

# Excavations at Cairnderry chambered cairn, Dumfries and Galloway, 2003.

## Interim Report

Vicki Cummings and Chris Fowler

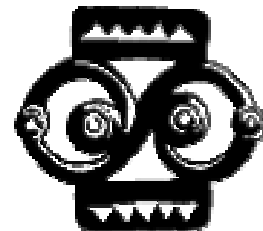
(with contributions by Alison Sheridan and Amelia Pannett)



CARDIFF STUDIES IN ARCHAEOLOGY



SPECIALIST REPORT NUMBER 25



# **Cardiff Studies in Archaeology Specialist Report Number 25**

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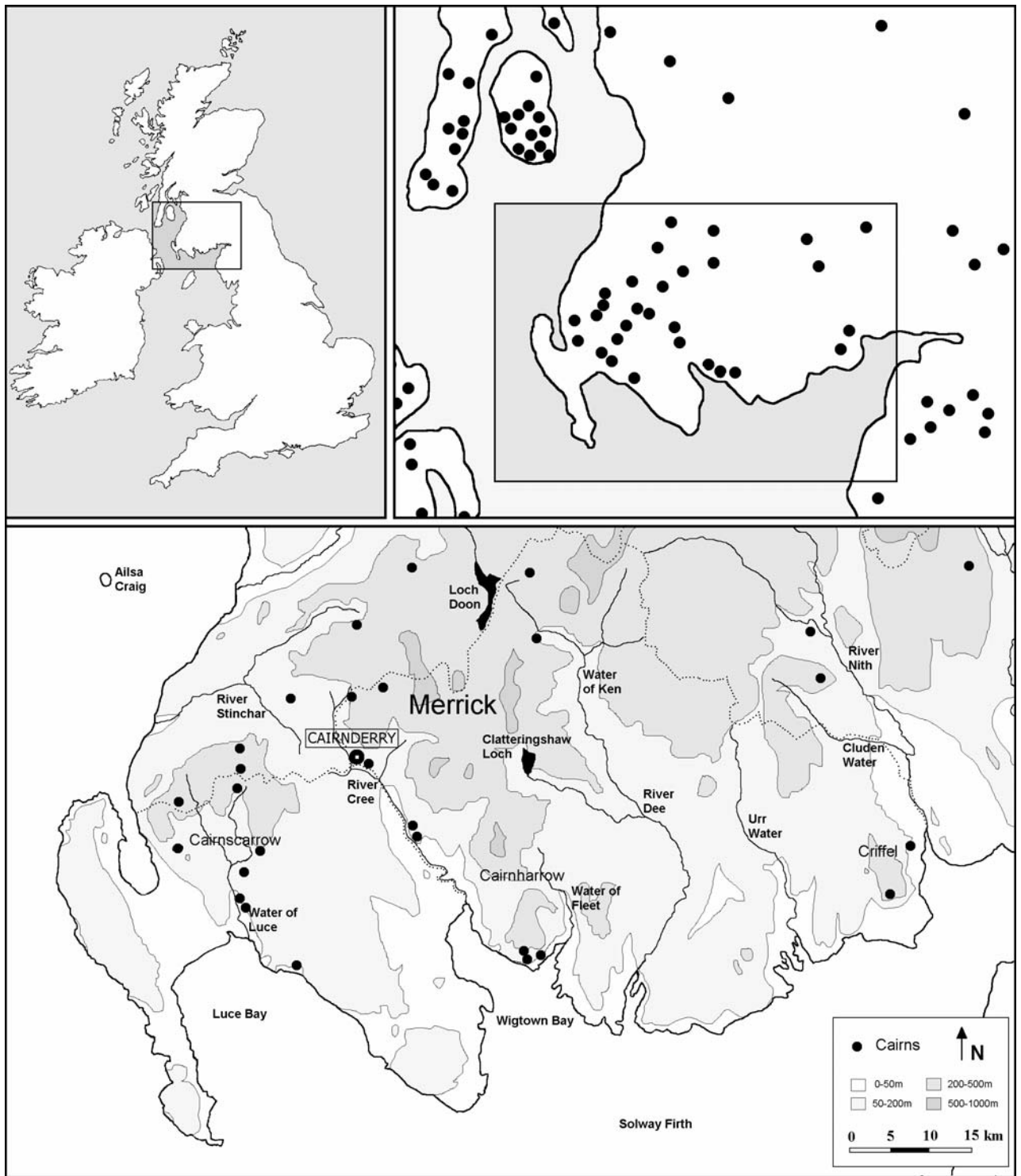
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## **Introduction: the background to the project**

Two different types of Neolithic chambered tomb have been identified in western Dumfries and Galloway. The first group have been described as 'Clyde' monuments and are characterised by multiple chambers set within a long cairn with a stone-built façade (Henshall 1972). Four of the seven Clyde monuments in Dumfries and Galloway (Cairnholy I and II (Piggott and Powell 1949) and Mid Gleniron I and II (Corcoran 1969)) have been excavated and these sites seem to originate from the early Neolithic, consisting of several discrete phases (as shown at Mid Gleniron by Corcoran 1969). The second group of monuments are the 'Bargrennan' sites, of which 14 have been identified (Henshall 1972; Murray 1992). These sites have a small chamber or chambers often with thin (often impassable) passages and are set within round cairns (Henshall 1972; Murray 1992). The only recorded excavation of a Bargrennan monument was at Bargrennan White Cairn in 1949 (Piggott and Powell 1949). However, the chamber had been robbed out and it has not possible to suggest a construction date for this site. Fragments of cremated bone and incised late Neolithic pottery were recovered from above the slabs lining the passageway, and charcoals remains of oak were found in a pit at the entrance of the passage (Piggott and Powell 1949, 150-1). It is not possible to tell if the later Neolithic finds date from an early or late use of the chamber and passage. Henshall produced a survey of all the monuments in 1972, and apart from Murray's (1992) reconsideration of the Bargrennan sites, little work has been done since. Vicki Cummings examined the landscape settings of the chambered tombs of south-west Scotland as part of her doctoral research and demonstrated that the Bargrennan monuments are not only structurally quite different to the Clyde sites but they are also located in radically different parts of the landscape (see Cummings 2001). The Clyde monuments are located in the lowlands on fertile land, while the Bargrennan sites are located in the marginal uplands of western Galloway (for further details see Cummings 2002). It is possible to interpret the differences between the Clyde and Bargrennan sites in two ways. First, the different distributions of these two monument types may suggest that the Bargrennan monuments were later in date than the Clyde monuments (this suggestion is favoured by Murray 1992). If this was the case it may suggest that people lived in the coastal regions in the early Neolithic and gradually moved inland over time. This model has implications for the origins of the Neolithic in this area and also for the economic use of the region throughout this period.

Alternatively, the two monument types may be contemporary. There are several ways of interpreting this suggestion.



**Figure 1.** Location of Cairnderry chambered cairn in south-west Scotland (after Cummings 2002)

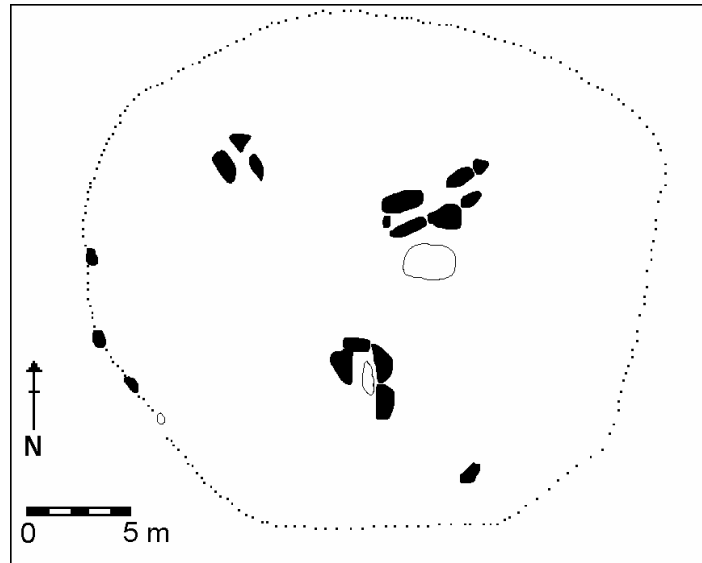
While it is possible to imagine two different communities living in Dumfries and Galloway and constructing different kinds of monument, it might also suggest that different parts of the landscape were directly related to different forms of monument. This may imply the uses of different locales in a seasonal round (people may have been moving inland over the summer months to follow game or to feed stock) or other connections between practices and places. A thorough programme of excavation of Bargrennan and Clyde monuments could allow some comparisons between Neolithic patterns of land use and those suggested by the robust evidence for seasonal use of the landscape by Mesolithic people (Cherry and Cherry 1997; Cole 1963; Cormack and Coles 1968; Edwards 1996).

