



ARO6: Preparing for death: excavations at Blairbuy, Dumfries and Galloway in 2012

By Warren Bailie, with contributions by Iraia Arabaolaza and Jennifer Brown

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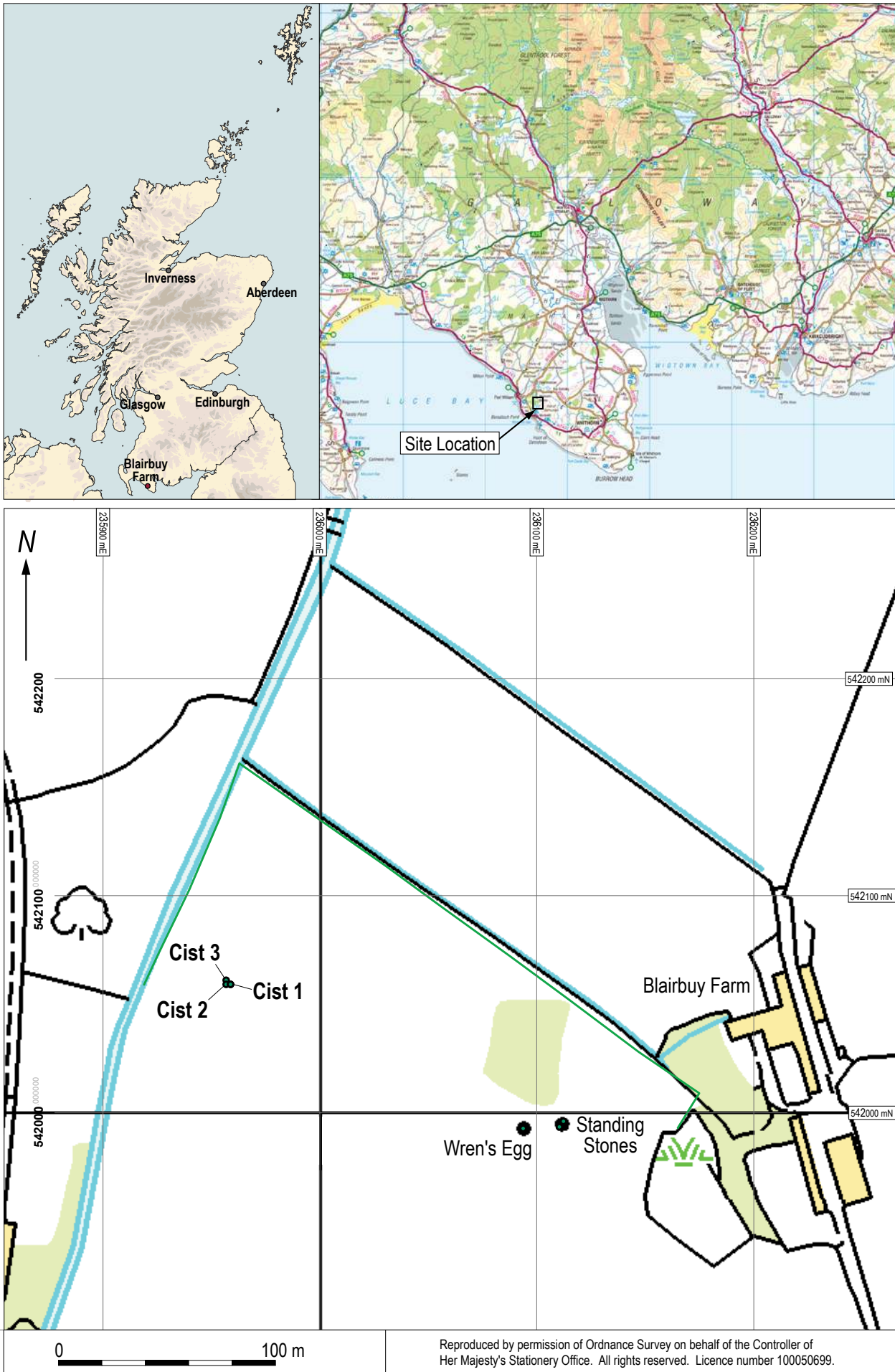


Figure 1: Site location.

