were split up according to age and sex; males tended to be in the back chamber, adult males and females in the inner chambers, and older males and females in the outer chambers (Whittle 2002: 67). With such particular practices we are drawn to ask what did these arrangements mean within the peoples' culture? And what sorts of rituals accompanied them?

Although it is difficult to determine the answers to these questions given the record's incompleteness, what evidence we do have can give some insight. It is evident that burial in long mounds was not the norm (Kinnes 1975: 16). Not only are there simply not enough skeletons to account for generations of people living in Britain during this era, but the distribution within the barrows are not representative of a typical population. Hodder (1990: 248) notes that in Wessex there tend to be more males than females in barrows; 120 disarticulated males were accounted for whilst less than 60 females could be found. However, "material culture does not so much reflect social conditions as participate in the structuring and transformation of those conditions" (Barrett 1990: 179). In many of the facades pig bones and pottery have been found suggesting ceremonies at the sites included feasting. Also, the small size of the passages within the tombs would only have accommodated a few people at one time, implying that religious leaders probably conducted the rituals. Consequently, the archaeological remains of funerals at these monuments reflect a society sufficiently organized to construct large earthen and stone monuments and an increasingly stratified social structure which emerged with their use (Barrett 1990: 182).

The early Neolithic monuments were built for the gathering of communities and no other type illustrates this better than causewayed enclosures. Causewayed enclosures are so called because they consist of concentric ditches and banks segmented by causeways leading through several circuits towards their centre (plate 2.11) (Whittle 2002: 70). They tend to be very large (Windmill Hill, for example, is 350 m in diameter) and are set on cliffs and hills or near natural features like rivers and streams. Votive deposits, cremations, and the remains of feasting are usually found within causewayed enclosures, particularly in the ditches. At Maiden Castle, different types of remains were found in each circuit suggesting different activities as one moved through the monument (Whittle 2002: 71). Human remains are also found in ditches, linking these monuments with long barrows (Hodder 1990: 246). In fact, with most causewayed enclosures are found associated barrows and where an abundance of long bones and a lack of skulls is typical of barrows, numerous skulls and few long bones are counted at causewayed enclosures (Hodder 1990: 246). Consequently, movement of human remains seems to have continued even after their initial burial between the two forms of monument during their use.

Also at this time specific places, the relationships between them, and paths linking them were very important (Barnatt 1996: 43). Building a chambered tomb or a causewayed enclosure created a reference point on the landscape for a mobile people and gave meaning to their seasonal round (Barnatt 1996: 51), but pathways, like the Sweet Track, which was a 2 km long wooden walkway across wetland, or the droveway running to the Coupland Enclosure, connected these places and instructed proper movement

Plate 2.11: Knap Hill Causewayed Enclosure, Wiltshire.

within the landscape (Whittle 2002: 64). It is therefore clear that the Early Neolithic people led an existence which, although different from our own, was sophisticated, and the remains we now uncover at these places, although frustratingly incomplete, give a glimpse of a once vibrant world.

Conclusion.

The beginning of the Early Neolithic brought with it many changes to the lifestyle of British people. The addition of domesticated plants and animals to the existing hunter-gatherer way of life caused a move to greater sedentism and new ideas sparked the inception of monumental architecture for communal gathering. In the past, these changes have seemed to occur quickly because the approach to studies of the Mesolithic contrasted with those of the Neolithic; however, it is now realized that there is strong support for a continuation of cultural evolution from the Later Mesolithic to the Early Neolithic. It is certain that with more research, bias will be further eliminated and a better understanding of what life was like when the first agriculturalists turned over new ground will emerge.

Chapter III: The Later Neolithic.

Map 3.1 Sites mentioned in chapter III

Introduction.

It was originally believed that the Neolithic period lasted for only 500 years, but since the discovery of carbon dating it is known to have lasted much longer - for some 3500 years (Barrett 1994: 49). By the later part of the Neolithic, life had changed so much that it can only be studied as a separate cultural era. As a result, the Neolithic is split into early and later periods at c. 3000 BC (Whittle 2002: 59). The Later Neolithic, which lasted about 1500 years, shows a continuation of the changes which began in the Later Mesolithic: a greater reliance on farming and sedentism. However, it is different from earlier periods since new forms of pottery, stone tools and monuments came into fashion (Waddington 1999b: 150; Whittle 2002: 59). Consequently, the Later Neolithic is considered separately from the Early Neolithic.

Environment.

It is hypothesized that during the Later Neolithic, forest clearance for grazing and farmland continued, causing the landscape to change into one with significantly more open spaces and more open woodland by the beginning of the Early Bronze Age. In the Milfield Basin, Northumberland, pollen cores from Akeld Steads shows decreasing tree pollen from around 4000 BC (Tipping 1996: 28), a slight recovery c. 3000-2500 BC during the transition into the Later Neolithic, and then a dramatic decrease c. 2500-2000 BC (Waddington 1999a: 148). As was discussed in chapter two, forest clearance may have been caused by natural disasters creating open spaces which people maintained. It has also been argued that Britain suffered from outbreaks of Dutch Elm disease like continental Europe, but the decrease of tree pollen is not uniform across the country

which makes a large-scale wipeout of a specific breed unlikely (Tipping 1996: 25). At least for Cumbria, Yetholm Loch and Swindon Hill, pollen charts show a reduction of *Ulmus* (elm), whilst alder and birch are much less affected (Tipping 1996: 25). Alder and birch tend to grow in boggy areas in peat whilst elm is found in more neutral soils. It is possible that this selection was caused by humans clearing fertile land since soils which are too acidic to cultivate were left untouched. From 2800 BC there is an increase of *Plantago,* an herb associated with open, cleared land and there is greater evidence for cereals like wheat, barley and oats (Tipping 1996: 23; Waddington 1999a: 148). As people relied more on domesticated plants for their diet they would have needed more land to yield greater crops. Coupled with this is the fact that there is a sharp increase in the use of land for monuments in this period. Tipping (1996: 29) suggests that it is this, along with the greater reliance on agriculture, which caused the drastic decrease of woodland. Although his hypothesis favours blaming humans, and the fact remains that natural causes were probably killing the trees as well, what we know of subsistence, settlement, and ritual behaviour at this time suggests open spaces were increasingly utilized by Neolithic people which shows that Tipping's inference holds truth.

Settlement.

For a long time there has been little information about settlement in the Later Neolithic. This is partially due to research bias, since monuments were given greater attention (most likely due to their visibility on the landscape), but also because settlement sites tend to simply consist of groups of pits, making them easy to overlook (Conolly and MacSween 2003: 44). However, in the last fifteen years, active search for settlements has

yielded many new sites, and a better understanding of the domestic life of Neolithic peoples has developed.

At the Milton of Leys site in Inverness, Scotland, near the known sites of Bogbain Wood (a collection of hut circles) and Druidtemple (a chambered cairn), a cluster of many small pits and postholes with Grooved Ware pottery was found and interpreted as a settlement (Conolly and MacSween 2003: 35). Of the thirty-five features, twenty-two were Neolithic pits, averaging 0.5m in diameter and 0.13m deep. Six postholes were identified, as well as five other possible postholes, but no structures could be discerned from their layout (Conolly and MacSween 2003: 37). As is typical of Later Neolithic sites, the pits were filled with charcoal, charred hazelnut shells, and cereal grains, and from this, four AMS dates were determined: 3370-3100 BC (hearth), 3340-3020 BC (charcoal), 3330-2920 BC (charcoal, hazelnut shell), and 3340-3090 BC (charcoal) (Conolly and MacSween 2003: 39). Fifty sherds of Grooved Ware, representing eight bucket-shaped vessels were found in the pits, making this the earliest site ever found associated with the Durrington Walls substyle of Grooved Ware (Conolly and MacSween 2003: 35-39). Interestingly, the fabric of these pots is so similar that Conolly and MacSween (2003: 41) believe that they belonged to a single assemblage, suggesting that there was only one occupation of the site in the Later Neolithic. A flint scatter was also found just outside the cluster of pits, indicating that flint-knapping took place outside the house; not uncommon since it is best to knap with optimal ventilation and light (Conolly and MacSween 2003: 43).

On mainland Europe, timber longhouses were the norm in the Later Neolithic and were usually positioned in villages or hamlets (Whittle 2002). It has been much debated

whether longhouses were built in Britain during the Neolithic, and the earliest known ones (at Willington, Derbyshire and Belle Tout, Sussex) date to the Later Bronze Age and Iron Age (Miket 1987: 39). So far the evidence suggests that British sites seem to have been much more ephemeral. In the Milfield Basin, Thirlings, Yeavering, Cheviot Quarry, and the Milfield North Pit only show up as a few middens and postholes. Thirlings does have a structure which is more substantial than a tent, but even its age can be questioned since the carbon dates have discrepancies over a hundred years and the pottery associated was found in the ploughsoil.

This brings up the issue that the settlements found in Britain are all too often close to the surface and show disturbance from later ploughing. The Later Neolithic peoples seemed to have preferred to live in the same places people live, farm and quarry today – well-drained gravel terraces in valleys which resist flooding and provide good soils for cultivation (Waddington 1999a). Since the remains are most often clusters of pits which can easily be missed, it is likely that many sites have been destroyed by ploughing, quarrying and construction (Conolly and MacSween 2003: 44). Thus the record we have is even more incomplete than if it had only been exposed to natural taphonomy. The most recent studies show just how complex Neolithic settlement was and it is apparent that it was much different than the settled agricultural villages of continental Europe. Perhaps it is with this recognition, however, that a better understanding will be realized as we interpret the evidence we have rather than focusing on what we wish to find.

Subsistence.

During the Later Neolithic, diet did not change drastically, but rather, continued to move towards one which included more domesticated resources with its wild ones. Roe and red deer bones continue to be found on Later Neolithic sites as well as birds and fish, but domestic fauna, particularly cattle, sheep and pigs become more prominent (Hodder 1990: 263). Although information from domestic sites is increasing, it is known that at least at henges the only wild animals found were those which do not have "domesticated counterparts", such as red deer, roe deer, beaver and fox (Hodder 1990: 264).

Moreover, the Later Neolithic saw a shift from a focus on cattle, which had been prevalent on Early Neolithic sites, to one on domesticated pig (Hodder 1990: 264). Early Neolithic causewayed enclosures and chambered cairns usually have large numbers of cattle bones, whilst Late Neolithic monuments, particularly henges, yield more domestic pig remains. Even on domestic sites in Southern Britain, Later Neolithic occupation levels demonstrate a decrease of sheep/goat remains and cattle as the number of pig and wild species increase (Hodder 1990: 264).

Later Neolithic people also seem to have put more effort into cultivation. Pollen charts from Akeld Steads in the Milfield Basin show a sharp increase of grass and sedge pollen (Waddington 1999a: 148). This alone does not prove that people were practicing agriculture more, but when taken along with the evidence from sites in the region, it would seem likely. At Whitton Hill I, which dates to 2150 BC, emmer wheat and barley were found and at Yeavering Palace site, a multi-component settlement, 6-row barley and

oats were found in much greater quantities than in Early Neolithic levels (Waddington 1999a: 149).

Technology.

The Later Neolithic toolkit is characterized by 'heavier' lithics and a greater variety of types, something which is typical of groups as they become more sedentary (Hodder 1990: 265). Although many of the same forms are present from the Early Neolithic, as people settled down, they began to make new tool shapes in many local styles (Waddington 1999a: 150). The pieces were well-made and new forms, such as barbed-and-tanged arrowheads (plate 3.1), exotic knives, chisels, perforated maceheads and carved stone balls, were invented (Waddington 1999a: 155).

As the number of styles increased, the use of specific types of stone became more important. In the Milfield Basin, the Later Neolithic sees a practice of making tools only out of flint. In fact, most of the flint used was of optimal quality and imported from northeast Yorkshire and further away (Waddington 1999a: 155). It is true that imported flint was used extensively in the Early Neolithic (about 72% of tools, and there is a trend beginning in the Late Mesolithic of the increasing use of the material, but it is only with the Later Neolithic that it was used exclusively (Waddington 1999a: 80).

Monuments.

Henges.

Henge monuments (plate 3.2) in Britain were first identified by Kendrick in 1932 (Catherall 1976: 1). Four years later, Clark defined them as:

Plate 3.1: Later Neolithic barbed-and-tanged arrowheads from Milfield North Henge.

Plate 3.2: The ditch, bank and inner circle of Avebury, Wiltshire.

> ...a more or less circular area on which stand stone or timber uprights... defined by a band and, where the material for this can be more easily quarried from the ground, by a ditch...Access to a central area is given by a single or often two opposite entrances (Clark 1936, quoted by Clare 1986: 281).

From the remains found within them, henges were first thought to have been temples or meeting places, and indeed, they still are believed to have been areas used for special gatherings or rituals (Catherall 1976: 1). Many henges were built on top of earlier domestic sites, but they do not appear to have been settlements themselves since there are no hearths or middens (Clare 1986: 285-299). Also, the most common feature tends to be cremation graves and they often fill the internal areas. A ritual function for henges is further supported by the kinds of artifacts found in them. At Balfarg Riding School a Grooved Ware pot was found with a residue of black henbane in it. Black henbane, as part of the hemlock family, is a hallucinogen and, consequently, could have been used during ritual to help create a trance-like state (Barclay 1998: 32). Moreover, many sites are associated with astronomical events, such as Stonehenge, where the midwinter sunrise is aligned with an avenue, which leads towards the entrance of the monument (plate 3.3 and 3.4). Outside the henge, two outer stones frame the entrance where the rays of light enter the monument at daybreak (Ruggles 1999: 135-141). At Woodhenge, six concentric rings of timbers fill the inside of the monument and are all aligned with their entrances facing the midsummer sunrise (Ruggles 1999: 132). The alignment of Later Neolithic monuments with astronomical events is quite common. Along with the many henge examples are stone rows, stone circles and burial cairns. At Ballachroy, Kintyre, a 5 km long row of flat standing stones align with a prominent burial cist 35 m to the

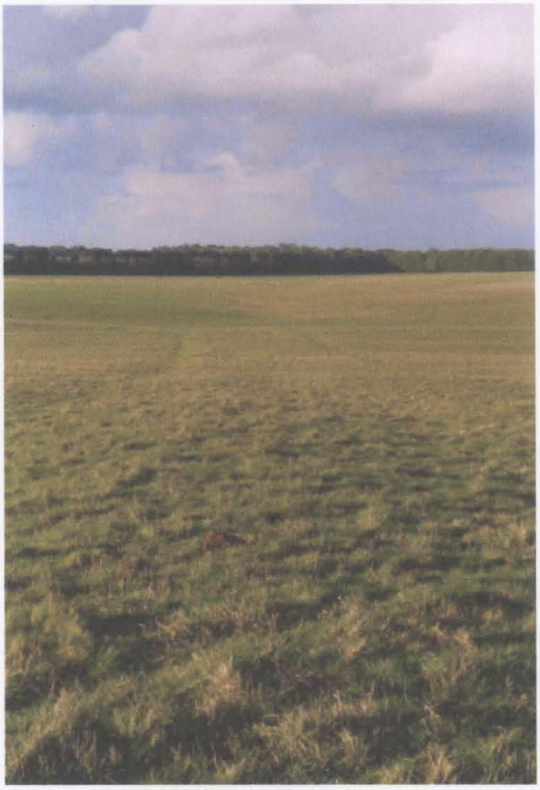


Plate 3.3: Cropmarks showing the avenue leading to Stonehenge.

Plate 3.4: Stonehenge. Facing the entrance from the inside, one of the uprights flanking the avenue can be seen.

southwest and point towards Cara Island and the midwinter sunset (Ruggles 1999: 20). All of the stones have their flat sides parallel to the alignment except for the centre stone which is positioned to point north to Corra Bheinn, the largest mountain in the Paps of Jura. In County Meath, Ireland, Newgrange is an 80 m wide passage grave surrounded by a stone circle (Ruggles 1999: 12). Each year at the midwinter sunrise the first rays of light go 19 m down the monument's passage to reach the back wall. And at Callanish on the Isle of Lewis, a circle of uprights with a centre stone aligns to the cardinal points (by rows of stones emanating from it) and with the moonset at the southern major standstill limit by two parallel rows creating an avenue (Ruggles 1999: 134-136).

It has been argued that such alignments were accidental since many are only roughly positioned, but with so many examples aligning to the same specific events it seems that the ancients did consider astronomical events in their planning (whether the structures were then used to predict the phenomena or not). Rather than being exact calendars the alignments could have equally been used to bring the moon or the sun to the rituals, or to hold the spirits of the dead inside (Burl 1980: 64). Such an act is more symbolic and alignments would not have needed to be precise to serve their religious purpose; however it is this behaviour that is most important.

As more sites have been found it is evident that the form of henges and the nature of their use were more variable than the first archaeologists realized. In 1969, Wainwright attempted to categorize these differences based on size suggesting three groups: 1) earthwork enclosures, measuring over 300 m in diameter; 2) henges, which were 300 m – 30 m in diameter; and 3) hengiforms, reaching only up to 30 m (Catherall 1976: 1). Size, however, is not a good variable in which to group these because the data

simply do not fit these classifications. For example, Culbookie, which measures 27.5 m across, looks very similar to Yarnbury, which is 35.5 m. Re-evaluations have shown a division around 110 m, creating two groups of earthwork enclosures and small "henge monuments" (Catherall 1976: 1); however, even this smaller group of henges is found to be quite variable. Henges can vary in many ways and there do not seem to be any 'types' that can be described (Clare 1986: 282). Perimeters can include a bank and a ditch, but they can also have only a bank or only a ditch and others have neither. The number of entrances varies from region to region and internal features range from posts to burials to structures and stone circles:

> it would seem that we are not dealing with a clear-cut monument type but a permutation of practices and features, such as digging of pits or the erection of uprights, and perimeter types some with entrance causeways, some without, some sealed by a mound, others left open. What is clear, however, is that Kendrick and Clark applied the term 'henge' to only one or two of the permutations, …and that other permutations tend to be described as 'hengiform' or dismissed as wholly unrelated (Clare 1986: 282).

Discussing henges therefore seems to be more difficult than with any monument because the term 'henge' really is a "catch-all phrase" (Catherall 1976: 8). Perhaps what we need to ask, then, is if it is possible if one 'permutation' in one area or at one time was capable of serving the same purpose as another 'permutation' elsewhere (Clare 1986: 306)? Our purpose is to understand past peoples' individual cultures, not generalize them. Even though they built similar monuments, they cannot be deemed the same everywhere, and so it seems that in order to get anywhere what we really need to do is take our

terminology lightly and make our judgements of the past based on the remains of individual sites rather than trying to make what we see fit into categories.

Stone Circles.

Stone circles are circular or oval groupings of stone uprights which are usually found in uplands, but can also be situated on plains with their entrances facing local mountains (Waddington 1999a: 166). They have been linked with the axe trade which flourished during the Later Neolithic because many, like Threestoneburn, Northumberland and Castlerigg, Cumbria are both located very close to axe quarries (Waddington 1999a: 166). In fact, Castlerigg (plate 3.5) is believed to have been at the crossroads of two important trade routes.

Like henges, stone circles are also thought to have been monuments used for ritual. As was mentioned, a circle surrounds Newgrange, an obvious example. In the Lake District in Cumbria, all of the stone circles (which Burl believes to have been the first built c. 3200 BC) have either larger stones marking their entrances (for example, Castlerigg and Long Meg and her Daughters) or extra stones forming a rectangle at the opening (Ruggles 1999: 131). These have been determined to have astronomical associations; the above examples face the solstice sunrise. Moreover, Druid's Circle in Gwynedd, Wales, (along with the other stone circles in the country) align to solstice sunrises and sunsets (Ruggles 1999: 133). And in Tomnaverie, Aberdeenshire, roughly 100 recumbent stone circles stand with their largest stones flanking the recumbent stone, creating a frame for the summer moonrise (Bradley 2002: 130-134).

Plate 3.5: Castlerigg Stone Circle.

Since stone circles and henges tend to have the same sorts of alignments, it is especially interesting that in places where henges were not built (like on the Isle of Arran in western Scotland) stone circles were found associated with the same types of artifacts (particularly Grooved Ware) as henges in other areas (Barclay 1998: 36). It would therefore seem then that stone circles also held spiritual significance in Later Neolithic society.

Regardless, it is a mistake of modern thinking that all places, objects and actions must be put into sacred and profane categories when hunter-gatherer societies, and even early farmers are known ethnographically to see the world as a place where the significant and mundane intermingle. Consequently, although it may be difficult for us to fathom, stone circles were probably monuments built to accommodate the axe trade and to be used for ritual (which could have occurred simultaneously) and should be considered as such.

Pit Alignments.

Pit alignments were first recognized in the 1920s when aerial survey began to be used to find sites and the rows of small, circular features showed up as cropmarks (Waddington 1997: 22). Waddington (1997: 22) describes them as:

> …pit features of consistent size and spacing arranged in lines, usually with a linear or slightly curved axis, and commonly occurring as part of a complex of such features in a given area.

Usually found on valley floor gravel terraces, the pits are circular or ovoid and similar in depth and width and it is likely that the pits were planned and dug in a single event since

the rows show so much consistency (Waddington 1997: 23). In fact, at the Ewart I pit alignment, the pits seem to be organized into groups of twelve which may indicate that groups of people worked together to make the alignment (Waddington 1997: 23).

Only a few pit alignments have been explored and they can be grouped into two types: single and double rows (Waddington 1997: 22). Single pit alignments, like those found at Aldwincle, Briar Hill, Eskbank Nurseries, Heslerton, Langford, Marygoldhill and Ewart I, are the more common. They are most often found forming "grid-like" patterns on land close to both monuments and settlements and are often associated with linear ditches with causeways (interpreted as entrances into the enclosed area).

Conversely, double pit alignments, like those at Milfield North, Boroughbridge, Dishforth, Ogden Down and Thornborough, are parallel rows of pits which are found near Later Neolithic monuments, particularly henges, linking them together like avenues (Waddington 1997: 22-26).

To date, there have been very few studies on pit alignments so the form, function, and meaning of them are debated (Waddington 1997: 24). Tree planting, quarries for earthworks, division of landscape, stock control, fences, votive offerings, and avenues for procession have all been suggested for the features (Waddington 1997: 25). The amount of material taken from the pits, however, would not have been enough to build local earthworks and not all pits have evidence for having held posts for fences (Waddington 1997: 23-24). Moreover, although the material found in the pits (charcoal, pottery and lithics) could have been ritually deposited, not all pits, even within the same alignment have artifacts in them.

The current leading argument is that the alignments were used to mark off land, either for farms or to prevent farmland from encroaching on ritual areas (Waddington 1999: 164). At Ewart I there are two single alignments, one of which turns suddenly at a 90° angle towards the other, seeming to close off the Ewart henge (Waddington 1997: 28-29). Such a boundary would have marked off the land around the henge and the complex it was a part of from the surrounding cultivated land so that farmers would avoid encroaching upon ritual territory (Waddington 1999a: 164). However, Ewart I henge itself has never been excavated and there is no evidence for pit alignments marking other henges in the Milfield Basin (except for Milfield North). Clearly, more work at the henges and the alignments should be undertaken to understand why this is. Pit alignments somehow fit into the landscape of the Later Neolithic, but it will require more fieldwork to figure out how.

Rock Art.

The same cup and ring carvings (plate 2.8) on rocks in the Early Neolithic continued to be used in the Late Neolithic, but the nature of this use changed dramatically. Of all elements which carry on from the Early Neolithic, rock art really is one which shows how Later Neolithic people connected with the past, but used the same features differently. The Early Neolithic people had carved on rock outcrops in the landscape, showing how they saw their world and their place in it. In the Later Neolithic, however, the same rock outcrops were quarried for use in standing monuments and inside burial mounds, showing how old symbols were reworked into a new ideology surrounding megalithic monuments (Bradley 1992: 169; Waddington 1999a: 166). Many

of the slabs of stone used in the monuments show truncated cup-and-ring marks and spirals, indicating that they were not carved for that monument, but had been re-used in a special way (Bradley 1992: 170). Indeed, in western Scotland, it is the more complex motifs which are found near ritual monuments and in passage tombs which demonstrate, "...that there was something special about the designs selected for re-use" (Bradley 1992: 172).

The very end of the Neolithic and the beginning of the Early Bronze Age brought the "laying to rest of the cup and ring tradition" when marked stone was put into human burials (Waddington 1999a: 166). At Cairnholy I, the megalithic tomb was reopened to put decorated slabs inside facing Bronze Age pottery and cremations, and at Balbirnie, cup and ring marked stones were put in two Bronze Age cists (Bradley 1992: 173). This ending symbolically marks the close of the Neolithic and the advent of a new phase of prehistory.

Conclusion.

Perhaps more than any other period in prehistoric Britain, the Neolithic has captured the imagination of archaeologists, writers and the masses alike. Monuments, like Stonehenge, have instilled images of ancient rituals by night and at stone circles, the reading of the stars as the first farmers' calendar has inspired many. But research and careful excavation of both monuments and settlements, along with pollen studies and ethnography have revealed a world even more complex than previously imagined. These people, who were our ancestors, were the first in Britain to cultivate food and raise animals as we do today. And yet, the way they saw the world and moved within it seems

to have been entirely different. Indeed, the archaeological evidence can often be perplexing as we try to understand why huge monoliths were erected and pieces of broken pottery were put carefully into pits. Part of this confusion, however, is due to lack of information. Studies have too long focused on monuments, making the data incomplete and difficult to compare with the previous periods, but more recent work is aiming to alleviate this imbalance. It is an exciting time for Neolithic studies and, clearly, more accurate images of the period are about to emerge.

Chapter IV: The Milfield Basin.

Introduction.

The Milfield Basin is located 10 km south of the River Tweed in the northeast of England, stretching from the village of Wooler north to Coldstream, and encompassing the parishes of Kirknewton, Ewart, Akeld and Milfield (map 4.1 and 4.2) (Harding 1981: 87). It is characterized by three topographical zones: the northeast range of the Cheviot Hills to the south and west of the basin, Fell Sandstone escarpments to the north and east, and a low-lying plain in between (Waddington 1999: 21). Today, it is a land largely used for agriculture and gravel quarrying, but it has a vibrant and important history. It is where many battles took place between the Scots and the English (Wright 1987: 8), where King Edwin chose to locate his palace during the Dark Ages (Hope-Taylor 1977: 17), and where some of the first evidence of domesticates and monumental architecture from the Neolithic period comes from (Waddington 1997: 145). And yet, prehistoric investigation of the area has been sporadic until the last thirty years. With ongoing work in the area, however, and by using the latest archaeological techniques, it is clear that a better understanding of the Neolithic will emerge.

Location and Geological History.