### **The overall research programme**

The dating of these monuments is crucial in developing our understanding of the origins and development of the Neolithic in this area. The excavation of a Bargrennan monument was therefore proposed with a primary aim of obtaining material for radiocarbon dating. Furthermore, an examination of a Bargrennan monument may give preliminary indication of differences or similarities in the patterns of use and construction of Bargrennan sites compared to Clyde sites. It is anticipated that these results would form a new set of questions for further investigations into both sets of monuments and other Neolithic sites in the region.

Cairnderry sits at the centre of the known distribution of Bargrennan monuments and has three chambers and passages set within a round cairn (Figures 1 and 2). The site has been robbed (see below) but it was considered possible that material may have survived in at least one of the chambers. One of the primary aims of the excavation was to obtain material for radiocarbon dating from within or under the chambers, passage and/or cairn. However, it was also desirable to gain a better understanding of the development of the site itself. Was the monument constructed in one single phase, or do the three chambers represent three separate phases of activity? Does Henshall's plan accurately represent the monument (see Figure 2)? Was there activity at the site prior to the construction of a monument? How was the monument used by people in the Neolithic and in subsequent periods? Was there activity around the outside of the monument? How does the material culture compare to that found within the Clyde monuments? In order to address these issues, a multi-season programme of

investigation and excavation was proposed. This interim describes the results of the second season. The results of the first, preliminary season are briefly summarised below and the full results can be found in an earlier interim report (Cummings and Fowler 2002).



**Figure 2.** The plan of Cairnderry by Henshall (1972)

### **The location of the site**

The site is set on the side of a valley on the edge of Glengruboch Moor at 155m OD, above the River Cree. The site is presently on Forestry Enterprise land in the heart of the Galloway forest. Trees surround the monument on all sides, although these are due to be harvested in 2006, and to the east the site is clipped by a forest track which has cut through some rubble external to the cairn. The monument is located just off the A714, eight kilometres south-east of Barhill. The site is close to a stream, Goat Burn, although the stream cannot presently be seen or heard from the site itself. The cairn itself is situated on a natural rise in the landscape, and the body of the cairn seems to fully incorporate the prominence of this knoll. Prior to excavation the extent of the cairn was unclear, but it is now evident that the diameter of the cairn is roughly 25m across west to east.

Because the monument is surrounded by trees on all sides it is difficult to ascertain precisely the parts of the landscape that would be visible from the site. Since the cairn is



located on the lower reaches of Wheeb Hill it seems likely that the view to the north-west would be restricted. It seems likely that the Merrick Mountains would be visible from the site (this is a characteristic of the Bargrennan monuments: see Cummings 2002). Views to the south and west would also be quite wide-ranging, looking out to Barjarg Hill and the Barrhill pass.

### **Description of the monument**

Prior to excavation, the monument was a large grassy mound covered with dense vegetation (mainly grasses and ferns), with a forestry road running immediately to the east of the mound. It was impossible to define the edge of the cairn, although it was clear that the monument had been disturbed in the past. Three chambers were visible at the heart of the mound, one to the north-east, one of the south and a third poorly-preserved chamber to the north-west. The north-east chamber survived as a number of slabs which defined a chamber and passage, and a displaced capstone lying to the south of the chamber. The southern chamber was the largest of the three and survived as several large slabs defining a chamber area, with the capstone lying on its side in the chamber. The third chamber survived as two opposing slabs which may be the sides of either a chamber or passage and a third displaced stone. In addition to the chambers, four large stones were visible to the west of the mound, and these are described by Henshall (1972, 448) as the remains of a possible peristalith. She also notes the presence of a stone a short distance from the southern chamber, which she also suggests may be part of a peristalith. In the 2002 season we exposed the area around this stone and found it to be part of the kerb. She marks four of the five peristalith stones as *in situ*. The site is surrounded by dense forestry in all directions which have severely disturbed or destroyed additional archaeological remains. A number of walls lie a short distance from the site, particularly to the west.

### **History of the site**

The 1849 OS map shows a large sheep enclosure to the north-west of the cairn and a road running to the south of the site. Both these features also appear on the 1896 OS map. It therefore seems likely that the cairn had been robbed in order to construct the sheep pens and road sometime prior to 1849, and possibly some of the dry stone walls. Henshall

(1972, 448) records that the cairn was greatly reduced some time before 1896 when it was recorded in its present condition. She suggests that the cairn was robbed for road building materials (Henshall 1972). Forestry had just been planted around the site when Henshall visited the site and the monument survives today in the same state that Henshall found it 30 years ago.

### **Summary of results from the first season**

In 2002 a small team conducted a preliminary investigation of the site. No excavation of any archaeological contexts was undertaken. Instead, we cleared away the vegetation and top soil from north-west part of the cairn in order to assess the state and extent of the cairn. We also opened a smaller trench to the south-east which revealed a kerb still *in situ*. We found that in most places the cairn survived at its lowest level, although it had obviously been heavily robbed in the past. In some areas, however, the cairn had been removed completely. In the area just to the north-west of the southern chamber the cairn had been robbed away leaving only stoneholes, and here we found very small fragments of early Neolithic carinated bowl.

### **Aims and objectives of the second season**

The preliminary season had demonstrated that although the cairn had obviously been robbed and disturbed in the past, some archaeological deposits potentially remained intact. The primary aims of the second season were as follows:

- To remove the capstone from the southern chamber so that the chamber could be excavated. We hoped that the capstone may have slipped into the chamber prior to the main recent robbing phases and may essentially have protected any archaeological deposits. Any surviving deposits in the chamber could tell us when the monument had been in use.
- To examine the southern half of the cairn, in order to see if the cairn had been built in a single phase or in several phases. The preliminary season had suggested the cairn was a single phase construction, and we wanted to confirm this in the southern part of the cairn.
- To look for pre-cairn activity.

- To establish the extent of the cairn to the south, and to find the extent of the kerb found in season one.
- To look for activity outside the monument, in particular directly outside the kerb and southern passage.
- One of the key aims was also to acquire material for radiocarbon dating in order to understand the overall construction sequence of the site and its subsequent use.

## **Methodology**

We opened a series of trenches in relation to the grid set up the previous year. We opened a large trapezoid trench in the south-west quarter of the cairn (Trench C), and another trapezoid trench in the south-east quarter of the cairn (Trench D). This included Trench B from last year, and later incorporated the trench which examined the passage (Trench F). A final trench (Trench E) examined the southern chamber (see Fig. 3).

## **Excavation results**

### *Cairn*

(See Appendix 1 for detailed context descriptions)

A thin layer of topsoil (001) was found over the cairn stones (002) where they remained *in situ*. This topsoil contained only modern finds, including a 1929 penny piece in Trench D. In Trench C we found that the majority of the cairnstones had been removed, probably in a single event, taking a large ‘bite’ out of the south-east of the structure. This removal event extended to the edge of where the cairn would once have been, and while stoneholes filled with topsoil were visible within the area where the cairn would once had stood, there were no traces of sockets from kerbstones. The cairn stones (002) were within an orange silty layer (003). This orange layer could be interpreted in three different ways:

1. As a layer of exposed relatively soft soil pre-existing the arrival of the cairnstones and into which they were placed, which later leached out into different gradations of colour



**Figure 3.** Plan of trenches opened in 2003. This is the post-excitation plan, showing details of the cairn, the kerb and the 4 cremation pits.

2. As a layer of silting through the cairn filling voids between cairnstones.
3. As a layer laid down with the cairn stones

(003) is darker in colour nearer to the top, shading down to a lighter, paler orange lower down in the fill. In most places (003) physically sat on top of the subsoil (004). However, in several places patches of (032) lay between (003) and (004). (032) is a thin (c. 1cm thick) grey compact clayey layer with smears and flecks of charcoal. This material appears to have been spread over (004). We can only assume that the landsurface was cleared down to (004) prior to the deposition of (032). (032) contained one piece of Arran pitchstone [1161]. A very faint line of (032) was observed during cleaning of (004) near to the east baulk of Trench C. Two soil micromorphologists examined (032) *in situ*, and compared it with the pre-glacial parent geology observed where the road cuts through the knoll. They considered it likely that (032) is the parent pre-glacial till (005) excavated, mixed with charcoal, and laid down prior to the construction of the cairn, although we are awaiting the results of laboratory examination (Donald Davidson *pers. comm.*; David Sanderson *pers. comm.*). It is also possible that this relates to a pile of the grey material left by the recent digging of an undiscovered pit and which was flattened during cairn construction. The picture that emerges is that the ground surface was cleared of vegetation, and either at that point or some time later, there was activity at the site resulting in the dispersal of earlier Neolithic bowl fragments, flint debitage and fragments of Arran pitchstone tools. A pit was probably then dug nearby, and grey parent geological material brought to the centre of the knoll. This was spread out over the site of the monument prior to construction as traces of (032) were found in patches within and under the chamber, under the passage and under a number of cairn stones.