Abstract

Archaeological investigations at Blairbuy Farm, Dumfries and Galloway revealed evidence that cists in the Bronze Age may have been tailored for individuals during their lifetime, possibly from early in life. During investigation of a cist containing a juvenile inhumation, accidentally damaged by ploughing in April 2012, two additional empty cists were uncovered. The cists were constructed differently in terms of both material and form. Samples from all three and the surrounding subsoil were tested using multi-element analysis and this implied that the two empty cists had never been used for the burial of human remains. The skeletal remains were that of a juvenile individual with an age estimate of approximately nine to twelve years old. This child suffered malnutrition, indicated by dental enamel hypoplasia (DEH) and cribra orbitalia, both childhood stress indicators. A radiocarbon date of 2027 to 1886 cal BC (2σ) was obtained from the left ulna, placing this individual's death in the early Bronze Age period.

Introduction

An archaeological rescue excavation was undertaken by GUARD Archaeology Limited at Blairbuy Farm, (NGR: NX 35960 42058) between 5 and 11 April 2012. This was conducted on behalf of Historic Scotland under the Human Remains Call-off Contract (HRCC). During ploughing, the landowner discovered a stone slab overlying a small stone-built cist (Plate 1), and an additional two cists were found during subsequent archaeological investigations in the immediate vicinity. Only the original cist contained human remains, a crouched juvenile individual.

The site of the three cists lay approximately 140 m to the north-west of the site of 'Wren's Egg' (Canmore ID 62752, Site Number NX34SE 10, SAM Index: 90316) a glacial erratic with a pair of nearby standing stones (Figure 1). This erratic may have acted as a focal point for prehistoric activity as there are numerous other known cists in the area. The three cists lay down slope of the Wren's Egg at approximately 31 m OD.

The surrounding landscape is one of undulating fields of arable and pasture with occasional stands of deciduous and coniferous trees. The fields are delineated by dry-stone walls constructed

of shale, sandstone, cobbles and whinstone, all locally available. The field where the cists were located slopes generally down to the north-west with small intermittent ridges probably reflecting undulations in the underlying geology. It was on one of these ridges towards the base of the north-west facing slope that the cists were located. The field is bounded to the north-west by Monreith Burn, which leads west down-slope to the nearby shoreline.

Excavation

On first inspection of the site, the stone cist (Cist 1) was photographed as found (Plate 1) and an account was taken from the landowner of the events leading to the discovery of the cist containing human remains. He had been carrying out routine ground preparation for the sowing of barley, when a plough blade struck the capstone of the cist. The farm-hand then had a 'guddle' in the hole and it became apparent that human remains were present. This led to the reporting of the find.



Plate 1: Cist 1 as found, from west.

The spoil around the perimeter of Cist 1 was passed through a 10 mm sieve for the retrieval of skeletal and any other artefactual or ecofactual material that may have been dispersed during the initial inspection and disturbance by the landowner. This task was completed prior to any further ground works. The overburden was removed from around Cist 1 to expose its full extent. This was accomplished using a smooth edged bucket on a mechanical excavator under the supervision of a professional archaeologist. During this process, two other stone cists (Cists 2 and 3) were uncovered within 0.8 m of the edge of Cist 1 (Figure 2 and Plate 2). The topsoil over and around them contained frequent rounded stones similar to the distribution noticed in the slight

rise in the field, which accommodated the cists. This may hint at a former cairn in this location. The surface of the subsoil around and between the cists was cleaned by trowel to ensure that no further archaeological features were present.

The upper levels of all three cists were cleaned by hand to ensure that any details in their construction or markings on the stones were not compromised. Each cist was subsequently planned, sectioned and photographed, and their positions were plotted using a sub-metre DGPS Magellan Mobilemapper CX. Samples of the internal cist fills, as well as fills below and around the cists within their construction pits, were retained for further analysis. A control sample was also collected of the surrounding subsoil in the event of phosphate or multi-element analysis being carried out. The skeletal remains within Cist 1 were cleaned using a trowel and small soft bristle brushes, planned, photographed and removed from site for further analysis.



Plate 2: Pre-excavation shot of Cists 1-3 from west.

