A Road to the Past

Excavations along the A1 at Loughbrickland

Angela Porter

Principle Editor: **Kev Beachus**
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ROADS Service
Department for Regional Development
NORTHERN ARCHAEOLOGICAL CONSULTANCY
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First published in 2009
By DRD Road Service NI

IBSN 978-1-904807-25-4

Typesetting and Layout by Angela Porter
Cover designs by Stephanie Godden

Printed in Northern Ireland by
Impact Printing
Leyland Road
Ballycastle
County Antrim
Northern Ireland
BT54 6EZ

Tel: 028 2076 2469
Fax: 028 2076 9919
e-mail: info@impactpublishers.co.uk
www.impactpublishers.co.uk

Acknowledgements

There are many people who need a big thank you from me:

DRD Roads Service for funding the book writing project as well as the archaeological excavations.

Stephen Gilmore, Lianne Heaney and everyone else at Northern Archaeological Consultancy for their help, advice and resources.

Steve Cannon and Stephanie Godden for the wonderful illustrations.

Kev Beachus for all the help, advice and editing that he has done.

Ian Kilcoyne, Head teacher, and Jeanne Evans, Deputy Head, of St Cenydd School, Caerphillyfor making it possible for me to pursue this project as part of my professional development. Thanks go to my colleagues and pupils who have had to listen to me waxing lyrical about it all.

It has been an amazing experience for me, one I have thoroughly enjoyed. It's given me a better understanding of Prehistory and Archaeology than I could ever have believed. There have been many moments of 'wow!' for me, and interesting discussions and debates about various theories and ideas. I hope my words convey my enthusiasm for things prehistoric and the puzzles that surface at least as much as the archaeology!

Contents

1 Setting the Scene

Aerial photograph of the A1 Road Widening Works near Lough Brickland

1. 1 Introduction

In 2004, the Northern Ireland Department for Regional Development's Roads Service began construction work to make the A1 Belfast-Dublin road a dual carriageway as part of the north-south communication improvements.

Jacobs Engineering UK Ltd, the advisor to DRD Roads Service, employed Northern Archaeological Consultancy Ltd, to undertake the archaeological works on the new road between Loughbrickland and Beech Hill in Co. Down.

Aerial photograph showing the low, rounded hills of the drumlin landscape. The Ballintaggart 2 site can be seen to the middle left. Lough Brickland can be seen to the right.

This section of the A1 is in south-west Co. Down and runs north to south, with the Slieve Guillion-Mourne mountain range lying to the south and Slieve Croob to the east. It passes through a landscape of drumlins - small rounded hills formed from the rock and silt

Archaeologists at work excavating two fwo of the ring barrows found at Ballintaggart 2.

debris carried by glaciers. In between the drumlins are hollows and valleys whose bottoms are often boggy.

In the past this boggy land was difficult to cross and has historically been used as a defence. Until recently it was believed that little or no prehistoric occupation had taken place among the drumlins. The agricultural past has left much of the landscape with small field patterns bordered by hedges, walls and fences. Over the centuries, ploughing, land clearance and levelling has obliterated much of the smaller 'lumps, bumps and dips' that made up the prehistoric landscape.

During the construction works on the A1 Road, the methodical removal of the topsoil allowed the archaeologists to monitor and control how the archaeological features below the soil surface were revealed . This work was covered by the initial license (AE/04/55).

Topsoil stripping taking place at Ballintaggart 2.

A darker patch of sub-soil which was later identified as a ring barrow.

This was later identified as the four-poster structure at Ballintaggart 2.

At the first sign of archaeology, such as a darker patch of ground or any artefacts, the machines were stopped and, the area of archaeology was taped off with red and white tape. The area could then be properly investigated. Further licences to excavate the archaeology were then applied for from the Northern Ireland Environment Agency so that the archaeology discovered could be fully excavated and recorded along with the removal and preservation of any artefacts. The end result is an accurate record of the site that will be preserved for future generations.

The Licences for the excavations were:

- AE/04/77 was issued for the excavation in Ballintaggart
- AE/05/14 was for the excavation in Derrycraw.

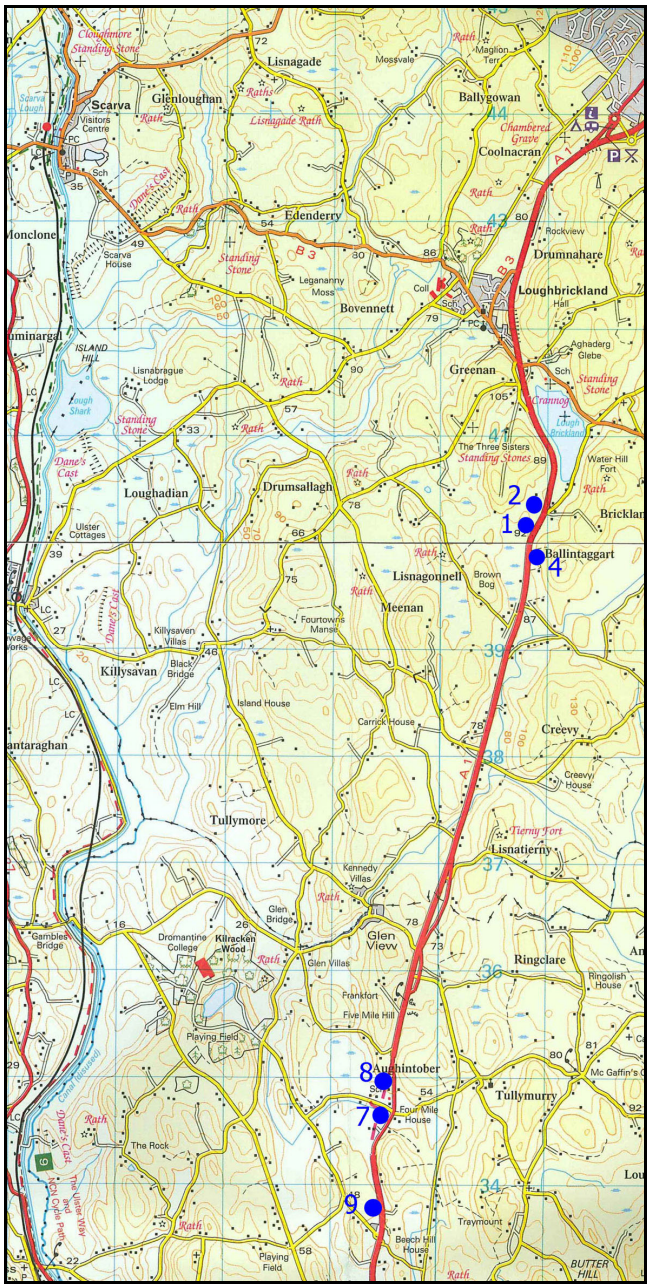
A wide variety of archaeological material was uncovered during the monitoring of the A1 road that ranged in date from the Neolithic to the Iron Age and included domestic, ritual and mortuary structures.

The excavations showed that the Loughbrickland area has been a focus for settlement from the Neolithic through to the present day. Combining the archaeological evidence from these excavations with that of other known prehistoric sites in the area, such as Brickland Barrow and the Three Sisters stone row, the idea that the heavy clay of the drumlin landscape, poor quality of soils available and the lack of suitable stone for tools that lead to the land being avoided by settlers until the Early Christian Period has now been shown to be inaccurate.

Amongst the archaeology found were three early Neolithic houses, the first to be discovered in Co. Down.

Also discovered was an Early Bronze Age campsite, a rare find in its own right.

Two Bronze Age cemeteries were also unearthed. One, at Ballintaggart, comprised of eight ring barrows and two ‘four poster’ burials. The other, at Derrycraw, consisted of four ring barrows, a penannular ring ditch, a cairn and a probable basket burial. The cremated remains of at least 20 individuals were found interred in these cemeteries.



A map of the stretch of the A1 to be widened. The numbers refer to the potential areas of archaeology.
(After OSNI Discoverer Series Sheet 20. Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown Copyright.)

Other archaeological discoveries included a lost Neolithic stone row, three burnt mounds, a very elusive Iron Age burial, and a plethora of other interesting and fascinating artefacts.

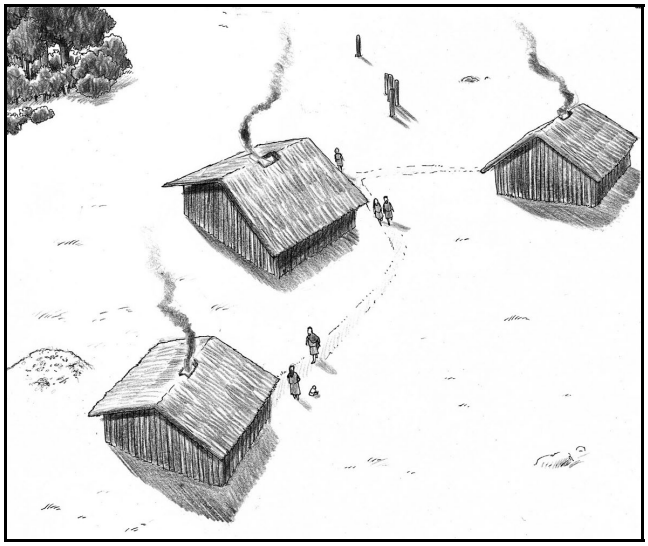
The sites of the archaeological discoveries are shown on the map to the left.
The sites are :

- Ballintaggart (1, 2 & 4)
- Derrycraw (9)
- Maddybrumbrist (7)
- Aughintober (8)

Indeed, Ballintaggart and Derrycraw are two of the most important archaeological sites discovered in County Down and, possibly, the whole of Ireland in recent years.

1.2 The Neolithic (6000 BP to 4000 BP)

The key innovation that ushered in the Neolithic Age was farming - the practice of farming spread from the Middle East through Eastern and Southern Europe, and reached Britain around 6000 BP (Before the Present). The Neolithic Age ended with the widespread use of Bronze around 4000 BP.



Reconstruction of the Neolithic Houses at Ballintaggart.
Steve Cannon

Although the Neolithic people were farmers, they continued to hunt and gather food from the wild to supplement the produce of farming. They were less likely to go hungry when wild game was scarce – excess produce could be stored for times of famine, or even traded for commodities with other communities. The store of food could need protecting from marauders and this would result in an increased cultural investment in the site. They built larger, more permanent dwellings; traces of three Neolithic houses were found at Ballintaggart. It is also likely that they lived in larger communities than during previous times as a greater supply of food could support a larger population. People had to live together in new ways – they had to find ways to co-operate as well as compete with one another. A fixed location gave them the security of leisure time during less busy periods in the farming year to invest in new innovations such as weaving and cloth making.

The Neolithic settlers that arrived in Ireland set about clearing upland forests to build their permanent farms; the upland forests were less dense and easier to clear than the lowland forests. They used a combination of stone axes and fire to clear the forest, with axes and adzes being used to work wood on a smaller scale. The newly cleared land was, at first good for agriculture but over many centuries overgrazing, erosion, and a change in the climate gradually caused it to stagnate, acidify and become a peat bog. Many of Ireland's upland peat bogs were formed as a result of farming and climate change during the Neolithic and Bronze Age periods. The earliest farmers lived in a climate that was one or two degrees warmer than it is today. Small changes in temperature can have a considerable effect on the ability to grow crops on the uplands. Around 5500 BP temperatures had fallen to those we experience today, but by the end of the Bronze Age (around 2500 BP) they had fallen even lower resulting in increased rainfall.

Porcellanite axe found at Ballintaggart

During the Neolithic, axes in Ireland were made from porcellanite as well as flint. Porcellanite is harder and tougher than flint and was extracted in Co. Antrim, from sites at Rathlin Island and Cushendall. Many stone axes appear to be unused and there is little evidence of their cutting edges being reworked to sharpen them. It may be that the axes were as much items of prestige as actual tools.

Pigs were native to Ireland, but cattle, sheep and goats were transported across the Irish Sea on rafts towed by skin boats or dugout canoes, a hazardous journey that would have taken a couple to several days depending on where the people sailed from. These people would also have brought wheat and barley to plant on their farms, as Ireland didn't have many native cereal crops at this time.

Neolithic pot sherds found at Ballintaggart

The Neolithic settlers also brought pottery with them. Enough sherds and pots have been found in Ireland to know how they were made – mostly by coiling clay (although some are made using the slab construction technique) round to make a simple shape, smoothing the coils down, decorating the outside using twigs, bones or fingers, drying and then firing in a hot fire to harden the pot. The pots were used for many things, including storing food and as lamps by placing a small amount of fat and a piece of reed as a wick so that they had light at night when there was no Moon visible.

It wasn't just the arrival of farming, new tools and pottery that marked the Neolithic - the people's beliefs seem to have been very different to the hunter-gatherers of previous times. The Neolithic people left us with great tombs and enclosures built using rocks, timber and soil, for example the Giants Ring Henge, Audleystown, Creggandeveskey Court Tombs, Slidderyford and Legannany portal dolmens, and Slieve Gullion passage tomb. The earliest of these monuments are much later than the earliest pollen evidence for cereal crops; hunting-gathering overlapped with farming for a considerable length of time before tombs and other monuments were built. The orientations of some of their tombs and monuments suggest that these farmers had a basic appreciation of the cycles of the Sun and Moon, for example Newgrange which is aligned on the winter solstice.

These monuments are big. Each took a lot of people a lot of time and effort to build. The time was available during the quiet periods of the agricultural year, for example after harvest - more evidence that they had leisure time and sufficient food stored in order to undertake such tasks. Perhaps these communities were ruled by a kind of chieftain or council of elders who organised people into performing these huge tasks of construction. It has been shown that a small tomb would take about 10,000 person hours to build, so, a small group of 20 people could have built one within a few months after harvest. The shapes of the tombs were probably modelled on house styles; round tombs corresponding to the round houses of the hunter-gatherers, rectangular or trapezoidal tombs being similar in shape to the longhouses of central Europe. It is interesting to note that these 'houses of the ancestors' were built much more solidly than the small, flimsy wooden houses of the living. It seems they show the permanence of the ancestors, in contrast to the transitory nature of individual lives.

1.2 The Bronze Age (4000 BP to 2500 BP)

The technology needed to make bronze, an alloy of copper and tin, reached Europe around 6000 BP. It took a little longer to arrive in Ireland by means of the transmission of information from community to community, and longer still for the people of Ireland to learn how to make bronze and for it to become in widespread use. The start of the Bronze Age in Ireland is accepted to be around 4000 BP. Perhaps the knowledge was spread by itinerant 'bronze masters' who travelled around, teaching their skills to others, or perhaps the 'bronze masters' took apprentices who then returned to their communities with their new-learned skills.

Copper was mined between 3500 and 3200 BP at Mount Gabriel, Co. Cork. The evidence of mining here consists of 25 shallow mine shafts that extend between 5 to 10 metres into the mountain's side. Evidence from inside the shafts suggests that the copper ore was extracted by lighting fires to heat the walls. Once hot, cold water was splashed on the walls to shatter the rock, allowing the fragments it to be collected. The tin needed to make bronze wasn't available in Ireland - the nearest sources are in Cornwall, England. The tin ore would have to be transported to Ireland, and this would involve boat trips and those making the journey would need navigational skills. The people making bronze could have gone to mine or trade for the tin ore themselves, or they could have obtained it from itinerant traders. All of this hints at a sophisticated trading system.

Throughout the Bronze Age, the techniques used to cast and shape bronze improved. Initially, the bronze items were cast by pouring molten bronze into a hollowed out stone. By the Middle Bronze Age two part moulds made from hollowed out stones were being used. By the end of the Bronze Age, people were making wax models of the items they wanted to cast. They coated the models in clay, fired the clay to harden it and to burn the wax off. Molten bronze was then poured into the mould, allowed to harden, and the clay was chipped off the bronze article.

Bronze is much stronger than stone and could be moulded into many different shapes. Bronze could be used for longer periods than a stone tool before it needed sharpening again. However, even with the widespread use of bronze, tools made from flint and other stones were still being used.

There are many examples of elaborate items made from bronze to be seen in the Ulster Museum for example.

Native gold is widespread in Ireland and the Bronze Age saw the first extensive working of this precious metal by Irish craftsmen. Examples in Ulster include the Killymoon hoards, Tyrone, and the Tamlaght hoard, Armagh. Irish gold ornaments have been found as far afield as Germany and Scandinavia.

A wide variety of plain and decorated pottery was also made during the Bronze Age.

Bronze Age cremation urn found at Derrycraw

At the end of the Bronze Age, the climate was considerably cooler and wetter. The cleared upland areas became peat bogs that crops could no longer be grown on. The wetter weather caused these bogs to extend towards lower ground and cause lowland lakes such as Loughbrickland and Brown Bog to rise. At the same time, the population in Ireland had grown, increasing the pressure on the available land.

The arrival of the more efficient bronze axe allowed the denser lowland forest to be systematically cleared over the next several centuries. This clearance changed the landscape of Ireland from a forest wilderness to a large patchwork of open ground and managed woodland and some areas would never again grow trees. The change in climate resulted in the many small lakes left after the ice age being turned into peat bogs.

A number of hoards of bronze and gold items have been found deposited in these peat bogs, for example at Dowris, Co. Offaly and Mooghan North, Co. Clare, perhaps as an offering to the gods, or maybe the stresses of a changing climate and famine caused people to hide their valuables and which they then forgot to come back and recover it.

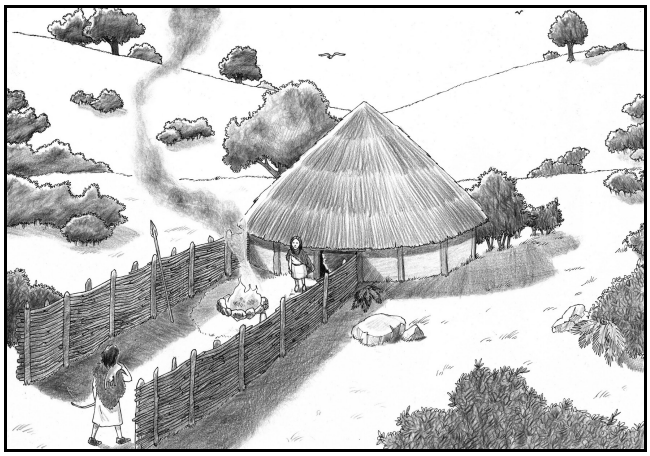


Illustration of the Early Bronze Age temporary campsite found at Ballintaggart
Steve Cannon

During the Early Bronze Age, groups of people appear to become more mobile, travelling around, living in temporary campsites near places rich in natural resources to harvest the abundance of the land. This image may be as a result of a lack of evidence from this period of prehistory, as there is evidence of large houses and metal work that suggest a large and stable population. Perhaps groups of the population travelled further afield to harvest the bounty of nature for longer periods of time thus necessitating the building of a temporary home. Small temporary settlements comprising of wattle and daub roundhouses with reed roofs were built with an expected construction life of between 5 and 10 years.

There was also a societal change with the appearance of a warrior elite during the Middle Bronze Age who were armed with weapons made from bronze. The stability of the non-migrant population and the growing pressure of an increased population on the land and resources was most probably the driving force for the development of this class of society – there was a greater need for the tribes/clans to keep their land and resources well protected.

Ballintaggart barrow cemetery

Burial practices also gradually changed from the communal tombs of the Neolithic, such as Newgrange, of the Neolithic to more individualised burials in barrows or, sometimes, stone-lined cists covered by a cairn of stones.

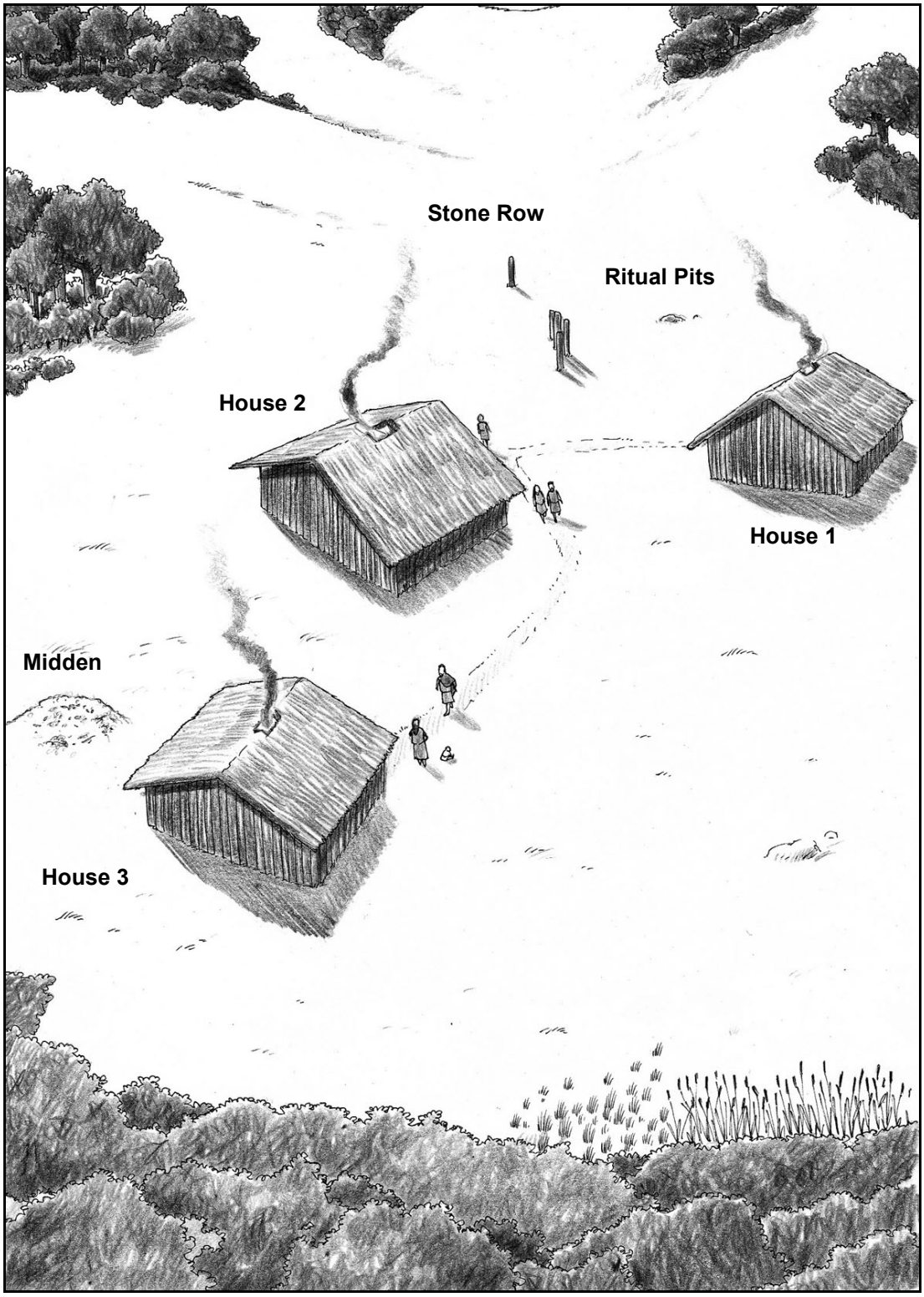
However, it must be remembered that not everyone, in fact only a very small percentage of the population was buried in a tomb of any kind in both the Neolithic and the Bronze Ages. Indeed, only a very small percentage of the population were accorded the honour of such a

burial. Even these small, individualised monuments would have needed a great deal of work to build, not to mention the gathering of wood for the funeral pyre. Why so few people warranted a barrow burial we may never know, though it could be to do with renewing the claim on the land, or to mark an event of importance to the people living at the time, or other ideas reasons that are discussed later.