The cairn itself seems to have been constructed in a single phase. There is no evidence of any bays or structural features which could potentially have divided up the cairn into different segments, and no suggestion that the chambers were built at different times. It is difficult to assess when the kerbstones were positioned. They clearly supported the lower courses of the cairn, but it is unclear exactly when in the construction process they were



**Figure 4.** The kerb

laid down. We identified 11 kerbstones at Cairnderry (marked 1-11). Although almost all of them seem to have moved, presumably when the cairn was being robbed, they are in fairly close proximity to their original locations. There are four kerbstones which seem to be more or less *in situ* (stones 3-6) and there is a noticeable hollow between stones 2 and 3, suggesting that a kerbstone may have been removed at some point. No stoneholes for kerbstones were found here or elsewhere in the trench.

#### *Perimeter of the cairn*

The subsoil (004) continued, as might be expected, outside the cairn as within. However, a bright strong orange layer, (013) was formed to a depth of at least 30cms all around the perimeter of the monument. This seems to be the remains of a transient b-horizon, formed during the growth of a humic layer over and around the monument over a long period of time. At different heights within this layer (013) we found numerous slabs of greywacke looking very much like dry stone walling slabs or paving slabs, the larger slabs being in the order of 60cms by 50cms. The angle at which these sat was consistent with their having slipped from the top of the kerb stones. We interpret these as dry stone walling slabs placed on top of the kerb, displaced gradually by the collapse of cairn stones from high up in the monument. While clusters of stones could be identified possibly relating to a single collapse event, it is likely that this was an attenuated process.



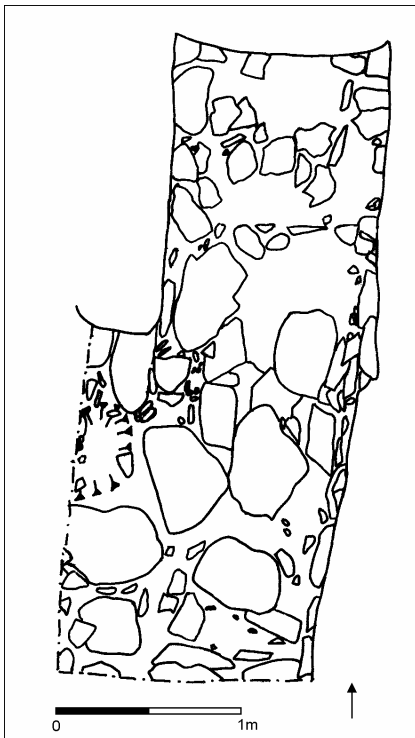
**Figure 5.** Slipped dry stone walling

The soil formation process associated with (013) was terminated when a thick layer of rubble sitting in loose dark topsoil was laid down (012). This would appear to consist of cairnstones that have been heavily fragmented, probably through human agency. This event may be related to the robbing of the cairn, but at the southern extent of Trench C it appears that this event has also taken a ‘bite’ out of the rubble layer too, so it may pre-date the robbing event. In four locations we found pits cut through (004) and sometimes the interface between (004) and the early formation of (013), outside the perimeter of the cairn. The top of each pit was covered by rubble (012), and in the case of pit 3, slipped dry stone walling (014). This would indicate that the dry-stone walling was still resting on top of the kerbstones when the pits were dug and filled.

*Construction of the chamber and passage*

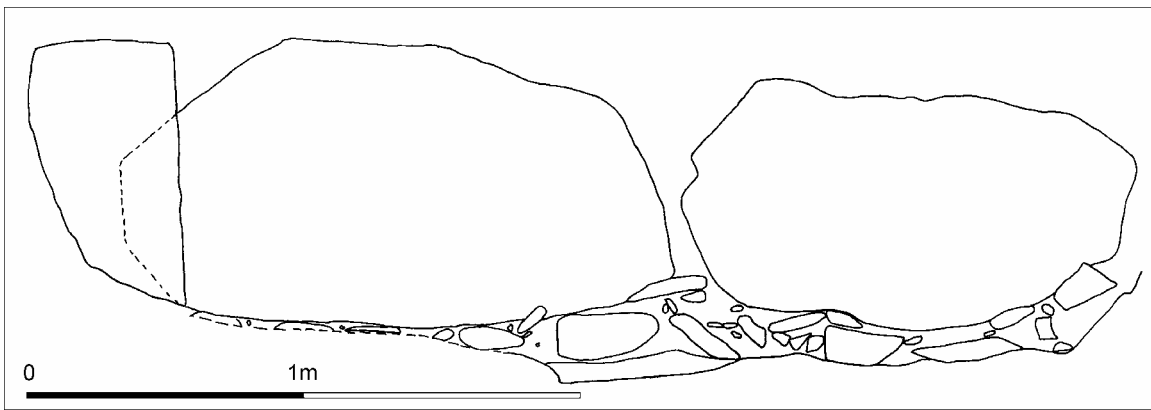
*Chamber.* We did not find any sockets cut into the subsoil which we would have contained the orthostats of the chamber. Instead, we found that the orthostats sat on top of large wide stones which we described as ‘cushion’ stones. These sat in their own stoneholes and were fairly similar to the lower course of the cairn. The chamber therefore appears to have been built on top of the land-surface, not cut into it. The lowest layer in the chamber (105) was an orange loam which contained areas of mottling of darker soil as well as patches of the grey parent material. This layer appears to be material churned up during construction, and the dark clumps are most likely to be clods of prehistoric

topsoil, while the grey clumps are lumps of the geological subsoil laid down more evenly directly to the west of the chamber. Exactly when this layer was churned up and formed is unclear, though it could either date to the construction of the monument, or a subsequent clearing out of the chamber. On top of this lay a layer of flat slabs each about 50cms by 50cms and 10cms thick (103) which are most likely to be paving stones, but may possibly be slipped corbelling which may once have stood on top of the chamber side orthostats. No prehistoric archaeological material was found above these stones, which suggests that any deposits above the paving were cleared away, either in prehistory or in recent years. Lying directly above the paving slabs in between the two eastern orthostats was a small section of slipped dry-stone walling. This suggests that the gaps between the orthostats in the chamber may have been filled with drystone walling. A recent fill lay above the paving stones (102) which contained numerous pieces of modern glass. The topsoil above this (101) contained among other finds a fork marked with a manufacturer's date of 1973.



**Figure 6.** Plan of the chamber





**Figure 7.** West facing section of chamber

*Passage.* We should point out that there is no clear evidence of a passage at the southern chamber at Cairnderry. However, all other Bargrennan monuments have passages, and there is evidence of a passage at the north-east chamber, so it is reasonable to assume that there was once a passage leading off the southern chamber. The sequence of events in the passage is not as clear-cut. An orange mottled layer (043) contained patches of grey material flattened into lenses in places by cairnstones. We consider it most likely this is equivalent to the mottled layer found in the chamber (105). Into this layer a number of stones were placed, which included cushion stones for orthostats, though it is unclear whether these are *in situ* or have been disturbed by robbing, which extended into the passage area in places. In either case what we found was most certainly the ‘foundations’ of the passage, rather than the passage itself. The large orthostats had been removed as were most of the cushion stones, and no paving was found. The voids left by the removal of cushion stones supporting orthostats had been filled by dark loam, contexts (024), (025) and (026) which were basically recent layers of soil forming within three different voids above the prehistoric deposits.

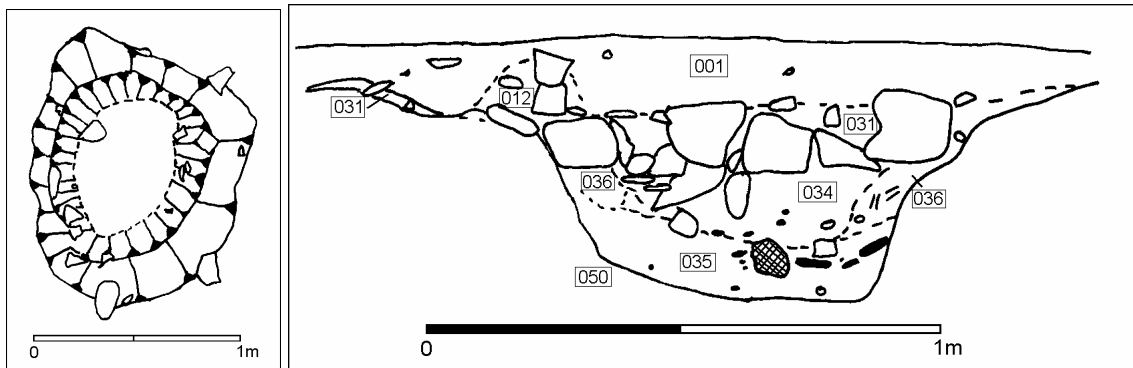


**Figure 8.** Part of the passage area excavated, exposing the stoneholes for the ‘cushion’ stones. Changes in soil colour hint at the removal of two large orthostats.