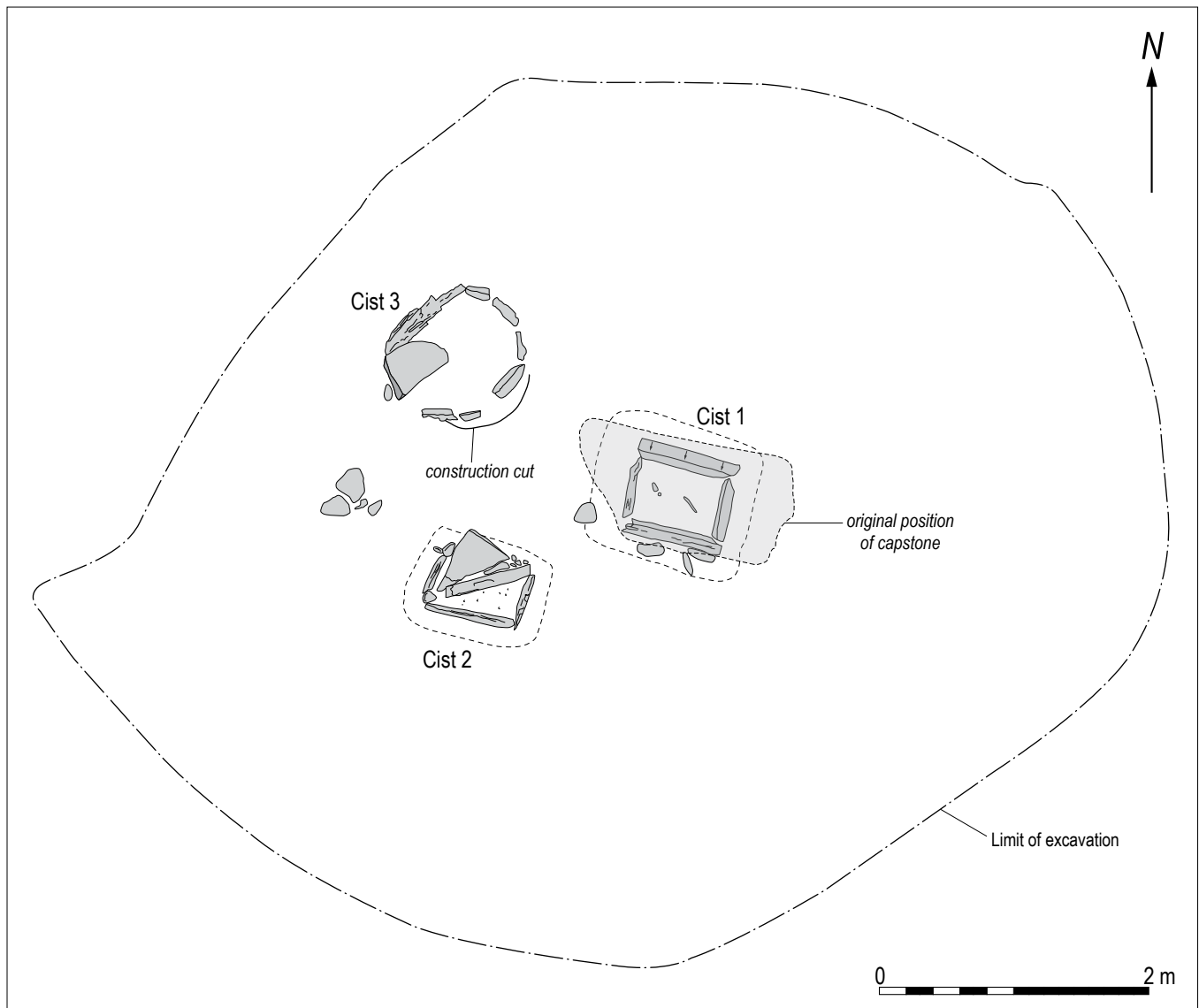


Figure 2: Pre-excavation plan of Cists 1-3, also showing capstone of Cist 1 in original position.