Most stone circles, rows and henges were built during the late Neolithic and Early Bronze Ages, but they began to fall into disuse towards the middle of the Bronze Age. However, burial near older monuments seems to be a favoured practice from the Middle Bronze Age on. This is seen at Ballintaggart where the Bronze Age barrows respect and are aligned to the stone row from the Neolithic. Also, there is an alignment of features, including the two 'four poster' burials that point towards the large barrow on Water Hill.

Brickland Barrow on Water Hill

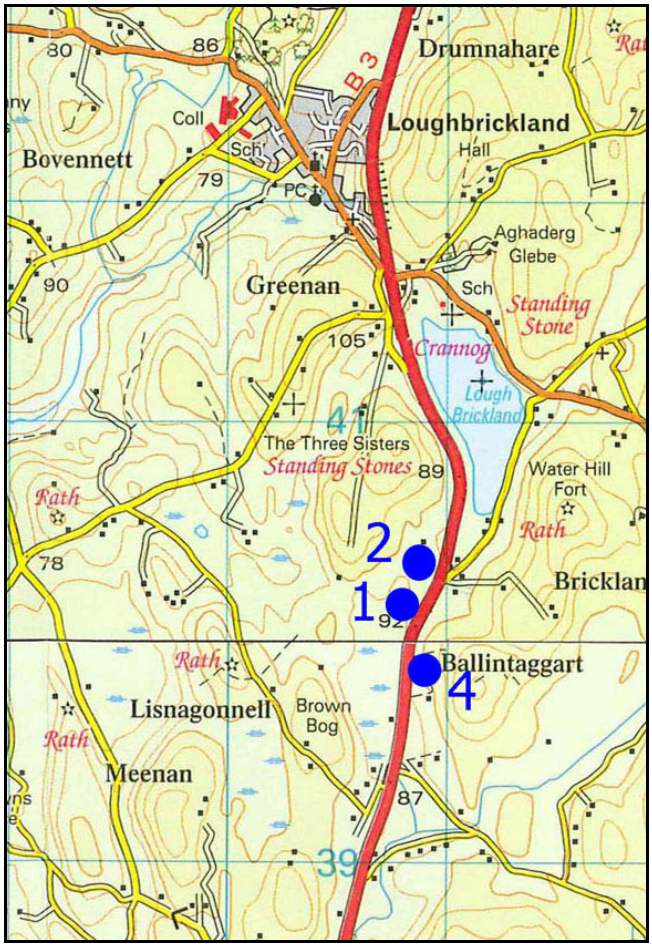
2 Ballintaggart in the Neolithic and Early Bronze Age



Neolithic Ballintaggart
Steve Cannon

2.1 Overview of the site at Ballintaggart 2

The site of Ballintaggart 2 is situated on a flat, south facing isthmus of land, known locally as an 'inch'. Hills to the north-west of this inch provide shelter from the prevailing weather. Immediately to the south-west lies Brown Bog, while to the north-east lies the nearby Lough Brickland. In the prehistoric past Brown Bog and Lough Brickland would have been more extensive, surrounding the inch of land with water and/or very boggy ground.



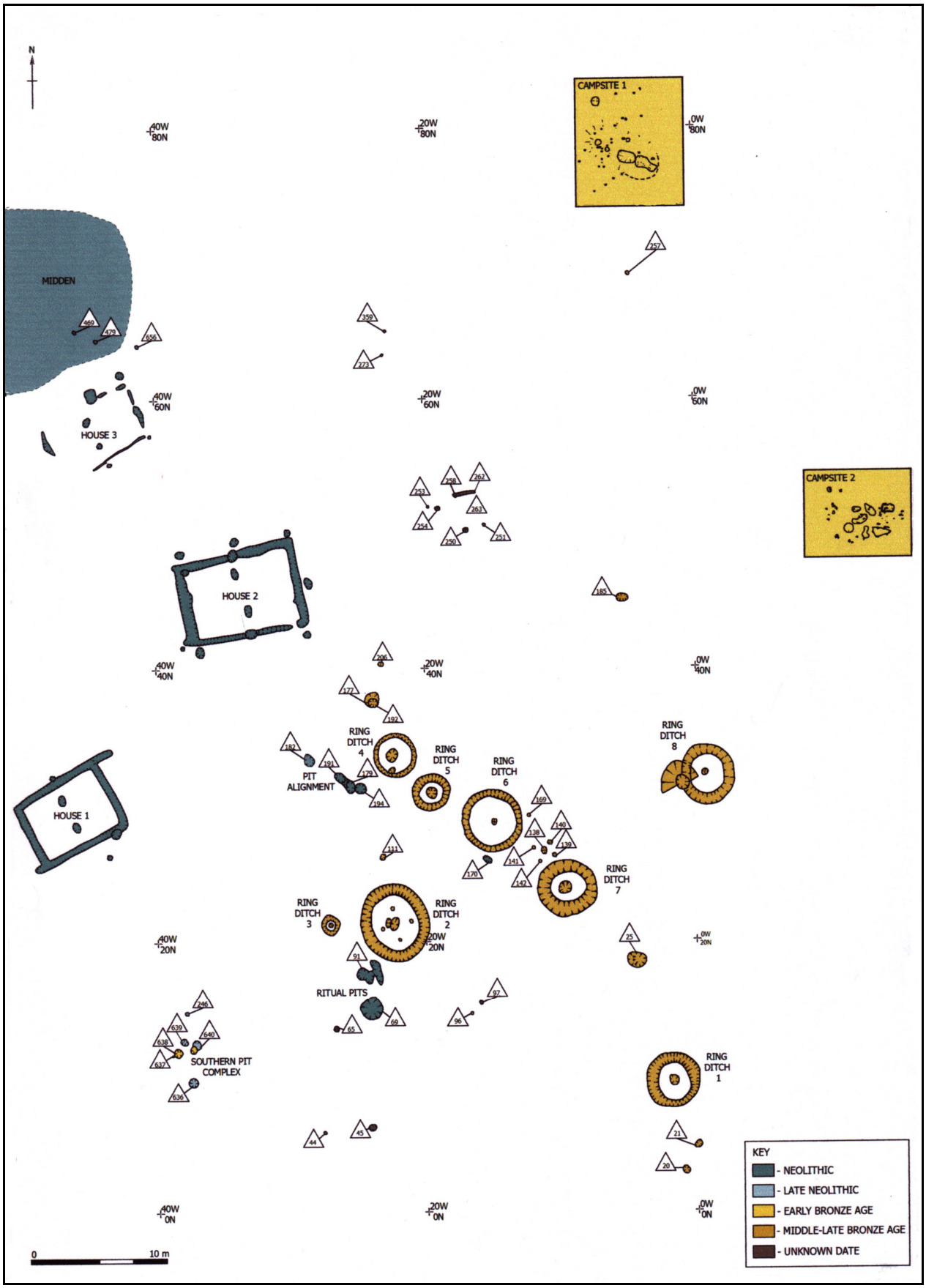
Map showing the location of Ballintaggart 2 and the locations of Lough Brickland and Brown Bog in the present day.

This site contained the largest and most complex series of archaeological remains uncovered during this phase of work on the A1. Within the site were three Early Neolithic Houses, together with many contemporary features that were dated to between 5770 BP and 2510 BP. The evidence suggests there was an extended period of settlement during the Early Neolithic at Ballintaggart.

There is some evidence that the houses may have been burned down before the site was abandoned for between 300 and 1000 years before being occupied once again in the late Neolithic and Early Bronze Ages. There is also evidence that some of the other Neolithic features survived for at least 2000 years.

In the late Neolithic, between 5000 BP and 4500 BP, four small pits seem to have been used for ritual deposits of token artefacts, including a small slate disc. Two rare temporary campsites dating to the Early Bronze Age were also discovered and these dated to between 4500 BP and 3600 BP.

From around 3600 BP to 2800 BP (Middle to Late Bronze Age), a period of some 800 years, the site was used as a very special cemetery that seems to respect some of the Neolithic features.



Plan of the completed excavations at Ballintaggart 2.

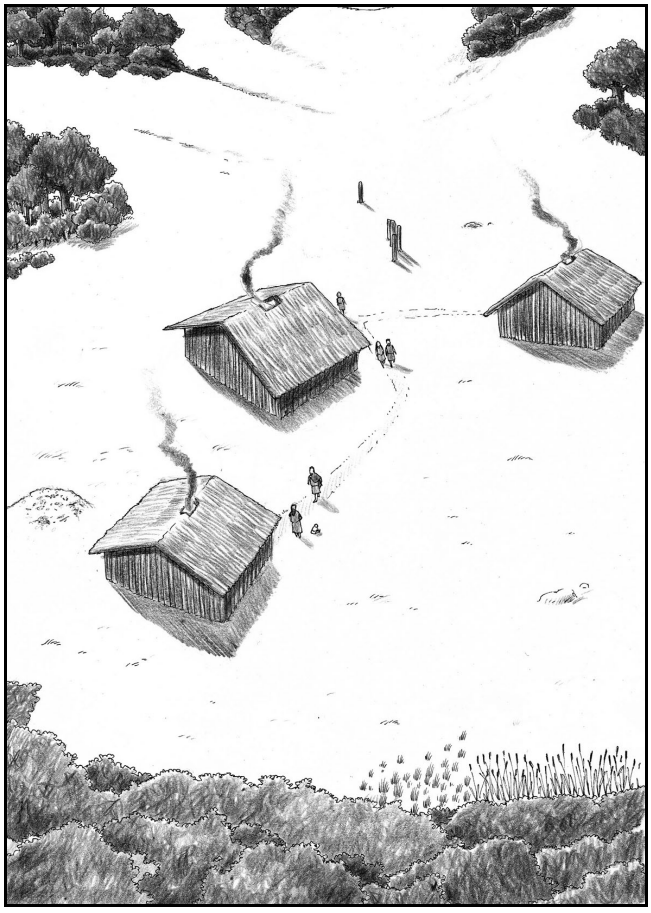
The completed excavations at Ballintaggart 2 looking to the south-east.

The completed excavations at Ballintaggart 2 looking to the north-west.

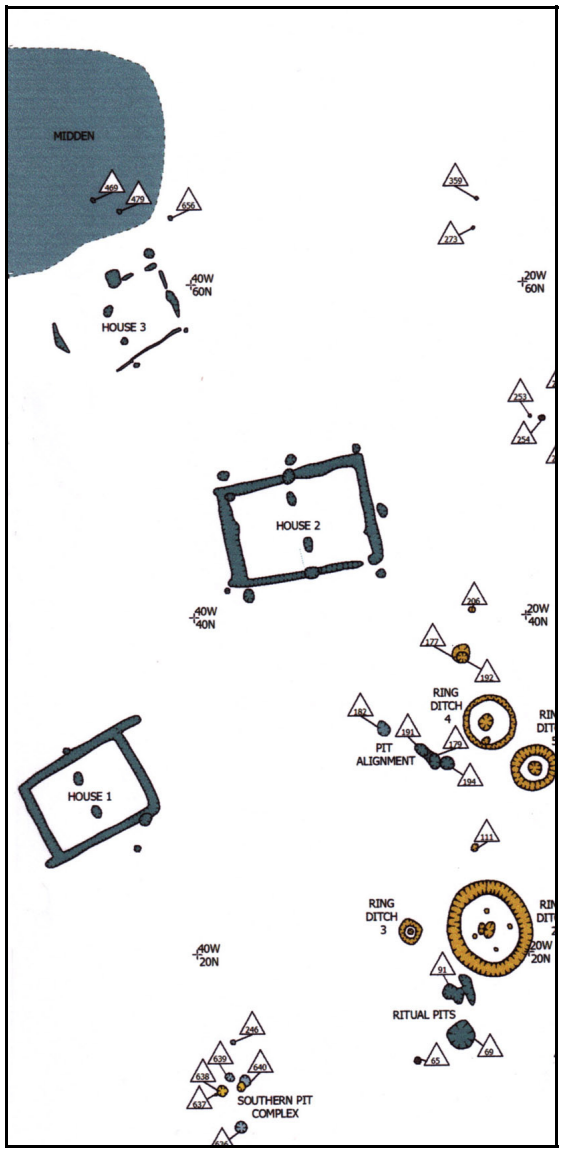
2.2 Early Neolithic Ballintaggart (6000 BP to 5500 BP)

The earliest occupation of the site was during the Early Neolithic, which in Ireland dates to around 6000 BP – 5500 BP. Before this, during the Mesolithic, the people were nomadic, moving around according to the seasons. They survived by hunting, fishing and gathering their food from the wild. At the start of the Neolithic, people began to settle down in one place, built more substantial structures, and started to farm the land, growing crops, such as wheat, oats and barley, and rearing animals such as pigs, sheep and cattle. Evidence for three houses from this period were discovered at Ballintaggart 2.

The houses were sited on a south-facing slope, sheltered from the worst of the weather by hills to the north-west. There was water and boggy land on either side of the settlement. This is a pattern seen in Neolithic settlements throughout Ireland. All the elements needed for living could be found locally – water, plants and animals, as well as other raw materials such as wood, clay, reeds and stone. The people who lived here would have been self-sufficient in everything except some of the materials for their tools, e.g. flint and porcellanite. The south-facing slope would be an ideal environment in which to grow crops. The lake and boggy land also made the area easily defensible as people and wild animals could only approach the houses along a narrow stretch of land.

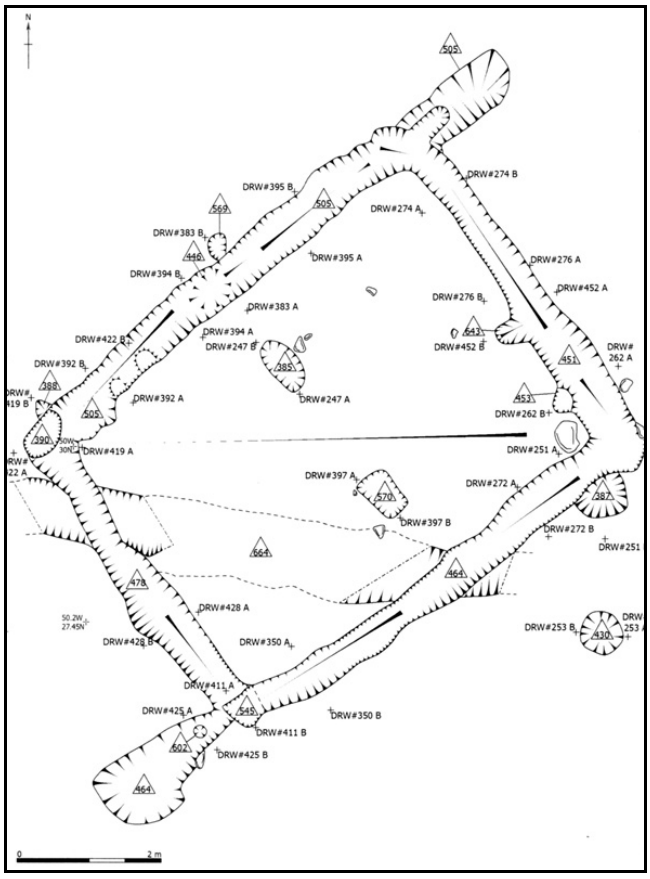


Reconstruction of the Neolithic houses at Ballintaggart.
Steve Cannon



Close up of the post-excavation site plan showing the Neolithic features in blue.

Along with the three houses, other features of a similar time period were uncovered. These included a row of pits that most probably held standing stones, a pair of large pits that may have been used for ritual deposits, possibly including human remains, and a midden.



Post-excavation plan of House 1.

Generally, Early Neolithic houses in Ireland were rectangular in shape, and so far around 60 have been excavated throughout Ireland. In the Middle and Late Neolithic (5500 BP to 4500 BP) the houses changed shape from rectangular to circular. This helps to date the settlement at Ballintaggart. Like other Early Neolithic houses, these were orientated with their entrances and longer sides facing south, most probably to allow the maximum amount of light to shine in through the doorway. Also, the Sun would have heated the longer side thus warming the interior of the house - Neolithic solar heating!

The three houses all seem to have been constructed in a similar way – the evidence for this comes from the remains of their foundations. The foundations for each house comprised of four straight 'wall slots' (trenches). Within the wall slots were several holes – these are where large timber posts would have been placed as extra support for the structure. Burnt timbers were found in the postholes of House1. This, together with the depth of the wall slot, suggests that the walls were probably made from split timbers (planks).

House 2 post-excavation showing the wall slots and post holes.

Evidence for timber walls. The stones in the bottom of this wall slot were used to hold the timbers in place.

The timbers were held in place by firmly packing stones around the timbers and then using the soil removed from the wall slot to pack the spaces between the stones.

A substantially built Neolithic house may have lasted some 15 to 25 years, which is roughly the equivalent of a single prehistoric generation. Less substantial buildings may have lasted just 5 years before the timbers rotted and the house was beyond repair. There

is evidence of repair in one of the houses discovered at Ballintaggart.

Found within the wall slots was a significant quantity of clay - it is likely that the gaps between the upright timbers were packed with a clay daub to help to weatherproof the building. A binding agent, such as straw, would need to be mixed with the clay to make sure it held together when it had dried. After heavy rain there would be a need for repair as the clay was washed away.

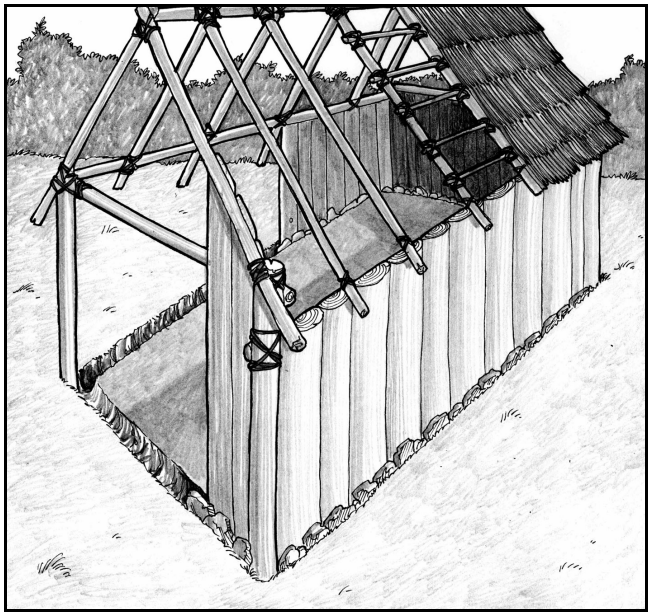


Illustration showing how a Neolithic house was constructed.
Steve Cannon

There were postholes on the outside of the wall slots. They probably held posts that would have braced the walls or the roof, or perhaps they were repairs done to shore up the weakening structure.

Postholes were also found inside each house. These may have served two functions – one being to support the roof, which was most likely A-frame in structure, the other could be to divide the house in two by supporting a partition wall.

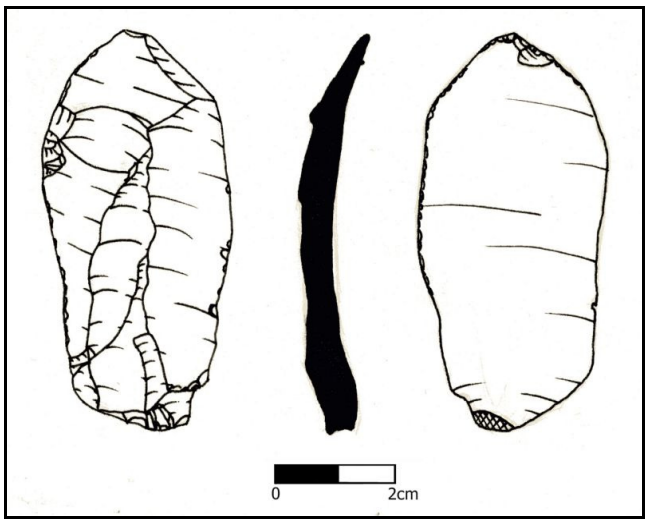
None of the houses had any evidence of a hearth. This doesn't mean that the houses didn't have them; rather, ploughing destroyed all the evidence for them.

The doorways into the houses seem to have been in the longer, south-facing wall of each house. The lack of stone packing inside the shallower wall slots at these points suggests a doorway. No posts to support a door were noted, but it is entirely possible that the wall post itself could have supported any door that there may have been - the timbers were certainly big enough for this. Then again, the door may have been a simple hung 'curtain' of fabric, leather or fur.

Neolithic potsherds.

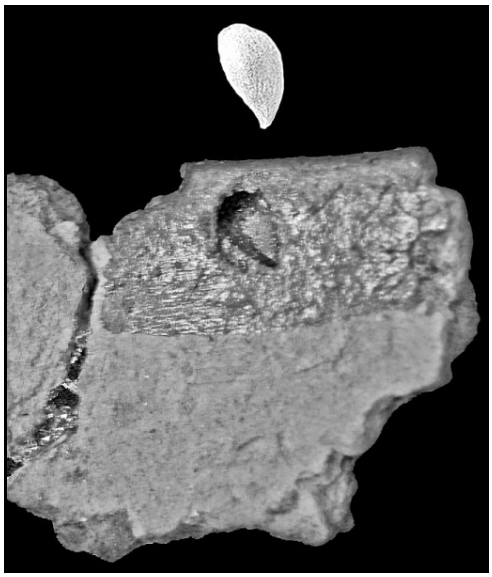
Broken leaf-shaped arrow head found in a posthole of House 2.

The upper layers of the material filling the wall slots contained items that were probably accumulated debris from the day-to-day activities of the people living in the house, perhaps as the result of over zealous house cleaning and floor brushing.



Broken leaf-shaped arrow head found in a posthole of House 2.

Some artefacts, however, were found placed in the bottom of the wall slot; these had been placed there before the trench was filled in. These included a broken axe and a flint knife, suggesting that these items were placed there deliberately, perhaps fulfilling some kind of ritual function we can only guess at today. Maybe it was to bring luck to the inhabitants, or to protect the home, or to ensure health, happiness and plenty, or perhaps it was to pay rent to the Earth for the use of the land for buildings and farming.



Pot sherd with an impression of an apple pip in it.

House 1

The long walls of House 1 were in a north-east to south-west direction. The outer dimensions of the house were 7.2m x 5.7m, giving an internal floor space of 30m^2. Today, the average ground-floor space in a new house in Ireland is almost three times as much at approximately 85 m^2.

Radiocarbon dating for House 1 resulted in dates of 5170 to 5620 BP and 5590 to 5530 BP, which place it very firmly at the end of the Early Neolithic.

The porcellanite axe found at the bottom of the eastern wall slot.

House 1 had some further slot trenches outside the main wall slots. These have been referred to as extensions, but it is not at all clear what purpose they served. They may have been for some additional structures attached to the house - perhaps as a windbreak for the corners of the house, or maybe they were part of a lean-to style of building.

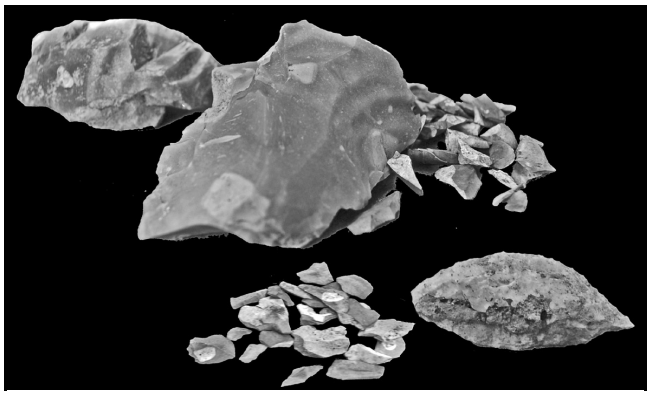
House 1 being excavated.