#### *Formation of the pit deposits*

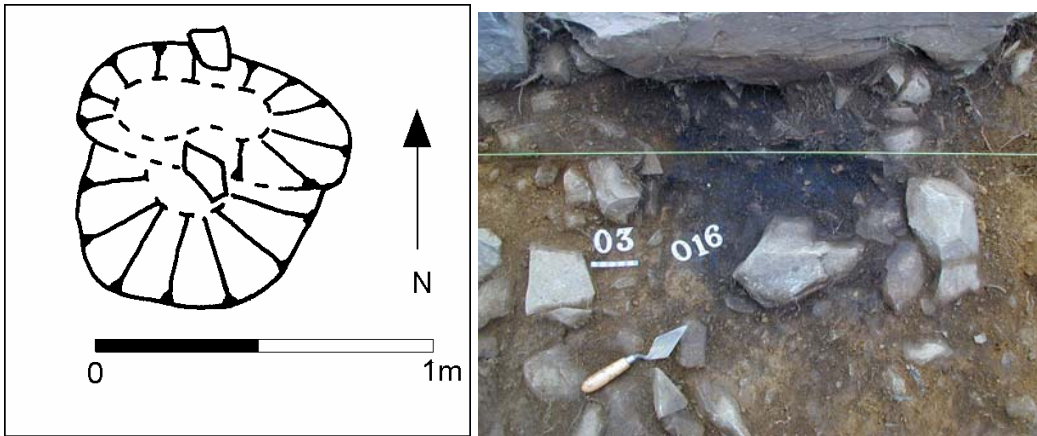
*Pit 1.* Pit 1 cuts through (013) at a relatively early state in its formation. The pit itself was roughly oval, measuring 61 x 46cm at the base and 121 x 109cm at top with the longer axis running roughly east-west. The pit was only 31cm below the present land surface, and was 40cm deep. At the base lay a fine silty black fill (035) containing over 50% charcoal particles, 30% charcoal pieces and 15% cremated bone. This layer contained an accessory cup [1188] and battleaxe [1164]. Bone fragments in this layer were much more fragmentary than those above. Next a collection of small flat stones were placed over (035) and a collared urn placed, inverted rim downwards, above these. Around the urn and stones thick deposits of cremated bone (048) and charcoal (049) were inserted and pushed up against the pot. Burnt red soil containing smaller amounts of cremated bone and charcoal (036) then slipped in around the edge of the pit and another dump of brown loam mixed with charcoal and cremated bone (034) was placed around and over the pot. This layer included 50% large packing stones which covered the pot and slotted around the sides to keep it upright - these were also particularly dense around the top of the pot.

The red material (036) lining the upper part of the pit partially slipped over (034). The very upper layer of the pit was a brown silty loam containing small stones (031). It was noted during excavation that the sides of the pit wall were reddened in places, penetrating to some 2-3 cms, possibly indicating that some of the material was hot when deposited. It was noted that the axe had suffered a hairline fracture, and that the pygmy cup was very lightly fired - we cannot be sure whether these were mixed in with hot ashes during deposition or not.



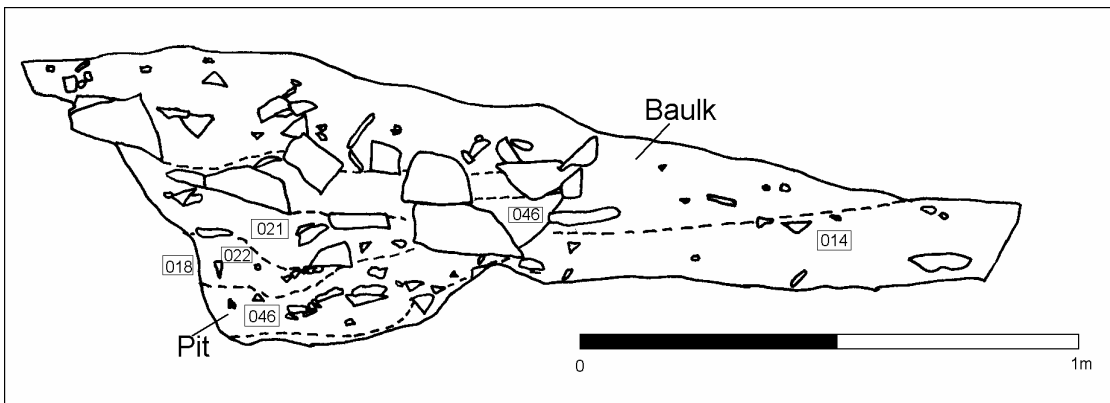
**Figure 9.** Plan and section of pit 1

*Pit 2.* The cut of this pit (058) was irregular at the top, with a flared edge about 50cm across and about 80cm wide, which was formed when the diggers cut down towards kerbstone 4. Once they had located the kerbstone, a small, oval hole (60 x 30cm) was dug alongside and slightly undermining it, cutting into (004). This pit contained only one main fill, a dark brown loam, rich in charocal and fragmentary bone and consisting of up to 55% fragments of large bone. The densest concentrations of bone were found right underneath the kerbstone or pressed up against it. A lighter brown loam fill covered the cremation deposit, but this was only found in remnant form. This feature appears to be a cremation insertion, as yet of uncertain date.



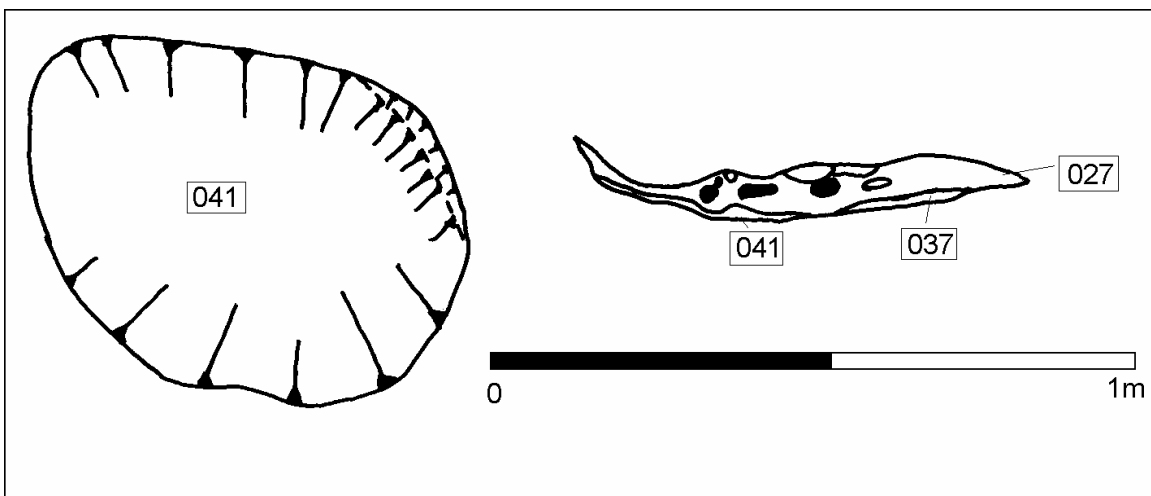
**Figure 10.** Post-ex plan and pre-ex photograph of pit 2

*Pit 3.* The cut of this pit (018) either sliced through or abutted against a heavily weathered and fragmented section of bedrock, and cuts through the lower reaches of (013) into (004). However, the full extent of this feature has not been uncovered, and while in early stages of excavation it contained few deposits, the lower layers were rich in cremated bone. It was decided to leave the lowest layers for detailed excavation rather than rush the process this season, particularly given the possibility that delicate finds might yet lie within the feature. The lowest layer uncovered (060) was a loose brown sandy silt containing charcoal and cremated bone. This had been packed down from above with a layer of stones (059). This was followed by a series of largely sterile fills (051, 047, 046, 022 and 021). A reddy fill was found to line the edge of the cut where it was exposed higher up in the feature. The entire pit was overlain to the south with large flat slabs sitting within and covered by the orange loam (013), meaning that the pit was filled before these slabs had slipped from the top of the cairn. This large pit, with a complex sequence of fills, requires further excavation before full analysis, but appears to be an early Bronze Age cremation deposit.



**Figure 11.** Plan of pit 3 at context (059) level and section. The section was placed over the feature at a point where it did not cut through the lower layers.

*Pit 4.* This was a very shallow feature, with an amorphous cut (041), which was 54 cms wide and 62cms long, in which only roughly 1cm of fills remained intact. The feature was cut very near to kerbstones 7 and 8 but did not abut them. The upper fill, (027) was a loose dark brown sandy silt and contained one fragment of pottery [1149], a large stone with quartz veins that seems to have been exposed to high temperatures and blackened, other burnt stones comprising some 10% of the matrix, and around 10% charcoal along with a few pieces of fragmentary cremated bone. Above this fill lay (037) a black silty soil matrix extremely rich in charcoal particles (c. 40%), and some 20% of which consisted of cremated bone, and more burnt stones. This would also appear to be the remains of an early Bronze Age cremation deposit, although this requires confirmation.