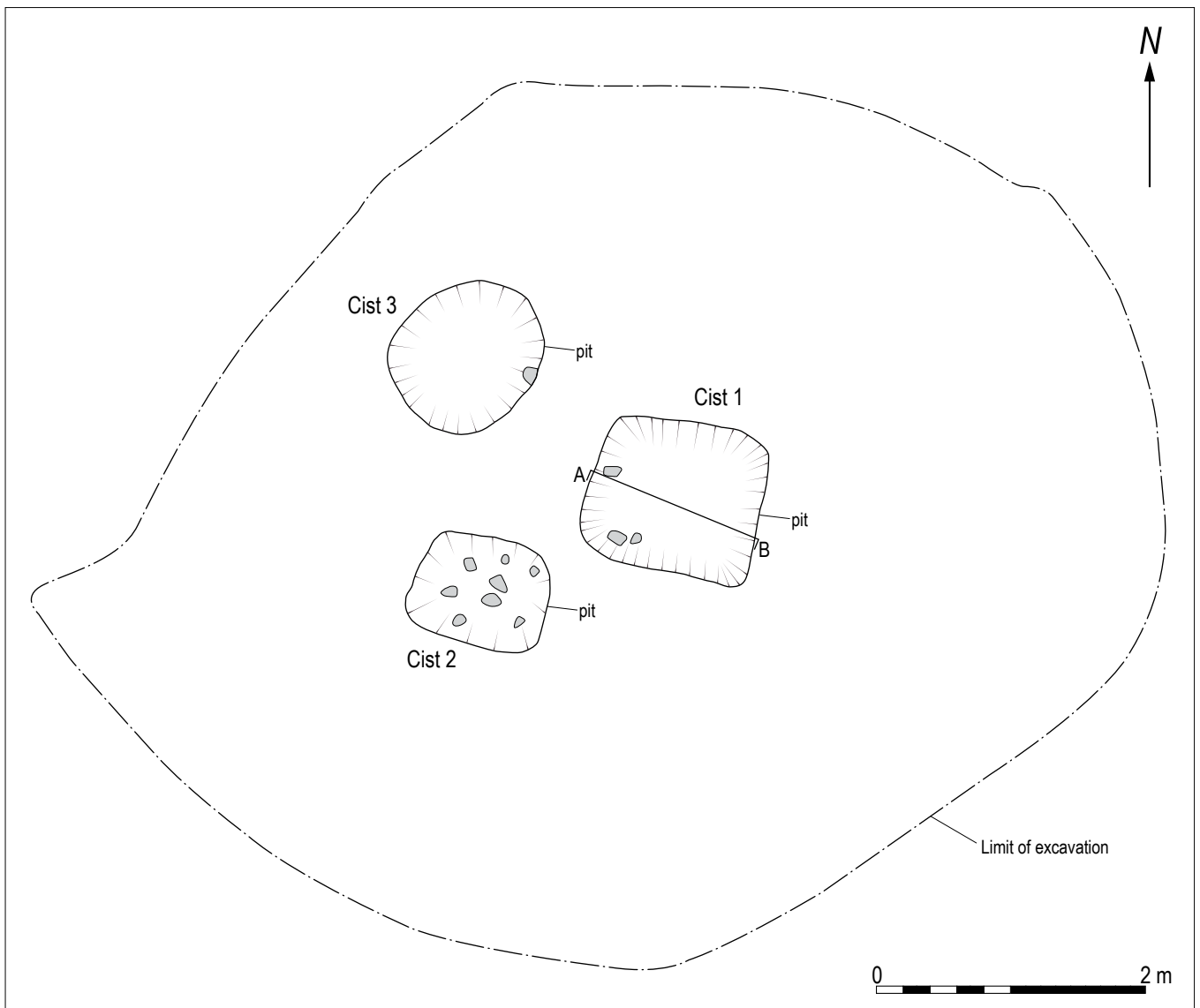


Figure 3: Post-excavation plan of Cists 1-3.

All slabs and other irregularly shaped components of each cist were checked for tool-marks, inscriptions, and fungal adhesions but none were noted. On completion of the excavations the six whinstone slabs from Cist 1 were left in the guardianship of Mr. McMaster, the farmer, but the small and broken stones from Cists 2 and 3 were not.

Construction of the Cists

Cist 1

This cist was constructed from whinstone slabs, possibly sourced from a small outcrop located to the east of the burial location. The sub-rectangular construction pit measured 1.14 m by 1.3 m and was 0.6 m deep. It was orientated ESE/WNW (Figure 3). A slab was laid in what at first appeared to be, a fairly horizontal position in the

base of the pit; but in fact sloped to the east with a difference in level of 40 mm across the surface of the slab. Four upright slabs were placed tightly around the sides of the basal slab to create a rectangular internal space; and gaps between them were plugged by small pebbles. The internal space measured 0.4 m by 0.6 m on plan and was between 0.45 m and 0.49 m deep. The bottom edges of the two longer slabs were placed on the base of the pit but the two narrower slabs at either end of the cist were dug into the subsoil by up to 0.15 m (Figure 4), presumably to achieve a level cist top for a capstone. The human remains were laid on the basal slab some time after construction (Plate 3) in a crouched position with the left arm flexed towards the head, the right arm extended towards the pelvis and the head faced north (Figure 5). An over-sized capstone sealed the cist in the early Bronze Age period,

probably remaining intact until its discovery after 29 March 2012; although we cannot be certain that the cist was not opened for commemoration or inspection at any point in its history. Actions of this nature are not likely to leave any trace.