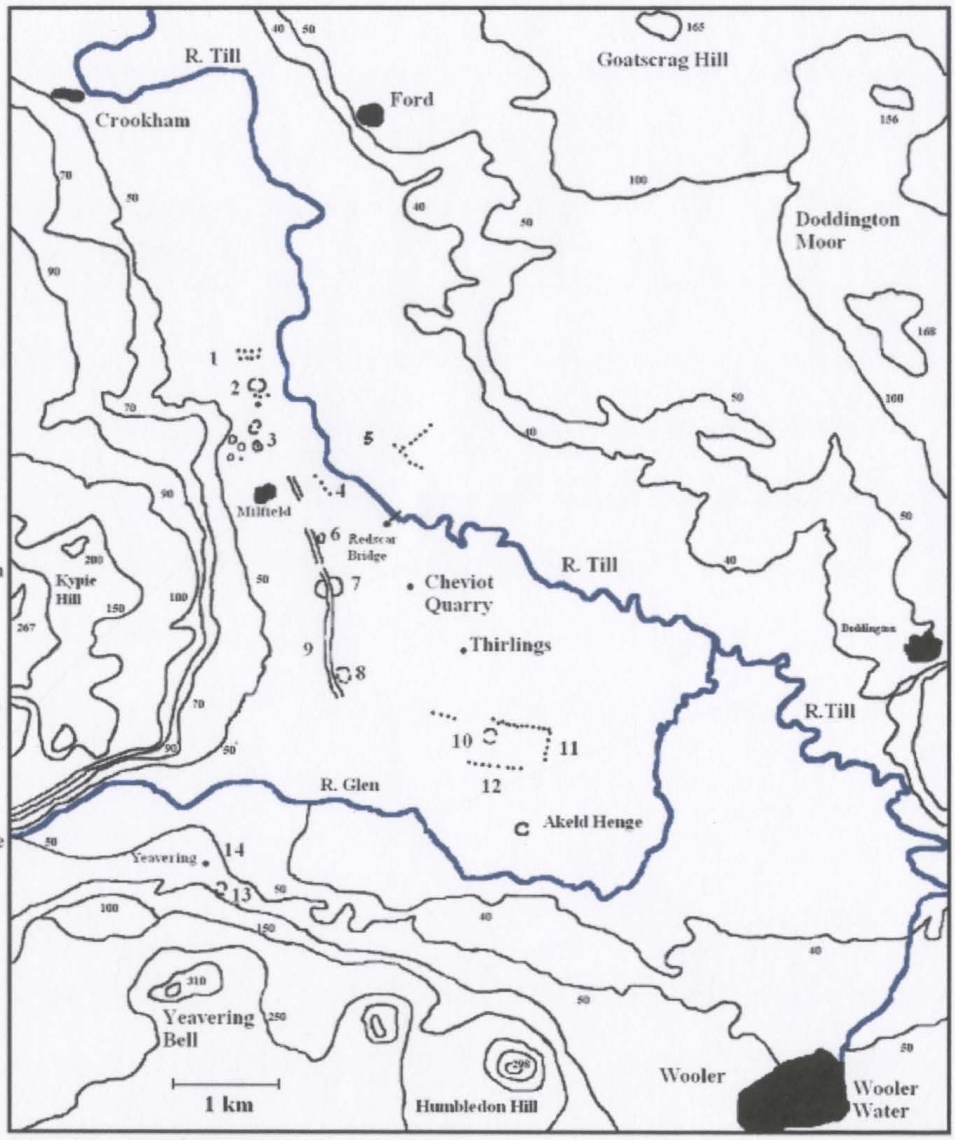
The Cheviot Hills.

The Cheviot Hills cover over 400 km^2 in the middle of northern England and are an undulating range with rounded tops reaching up to 815 m separated by U-shaped valleys in between (plate 4.1) (Waddington 1999a: 26). Made by major volcanic eruptions during the Lower Old Red Sandstone/Devonian Period (380 million years ago), the Cheviots are composed of igneous rock with underlying granite (which, due to

Map 4.1 Location of the Milfield Basin.

Legend

1. Milfield North Pit
2. Milfield North Henge
3. Whitton Hill henges & ring ditches
4. Milfield Palace site pit alignment
5. Milfield Plantation pit alignment
6. Milfield South Henge
7. Coupland Enclosure
8. Marleyknowe Henge
9. Droveway/ Avenue
10. Ewart Henge
11. Ewart I pit alignment
12. Ewart II pit alignment
13. Yeavering Henge
14. Yeavering standing stone



Map 4.2 Location of Sites.

erosion, can be seen today peeking out as crags) (Wright 1989: 21). It is estimated that the hills once stood some 4, 570 – 6, 100 m, but after several ice ages between 1 million and 12, 000 years ago, they have eroded to their present height (Wright 1989: 21). During the ice ages, ice sheets as thick as 533 m came down from Scotland and met another sheet coming in from Scandinavia just to the east of Northumberland. They traveled as far south as the Thames Valley and southern Wales (Wright 1989: 31). The Cheviots themselves do not appear to have been covered by the glaciers (although they were probably ice-capped of their own accord), but the presence of the glaciers' movements can be seen in the landscape today. They widened the valleys between the hills and rounded off the tops of the Cheviots, exposing their inner granite and making 'tor-like formations' out of it (Wright 1989: 21-32). Indeed, the gentle hills we see today are simply the "roots" of those mountains which once dominated England's north (Wright 1989: 21). Regardless, the Cheviot Hills are still an imposing range, especially in the Milfield Basin where they ascend high up at steep angles from the flat plain.

The Fell Sandstones.

On the opposite side of the Milfield Plain are the Fell Sandstone escarpments which loom in some areas as rocky cliffs up to 200 m O.D.[3], and in other parts as gentle, peaty slopes (plate 4.2) (Miket 1987: 10). The edges of the escarpment were originally cut by river water draining towards the North Sea, and today they are covered by very thin soils with peat on top (Miket 1987: 10; Wright 1987: 24). It is likely that in prehistoric times this area was covered by woodland, but the soils are very acidic and

[3] Ordinance datum, O.D., is the term used in Britain for sea level. It is measured from the tides at Newlyn in Cornwall (www.freespace.virgin.net/mark.davidson3/sea_level_rise/what.htm).

Plate 4.1: The Cheviot Hills.

Plate 4.2: The Fell Sandstones.

would not have been good for cultivation. Today, this area is moorland, covered by bracken and heather, and is used for grazing.

The Milfield Plain.

In between these two elevations is a very low-lying plain covering about 3000 ha. of land (plate 4.3) (Miket 1987: 1). Boulder clay slopes sweep down onto the plain which, at an elevation of no more than 70 m O.D., is made up of fluvio-glacial sand and gravel terraces interspaced by alluvial valley floor (Waddington 1999a: 21). During the end of the last glaciation this area filled with the melt water of the receding glaciers forming what is called Lake Ewart (Miket 1987: 12; Waddington 1999a: 21). Consequently, the plain itself has very few contours (Wright 1987: 34), save for the gravel terraces to the north which would have been islands at this time (Waddington 1999a: 21).

Since the beginning of the Holocene, the rivers Till and Glen, along with their tributaries, have wound throughout the basin making it fertile for agriculture. In fact, the Milfield Basin is known to be one of the best places to farm in the north of England because of its well-drained gravel soils, its lower annual rainfall (and therefore greater amount of sunlight), and the shelter of its surrounding uplands (Waddington 1999b:15). As a result, it is understandable that this is the place where some of the earliest evidence for farming is found.

Plate 4.3: The Milfield Plain with the Cheviots in the Background.

History of Study in the Milfield Basin.

Antiquarian Work.

Archaeological study in the Milfield Basin was originally less intensive than in southern areas of Britain, but there has been a steady interest in the area for almost two hundred years. Antiquarian work really only began in the 19th century in north Northumberland around the time the Society of Antiquaries of Newcastle upon Tyne was established in 1813 (Miket 1987: 17); however, despite this late start, information about Northumberland's antiquities immediately flooded in since the establishment of the society gave landowners a place to bring the artifacts they were finding. As a consequence, much of what would otherwise have been lost was recorded.

Part of the reason for these occurrences was the keen interest that Hugh Percy, second duke of Northumberland (1742-1817), Hugh Percy, third duke of Northumberland (1785 – 1847), and Algernon Percy, fourth duke of Northumberland (1792 – 1865) had for their lands' past, and their encouragement (and funds) to explore and preserve it (Miket 1987: 18). The first real fieldworker was Sir David William Smith, who was commissioned by the 2nd and 3rd Dukes to establish a museum for the material being brought to Alnwick Castle. Smith also dug several sites on the Duke's estate at Weetwood and near Horton, and his records were invaluable to later researchers (Miket 1987: 18).

As was common in Britain during this period, those interested in Britain's past spent their time recording the location of monuments and digging them for treasure. John Grey of Milfield Hill spent the 1820s-1850s recording the placement of monuments in the centre of the Milfield Basin, and Rev. William Procer (the Vicar of Doddington)

recorded cup-and-ring marks on the Fell Sandstones near Doddington in the 1850s and 1860s (Miket 1987: 18-19). George Tate excavated Threestoneburn and Yeavering Bell, and William Greenwell (1868) dug burial mounds at Ford Common, Etal Moor, Weetwood Moor, and Doddington Moor (Miket 1987: 20; Waddington 1999a: 21). Although part of the mound-digging tradition (where burial mounds were dug up the dozens per day) Greenwell is remembered for having been one of the better antiquarians of his day as his records of location, context and content were much more detailed than those of many of his colleagues.

Perhaps the biggest advancement of this time was with Henry MacLaughlan in 1857, who on appointment by Algernon Percy, created a detailed map of the county's prehistoric monuments (Miket 1987: 19; Waddington 1999: 21). MacLaughlan was a geologist and professional surveyor and, not only did he include the location of the sites, but also local information about them, creating a document which captured the spirit of a landscape. Moreover, since the map displays sites and information about them now lost, it is still useful to modern landscape studies (Miket 1987: 19; Waddington 1999a: 21).

After this surge of interest, exploration suddenly stopped and it was not until the 1890s that an interest re-emerged in the region. At this time, the Berwickshire Naturalists Society was established for Victorian/Edwardian fellwalkers who, as members of the upper-middle classes of the time, took an interest in exercise and the collection of the "curiosities" of the ancients (Miket 1987: 21-22). It was an unfortunate time for Northumbrian archaeology; as many artifacts were swept up and became conversation pieces on peoples' mantles and desks, they lost their context and often, after time, were themselves lost amongst other knick-knacks in the parlour. Most of these artifacts were

described in the Berwickshire Naturalists Society's journal and so record of them does exist, but many of the actual artifacts are lost or unlabelled and so cannot be included in modern studies.

Modern Archaeological Work.

In 1931, a school boy named David Short excavated and recorded three burial cists on his father's farm (Miket 1987: 22). It was the first modern-style published report in the county and was part of the beginning of a rich archaeological record. Around the same time, J. H. Craw (1935) dug Duddo Stone circle, and N. Newbiggen (1935) re-examined Greenwell's pottery at Broomridge, whilst R. Hedley (1923-24), and then Hoggs, began to publish gazetteers of the known sites (Miket 1987: 22-23; Waddington 1999a: 21).

After the First World War, aerial survey began to be used to look for archaeological sites all over Britain and in the Milfield Basin, Prof. St. Joseph of Cambridge started to record the complex of henges now known on the plain (Harding 1981: 87; Miket 1987: 23). In 1949-1950, Atkinson began his work recording the Coupland henge and avenue and Old Yeavering, known historically from the writings of the Venerable Bede to have been an Anglian centre, was excavated by the late Dr. Hope-Taylor for almost ten years from 1953-62 (Hope-Taylor 1977). It was expected that the early medieval town, Gefrin, would be found at Yeavering, and indeed it was there, only it lay upon the prehistoric remains of a Neolithic settlement and henge (Hope-Taylor 1977; Waddington 1999a: 21-22).

Most sites in the Milfield Basin have been ploughed under and only exist as cropmarks, so the 1960s and 1970s saw more aerial survey by Prof. N. McCord to discover new sites (Miket 1987: 24). The settlement at Thirlings, and the pit alignments and henges at Whitton Hill and Ewart were found at this time and excavated by Roger Miket (1976, 1981, 1985, 1987) whilst Colin Burgess explored Meldon Bridge (1976), Bronze Age settlements on the Cheviot slopes at Houseledge and Black Law (1980), the first hillfort at Fenton Hill, cragline cemeteries at Goatscrag, and a scooped-out settlement at Hetha Burn in the College Valley (Miket 1987: 25). Particularly active was G. Jobey whose discoveries included Milfield North henge, E. Marleyknowe henge, Ewart Park and W. Akeld Steads, as well as the avenue which connected the entire complex of henges (Harding 1981: 87).

In the 1980s and 1990s, Miket continued his work at Ewart 1 and 2, and at Whitton Hill, but a greater focus seems to have been placed on the Bronze Age sites. Jobey (1981, 1983; Jobey & Jobey 1987) and Gates (1981) focused much of their work on the unenclosed and enclosed settlements found on Cheviot slopes, establishing a better understanding of the period, and at the same time, Gibson (1981, 1983, 1986, 1990) did several experiments regarding the manufacture of pottery. Through diatom analysis and firing experiments, it was determined that pottery in the Milfield Basin had been made of local clays, tempered with sand, grit, and grasses, and then fired in open pits.

Since the mid-1990s, the work in the Milfield Basin has been conducted mostly by Drs. Clive Waddington and David Passmore. Beginning with an excavation of the Coupland Enclosure for his MA thesis, Waddington (1996a, 1996b, 1997, 1999a; Passmore & Waddington, in prep, a and b) determined the monument to have been much

older than previously thought and suggested a settlement pattern based on transhumance for Neolithic peoples in the area. Then, a major landscape study, having been in progress since 1995, was published for Waddington's PhD thesis in 1999. Taking a random transect of the basin, which encompassed all topographical and geological zones, Waddington's team fieldwalked, test-pitted, cored and mapped the land using GIS. Moreover, to reconstruct past environment, pollen analysis, phosphate analysis, and sediment dating were done by geographer, David Passmore. Since it considered off-site as well as on-site evidence, the project allowed a clear understanding of past settlement and landuse in the area from the Mesolithic to the Bronze Age. This enabled a more complete interpretation than was previously possible of how the inhabitants of the Milfield Basin lived within their landscape and related to neighbouring regions.

Since 1999, Waddington has continued his work in the area and has several papers which will be published in the summer of 2006. Moreover, he has created better public awareness of the region's archaeology by starting the Maelmin Heritage Trail which takes people from the Mesolithic to the Early Medieval period at reconstructions of sites that have been found in the surrounding area.

Neolithic Sites.

The Milfield Basin is an area which is rich in Neolithic remains, suggesting extensive settlement from the Mesolithic-Neolithic transition onwards. Early Neolithic sites include three settlements at Thirlings, Yeavering and Woodbridge Quarry in the southern end of the plain, the Coupland enclosure in the middle of the plain, and a droveway traversing the length of it from the hills. Later Neolithic activity seems to have

been more intense at the same three settlement sites as well as near the northern henges at the opposite end of the plain. However, most interesting is a complex of nine aligned henges and an avenue, some associated with the seven known pit alignments, running north to south along the valley floor towards the settlements. On a landscape level, these sites demonstrate a sophisticated landuse pattern in both periods of the Neolithic as cultivated foods and domestic animals were adopted to create new ways of life.

Part 1: Sites in the Milfield Basin.

Thirlings.

The Thirlings site is located in the southern part of the Milfield Plain on a delta terrace at 46 m O.D. (Miket 1987: 37). It was first noticed by Prof. N. McCord in 1978-81 during his aerial surveys as field systems associated with its later Anglo-Saxon occupation, but upon closer inspection during excavation in 1976 by Roger Miket, it was found to have significant prehistoric material as well (Miket 1976: 114; 1987: 37). Thirlings was a settlement during both parts of the Neolithic and yielded not only copious amounts of Grooved Ware, hazelnut shells and cereal grains, but it also had the first known Neolithic structure in the area.

Thirlings is located on good-draining soil and, although the closest water source is a kilometer away, before the draining of the valley in the 19th century it is known that this area was marshy, so the site would have been in close proximity of water, game, thatch, and reeds for baskets, mats and clothing (Miket 1987: 44). The only observable structure from the Early Neolithic component was a trapezoidal layout of post-pits running east-west and measuring 6.4 m long and 3-5 m wide (Miket 1987: 37). In one posthole were

Grimston Ware sherds and enough organic material to get a C-14 date of 3280 +/- 150bc. Just 5.6 m south of this structure was a shallow pit containing over 400 sherds of pottery (minimum of 12 vessels) showing little to no decoration (Miket 1987: 39-40). Miket (1987: 39) concluded that this component of the site had been an Early Neolithic settlement, but he noted that the trapezoidal structure was unique because, although common with the LBK culture on the Continent, only five others are known in Britain (four at Willington, Derbyshire and one at Belle Tout, Sussex) and these had dated much later.

After this first occupation of the site, Thirlings was abandoned for a thousand years, re-emerging from this hiatus as a Later Neolithic settlement associated with Peterborough Ware and Grooved Ware (Miket 1987: 55). This component of the site was marked by many pits, gulleys and postholes associated with seven pits aligned in a right angle which are believed to be the remains of a tent-like structure measuring 8 m x 4.3 m (Miket 1987: 57; Waddington 1999a: 157). The pits contained charcoal, the remains of the posts and, in one pit, 25 sherds of Peterborough Ware representing two pots. A second pit, 4 m southeast of this, contained similar pottery and had a sandstone quern placed upright seemingly used to secure the post the pit held (Miket 1976: 119). The quern had been damaged by later ploughing, but it was evident that it had been whole when first deposited.

Beside this group of features was another concentration (called group 2) of thirty-five features containing hazelnut shells, bone and pottery. Five pits were also found in a line; one of particular interest was Feature 466 which had been lined with clay and Peterborough Ware sherds of the Fengate style, creating a storage vessel in the ground

(Miket 1976: 119). After this, the pit was filled with domestic waste and burnt material including carbonized hazelnut shells and pottery sherds, and finally, a post with thirteen stakes surrounding it (Miket 1976: 119; Miket 1987: 59). A carbon date of 2130 +/- 130 bc was taken from the charcoal in the pit.

The pits also contained several cereal grains including oats and 6-row barley, and soil samples were found to contain vetches, brome grass, fat hen and chickweed. These are all associated with arable fields showing that cultivation was taking place (Miket 1987: 59). Moreover, archaeobotanic samples showed that hawthorn, bramble, and hazelnut were prevalent near the site suggesting a woodland nearby, and sedge and blinks indicated a marsh. This, along with the many flints (mostly scrapers and blades) and pottery found in the ploughsoil indicate that Thirlings was most likely occupied repeatedly for months to years in a short-term sedentary lifestyle taking advantage of its proximity to forest, marsh, and good farmland until its abandonment c. 2400 bc (Miket 1987: 124; Waddington 1999a: 131).

Yeavering.

Old Yeavering Palace.

At the base of the Cheviot Hills in the southwest end of the plain is the site of Old Yeavering (plate 4.4) (Hope-Taylor 1977: 4-5). Located on a slight hill of glacial sand and gravel between the River Glen and Yeavering Bell, this was once the royal site of Gefrin in the Anglo-Saxon kingdom of Bernicia (Hope-Taylor 1977: 6). In records from 1329, Ekwall explains that the name *Yeavering* is an evolved version of the Anglo-Saxon name *Gefrin,* which came from the words *gafr* (goat) and *bryn* (hill) (Hope-Taylor 1977:

15). No doubt the name originally referred to Yeavering Bell, which was probably later named on account of its 'bell' shape. After the identification of the palace features through aerial survey, Dr. Brian Hope-Taylor explored the area from 1952-1962 to salvage the site from quarrying (Ferrell 1990: 29; Harding 1981: 119). Although his work was meant for better understanding of the Anglo-Saxon period (especially to solve questions surrounding the move of the royal palace to the interior of Bernicia from the coast), Hope-Taylor soon realized that Yeavering had been inhabited long before Gefrin or the Romano-British hillfort on top of Yeavering Bell (Hope-Taylor 1977: 6). At the base of the plain's most prominent hill he found the remains of two ring-ditches, a 'ritual' pit, a henge and a standing stone (figure 4.1)(Ferrell 1990: 29).

The two ring ditches at this site were both found at the base of Yeavering Bell on the west and east sides of the Anglo-Saxon site. The western ring-ditch consists of a circular segmented ditch 15.8 m in diameter (Ferrell 1990: 29). The ditch segments are 18 cm deep on average, but were found to be up to 45.5 cm deep; however, the shape of the ditches has caused Ferrell (1990: 29) to question if they might have actually held squat upright stones when the monument was in use. In the centre of the ring-ditch, Hope-Taylor uncovered a pit measuring 2.29 m in diameter and 61 cm deep which held a cremation with a post on top. This was found in association with three other postholes forming a rectangle (Ferrell 1990: 29). Hope-Taylor (1977: 30) suggests that the western ring-ditch had undergone several modifications: the segmented ditch and central hole were first dug, then a cremation was put in the central pit. Next, an upright was placed in the pit when the outer stone circle was constructed, and finally, the stones were removed

Plate 4.4: Yeavering Bell. Old Yeavering is located at the base of the hill to the right in this photo. Photo faces west.

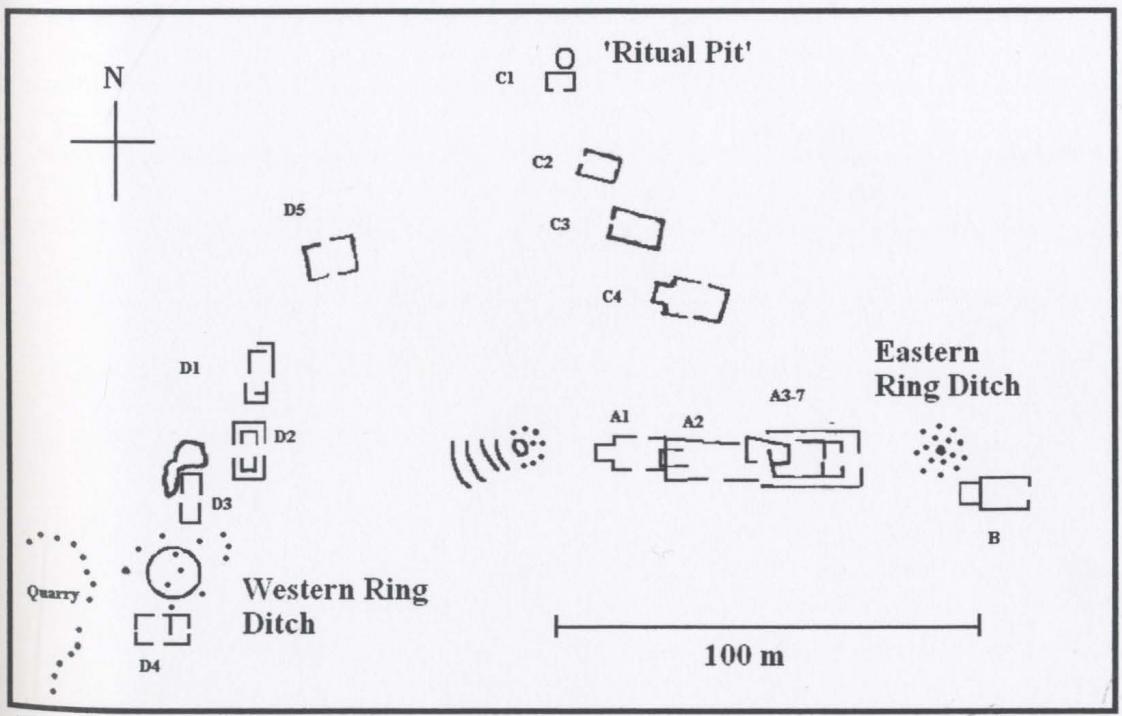


Figure 4.1 Yeavering Palace Site (after Hope-Taylor 1977)

and posts were put in their place. Sometime during the later phases, this monument was used as a cemetery for thirty-one inhumations (some of which cut into the postholes); however, even at this stage the inner circle seems to have held significance as all but four of these had been placed within the post setting (Ferrell 1990: 30). Since soils in the Milfield Basin tend to lend themselves to poor preservation, nothing but a little tooth enamel remained in these graves, but one yielded an iron knife suggesting a late prehistoric date for the cemetery.

The eastern ring-ditch was found partially within the Great Enclosure of Gefrin, but was obviously older as it had actually been cut into by it (Ferrell 1990: 30). It measured 13.4 m in diameter and near the centre of the circle was a pit with cremated bone and the remains of a Later Bronze Age urn.

To the north of the site near the Anglo-Saxon building C, a large pit was found which had miniscule amounts of cremated bone, much charcoal and a large quantity of Grooved Ware very much like that of Thirlings (McInnes 1977: 348). Three distinct layers were found in this pit. In layer A, closest to the surface, large pieces of pottery, burnt bone and tiny bits of charcoal were dug up. Under this, in layer B, was simply soil with a few pieces of charcoal. Layer C, however, contained burnt bones, a "dense concentration of charcoal", hazelnut shells, pottery, and one flint flake (Hope-Taylor 1977: 348). Hope-Taylor (1977: 348) believes that this was a ritual pit and that all of the fills were contemporary since sherds from layers A and C were found to fit together.

Yeavering Henge.

Although the henge was described by Hope-Taylor in his 1977 report, it was Harding who excavated and published this part of the site in 1981. Located 200 m east-southeast of the palace site, Yeavering Henge is a class II henge with two opposing entrances oriented east-west (figure 4.2) (Hope-Taylor 1977: 32). It is elliptical in shape, measuring 16 x 19 m, and a burial was found beneath a stone just outside the western entrance. Harding's excavation consisted of four sections cut across the henge ditch; A and B explored the centre of the ditches at opposite sides of the monument and C and D considered the terminal ends at the western entrance (Harding 1981: 122). The ditch was found to be 4 m wide and 1.4 m deep with a flattish bottom and slightly sloped sides. Section A showed evidence for gravel and silt having eroded into the ditch at the centre of gravity, showing that the monument had stayed open for a long time (Harding 1981: 122). In all of the sections, pottery was found which Harding concluded to be Grooved Ware since some had features such as beveled rims and cordons. However, these pieces were from secondary silt contexts and their cultural affiliation has been called into question (Gibson 2002: 176).

An oval pit, measuring 1.9 x 1.14 m and 70 cm deep, and containing a grave, was found just outside the western entrance (Harding 1981: 122). It had been filled with stones and the buff clay shadow of an inhumation lying on its right side was recorded on the orange gravel. The characteristics of this grave led Harding to believe that it was contemporary with the henge, but such a burial is reminiscent of Early Bronze Age beaker burials – a time when many of the henges in the Milfield Basin were still being utilized.