**Figure 12.** Pit 4.

## Finds

(see Appendix 2)

By far the most impressive finds were those from Pit 1: the battleaxe, the small collared urn and the small accessory vessel (see Fig 13). We also found a small flint assemblage, 2 pieces of Arran pitchstone and other very small pieces of pottery. The other significant prehistoric find was an unworn pebble found low down in (013) outside the cairn to the south of the southern passage, which would have made an ideal hammerstone or rubbing stone. There were also a series of modern finds, which probably attest to several hundreds of years of disturbance. This included the remains of several glass bottles, some clearly new and a few lumps of metal, probably from agricultural machinery. A fork made in 1973 was also found in the topsoil of the chamber.



**Figure 13.** The small collared urn and battleaxe just before being lifted (left) and the small accessory vessel (right)



**Figure 14.** The battleaxe.

The pottery is currently being conserved at Cardiff University. Therefore, no pot report is included here. However, Alison Sheridan has suggested that the pot is a small example of

a collared urn, dating it to between 1900-1500 BC, placing it firmly in the second half of the early Bronze Age. We hope that we will also be able to conduct lipid analysis on both pots from Pit 1 as well as petrological analysis: this may be able to help us construct a biography for the pots prior to deposition. The bone and charcoal is also currently being examined, and while we expect the results of analysis within a year of the excavation, no report for those are included here. Specialists have examined the battleaxe and flint, however, and their reports follow.

### **Report on battle axehead from Cairnderry, Dumfries and Galloway**

*Alison Sheridan, National Museums of Scotland*

Battle axehead, length 128.3mm; maximum width (at perforation) 61.5mm; maximum thickness (at blade) 49.9mm; minimum thickness (at butt) 21.5mm; perforation diameter 29.2mm at outer edges, narrowing to 24.3mm in interior. In profile it has a slightly expanded blade and gently dished upper and lower surfaces, which narrow (without being faceted) to a gently squared-off butt. In plan the blade is blunt and the body ellipsoid, with the butt end again gently squared off. The perforation is central, gently hourglass-shaped (indicating that it had been drilled from both sides), and very smooth. The surface of the battle axehead is also very smooth, and there is a hairline crack extending across the body from the perforation.

The stone has been identified by Dr Suzanne Miller (NMS Geology and Zoology Department) as a granodiorite. It could have been obtained within a few kilometres of the findspot, either from an outcrop (there are outcrops of dolerites and granites in this part of the former Stewartry of Kirkcudbright) or as a cobble in glacially-transported deposits. (Granodiorite erratics could easily have been transported south-westwards into the region from sources in highland Scotland.) Previous work on the sourcing of stones used for battle axeheads by Malcolm Fenton (1984) had concluded that selection of visually-striking glacial cobbles, of a size close to the finished size of the object, seemed the most likely scenario.

According to Fiona Roe's typology of shafthole implements, this item is an

‘Intermediate’ battle axehead (Roe 1979, fig 2) – a type believed to be roughly contemporary with ‘Wessex 1’ burials (Smith 1979, 16) which, according to Needham’s estimation (1996), should date to around 2000-1750 BC in calendar years. Its association here with a Collared Urn would be consistent with such a date (see Sheridan 2003 for details of dated Scottish Collared Urns), and the currently-available dating evidence relating to battle axeheads in Scotland would also accord – or at least, not contradict. The developments identified in Roe’s scheme from ‘Early’ through ‘Intermediate’ to ‘Developed’ battle axeheads involve an increasing accentuation of shape, with blades becoming expanded and butts becoming angular, *inter alia* (see Roe 1979 for details). Radiocarbon dates which have recently been obtained for NMS for cremated remains associated with battle axeheads have confirmed her overall sequence. An ‘Early’ (‘Woodhenge style’) example from a Food Vessel-associated burial at Barns Farm, Fife (Shepherd 1982, 106-8 and fig 19) has just been dated to 3595±50 BP (GrA-24001, 2030-1880 cal BC at 1σ, 2140-1770 cal BC at 2σ); an ‘Intermediate’ example from a Collared Urn-associated burial at Carwinning, North Ayrshire, to 3435±45 BP (GrA-19421, 1880-1680 cal BC at 1σ, 1880-1620 cal BC at 2σ); and a ‘Developed’ example from McKelvie Hospital, Oban, Argyll & Bute, to 3400±40 BP (GrA-24017, 1750-1620 cal BC at 1σ, 1880-1530 cal BC at 2σ).

As regards other battle axeheads found with Collared Urns, Longworth’s *corpus* (1984) illustrated five examples, all of ‘Intermediate’ or ‘Developed’ type (his nos. 2236, 1301-2, 1959, 902 and 169; maceheads not considered here).

### **The lithic assemblage from Cairnderry**

*Amelia Pannett, Cardiff University*

The lithic assemblage comprises 20 lithics recovered from the pre-cairn surface beneath the structure of the cairn and within the chamber.

#### *Primary technology:*

The assemblage comprises predominantly flint, with one piece [1183] showing signs of having been burnt. Two pieces of Arran pitchstone were also recovered.



	Total number of lithics	% of assemblage
Primary	5	25
Secondary	10	50
Tertiary/Infer	5	25

The proportion of primary pieces in the assemblage is relatively high, suggesting that unprepared flint nodules were brought to the site for knapping - the presence of two flakes with cortical platforms confirms this. The cortex on the primary flakes is abraded – characteristic of beach pebbles. However, the flint itself is of good quality, showing no signs of the flaws that are often found in beach flint. There appears to have been no preference for the type or colour of flint chosen, with quality apparently dictating the raw materials used. Cairnderry is located around 20km from the nearest possible source of flint, the beaches around Wigtown Bay.

The Isle of Arran, the source of the pitchstone, is located around 70km to the north-west of the site. The two pitchstone flakes recovered had evidently originated from different cores, and were distinctly different in appearance and quality.

The assemblage comprises predominantly irregular flakes, with three blade fragments identified, including one of the pieces of pitchstone. The complete pieces are consistently small, with an average length of 23mm, breadth of 16mm and thickness of 5mm. This is no doubt reflective of the size of the available raw material.

Although no cores were recovered from the site, it is possible to determine that the predominant form of core reduction was single platform flaking. There is no evidence for the use of a bipolar flaking technique. Two of the pieces showed signs of platform preparation, with the edges lightly trimmed prior to the removal of the flake. The core rejuvenation flake identified appears to have been struck to remove a large flaw in the cortex of the nodule and to facilitate the continued use of the core – maximum use was evidently being made of the lithic resource. This flake shows evidence for the removal of

both flakes and blades.

Four flakes showed evidence for stepped or hinge fractures on the terminations. This may be reflective of the quality of raw material used, but may also relate to the use of a soft hammer technique.

#### *Secondary technology*

Only the pitchstone showed any signs of use or retouch, with edge damage identified on the snapped blade [1158]. This is very fine, and restricted to one edge of the blade.

Adjacent to the snapped end of the blade is a further small area of damage, which may relate to the deliberate snapping of the blade by striking one edge. The possible retouch on the other pitchstone piece [1161] is also very fine, and restricted to one corner of the flake. This is reminiscent of abrupt anvil retouch, although its limited area and small size may indicate that it was also caused through use of the flake.

#### *Interpretation*

The limited size of the lithic assemblage and the lack of any tools makes it difficult to draw any firm conclusions about the nature of the activities associated with the scatter. The presence of both flakes and blades indicates that it is late Mesolithic/ early Neolithic in date, although the latter is more likely. Knapping was evidently occurring on the site, with flint nodules imported from the beaches, possibly brought inland along the River Cree. It is possible that the assemblage represents an episode of transient activity at the site, with knapping taking place but the resulting tools removed and cores curated.

Pitchstone was also imported, although it is unlikely that this was being worked on the site. Saville has recently commented on the recovery of Arran pitchstone from Neolithic sites in Scotland, noting that where this material is found it generally occurs as a single find or a very small assemblage (Saville 2002, 89). This, he suggests, may highlight the 'exotic' nature of the pitchstone, for, as a functional resource, it is not as desirable as flint (Saville 2002, 89). In the context of the Cairnderry assemblage, therefore, it is interesting to note that the only pieces which showed any signs of retouch were the pitchstone flakes.