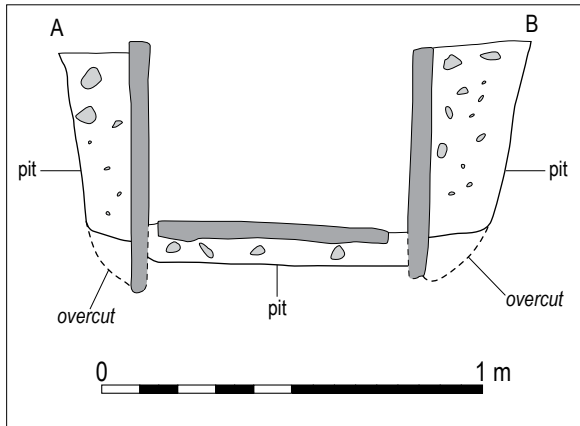


Figure 4: SSW-facing section of Cist 1 - construction cuts and slabs.



Plate 3: Cist 1 Skeletal remains, from SSW.

Cist 2

The remains of this whinstone constructed cist lay 0.8 m to the south-west of Cist 1 and were in a poor state of repair with a fractured and collapsed capstone (Figure 2). The construction pit measured 0.76 m by 0.95 m by 0.35 m deep. It was aligned on the same ESE/WNW orientation as Cist 1. Two sides of the cist were defined by shale slabs with a third side comprised irregular stones; the remaining side had no stones or slabs present. The internal cist space measured 0.42 m by 0.64 m by 0.35 m deep. The whinstone capstone had been disturbed in the recent past, as it had fractured and collapsed into the internal cist space. Up to this point the cist must have been intact and therefore relatively empty for the capstone to collapse inside so readily. No human remains or other artefacts were discovered during the investigation.

Cist 3

The third cist lay 0.8 m north of Cist 2 and 0.8 m WNW of Cist 1. It was different in a number of ways from Cists 1 and 2. The construction pit, which measured 1.04 m - 1.2 m by 0.47 m and 0.48 m deep, was oval in plan. The material used for the cist was exclusively irregular pieces of shale, with its long axis aligned north-east to south-west. The shape of the cist mirrored that of the construction pit. The cist construction involved the placing of various irregular shale stones around the edge of the pit. These were then backfilled behind for support. The basal stones were then laid tightly against the side slabs with small gaps packed with small shale pieces (Figure 6 and Plate 4). The internal area of the cist measured 0.74 m by 0.92 m at its top edge and 0.5 m by 0.62 m at its base. It had a similar sized area to that of Cist 1. The depth of the cist varied between 0.33 m and 0.39 m due to the irregularity of the stones used. There were no skeletal remains or artefacts present, and the capstone(s) were missing.

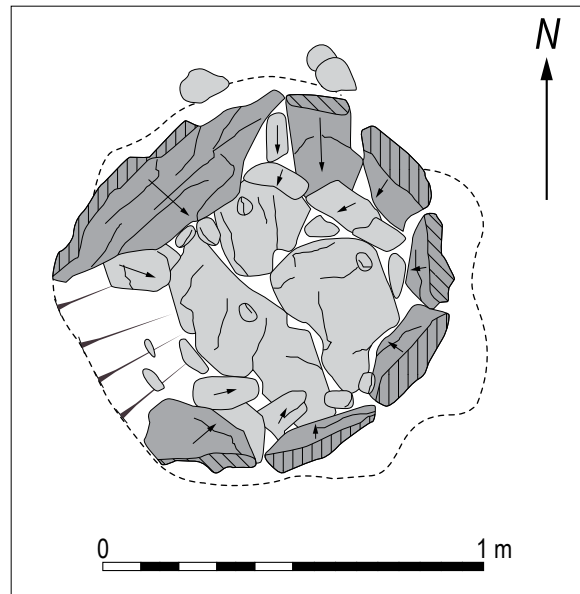


Figure 6: Excavation plan of Cist 3.



Plate 4: Cist 3 side slabs and basal stones exposed, from south-west.