There was also evidence that at least part of House 1 had burnt down. There were *in situ* burnt wall timbers and posts together with a large amount of staining from charcoal in the fill of the wall slot. The north-east wall slot had the greatest amount of charcoal in the material filling it, which suggests that more of this wall must have been burnt than in any of the other slots. What this doesn't tell us, however, is how the fire started. Was it an accident? Was it a deliberate act by the inhabitants? Or was it caused by the action of others not from the settlement? We shall never know.

A broken porcellanite axe was found at the bottom of the eastern wall slot. Maybe this was deliberately placed there before the wall slot was filled in – a so-called 'ritual deposit'. Or, perhaps, it was just accidentally dropped or just disposed of in the nearest hole when it broke.

Also found in the wall slots were flakes and pieces (debitage) of flint from knapping, a broken flint blade, the broken end of a flint axe, and sandstone hammer stone.

Sandstone hammer stone found in House 1



Evidence for knapping taking place on site.
The large pieces of flint are the flint cores. Debitage is the smaller pieces. The arrow is the finished flint item.

Knapping is the process by which flint is struck and shaped into useful items. The knapper would use a hammer stone to break the flint nodule into workable sized pieces and shape the piece of flint into a core ready for use. A wooden hammer and a punch of bone or stone would be used to strike blades from the edge of the core. A bone or wood chisel was then used to trim the edge of the flake and make the finished implement.

One hundred and eighteen sherds of pottery were recovered from 34 different bowls. These bowls were typical of the Western Neolithic tradition, which dates from 4100 BP to 3650 BP.

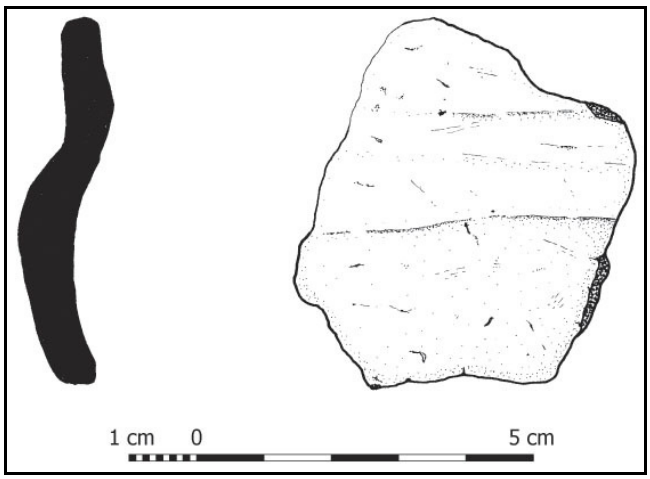
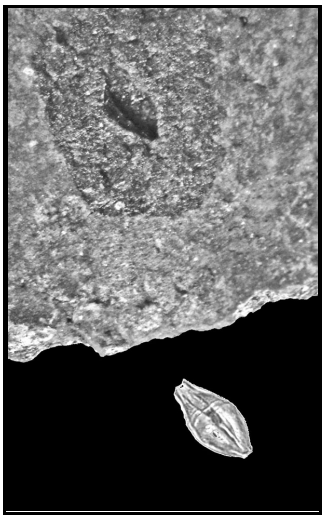


Illustration of a Neolithic pot sherd.
Stephanie Godden

Altogether, there were sherds from around 120 different vessels from the houses and midden. That's a lot of pots for houses that have a relatively short lifetime (between 5 and 15 years). This could be because the pots were relatively brittle, broke easily and were regularly remade. Or, it could mean that the residents had food stored in a lot of pots.

An oat grain was found within the south-west wall slot. An impression from a single grain of wheat was found on one of the pottery sherds. This is our only evidence that the inhabitants of House 1 were growing crops. Hazelnut shells were also found in the wall slots, perhaps swept here like the oat grain by our over zealous house owner, and this suggests that they continued to hunt and gather foods from the local area to supplement their diet alongside farming.



Pot sherd with an impression of a wheat grain.

Only two fragments of bone were found in House 1. One was the femoral head (top of a thigh bone) from a pig. There is no way of knowing if this was a wild pig or a domesticated pig, but it does tell us the inhabitants consumed pigs. The other piece of bone was part of a cranial vault (top of the skull). The species of animal that it came from could not be determined as pig and human cranial vaults are difficult to distinguish between, though the osteoarchaeologist who examined it thought it might be human. This fragment of cranial vault was found in the fill of one of the earliest features of the house and could be part of a ritual deposit, particularly if it was human. Perhaps the lack of bone suggests that the houses were kept very clean, or that very little meat was eaten.

House 2

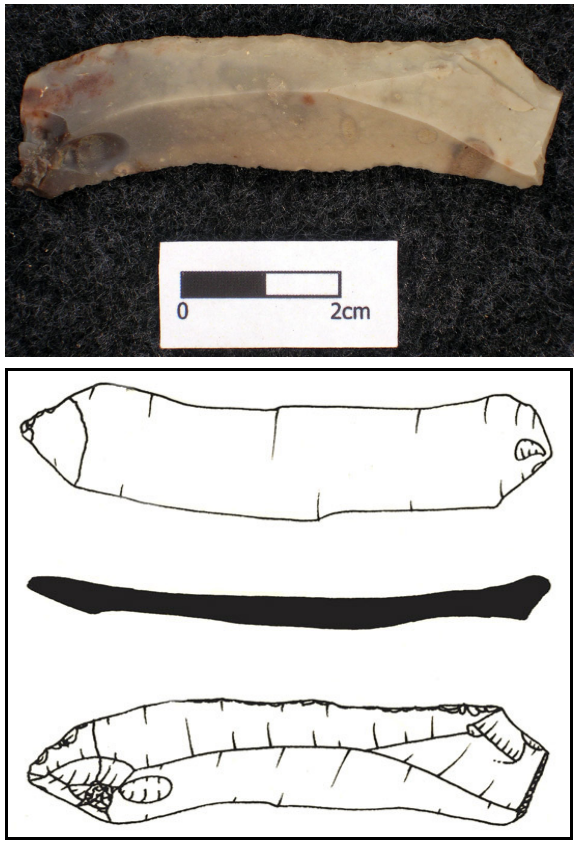
This was the longest of the three houses; the long walls were orientated east to west. It lay 10m north-east of House 1 and was in the middle of the three houses. Externally, it measured 9.2m x 6.4m with an internal floor space of 34m^2.

House 2 post-excavation.

Radiocarbon dating for House 2 gave a date of 5770 BP to 5510 BP. This date overlaps with the dates for House 1. Taking this with the fact that House 2 respects (doesn't disturb or destroy) House 1 means they were likely to have been contemporary with each other.

It did not appear to have the extensions that House 1 had, however, it had postholes outside the corners of the building and it seems that these may have been there to support an overhanging roof or perhaps to help brace the gable-end.
House 2 did not have any sign of the walls ever being burnt, though there was evidence that some of the postholes were dug after the walls had been built. This suggests that there was later replacement and/or repair of the house.
The artefacts recovered included an unused flint blade, giving yet more evidence for deliberate ritual deposits. All the artefacts found were consistent with an Early Neolithic date.

Cores (pieces of flint or quartz that flakes and tools are knapped from), debitage (waste) and flakes of flint and quartz were recovered from House 2. This suggests that knapping took place close to, or even inside, this house. Also found were three retouched flakes, two flint knives, a scraper, a leaf-shaped arrowhead, and four polishing stones. This reinforces the suggestion that flint working took place on site.



Flint blade found in House 2.
Illustration by Stephanie Godden

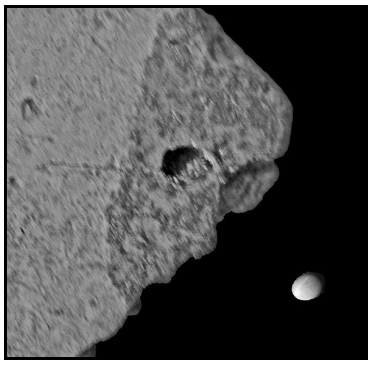
One of these polishing stones was half-coated with a shiny, black residue that was similar to the residue found on an arrowhead from a pit to the south of the site. This residue was identified as birch tar. Birch tar was used as a kind of glue in hafting (attaching to sticks) arrowheads, spearheads, and such like. However, the black residue on the stone was burnished, and it seems unlikely that this stone was ever hafted. The burnished surface could have resulted from the stone's use – maybe it was used in making the birch tar. Maybe the stone was used to spread the birch tar on clothing to waterproof it, or to seal the lap joints on a boat. Perhaps it was just a simple decorative item.

Archaeologists standing in House 2.

Over 170 sherds of pottery were recovered from House 2. These came from 37 different bowls of the Western Neolithic style.

Eight bone fragments were found that came from domesticated or wild pig. These were five vertebral bones, one rib, one scapula, and a shaft of a femur.

Three pot sherds had impressions of seeds. Two of these were apple pips. The other was a small fruit stone, possibly that of the blackthorn or sloe and suggests that the people living here gathered and ate the wild fruit including sloes and crab apples that grew nearby, supplementing their otherwise meagre diet.



Pot sherd with an impression of a sloe stone

Plano-convex knife found in House 2.

House 3

House 3 lay 10m to the north-east of House 2 and much of its evidence had been destroyed by ploughing and levelling of the land, and by a modern field drain in the south-west corner. The house had the same orientation as House 1 – north-east to south-west. Externally it measured 8.5m x 5.9m, giving a floor area of 36.5m^2.

Not enough charcoal was recovered from House 3 for radiocarbon dating. However, based on the type of pottery found, the similarity of the house style to the other two and the fact that it respected the others it is most likely to have been contemporary with them.

The features that did survive suggested that this house was very similar to the other two, but perhaps more similar to House 2 as it didn't show the corner extensions seen in House 1. It did have the external supporting posts at the corners as in House 2.

Fourteen sherds of pottery were found from five vessels. Again, these vessels were of the Western Neolithic tradition.

House 3 is in the foreground, House 2 in the background.

Midden

A large spread of material, overlying a posthole and a pit, was found immediately to the north of House 3. It is likely that this was a **midden** (waste dump) for material from the occupation of the houses. This rubbish would originally have been heaped up, but the effects of gravity, water running off the hills and later agricultural activity flattened the heaps and spread the material out over a wider area.

Neolithic pot sherds from the midden

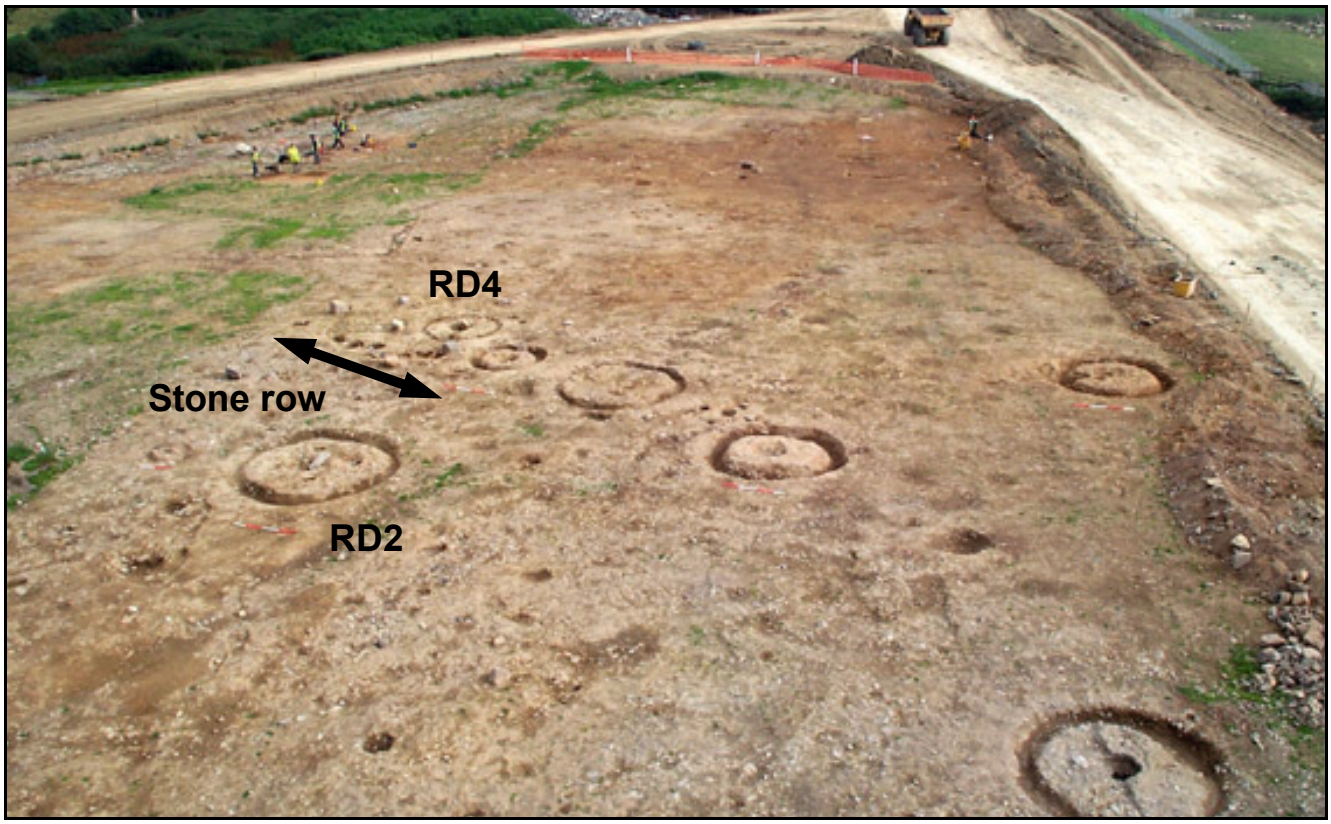
The midden yielded 381 sherds of pottery that came from 51 different vessels. One of the sherds had an apple pip impression in it, another had a charred wheat caryopsis (whole kernel) adhered to it - more evidence of the diet of these people. All of the sherds belonged to pots from the Western Neolithic tradition, the same as the sherds found in the houses. This, together with the closeness of the midden to the houses, points to the midden being used by the occupants of the houses. No evidence was found for a kiln or fires in this area, so the pots weren't made at this part of the excavated site.

Also found in the midden were fifty-two lithics (stone artefacts). These included flint scrapers, quartz and flint cores, debitage, flakes and two blades - more evidence that the people were flint knapping within the area of the excavated site.

Stone Row

A series of four pits were found some 10m to the south of House 2. These were aligned in a west-north-west to east-south-east direction. No large stones or obvious post pipes (the space left where a post had been) were found in the pits. However, the pointed depression in one of the pits is evidence that a large stone was situated there. If this was the case, then it is likely that the other pits also contained stones. This stone row would have been visible from the doorways of each of the three houses, suggesting that it was important to the people who lived here in the Neolithic.

The later Bronze Age cemetery respected this pit alignment, with some barrows being placed on a line parallel to it. This suggests that the stones were still visible features in the Bronze Age - nearly 2000 years after the Neolithic houses were in use - and still revered, or at least respected, as being of spiritual value. Wooden posts would have long rotted away during this time, but stones would have remained. So, the Bronze Age features provide some indirect evidence for the presence of stones in the aligned pits.



Labelled photograph of the site, looking northwards and showing the location and alignment of the stone row.

There are other stone monuments in the area, e.g. The Three Sisters at Greenan and the Drumnahare Standing Stone. By comparing the pits with these existing monuments it is likely that the stones forming the row were between 0.5m and 2m in height.

A number of stone rows appear to be aligned towards the place where the Sun, Moon or a particularly bright star rises or sets on a significant date in the year. However, for most stone rows there appears to be no such alignment. These rows may have formed avenues or processional ways to the monuments or geographical places they were aligned to. Or, they were not aligned to anything in particular.

The stone row excavated at Ballintaggart was aligned at an angle of 299º. This does not seem to point to any specific astronomical event or geographical feature. It is interesting to note, however, that this alignment is almost identical to that of The Three Sisters, which, at less than 1km away, are the nearest stone monuments to Ballintaggart 2. It may be that this alignment was important to the Neolithic people, an importance that we are unaware of today. Perhaps the apparent void in space was of spiritual significance to them.

Ritual Pits

Two pits were found 20m to the south-east of House 1. They contained a large amount of artefacts. There were 146 sherds of Neolithic pottery that came from 13 plain bowls and 13 carinated bowls, burnt hazelnut shells (more evidence for the diet of these people), fragments of unidentifiable bone, a bipolar flint core, two broken flint flakes, a flint fragment, and two worked flint arrowheads.

Arrowhead with black, birch tar remaining on it.

All of these artefacts were of a similar type to those found in the houses and midden, suggesting that the pits were in use at the same time.

One of the arrowheads had a small amount of black resin on its butt end. This resin was similar to that found on the polishing stone from House 2 and it was also identified as birch tar. The tar was most likely used to securely attach the arrowhead to the haft before binding it in place with twine made from something like sinew. The resin would also have been used to glue or seal the twine in place. Finding resin like this is very rare – it has only been found at a small number of other Neolithic sites in Ireland.

The large number of artefacts in the pits suggests that these were deliberate deposits. The two arrowheads were unbroken so it is not likely that the pits were used for disposing of rubbish. Indeed, making arrowheads is a long and involved process and it is unlikely that these items would have been thrown away lightly. It is much more likely that the arrowheads had a significant symbolic meaning, as well as their practical function, and this strongly suggests the deposits being ritual in nature. Of course, the arrowheads could have been embedded in a piece of rotten or uncooked meat that was disposed of in the pits, or in a piece of meat deposited for a ritual reason, perhaps as a gift to the 'gods' in thanks for a good hunt.

The unidentifiable burnt bone could possibly be human rather than animal, and may have been a cremation, or cremations, ritually deposited in the pits along with the other artefacts. Alternatively, the bone could have been of animal origin and it could be the remains of ritualised feasting.

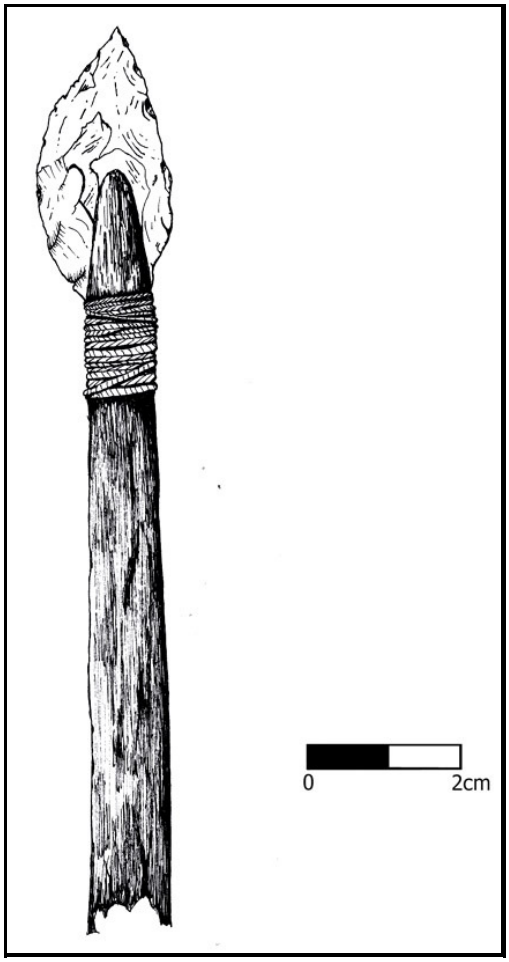


Illustration the arrowhead may have been hafted.
Stephanie Godden

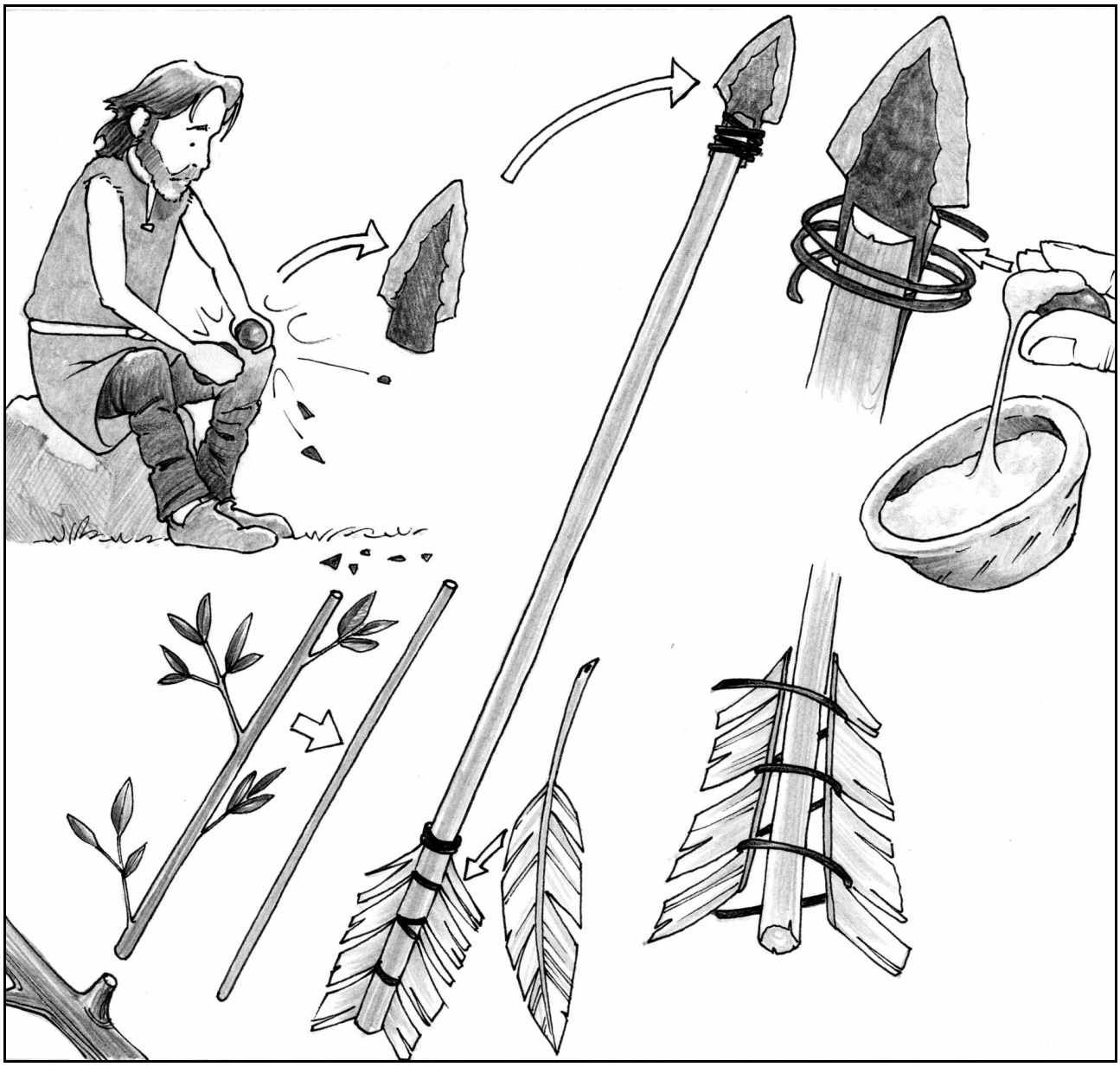


Illustration showing how to make a flint arrowhead and haft it.
Steve Cannon

2.3 Conclusions about Neolithic Ballintaggart

The Early Neolithic settlement showed evidence of both domestic (the houses and midden) and ritual activity (the stone row and the ritual pits). The stone row and ritual pits were close to the houses and this suggests that there was either a conscious intent to incorporate the ritual and domestic into one, or that for the Neolithic people there was an element of ritual in all of their activities.