## **Discussion**

The results from this seasons work at Cairnderry are very exciting, offering a range of insights into the construction, use and subsequent reuse of this site. It appears that the fallen capstone did not preserve any prehistoric deposits of note, possibly since these had been removed in prehistory, or possibly because these had been destroyed during the interference with the structure in the historic period. No material from a secure enough context for radiocarbon dating has been recovered from under the cairn or within the chamber and passage, and while we did obtain material for use in optical thermoluminescence dating from under the cairn the degree of precision offered by this method at present is unlikely to provide a useful dating range, and we are unlikely to have the material processed as part of this current project. However, while dates for the initial construction of the monument still prove elusive, a number of major discoveries were made which shed new light on Cairnderry and suggest avenues for further research on Bargrennan chambered cairns more generally. We consider the implications of this seasons work in chronological order.

### *Early Neolithic activity*

We now have enough evidence to support the idea that there was activity on the site in the early Neolithic. This is represented by an early Neolithic lithic and pottery assemblage. Whether this assemblage represents activity just prior to the construction of the cairn remains unclear. This seems the most likely scenario, although we should not rule out the possibility that this activity predates the monument by many hundreds and years, and the site was chosen at a later date for the construction of a monument. If the latter was the case, it indicates the persistence and long-term significance of this particular locale. The presence of pitchstone in this assemblage is particularly interesting. The desirability of exotic and shiny black pitchstone has already been noted, and its presence strongly hints at knowledge of the wider Neolithic world, which may well have included knowledge about different (Clyde) monuments, which are numerous on Arran (Henshall 1973). Both pieces of pitchstone were found within the chamber and passage. It is difficult to assess whether these were deposits within the chamber itself, or onto the prepared ground surface which would subsequently see the construction of the

monument. The presence of one piece of pitchstone [1158] over the grey redeposited natural layer (032) suggests the latter, and may represent a special deposit deliberately placed prior to chamber construction. It is relevant to note that pitchstone was also found at Cairnholy I. It is worth noting that no evidence of later Neolithic or early Bronze Age or any later activity was recovered from the area within the perimeter of the cairn.

### *Monument construction*

Unfortunately, we still have no clear clues as to the date of the construction of the monument. It seems clear that the monument was built in one single phase. Our favoured construction sequence begins with the laying down of grey parent geological material over some of the site, followed by a single layer of cairn stones. Some of the base layer of cairn stones were large ‘cushion’ stones which would eventually support the chambers. The kerb may have laid down early on in the sequence, or following the placement of the first course of cairn stones. The chambers were probably constructed next followed by the rest of the cairn being built up. All the stones were derived from the local area (James Williams *pers. comm.*) and can still be found in the surrounding landscape, particularly the nearby stream. There was no evidence that the cairn was a multi-phase construction, or that the chambers were added at different times. Since we are therefore envisaging a single construction sequence at Cairnderry, this contrasts markedly with the Clyde monuments in the area. Certainly both monuments at Mid Gleniron (Corcoran 1969) and also probably the monuments at Cairnholy (Cummings 2003; Noble forthcoming; Scott 1969), have evidence of multi-phase construction sequences. These monuments probably began life as simple box-like chambers, which then had additional elements added, including extra chambers at Mid Gleniron I and II, and façades and long cairns at all sites. Clearly something rather different has occurred at Cairnderry. This obviously has chronological and functional implications, but does not exclude the possibility that all monuments in Dumfries and Galloway are contemporary. We also have, at present, no sense of how the monument was used once it had been constructed. We suggest the southern chamber may have been paved, but none of the deposits (if there ever were any) have survived. We also consider it to be very interesting that the whole monument was constructed without cutting into the earth of the knoll on which it was built. Our impression is of a monument capping a natural and possibly

sacred place without disturbing the earth. The stones defined by Henshall as part of a peristalith look most likely to have been part of a kerb, which originally sat some 1 or 2 meters further towards the centre of the monument than their current resting places. The west of the monument was the largest area of the perimeter to display an unbroken façade, and may have afforded the most dramatic difference in height between the ground surface and the top of the monument. This would have been a very impressive monument, the impact of which was clearly important into the early Bronze Age.

### *Early Bronze Age reuse*

Like other Neolithic chambered tombs, the chambers at Cairnderry may well have been blocked prior to the Bronze Age (e.g. Cairnholy 1: Piggott and Powell 1949). This might indicate why the cremation deposits were found around the edge of the monument. However, because of the poor preservation of the chamber deposits, we cannot rule out the possibility that the chamber remained open and accessible. Elsewhere, at Cairnholy I for example, even though the forecourt had been blocked, early Bronze Age people gained access to the rear chamber and made a series of deposits (and possibly removals) there. The early Bronze Age deposit richest in material culture (Pit 1) was made at the point where we think the southern passage ended, indicating that people knew where the key architectural features were located. One of the other cremation deposits (Pit 2) was pushed right underneath one of the kerbstones, while others lay a short distance from the kerb. People were clearly drawing on the significance of this place by making these deposits. The significance of this place in the landscape had persisted in the memory of local people, illustrating the power of place to endure over considerable periods of time.

It is unclear how far the deposits were removed from the cremation pyres, but several fills contained small quantities of burnt stones, some large chunks of burnt wood, and very fine silty lower fills rich in small flecks of charcoal. Whether cremation was nearby or not, it seems care was taken to deposit a representative portion of the pyre remains, rather than just bags of carefully selected bone. However, some contexts, such as (048), do attest to the deposition of discrete collections of bone. Rather few people were buried in the early Bronze Age, and interpretations often tend towards the idea that those who were must have been powerful individuals (e.g. Clarke *et al.* 1985). However, we might

interpret these deposits not so much simply as burials of the dead, but as a gift or offering given by the community to other powers at an older, sacred place. Alongside valuable objects like the axe, the converted and refined bodies of the dead were offered in the form of their bones. This early Bronze Age deposition of bodies and objects around the perimeter of the chambered cairn at Cairnderry and at sites in the region as a whole is an intriguing phenomenon, potentially linking Bargrennan and long cairns in a new way, and one we would like to pursue in further study. It would be useful to discover whether there are further early Bronze Age deposits around the perimeter of Cairnderry, and also whether similar events occurred at Bargrennan and other sites of the type. In this context Piggott and Powell's discovery of cremated bone and pottery in a shallow pit at the entrance of the passage at Bargrennan is particularly intriguing, and suggests the need for further consideration of later activity around the perimeter of this monument and other Bargrennan sites.

#### *Subsequent events at Cairnderry*

The monument suffered heavily since the early Bronze Age, most visibly during the later historic periods. Robbing of stone from the monument was most visible in the south-west quadrant of the site, where almost all of Trench C had been robbed, but discrete 'bites' were also taken from the far west of the site in Trench A, and the far east of the site in Trench D. Shotgun shell components and glass bottles would tend to indicate a date somewhere in the last two hundred years for most of these events, but some of the removal of the upper courses of stone, damage to the chambers and passages, and creation of a rubble layer from cairn stones around the edge of the site could well have occurred at an earlier juncture. Much stone debris that was found in the southern chamber, including slabs that had sliced off from the capstone, and one of the orthostats showed signs of scorching. Several deep holes some of which have ripples extending out from them are present in the rear orthostat. These might be the result of weathering of the rock, or might be from drilling into the stone and blasting. The line of these would suggest that they follow a natural seam, so the first option is most likely, but an attempt to break up the chamber cannot be fully excluded without further assessment from a geologist.

### **Implications for future work proposed in 2004**

There is a strong possibility that we have only uncovered some of the early Bronze Age deposits around the edge of the cairn. It would be desirable to further examine the area around the edge of the cairn in more detail to look for additional deposits. To the west of the monument where the cairn has slipped by one or two metres such features may yet lie under the present location of the cairn, but in general such investigation would not involve further impact on the current structure of the monument. We would therefore consider excavating further areas around the outside of the site, particularly between the kerb and the trees and road in the southern half. We would also consider excavating the perimeter of Bargrennan White Cairn to assess the possibility that such deposits exist at both monuments.