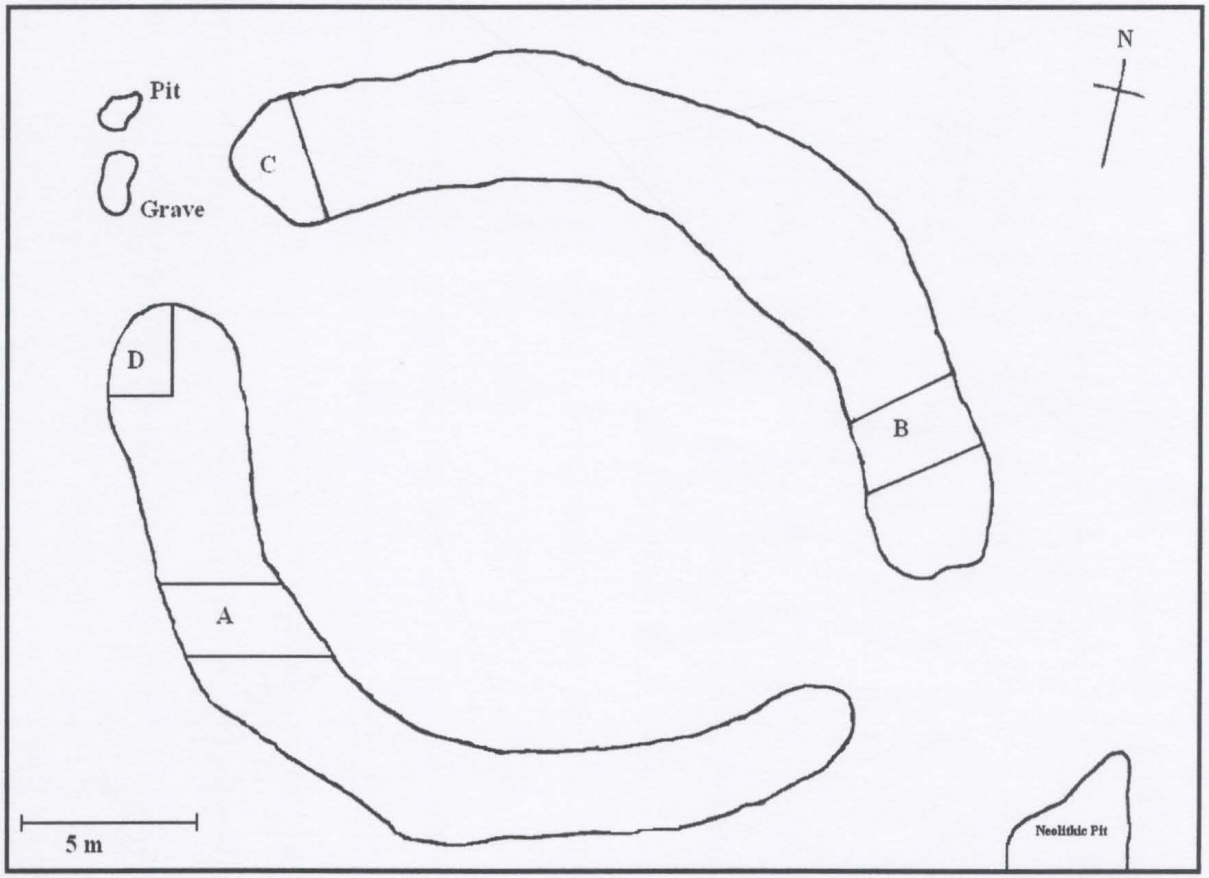


Figure 4.2 Yeavering Henge. (after Harding 1981)

Just north of this grave, a 31 cm deep bowl-shaped pit was found with carbonized nuts in its upper levels and burnt material, including Grimston Ware sherds, dating to 2940 +/- 90 bc, underneath (Harding 1981: 122). There were no indications of posts in this area, but Harding (1981: 122) believes that there is strong evidence that the site had been used for domestic activity in the Early Neolithic before being used for ritual in the Late Neolithic and Early Bronze Age.

Outside the eastern entrance of the henge was a depression of silty brown material, "…merging imperceptibly with the surrounding sand matrix", that contained many pottery sherds (Harding 1981: 122). Harding (1981: 129) discusses that Grimston Ware seems to have been found in domestic contexts at both the palace and henge sites whilst Peterborough Ware and Grooved Ware sherds were only uncovered in a ritual pit and at the henge – both 'ritual' contexts. Ferrell (1990: 39), however, argues that Later Neolithic occupation of the site may not have been only for ritual and questions the 'ritualness' of the pit near house C. She states that it could be equally seen as domestic. Not only is it located far off from the henge, but the content of hazelnut shells, charcoal, pottery sherds and flint flakes is highly reminiscent of domestic middens at Thirlings and other settlement sites (Ferrell 1990: 39). It would seem that although structures have not been found associated with this pit, there may have been settlement here at the end of the Neolithic.

The final feature of interest at Yeavering is a standing stone, 2 m tall, which is 122 m west of the henge's entrance (Hope-Taylor 1977: 32). This alignment has been questioned as records show that it was re-erected in cement by the Berwickshire Naturalists Club in 1925, but its position may actually be correct since MacLaughlan

wrote about it, calling it the Grey Stone, and stated that it had been there from at least before 1415 (Harding 1981: 119).

Cheviot Quarry.

The Cheviot Quarry site is located between Thirlings and Yeavering at the Woodbridge Farm, southeast of the Old Airfield near Milfield Village (Waddington 2000b: 1). In 1992, seventeen test pits, measuring 35 x 3.5 m, were excavated and trenches 3 and 13 were found to have domestic pits and postholes dating to the Neolithic. In trench 3, a pit was found bearing twenty-eight sherds of Grimston Ware and charcoal, whilst in trench 13 nine sherds of Later Neolithic Impressed Ware was found with a further fourty-three eroded fragments and charcoal.

Further work was done by Tyne and Wear Museums Service and MAP, resulting in the accumulation of more prehistoric pottery, but it was not until the summer of 2005 that the site was fully excavated by Archaeological Services Inc. to save it from quarrying. Of the 706 sherds found during all of these projects, several fabrics were identified demonstrating the variety of wares present at the site (Waddington, in prep, c, appendix 1). These included pieces from the Early Neolithic to the Bronze Age, although the greatest number seem to be of the carinated Grimston Ware tradition. Since there is only one sherd of Impressed Ware directly associated with an AMS date, this site, which encompasses all of the periods, will offer the chance for the typology of the region to be better understood than it is now with such a paucity of material (Waddington, in prep, c, appendix 1). The pottery was found in association with many post holes forming longhouses and it was first thought that this was the remains of the first Neolithic

longhouse village to be found in the UK. Hopes were dashed, however, when AMS dates showed the structures to be from the Later Bronze Age. The pits the pottery was found in, though, to date to the Neolithic, and residue analysis on the sherds showed high levels of fatty acids from cooking (Stern & Heron, in prep, appendix 6). It is therefore clear that the Cheviot Quarry site is domestic and was extensively used from the Early Neolithic onwards. The fact that it was fully excavated will also be useful in accessing the data collected.

Milfield North Henge.

The Milfield North henge is the most northerly of the aligned henges in the Milfield Basin and is located 250 m west and 8 m north of the River Till (Harding 1981: 101). It is a class II henge with a segmented ditch and bank which has two main entrances at the north and south of the monument and a causeway to the southwest, all covered in hard gravel (figure 4.3) (Harding 1981: 101; Miket 1987: 86). There is a circle of pits surrounding the monument and internal features, including another circle of pits, three large cremations, a cist burial and scattered cremation graves fill the henge. Like Thirlings and Yeavering, this site seems to have been first built in the Neolithic, but used through to the Anglo-Saxon period.

In 1975 and 1977, Harding excavated at the site and then in 1978 resistivity survey was conducted (Harding 1981: 101). Outside the monument eleven pits were found, seven to the north and four to the south. Although the henge was not excavated entirely, from the location and orientation of these pits it would seem that they formed a ring which surrounded the ditch. Post pipes were unearthed in pits 3 and 5, and from their

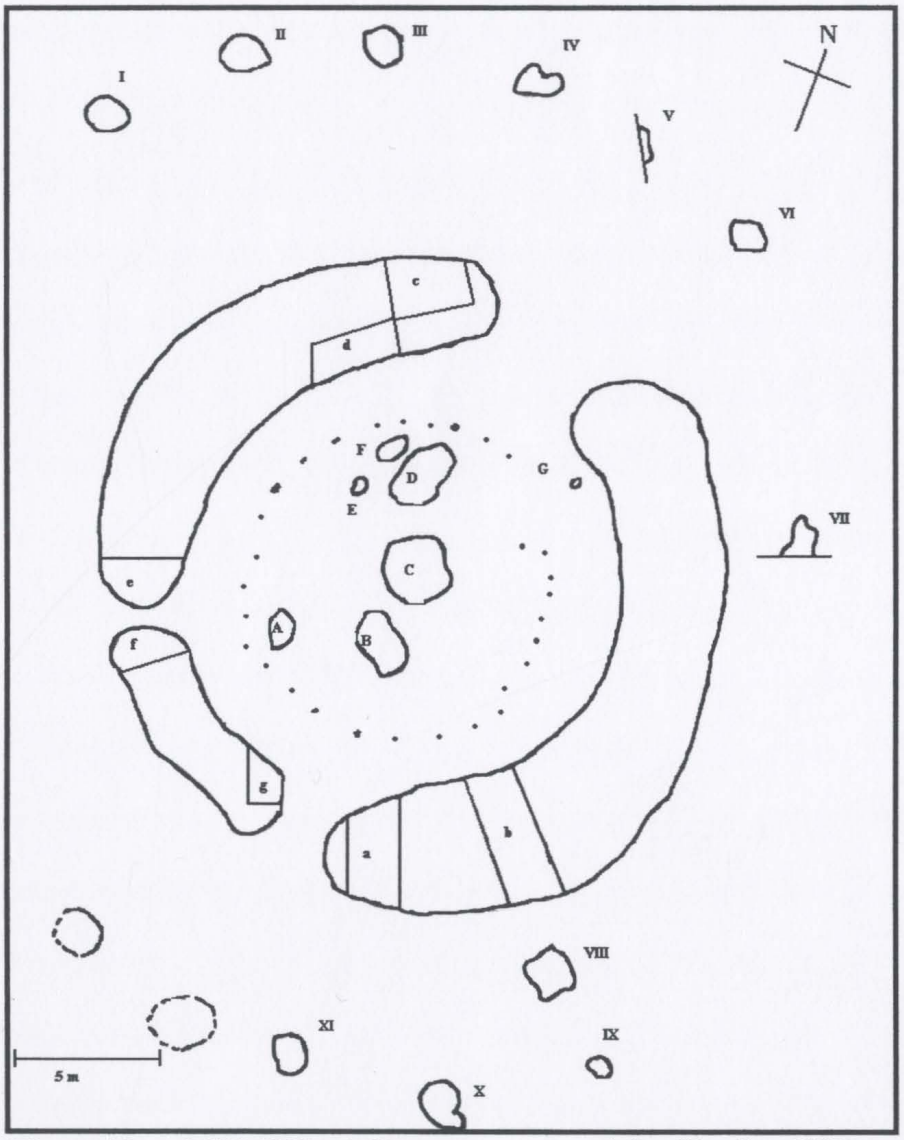


Figure 4.3 Milfield North Henge. (after Harding 1981)

fill, pits 10 and 11 had clearly held posts, although the pipes had been removed. Pits 8 and 9, although under what would have been the bank, had post fittings which had also been removed. Pit 9 contained a barbed-and-tanged arrowhead indicating a Later Neolithic date for these pits (Harding 1981: 105).

The henge's ditch is 15 m in diameter with a larger entrance to the north (4 m) than in the south (2.3 m) (Harding 1981: 105). Seven sections cut within the three segments showed that it was 1.2 m deep and flat-bottomed and silting found at the bottom of the ditch suggested that it had been kept open for several centuries. Charcoal dates were taken at upper and lower levels of the fill and were found to be 1824 +/- 39 bc and 1851 +/- 62 bc respectively, but iron objects were also found halfway down the ditches' stratigraphy showing that the monument must have stood open until at least the Iron Age (Harding 1981: 108).

Just inside the henge was an irregular circle of thirty small pits which contained grey silt and stones (Harding 1981: 108-109). Some had tiny pieces of charcoal, but none held posts. Within this circle were even more pits which, most likely, once held cremations and a cist grave (Feature A) (Harding 1981: 109).

Most interesting were three large pits running north to south in the centre of the monument (Harding 1981: 109-111). The most southerly (Pit B) held fourty Later Neolithic sherds, stones, a flint scraper, and two upright slabs of stone at each end. Despite the lack of a body, it is believed that this had been a grave.

The middle pit (Pit C) which measured 2.72 x 2.4 m and 1.44 m deep, had been filled with large stones, charcoal (dated to 1800 +/- 80bc), almost an entire Food Vessel

(supporting the Early Bronze Age date), and, judging by the stratigraphy, a wooden coffin which had later slumped down as it decomposed (Harding 1981: 111).

The final pit (Pit D) was oblong, 2.62 x 1.5 m and 0.84 m deep. The centre was deeper than the edges and the remains of a charred slab of wood was found on a gravelly-brown soil/burnt layer near the bottom. There were no finds from this pit, but Harding (1981: 111) believes that this was also a grave because of its similarities to pits B and C.

Milfield North Ditch Feature and Pits.

In the same field as the Milfield North henge, only a few hundred meters from the River Till, is a ditch feature running east to west, which can only be seen as a cropmark (Passmore & Waddington, in prep, a). A trench, measuring 9.75 x 7 m, was placed over the west end of this ditch and excavation showed that the ditch was 3-4 m wide with a flat base and concave sides. For lack of evidence, it was not possible to determine the function of the ditch, but it is obvious that it was man-made.

After hoeing back the turf in the trench, two pits were also found side by side up against the edge of the ditch. Pit 1 (69 x 82 cm, and 33 cm deep) was circular with dark, charred material in two fills (contexts 4 and 9), each with flints, burnt bone, charred hazelnut shells, charred wood and Grooved Ware pottery. Pit 2 (48 x 64 cm, and 31 cm deep) had one fill of orange-brown sandy gravel with stones (context 6) and contained five lithics. Only context 9 was suitable for AMS dating, and two dates of 2620-2450 cal BC and 2570-2340 cal BC were taken from hazelnut shell. The stratigraphy and fill of the pits are different and so associations between the two really cannot be made. However,

the dates from pit 1 show that it was earlier than the Milfield North henge and pit alignment (described below). Moreover, the Grooved Ware from this pit seems to have been pressed into the sides very much like the clay-lined pit at Thirlings from which a similar date was taken. Since there is no evidence of a structure, Passmore & Waddington (in prep, b) believe that the pits are the remains of a small domestic site and may have been where people stayed temporarily whilst coming into the valley for ritual. What is particularly exciting is that this represents a pre-henge phase for this field and further work could very well give some indication as to when, how and why the henge and pit alignments were built.

Milfield North Pit Alignment.

The pit alignment at Milfield North is one of six known pit alignments in the Milfield Basin (Miket 1981: 137). At the Milfield Palace site there is an irregular line of pits going 300 m towards the River Till (Miket 1987: 76). At the Milfield Plantation an alignment of closely spaced pits runs 900 m northwest to southeast and is intersected by another alignment going 300 m northeast to southwest. The Milfield North pit alignment, however, is a double row of pits which travels east-west, stopping just 180 m short of the Milfield North henge, and is the only of the Milfield alignments that has been explored archaeologically (Miket 1981: 138).

In 1978, Harding dug two pits at the end of this alignment near the Milfield North henge (Miket 1987: 79). He found evidence of posts in each pit and sixteen sherds of Grooved Ware. Charcoal in pit 2 yielded C-14 dates of 1790 $^{+}/_{-}$ 50 bc, 1820 $^{+}/_{-}$ 50 bc, and 1655$^{+}/_{-}$ 80 bc (Harding 1981: 115). These dates indicate that this pit alignment was

contemporary with the henge and must have been associated in some way. However, it was not until Miket considered the Ewart pit alignments further down the valley that this association became more pronounced.

Whitton Hill.

To the south of the Milfield henge are several ring-ditches clustered at the base of Whitton Hill (Harding 1981: 101). Discovered by Prof. N. McCord during aerial survey and described by T. Gates, the ring-ditches sit on the gravel terraces by the Cheviot slopes, 1 km north of Milfield Village (Harding 1981: 101; Miket 1985: 137). Of the many monuments, five are larger than the rest. The smallest of these five is only 3.5 m in diameter with a 2 m wide ditch whilst three have 1 m wide ditches surrounding an area of 9-20 m diameter (Miket 1985: 137). The fifth ring-ditch, called Whitton Hill I, is the largest and was excavated by Miket in 1982-1983.

Whitton Hill I has a ditch which is V-shaped, 2 m wide and 1.2 m deep, and filled with three components (figure 4.4) (Miket 1985: 137). First, sand and gravel had been put into the ditches when they were first dug, then whinestone and sandstone boulders were piled up to 40 cm high along the middle, and finally, burnt material with charcoal, burnt bone, hazelnut shells, flint, and pottery fragments formed the top layer (Miket 1985: 137-138). Five charred timbers which were found at the southwest part of the ditch lined parallel to each other. C-14 dates were taken from these indicating dates of 1730 $^{+}/_{-}$ 80 bc, and 1790 $^{+}/_{-}$ 50 bc (Miket 1985: 138). Miket interpreted these timbers and the stone settings of the ditch as having held timbers for a structure, although the form of this could not be ascertained (Miket 1987: 95).

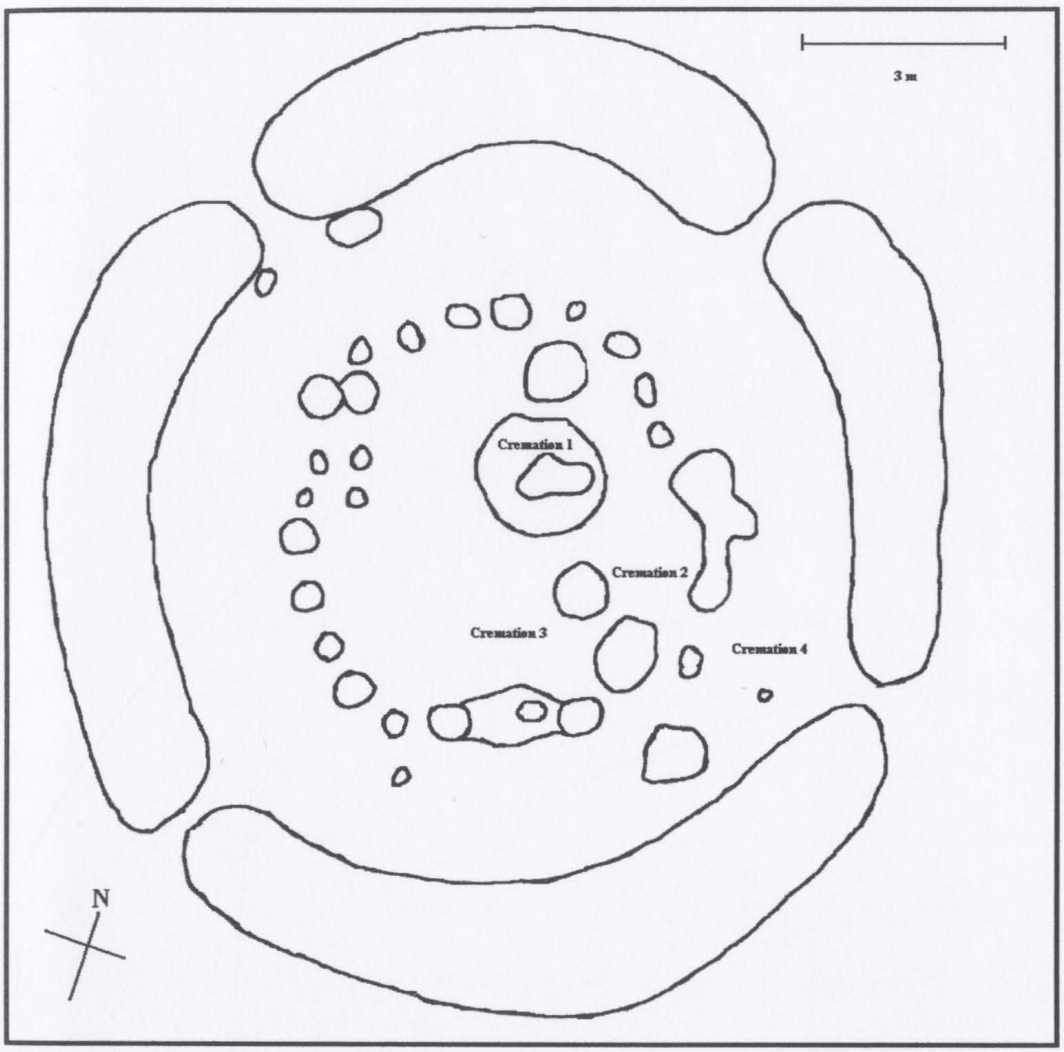


Figure 4.4 Whitton Hill I. **(after Miket 1985)**

The Whitton Hill I henge has four entrance causeways roughly at the cardinal points and an internal ring of thirty-one pits which is 10.3 m wide (Miket 1985: 138-140). All of these pits had dark earth fills and measured 10-60 cm wide and 30 cm deep; pits 13, 14 and 17 had postpipes and pits 11 and 20 had stone packing. Pits 6 and 7 both had cremations (Miket 1985: 139). Within the henge a further ten pits, many containing cremations, were scattered both in and outside the internal ring (Miket 1985: 140). Of particular note is pit 28 which, measuring 1.8 x 1.72 m, held a flat sandstone flagstone with an inverted vessel covering an adult cremation. This was covered with packing stones and the upper fill contained Grooved Ware and charcoal dating to 1710 +/- 50 bc (Miket 1985: 140).

Whitton Hill II is a class II henge in this cluster which is found just on the other side of the A697 southwest of Whitton Hill I (figure 4.5) (Miket 1985: 144). Underlying this henge is a charcoal layer of soil which Miket was able to date to 2870 +/- 80 bc. The site consists of a U-shaped ditch, only 90 cm wide, and a bank with only one entrance (Miket 1985: 145). The ditch fill consisted of silt with two deposits of charcoal, the first dating to 1650 +/- 45 bc, and the second at 820 +/- 170 bc showing that the monument had been used well into the Bronze Age and Iron Age. Three pits were found flanking the entrance into the monument one of which held a cremation with charcoal dating to 910 +/- 310 bc, the other two were empty.

Inside the henge was an internal horseshoe of twelve pits which Miket (1985: 145) believes may have been an enclosure. A central pit, pit Y, was 40 -70 cm wide with a flat bottom. It contained the cremated remains of twenty-three people and had a date at

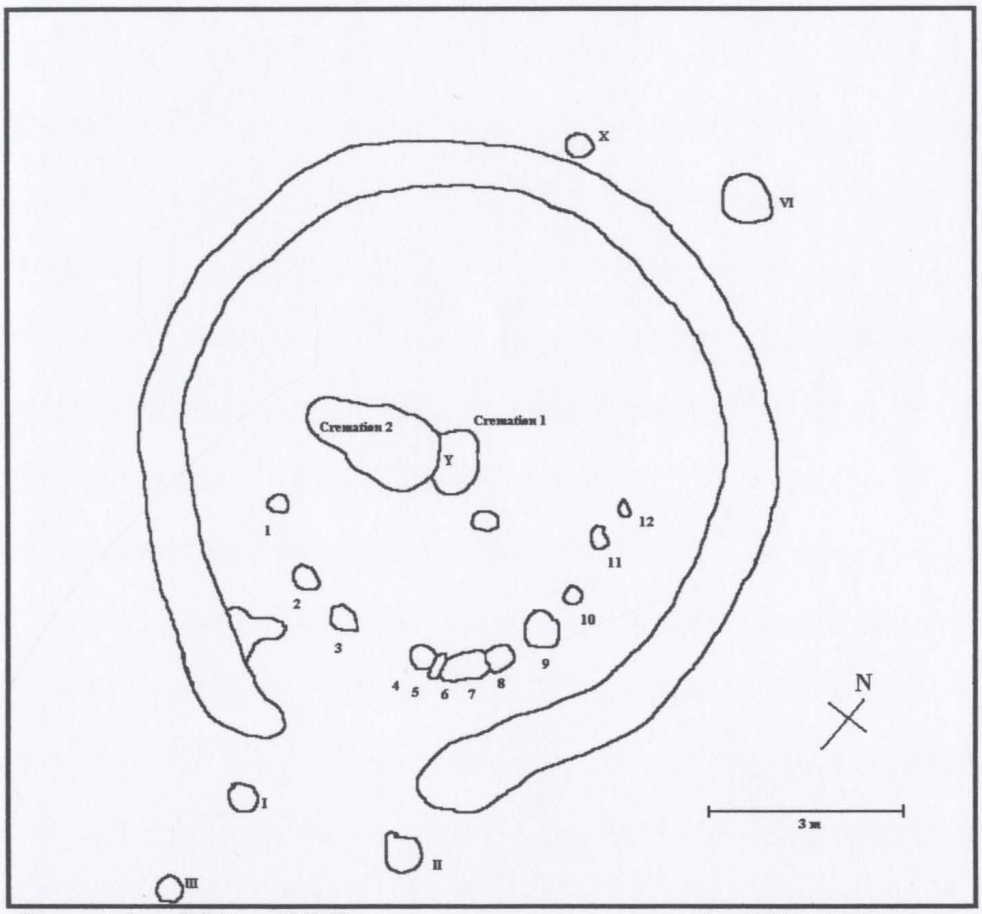


Figure 4.5 Whitton Hill II (after Miket 1981)

the topmost level of 930 +/- 310 bc (something, however, which should be taken with caution since the range of error is over three centuries). The top of the pit had been covered with a flagstone and a small mound had been piled over this.

The evidence from Whitton Hill II shows a similar progression as Milfield North. The underlying burnt layer adds to what is known of the pre-henge use of the basin. The henges support the evidence for ritual and procession having been important later on, and the cremation burials inside show what became of the henges after the Neolithic.