There are approximately 60 rectangular Neolithic buildings known throughout Ireland. It would be wrong to suggest that they were just used for domestic activities, such as holding council, exchanging goods or storing and redistributing domesticated and wild food resources. It is likely that they were used for ritual activities and celebratory feasts or laying out of the dead.

This is not so different from us today - we don't separate the purely ritual from the mundanely domestic. Examples of this are that we hold celebrations at regular times of the year, we display bodies at wakes, religious symbols and pictures adorn the walls of our modern homes, meetings and discussions are held within the family and with outsiders, and the religious carry their beliefs into all that they do. Our modern houses are used in many different ways, and this is most probably true for the people of the Neolithic too.

Evidence for the diet of the Neolithic people was also found. They ate farmed produce such as wheat and oats, and most probably barley though no evidence was found during the excavations. The farmed foods were supplemented by food gathered in the wild such as crab apples, hazelnuts and sloes. They would have gathered other foodstuffs available in season such as bird eggs, wild strawberries, blackberries, elderberries, mushrooms, acorns, and other nuts. Perhaps they even gathered honey from bee's nests. The meat in their diet came, at least partly, from either wild or domesticated pigs. They may have farmed cattle, sheep and goats. They would have hunted birds and deer and the lake would have been an abundant source of fish and fowl.

They made their pottery locally. The remains of more than 120 pots were found in the houses and midden. This is a lot of pots, especially bearing in mind that the life-span of the houses may have only been 15 years. It could be that the pots were fragile and easily broken, or that a lot of food was stored in pots.

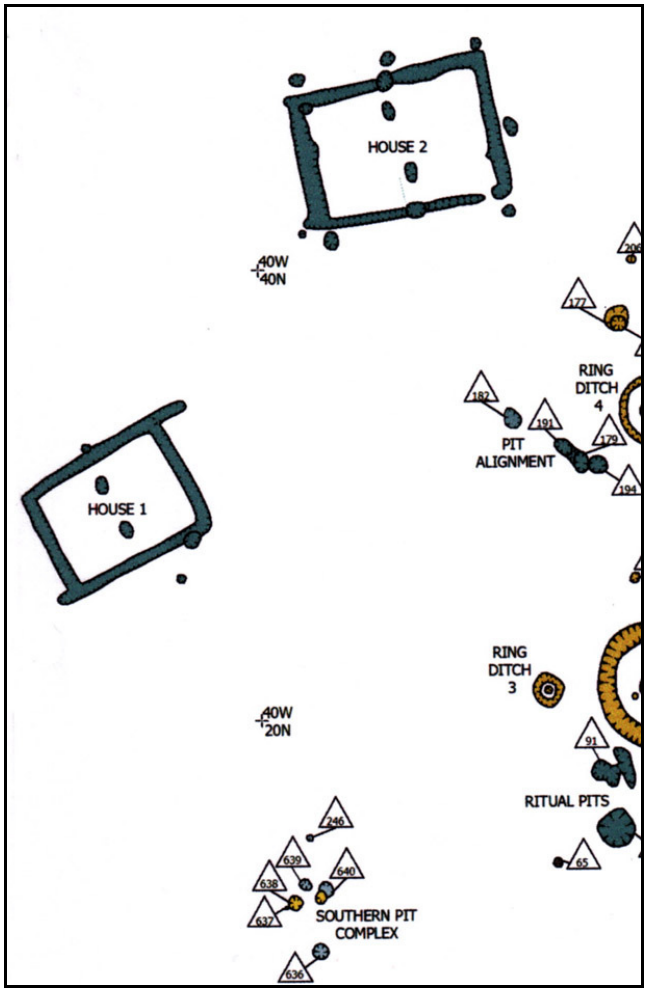
Flint and porcellanite, however, are not found locally to Ballintaggart. The closest sources of flint are around the north Antrim coast, around 50 miles away from Ballintaggart. Porcellanite is not a very common rock with just two sources known in Ireland - the north Antrim coast and Rathlin Island which is 75 miles and a boat trip away - over a week's travel given good weather and travel conditions.

If the people living at Ballintaggart undertook the journey themselves, then they were unlikely to do so when they'd all be needed to sow, tend and reap the crops on their farm or gather nature's bounty. The travel would almost certainly be undertaken in late autumn after the harvest was over, or in early spring once the crops were sown and growing. Perhaps, though, they didn't travel these far distances themselves. Maybe itinerant traders or a network of trade between nearby communities brought the needed resources to the people, or maybe there was a combination of both activities.

Tools made from porcellanite from Rathlin Island and Cushendall have been found as far away as southern England and southern France, which is more evidence for long distance trade between the Neolithic peoples, and therefore the communication and movement of people, goods and ideas over long distances.

2.4 Late Neolithic and Early Bronze Age Ballintaggart

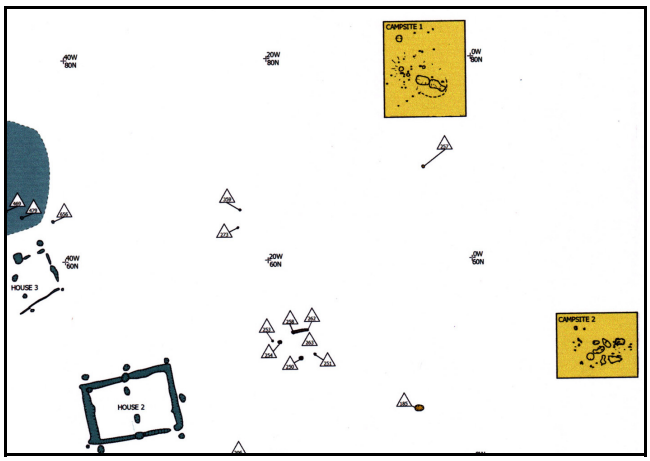
One small area of later Neolithic activity and three areas of Early Bronze Age activity were discovered at Ballintaggart 2.



Close-up of the post-excavation site plan showing the location of the southern pit complex.

The southern pit complex comprised of six pits and one stakehole. These were located in the south-west corner of the site, some 15m south-east of the Neolithic houses. Four of these pits dated to the Late Neolithic (5000 BP - 5500 BP). The other two pits and the stakehole were dated to the Early Bronze Age (4500 BP - 3600 BP).

Two Bronze Age temporary campsites were also discovered at Ballintaggart. The temporary nature of such campsites means that they leave few traces for archaeologists to find so they are rarely found. These are two of the first such campsites to have been discovered in Northern Ireland.



Close up of the post-excavation site plan showing the location of the Late Bronze Age temporary campsites.

During this period of time there seemed to be a change in society. In the Neolithic, the people lived in houses close to their crops and would gather nearby resources. Towards the end of the Neolithic warfare seems to become more frequent perhaps battles over resources and security were due to pressure from the increasing population. During the Early Bronze Age people continued to live close to their crops, but some groups seemed to travel around the countryside to gather and use the resources available in different places living in temporary campsites as they did so, such as the one found at Ballintaggart 2. A new class of people seemed to emerge at this time too – a warrior elite.

Southern Pit Complex

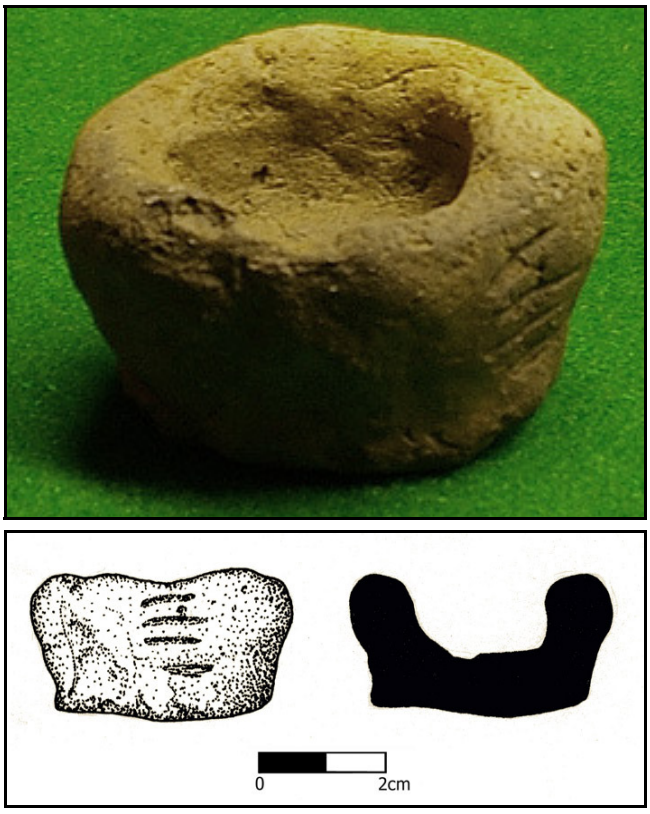
The four late Neolithic pits form a discrete group of their own; they don't seem to be directly related to the houses, stone row or ritual pits.

These pits appear to have been used for the ritual deposit of token artefacts. Three of the pits contained sherds of late Neolithic bowls or carinated bowls. One of the other pits contained an almost circular slate disc 25mm long, 23.5mm wide and 6.5mm thick. There were signs of grinding on the disc's face and edges. The slate was from a local source so the disc was probably made on site or, at least, nearby.

The curious slate disc

The slate disc may have been a rough out for a bead or a gaming counter. A few other Neolithic sites have provided rough-outs of beads, but these were larger and not as well finished as the disc found at Ballintaggart. This suggests another, unknown use, maybe a kind of 'pass' token for long distance travellers.

The two remaining pits and the stakehole either contained or were closely associated with evidence giving an Early Bronze Age date. Amongst the Early Bronze Age pottery recovered was a miniature cup or bowl. What it was used for is a mystery, though several suggestions include a child's toy, an apprentice piece, a sample made to test the suitability of the clay for potting, a crucible, or a burner for narcotics or incense.



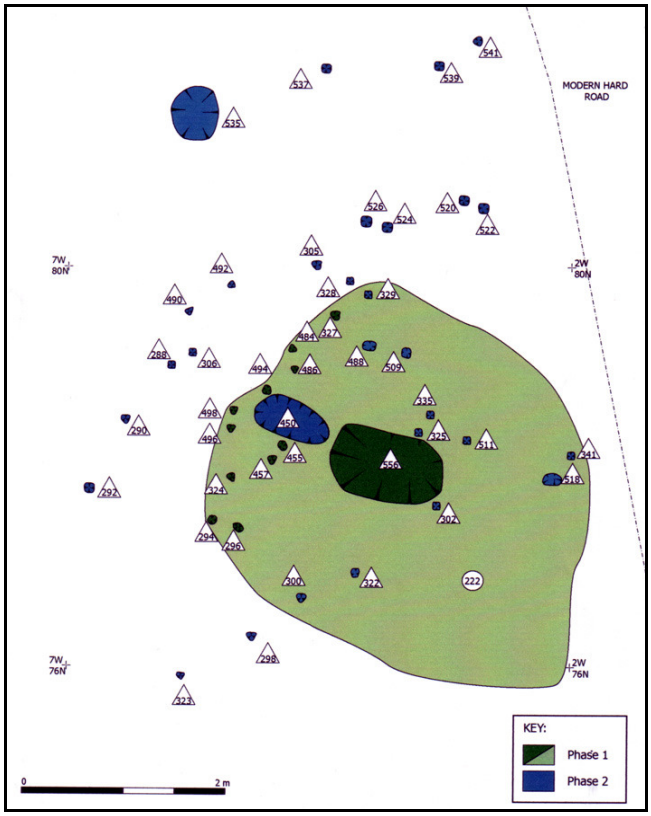
The miniature cup with an illustration showing the fingernail marks.
Stephanie Godden

The miniature cup was coarsely made from a single piece of clay and it was pinched into shape. The surface still has traces of slip on it as well as a number of shallow fingernail impressions on the outside surface on almost opposite sides of the vessel. These impressions appear to be deliberately made - they could be a maker's mark.

Such miniature cups are not uncommon in the Bronze Age; however, this example is very crude in comparison and much smaller than others found elsewhere.

Early Bronze Age Campsite 1

This campsite was situated some 40m north-east of the Neolithic houses. It was occupied during two distinct phases.



Post-excavation plan of Campsite 1.

The first phase consisted of a simple windbreak of 11 stakeholes protecting a small pit.

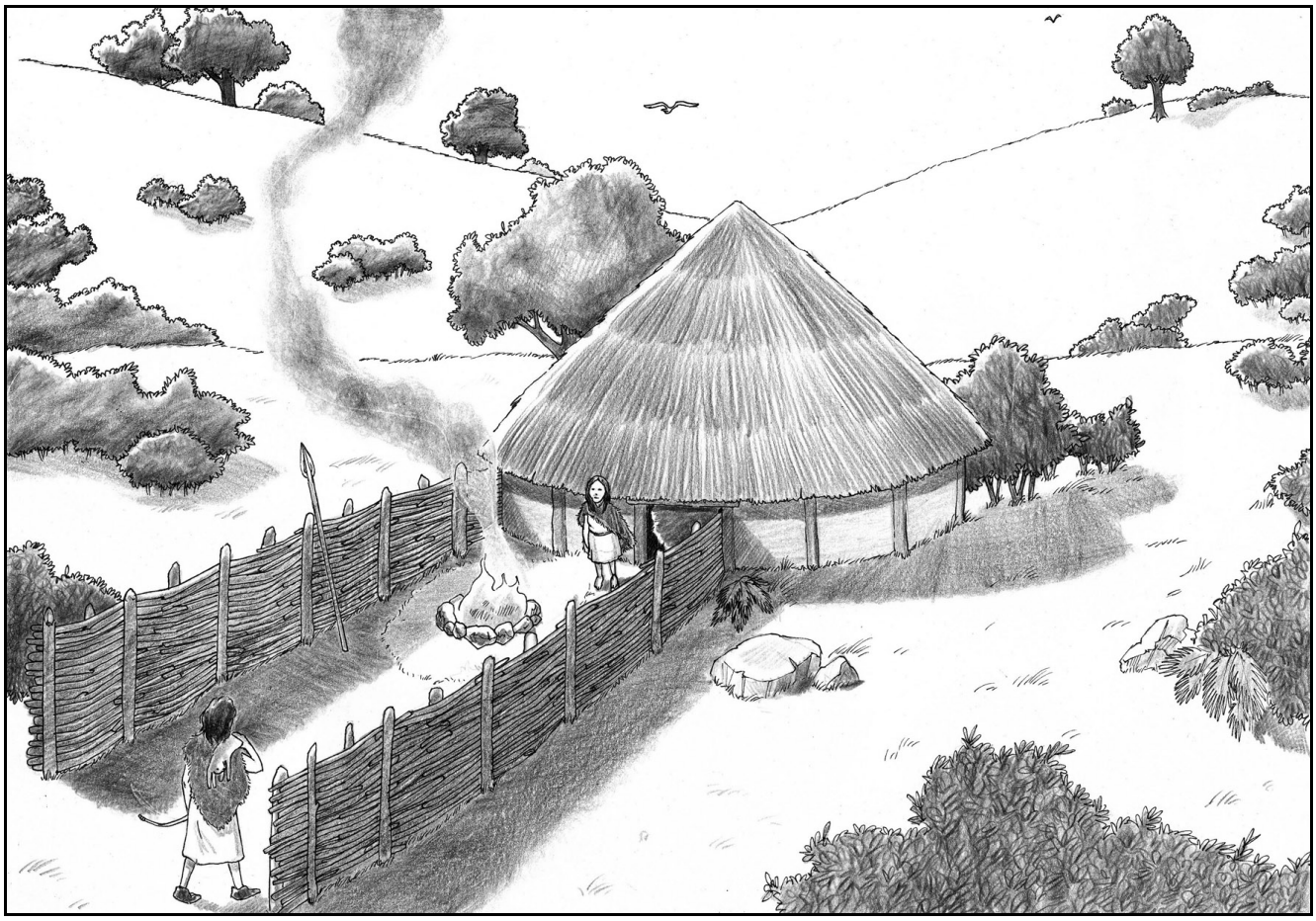
The second phase had a small circular hut with a rectangular forecourt to the west. These features cut through the spread of evidence from the first phase of occupation. The remaining stakeholes suggest that the hut had a diameter of around 2.6m giving it a floor space of approximately 16.7m^2, which is consistent with other Bronze Age structures of a similar date. A hearth was found in the centre of the forecourt, and the forecourt walls were most probably built to shelter the hearth. The circular hut was too small to safely light a fire inside it.

A line of three stakeholes and a pit were unearthed 1m to the north of the small circular hut and forecourt. The stakeholes ran parallel to these features and so it is likely that they were contemporary. A semi-circle of paired stakeholes marked out the position, shape and size of the hut; unfortunately a modern road had destroyed the eastern side. It is likely that these stakeholes were part of a wattle built circular building rather than a tepee-style hut. It was most probably built in the traditional style of woven upright wicker walls with a roof covered by thatch or grass. The stakeholes would have supported both the walls and the roof. The interwoven supple hazel or willow rods would have given strength to the structure.

Running south-west from the western edge of the hut were two, 4m long, parallel lines of stakeholes. These stakeholes were 2.3m apart at the hut, narrowing slightly to 2m at the end of their runs. These stakeholes would have supported wattle walls. As only single stakeholes were used, the structure here would have been less stable and so was probably unroofed. There was no evidence of stakeholes at the end of these walls so the forecourt was open.

A shallow pit and an alignment of three stakeholes were revealed approximately 1m to the north of the hut and enclosure. These may have supported another wattle wall that acted as an extra windbreak for the circular hut. They also may have been part of a bigger structure, of which no other evidence has survived. There was no clear evidence to suggest what the pit was used for.

The only evidence for dating Campsite 1 came from the artefacts. Forty-seven sherds of the 'Food Vessel' type of pottery were recovered from this area. This Food Vessel type of pottery is known in two forms – vase and bowl. Both seem to have developed from the 'Beaker' vessels of the first Bronze Age people in Ireland. The transition from Beaker to Food Vessel took place around 4000 BP, and Food Vessels continued to be used up to 3400 BP. These types of vessel appear most often as grave goods. However, very few habitation sites have been discovered compared to the number of burial sites and so the interpretation



Reconstruction of Campsite 1. – *Steve Cannon*

of these vessels as just grave goods is biased – Food Vessels were as much a domestic item as a ritual one.

There are only a handful of permanent or semi-permanent settlements found in Ireland where Food Vessels have been recorded, and of these only two had identifiable buildings associated with them. For the remainder, either no evidence of structures was discovered, or the pits and stakeholes that were revealed could not be resolved into any particular structure.

The discovery of Food Vessel pottery sherds mean that Campsite 1 must be dated after 4000 BP. However, by the start of the middle Bronze Age (2600 BP) there is clear evidence for systematic house building, strongly suggesting that the campsite dates to between 4000 BP and 2600 BP.

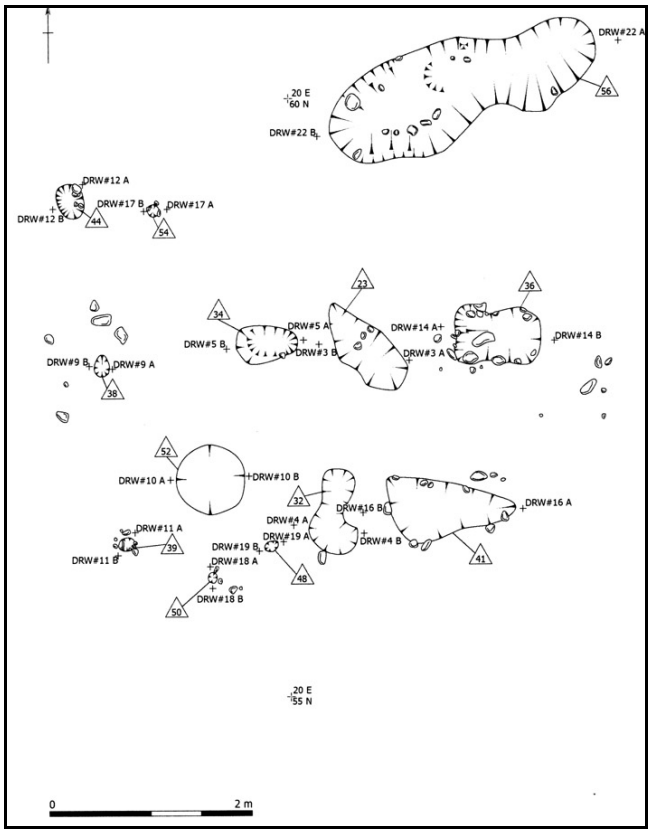
The people who built Campsite 1 may have lived there at the same time, or at least just a few seasons apart, as the people who built Campsite 2. They may also have made the ritual deposits in the Southern Pit Complex. However, there is no clear relationship between these sets of features so we cannot be sure that this was the case – the campsites may be unrelated with a gap of either a few seasons or even centuries between their constructions.

Bipolar flint cores found at Campsite 1.

Early Bronze Age Campsite 2

A second Early Bronze Age campsite was discovered 50m to the north-east of House 2. There were 12 related features in this campsite; however, they could not be resolved into an identifiable structure, a common problem with sites of Early Bronze Age settlements.

The Bronze Age pottery was mainly of the Vase Urn type, but there were also some Food Vessel types. Vase Urns and Food Vessels appear in the same period (4000 BP to 3400 BP) and are often found on the same sites. Only one site in Ireland has previously identified Vase Urn pottery before the discoveries at Ballintaggart – this was the Bronze Age settlement at Enagh, Co. Londonderry.



Post-excavation site plan of Campsite 2.

Several of the vase urns had burnt residues inside them – evidence that they were used to either cook or store food (with the vessels later being burned to produce the charred residues). This suggests that the people living at this campsite were occupied with domestic rather than ritual activities. It is possible that people could have occupied the houses for festivals or ceremonies and the vessels were used to cook the food for these events. It is possible to identify some related structural features in this campsite, and that, along with the number of pits, suggests that people lived and were active here for some time. However, it is entirely possible that the people who lived here were involved in the construction of one or more of the ring barrows on the site; RD 3 was radiocarbon dated to between 3620 BP and 3390 BP, for instance.

The date for RD 3 also overlaps with the date for the Southern Pit Complex; human activity on the site did not end with the Early Neolithic houses, but continued intermittently through the Late Neolithic and into the Early Bronze Age before reoccurring in the Middle to late Bronze Age. This is hardly surprising as the site is in an easily defended position between a lake and a lake/bog rich in natural resources - fish, birds, clay for pottery, wood and plant material. Rather than living on the isthmus as people did in the Early Neolithic, they most probably visited the area to make use of the resources that were available at different times of the year. This is a practice typical of a subsistence economy. Or perhaps they were visiting as part of funerary rites and rituals now lost to us.

3 Bronze Age Barrow Cemeteries

Excavated ring barrow cemetery at Ballintaggart.

Excavated ring barrow cemetery at Derrycraw.