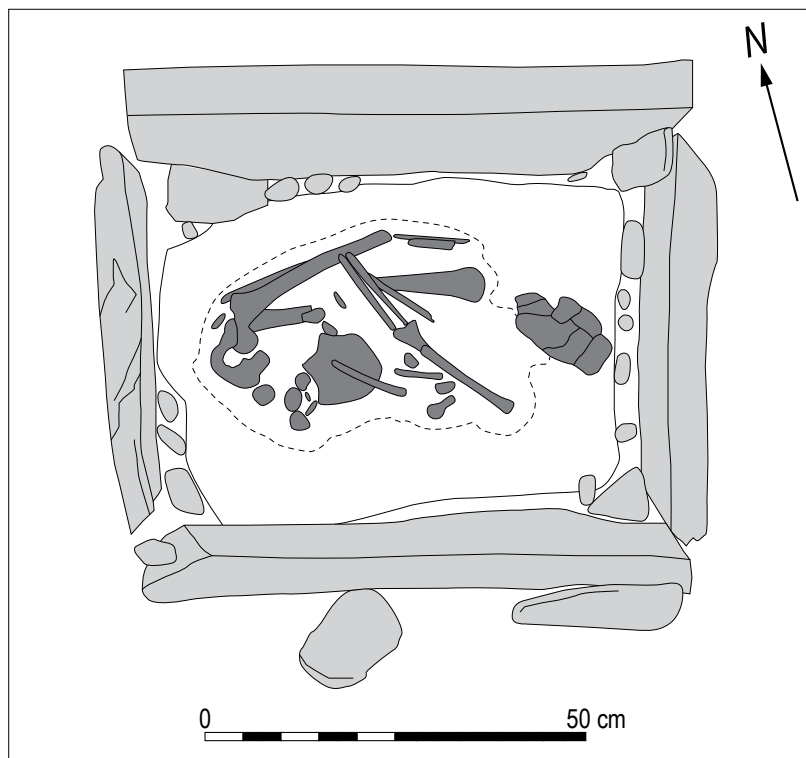


Figure 5: Plan of skeleton 01 in base of Cist 1.

Specialist Reports

The skeletal remains

By Iraia Arbaolaza

A macroscopic analysis was carried out on the human remains. Standards used during the analysis included Brickley and McKinley (2004) and Buikstra and Ubelaker (1994) and the data was recorded on pro-forma skeletal recording sheets. About 75% of the skeleton was recovered, although ribs, vertebrae, scapulae and clavicles, some hand bone and most of the lower limbs, except for both femorae, were missing (Figure 5 and Plate 3).

The human remains were those of a child aged between (3-12 years old), although a more specific age was obtained based on the dental development and eruption of 9.4 -12.2 years of age (Smith 1991). Most of the permanent dentition was present and erupted, apart from the unerupted third molars. The crown of the third molar was completed and the roots of the canine were still not closed giving an age of 11 years (+/- 30 months) according to Ubelaker. The epiphyseal fusion age obtained was of an individual that did not reach puberty but was older than 6 years. Even the long bone measurement based on the left radius gave an age range of 9.5-11 years.

The sex determination of human remains is based on pelvic and cranial morphology, and post cranial metric data. However in sub-adult skeletons, especially on those who have not reached puberty, the lack of sexual dimorphic traits in either skull or pelvic fragments prevent any reliable determination of sex. As a result, it was not possible to determine the sex of these remains.

The pathological indicators encountered on the skeletal remains; dental enamel hypoplasia (DEH) and *cribra orbitalia* are both childhood stress indicators. The defects identified on the enamel indicated at least two episodes of stress, which occurred prior to the individual's death. The same can be said about the *cribra orbitalia* lesions, which were healing at the time of death. As a result, none of these pathological conditions would have caused the death of the individual. However, they would have weakened the individual's immune system and therefore made it more vulnerable to any other diseases. Their presence certainly indicates that the individual suffered poor living conditions and environmental stresses during her/his life.

Multi-element analysis using XRF

Dr. Jennifer Brown

The aim of the analyses was to determine if there were once human remains in the two empty cists. To do this, it is necessary to find a chemical 'signature' for the presence of an inhumation. By sampling material from soil surrounding clearly identifiable bodies it is possible to extrapolate the trace-element 'signature' to a situation where no visible traces can be found but the presence of a body is suspected (Bethell and Smith 1989, 47-55).

Methodology

Pellets of 5 cm diameter were prepared by pressing 36 g of air-dried soil, previously sieved to 2 mm, to a pressure of 11 tons using a Perkin-Elmer press. Element concentration determination was performed with XRF spectrometry using an Energy Dispersive Thermo Scientific NITON handheld XL3 Series analyser. Five replicates were measured per sample for quality control.

Nine elements, commonly reported as being altered in soils from inhumations, were considered for statistical analyses (Lambert et al. 1985, 477-482; Bethell and Smith 1989, 47-55; Fiedler et al. 2012, 90-97). These were: Strontium (Sr), Chromium (Cr), Calcium (Ca), Potassium (K), Aluminium (Al), Phosphorus (P), Magnesium (Mg), Zinc (Zn) and Iron (Fe). Statistical analyses were performed with the software Minitab version 15 and using a 5% significance level.