The Whitton Hill sites, however, are particularly interesting because of their many components and unique form. Whitton Hill I is the only henge on the plain with four entrances and the evidence from its features shows different uses from the construction of a structure within to becoming a cremation cemetery. Whitton Hill II, located so close to Whitton Hill I, is of such a different form and has its own unique history, yet it seems to have also been part of the henge complex with its own function. What seems especially curious, however, is that both these sites are located amongst so many other monuments of similar form which have not been evaluated. Although Whitton Hill I and II are the largest and both line up with the other henges in the basin, forming what is believed to be a ritual complex, excavation of the other ring-ditches surrounding them to determine their relationship with them would be very informative. Such a project might even produce a better understanding of the larger ritual complex and how the Whitton Hill I and II sites fit into it.

3 Whitton Park.

The Whitton Park site is just at the edge of the Milfield Village, 43.5 m O.D., and only 500 m northwest of the Milfield South henge (Waddington, in prep, b). In the summer of 2004 the site was fully excavated to clear the land for housing and eight features were found including six postholes, one pit and a stakehole.

The pit feature was typically domestic with charred hazelnut shells, Impressed Ware pottery, cereal grains (wheat and barley), flint, and chert and AMS dates from this pit indicated that it was filled in c. 2120-2090 cal BC. The postholes were determined to be contemporary as they contained the same type of pottery and sandy silt fill and their form suggested a small, temporary structure.

Waddington believes that the evidence from this site points to a small, transitory site, not unlike that found at Bolam Lake, which, due to its proximity to the Milfield South henge, may have been a settlement used seasonally when the henge was used for ritual. Not only do the dates suggest contemporaneity with the henges in the basin, but it can hardly be a coincidence that its location puts it only 500 m from the avenue/droveway that is associated with the ritual complex. What is most important about this site, however, is that it is the first which has allowed for a solid date to be determined directly associated with Impressed Ware which supports the dates found at the other henges which produced similar pottery.

Milfield South Henge.

The Milfield South henge was built on a natural hill 600 m southwest of the River Till near a small stream (Harding 1981: 93). Its highly segmented ditch has only a single

entrance oriented northwest. Today, the east side of the monument is destroyed by a field boundary and a road. Although the site was known of since the first aerial surveys after World War I, it was not until 1976 that it was described and 1977 and 1978 that it was excavated by Harding (figure 4.6) (1981).

From Harding's work, the ditch is known to have taken advantage of the natural slope of the hill sides and the walls of the ditch itself are at a 45° angle as a result of this (Harding 1981: 95). The ditches seem to have naturally filled in over time as silting was found at the centre of gravity and no recuttings could be seen in the cross-section (Harding 1981: 96). Although most of the internal part of the henge had been used for Anglo-Saxon flat graves, in the west-central part of henge there was a large pit, 3.6 x 3.2 m, which dated much earlier (Harding 1981: 97). After the pit was dug, a setting of stones was put in creating a rectangular 'box'. In this was a cupmarked rock and burnt material which dated to 1950 +/- 110 bc and 1590 +/- 100 bc. Slightly above this original context was evidence for a post having been put in the pit c. 1740 +/- 80 bc. Some calcined bone was found in this fill, but Harding (1981: 97) concluded that it was not a cremation. Finally, the post was taken out before it could rot and the pit was filled in. Harding (1981: 97) believes that the pit may first have been used for a cremation or inhumation, but in subsequent periods it was meant to hold a post. The cupmarked rock is typical of Later Neolithic deposition in graves, but soil analysis gave no indication of a burial and so it could equally have been placed in the pit as a votive deposit for the foundation of the post. Around the central pit were also six smaller pits which almost form an inner ring (Harding 1981: 97). These had no evidence of posts, but it seems they were associated somehow with the central pit (Harding 1981: 97).

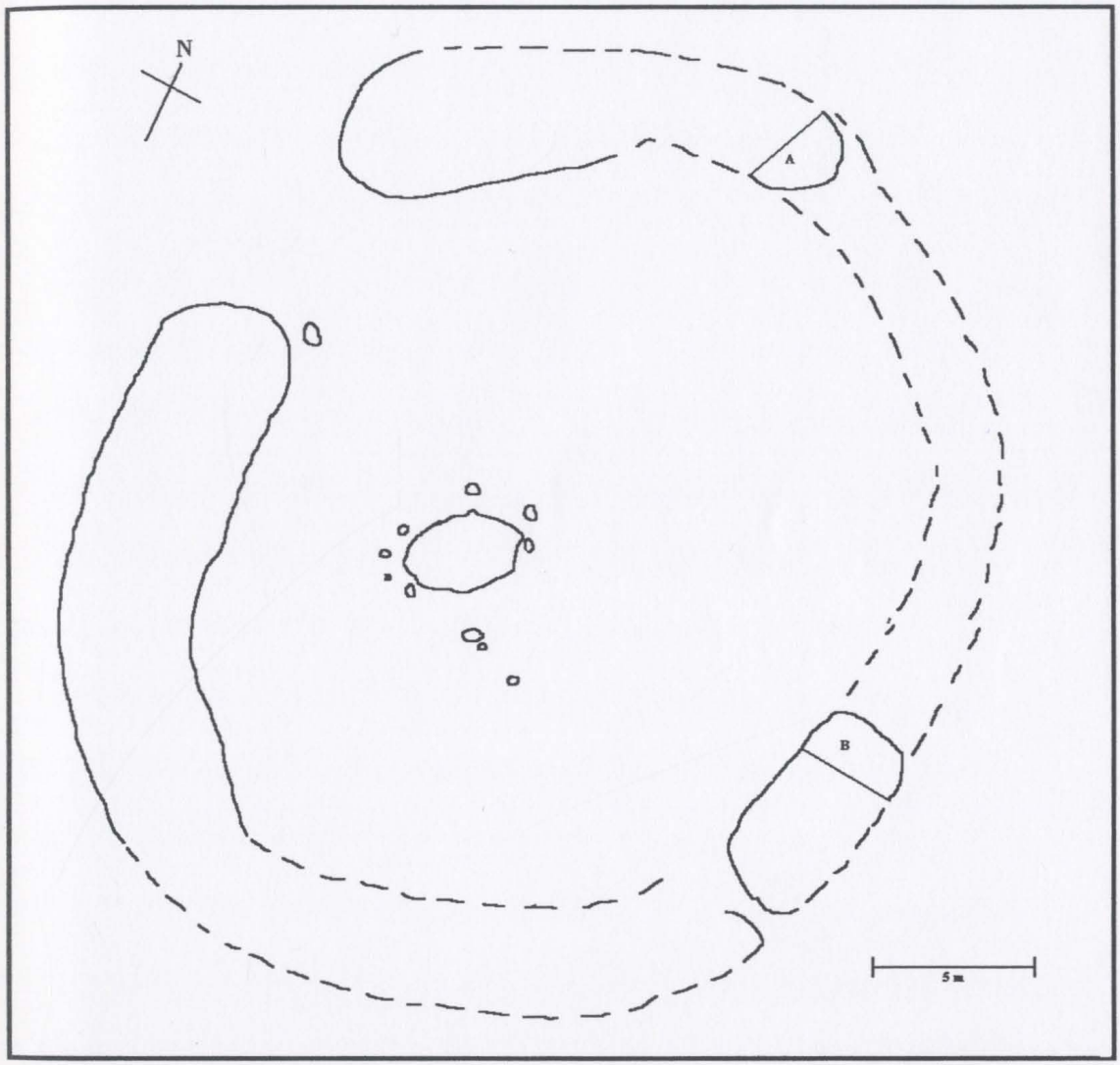


Figure 4.6 Milfield South Henge **(after Harding 1981)**

Coupland Enclosure/Henge.

Located in the centre of the western side of the valley is perhaps the most enigmatic of the henges. Called a 'camp' by MacLaughlan, a 'henge' by Harding and Miket, and an 'enclosure' by Waddington, the Coupland site has been one of the most debated in the Milfield Basin (Waddington 1996a: 9). Most likely due to its enormous size (it measures some 95 m in diameter) and its direct association with the linear avenue, or droveway, which runs the length of the valley, Coupland is the only one of the henges still visible from the ground (Harding 1981: 91).

In the 1970s, Harding explored the site at its south entrance, but found little more than a few pits (Harding 1981: 91). Then in 1995, the area was fieldwalked and, as part of his Milfield Archaeological Landscape Project, Waddington excavated the northern entrance and part of the droveway running through it (Waddington 1996b: 9).

The site is comprised of two main components, the enclosure/henge itself and a raised droveway (called an avenue by Harding) (figure 4.7). This droveway is a linear feature with parallel ditches set 15-30 m apart that runs north to south in the valley for 1.7 km (Passmore & Waddington, in prep, b). Unlike the other henges in the basin which are placed on either side of this feature, the Coupland site straddles the droveway as it goes straight towards the River Glen (Harding 1981: 91; Passmore & Waddington, in prep, b; Waddington 1996b: 9; Waddington 1997: 144). It is therefore inferred that the droveway was constructed after the Coupland enclosure was in place since its path actually changes course within the monument to leave via the off-centre exit (Waddington 1997: 144). Before Waddington's study of the Coupland site, little work had been done on droveway, save for resistivity survey and testing by Harding (1981) and aerial photography, both of

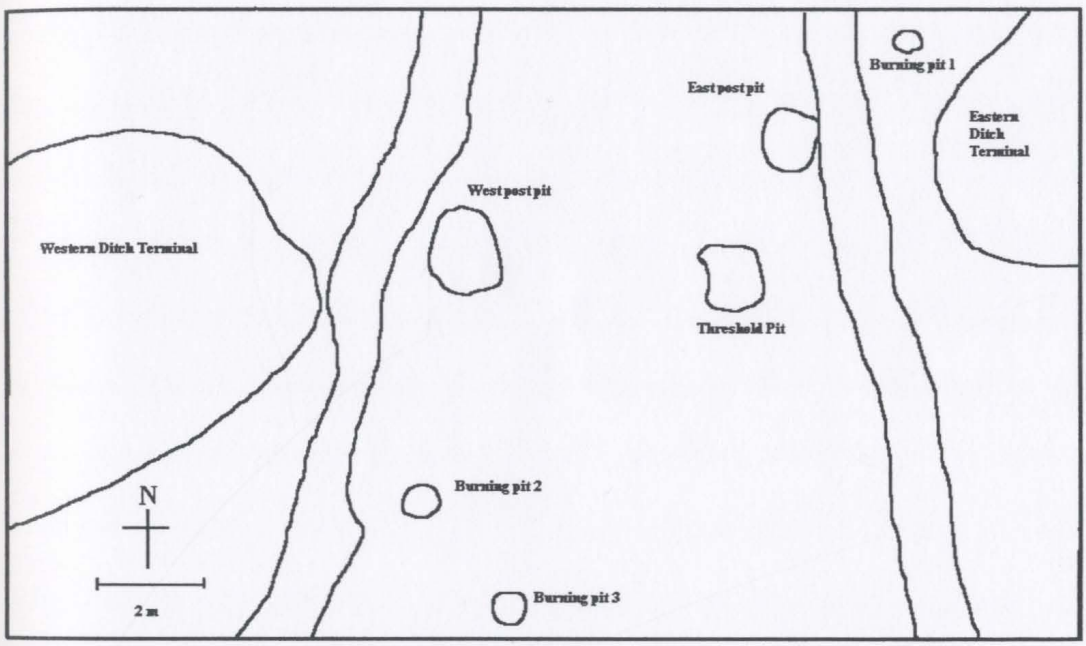


Figure 4.7 The Coupland Enclosure, northern entrance. **(after Waddington, in prep b)**

which indicated that some pits were associated with the ditches. Therefore, Waddington decided to survey the northern entrance of the enclosure and to sample the droveway to consider its relationship with Coupland (Waddington 1996b; Waddington 1997).

A trench, 22.5 x 13 m was dug encompassing the eastern ditch and five sections were put into the western one (Waddington 1996b: 11). It was found that the droveway ditches were dug to be U-shaped and were 80 cm wide and 50 cm deep. Burnt material was found with Grimston Ware sherds, flint, hazelnut shells and packing stones in the lower ditch fill and there was evidence for a fence 1.2 m high (if the assumption that 1/3 of a post must be dug into the earth to make it stable is true) (Waddington 1996b: 11-15). Dates from this material calibrated to 3800 BC give it a firm Early Neolithic origin which means that the Coupland enclosure must have been at least as old, and therefore much older, than the other henges in the basin (Waddington 1997: 144). Further supporting its uniqueness is the fact that the Coupland enclosure is sixteen times larger than the other henges and its ditch terminals are square rather than rounded and up to 6.5 m wide (Harding 1981: 91).

The site also had three burning pits, two entrance pits and a 'deposition' pit (Passmore & Waddington, in prep, b). The three burning pits were 13-30 cm deep with rounded sides and bases and were filled with charred hazelnut shells, Grimston Ware pottery, and cereal grains (emmer wheat and barley). All seem to have been from a domestic occupation pre-dating the monumental construction in the area (Passmore & Waddington, in prep, b). Pit 1 was under what was later the enclosure bank and dated to 3780-3640 cal BC. Pits 2 and 3 were both within the enclosure itself, but dated to 3990-3700 cal BC and 3640-3100 cal BC respectively. Although there is little evidence for this

occupation of the site, what is remarkable is that these are the earliest good dates for the Early Neolithic in the UK.

Within the entrance of the enclosure, two significant pits were found opposite each other on either side of the droveway (Passmore & Waddington, in prep, b). Both had stone packing in its original position and clearly displayed that these pits had held 30 cm wide posts which would have stood 1.8 m above the ground. From the location of these pits and the fact that they had held posts it seems clear that these are the remains of a gate. At some later point, like the posts in the droveway ditches, they were extracted – presumably when the ideology surrounding the monument and the nature of its use changed.

Finally, a third pit was found just inside the entrance of the enclosure that was larger than the rest (1.4 m diameter) (Passmore & Waddington, in prep, b). It was not as deep as the others, only 22 cm, and held only loose orange-brown fill with a bit of charcoal. It seems that after being dug, whatever had been placed inside was dug up again and the pit was filled in immediately. As a result, Waddington (1996b: 13) suggests that this may have been a "dedicatory deposit" not unlike those known in the entrances of Woodhenge and Landegai, similar circular earthen monuments dating to the Early Neolithic.

Since the Coupland enclosure has an internal ditch, an external bank and opposing entrances (all henge characteristics), it has long been thought to have been another henge in the complex. However, Waddington's discoveries show that the monument is much older and that it does not have the internal features common to the other henges. Moreover, two transects of soil samples revealed that phosphate levels are much higher

on the droveway and inside the monument than outside of them (Waddington 1996b: 15). As a consequence, Waddington (1996b) concluded that the monuments had been used in the Early Neolithic to move livestock from the Fell Sandstones into the enclosure for redistribution and consumption at specific times of year. He asserts, however, that this does not suggest that the Coupland site was not used as a henge within the Milfield complex in the Later Neolithic (Passmore & Waddington, in prep, b) Just because the phosphate levels indicate large numbers of animals on the droveway and in the enclosure does not mean that humans did not use them for ritual as well:

> The embedding of economic/subsistence strategies within ritual practice and pervading belief systems should not necessarily be seen as unusual or unlikely. In this way the performing practical realities such as cultivating crops and herding of stock and the observation of ritual and ceremony should not necessarily be seen as mutually exclusive (Passmore & Waddington, in prep, b)

Regardless, the Coupland site is perhaps one of the most important to the understanding of the Neolithic in the Milfield Basin. At this site a progression can be seen from the earliest phases of the Neolithic to the Early Bronze Age – something which is simply not as visible at the other sites.

Marleyknowe.

Almost directly south of the Coupland enclosure is Marleyknowe henge. This henge had never been excavated and is consequently of unknown class, but 19th century accounts state that it was an earthwork with large upright stones in the centre at that time (which were evidently removed at some point) (Harding 1981: 89). In 1971,

Marleyknowe was described by McCord and Jobey based on aerial photographs. It was recorded as 25 m in diameter with no internal features and only one entrance was noted on the western side (Harding 1981: 89).

Ewart Henge.

Ewart henge was first excavated by McCord and Jobey in 1971 and then further explored by Miket in 1976 (Harding 1981: 129). It is a class II henge that is 22 m in diameter with two opposing entrances at the northwest and southeast (Miket 1987: 90). Unlike many of the other henges in the Milfield Basin, the ditch is not segmented, but it is interesting that the northwest entrance is wider than its counterpart (Harding 1981: 129). Also, a standing stone, 2.8 m high and 1 m wide, aligns with the henge, but this has a date on it of 1869 and its unweathered state suggests that it is not prehistoric (Harding 1981: 129). There is only one internal feature found inside the henge, a central cremation pit, but an association with the nearby pit alignments seems obvious.

Ewart Pit Alignments.

Enclosing the Ewart henge are three pit alignments. Like those found at Milfield North, Ewart 3 runs southeast to northwest for 300 m before fading, but perhaps the most interesting of all the alignments in the basin are Ewart 1 and 2 (Miket 1981: 137). Ewart 1 is an irregular line of pits which follows an elevation overlooking the henge for 1100 m until it bends southward at its eastern end to go towards Ewart 2 (figure 4.8). It is unsure if Ewart 2 also bends towards Ewart 1 at this end as it fades, but it is noted that it runs parallel to it for some 300 m. In 1977 and 1980, an area of 6.3 x 17.5 m was excavated by

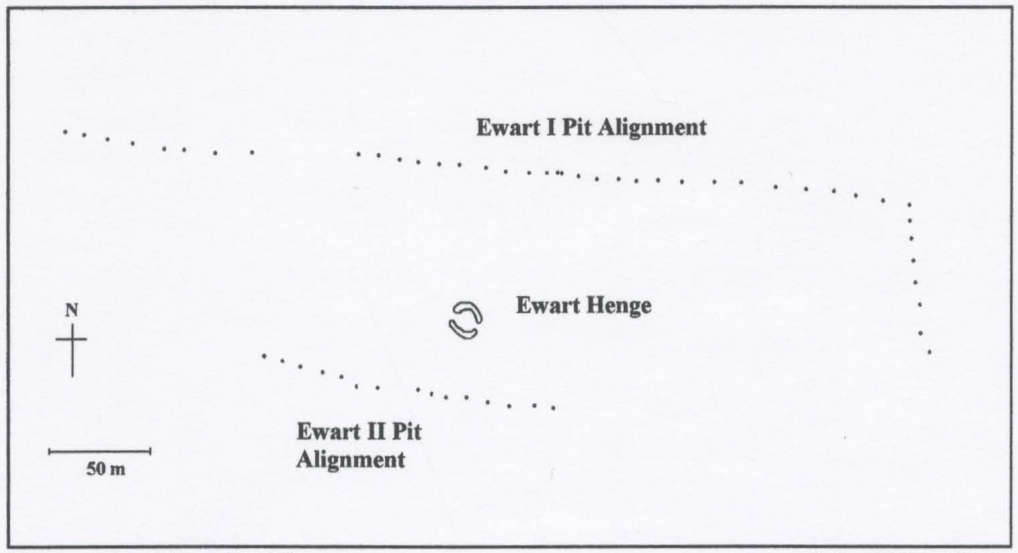


Figure 4.8 Ewart Pit Alignments. **(after Miket 1981)**

Miket to determine the content of these pits, and to understand what their function may have been (Miket 1981: 138; Miket 1987: 77). Six pits were dug at Ewart 1 and all were found to have been roughly 2 x 3m and to have stone packing in them, Grooved Ware pottery, flint, bone and dark brown fill (Miket 1981: 139). The fact that the fill was so similar in each of the pits suggests that they had been dug at the same time in a purposeful way:

> From the above alone, it seems clear that the intended function of the pits was intimately tied to their positioning, a function in which the provision of a broad internal shelf and a rapid-filling of the pit played a necessary part (Miket 1981: 145).

All of the pits that Miket dug had a shelf in the upper layer of the pit and this evidence in conjunction with the stone packing and fill, and the fact that the alignments essentially sectioned off the land used for the henge, led him to conclude that the pits had held timbers (Miket 1981: 143-145). From the pottery found in the Milfield alignments and the Ewart alignments it seems correct to believe that they were contemporary. On the flat ground upon which each of the alignments were made, a fence like this would have made a good part of what Miket believes was a more complex border for the ritual monuments (Miket 1981: 76; Miket 1987: 83). These could have lasted for centuries, guiding people around the henges and preventing economic activities from infringing on sacred ground as farming became a more important part of life (Waddington 1997: 28). However, the Ewart 1 timbers must have been taken out and the holes filled in later on since they held stone packing near the centre of gravity, but no postpipes (Miket 1981: 143-145).

Akeld Steads Henge.

This henge is located in the south of the basin east of Yeavering. It is a class I henge with two opposing entrances, the main one facing southeast (Miket 1987: 90; Waddington 1999a: 159). In their 1971 survey, McCord and Jobey photographed the Akeld henge and then examined it from the ground in 1976, but the site has never been excavated. At the time it was decreed that, "the degree of detail seen on some air photographs of the site almost makes excavation unnecessary" (Harding 1981: 129). What is known, however, is that the ditch is 36 m in diameter and 6-7 m wide (Harding 1981: 129). Internal features include ten regularly spaced pits in two rows placed 5-7 m apart and a ring of nine small pits around a much larger one. Such features are highly reminiscent of other henges in the complex and it is assumed that the Akeld henge was also used as a cemetery near the end of its life (Harding 1981: 129). Pit-like features were also seen surrounding the henge, but not encircling it – they seem to be associated with the monument, but as with the other features at Akeld, without excavation little about can be concluded about the henge's life and place within the Milfield Complex.

Crookham Dene.

During the 1860s, William Greenwell dug up, or had brought to him, several 'urns' found in burials in the Milfield Basin. Many of these sherds have since been lost, but of those remaining it is clear that some dated to the Later Neolithic and were part of the Ford style of Peterborough Ware. Therefore, it is important to discuss Greenwell's accounts here as his sites are part of the study area.

Crookham Dene is located to the north of the plain near the River Till. Greenwell (1868: 196) writes that on "…a swelling of ground near Crookham Dene", he found several shallow pits covered with slabs of stone. Under each were shallow pits, lined with stones, which contained cremations. Greenwell particularly remarks about one pit in which a pot was found with beads arranged around the pot like a necklace (Greenwell 1868: 196). He notes that there was no indication of a mound ever having been built over these graves.

Although it was commonly believed in Greenwell's day that all cremation graves dated to about the same time, the sherds from these graves were later examined by Piggott and determined to be from the Peterborough Ware tradition, rather than the Early Bronze Age. This puts these graves firmly in the Later Neolithic and supports the data found elsewhere in the basin.

Redscar Bridge.

This site is located in the heart of the Milfield Basin at a bridge crossing the River Till just north of the Woodbridge Quarry site (plate 4.5). In the mid-1860s, sherds of pottery, which had been found in a pit under a flat stone in the woods, were brought to Greenwell (Longworth 1969: 260). When Greenwell later returned to examine the site it had been emptied and he noted that he could not see any evidence of a cremation, artifacts nor a mound. Two other sherds were found near this spot, but only this one survives in the British Museum (Longworth 1969: 261). It has been categorized as Peterborough Ware because of its context, but its decoration and fabric are much more

Plate 4.5: Redscar Bridge.

like the Impressed/Grooved Ware sherds from the Yeavering Palace site suggesting that it may not be Ford substyle of Impressed Ware.

Part 2: Related Neolithic Sites Outside the Milfield Basin.

Broomridge.

Broomridge is located near the village of Ford at the north of the Milfield Plain. It was called Broomhill during Greenwell's time, but by the 1930s it was referred to as Broomridge since it is on a ridge of the Fell Sandstones overlooking the basin (Newbiggin 1935: 149). In the 1860s, Greenwell excavated a pit on Broomridge which was circular, shallow and clay-lined (Greenwell 1868: 196). He describes the pit to have held two pots, the larger standing upright with the smaller inverted holding a cremation. What is particularly interesting is that the pit in this case was lined like those at Thirlings and Bolam Lake. Although this is a burial site unlike those (which are both habitation sites) the fact that all three are similar in shape, contain Peterborough Ware, and were treated the same way is significant.

Ford.

Greenwell (1868: 196) writes that the area around Ford had a greater concentration of burials, mostly cremations, than anywhere else in Northumberland. Most of these were found during ploughing, draining, and walling, but he describes two sites which he excavated himself. Greenwell (1868: 195) reports these sites to have been on Ford Common, which is approximately 100 m OD, and like Broomridge, is an area which overlooks the basin. The first was under a small round barrow which held several

cremations, "...a rather rudely formed urn" and four jet beads. This pot was later identified as Peterborough Ware.

The second burial of note was closer to the village of Ford on a knoll at the highest elevation of Ford Common (Greenwell and Rolleston 1877: 406). On this site, a cist had been accidentally opened by a plough and when Greenwell was called to investigate, he found that it contained gravel and sand, a cremation, charcoal, a leaf-shaped end blade of honey-coloured flint (the type Waddington notes is most typical of the Neolithic in the Milfield Basin) and one sherd of pottery (Greenwell and Rolleston 1877: 407). Again, this burial was most likely Later Neolithic.

Bolam Lake.

The Bolam Lake site is quite a bit further from the Milfield Basin than Broomridge or the Ford burials, only about 25 km from Newcastle, but it is very important for the understanding of settlement during the Neolithic (Waddington & Davies 2002: 2). In 1997, Waddington & Davies decided to excavate near the Sandyford Quarry on a concentration of lithics which had been found during fieldwalking beside a Later Bronze Age cairn. Since it is located on an elevation above a valley, like the Fell Sandstones in the Mifield Basin, this area had rarely been ploughed so it contained more artifacts than other parts of the Blyth Valley. An abundance of Grimston Ware sherds and flint tools, like scrapers and knives, demonstrated that it had been a domestic site (Waddington & Davies 2002: 5).

Four postholes were found, each with stone packing, forming a triangle (Waddington & Davies 2002: 8). These were estimated as having held posts about 1.2-1.8

m high and Waddington & Davies believe supported a slight, temporary structure, such as a lean-to or a tent. Inside the formation, to the northeast, were two small pits with charcoal and Grimston Ware and outside were two clusters of pits containing dark, brown soil, burnt hazelnut shells, charcoal, Grimston Ware, flints, emmer wheat, and lithics (Waddington & Davies 2002: 10). It is interesting to note that in one of these pits (F5), a dark-brown material, 3 cm thick, was caked along all of the edges. This suggest that this pit had been lined with a wicker or reed lining and may have been used for storage before being turned into a domestic midden. Carbon dates were calculated from the hazelnut shells found in these pits and dates of 3940-3520 cal BC and 3930-3380 cal BC were almost indistinguishable from those from the domestic component of the Coupland Enclosure (Waddington & Davies 2002: 17). Also, to southwest of the site, a shallow ditch, 90 cm wide, was found with many stakeholes forming a row (Waddington & Davies 2002: 15). It is estimated that these would have been about 1.2 m high, suggesting a fence, high enough to just see over.