3.1 Ballintaggart Barrow Cemetery

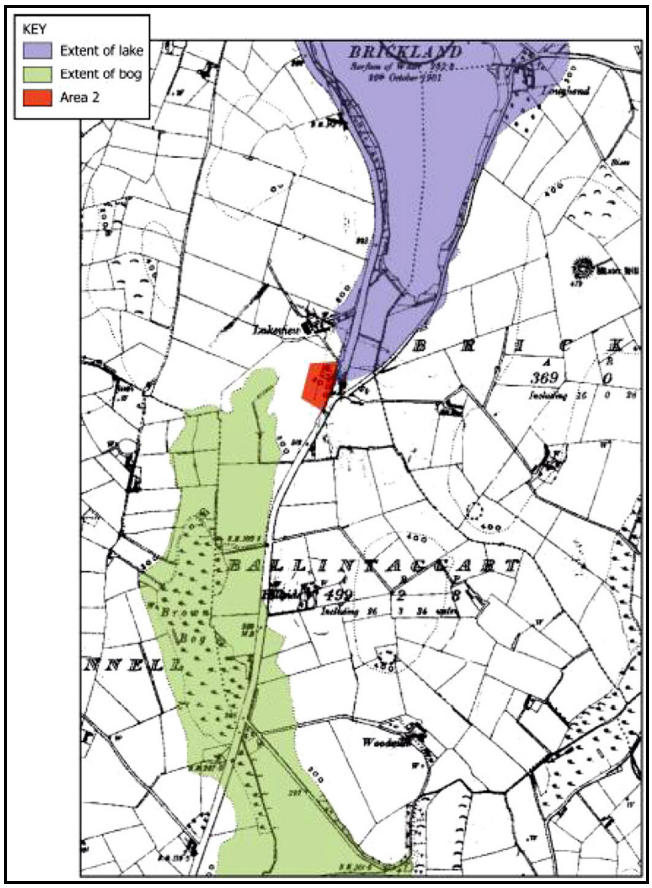
Ballintaggart 2 was occupied during the Neolithic and Early Bronze Ages and the land continued to be used during the Middle and Late Bronze Ages as a barrow cemetery.

Ballintaggart barrow cemetery looking to the south-east.

The reuse of the site over such a long time strongly suggests that the 'inch' of land was regarded as an important location in prehistory, an important boundary, connected to its previous use. The Neolithic stone row and perhaps the ritual pits were still visible and this may have marked the land as being sacred or special in some way. Perhaps it was a visual representation of the statement that 'our ancestors are here, this land is ours'. Or maybe it was seen as a good place to honour their own dead, as it seemed the spirits of their ancestors were there too.

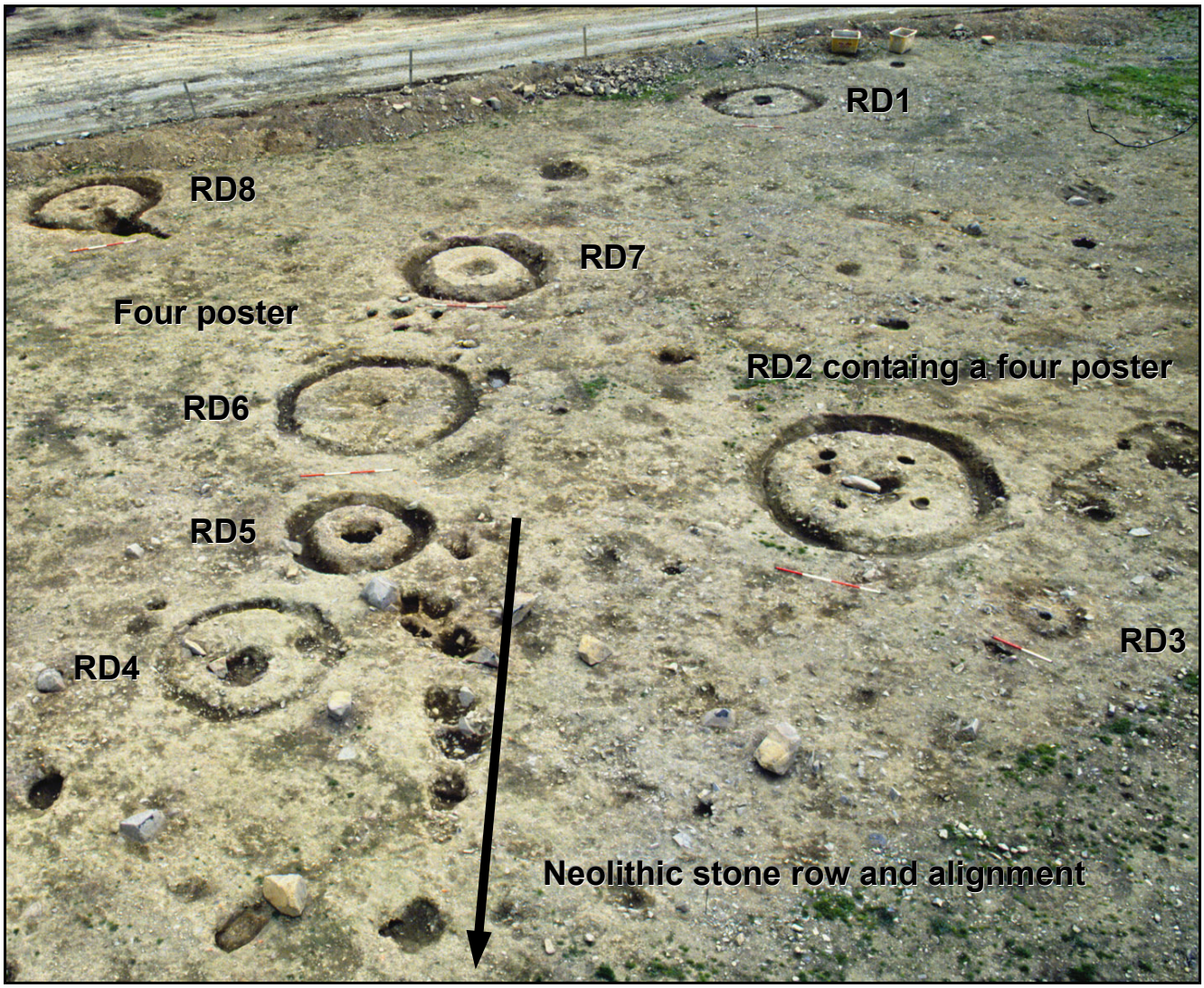
During the Neolithic and Bronze Ages, the 'inch' would have been surrounded on one side by water and on another by marshland. This would make it an easily defended and very conspicuous feature, as well as allowing easy access to the resources of both the lake and marsh.

The presence of a body of water may have had a spiritual significance for the Bronze Age people that was connected to its use as a cemetery. Maybe they believed that the presence of water marked a place where the land of the living and the land of the dead were closer together, a so-called liminal site. The word liminal comes from the latin '*limin*' meaning a threshold or boundary, and is used to describe a boundary between water and land where the journey to the after-life would be easier, or where the barrier between this life and the next is weaker. Perhaps the land was a barrier between two clans or tribes, with the cemetery marking out and reinforcing this boundary as well as visibly claiming the land for one group of people. The barrows may also have been a kind of 'spirit fence' - keeping the dead away from the heartland of the tribe as well as being a barrier to outsiders.



Map showing the extent of Lough Brickland and Brown Bog in the Bronze Age.

Evidence for such liminal sites being boundaries comes from Flag Fen near Peterborough, England. Hundreds of bronze artefacts including swords, axes, spearheads and knives were found deposited near a

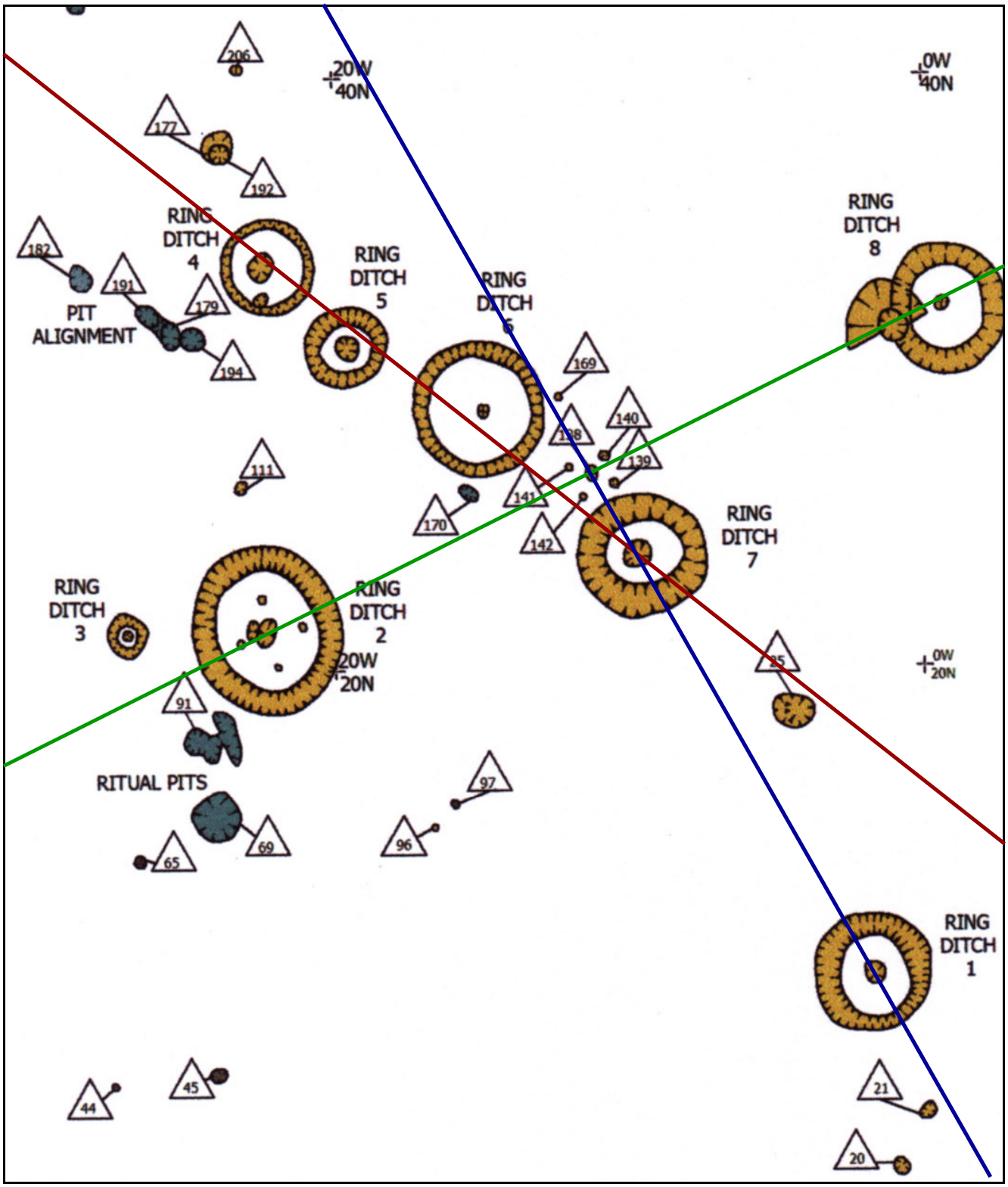


The main features of the barrow cemetery at Balliintaggart.

Bronze Age wooden causeway at Flag Fen. The bronze items had been deposited to the south of the timbers and had probably been thrown from the causeway. One bronze sword was unused and had never been sharpened. All the other swords had been deliberately broken in half or bent; knives and spearheads and other bronze items had been treated similarly or smashed in some way. Other items had been carefully deposited in a scoop made in the mud, or carefully laid on their sides before a log was pegged above them. These seem to be more careful offerings, maybe made to the ancestors at a special place to accompany them on their journey in the afterlife, rather than deposits made to mark a tribal border.

The extent of the excavations at Ballintaggart did not extend to the edge of the Lake or Bog, but it may be that any future investigations may reveal more evidence about the liminality of the site and its ritual use.

The cemetery consisted of eight barrows and two ‘four-post’ burials; one of the four posters was later incorporated into a barrow. A circular ditch containing numerous stones surrounded each barrow; the diameter of the ditches ranged from less than 2m for RD3 to over 6m in the case of RD2. These barrows were much smaller than the classic barrows of southern England, but they are similar in size to others found elsewhere in eastern Northern Ireland.



Possible alignments in the barrow cemetery, in chronological order:

Alignment pointing towards Brickland Barrow, to the north-east of the site

Alignment parallel to the Neolithic stone row and pointing towards a void in the heavens

Alignment pointing to the dip in the hills and aligned on the Solstices

Panoramic view from Brickland Barrow towards the site of the Ballintaggart Barrow Cemetery

The earliest three barrows were RD3, RD1 and RD7 forming no alignment.

The next series of features, the posthole below RD8, the four-poster burial and the four-poster below RD2 form an alignment that points towards Brickland Barrow, the large barrow on Water Hill to the north-east of the site. These three features were evenly spaced, each being 12m apart. Each four-post structure formed a 2m square and each had a central cremation burial. The later incorporation of the most south-westerly of the four-posters into RD2 suggests that the barrow was built to make use of the 'power' of the ancestors in some way. The posthole beneath the ditch of RD8 was dug to hold a large, upright timber that protruded some 3m to 6m above the ground surface. This was most probably a sighting post that aligned on Brickland Barrow.

This alignment seems to mark a seemingly deliberate change in belief systems, with the focus of the monuments being set towards a large feature on the landscape rather than older stone row alignment seems to have done, perhaps showing a change in religious belief and practice. With a diameter of 30m, Brickland Barrow is a big barrow for Northern Ireland. It may have been built for someone of great importance to the people of the area, perhaps a clan chief. The eight barrows excavated most probably followed the tradition shown by the builders of the Brickland Barrow, but didn't fully understand it. Whatever the reason may be, Brickland Barrow is easily seen from the surrounding land, and there are good views of the land from the hill. It's presence stakes a huge claim on the land. The features aligned to Brickland Barrow may be to strengthen the land-claim the barrows make – importance by association.

View from Brickland Barrow towards the site of the Ballintaggart Barrow Cemetery

RD7 was incorporated into an alignment when the later ring ditches, RD4, RD5 and RD6 were built. This alignment, which could include the four-poster, ran for approximately 20m in south-east to north-west direction roughly parallel to the Neolithic stone row and pointing to the apparent void in the heavens. These barrows respected the earlier alignment of the four-poster, RD2 and RD8. Taking alignments from older features, such as the Neolithic stone row, could have conferred legitimacy or power on the site, increasing the claim the people had on it.

RD1, RD7 and the eastern-most four poster form a possible third alignment which seems to point to a dip in the hill that is the only feature

that lines up with sunrise on the Winter Solstice, or the Summer Solstice sunset with the dip in the hills behind the viewer. The peoples occupying the site in both the Neolithic and Bronze Ages were farmers who were intimately concerned with the changes in the seasons for survival. The sunrise on the Winter Solstice would have been an important point in their year, with the promise of longer days to come with the Sun growing in strength once more, a time to start to prepare the land for sowing, perhaps. The Summer Solstice sunset may have marked the time to prepare for harvest, or maybe the people were marking when the Sun's strength was greatest before it waned once more. Perhaps by aligning their sacred places with the movement of the heavenly bodies people were making them part of the natural order of things as well as using them as a way to follow agricultural time. The seeming death and rebirth of the Sun was related to the physical death of people and their rebirth into the next world, their everyday life experiences and beliefs were naturally intertwined. Or maybe these people died on or near one of the solstices and their special burials were to venerate their apparent link with the Sun. Whatever the reasons may be, this third possible alignment seems to suggest another change in the belief systems of the people, this time away from venerating older monuments to astronomical events and seasonal changes.

Cremated bone fragments in a central pit.

Each barrow contained a central burial pit surrounded by a circular ditch. The deceased person was cremated; the cremated remains were then collected, cremulated (broken into small pieces) and placed into a pot or some other receptacle such as a cloth or leather bag, or a wooden basket.

Funeral urn in the centre of RD4.

A burial pit was then dug and the cremated remains were placed in the pit and covered. Next, a circular ditch was dug around the central burial. The material removed from the ditch was piled on top of the burial to create a mound. Stones collected from the local area may have been used as a 'kerb' around the mound to define it and as a retainer for the mound to stop it from being washed into the ditch by rain. Over time, the mound, together with the stones, slumped into the ditch. In recent times, ploughing and other agricultural activities completely levelled any traces of the ring barrows to ground level; only the features cut deep into the subsoil remained for the archaeologists to find.

As no evidence of the barrows survived in the modern landscape, it was not possible to describe how prominent the mounds originally were. If all of the material from the ditches was used to create the central mound then the barrows could be between 0.5m and 1.0m in height, which means they would have been clearly visible. It is also possible that only some of the material removed from the ditch was used so the barrows would have much flatter, 'dish-shaped' mounds, maybe the rest of the material was used to create a bank around the outside of the ditch, although no evidence was found for this.

Ring Ditch 3

This was the smallest and earliest ring ditch excavated, being dated to between 3620 BP and 3390BP; its diameter was just 1.42m.

It had a central burial pit, which contained the remains of a single sub-adult with two fragments of a more weathered, and less well cremated, adult. These fragments may have been the residue from an earlier cremation on the site and were included by accident. Or, the cremated adult body parts were held back to be buried with the sub-adult. These may be the bones of an ancestor or another relative who would act as a guide to help the young person into the next life.

RD3 is the small ring barrow at the front of the image. Behind it is RD2 with the capstone placed over the central burial.

Ring Ditch 4

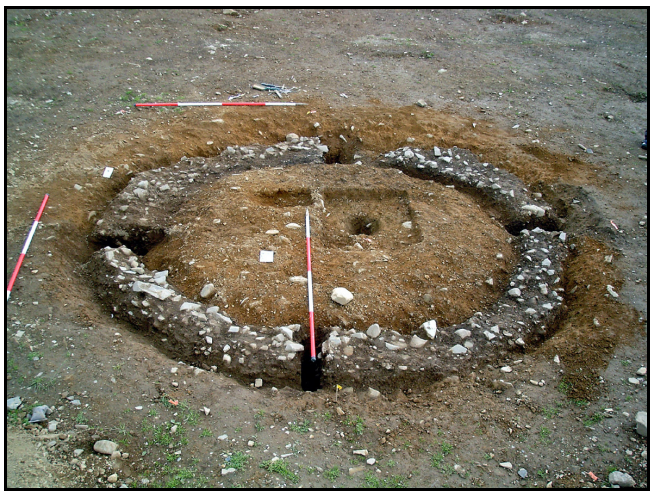
The central burial pit contained a broken, undecorated domestic Coarse Ware urn that contained burnt bone. It seemed that a second pit had been dug that broke this pot. No bone was found in this second pit, so it didn't seems unlikely it was used for a burial.

The funeral urn in place in RD4.

The reconstructed funeral urn from RD4.

Sighting Post and Ring Ditch 8

While RD8 was being excavated a large pit was exposed below the eastern side of the ring ditch. The pit had a diameter of 1.25m with a depth of 0.9m with vertical sides and a U-shaped base. It seems likely that this pit contained a substantial post that marked the burial as significant in some way, and was a sighting post of the two four-poster burials, all of which line up to the big barrow on Water Hill.



Partly excavated RD8

Reconstructed vase urn funerary urn from RD8.

The Four-Poster Burial

Four postholes were found that formed a square with sides 2m long. In the centre of this square was a burial. The arrangement of the postholes and their distances apart was consistent with a similar four-post structure discovered below RD2.

The four-poster burial.

RD2 contained a four-poster burial.

At first, this structure was thought to be a form of 'four-poster' burial, a type of stone circle that is common in central Scotland. However, its location, date and the fact that it was marked out by timber posts and not stones suggest it is more likely that it is all that remains of one of the following:

- A funeral pyre
- A mortuary house
- A cenotaph (grave marker)
- An excarnation platform
- An alignment marker

This may mean that the burial of the cremated remains in a barrow was the end of a process

that started with exposure of the dead body in some way, although only two of the burials are associated with four-poster structures so it's not certain if such practices applied to all the burials. It may be that the four-posters were associated with the belief system that seems to relate to Brickland Barrow and association with a larger, older monument, and perhaps the function of a four-poster was only in vogue for the time that this belief system existed. One of the four-posters was incorporated into a barrow (RD2), perhaps because this would confer the 'power' of the ancestors buried below the four-poster onto the barrow.

The remains of two persons were found within the four-poster. The first was that of a person, possibly female, aged 25 to 35. The second, a male aged between 25 and 35. Radiocarbon dating of the central burial gave a date of 3270 BP to 2850 BP. This may be earlier in date than RD4, RD5 or RD6, which would mean that these ring barrows intentionally lined up to the four-poster, which would have been visible as either a marked grave or some other structure such as an excarnation platform.

Funeral pyres

During cremation, the body is placed on a pyre (a large mound of wood which is then ignited) and incinerated. The optimum temperature for cremation is 760ºC to 1150ºC when the soft tissue and organs of the body turn to vapour and burn. This process would take several hours leaving dry bone fragments and charcoal.

A large pyre would then take 12 hours or more to cool enough to allow the cremated remains to be collected. The bones would be broken up as burning would not have reduced them to small, manageable pieces that could be disposed of more easily by burying in an urn, scattering in a lake, or another method. This is a funerary practice that has been carried out around the world and throughout history, and up to the present day in the Far East

In modern open-air cremation, such as that carried out by Hindus, aromatic woods, herbs and spices are burnt with the body to mask the

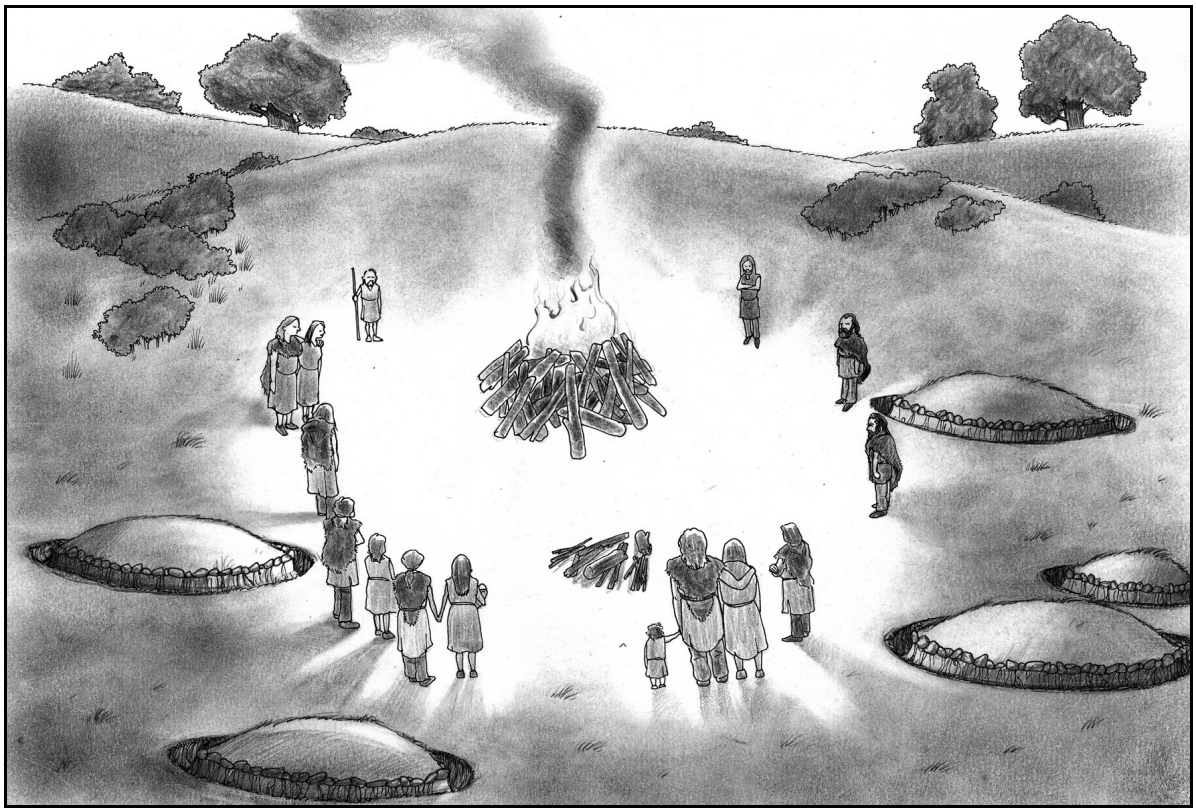


Illustration showing a funeral pyre at Ballintaggart.
Steve Cannon

smell; this may also have been the case in prehistory. In Hinduism, the eldest son then places the cremated remains in the River Ganges. A similar situation may have occurred in Bronze Age Ireland, and Britain, with the vast majority of the population being cremated and scattered in water. The minority may have been an elite of some kind, perhaps priests and aristocracy, with their remains being buried in barrows.