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## Appendix

### *List of finds*

<b>Finds number</b>	<b>Context</b>	<b>Description</b>	<b>Co-ordinates E / N / H</b>
1100	013	Burnt bone	93.3 / 485.6 / 9.8
1101	012	Charcoal	92.5 / 484.5 / 10.0
1102	001	Fork made in 1973	Topsoil find
1103	003	Flint	82.7 / 488.2 / 9.8
1104	102	Charcoal	85.8 / 490.7 / 10.1
1105	003	Charcoal	84.8 / 448.4 / 9.9
1106	003	Pottery	85.9 / 485.9 / 9.8
1107	003	Pottery	85.8 / 485.0 / 9.8
1108	003	Pottery	84.2 / 488.2 / 9.9
1109	012	Bone	95.3 / 486.7 / 9.7
1110	003	Pottery	85.4 / 485.4 / 9.8
1111	003	Pottery	84.8 / 485.2 / 9.8
1112	101	Burnt bone	88.7 / 490.4 / 10.3
1113	101	Burnt bone	88.5 / 490.4 / 10.2
1114	101	Burnt bone	88.5 / 490.1 / 10.3
1115	016	Charcoal	93.1 / 485.3 / 10.5
1116	101	Burnt bone	88.4 / 489.1 / 10.2
1117	017	Charcoal	94.8 / 485.5 / 9.6
1118	013	Charcoal	96.0 / 486.3 / 9.6
1119	022	Charcoal	95.6 / 484.0 / 9.7
1120	101	Burnt bone	88.5 / 489.1 / 10.2
1121	023	Flint	88.3 / 489.9 / 10.2
1122	101	Bone	88.6 / 490.2 / 10.2

1123	101	Bone	88.6 / 490.6 / 10.2
1124	101	Bone	88.7 / 490.6 / 10.2
1125	101	Bone	88.7 / 490.6 / 10.3
1126	101	Bone	88.7 / 490.2 / 10.3
1127	101	Bone	88.5 / 490.2 / 10.2
1128	101	Bone	88.6 / 489.9 / 10.2
1129	101	Stone chips	Sieve find
1130	101	Burnt bone	88.1 / 489.2 / 10.1
1131	101	Burnt bone	Sieve find
1132	101	Metal	87.2 / 486.5 / 10.0
1133	013	Pebble	88.5 / 482.2 / 9.9
1134	017	Charcoal	92.7 / 485.2 / 9.9
1135	014	Pebble	93.2 / 484.8 / 9.8
1136	024	Glass	Surface find
1137	014	Charcoal	93.6 / 485.7 / 11.2
1138	035	Charcoal	86.6 / 483.1 / 9.7
1139	035	Stone ?	
1140	003	Flint	84.8 / 488.6 / 10.0
1141	105	Flint	87.8 / 489.5 / 10.1
1142	105	Flint	88.6 / 489.5 / 10.1
1143	034	Burnt bone	87.0 / 483.2 / 9.1
1144	014	Charcoal	96.9 / 488.6 / 9.5
1145	014	Quartz	90.1 / 486.2 / 9.4
1146	025	Flint	87.9 / 486.8 / 10.3
1147	112	Flint	88.3 / 488.9 / 10.2
1148	016	Cremation	93.0 / 485.3 / 10.0
1149	027	Pottery	95.6 / 486.8 / 9.8

1150	027	Burnt stone	
1151	040	Quartz	88.4 / 481.6 / 10.0
1152	112	Bone	88.1 / 488.9 / 10.2
1153	027	Stone	95.3 / 486.7 / 9.6
1154	037	Pottery	95.3 / 486.6 / 9.6
1155	036	Pottery	86.6 / 483.6 / 9.8
1156	105	Bone	
1157	037	Pot	95.2 / 486.5 / 9.6
1158	105	Arran pitchstone	88.6 / 489.7 / 10.1
1159	034	Charcoal	86.7 / 483.1 / 9.7
1160	028	Pottery	95.5 / 486.2 / 9.5
1161	032	Arran pitchstone	86.0 / 490.5 / 10.1
1162	034	Charcoal	86.8 / 483.1 / 9.7
1163	053	Flint	84.4 / 482.1 / 9.8
1164	035	Battleaxe	86.6 / 483.3 / 9.6
1165	054	Quartz rock	
1166	028	Flint	95.8 / 485.7 / 9.5
1167	021	Pottery	95.0 / 485.9 / 9.6
1168	012	Pottery	95.4 / 486.2 / 9.6
1169	056	Collared urn	86.7 / 483.3 / 9.7
1170	035	Charcoal	86.8 / 483.2 / 9.6
1171	027	Cremated bone	95.2 / 486.3 / 9.6
1172	035	Fire cracked stone	86.9 / 483.1 / 9.2
1173	054	Quartz rock	
1174	035	Stone	86.7 / 483.1 / 9.5
1175	054	Flint	85.2 / 480.8 / 9.8
1176	102	Bone	Stray find

1177	053	Quartz	
1178	035	Stones	
1179	052	Charcoal	95.3 / 485.5 / 9.4
1180	102	Flint	88.2 / 491.3 / 10.1
1181	102	Flint	88.3 / 491.5 / 10.2
1182	102	Flint	88.4 / 490.8 / 10.1
1183	102	Flint	88.4 / 491.0 / 10.1
1184	102	Flint	Sieve find
1185	102	Flint	Sieve find
1186	042	Pot	94.9 / 485.7 / 9.4
1187	101	Bone	88.4 / 490.6 / 10.1
1188	035	Pot (accessory cup)	86.7 / 483.2 / 9.5

*Contexts relevant to the interim report*

A number of contexts were assigned to layers which were geological in origin, to fills of topsoil in shallow stone holes and to different areas of cairn material which were later subsumed under a single context. Fills of pits and cuts of stoneholes that are not discussed in this interim are not included.

**001** is topsoil, thick with roots, very damp, very humic. The topsoil over the cairn is generally less than 10 cms thick, and in places the cairn stones (002) are exposed. The topsoil sits as a heavy water-logged layer above the stones, and does not drain well. 001 extends over the entire site, and can be up to 30cms deep outside the cairn.

**002** are cairnstones. In most places only one course remains, in some places (002) was altogether absent. Size of stones varied but most were over 50cms in diameter and less than 1m in diameter. The stones were over 99% local greywhacke and gritstone, with around 1% granite boulders. See fig \* for the full extent of 002.

**003** is a largely sterile and stone-free dull reddy orange shading lower down to a brighter burnt umber silty clay loam found between and beneath the lower course of the cairnstones. Thickness varied from absent under the base of stones to c4cms deep under the stones. It is possible that this was silting subsequent to the deposition of (002), or that this was part of a bedding layer and was deposited along with (002), or that it represents the leached remains of the ancient topsoil (this possibility is being studied by Donald Davidson, though it is not thought likely to be the case). This layer blended into (004), so it was difficult to distinguish between layers until the subsoil became very compact to trowel, or in areas where (032) was sandwiched between these layers. (003) was found only within the perimeter of the cairn, and was observed underneath kerbstones.

**004** is the strong orange varying with depth to a very bright yellowish strong orange silty clay loam subsoil found across site and is the post-glacial b-horizon between the parent geology and the layers laid down in prehistory. It is anticipated that this would have been the soil immediately underneath the topsoil when the cairn was built, and it extends throughout the site including outside the perimeter of the monument.

**005** is the olive-grey extremely compact pre-glacial clay parent geology, found in patches underneath the cairn.

**011** are kerbstones. The largest is 40cm x 1m x 40cm. Others are higher but not as wide.

**012** are broken and dislodged stones sitting within a loose soily dark brown topsoil matrix just outside the extent of the cairn. They may be dislodged and broken up cairn stones, and are generally flat and sharp along most facets, but also likely to include rounded surfaces. The local greywhacke is easily fractured, and stones may smash during normal displacement without deliberate attempts to do so with tools.

**013** is a bright orange silty clay loam layer resting over 004 outside the perimeter of the kerb, and abutting kerb stones to a maximum depth of c. 50cms. (013) lay underneath the rubble (012) and contained differing slips of flat cairn slabs designated generically as (014). It is anticipated that 013 is the remains of a long-term soil formation process

through which the humic a-horizon increased in depth, and then migrated upwards, leaving a widening layer of b-horizon underneath. (013) is the resultant b-horizon outside the monument which post-dated its construction, and continued throughout the period of cairn collapse, but was then sealed in by the deposition of the rubble layer (012).

**014** are flat greywhacke slabs roughly 60cms by 50cms and 15cms thick which were found at a shallow tip angle all around the outside of the cairn, and seem to have been dry stone walling sitting above the kerbstones and subsequently dislodged. In places (e.g. just exterior to the peristaliths in Trench A) these slabs entered the ground at a far more pronounced angle (almost vertical), suggesting that they had fallen from some height directly above the impact area. It is not envisaged that there was one single collapse event, but that this was a gradual and ongoing process starting some time within or shortly after the early Bronze Age.

**030** is a context number given to the cairn stone removal event in trench C.

**032** Very compact thin (less than 2cms thick) layer of pale mid grey clay seemingly taken directly from the parent geology (005) rich in charcoal smears and flecks, deposited before cairn construction over (004) and under (003). This may have originally been a mound left by excavation of some feature we did not locate, and then squashed flat prior to the construction of the cairn, or may have been brought to the locale and smeared over the land surface in the form we discovered it.

**053** Patch of dense cobbles in south of trench C, outside of the area of cairn and underneath rubble 012. Cobbles of this kind were found in very small and fragmented patches around the front of the cairn and outside the passage. In these areas cobbles were located in dislodged clumps under 014 slabs and 013, so there may have been a cobbled area around the outside of the monument directly following its original construction, though this is currently unclear. Stones of this size and shape were also found in (031), the uppermost intact fill of pit 1, perhaps indicating that areas of cobbling were disturbed at the time this feature was created.