Although this site is far from the Milfield Basin, it is important to consider because of its many similarities to sites on the plain. The structure at Bolam Lake, a small, temporary tent from the Early Neolithic, is highly reminiscent of the structures found at both Thirlings and 3 Whitton Hill (Waddinton & Davies 2002: 23). Moreover, the life of the lined pit, which may have been used for storage before becoming a midden, is not unlike the clay-lined pit at Thirlings, and the fact that it is lined at all is very similar to the burials at Crookham and Broomridge. Although the concept of lining a pit really is not a peculiar one, the fact that these were lined when so many in the region were not, shows different behaviour at these sites.

As was discussed in chapter two, Waddington (1997) believes that Early Neolithic people in northern Northumberland lived a pastoral lifestyle, practicing transhumance from the Fell Sandstones in summer/autumn to the Milfield Plain (particularly into the Coupland Enclosure) in winter/spring. The Bolam Lake site may have been one such site that a small group came to each year to graze their animals before moving back into the Blyth Valley to shelter during the winter.

Conclusion.

Located on the border between Scotland and England, the Milfield Basin has been the location of wars over the borders and the strategic position of kingdom capitals. But before that border existed and even before the Anglo-Saxons sought to control the native Britons living inland, it was a centre for ritual and a fertile valley in which to experiment with cultivation. Although archaeologists in the past have focused more on obvious Neolithic landscapes, like the Salisbury Plain and Orkney, research in the last three to four decades has shown that the Milfield Basin is just as valuable to our understanding of the first farmers in Britain. Surely, as excavations continue and existing material is re-evaluated, the vibrant cultures which once inhabited North Northumberland will be revealed.

Chapter V: Pottery in British Prehistory.

Introduction.

Pottery in British prehistory is something which we still know far too little about despite the large quantity of material that has been found. This is partially because later wares, like those from Roman times, are finer and were more appealing to early researchers. The prehistoric pots, on the other hand, tend to be much more fragmentary and coarsely made; in fact, one of my colleagues showed her distaste of early British ceramics by describing them as 'lumps of mud' in the ground. However, when studying a period as enigmatic as the Neolithic, the information pottery can give us is invaluable – not only from its contents and context – but its very presence tells us about the nature of the Neolithic and how it differed from other periods.

In 1925, T. D. Kendrick was studying the ceramics found at a site in Peterborough and noticed that there seemed to be two distinct types (Piggott 1931: 68). The plainer ware was later called *Grimston Ware* for the barrow Kendrick found it in – the Hanging Grimston long barrow – whilst the decorated sherds were called *Peterborough Ware* (plates 5.1, 5.2, 5.3, 5.4, and 5.5).

At the Windmill Hill site, in the south of England, many pot sherds of the same two types were also found (Piggott 1931: 82). Within one pit, there was a lower layer of Grimston Ware and an upper layer of Peterborough Ware separated by a sterile layer (Piggott 1931: 83). Piggott (1931: 83) acknowledged that Grimston Ware must therefore be older than Peterborough ware and he called the older Class A and the younger Class B, although later, these styles regained their original names of Grimston ware and Peterborough ware (Piggott 1931: 71).

Plate 5.1: Grimston Ware from Cheviot Quarry.

Plate 5.2: Profile of Grimston Ware.

Plate 5.3: Impressed Ware from Ford.

Plate 5.4: Decoration on the rim of the Impressed Ware from Ford.

Plate 5.5: Profile of Impressed Ware from Ford.

A few years later, a third type of pottery was defined which showed little connection to Grimston Ware or Peterborough Ware. Called Grooved Ware (plate 5.6 and 5.7), on account of the decorative technique most used, it was found to overlap temporally with Peterborough Ware (at the end of its use) and Beakers (at the beginning of theirs) (Gibson 1986: 7). The fabric, decoration and form of Grooved Ware, however, suggest a different origin than the other two classes and so it is known that, although they usually appear on the same sites or in the same regions, their variation demonstrates the diversity of the British people in the Neolithic.

Grimston Ware.

Today, the earliest dates for Grimston Ware are from the Coupland Enclosure, c. 3800 BC (Passmore and Waddington, in prep, a), and the tradition is thought to have lasted for about a thousand years (Gibson 1986a: 11). It is best known for its hemispherical bowls, S-shaped pots, shoulder carinations and either sparse decoration or complete lack of it (Gibson and Woods 1990: 60). Its fabric is generally black and hard and the surfaces tend to have been burnished (or grass-wiped) and have a 'soapy' feel. Organic inclusions were often used which burnt out during firing causing the fabric to have black specks in it or even a 'corky' texture (plate 5.8) (Gibson 1986a: 11).

Work by Howard on the Windmill Hill assemblage has found that there were several forms made by the Early Neolithic peoples (Gibson and Woods 1990: 196):

Small pots	individual eating/drinking cups
Large open or closed forms	plain cookpots
Large open, decorated or plain	food preparation

Plate 5.6: Grooved Ware decoration on sherd from Yeavering Palace site.

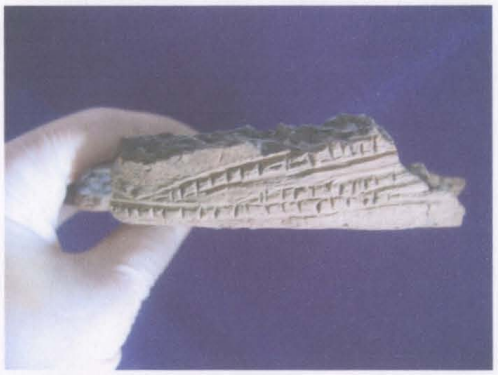


Plate 5.7: Grooved Ware base.

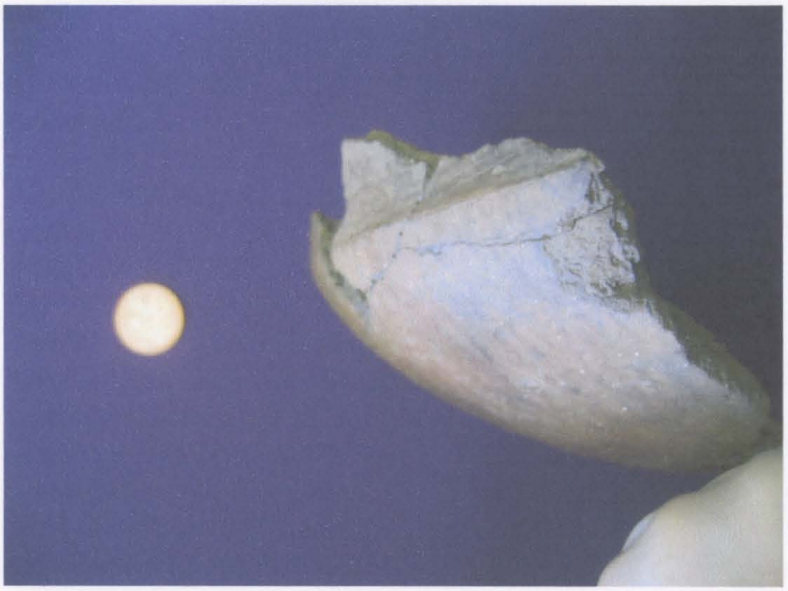


Plate 5.8: Example of a Grimston Ware carinated bowl from Yeavering.

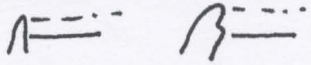
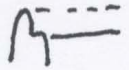
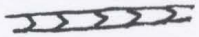
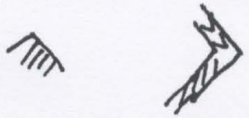
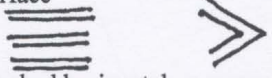
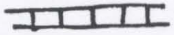
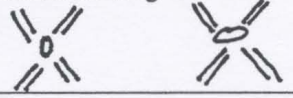
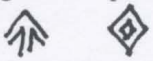
Closed forms, decorated	cookpots, storage, carrying containers
Closed undecorated forms	storage
Large closed forms, decorated	communal storage, transportation of goods

Although Grimston Ware was found to be surprisingly similar all over Britain, there are known regional variations: the Heslerton and Towthorpe wares in Yorkshire, the Hembury style in the southwest of England, the Windmill Hill and Whitehawk styles in the south of England, the Abingdon and Mildenhall styles of the southeast, and the Boghead bowls of Scotland (Gibson 1986a: 11-18; Gibson and Woods 1990: 60).

Impressed Ware/Peterborough Ware.

Impressed wares are found across the UK: from Orkney to Sussex, Yorkshire to Wales (Piggott 1931: 85). The first examples were identified by Reginald Smith in 1911 and were named *Peterborough Ware* after the location of the first sites (Piggott 1931: 68). In the last century, however, many more ceramics of this type have been found and a more general term, Impressed Ware, has been adopted to include Peterborough Ware as a substyle with its regional counterparts (Gibson 1986: 19).

Impressed Wares dates from the middle of the third millennium BC through the Later Neolithic and are known to have evolved directly from the Grimston Ware tradition (Piggott 1931: 111). Their fabrics are much coarser and softer than Grimston Ware, with large flint grits and "clumsy" thick walls (plate 5.9) (Piggott 1931: 112). It is with this tradition that flat bases are found. It has been argued that this may suggest the first use of furniture (Piggott 1931: 114), but this claim must be taken with some skepticism. There is no evidence that the Early Neolithic people did not have furniture and simply used their

	Clacton Style	Woodlands Style	Durrington Walls Style	Rinyo Style
Location of first discovery	Clacton, Essex	Woodhenge, Dorset	Durrington Walls, Dorset	Southern Scotland and Orkney
Types of Vessels	Vertical/splay-sided pots; squat tub-shaped pots	Small open bowls, tub-shaped pots		
Rim shape	Simple, rounded 		Simple, pointed; moulded bevel on top (vertical bevel) 	Internal step bevel 
Rim decoration (internal)	Horizontal grooves  Complex plastic decoration 	Incised herringbone  Groups of strips applied across rim 	Incised decoration under rim 	Continuous scalloped rim 
External decoration	Grooved or incised triangles, lozenges, or rectangles filled with dots  Multiple grooved or incised chevrons  Opposed grooved or incised chevrons  Staggered/evenly spaced oval impressions (also called maggots) 	Plain horizontal or converging cordons applied or pinched from surface  Slashed horizontal or converging cordons applied or pinched from surface  Ladder pattern  Applied or grooved 'knots' where cordons converge 	Grooved spirals or concentric circles  Vertical cordons (plain or decorated) dividing body into panels  Vertical single or multiple incised lines or grooved filled triangles  Twisted cord 	Applied pellets Applied roundels  Applied complex geometric patterns  Grooved cordons (diagonal)  Cordons with round impressions (diagonal) 

pottery differently – in Egypt, round-bottomed bowls are still made and used, and yet people use tables and benches. Moreover, there is just as little proof that Later Neolithic people had furniture – something which would have made their still somewhat mobile lifestyle more difficult.

Impressed Ware is best known for its abundance of decoration over the entire surface of the vessel as well as on and inside of the rim. Techniques include: maggots, simple incisions, shallow grooves, stab-and-drag lines, cord impressions, whipped cord lines, bird-bone ornament, comb, fingernail/fingertip impressions, cardium (cockle) shells, curved patterns, and zig-zags (Piggott 1931: 116-119). Piggott (1931: 114) describes the designs as creating a "confused richness" and certainly, Impressed Ware is as much decorated in complex and interesting patterns as Grimston Ware is not.

It is believed that Impressed Ware derived from northern England and for a long time the Fengate, Ebbsfleet, and Mortlake styles of Peterborough Ware were considered the three main variations (Gibson 1986: 19). Since then, other styles have been found including the Rudston style from Yorkshire, known for its T-shaped rim; the Meldon Bridge style from north Northumberland and the Scottish borders, and the Ford style from Northumberland which connects Yorkshire to Scotland (Gibson 1986a: 23). The Yorkshire styles tend to be found throughout England, but the rest of Scotland seems to have a tradition of its own. At this point they are simply called Scottish Impressed wares, but Gibson (1986a: 23) believes that more work will reveal further regional variation.

Grooved Ware.

Slightly later, but contemporary to Peterborough ware, is Grooved Ware, which was first defined and described by Piggott in 1936 (Wainwright and Longworth 1971: 235). Piggott compared pottery found on the Essex coast at the Clacton site to sherds from Woodhenge and Skara Brae and felt that, although they were of separate styles, they were related. Then in the 1950s, Smith defined three styles of Grooved Ware: Clacton, Woodlands, and Woodhenge (later renamed Durrington Walls style) (Wainwright and Longworth 1971: 235-236). At first, Smith's styles were seen as variations of a single culture spanning the entire country, but Clarke argued that they represented different regional cultures within a common tradition – a belief which endures to this day (Wainwright and Longworth 1971: 236). Today, it is known that Grooved Ware is represented by four substyles: Clacton, Woodlands, Durrington Walls, and Rinyo, all of which date from c. 2500-1800 BC (table 5.1).

As was mentioned above, the Clacton style was named for the site on which it was first found in Essex. Pots of this style tend to have 'splayed', vertical sides approximately 10-26 cm in diameter with internal, horizontal lines on simple, rounded rims (Wainwright and Longworth 1971: 237). Decoration includes zones of incised and impressed motifs, rustication and finger-pinching, dot-filled lozenges, triangles and staggered ovals and chevrons. Whipped cord, twisted cord and applied decoration are never found on this substyle.

Plate 5.9: Profile of a sherd of Impressed Ware from Thirlings showing the coarse, thick texture of the fabric.

The Woodlands style is characterized by small open bowls and tub-shaped pots with very thin walls and T-shaped rims decorated with grooved ladder, incised herringbone, and strips of clay (Wainwright and Longworth 1971: 238). Pots often have imperforated or horizontally perforated lugs, horizontal cordons which converge, and horizontal cordons which are slashed, pinched or simply plain.

The Durrington Walls style is made up of deep bucket-shaped vessels with simple, internally beveled and moulded rims which are often decorated with incised lines (Wainwright and Longworth 1971: 240). The outside of the vessels are split with vertical panels which are filled in with opposing grooves, dots, incised lines, twisted cord, combed lines or triangles, and finger pinching or impressions are put inside these panels. This is the only style which makes use of twisted cord. Particularly characteristic are heavy cordons which are used horizontally, vertically, or angled along with incised, grooved or impressed decoration. Grooved concentric circles as well as spirals and rustication are also common.

In 1939, Childe and Grant examined pottery found at the Rinyo site in Scotland and connected it with the other Grooved Ware styles (Wainwright and Longworth 1971: 235). Then in 1948, Robert Stevenson published sherds from Dingieshowe, Evie, Glenluce and Gedderwick which showed that the Rinyo style had been prevalent throughout Scotland. The Rinyo style is characterized by tub-shaped pots (some very large) with an internal step bevel inside the rim (Wainwright and Longworth 1971: 242). Plastic decoration is typical on the rims of these pots, particularly scalloped rims.

Although grooved and incised decoration is typical on the outside of the vessels, plastic designs, including clay pellets, roundels, concentric lozenges and other geometric shapes make this style unique.

Research in Scotland has shown that, using the same motifs, the decoration of pots follow certain 'rules' (MacSween 1995: 43). For example, at Pool on Sanday, Orkney, vessels with multiple pinched cordons are only found with scalloped rims and applied lattice is only used with scalloped or notched rims (MacSween 1995: 43). It would seem then that, at least for Scotland, "there was a basic 'grammar'…of types appearing in different combinations in more than one area" (MacSween 1995: 41), something which was most likely true for other parts of Britain as well.

The Clacton, Woodlands, and Durrington Walls styles cannot be separated geographically and for a long time this separated the Rinyo style from the other three. Clarke suggested that the Rinyo style had been an unrelated tradition derived from "similar stimuli" (Wainwright and Longworth 1971: 242), and later C-14 dates found the three southern styles to be chronologically separate as well. However, finds in Northumberland have shown a link between the styles (Manby 1974: 1) and more work in Scotland has proven that Grooved ware most likely began in Orkney whilst the English made Impressed Ware and they met as the styles were adopted across the islands (Manby 1974: 100; Cleal and MacSween 1999: 4).

As a consequence of this, much effort has been put into discerning the origin of Grooved Ware on mainland Britian. In the north of England and throughout Scotland the motifs used on Grooved ware can be seen on other media. Spirals, concentric circles and grooving have been found carved into stone balls and boulders used in monuments,

linking them to the pottery style (Manby 1974: 100), and all of these designs look very similar to the Boyne art tradition which is thought to have begun in Ireland (Wainwright and Longworth 1971: 247). In the Boyne Valley, passage tombs bearing similar motifs begin around 3400 cal BC, peaking by 3300-3100 cal BC (Cleal and MacSween: 6-7). O'Sullivan has categorized two styles of passage grave art: the Depictive Style (picked, pecked, and incised motifs) and the Plastic Style (natural curves of rock decorated). Since Grooved Ware incorporates triangles, lozenges, chevrons and spirals, it is argued that it was a part of this "passage tomb tradition". However, Grooved ware is known to be British and not Irish, although it is possible that there may have been some influence from contact with Ireland (Cleal and MacSween 1999: 7).

Although Grooved ware has been found on monumental sites (the henges in the Milfield Basin, for example), it is prevalent on domestic sites associated with scrapers, arrowheads, serrated flakes, knives, awls, fabricators, and polished axes (Wainwright and Longworth 1971: 254-255). It therefore seems to have been a multi-purpose ware which was used for both mundane and sacred activities. Consequently, it may hold information about many different aspects of Later Neolithic life - studies using residue analysis are already demonstrating this (Waddington, in prep, a, appendix 6).

Conclusion.

Pottery is one of the most common finds on Neolithic sites. More often than not, however, it is in fragmentary form and much less aesthetically pleasing than later glazed wares. As a consequence, many archaeologists see its curation as a chore and its abundance frustrating. However, great amounts of information can now be gathered from

ceramics so despite its mundane appearance it is invaluable to the comprehension of prehistoric life. It is apparent that with better dates and more residue analysis, the information extracted from pottery will be 'limited only by the researcher's imagination' (Orton et al. 1993).

Chapter VI: The Milfield Basin Ceramics Project.

Introduction.

Until the 1990s, Later Neolithic studies in the Milfield Basin focused on individual sites. This resulted in an abundance of information about the period at the site level, but little about how it all fit together. Waddington's on-going landscape project has allowed for a greater appreciation of the sites from a larger focus and demonstrates a way in which the landscape was used in the past as a whole. However, much of the material has not been re-examined since it was uncovered and so it is necessary to re-evaluate it from a landscape focus and in light of recent finds.

Due to poor preservation of organics in the Milfield Basin, the remains found on most sites consist of simply lithics and pottery. Pottery is a form of material culture common to all of the sites in the Milfield Basin and ethnographically, it is known that form, fabric and decoration are constrained by cultural norms (MacSween 1995: 45). As a result, it is a valuable medium for a larger-scale research project in this region.

Purpose.

The primary aim of this project is to create an up-to-date comprehensive catalogue of all of the Grooved Ware which has been found in the Milfield Basin. Since the mid-19th century, Later Neolithic pottery was found in the basin and was compared to sites known at the time (particularly Yeavering and Thirlings on account of their larger assemblages) but to date there has been little to no work cataloguing Grooved Ware with a standard set of variables and considering the assemblage as a whole.

In 1990, Gill Ferrell re-examined the material found at Yeavering, illustrating those pieces which had not been published before by Hope-Taylor. This much-needed

work included an analysis of the Yeavering pottery in comparison to the other Grooved Ware in the Basin and was the first project focusing only on ceramics rather than reporting an entire site with the pottery report being a small portion of a larger whole.

Ferrell's work is invaluable in that it is a full catalogue of the Yeavering material, something which was unfortunately not included in the 1977 report of the site and was much needed to understand the material now sitting in the Museum of Antiquities in Newcastle. However, her comparison to other sites has a strong focus on the Thirlings ceramics and the catalogue only includes the sherds found at Yeavering. Granted, the aim of Ferrell's work was to make the Yeavering material more comprehensive and that was done in a most efficient way. The foundation created by Ferrell called for more evaluation to be done on a larger scale, especially by the end of the millennium when several more sites had been found.

More recently, Alex Gibson (2002) has considered the Grooved Ware found in the Milfield Basin on a regional scale, drawing awareness to the fact that older material should be re-examined and compared to newer finds since terminology and typology have changed in the last thirty years and are based on southern material. He states that some of the ceramics which were first considered to be Grooved Ware on account of their C-14 dates and similarity to southern examples may now be recognized to be from different traditions as the assemblage of local material continues to grow. Gibson therefore calls for a re-examination of the pottery found in the Milfield Basin to ensure that our conclusions are based on accurate data.

This project seeks to unite Ferrell's and Gibson's ideas by fully re-examining all of the Later Neolithic pottery in the Milfield Basin and developing a catalogue of

standard variables of the material. At this point, an evaluation of the basin as a whole, rather than focusing on one site and comparing it to the others, is finally possible as a significant amount of Grooved Ware has now been found in the region. Therefore, to evaluate the region as a whole, the collected data were used to answer the following questions:

- How much variation is there in vessel form, fabric, and decoration in the Milfield Basin at contemporary sites?

- Do these variables (or the same combinations of them) occur more often at the same type-sites (e.g. henges, settlements), suggesting specific cultural behaviour?

- How does this compare to Grimston Ware and Impressed Ware sites in the Milfield Basin?

- Are there specific trends in particular parts of the Milfield Basin which might suggest territories or zones for either particular cultural groups or specific cultural behaviour?

Method.

Since most of the assemblages have not been examined since they were first removed from the ground, some over thirty years ago, it seemed pertinent that each sherd should be re-examined. This allowed for the same variables to be measured and recorded for each sherd and digital photographs to be taken, weighing each site equally.

Over the course of five months, all of the Grooved Ware and Impressed Ware assemblages (which still exist and are available to researchers) as well as a random sample of Grimston Ware was examined. Due to time constraints and the fact that this

project is focused on Later Neolithic, rather than Early Neolithic, pottery, not all of the Grimston Ware was evaluated. It is intended that data from the remaining sherds will be collected and evaluated in the future during a larger study. The context, date, and information about the sites had previously been gathered from site reports, and for each sherd, the fabric, form and decoration were evaluated.

The fabric of the pottery was determined using the naked eye, although on most of the sites, previous researchers have published results of their observations using a 10x magnifying hand lens. Inclusions were noted, indicating the material used (quartzite, stone grit, burnt out organics) and the average size was recorded as follows:

Very fine grit - < 0.5 mm

Fine grit – 0.5 mm – 1.0 mm

Small grit – 1.0 mm – 2.0 mm

Medium grit – 2.0 mm – 3.0 mm

Large grit – 3.0 mm – 5.0 mm

Very large grit – 5.0 mm – 7.0 mm

Extremely large grit - > 7.0 mm

In many cases, one piece of pottery had two or more sizes of inclusions and in this case both sizes were indicated.

The external surface colour, internal surface colour and core colour was recorded using a Munsell soil colour chart. In cases where the sherd was burnt or the colour did not fit a particular colour chip, the shade was described. Colour, however, is a less important variable than size or form because the colour of an open-fired vessel can vary across the surface of a pot since it was exposed to different levels of heat. It is useful, though, in

determining how it was fired since the core colour and changes on the surface can indicate changes in temperature.

The diameter of rim and base sherds were measured using a radius chart. The pot profile and rim type were recorded and a possible vessel shape was inferred from these variables. Also, the length, width and thickness of each sherd were measured in millimeters using electronic sliding calipers.

The decoration on each sherd, if there was any, was also recorded. Motifs such as twisted cord impressions, concentric arcs, incised lines, grooving, stamping, stab impressions, zig-zags, herringbone shapes, fingernail impressions, rustication, cross-hatching, lugs, cordons, and indentations were noted. The location of these motifs on the pot was recorded as well as specific combinations of decorations and the method used to make them.

All records were kept on a spreadsheet which is illustrated in tabular form in the appendices of this thesis. Photographs were taken of the external and internal sides of each sherd and, for rims, bases and interestingly shaped body sherds, the profile was also photographed.

Using scatter graphs, these data were then plotted comparing sites and time periods to evaluate any trends which might show cultural behaviour in specific areas or during a particular time.

Data Set.

In the Milfield Basin, there are twelve sites reported to have contained Grooved Ware pottery. These include three settlements (at Yeavering, Whitton Park and

Thirlings), one possible settlement scatter (at the Cheviot Quarry site, area 2), four henges (Yeavering, Milfield North, and Whitton Hill I and II), two pit alignments (Milfield North and Ewart I), a pit (Milfield North Pit), and an unstratified burial (Redscar Bridge). Site reports from each of these contain separate analyses of the pottery by specialists, indicating the fabric, typical decoration and inferred tradition in which it was constructed. A table outlining these previous conclusions is given below:

Table 6.1: Grooved Ware Sites.

Site	Pottery Specialist	Context	C-14 Date Associated	Fabric	Style
Yeavering Palace Site (settlement)	Isla McInnes (1977)	'ritual' pit close to building C_1	N/A	Mostly hard with large grit inclusions	Rinyo-Clacton
	Gill Ferrell (1990)	Pit close to building C_1	N/A	Hard, some sand tempered, most with large grits of crushed stone.	Woodlands
Thirlings (settlement)	Roger Miket (in prep)	Ploughsoil; near structure in domestic pit	2130±130bc	Softer and more friable than Grimston Ware at the same site; grit inclusions which get bigger as the pot does.	Durrington Walls (stated in 1985)
3 Whitton Park (settlement)	Clive Waddington (in prep)	Two postholes of a structure	2120-2090 cal BC	Coil-made, coarse, angular grit inclusions. Two fabrics, one closer to Impressed Ware, the other possibly related to Food Vessels	Meldon Bridge Impressed Ware or Grooved Ware.
Cheviot Quarry – Area 2	Clive Waddington (in prep)	Scatter of pits: F61, F133, F163, F168	Still being analyzed	Coarse, well-made/fired, coil built, crushed stone and organic inclusions.	Grooved decoration and lozenges = Clacton; fingernail impressions

(Possible settlement/domestic scatter)					(pots 7, 8) = Woodhenge; internal rim bevel (pot 2) = Durrington Walls
Yeavering Henge	A. Harding (1981)	Secondary silting of upper ditch fill and pit outside E entrance	N/A	Coarse, crumbly paste with large grit inclusions	Similar to Thirlings
Whitton Hill – site I (Henge)	Roger Miket (1985)	Vessel 1 – layer 3 of henge ditch; vessel 2 – pit 28	1710±50bc,	Some white and grit inclusions	Most similar to Carnaby Top site in Yorkshire.
Whitton Hill – site II (Henge)	Roger Miket (1985)	Vessel 4 – NNE part of ditch	2870±80bc, 1650±45bc, 820±170bc, 930±310bc	Friable, poorly fired, med./large grit inclusions	Pot of same shape found at Thirlings
Milfield North Henge	A. Harding (1981)	Middle ditch fill (redeposited because with Beaker ware)	1824±39bc, 1851±62 bc	Sparse grit inclusions, compact paste	
Milfield North Pit Alignment	A. Harding (1981)	Pit 2	1790±50bc, 1820±50bc, 1655±80bc	Compact paste with fine grit inclusions, except for P13 which has med./large grit inclusions	Not diagnostic enough to determine sub-style
Ewart I Pit Alignment	Roger Miket (1981)	Pit 3, 4, 5, 6, 7	N/A	Dark, gritty core or small grit inclusions	Clacton
Milfield North Pit	Alex Gibson (in prep)	Pit 1 – context 4 and 9	2620 – 2450 cal BC 2570 – 2340 cal BC	Hard, well-fired (fabric 2 a bit softer), finely crushed inclusions and grog. **Fabric 1** – crushed stone and possible shell **Fabric 2** – organics **Fabric 3** – denser, only grog	Durrington Walls
Redscar Bridge	Ian Longworth (1969)	Disturbed cremation(?) burial	Excavated by Greenwell before	Finer fabric than many Grooved Ware sherds	Rinyo-Clacton, but context of pit similar to Peterborough

(unstratified burial)			carbon dating		Ware finds.