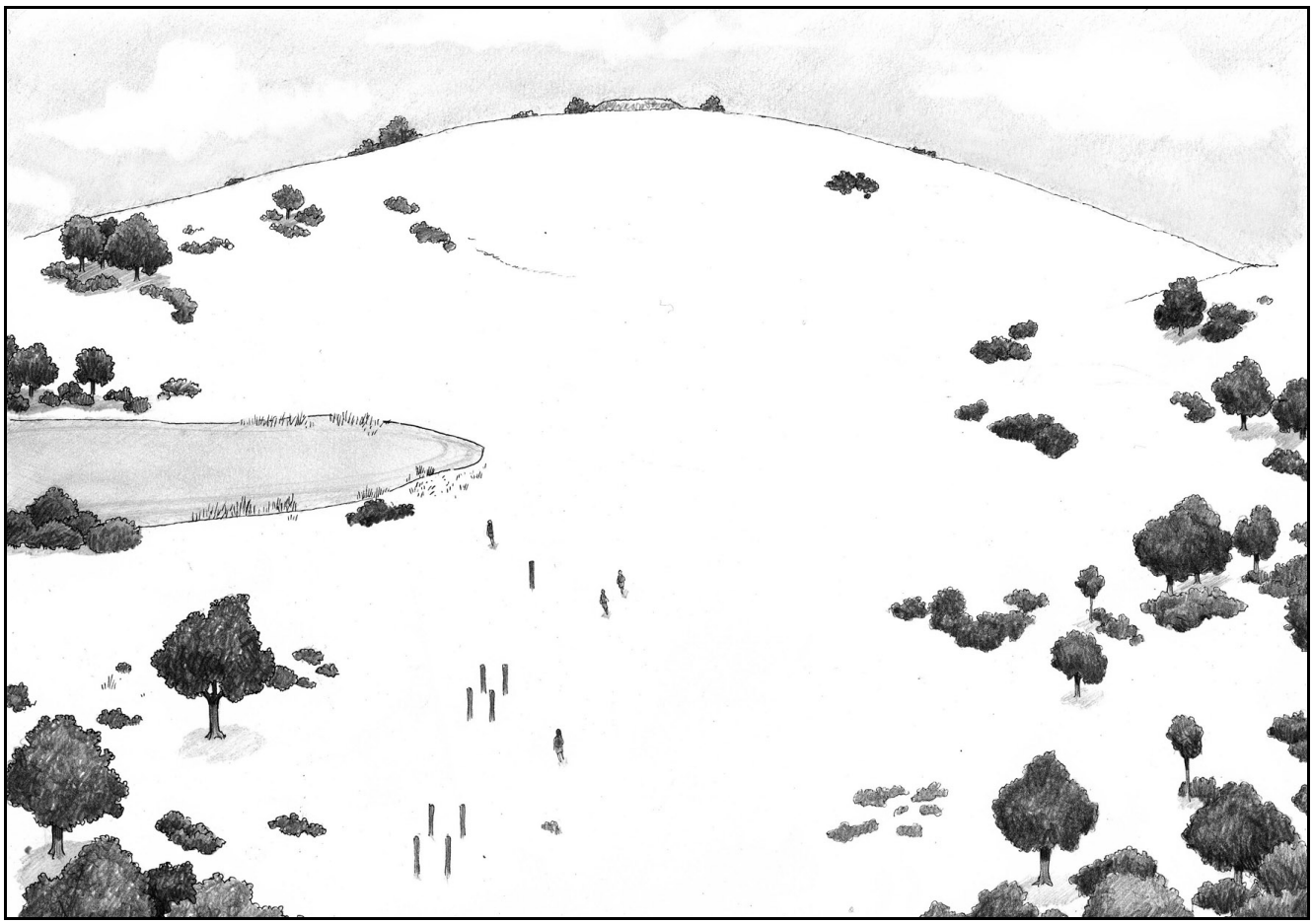
A mortuary house

Mortuary houses or enclosures are usually associated with excarnation and defleshing of bodies. They are usually associated with the Neolithic, but they have sometimes been found forming the cores of barrows. In Barrow 51, Amesbury, Wiltshire, the remains of a mortuary house with squared corner timbers was found which dated to the Beaker period. At Lockington, Leicestershire, a circular wooden palisade formed a mortuary enclosure around the remains of a pyre. At Ballyvleesh, Co. Tipperary, a grave containing the remains of two adults and three children was uncovered at the centre of a ring ditch and was surrounded by a timber structure interpreted as a mortuary house.

A cenotaph (grave marker)

Several of the features uncovered during the excavations along the A1 may be evidence for grave markers. These include the large pit beneath RD8 at Ballintaggart 2 and the Pit Burial at Derrycraw 9. The two four-post structures at Ballintaggart 2 may also represent something similar.

Evidence for multiple grave markers associated with ring barrows has been uncovered elsewhere in Northern Ireland. The posts at Ballintaggart 2 may have stood 2m to 3m tall. They may have been carved or decorated,



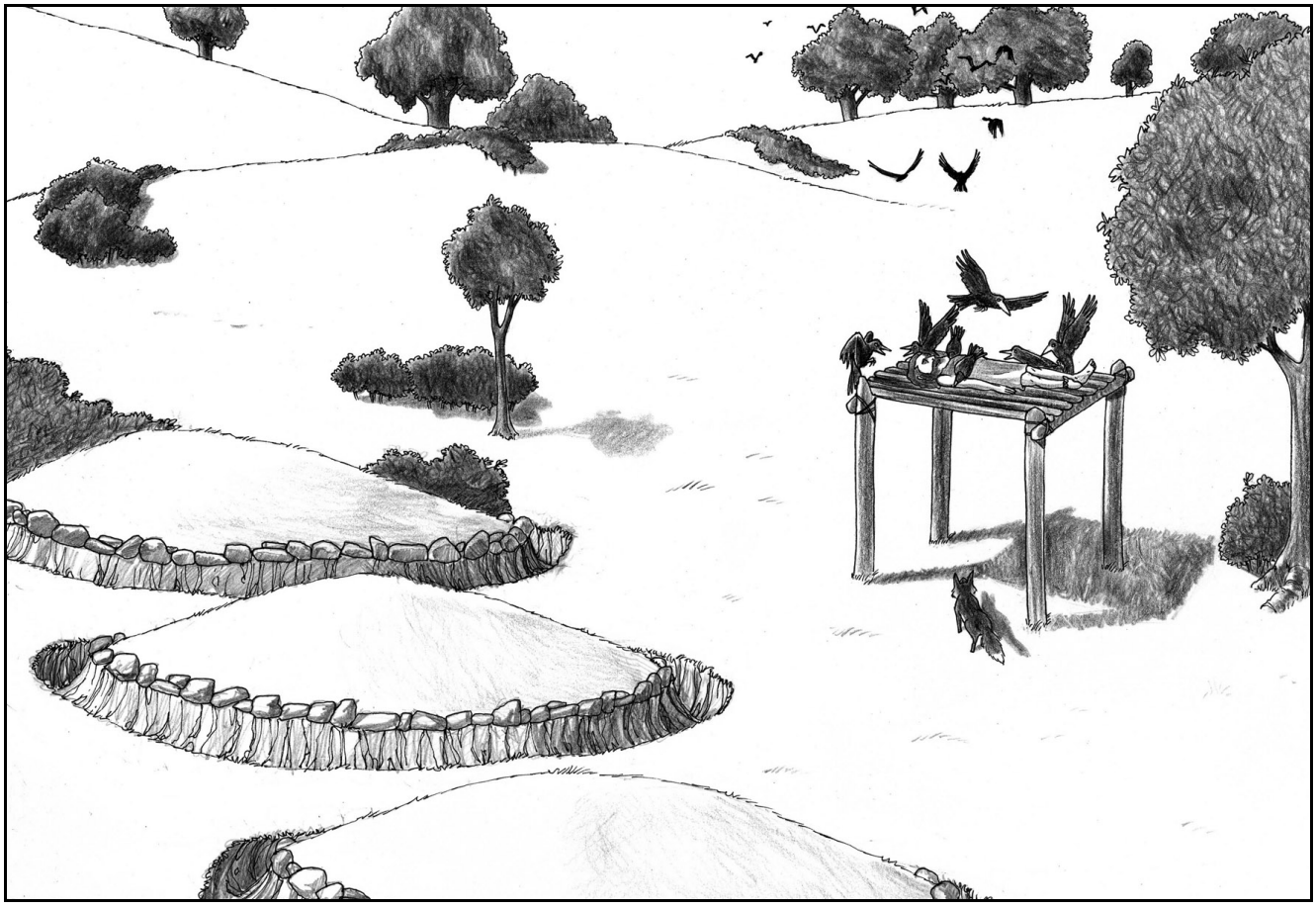
The two four-posters and the marker post at RD8 aligned on Brickland Barrow on Water Hill.
Steve Cannon

perhaps in a similar way to Native American totem poles. The larger pits at Ballintaggart and Derrycraw may have held much more substantial timber posts.

An excarnation platform

This is a raised platform where the dead were left exposed to the elements and local wildlife to remove the flesh. The bones were then cremated or disposed of in another manner. If the bones were cremated after excarnation, then a smaller pyre would be needed, which would mean less labour too.

Excarnation was carried out in the British and Irish Neolithic and Bronze Age as most of the bodies found in long barrows and megalithic tombs were disarticulated (not joined together) and incomplete. The long bones and skulls were gathered together in separate piles. Many of the small bones, such as finger bones, are under-represented and the long bones are weathered. Excarnation has been noted in Native American societies up to the 19th century, as well as in other parts of the world where it is seen as a spiritual and natural way to 'return to the earth'



An excarnation platform where the traces of the four-poster structure were found.
Steve Cannon

The Cremations at Ballintaggart

At Ballintaggart the cremated remains of 15 individuals were recovered from nine locations in the cemetery.

Ten of these were adults - four female, three male, and three whose gender could not be established. The ages of these individuals were:

- four between 25 and 35 years old,
- two were 35+ years of age
- four were 25 to 45 years old

This data gives an average life expectancy of just 33 years. However, it must be remembered that the people buried in the barrows were somehow 'special' people and perhaps not representative of the general population.

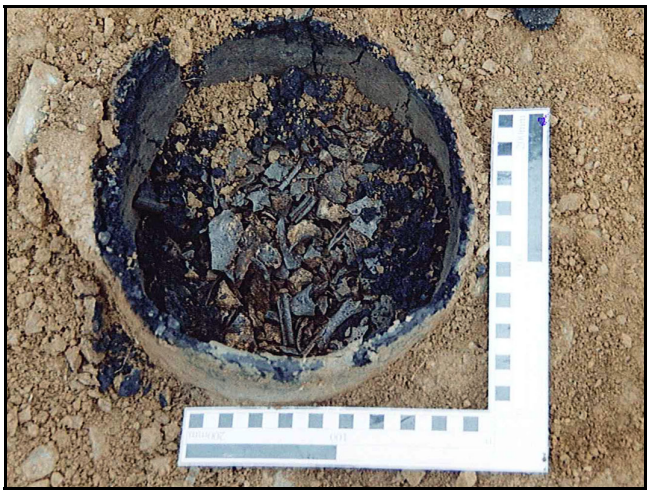
There were five sub-adults, none of which could be assigned a gender. Their age ranges were:

- one newborn
- one between 3 and 6 years of age
- one between 8 and 14 years old
- one between 10 and 15 years of age
- one between 13 and 18 years old

Only Ring Ditches 4, 7 and 8 contained enough cremated material to represent a complete or nearly complete individual. The other burials may have been token deposits where not all of the cremated remains were gathered and buried, or where later agricultural activity may have damaged the burials.

Cremated remains are usually white or pale grey in colour, indicating that the pyre had burned at temperatures between 645ºC and 1200ºC. The cremated bones from RD 7, however, were dark brown with white tinges, which indicates the temperature of the funeral pyre was below 285ºC. This is much cooler than a typical cremation and the osteoarchaeologist (an archaeologist who studies the skeletal remains of people) suggested reasons for this. It could be that the funeral pyre was lit in rainy weather, or it was made from unseasoned or wet wood. It could have been that the effects of an infectious disease or some other disaster that had killed these three individuals had also reduced the size of the community and left the survivors sick and weak. Not enough wood was then collected for a large pyre to cremate the three individuals.

These bone fragments were cremated at high temperatures.



A lower temperature pyre resulted in these bones being a darker colour.

The osteoarchaeologist also identified several diseases of the people buried in the barrows.

Degenerative joint disease (arthritis) was seen in the male from RD2, the adult from RD5, the adult female from the four-poster, the male from the four-poster and the female from RD7. The presence of arthritis is evidence that the subsistence lifestyle these people led involved a great deal of hard labour, such as planting and reaping crops, building, gathering and

hunting. This unending daily grind put stress on the skeleton causing arthritis in the joints and the spine. If not treated effectively it would lead to lifelong suffering and reduced mobility.

One person had suffered damage to the tendon joining their quadriceps (thigh muscle) to their kneecap. This could have been as a result of damage to the knee or thigh or an infection. It caused stress damage to the kneecap and would have led to pain, difficulty in walking, and a reduced use of the affected leg.

Iron deficiency anaemia was also evident in the child from RD7 and the female from RD7. This was seen as pitting in the roof of the eye-sockets, a condition known as *cribra orbitalia*. This most often occurs in children and can be caused by several things, including poor diet. Either these people were living with little surplus to carry them through lean years when food was in short supply, or in a limited variety, for extended periods of time. Poor diet would have had an effect on the growth and neurological development of children; malnutrition and deficiency diseases such as scurvy, rickets and iron deficiency anaemia would have been common.

There was evidence of dental problems amongst the people who were buried in the barrow cemetery. One person showed they had lost five molars and had socket infections in the front teeth. The left tooth sockets had healed over while the right sockets were in the process of doing so. It takes 6 months to 2 years for sockets to completely heal, suggesting this person experienced a series of dental problems in the last year or so before death. The causes of these dental problems range from poor oral hygiene to diabetes to heart disease. If not treated, gum disease can lead to pain, a reduced ability to eat food, and ultimately to death.

What else was found in the barrows at Ballintaggart?

A branch from an alder tree (*Alnus sp.*) with a diameter of 3cm and with 10 annual rings was found in Ring Ditch 3. Alder grows in wet habitats, such as fens and marsh. The presence of alder suggests that it was common in the area of Ballintaggart in the Bronze Age. The branch may have been a remnant of the funeral pyre, or a footing for the pyre, or maybe part of mortuary structure, or an excarnation platform.

Branch from an alder tree found in RD3.

Oats were the most common cereal grains found on the site. Only very small amounts of bread wheat and barley were found. The oats were found in the ring ditches and in the post-hole burials and, if they were cultivated oats, this seems most likely to be a sign of a shift from the barley and wheat farming seen in the Neolithic at Ballintaggart to oats in the Bronze Age

The presence of cereal grains in the ring ditches and posthole burials may be a result of a funeral feast, a celebration to the gods to look after the dead, food offerings for the dead, or just straw or hay kindling for the funeral pyre.

A charred hazelnut fragment found in RD1 suggests that the funeral may have taken place in the autumn or early winter, perhaps using hazel as fuel. It could also mean that the hazel nuts were part of a funeral feast or a food offering at the funeral.

Six flint scrapers were recovered from the ring ditches. The central burial of RD5 contained a broken polished stone axe that was made of mudstone or shale of a type that is found in Co. Down.

It is more common to find flint and stone tools in Late Bronze Age burials in Ireland than objects of bronze or gold. The Bronze Age people seemed to deposit their valuables in hoards in places other than cemeteries, perhaps meaning that they believed you couldn't take it with you and all the valuables you could need were waiting for you in the after life. Or maybe they were just placing them beyond the use of others on the death of their owner.

Pottery was also found within the ring barrows. The sherds belonged to 13 different vessels, 11 of which were from the Bronze Age. The Bronze Age pottery included two vase Food Vessels and four vase urns. One of these vase urns was similar to a perforated vase urn found at the barrow cemetery at Derrycraw.

It was likely that all of the pieces of pottery found were made locally; the rock fragments contained within the clay included basalt or dolerite, granite and sedimentary grits, all of which are local to Ballintaggart.

Some of these pots held cremated human remains when they were buried in the barrows. Other pots could have held food offerings to accompany the dead in their journey to the after life. Also, they may have been the leftover bits and pieces from the funeral ceremony or feast – perhaps they were smashed after the funeral and scattered around the cemetery, maybe as a sign of grief, or to send into the next world with the owners, or destroyed because they were 'polluted' after being used in the funeral feast.

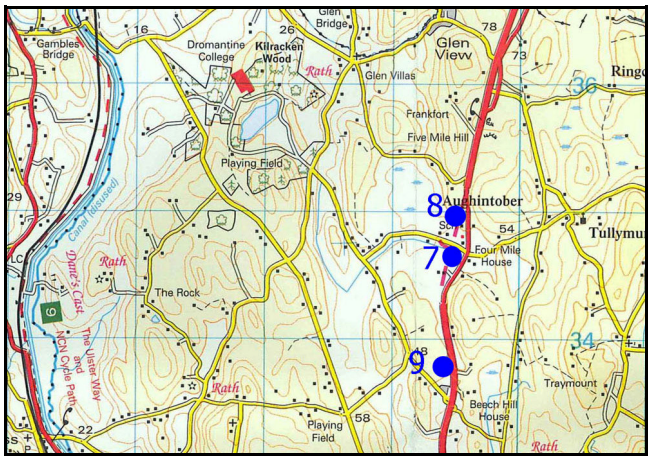
One vase Food Vessel was found in a pit to the north-east of the area that was excavated. This may be evidence of a change in the burial rite – disposing of the pot by burying it. It might also just be the disposal of an item of domestic rubbish.

Sherds of incomplete pots were found accompanying the cremation burials as well as scattered in pits and accompanied by small quantities of unidentified bones. Some of these may have been due to erosion of earlier burials. Or, they may be deliberate burials of the sherds and bone fragments.

Cremation urns recovered from the Ballintaggart Barrow Cemetery.
From left to right, Vase food vessel from RD4, vase urns from RD8, RD7 and RD1.

3.2 Derrycraw Barrow Cemetery

Derrycraw, 7.5km to the south of Ballintaggart, was the site of a second Bronze Age cemetery. Funerary activity began at Derrycraw around 3750 BP, somewhat earlier than at Ballintaggart, where the earliest barrow dates 3230 ± 60 BP.



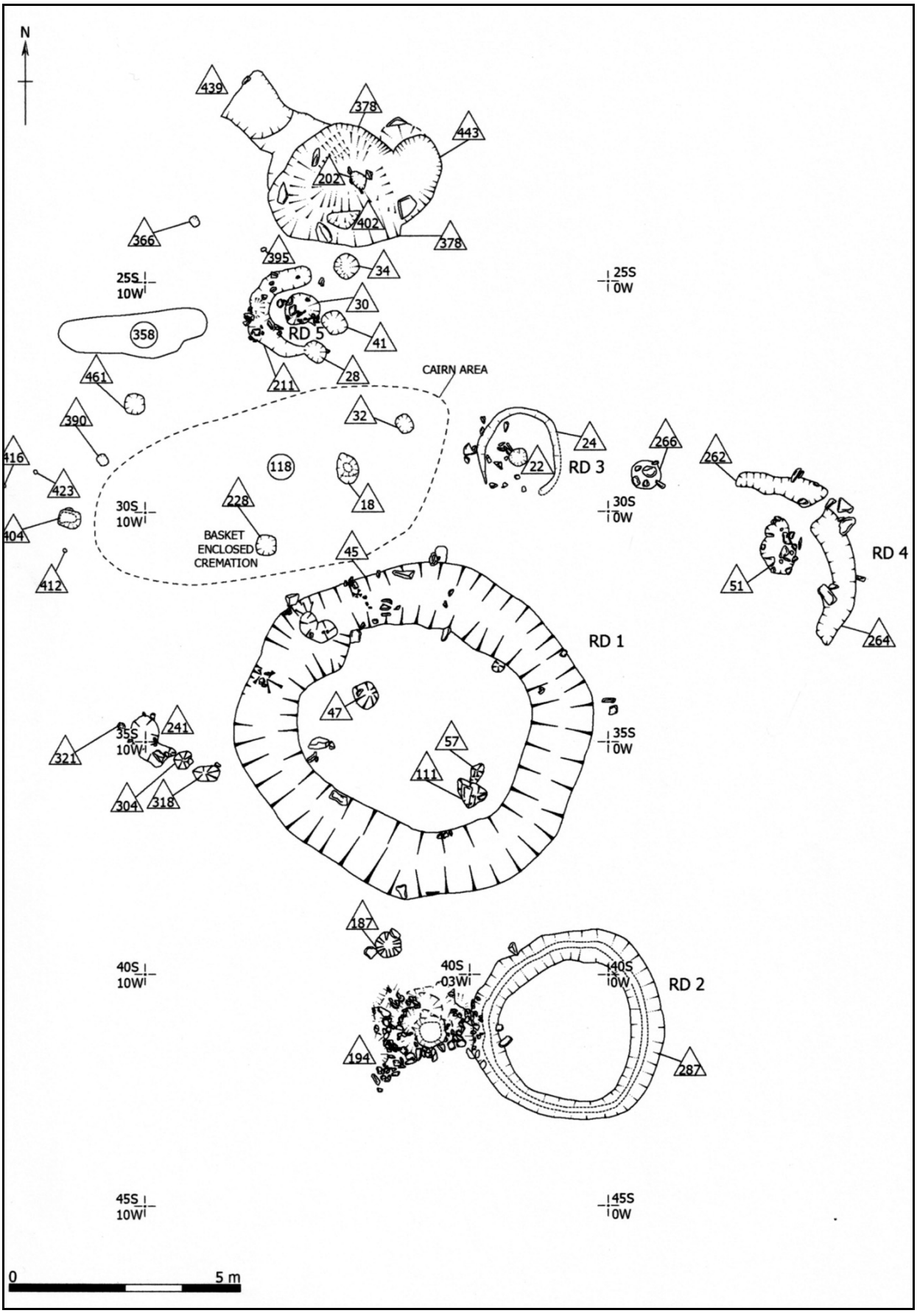
Map showing the location of Derrycraw.

The excavated site measured 50m x 15m and was on the eastern slope of a drumlin just to the west of the existing A1 road. This drumlin was surrounded to the west, east and south by poorly drained land, which may have been lake or bog in the Bronze Age - another liminal site. The site lay less than 3km to the east of a major Iron Age tribal boundary along the Newry River valley. Again, this suggests that cemeteries in the Bronze Age may have acted as some kind of 'spirit fence' keeping the dead away from the heartland and as a barrier to outsiders.