Results

Although phosphate analysis has commonly been used to detect inhumations where no human remains are seen (Johnson 1956, 200-207; Barber 1982, 536-541), other studies have found either no signs of P accumulation in grave soils or no conclusive evidence (Barker et al. 1975, 550-572; Fiedler et al. 2012, 90-97). The levels of Al were significantly lower in samples from the skeleton in Cist 1 than other samples. This can be explained by translocation of Al from the soil to the bones, a phenomenon which has been previously reported not only for Al but also for Fe and Mn (Lambert et al. 1985, 477-482).

Statistical comparisons of the Ca-P-Al signature, with samples from empty cists, show no evidence

of a body having decomposed in them. Moreover, the samples from the empty cists were not significantly different in the levels of Ca, P and Al than control samples, reinforcing this conclusion. It is highlighted that this signature is specific to this example and will not necessarily be repeated under other burial conditions. Factors such as soil type, drainage and pH affect the diagenesis of organic matter and the retention of elements in the soil (Bethell and Smith 1989, 47-55).

Conclusion

Based on the combination of Ca, P and Al levels associated with human remains in Cist 1, it is concluded that no bodies have decomposed in Cists 2 and 3. The methodology used shows the advantage of using multi-element analyses over phosphates analysis since the information from the P content alone would not have given conclusive evidence in this case.

Radiocarbon dating

Due to insufficient quantities of organic material recovered from the soil samples, a sample of the left ulna from the skeletal remains was used for dating. The sample was submitted to Scottish Universities Environmental Research Centre (SUERC) for radiocarbon dating. The bone produced the date of 3593 ± 29 BP (GU29888 - 2027-1886 cal BC at 2σ) placing it in the Early Bronze Age period (ScARF 2012).

Discussion

The Blairbuy farmlands are located approximately 1 km inland of the shoreline at Monrieth (Figure 1). The farm sits amidst a landscape that is very rich in prehistoric archaeology; with evidence of Mesolithic, Neolithic, Bronze Age and Iron Age activity. The closest site to the position of the cists is the 'Wren's Egg' glacial erratic and a nearby pair of standing stones 15 m to its east (Canmore ID 62752, Site Number NX34SE 10). This particular site was investigated in 1972 (Masters 1976-77, 28-43) as a result of the theory that the large glacial erratic formed the centre of a double concentric stone circle, based on accounts from 1912 (RCAHMS). The investigations found no evidence of a former circle or circles of stone. It was conceded however that stone sockets could have been ploughed out. Finds, mostly from the plough soil, included a flint knife, scrapers, flakes,

and unworked pebbles of flint. During the recent investigations at Blairbuy in April 2012 a number of large elongated boulders were observed around the edges of the stand of trees adjacent to the Wren's Egg and the existing standing stone pair. Along with these large stones lay extensive piles of rounded and irregular stones from field clearance, and the occasional large slab of stone. The presence of the elongated boulders in the clearance material suggests they had been removed from the main field. Whether they formed any relationship with the standing stones or the glacial erratic is unknown. The slabs may be an indication of further cists in the vicinity that had been disturbed by ploughing, as they do not occur naturally in the ploughsoil.

A bucket-shaped cinerary urn, now in the National Museums Scotland was found in a cist at Blairbuy (NGR: NX 363 418) in 1968 (Morrison 1968, 76). A number of other artefacts from Blairbuy (Blairbuie) (NX 363 418) are also held by the National Museums Scotland (NMS). They include a perforated stone (Maxwell 1889, 147), a quartz hammer stone (Maxwell 1891, 133), a barbed and tanged flint arrowhead, triangular flint knife, flint borer (McMaster 1910, 11), and an abraded quartz pebble (Maxwell 1915, 10). Other material is housed in Dumfries Museum: an Iron Age sinker, Mesolithic and Neolithic flints, and a polished stone axe and a number of Mesolithic flints. Items found in 1962, also in Dumfries Museum, comprise a leaf-shaped arrowhead, a hammer-stone, a stone axe, some flint scrapers and flakes, and a small perforated sinker.