In addition to the Grooved Ware sites, all of the Impressed Ware sites (since they also encompass a part of the Later Neolithic) and a sample from each Grimston Ware site were analyzed to compare with the Grooved Ware data. Tables 2 and 3 display this information below:

Table 6.2: Grimston Ware Sites.

Site	Pottery Specialist	Context	Carbon Date	Fabric
Yeavering Palace Site (settlement)	Isla McInnes (1977)	Ploughsoil of building D_3	N/A	Fine with very small grit inclusions
Woodbridge Quarry – Area 1 (settlement)	Clive Waddington (in prep)	Domestic pits	Still being analyzed but Early Neolithic (Waddington, pers. Comm.)	Hard, fine, with crushed stone and organic inclusions.
Thirlings (settlement)	Roger Miket (in prep)	Shallow pit south of the structure	3280±130bc	Fine, hard with almost leather polish, organic and fine grit inclusions.
Coupland Enclosure/Henge (Possible settlement before enclosure built.)	Alex Gibson (in prep)	Unstratified, in 3 pits, in droveway fill	3780-3640 cal BC, 3990-3700 cal BC, 3640-3100 cal BC (burning pits)	Medium angular stone inclusions, hard, well-fired
Yeavering Henge	A. Harding (1981)	Pit outside eastern entrance	2940±90 bc	Hard, compact, fine inclusions, burnished.

The ceramics from the Bolam Lake Grimston Ware site in Northumberland were also studied since it yielded such a large assemblage of Early Neolithic pottery, many pieces being quite large. Although it is not situated in the Milfield Basin, it is located in a similar region characterized by a low-lying river valley surrounded by hills and escarpments approximately 20 miles south. The pottery was found in a domestic pit and in association with the temporary structure and is strikingly similar to that found in the

Milfield Basin in that it has hard, fine fabric with small grit and organic inclusions and the same forms. Also, not only was the site excavated in 1997 and the Grimston Ware well-analyzed and catalogued, but AMS dates were taken in direct association with the pottery (3940-3520 cal BC, 3930-3380 cal BC) which makes it a real asset to the data set since so many dates on the other sites are less accurate and encompass large spans of time. Consequently, it is of value to compare the Bolam Lake site along with the others, albeit with caution since it is not in the Milfield Basin proper.

There are rather few Impressed Ware sites in the Milfield Basin. This is partly because the regional variant, the Meldon Bridge sub-style, was only defined in the last three decades, but also, since Impressed Ware and Grooved Ware overlap, there are many sites which either have pots from both periods in the same context, or even a mixture of characteristics from each period on a single pot. Much confusion, however, most likely has also had to do with the fact that the pottery found in the Milfield Basin is fragmentary at best and finding a large portion of a pot, let alone the sherds of an entire one, is rare. The best example is at Whitton Hill I henge where, in pit 28, approximately five sherds were found representing two vessels; vessel 2, "…fit comfortably within a Grooved Ware context" (Miket 1985: 141), whilst vessel 3, with its T-shaped rim and flat rim bevel adhered more to a Meldon Bridge style. As a result, although the Impressed Wares are considered as a separate group, they were also tested in conjunction with the Grooved Ware assemblage in comparison to earlier Grimston Ware sites.

Table 6.3: Impressed Ware Sites.

Site	Pottery Specialist	Context	Carbon Date	Fabric	Style
Yeavering Palace Site	Gill Ferrell (1990)	'ritual' pit – near building	N/A	Hard, sparse quartzite grit	Meldon Bridge

(settlement)		C_1		inclusions	
Thirlings (settlement)	Roger Miket (1987)	Clay-lined pit	2130±130bc	Crudely-made, soft.	Fengate
Whitton Hill I Henge	Roger Miket (1985)	Vessel 3 – pit 28	1710±50bc	Poorly fired – almost melted when found.	Meldon Bridge
Redscar Bridge (Unstratified burial)	Ian Longworth (1969)	Vessels 1-4, from near Ford	Found by Greenwell before carbon dating	Grit tempered paste	Like Fengate, but also has characteristics like southern Scotland.

Conclusion.

Although the work in this project has been conducted attempting complete objectivity, there are weaknesses in the data. First, not all of the Grooved Ware from the Milfield Basin was available for assessment. The ceramics from 3 Whitton Park are kept by the landowner and are unavailable for study and the latest finds from the Cheviot Quarry site had not been unearthed at the time of analysis.

Second, the Grooved Ware assemblage in the Milfield Basin is still very small and what is available is highly fragmented and eroded. This makes it difficult to reconstruct the vessels that were present and limits researchers to either a smaller assemblage or more general variables.

Finally, most of the sites have poor dates, if any at all. This causes the consideration of trends over time or even similarities at contemporary sites challenging. However, with the advancements of dating techniques, strong dates in direct association with ceramics are being found and so, over time, it is certain that this trouble will be alleviated.

Despite these weaknesses, this project is one which is necessary to get a grasp on the Later Neolithic pottery in the Milfield Basin. It provides a catalogue in which those researching Later Neolithic pottery and the Milfield Basin can quickly and easily compare their ceramics, and since each piece has been analyzed using standard measures, the catalogue can be updated with new material in the future. Consequently, it is designed to be a resource which can evolve with new material, hopefully leading to a better understanding of the Later Neolithic cultures of North Northumberland.

Chapter VII: Results.

Introduction.

The study assemblage contains 599 pottery sherds dating to the Early Neolithic, Later Neolithic, and Early Bronze Age. Characteristics of sherd dimension, vessel shape and size, fabric, and decoration were recorded in detail and scrutinized for any trends which may have been present in the Milfield Basin. Using scatter graphs and bar graphs, these variables were also plotted to determine what the data so far can tell us about how people in the past made and used their pottery. It is stressed that the data set is still very small with a meager 21 fragments of Impressed Ware and 326 pieces of Grooved Ware, and with such an assemblage, generalizations must be taken with caution. Nevertheless, this is the largest collection which has ever been considered in the Milfield Basin and is large enough to demonstrate that some of the sherds may have been miscataloged, suggesting a greater presence in the Early Bronze Age in the Milfield Basin than was previously realized.

Results.

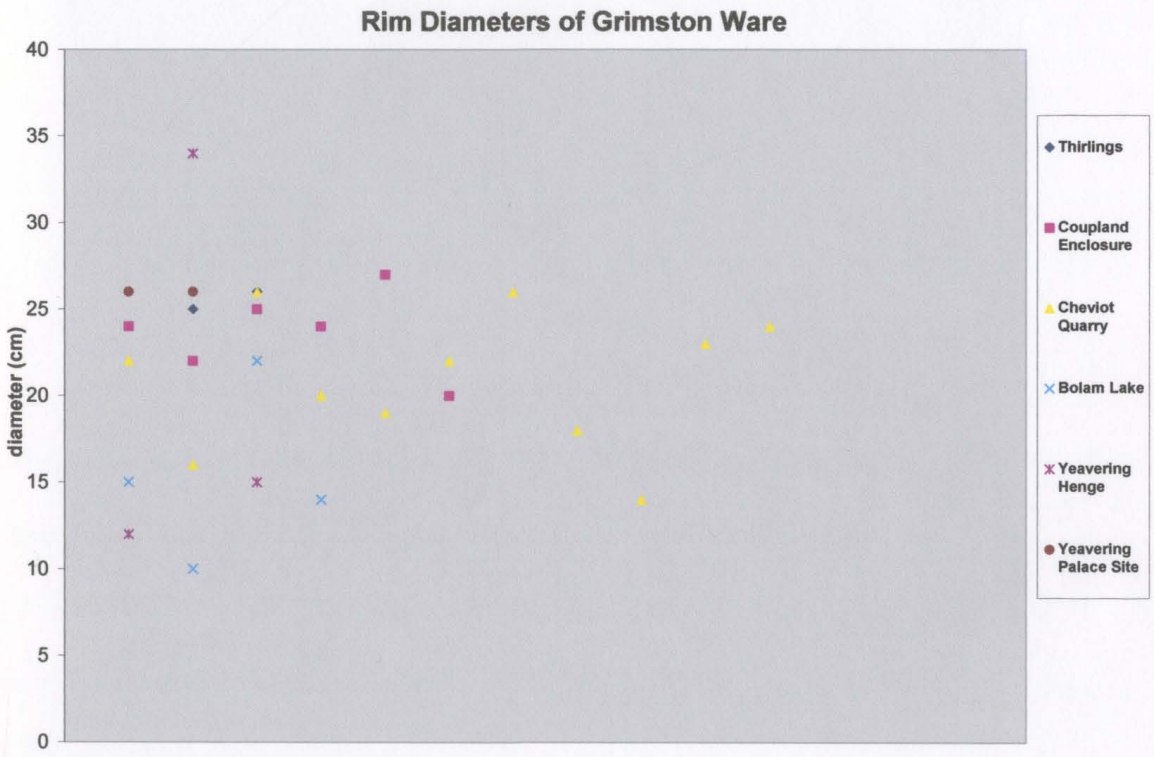
Form.

Despite the sherds of pottery being fragmentary and eroded, it was possible to measure the diameter of some of the pots from rim and base sherds. These were later compared to wall thickness to gain an idea of how large and 'heavy' the pottery was being constructed. The thickness of body sherds was also measured in separate graphs to consider how people from different sites or traditions made their ceramics. Finally, research in Eastern and Central Europe has shown that in the Neolithic, pots were broken into equally sized pieces and placed in pits in cemeteries either as votive deposits or in

lieu of bodies (Chapman 2000: 68). Since many other ideas, like agriculture, ceramics, monument building and domestication are thought to have derived from these locales, it is not improbable to consider that other ideology filtered through as well. Consequently, the dimensions of each sherd were also evaluated to determine if their similarity might show a specific cultural behaviour.

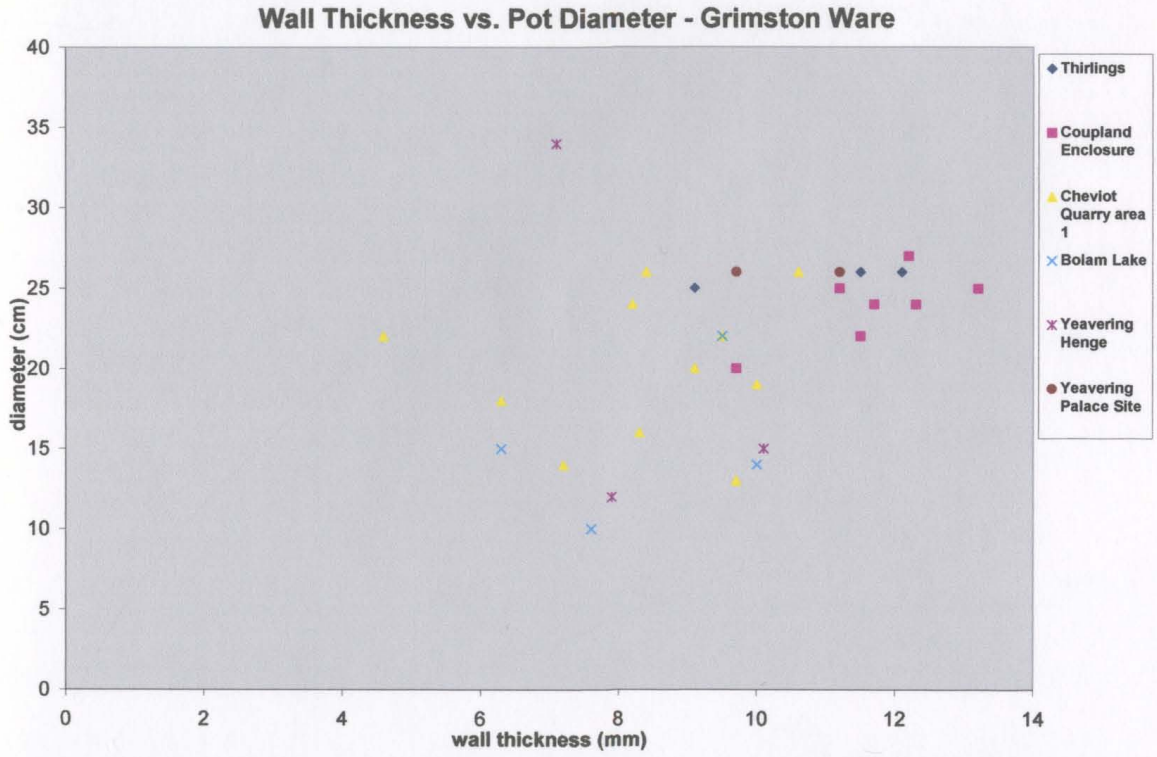
The Grimston Ware pottery analyzed showed the typical forms of round-based bowls with carinated shoulders, rounded bodies and simple, rolled over rims. Pots range in diameter from 10-34cm (graph 7.1), but there is a distinct cluster at 22 – 26cm. Since all of the sites from the Early Neolithic are concluded to be domestic no type-site comparison could be made.

Graph 7.1



When comparing the diameter of a pot to the thickness of its walls (graph 7.2), it was found that all of the rim sherds tended to be about the same thickness (about 8-13mm) and were thicker as they got larger (as would be expected to maintain the

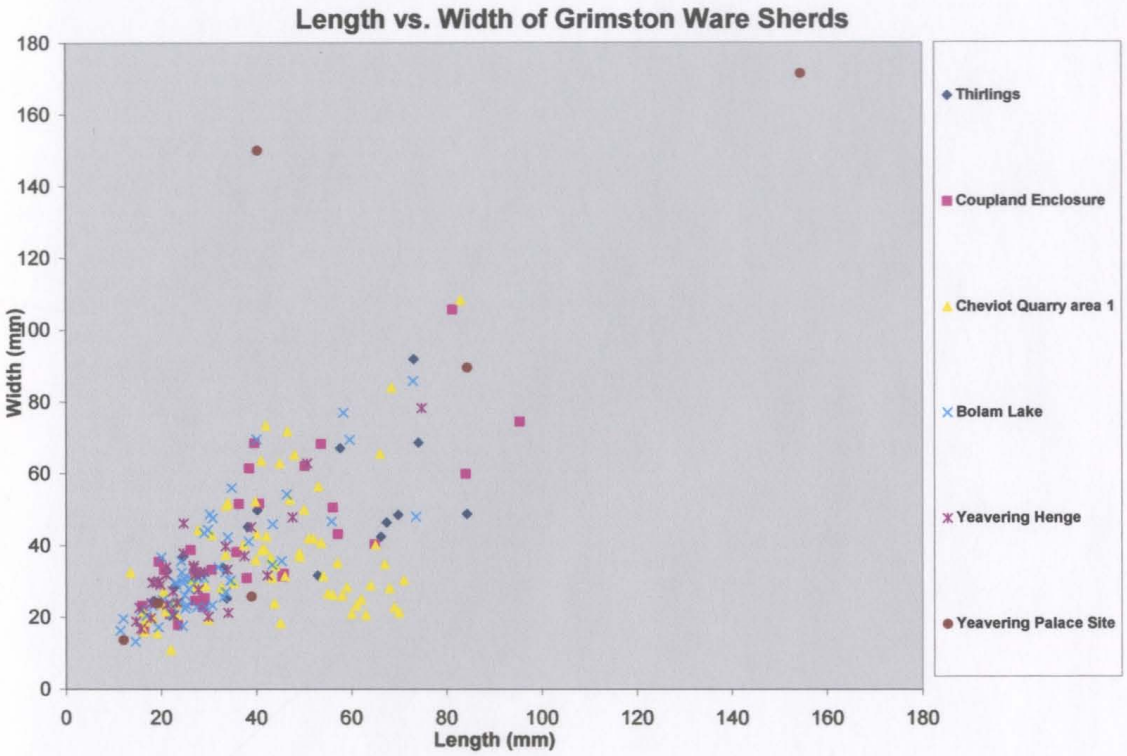
Graph 7.2



structural integrity of the pot). The exception was the Coupland Enclosure and Thirlings where vessels tended to be thicker than the other sites despite having the same diameters.

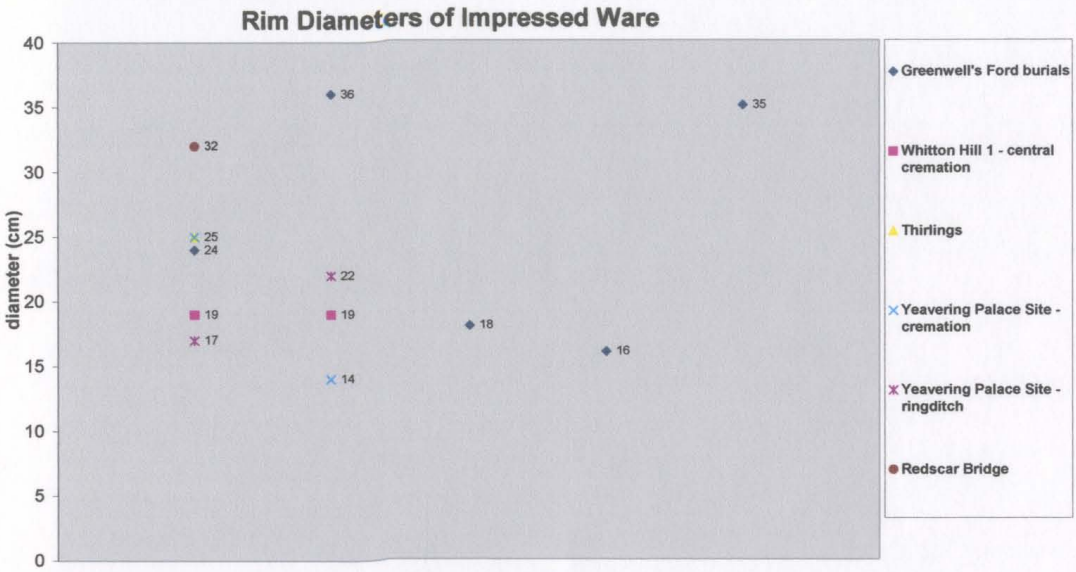
The dimensions of the sherds tend to be uniform and there is a cluster from 2–6cm^2. The exception is the Cheviot Quarry site which has sherds of all dimensions (graph 7.3).

Graph 7.3

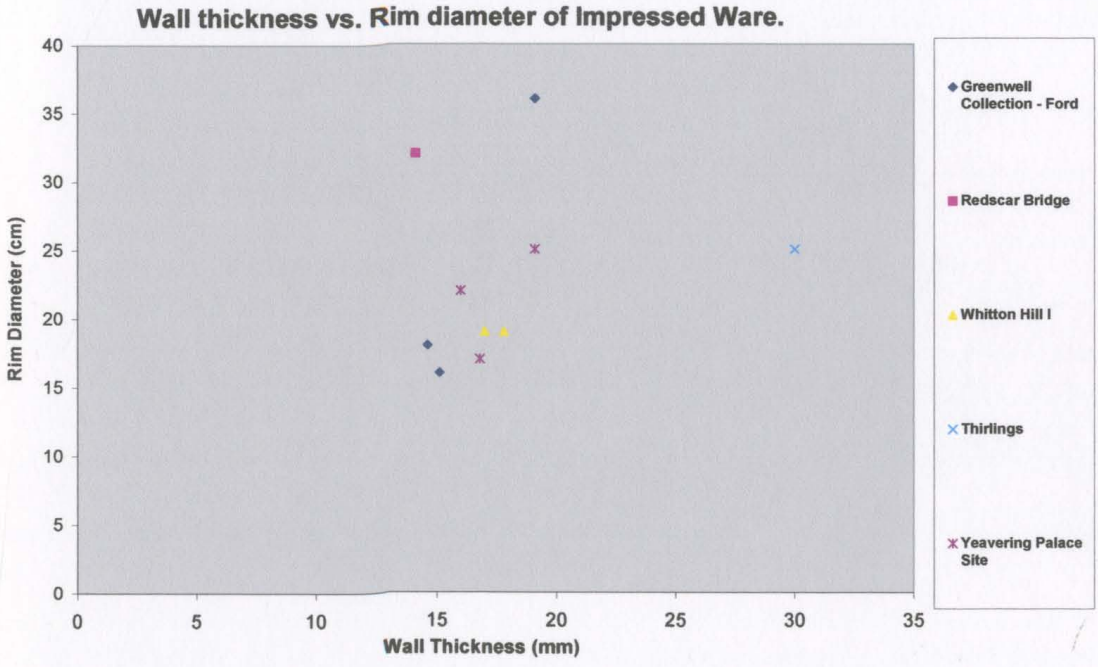


The Impressed Ware assemblage is the smallest, but shows the characteristics typical of Peterborough Ware, like heavy T-shaped rims and an abundance of decoration on every available surface. Other examples tend towards the Meldon Bridge sub-style with motifs (and combinations of them) typical of that tradition. Taken all together as a time period, the Impressed Wares vary in vessel size from 14 to 36 cm, but loosely cluster at 18-25cm (graph 7.4). Coupled with wall thickness, most pots are about the same thickness (15-20mm), with the exception again being Thirlings where the pots were made much thicker (graph 7.5).

Graph 7.4

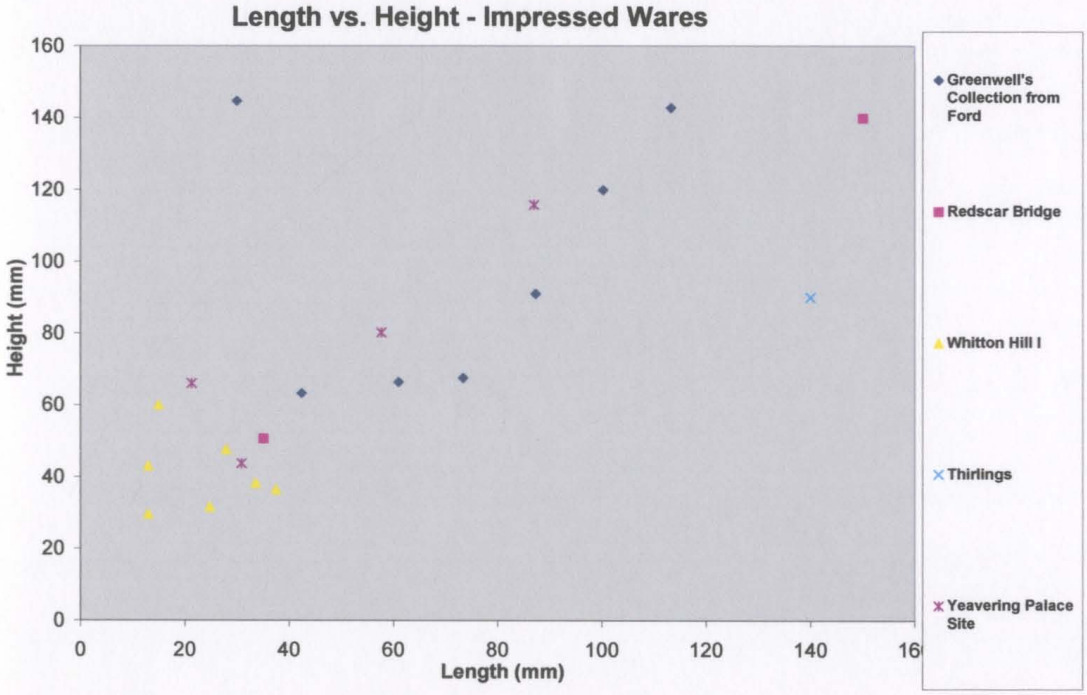


Graph 7.5



The sherds themselves were found to be of all different sizes, except at Whitton Hill I where their dimensions clustered at the same size as those in the Grimston Ware tradition (graph 7.6). Of all the variables, there was no difference between cremation and settlement sites; however, it must be considered that the assemblage is very small and there were only two sherds from settlements with which to compare.