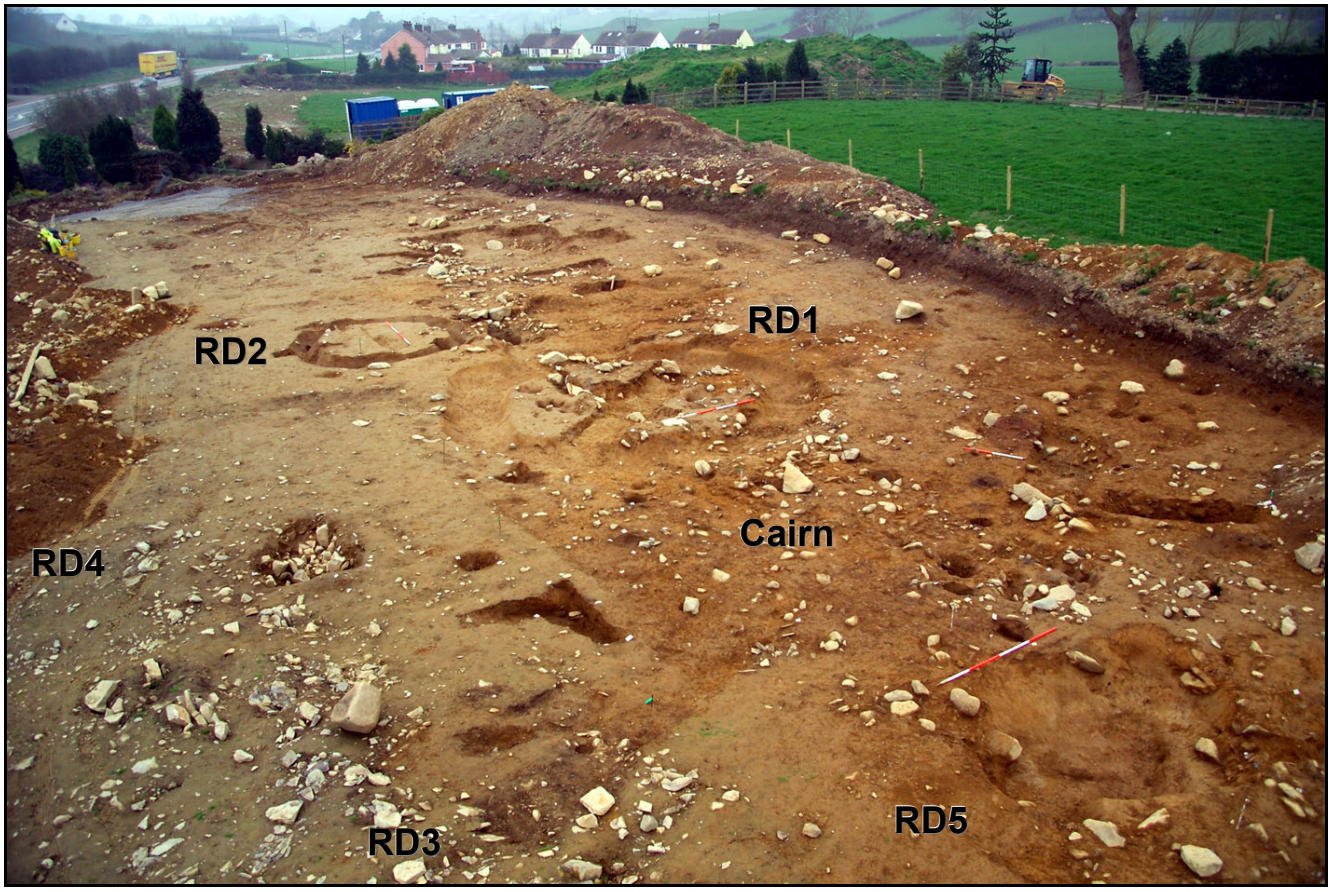
The main funerary features of the archaeology discovered at Derrycraw were all of the Bronze Age and they displayed an unusual range of styles:

- two large circular ring barrows
- two smaller badly truncated ring barrows
- a penannular (horseshoe shaped) barrow with a pair of entrance posts
- a pit burial
- a probable basket burial
- a cairn

Completed excavations at Derrycraw, looking north.



Site plan of the completed excavations at Derrycraw



Completed excavations at Derrycraw, looking to the south. The important features are labelled.

Ring Ditch 2

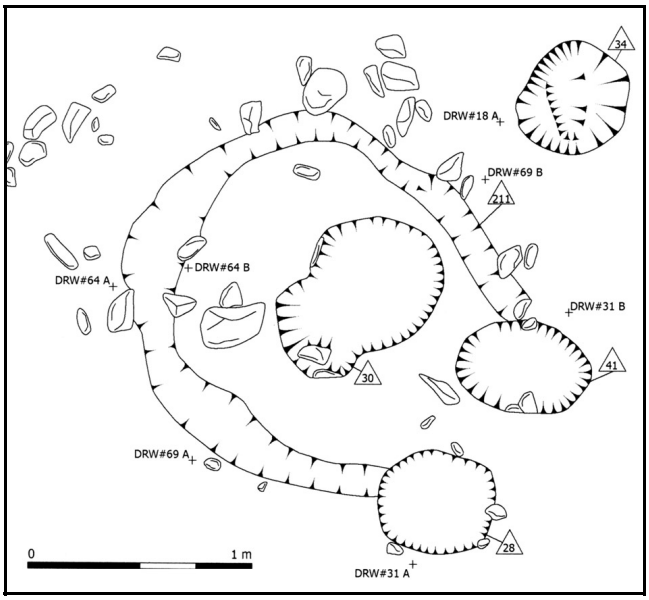
The diameter of this ditch was 4.5m and it contained a deposit of 34 sherds of Bronze Age pottery from a perforated vase urn. Carbonised timber found in the ditch dated this barrow to 3500 BP to 3140 BP The vessel was not complete and it appeared to have been deliberately smashed before being buried; there was no cremation associated with this urn.

RD2 post excavation. The narrow slot for the palisade fence can be seen at the bottom of the ring ditch.

The ditch had a deep and narrow U-shaped slot cut into its base. The slot may have been designed to hold a palisade (fence), maybe to mark out a sacred space or to keep out the casual observer. The palisade could have been made from stakes or timber planks; however there was no physical evidence of either remaining. RD2 is the only barrow discovered that shows evidence for such a structure. No burial was found within this ring barrow, so it seems that this could have been some kind of ritual or mortuary enclosure as well as or instead of a barrow.

Ring Ditch 5

This barrow had a ditch that was **penannular** in shape with a posthole at each of its ends. The postholes were similar in size and may have been as much as 1m deep in the Bronze Age - they could have supported posts 2m to 3m in height above ground level. These were hefty posts, and they may have defined an entrance to this feature. Structures defined by posts may also have existed at Ballintaggart, viz. the two four-posters and the sighting post associated with RD8.



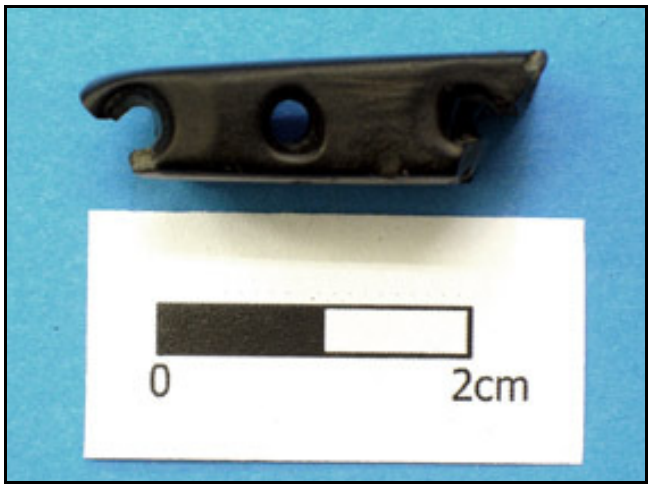
Post-excavation plan of RD5.

In the centre of RD5 was a large pit that contained cremated human remains. A capstone for the burial was found in the material filling the central burial pit. The cremated remains belonged to an adult aged 15 to 35 years old of indeterminate gender. These remains were dated to between 3520 BP and 3250 BP.

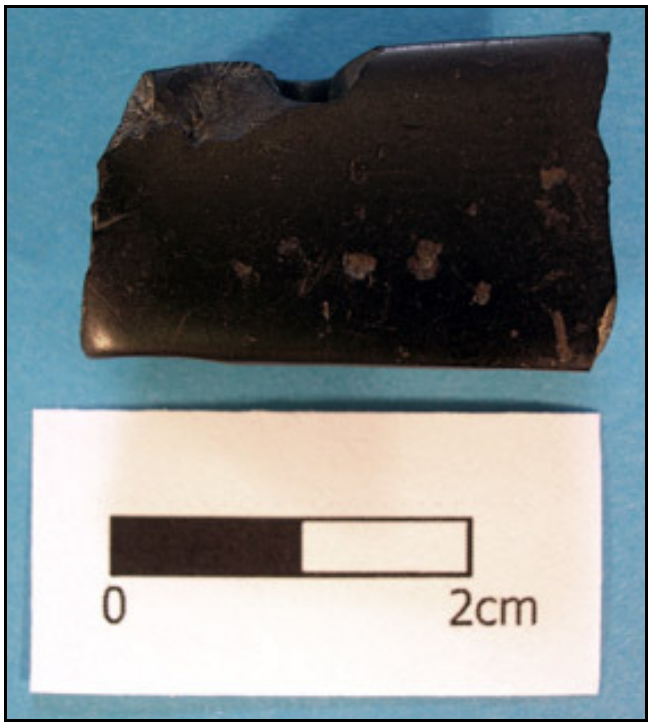
Unburnt sandstone and schist rubbing stones were also found meaning that they had not come from the pyre but were added to the burial after the cremation. These could be items of significance to the person buried in the barrow.

Cairn

The remains of an oval mound that was orientated east to west was found between RD1, RD3 and RD5. The mound measured 6m x 3m and was 0.3m in height and was most probably the result of the collapse of a cairn. A cairn is a man-made pile of stones, often conical in shape, and used in the Bronze Age to mark a burial that was sometimes contained in a cist (a stone-lined pit).



Side view of the jet spacer bead found in the cairn

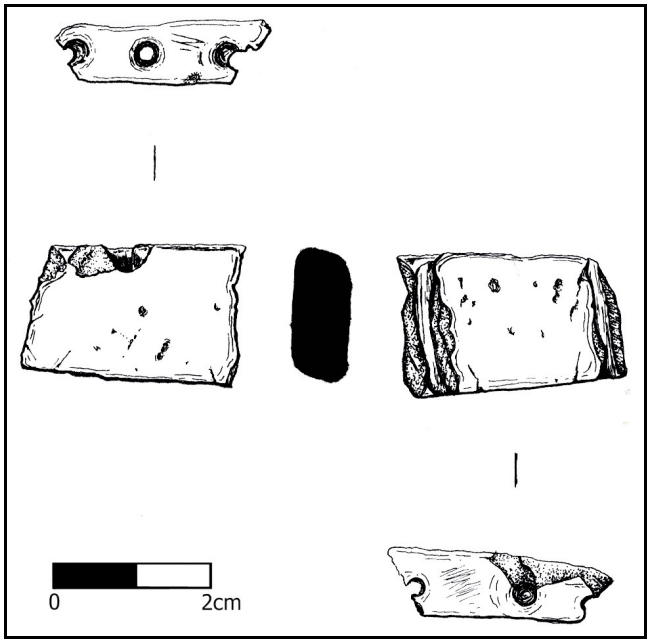


Top view of the jet spacer bead.

Charcoal from the cairn was dated to between 4550 BP and 4140 BP which is very Late Neolithic to Early Bronze Age. A sherd of pottery from a Bronze Age vase urn helped to date the cairn to the early Bronze Age. A jet necklace spacer was also found here; it most probably dates to the early to middle Bronze Age. Similar spacer beads exist in the Pen Y Bonc Necklace found near Holyhead, Anglesey, Wales, and the jet necklace found at East Kinwhirrie, Angus, Scotland.

The dates are a bit of a puzzle. The charcoal dates suggest the cairn is between 500 and 1000 years older than anything else on the Derrycraw site, except for one anomalous Neolithic pit. The cairn must have been an obvious feature at the time of the main activity on the site, but it is most likely to have been part of this activity rather than a feature dating to the late Neolithic or early Bronze Age.

The Pit Burial and the Basket Burial were both cut into the cairn, and they have dates in the middle Bronze Age, which is consistent with the pottery, bead, and the dates for the other ring ditches.



Illustrations of the jet spacer bead.
Stephanie Godden

A jet necklace that the spacer bead could be part of.
Stephanie Godden

Basket Burial

Cut into the cairn was a circular pit that contained a token deposit from the cremation of an individual aged 13 to 17 years at death. These cremated remains were found in a 'basket-like' structure consisting of thin strands of alder wood running around the inside of the pit. Vertical rods, of similar width to the strands, were also visible. Larger pieces of what seemed to be bark could be seen towards the base of the pit. These larger pieces may have been woven into the 'basket' to make a more secure container, possibly one that had a solid base and woven sides. Or, perhaps, the structure was a kind of wooden bucket that has rotted away to leave basket-like traces. The most likely scenario, however, is that the larger pieces may just have been lumps of wood that were collected from the pyre.

Looking into the pit containing the basket burial. The woven texture can be seen to the top right of the pit.

Towards the top of the pit, on the northern side, two strands of wicker could be seen curving downwards. This could have been due to the internal collapse of the pit, or they may represent the remains of 'basket handles'. The presence of handles would strongly suggest that this was a container rather than a pit lining. Indeed, it would be easier to make a basket to place into the pit rather than to fabricate a pit lining.

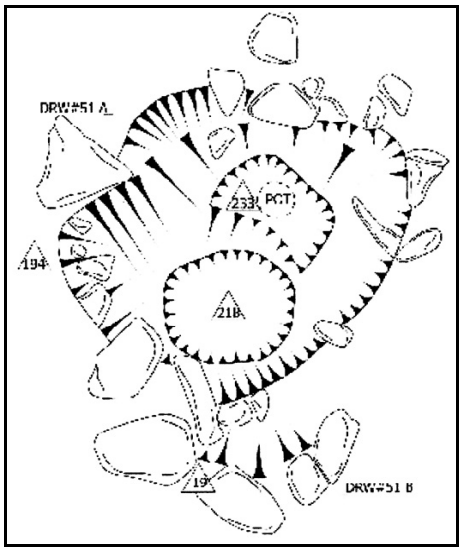
This burial is unusual in that evidence of a 'basket', or at least some form of organic container, has survived. However, it may be that this was not an unusual funeral practice - such containers would usually have rotted away.

The handle can be seen to the top right, the woven texture below it.

The container was carbonised *in situ*, which is evidence that the contents were still very hot when they were placed into the pit. The charcoal of the 'basket' was dated to between 3620 BP and 3310 BP.

Pit Burial

The pit was marked by a substantial posthole. A complete and undisturbed funerary urn that sat on a 'shelf' cut into the wall of the pit. The capstone was still in place, as were the cremated remains, which were of an adult male aged between 25 and 45 years at death. The remains were dated to between 3760 BP and 3440 BP, which makes this the oldest feature of the site.



Post-excavation plan of the pit burial

The spine of this person showed signs of everyday wear and tear as well as ageing on his spinal bones and other joints. He would have suffered from arthritis. He had also lost at least two teeth before he had died – the teeth sockets had almost completely healed.

Archaeologist standing in the pit. The urn can be seen in the wall of the pit.

The evidence from the excavation suggests that this burial was a deliberate multi-staged process. Also, a substantial post marked its position. So, this could be the grave of a person of importance, or a burial made as a claim to the territory, or even a foundation burial marking the beginning of the period of use of the land as a cemetery.

The urn on its shelf in the side of the pit.

This feature is similar to the large pit uncovered below RD8 at Ballintaggart – both are thought to have contained a large upright timber. There was, however, no cremation burial in an urn or other container in the pit at Ballintaggart.

How to safely remove an urn.

Carefully clear any material around the urn, leaving it standing on a firm base. The contents of the urn are left in place for later removal and examination. The contents also help to stabilise the structure of the urn. Tie strips of gauze bandage carefully but firmly to stop it falling to pieces. Then wrap in cling-film to further stabilise the urn, but also to give a non-permeable covering.

Wrapping the urn in gauze then cling-film.

The next step is to encase the urn in cooking-foil, again as a barrier to the plaster in the next step.

The urn being wrapped.

Plaster bandages are then wrapped around the urn to create a strong support for the urn.

Plaster bandages being applied.

Once the plaster has set, the urn is carefully freed from its base. This urn was placed in a bucket to transport it safely from the pit.

Gently does it! The urn is carefully lifted from the ledge.

The urn from the pit burial.

The Cremations

The remains of five individuals were found in five different burials in the Bronze Age cemetery at Derrycraw.

There were three adults:

- two who died between 25 and 35 years of age
- one who died between 25 and 45 years of age
- one adult was male, one female, and the third could not be assigned a gender

There were two sub-adults

- a juvenile or adolescent aged between 7 and 15 years at death
- an adolescent aged 13 to 17 years at death

Each grave discovered at Derrycraw contained the remains of just one individual, unlike some of those at Ballintaggart. Three of the burials were made up of bones of a uniform white to pale grey colour, indicating these individuals were cremated at a temperature between 645ºC and 1200ºC.

The remains from the Pit Burial were mainly white to pale grey in colour, though part of a right rib and two hand bones had a dark grey colour. This suggests that parts of the body of this person, including the extremities, had burned at a lower temperature, perhaps due to a cool spot in the fire, the extremities not being fully on the pyre, or even rain during the time the pyre was burning.

The cremated remains found in the cairn contained dark grey bone with a greasy appearance, indicating that the cremation had been carried out at a temperature between 285ºC and 525ºC.

Only the pit burial contained the quantity of bone for a complete, or near complete, individual. The relatively small quantities of bone from the other burials may have been as a result of disturbance by later land activities, or they may have been genuine token deposits, as seems to be the case at Ballintaggart.

What else was found in the cemetery at Derrycraw?

A total of 64 lithics (stone tools and the materials from which they were made) were found at Derrycraw; one-quarter of these were of quartz, the rest of flint. There were bipolar cores, flakes as well as a flint blade and a flint scraper. Two of the bipolar cores fitted together. Two pieces of stone showed signs of burning. An incomplete, slightly asymmetric leaf-shaped arrowhead was found, typical of the Neolithic. A very neat and small flint thumbnail scraper was also found. Such small scrapers appear to belong to the earliest Bronze Age; they become larger and much cruder through Bronze Age.

A piece of worked flint.

Neolithic leaf-shaped arrowhead.

Ninety pottery sherds were found which represented 14 vessels. There was one early Neolithic bowl. Pots from the Bronze Age were a Bowl Food Vessel, a vase Food Vessel, and

ten Vase Urns, which date to later than 4000BP. The range of vessels recovered suggests that this site at Derrycraw was used both in the early Neolithic and the middle Bronze Age periods. Decorated and undecorated Vase Urns are relatively unusual for this area of County Down, although the number of sites yielding examples of decorated and undecorated ware is increasing. A unique find were the sherds from a decorated Bowl Food Vessel. The decorations were made from incised lines and impression patterns from a bird bone. This decoration is a unique find at this site; suggesting that the Bowl Food Vessel and the pit into which it was deposited were special in some way.

At Derrycraw, the deposition of undecorated

Sherds of the decorated Bowl Food Vessel.

pots that may originally have had a domestic use suggests that though pots were specifically made for funerals a range of plain wares were also used.

Charred planks and the material forming the 'basket burial' were the only organic materials recovered. These came from oak and alder suggesting that these trees were common in the area around Derrycraw in the Bronze Age. They are also both damp-loving trees, providing supporting evidence for the damp, boggy nature of the land around the site.

A jet spacer bead from a necklace was found in the cairn. This necklace would have been made of many strands of beads; spacer plates, like the one found, would have supported the strands and given the necklace a crescent shape. Some very fine examples of such necklaces have been found. Jet is not found in Ireland; the most common source of jet in the Early Bronze Age to Iron Age was the Whitby area of Yorkshire, England, again showing that there was some kind of long-range traders, or a "down the line" exchange system. These are, and were, rare items and suggest that they belonged to high status individuals across the UK. They would have been even rarer in Ireland due to the increased distance from the source of the jet.

Sherds of a decorated pot.

Sherds of a perforated pot.

3.3 Conclusions about the Barrow Cemeteries

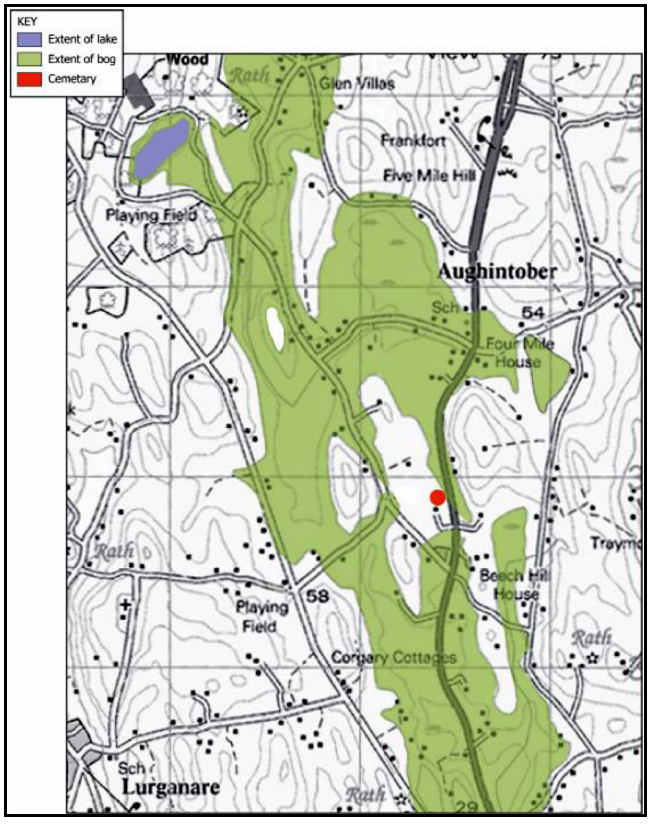
Prior to these excavations, only two other Bronze Age barrow cemeteries had been excavated in County Down. The cemeteries at Ballintaggart and Derrycraw are unique because of the styles of burial monuments associated with the ring barrows.

The cemeteries at Ballintaggart and Derrycraw dated mainly to the period of the Middle and Late Bronze Ages, between 3600 and 2800 BP. Until recently, metalwork was the main evidence of humans from this period; archaeological sites were very few in number. Because of this, the middle Bronze Age was seen as a time when funerary monuments disappeared to be replaced by the deposition of artefacts into wetland sites; this is often the reason given as to why Irish graves have few metal items deposited in them. The old religious beliefs are seen to have been gradually replaced by a water cult. It is considered that this change might have been caused by a climactic downturn that disrupted society. However, as more sites have been discovered dating to this period, this view is no longer seen as the whole truth. Barrows continued to be constructed throughout this time period, and at least into the Iron Age, and the deposition of metal artefacts continued alongside them.

Many Bronze Age Irish barrow cemeteries seem to be situated on liminal sites – threshold sites where land and water meet, maybe seen by these peoples as marking a spiritual boundary between this world and the next. This seems to be a deliberate positioning and may be related to a funerary rite that emphasised the disposal of the cremated remains of most of the population in water.