### **Pit 1 (Pit with pot and axe: cut 050)**

**031** Thin spread of small stones (c7cms diameter) forming 80%+ of the fill, found within the dark brown loam matrix of the upper fill of pit. The fill was less than 15cms thick

**034** 50% medium to large subangular stones (c. 20cms by 20cms) some of which had an orange tenacious surface and signs of blackening, sitting within and fill found in upper layer of pit 1. Brown silty loam containing some fragments of burnt bone and charcoal. The stones packed the collared urn [1169] in from above and from the side. Two similar stones were found at the base of (034) underneath the upturned urn.

**036** Reddish dark orange soil matrix rather similar to the background subsoil, but seemingly reddened by exposure to high temperatures and containing 10% charcoal, 40% Small stones, and 5% bone fragments. This fill seems to consist of the slipped sides of the pit edge from a higher level, which collapsed in above (035) during the depositional practices. It also slumped in around (034) as such collapses continued while the feature was backfilled.

**049** Thin discrete fill projecting downwards and into the centre of the feature from the north side of the pit, consisting of blackish brown silty loam, charcoal sediments and flecks, 10% small (c2cms diameter) burnt stones, 15% burnt bone, and 50% charcoal chunks with long grains visible – possibly the remnants of pyre boughs or planks.

**048** Fill 60-70% cremated bone pressed in all around and partly underneath the urn. Particularly dense to the north of the pit. Gives the impression of a discrete dump of burnt bone.

**045** Collared urn [1169] and its contents deposited on two flat stones above 035. Contents of this fill are currently under excavation in laboratory conditions.

**035** Primary fill of pit, a rich layer of very fine sediments consisting largely of charcoal particles (50%), dark silty loam, charcoal lumps (5%) and fragments of bone (15%). A pygmy vessel was found sitting in the base of this layer to the north of the centre of the pit. Above this and further towards the east of the pit, a granodiorite battleaxe was found sitting with its shafthole upright. This layer was bowl shaped, with a relatively level upper horizon sloping upwards along the south side of the pit.

**056** Pygmy cup [1188] and its contents –placed directly onto the bottom of the pit most likely while (035) was being deposited.



**050** Cut of pit. The pit was roughly oval measuring at base 61 x 46cm and at top 121 x 109cm, and 31cm deep in the centre. It was fairly irregular in shape, with a flat base, a steep break of slope at the base, steep sides, a very shallow break of slope towards the top with shallower sides. The pit was located immediately in front of the passage area to the southern chamber.

*The majority of these fills were taken as an entire bulk sample, and are being processed at Sheffield University where the bones and charcoal are being analysed.*

### **Pit 2 (cut 058)**

**055** Loose brown silty fill above layer 16, containing 5% small bone fragments, 4% charcoal and 30% medium stones.

**016** is the primary fill of pit 2, rich in burnt bone (c.55% large fragments) pressed up underneath kerbstone 4, and rich in charcoal with a dark fine silty soil matrix.

**058** Cut of cremation deposit – dug through 013, and 004 under kerbstone 4. The base of the cut was a regular oval shape, 68cm by 30cms, while the upper reaches of the cut flared out and were extremely irregular. The base was flat to surrounded with a steep break of slope to the sides, then an abrupt break of slope opened to very gradual break of slope outwards to the top of the cut.

*These fills were taken as an entire bulk sample, and are being processed at Sheffield University where the bones and charcoal are being analysed.*

### **Pit 3 (cut 018)**

*This feature is only partially excavated, and no definitive interpretations can be offered.*

**018** Cut of Pit 3; the extent of this cut is not fully known. While the top of the cut was planned at 100cm by 100cm, during the final day of the excavation it became apparent that some of (013) thought to mark the edge of the cut was in fact material that had slumped into the pit (and containing some flecks of charcoal and some burnt bone, as well as overlaying some of the lower fills), suggesting it to be far larger than expected.

**021** Uppermost fill surviving within pit 3, a brown friable loam, with 50% very small stones (3cms by 1cm). Included one fragment of pottery [1107].

**022** Fill of pit beneath 021, a compact black silty loam containing 1% burnt bone fragments and up to 70% lumps of charcoal. (051) is identified as a black silty loam consisting of 80% charcoal lumps and flecks, and is a thin lens within (022).

**046** fill of pit below 022, a mid brown silty loam containing a localized lens of charcoal identified as (047).

**052** A friable red clay loam containing burnt bone and charcoal, and not fully excavated.

**059** a firm reddish brown sandy loam not fully excavated but apparently containing roughly 40% small surrounded stones, 40% medium to large angular stones, and 2% charcoal.

**060** Fill of pit consisting of a loose mid brown sandy loam containing charcoal and cremated bone, not fully excavated.

The pit was capped by slabs from (014), and then by (020), which is the same as (012). (017) is identified as a layer of loose blackish brown loam with up to 30% charcoal at the base of (020), and would seem to represent an area of (012) which involved the localized inclusion of burnt material. It was amorphous in extent, appearing in patches around the kerbstone.

*These fills were taken as an entire bulk sample, and are being processed at Sheffield University where the bones and charcoal are being analysed.*

#### **Pit 4 (cut 041)**

**041** Cut of pit located just to the east of kerbstone 7 - extremely shallow pit with flat base and abrupt break of slope at the sides, c 54cm wide by 62 cms, and 1.5 cm deep.

**027** 9mm deep fill of pit 4, a loose dark orangey brown sandy silt with 10% small stones, 10% cremated bone, less than 10% charcoal, and one sherd of pottery [1149]. Fill of pit

**037** 6mm deep fill of pit 4 beneath (027), a friable black silt, over 40% charcoal particles, 20% cremated bone, 10% small to medium burnt red stones.

*These fills were taken as an entire bulk sample, and are being processed at Sheffield University where the bones and charcoal are being analysed.*

#### **Chamber**

**101** Loose silty clay loam, humic with up to 20% root material, 60% large stones including flat slabs c. 50cm by 25 cms and up to 10 cms thick, and a very small amount of burnt bone (much less than 1%). Chamber topsoil.

**102** Uppermost fill of chamber, orangey brown silty clay loam with small flecks of charcoal, small stones and some flints. A very narrow layer around 2cm thick

**103** Context given to layer of large flat slabs (c. 50cm by 60cm, less than 8cm thick) underneath (102) and embedded in top of (104). Either paving slabs or slipped corbelling, though all were laid absolutely flat.

**104** Section of slipped drystone greywhacke walling overlaying (103) in the eastern side of the chamber and spilling out between the underneath of the two upstanding orthostats. Consisted of five small slabs which were not removed during the excavation.

**105** Lowest fill of chamber excavated, primarily orange silty clay, mottled with clumps of dark brown loam and grey clay geological material (probably derived from (005)). This layer contained flint and Arran pitchstone debitage, and gradually gave way to a firmer sterile subsoil likely to be (004). Interpreted as the puddled floor of an area walked on and disturbed most likely during construction of the monument, but possibly during a later event which cleaned out remains of any previous activity in the chamber.

*All of these fills appeared to run the full length and breadth of the chamber, although the chamber was not fully excavated for safety reasons.*

### **Passage**

**024** was an 18cm deep layer of friable dark brown silty clay loam which contained dislodged cushion stones and the impressions of removed stones filled with topsoil (001). The impressions allowed us to locate the probably place of the cushion stones on this side of the passage. It is thought likely that this layer may be heavily disturbed (003) which was in all cases far darker in areas where robbing had occurred.

**025** This crumbly orange-brown silty clay loam, around 14cms deep, is probably the remains of a disturbed passage fill, and, though it is impossible to assess when it was formed, the voids that (024) and (026) filled left impressions into the sides of (025) suggesting that it was present before the removal of the cushion stones and orthostats. The width of this presumed passage area was about 50cms. One piece of flint was recovered [1146].

**026** is an area filled with topsoil, which is essentially the furthest easterly extension of the robbing event (030), and seems to have removed the cushion stones from this side of the passage.

024, 025 and 026 were basically recent layers of soil forming within three different voids above any prehistoric deposits.

**043** Lowest fill of passage excavated, primarily orange silty-clay, mottled with clumps of dark brown loam and grey clay geological material (probably derived from (005)), and almost certainly the same as (105). The patches of grey material found in 043 were frequently flattened lenses rather than clumps, and either recorded the impressions of stones or underlay large angular stones. These stones seemed to be damaged and displaced cairn stones or cushion stones, and were found in the centre of the passage area. At the eastern side of the passage a cluster of such fractured greywhacke stone entered the soil matrix at a vertical angle, giving the impression they had penetrated the fill with some force in a fall from above (044).

Our overall analysis of the chamber is that it has been heavily disturbed, but that its extent can be cleared mapped even though all we found were the 'foundations' rather than any deposits.