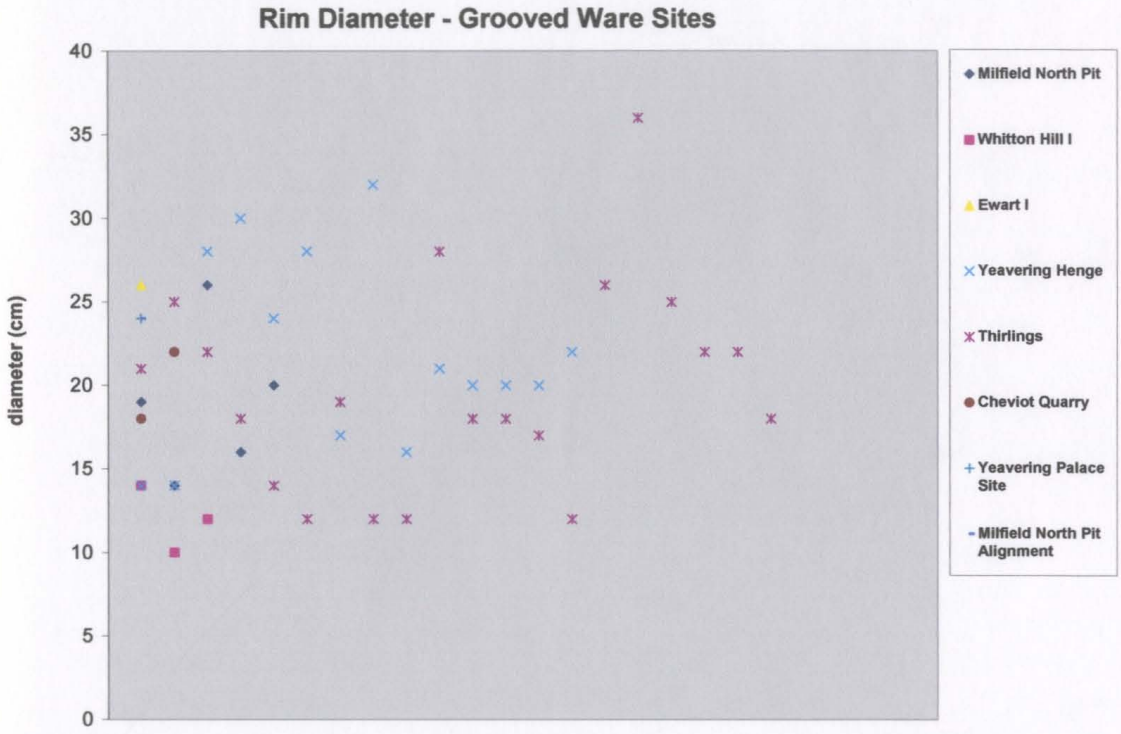
Graph 7.6



Grooved Ware pots tend to, again, vary greatly in size, ranging from 10 – 36 cm in diameter, but most were around 12-25cm (graph 7.7). The vessels from pit alignments were closest to 25 cm wide whilst those from settlements and henges were more variable,

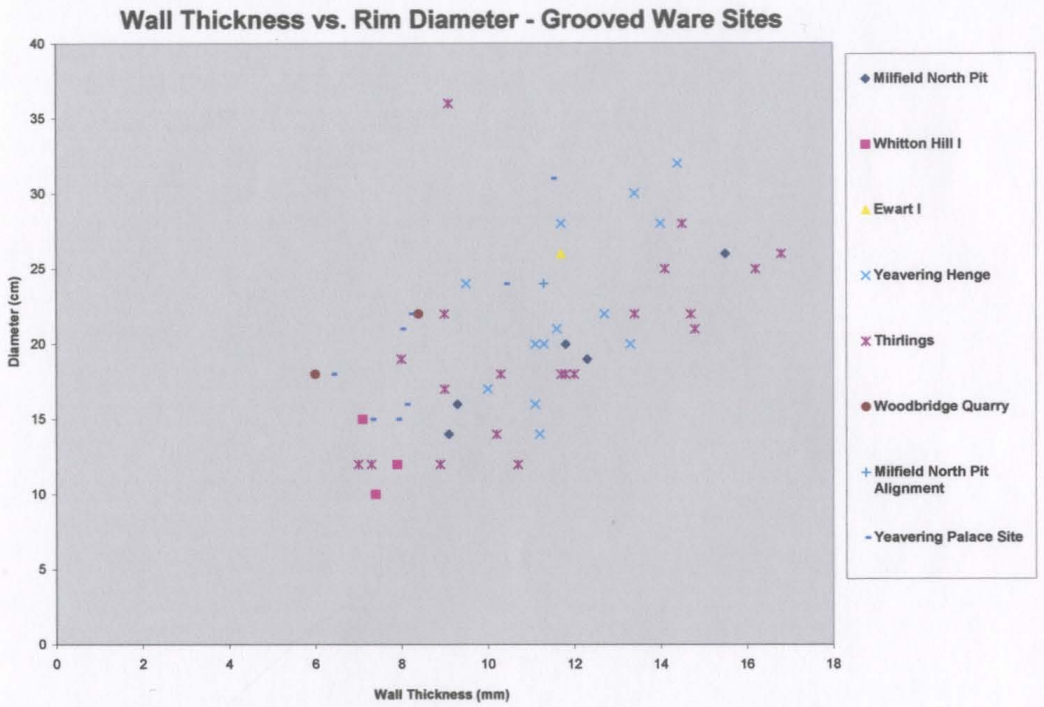
but since there are only two values from this type of site, it is not considered to be a trend.

Graph 7.7

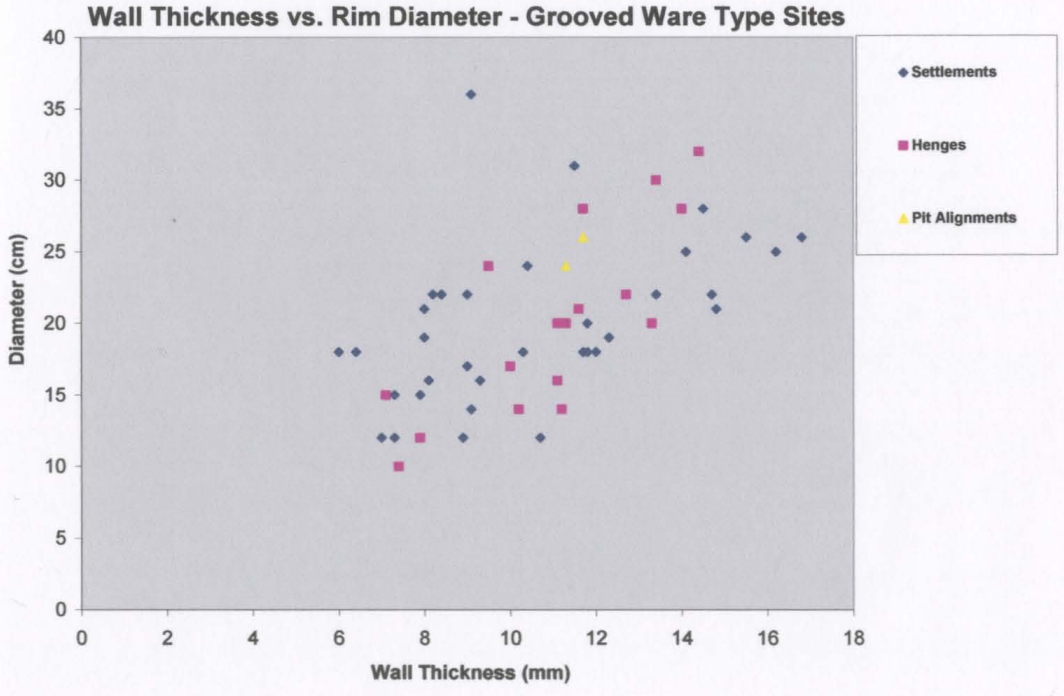


Thickness, as well, varies greatly, ranging from 6 – 17mm and Thirlings once again yields much thicker pots than elsewhere (graph 7.8). It is interesting to note that Yeavering Henge and Milfield North Pit had much larger vessels than the other sites and when considering type-sites, settlements and henges showed a greater variety in vessel size than pit alignments (graph 7.9). However, again the small number of examples from pit alignments constrains this claim and so, taking the wall thickness of all sherds, it was shown that the Ewart I material was much thicker. Overall, the data supported that settlements and henges had vessels of many sizes, whilst those from pit alignments clustered either on the thicker or thinner side.

Graph 7.8

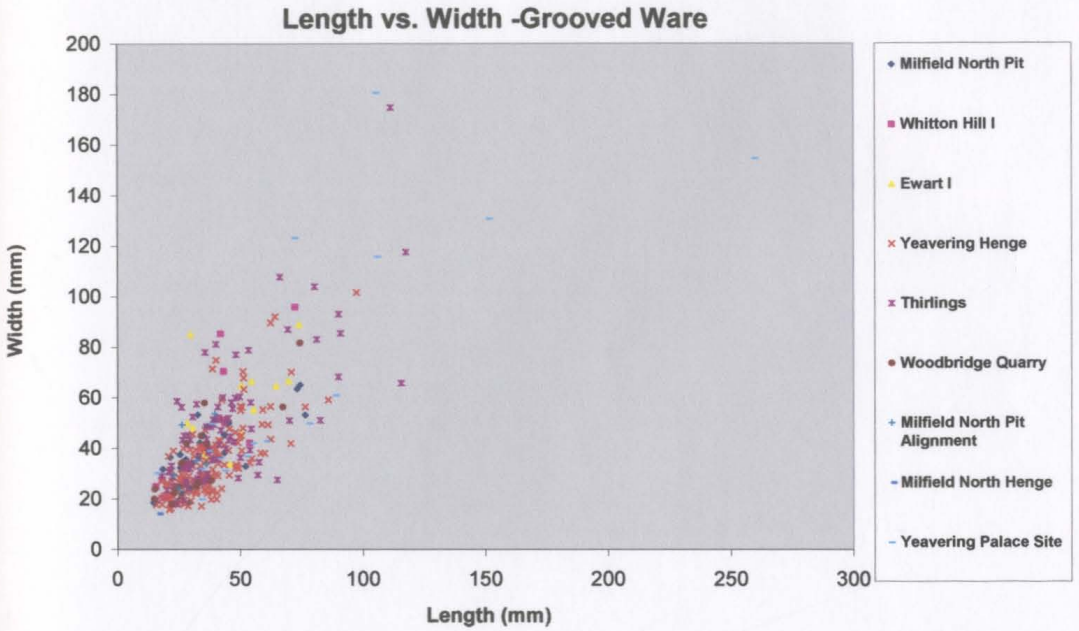


Graph 7.9



The sherd dimensions show the same clustering of equal-sided pieces as in the Grimston Ware group, at 2 – 6 cm^2 (graph 7.10). The examples from henges adhere to this more so than settlements or pit alignments, but the cluster is present at all sites.

Graph 7.10

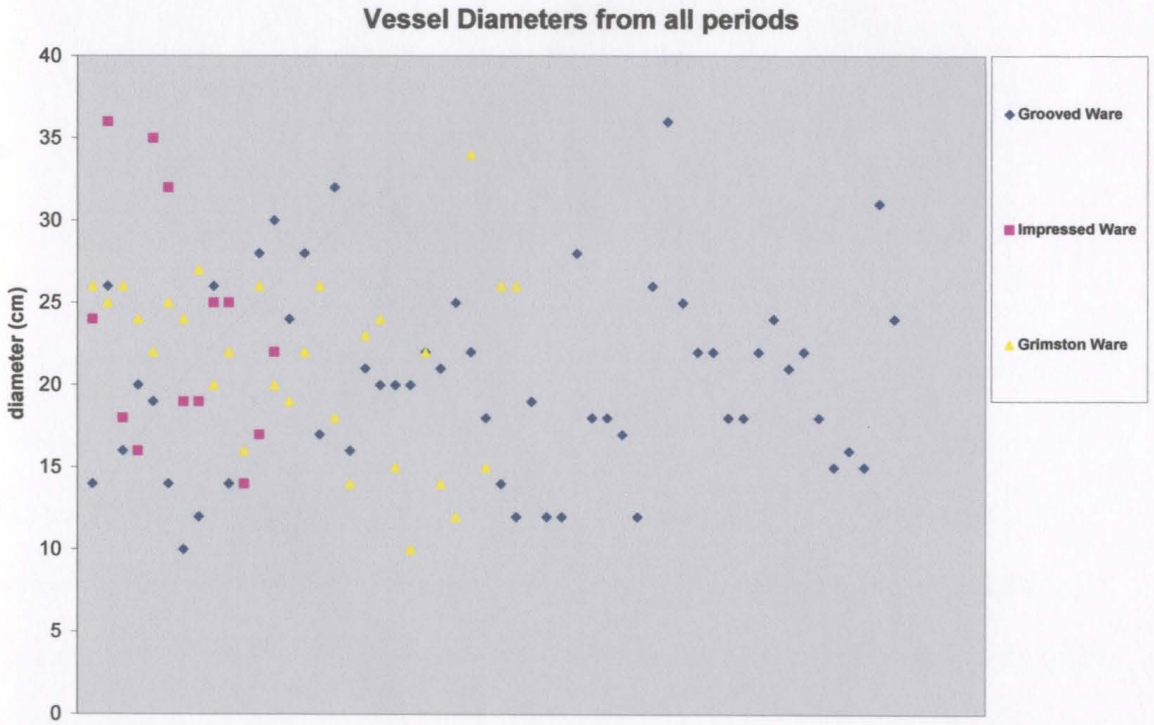


When considering all of the traditions together, it seems that ceramics in the Milfield Basin were made about the same range of sizes throughout the Neolithic, with Impressed Wares being slightly larger than Grimston and Grooved Wares (graph 7.11). Like other parts of Britain, Grimston Ware was more finely made than Grooved Ware and Impressed Wares were much heavier and cruder than any others in the Neolithic.

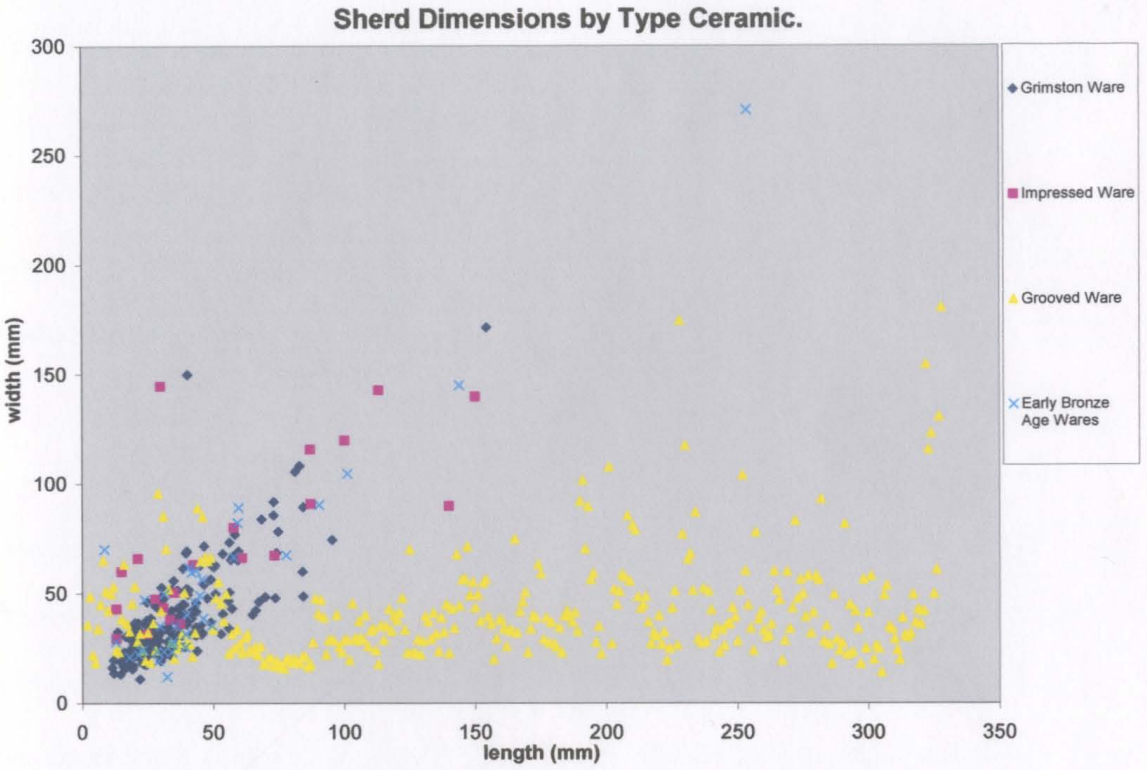
The data concerning sherd dimensions show that, although most of the sherds were rather square and about the same size, there is no evident significance to their form (graph 7.12). The fact that the same clustering occurs in both the Early Neolithic, Later

Neolithic and in domestic middens as much as henges or cremation graves suggests that there is no reason to assume any activity other than taphonomy causing the dimensions.

Graph 7.11



Graph 7.12



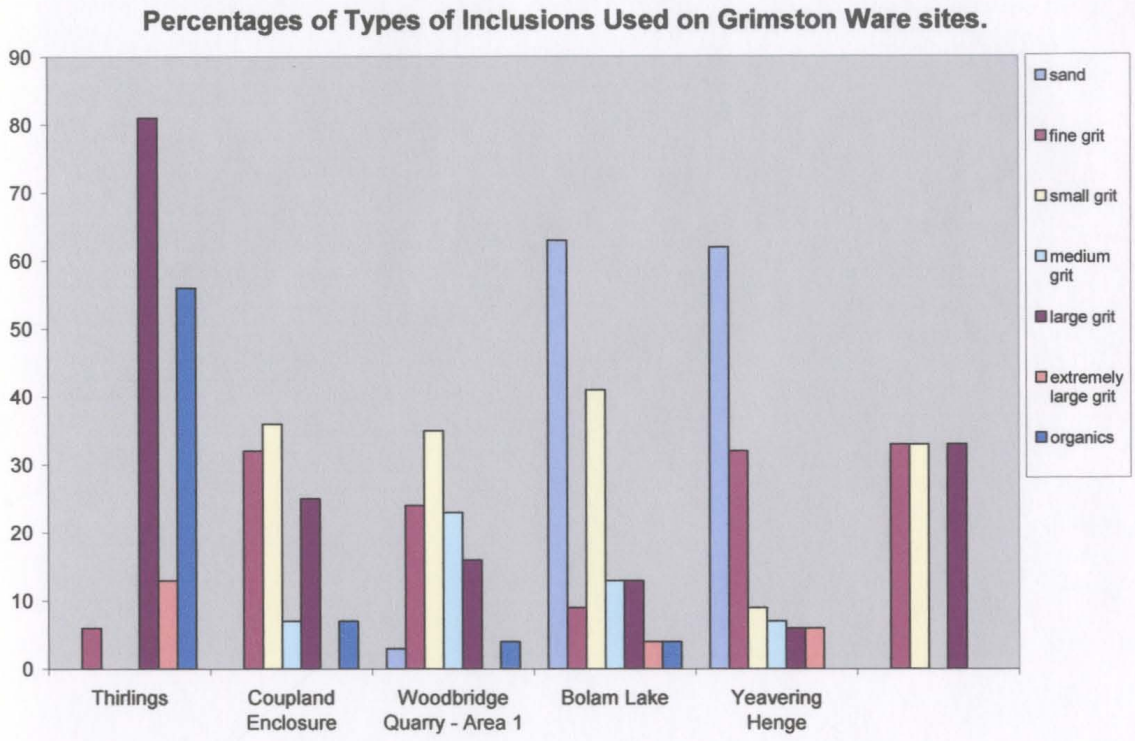
Fabric.

The main parts of the fabric of a pot are the paste (particularly its hardness), its colour and its inclusions. With the exception of Ferrell's re-evaluation of the Yeavering Palace site material, the hardness of the Milfield Basin sherds has not been tested on most of the assemblages. Miket (1981, 1985, 1987) notes how well-fired his ceramics are based on how hard the paste is, but it is not indicated if the sherds were tested using a standard like Mohs' hardness scale. This evaluation also does not include verification of the ceramics' hardness because access to the material required that it not be altered or harmed (scratched, thin-sectioned) in any way. Colour, however, was recorded and is listed in the appendices.

Of particular interest is the choice of inclusions. Inclusions must be added to most clay to open the fabric so that water molecules can escape making it more durable in the kiln. The matter of the inclusions (eg. organic, quartzite grit, sand, etc...), however, is the choice of the potter. Ethnographically it is known that this is often largely culturally determined and since it is known that the potters in the Milfield Basin used local clay, it is an informative variable.

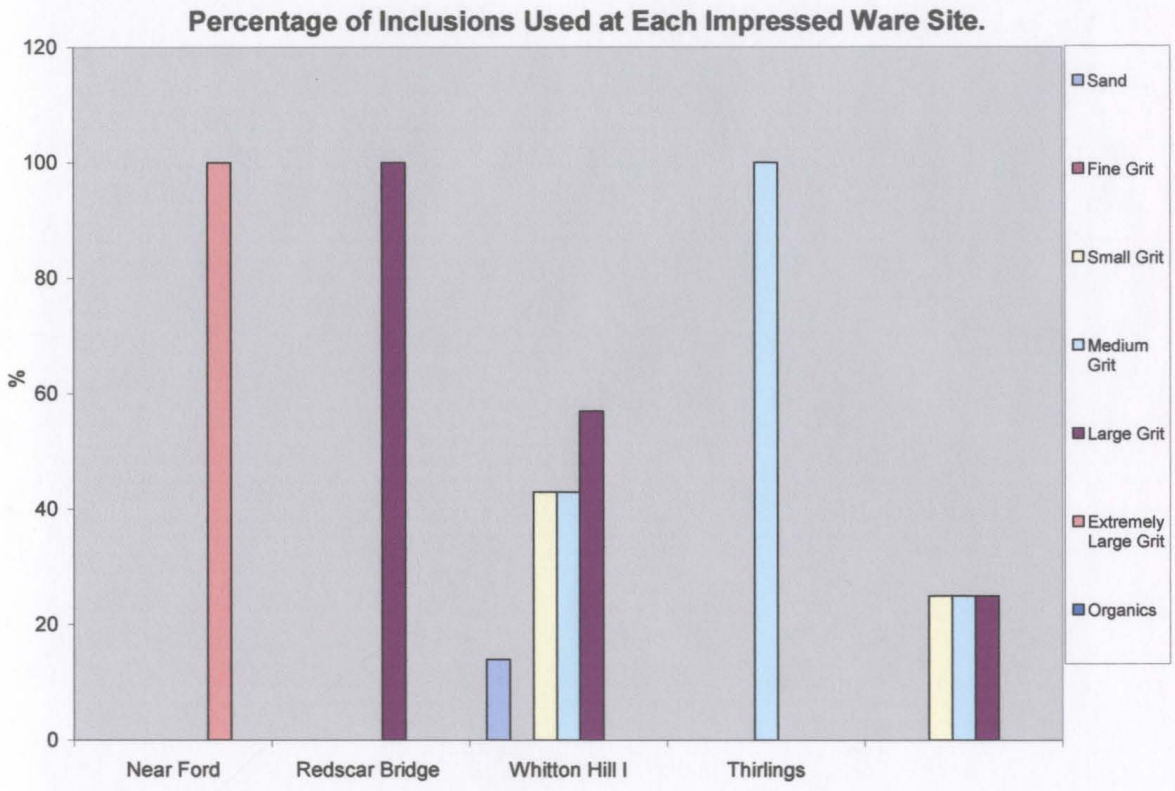
The Grimston Ware pottery shows interesting trends in the types of inclusions used (graph 7.13). At most of the sites sand, fine grit and small grit are present in the greatest numbers, particularly at Bolam Lake and Yeavering Henge where over 60% of the sherds show great amounts of sand. Thirlings, however, is different from the rest as the assemblage is largely tempered with large grit, extremely large grit and organic inclusions. These variables are present at the others sites, but in much smaller quantities, and the fact that smaller inclusions are not found at all (except for a small quantity of fine grit) is significant. Thirlings is the site that had the thickest pottery and this most likely accounts for the larger inclusions. What is important, though, is that there are different manufacturing techniques being used showing a different craftsman either in space or time.

Graph 7.13



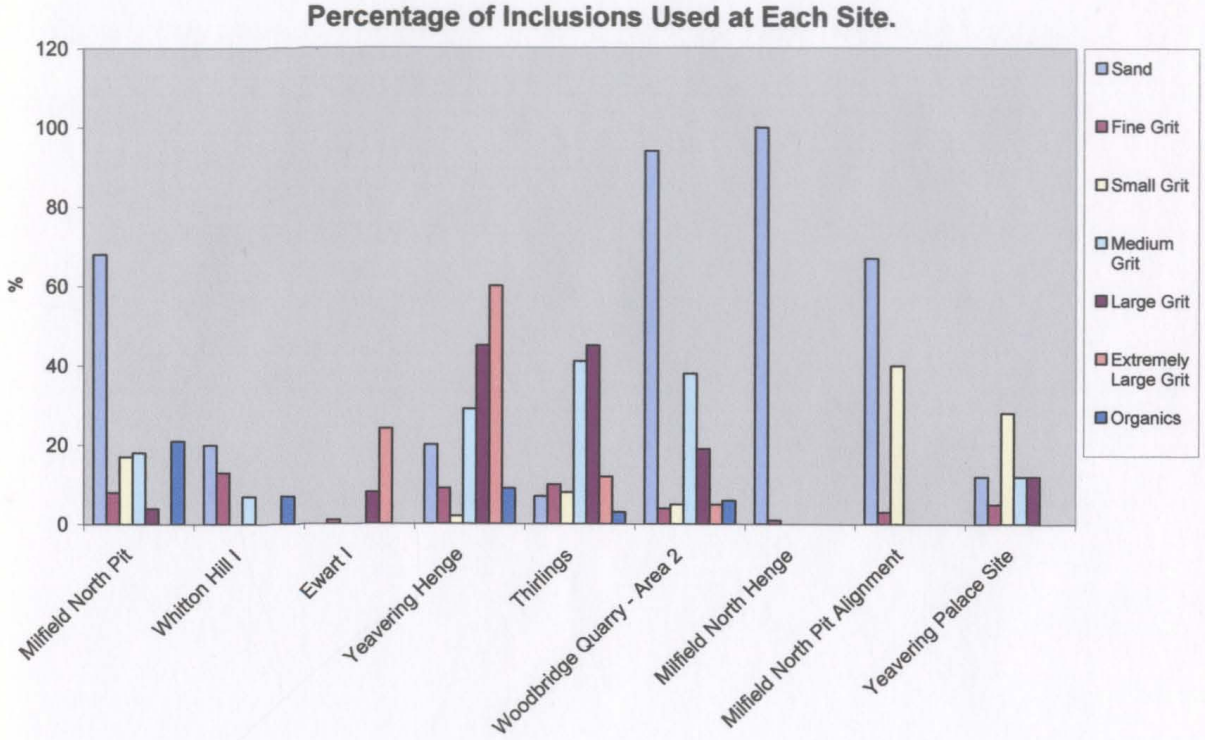
The Impressed Wares in the Milfield Basin show a different trend (7.14). As is common in the tradition, most of the examples show the use of very large grit inclusions, a result of necessity since the vessels tended to be larger and thicker. Interestingly, however, the Whitton Hill I site and the Yeavering Palace Site, both monuments in this example (the Yeavering pieces come from the ring-ditch), also show significant amounts of smaller inclusions being used. Moreover, unlike during the Early Neolithic, the Thirlings example shows the exclusive use of medium grit. This variable use of inclusion size is in contrast to the Ford sites and Redscar Bridge, cremation burials in pits, often with mounds overtop, which have only large grit and extremely large grit. Again, however, these conclusions must be taken carefully, since the assemblage is so small.