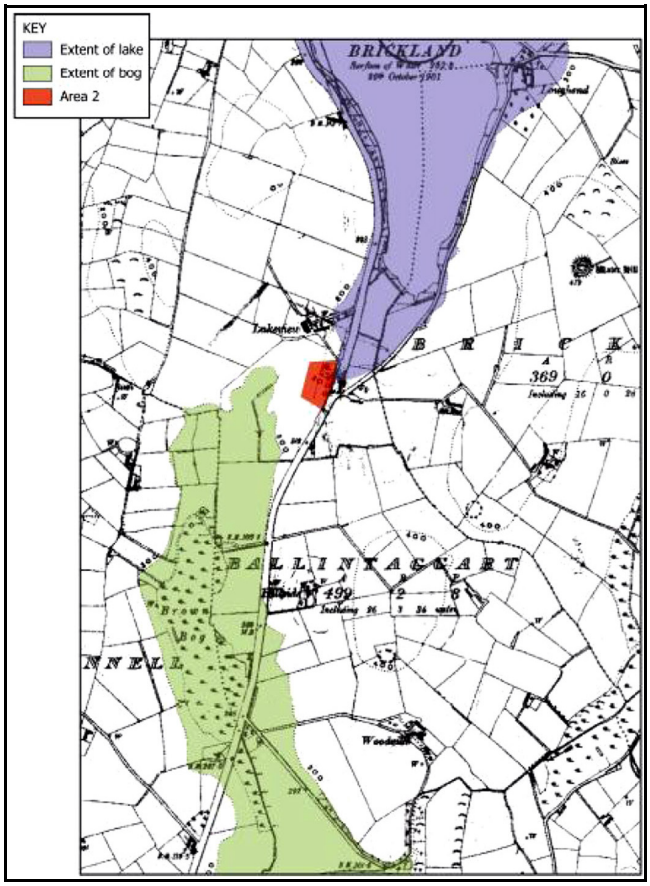
Ireland, generally, has a much smaller number of barrows compared to England than would be expected, but this may be due to them having been ploughed flat, as in England. Also, the Irish barrows have been less intensively studied. There are many possible reasons for this difference. The English barrows also tend to be bigger and more robustly built – many English barrows are stone built, while the Irish ones tend to be built of earth which makes them more susceptible to plough damage. The English barrows tend to occur on land that has not been farmed during the last few thousand years, such as the chalk downs in the south and the granite moors in the south-west.

The barrows at Ballintaggart 2 are out of the ordinary – they are situated on a small piece of land lying between two lakes and linking two pieces of higher ground. This location may have been chosen to act as a spiritual barrier between two clans or tribes. A similar practice can be seen in the Irish Early Christian period; church sites were situated close to tribal boundaries, presumably as a barrier to inter-tribal conflict.



Map of Derrycraw showing the extent of boggy land in the Bronze Age and how it makes Derrycraw a liminal site.

At Ballintaggart 2, not only was the site liminal, but it was also close to a Neolithic stone row that had survived the passage of some 2000 years. There was also a possible alignment of features in the cemetery to a large barrow on Water Hill. This barrow has not yet been examined but it appears to have had some significance to the builders of the cemetery as the four post structures and the sighting post were aligned on it. Why this is we do not know, was it the resting place of a great leader or the founder of the local tribe and aligning to it conferred legitimacy on the land claim made by the four-poster burials? These features made the place special for the Bronze Age people that used it as a cemetery. The cemetery was in use for 800 or so years, yet only 15 cremations were deposited, which strongly suggests that the barrows had functions other than the burial of human remains.



Map illustrating the liminal nature of Ballintaggart in the Bronze Age.

The cemetery at Derrycraw is also out of the ordinary, containing many puzzling features including a possible mortuary enclosure or house, a basket burial and a penannular ring barrow. The jet spacer bead is an indication that long distance trading was occurring, and also an indication of the wealth and status of the owner of the necklace. There may have been long distance trade routes, or at least extensive exchange systems. Along with the items being traded there would also be an exchange of knowledge, beliefs, practices and innovations between tribes.

What can we tell about the people buried in the barrows?

The human remains found in the barrows at Ballintaggart and Derrycraw showed a range of ages and genders. One thing is certain that, in barrows at least, there is no obvious sexual or age dichotomy. It seems possible that women in Bronze Age society, in some ways at least, ranked in importance alongside men. It suggests that the decision on who was accorded a barrow burial was based on who you were not what your achievements were, so these people may have been from a kind of aristocracy with an 800-year lineage (the length of time the cemetery was in use) or a member of the priesthood.

The cremation burial of an individual in a barrow took a lot of time and effort. If the body was not excarnated, then lots of wood had to be collected for the pyre. The cremated remains had to be collected and broken into pieces, a central burial pit dug, and the mound raised by digging an enclosing ditch. Few surviving grave goods were found, just occasional flint flakes, pottery sherds and flint artefacts. Grave goods made of precious metals were not found, though valuable items made of organic materials such as leather, wood or wool would have long since decayed. It may be that any pomp and ceremony associated with the cremation is mostly invisible – the ritual of the funeral, the goods to

accompany the deceased were consumed by the pyre, feasting afterwards, or other ways of remembering the dead such as tattooing. The people buried in the barrows may have had a high status in the tribe but there's no evidence to be sure of this.

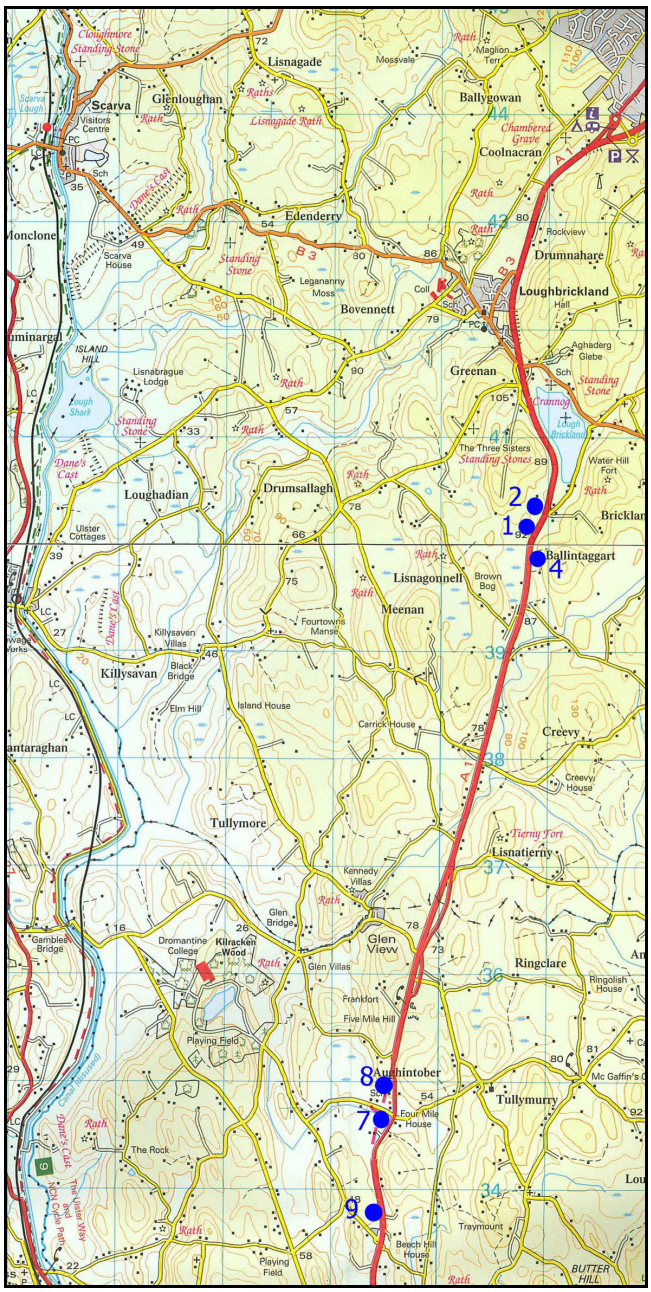
An alternative idea is that they may have died at a time that was in some way significant to their tribe, their deaths being memorable, such as at the time of the Solstice and needing to be marked as such. Or, their burials may be to reinforce the tribe's claim upon the land at periodic intervals.

Where have all the others gone?

At Ballintaggart and Derrycraw the cremated remains of 15 individuals were found. The cemeteries were in use for some 800 years, which equates to around 35 to 40 generations. So what happened to all the other people that lived during this time?

They may have been left to be excarnated and their bones scattered by wild animals. Perhaps their bones were disposed of in the lakes or bogs surrounding their land, before or after being cremated. The simple answer is, we don't know. We don't know why so few people were accorded the honour of a barrow burial; we only know that a very small percentage of people were given the status of a barrow burial. What is also certain is that only a small area of land was excavated during the A1 road-widening works. It is very likely that more archaeology lies outside of the excavated areas.

4 The Four Small Sites



Four other small archaeological sites were investigated :

- Ballintaggart 1
- Ballintaggart 4
- Maddydrumbrist 7
- Aughintober 8

The map shows the location of these sites.

4.1 Ballintaggart 1

Several pieces of broken Grooved Ware pottery from the Neolithic (radiocarbon dated to 4880 BP and 4460 BP) were found within these two small, linked pits. Over 300 pieces of flint were also found, which is quite a lot for such small pits. Also found were some pieces of burnt bone, which suggests a funerary function. However the bone was so badly degraded that it was impossible to tell if the bone came from a human or an animal; it is not possible to say if the pits were related to funerary customs or the contents were just domestic refuse from an unidentified site of occupation.

The excavated pits.

Sherds of Neolithic pottery.

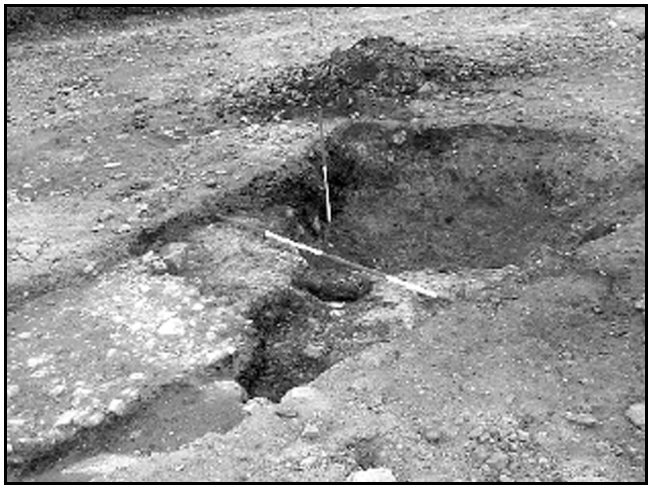
Flint scraper.

4.2 Ballintaggart 4

A large burnt mound (*fulacht fiadh;* a dump of burnt material) that covered an associated trough was found at Ballintaggart 4. However, the mound had been badly disturbed by a modern drain. The burnt mound was quite large; it measured 8.5m x 8.0m and it was 0.50m thick in the centre. It contained a lot of dark soil and charcoal.

Part-way through the excavations.

Once the mound was removed, it was possible to see the trough, which was a circular shaped pit, 2.5m in diameter and 1m deep. It was filled with black, charcoal-rich soil and burnt stones.



The trough below the burnt mound.

Only 14 burnt mounds have been excavated in County Down, while in counties such as Cork or Fermanagh hundreds are known. This may be partly due to the differences in the nature of the landscape, or on the rate of development and construction. However, the population in Cork, Fermanagh and Down were doing similar things in a similar way, then the more intensive agricultural practices in County Down have destroyed many burnt mounds. It may also be the case that in Fermanagh and south-west Ireland there have been active campaigns to locate burnt mounds, while this has not been the case in eastern Ulster.

Burnt mounds date to the Bronze Age (3800 BP to 2800 BP). It is believed they were used to heat water – the trough was filled with water and hot rocks from the fire were dropped into the water. Experiments by O'Kelly at Ballyvourney, County Cork, showed heated stones could bring a trough full of water to boiling point in 30 to 35 minutes and provide well-cooked, palatable food. However, this experiment does not prove that cooking was the actual function of burnt mounds. Recently, in August 2007, experiments in Galway have shown that burnt mounds could have been used to brew beer. Bones have been only infrequently recovered from burnt mounds or their troughs, though the absence of bones may be explained by the increased acidity of the soil that would destroy bone. It may be there was a strong ritual element in the firing of burnt mounds that involved the control and careful disposal of food remains. Alternative uses could have been used as saunas, sweathouses, for bathing, for dying textiles or for curing hides, or just the weekly wash. The main function of the fulacht fiadh seems to have been heating water that then could be used in a multitude of ways.

4.3 Maddydrumbrist 7

Three groupings of features were found within the Maddydrumbrist site.

Area 7A contained three features close to each other – a burnt mound feature, a large, shallow oval pit and an hourglass shaped spread of material. To the north was a stream, which would have been a source of water for a trough associated with the burnt mound. Although the evidence for such a feature is slight, it may be that as these features were found on the edge of the investigated land more significant material lies outside of the area of excavation.

The burnt mound was uncovered following the removal of topsoil without the presence of an archaeologist; without the archaeological supervision, too much topsoil was removed and led to the almost total destruction of the site.

The oval pit lay 15m to the east of the burnt mound and measured 3.20m x 0.72m and was only 11cm deep. Within the soil of this pit were large amounts of heat-discoloured stones.

The hourglass shaped spread was 21m to the west of the burnt mound and 3m north of the pit. It measured 1.40m x 1m and was 20cm deep.

Area 7B contained three small features located on a stone outcrop; they were roughly the same size, measuring 0.8m x 0.7m and were around 20cm deep. The soil within these pits appeared to have been burnt, however the sides of the pits showed no sign of intense heat or burning which suggests the soil was dumped here from elsewhere; this rules them out as being the remains of temporary hearths. Within the burnt soil were fragments of burnt, unidentifiable bone and the remains of hazelnut shells. A sample of soil from one pit was dated to 1860 BP to 1570 BP – the only Iron Age date in the series of excavations along this section of the A1 road.

The pits in area 7B may represent examples of the rather elusive tradition of Iron Age burials. The majority of known Iron Age burials are part of ring barrows, or are enclosed by a ditch or similar structure, although unenclosed pit burials are also known. It is not conclusive that the Maddydrumbrist pits are genuine Iron Age burials, but if they are, then they are unique in County Down.

It is also interesting to note that just 4km to the north-west of these three pits likes the Danes Cast, an Iron Age linear earthwork.

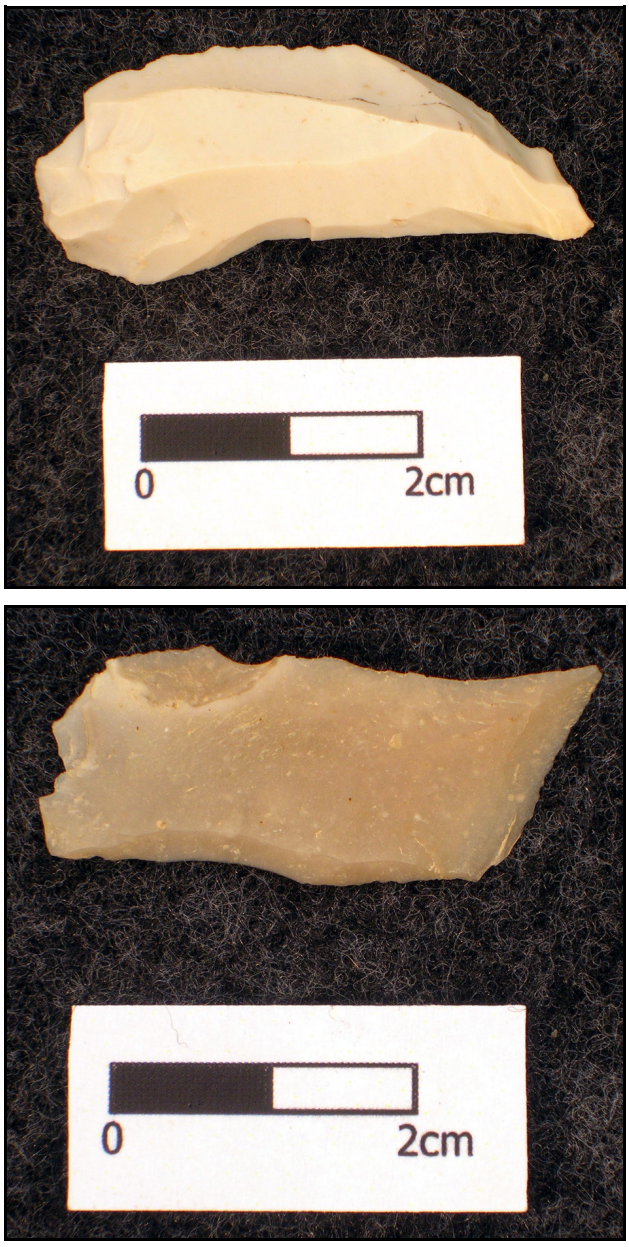
Area 7C had a burnt mound that was defined by a line of large stones and a stream. The burnt spread measured approimately 5m x 4m and it contained a concentration of heat-decayed stones. A penannular bank enclosed the trough; the excavator suggested the bank was progressively built over the lifetime of the site.

Burnt mound at Maddydrumbrist 7A

4.2 Aughintober 8

The material filling the 25 pits and postholes in this site contained several pieces of pottery, identified as fragments from a Cordoned Urn and two Vase Urns. These pottery types place the features firmly in the Bronze Age (4200 BP to 3500 BP). A radiocarbon date gave a date range of 4550 BP to 4200 BP which places the features in the late Neolithic to early Bronze Age transitional period.

The pits and postholes seemed to lack any coherent pattern or to belong to any type of structure.



Flint blades found at Aughintober.

5 Conclusions

The excavations along the stretch of the A1 road between Loughbrickland and Beech Hill in Co. Down have given us a tantalising glimpse into our prehistory. They have been a peek into a past where the people left us no written records of how they thought, what they did day to day, and what their beliefs were. What they have left us instead are clues in the ground that give us hints as to what their lives were like.

The group of Neolithic houses at Ballintaggart is like a very small village. Its inhabitants were most probably a group of related families. The archaeological evidence left by these people gives us a snapshot of a time in our past when farming, and possibly the people involved, were new to Ireland. These people, and others like them, created the basis of our society. They lived a life of subsistence farming, a lifestyle that would have been familiar to our ancestors until just a century or two ago.

The evidence from the midden and the organic remains from the houses, such as oat grains, impressions of wheat grains, apple pips, hazelnut shells and pig bones, shows that they were exploiting the local environment for food and natural resources as well as growing their own cereals and herding their own livestock.

The porcellanite and flint tools the Neolithic peoples used show that, although the site was rich in resources, some things could still not be found locally. So, 6000 years ago, as now, social or trade networks were an essential part of society. Along with the trade in material items, there would have been an exchange of ideas, peoples and beliefs. The necessity or desire for items not available locally is shown again by the presence of flint tools in the barrow cemeteries at Ballintaggart and Derrycraw, this need being highlighted by the jet spacer bead from far away Whitby. The trade wasn't one-way, however. Porcellanite tools from the outcrops at Rathlin Island and Cushendall have been found as far away as Southern France.

Another theme that can be traced through the Neolithic and Bronze Age at the sites is that of the spiritual beliefs of the peoples that lived here.

From the Late Bronze Age, we have two cemeteries acting as more than repositories for the dead. It took a long time to provide a series of monuments for less than two-dozen people, which suggests these were making an important statement. The variety of alignments at Ballintaggart suggests that the beliefs of these people and the statements they were making changed over the lifetime of the cemetery.

Were the barrows built to act as a claim on the land, to define a liminal area between this world and the next, to reinforce a political boundary or to keep the spirits of the dead away from the heartland of the tribe? It is impossible to know.

The slightly earlier site at Derrycraw with its variety of different monument styles reinforces the idea that religious belief, or burial practice, was in flux in this period; these beliefs and practices eventually settled on the small ring barrow in the latter part of the fourth millennium BP.

The archaeological sites uncovered did not exist in a vacuum but related to other monuments in the surrounding areas.

The Neolithic stone row is on a similar alignment to the Three Sisters stone row at Greenan. The Bronze Age alignments in Ballintaggart cemetery point to the large barrow on Water Hill and to the gap between Water Hill and Ballintaggart. This suggests that life at Ballintaggart extended beyond the locality and into the wider world.

The four smaller sites also produced interesting evidence.

The group of three features at Maddydrumbrist 7B produced fragments of burnt bone that dated to the late Iron Age. This is particularly important as evidence from this period is rarely discovered during excavation. This may be examples of the relatively elusive tradition of Iron Age burial. If so, it is a unique find in Co. Down. It is also interesting as they are close to the 'Danes Cast', an Iron Age linear earthwork lying some 4km to the north-west.

Only 14 burnt mounds have been excavated in County Down, while in counties such as Cork or Fermanagh hundreds are known. This may be partly due to different kinds of landscape. However, there must be another explanation since the population in Cork, Fermanagh and Down were doing similar things in a similar way. If this is the case, then it could be that the intensive agricultural practises of Down have destroyed many sites of burnt mounds. It may be that more burnt mounds are known in Fermanagh and south-west Ireland because, there have been active campaigns to find them, which, so far, has not been the case in eastern Ulster.

A wide variety of archaeological material was uncovered during the monitoring of the road works on this stretch of the A1. It ranged in date from the Neolithic to the Iron Age and included domestic, ritual and mortuary structures. This, along with other known prehistoric sites in the vicinity such as Brickland Barrow and the Three Sisters stone row, shows that the idea that the boulder clay in drumlin areas unused by the population prior to the Early Christian Period is inaccurate. It is likely that developer funded archaeological investigations will discover many more sites.

These excavations have shown that the Loughbrickland area was a focus for settlement from the Neolithic through to the present day.

The archaeological information recovered from this series of excavations has provided evidence of the first Neolithic houses in Co. Down, evidence of late Neolithic and early Bronze Age occupation, the two largest Bronze Age cemeteries yet excavated in Co. Down, several rare Iron Age burials and three burnt mounds to add to an increasing number being uncovered in eastern Ulster. The wealth of information gained from this site fully justifies the importance placed on the implementation of a full programme of archaeological work instigated by the NIEA and DRD Roads Service in advance of the construction of the A1 Loughbrickland to Beech Hill improvement scheme.

The excavation crew at Ballintaggart.

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Where to go for more information

If you are interested in archaeology you can find more information at:

- DRD Roads Service – *www.roadsni.gov.uk*
- Northern Archaeological Consultancy – *www.northarc.co.uk*
- Northern Ireland Environment Agency – *www.ni-environment.go.uk*
- Northern Ireland Young Archaeologists (NIYA) – *www.britarch.ac.uk/yac*

Museums in Northern Ireland

Armagh County Museum
http://www.armaghcountymuseum.org.uk

Down County Museum
http://www.downcountymuseum.com

Enniskillen Castle Museum
http://www.enniskillencastle.co.uk

National Museums Northern Ireland
http://www.magni.org.uk

The Tower Museum
http://www.derrycity.gov.uk/museums

Ulster Museum
http://www.ulstermuseum.org.uk

Ulster Folk & Transport Museum
http://www.uftm.org.uk

Ulster American Folk Park
http://www.folkpark.com

This book describes the results of one year's monitored topsoil stripping and excavation in advance of a 10-kilometer development of the A1 from Loughbrickland to Beech Hill. A number of areas of archaeological remains were identified. Two particularly complex and large sites. The first of which comprised three Neolithic rectangular houses and a Bronze Age cemetery in the townland of Ballintaggart. The cemetery contained nine cremation burials, eight marked by ring ditches and two four-post burials. This site also included an Early Bronze Age occupation area. The second site in the townland of Derrycraw comprised a destroyed cairn, five ring ditches (three of which contained burials), a cremation in a woven structure, several other token burials and a single post-marked burial, which was associated with a Bronze Age funerary vessel containing a cremation. A number of smaller unassociated excavations were completed, including an iron Age cremation in Maddydrumbrist townland and several burnt mounds.

A Road to the Past ISBN 978-1-904807-25-4

Front & back cover design by **Stephanie Godden**