Graph 7. 14



During the Grooved Ware period there is a lot more variation in the inclusions used at each site and few trends which can be seen through the basin (graph 7.15). It is noted that all three of the Milfield North sites and the Cheviot Quarry site – area 2 show large percentages of sand whilst Yeavering Henge, Thirlings and Ewart I incorporated much larger tempers. Due to the proximity of the Cheviot Quarry site and the Milfield North sites, as well as Yeavering, Thirlings and Ewart I, as well as carbon dates showing the contemporaneity of each group, this could indicate separate groups inhabiting these two regions, either as neighbours, or during different generations.

Graph 7.15



Decoration (graph 7.16).

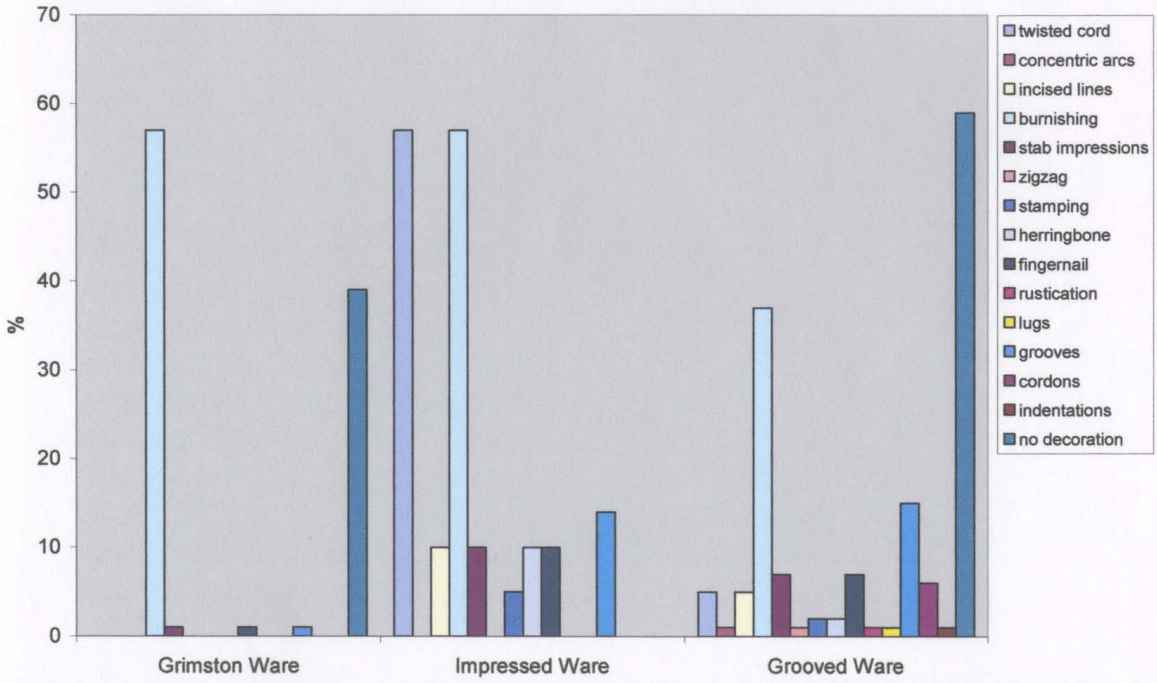
As is common with Grimston Ware across Britain, the Milfield Basin assemblage showed little to no decoration at all. A large proportion of the sherds had burnishing on one or both sides and there were a handful of examples with either minimal grooving or faint fingernail impressions or stab marks. Otherwise, the material follows the norm for the Grimston Ware tradition.

Typical of the Impressed Ware tradition, the assemblage in the Milfield Basin from this period exhibits much decoration over the external sides of the sherds and on and inside the rims. The most common motifs are twisted cord and grooving and, at

Greenwell's sites near Ford, herringbone patterns. Interesting to note, however, is the use of fingernail impressions at the Yeavering Palace site which is not uncommon in this period, but unique to this site in the basin.

Graph 7.16

Percentage of Motifs Used Each Time Period.

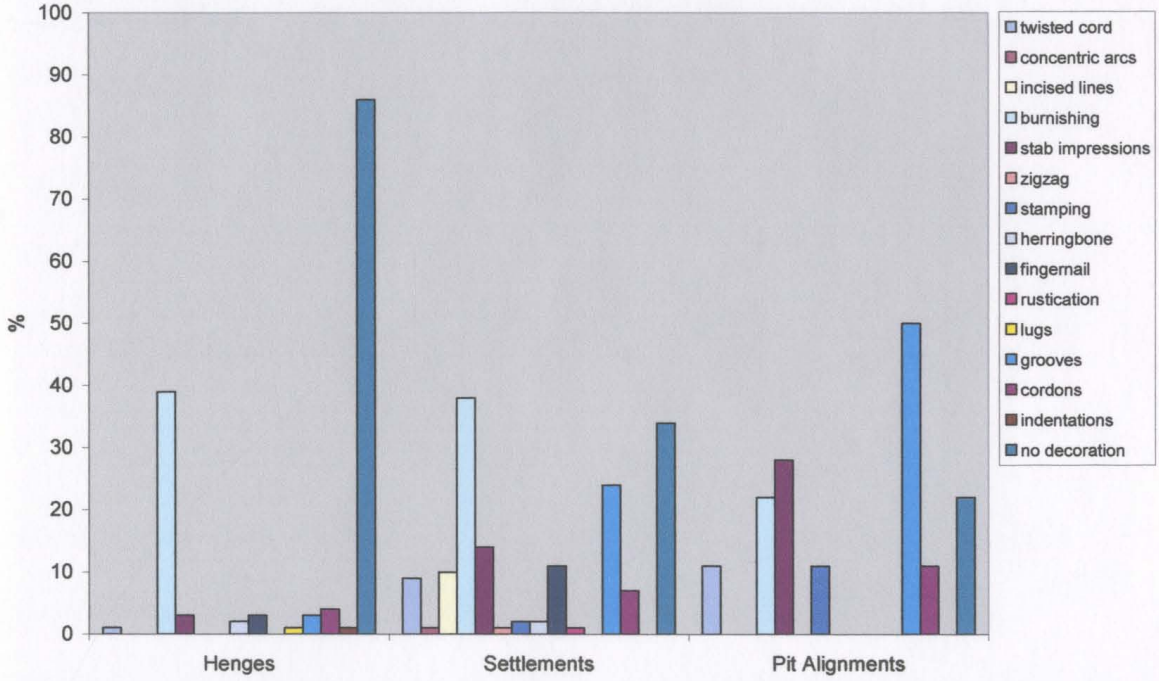


Except for the Milfield North Henge site all of the sites in the Milfield Basin show the use of a variety of decorative motifs on their Grooved Ware (graph 7.17). Grooving is the most common motif throughout the basin and has its highest percentages at the Cheviot Quarry, Milfield North Pit Alignment and Yeavering Palace sites. However, the evidence suggests that in the Later Neolithic, Grooved Ware in this region, like other parts of Britain, was more conservatively decorated than Impressed Wares

since a large proportion of the sherds, particularly at the Yeavering Henge (the site with the largest assemblage), had no decoration at all.

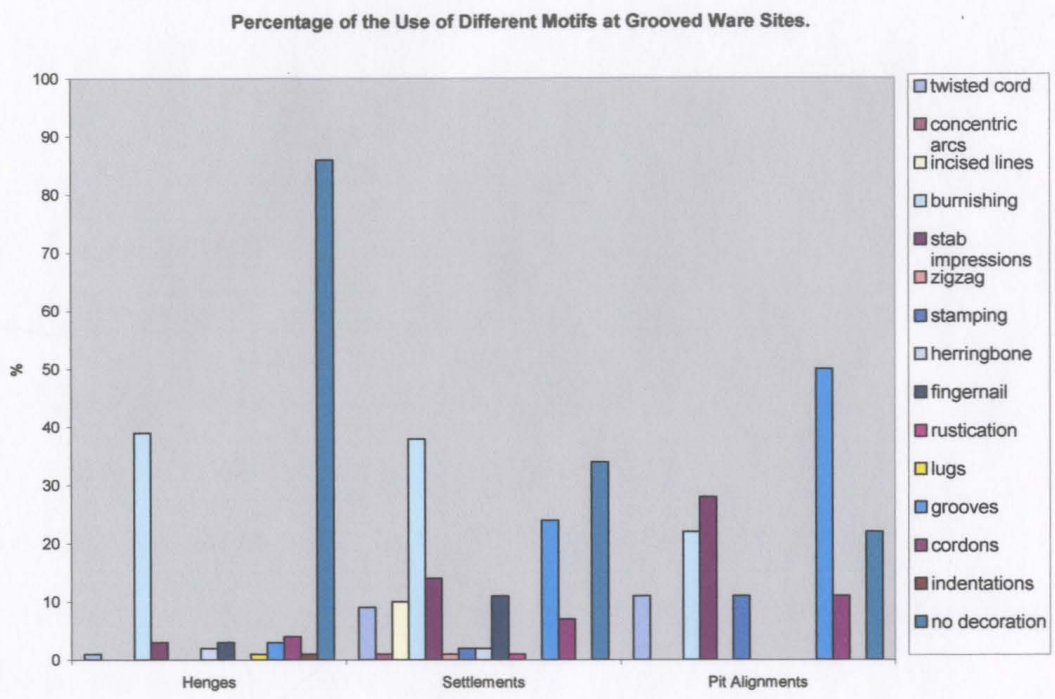
Graph 7.17

Percentage of the Use of Different Motifs at Grooved Ware Sites.



The data also show that, overall, settlements had pottery with the greatest variety of decoration, whilst henges had the highest level of unornamented pieces (graph 7.18). This result was unexpected as it was hypothesized that henges as ritual sites would contain pottery bearing more decoration as symbols. This trend shows how preconceptions about 'ritual' space and the sorts of artifacts found within them can bias interpretations.

Graph 7.18



This is not to say that henges were not places of ritual. Indeed, the abundance of burials and cremations within them suggest they held liminal significance. It is to suggest, however, that either the undecorated pot held more significance than the decorated one in the Milfield Basin or that the motifs used to decorate pottery may, in this case, have simply been for aesthetic value. Regardless, this trend should be noted and followed as more data are revealed.

Pottery can be decorated in a myriad of ways and simply the presence of certain motifs does not necessarily indicate a specific culture. The way in which the motifs are used and on what part of the pot, however, can show some tradition and connect sites. In the Milfield Basin, the Grooved Ware assemblage is very small, especially when

considering that any individual piece could date to anytime during several centuries. It has been noted several times that there are acute similarities between the Yeavering Palace and Thirlings assemblages (Ferrell 1990, Miket 1987, Waddington 1999a). However, there are examples of other sherds bearing the same decorative characteristics.

Sherd 74.1 (plate 7.1) from Thirlings demonstrates internal rim bevels made by smoothing the valleys between the coils of the pot. Similarly, at the Cheviot Quarry site, pot 2 (plate 7.2) this technique has been used to create ridges.

Also at the Thirlings site, sherd 69.2 (plate 7.3) shows heavy fingernail impressions used in an irregular pattern on the external surface. The Greenwell Collection from Ford, example 1743 #2 (plate 7.4), also has this kind of adornment on a body sherd in the same uneven way.

Twisted cord is a common form of decoration that was used on Grooved Ware pottery and there are several examples in the Milfield Basin. Its use, however, to create triangular patterns, like sherds Whitton Hill I, 59 (plate 7.5), and Thirlings 121 (plate 7.6), is more unique and looks to be more regional as it conforms more to the Meldon Bridge sub-style. This triangular arrangement is further exemplified at the Cheviot Quarry on pot 4 (plate 7.7) where it was made by grooving.

Horizontal lines are also found on many body sherds on the external side. The Cheviot Quarry pot 2, sherds 17 and 20 (plates 7.8 and 7.9) demonstrate grooves made by a blunt object and are most similar to one found from pot 9 (plate 7.10) at the Milfield North pit alignment. Yeavering Palace site, sherd 5 (plate 7.11), also uses parallel horizontal grooves, but these are different from the first examples since they are narrower and have more V-shaped profiles. What is interesting about these examples is that the

Plate 7.1: Thirlings 74.1

Plate 7.2: Cheviot Quarry, area 2: pot 2

Plate 7.3: Thirlings 69.2

Plate 7.4: Greenwell Collection 1743a #2

Plate 7.5: Whitton Hill I, 59

Plate 7.6: Thirlings 121

Plate 7.7: Cheviot Quarry, area 2, pot 4

Plate 7.8: Cheviot Quarry, area 2, pot 2, sherd 17

Plate 7.9: Cheviot Quarry, area 2, pot 2, sherd 20

Plate 7.10: Milfield North Pit Alignment, pot 9

Plate 7.11: Yeavering Palace Site, sherd 5

similar pieces are from the same sites as the northern group noted in the trend found in fabric inclusions and that they contrast to a site from the southern group.

From the evidence presented above it would seem that there are many connections between the Grooved Ware sites in the Milfield Basin. However, it is important to remember that the sherds are fragmentary and many of the decorative techniques can simply be attributed to the tradition from whence they came. Without proof of those characteristics being used in conjunction with particular others, forming entire pots of the same type, greater links cannot be ascertained – it simply requires larger portions of the pots.

There is one example, though, in which two larger sherds were found bearing similar motifs in the same way on a pot surface. Yeavering, sherd 6 (plate 7.12), and Greenwell's sherd 1747 (plate 7.13) from Ford both have diagonal grooves in sets of four, creating long zigzags across the sherd from top to bottom. It would seem then that this, not unlike the examples at the Meldon Bridge site, demonstrate a common aesthetic which existed in the Milfield Basin during the Later Neolithic.

Discussion.

There are many problems associated with understanding the prehistoric pottery of the Milfield Basin. As has been stressed above, the sherds are fragmentary and there simply are not enough to reconstruct a sufficient number of pots to see trends in form and

Plate 7.12: Yeavering Palace Site, sherd 6

Plate 7.13: Greenwell Collection, 1747

decoration. Furthermore, most of the sites on which Grooved Ware was found have either poor dates spanning large periods of time or no dates in direct association with the pottery. For example, all of Yeavering Henge's material is from a secondary silting of the henge ditches and at Whitton Hill I, dates were found to be incorrect and had to be recalculated, a process which caused the narrowest period of occupation to be sometime c. 3600-1400 cal BC – almost the entire Neolithic and Early Bronze Age! As a result, it has been very difficult to understand the chronology of ceramics in the Milfield Basin – especially since some of the assemblages are more varied in form, fabric and decoration than others.

There has been debate over what Grooved Ware looks like in the northeast and how it is different from the slightly earlier Impressed Wares. Granted, some of this confusion has been caused by the changing of terminology as new examples were found, but it is also because of the small assemblage size and the fact that the sherds themselves are so small. Most range from 2-6 cm^2, and unless they are obvious rim or base sherds, they can only be considered a 'body sherd', which could derive from anywhere on the pot.

Moreover, the decorative motifs can be evaluated for their presence on sites, but their location on the pot and what combinations were used – variables which are pinnacle to determining cultural trends – cannot be discerned. Without knowing what combinations were present it is difficult to assign an age to the pot because motifs like grooving, stab impressions and fingernail impressions were used in many periods, simply in different ways. Therefore, at this point the only variable that can be evaluated to better understand the Basin's assemblage is fabric.

It is known from Gibson's (1983, 1986b) analysis of the pottery in the 1980s that the ancient people extracted their clay from local sources, particularly the River Glen, and so the inclusions used must have been decided by individuals faced with the same raw material. It is therefore interesting that of all of the sites from the Later Neolithic, three show the use of considerably different inclusions than the rest of the sites in the area (graph 7.15). Yeavering Henge, Thirlings and Ewart I all showed the use of large and extremely large grit inclusions as temper and thick sherds with gritty, friable fabrics whilst the rest of the sites had yielded pottery only containing high percentages of sand, fine grit and small grit inclusions. Initially, it seemed clear that there were two groups of fabrics representing two cultural groups living side by side since the Yeavering Henge, Thirlings and Ewart I sites are in the southern part of the basin whilst the others are further north. However, further examination of the data shows that these three southern sites are also the only ones with great variation in the types of inclusions used suggesting that they were multi-component and unstratified.

Gibson (2002) has stressed that the material from the Milfield Basin needs to be re-evaluated because many of the sites dug in the 1970s had poor dates and came from unstratified contexts. He argues that these were called Grooved Ware based on their similarity to other sites in the region, but those sites were also poorly dated and the assemblage has ended up with pieces which likely do not fit in the Later Neolithic box.

At Yeavering Henge, a complete lack of carbon dates and a secondary, unstratified context casts doubt on its Later Neolithic date. Similarly, at Thirlings, the pottery was found mostly in ploughsoil and in a poorly dated pit, and at Ewart I, the ceramics came from multi-component pits. Gibson draws parallels with the Yeavering

Henge material to that at the local Early Bronze Age unenclosed settlements at Standrop Rigg, Houseledge, and Green Knowe on account of the large, angular grit inclusions, thick walls and a friable, gritty texture of the sherds – a common trait in Early Bronze Age wares (Gibson 2002: 176). But it is at Thirlings where actual examples of rim sherds show a striking resemblance in decoration and form as well as fabric. Both 57.1 and 57.7 (plates 7.14 and 7.15) from the Thirlings site show a simple, but heavy and raised rim with criss-crossed incisions just like sherds 4 and 10 at Standrop Rigg (figures 7.1 and 7.2).

There is another group of Neolithic pottery which bears a similar fabric to this group. The Greenwell Collection from near Ford and at Redscar Bridge have thick, gritty walls and large angular grit inclusions as well, but the context, form and decoration of these sherds are different. They were found in cremation graves under barrows (with the exception of Redscar Bridge) and not in henges. They also have T-shaped rims and an abundance of decorative motifs in the same combinations and locations as Peterborough Ware pottery from Yorkshire found in the same context. Consequently, the 'coarse' group in question does not seem to have belonged in Greenwell's sub-style.

Support for an Early Bronze Age date for the anomalous group is at Ewart I, the third site where coarser fabrics are found. At this pit alignment, Miket (1981) describes the material as having been mixed in the pits with stones, a small amount of charcoal and soil. Miket believes that these pits once held posts which were later extracted on account of the collections of stone all being near the centre of the pits. Furthermore, the pits were all shelved which is known to have been a technique used to carefully lower the posts in. Indeed, sherds which fit a Grooved Ware classification were found at Ewart I, but

Plate 7.14: Thirlings 57.1

Plate 7.15: Thirlings 57.7

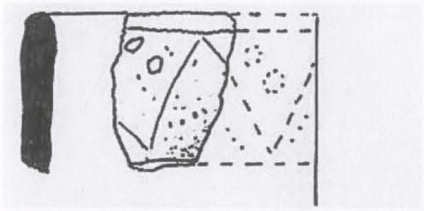


Figure 7.1: Sherd 4 from Standrop Rigg (redrawn from Jobey 1983).

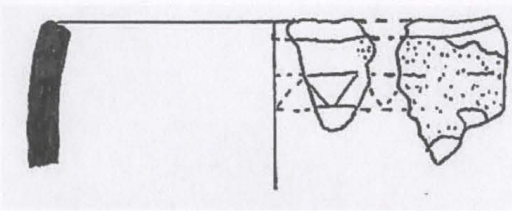


Figure 7.2: Sherd 10 from Standrop Rigg (redrawn from Jobey 1983).

Figure 7.16: Ewart 1, rim #1, top

Figure 7.17: Ewart 1, rim #1, profile

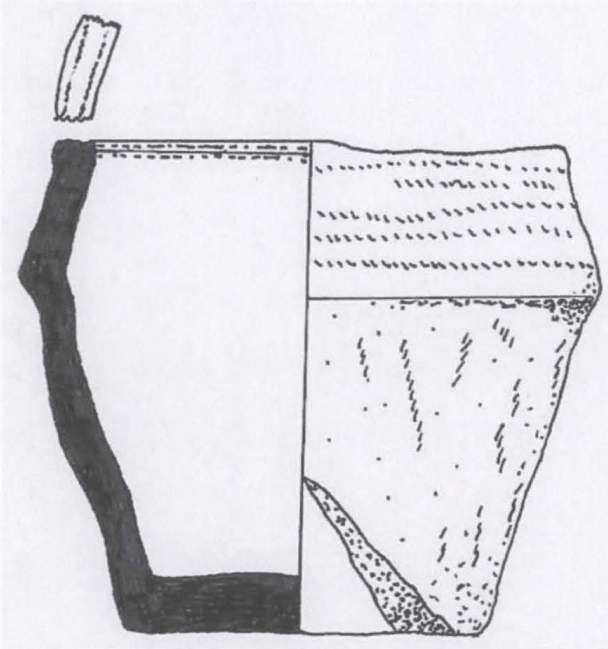


Figure 7.3: Vessel from Howick Heugh (redrawn from Jobey & Newman 1975).

examples of the heavy, gritty ware are also present. One of the heavier sherds found, sherd 69.1, rim #1 in appendix 1 (plate 7.16 and 7.17), has stab marks in parallel rows on the top and just inside the rim, very much like one that was found in an Early Bronze Age cremation burial at Howick Heugh in 1972 (figure 7.3). It is therefore plausible that Grooved Ware material was mixed in during the initial digging of the pits, like at Milfield North and then, when they were filled in after extracting the posts, more modern material was incorporated in the fill.

An Early Bronze Age date, then, for this fabric group adds new information to the argument surrounding land use after the Neolithic. Jobey has argued that the evidence suggests that in the Early Bronze Age there was an exodus of the vale floor for the Cheviot slopes. This is based on the unenclosed settlements like Houseledge and Standrop Rigg which are recognized as the first examples of Bronze Age agricultural people in the area (Frodsham 2004: 26). However, although it was known that one sherd from Thirlings was that of a cinerary urn from the period and cremations found at the western ring-ditch at Yeavering Palace site and at Milfield North Henge also had examples. The material presented suggests a greater presence in the basin either during the Early Bronze Age or a transitional period between the Neolithic and Bronze Age than was previously known (especially accounting that one of the sites is a domestic site). It would therefore seem that the move into the hills may have been less dramatic. Some may have moved into the hills to take advantage of the open land whilst others remained in the places their ancestors had been. Regardless, it is a question which needs to be further researched to gain a better understanding of land use at the beginning of the Bronze Age.

Chapter VIII: Conclusions.

To conclude this project at this point is difficult because it is only the foundation of a much larger study. The research shows that the form and decoration of the Grooved Ware in the Milfield Basin is typical of the tradition, but these claims are made in the knowledge that the assemblage is very small to make generalizations, and the pieces themselves are really too small to determine positioning and combinations of motifs.

It also appears that the Later Neolithic people were using the same ceramics at henges, settlements and pit alignments since all three sites showed the same ranges. Henges, however, do appear to have a correlation with undecorated (or more sparsely decorated) pottery and this something which calls for us to re-examine our preconceptions about specific types of sites.

Over time, Grimston Ware and Impressed Ware in the Milfield Basin follow the typical forms, fabrics and decoration of their respective periods. However, it is noted that Impressed Ware is found predominately in burials, whilst Grooved Ware sherds were used at all types of sites. Again, though, this most likely has to do with the miniscule assemblage size of Impressed Ware, although, further investigation may prove this to be a trend.

The most interesting and important variables found in this research, however, were inclusion type and size. Whilst the majority of the Neolithic sites demonstrated small and fine grit and sand mixed into their ceramics, two settlements, Yeavering and Thirlings, and a pit alignment, Ewart I, also had many pieces with large and extremely large grit – the entirely opposite end of the spectrum. What is most compelling is that these sites also had the greatest number of components suggesting that these changes in pottery construction demonstrate cultural change over time. Moreover, since replicas of

these coarser wares can be found at Early Bronze Age sites in the immediate region we can place these changes in time to the Neolithic – Bronze Age transition.

From the ceramic data, then, it is inferred that at the end of the Neolithic, land use patterns did change dramatically. The lack of coarser wares from the henge sites suggest they were no longer used (or if they were, the nature of that use changed) which indicates drastic alterations to the peoples' worldview. The pit alignments also seem to have gone out of use. This is particularly acute at Ewart I where the coarser wares were found in the upper fill, associated with the removal of the posts. Obviously, the way this land division was used changed, presumably a reflection of how land division and general use did as well. At the settlement sites, Yeavering and Thirlings, the coarse ware prevails and so it can be assumed that people continued to live in this part of the Basin as they relied more on farming.

Supporting Waddington's work then, these data suggest that with the Early Bronze Age, settlement did not abandon the valley floor, but rather expanded within it, particularly in the south. It must be noted, though, that the bias towards the southern half may have more to do with the fact that the large sites which have been fully excavated have all been salvage excavations at quarries in the south and northern enquiry has yet to be done. Regardless, it seems we are on the brink of great insight into land use patterns, and thus lifeways, at the end of the Neolithic and further research, both in the field and in the laboratory, still have much to reveal.

At this point, it can safely be said that this research has achieved what it was meant to. A foundation of data from the Milfield Basin has been collected and stored and a standard criteria for ceramic studies in this region has been created. These data have

also shown some cultural zoning in the region and have indicated land use patterns. However, it is also a project which has only begun.

The catalogue must be something which is left open for future inclusions. More examples need to be found in secure contexts and better associated dates must be calculated (something which is more possible with newer technology). Moreover, once the entire assemblage from the Cheviot Quarry is available, my hypothesis regarding inclusion changes and settlement patterns can be tested since this is another multi-component settlement site near Thirlings and Yeavering. Residue analysis is also required to understand what the vessels were being used for so that a better comparison of type sites can be done.

It is therefore my aim to expand this project beyond the perimeters of the Milfield Basin to consider the eastern Scotland-England border as a whole. This will not only increase the assemblage size to one with which trends can be more conclusively determined, but will help to place the Milfield Basin in Britain as a whole. Until recently, pottery has been studied using separate techniques in Scotland and England despite the fact that the border between these two areas was non-existent in the Neolithic. This has caused two schools of thought to develop and the material to seem more different than it actually is (R. Miket, pers. comm.). As a result, further study of Grooved Ware found on both sides of the border should help to alleviate this divide and create an understanding of Grooved Ware in the north in its own right – something which is long overdue.

Most likely due to the imposing megalithic structures dotting the landscape, Neolithic remains have been an interest in Britain for centuries. As a consequence there seem to be few frontiers left for archaeologists. The Milfield Basin, however, is a place

which was reasonably untouched until the 1860s and then largely ignored until modern archaeology. Consequently, it offers the chance to explore the Neolithic using the latest scientific techniques and the opportunity to better understand how and why people chose to start cultivating their food and keeping animals. This is why it has been an ideal place for me to start an enquiry into northeast England's past. With more research it is clear that we will finally know how and why our ancestors settled into a farming existence, and at that point, we will catch a glimpse of where we come from.

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