Funerary ritual

There were no artefacts present with the individual in Cist 1 and there was no evidence of any significant botanical offerings in the samples analysed. The individual had been placed in a crouched position, facing north with the head resting on the left hand, and the right hand put near the pelvis. There are no specific viewpoints or known sites to the north to account for the way the head was facing. The concentration of poorly sorted rounded and angular stones in the topsoil removed from the area over the three cists, and noted in the topsoil in the immediate vicinity, may imply that there had at one time been material deliberately mounded over the cists. A possible mound or cairn may have been removed over a period of time before ploughing of the area

finally reached the top of the cists leading to the eventual dislodgment of the capstone of Cist 1.

Based on the evidence from the excavations, and in particular the results of the XRF analysis of the sub-samples from each cist and the surrounding subsoil, it appears that only one of the three cists were ever used for burial. One possibility is that the two empty cists had once been used for inhumations, which had since been removed and reburied elsewhere. The multi-element analysis disproved this theory and suggests that the cists were possibly constructed in anticipation of use, rather than being constructed as and when required. Perhaps this was a conscious attempt by a group or family related to the young individual who was buried here, to set aside graves in the immediate vicinity for future use. The stress indicators on the skeletal remains may be indicative of a wider problem for the community at that time, perhaps a food shortage or onset of disease; this is a possible explanation which may have prompted the preparatory construction of the surplus cists. This implies that the community understood and planned an individual's burial practice well in advance of that person's death. If we assume that the juvenile was the intended occupant of the cist this suggests the possibility that it was constructed at the time of the individual's infancy or illness, in anticipation of their eventual demise.

The construction of the three cists may also have been a statement of ownership by a group or family whereby the cists were constructed and set aside for use of that family or group, similar to how plots are set aside for family groups in modern societies. The fact that the two cists were not used suggests the possibility that the group or individuals they were prepared for may have moved away from the area, or that the positions of the cist were lost due to the lack of permanent markers in the landscape. This is rare evidence of the possible movement of groups and the loss or abandonment of ritual sites in an otherwise settled landscape during the Bronze Age period.

Previous authors have made attempts to establish the presence of human remains in empty cists using phosphate levels alone (Johnson 1956, 200-207; and Barber 1982, 536-541). An additional example where phosphates were examined in potential burial contexts was Beech Hill House (Stevenson 1995), although in this case the

cists that did contain human remains were not tested, so there was no available signature for comparison with the high phosphate readings from features with no human remains. As Brown notes in the multi-element analysis for this report: 'other studies have found either no signs of P (phosphate) accumulation in grave soils or not conclusive evidence', (Barker et al. 1975, 550-572; and Fiedler et al. 2012, 90-97). This report therefore highlights the merit of multi-element analysis and the advantages of using readings from an occupied cist as a signature for comparison with other potential funerary contexts in the proximity.

Conclusion

The excavations confirmed that the individual buried in Cist 1 was interred in the Early Bronze Age period at a date of 3593 ± 29 BP (GU29888, 2027-1886 cal BC at 2σ) obtained from the left ulna. The two cists in the vicinity may be contemporary given that they were in close proximity although with the absence of dating evidence this cannot be confirmed. Based on the evidence from the multi-element analysis, it appears that a conscious effort may have been made by the family or community of the individual to prepare cists for members of the community not yet deceased. Although the three cists differed in construction each would have functioned equally well for the purpose for which they were designed.

The presence of these cists adds another element to the Bronze Age ritual landscape around Blairbuy and helps chart the variance in burial rites during the Bronze Age period from cremation urns, such as that recovered by Morrison (1968, 122) to the inhumation observed during these investigations. This diversity in funerary practices during the Bronze Age period can be seen across Britain and beyond. The tradition of individual burial is thought to be a progression from collective burial in megalithic tombs with origins in Northern Europe around 3000 BC. By 2300 BC this tradition had been adopted across most areas of central and Western Europe, "...from Morocco to Scotland and from Ireland to Hungary" (Cunliffe 2001, 215).

These investigations provide an insight into the social organisation of Bronze Age life in this area, which may be comparable with other similar sites

and regions throughout Scotland and further afield. More specifically this work shows that we cannot assume that the construction of the cists we discover is necessarily contemporary with the burial of the bodies contained therein.

Acknowledgements

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Location of Archive

The skeletal remains and remaining samples are currently in storage at GUARD Archaeology Ltd offices in Glasgow but will be reported to the Treasure Trove Unit. The documentary archives will be lodged with the National Monuments Record for Scotland at the RCAHMS, Edinburgh.

Sources

RCAHMS A.1.1.INV(4) Wigtown, Edinburgh, 12, No.12

Bibliography

- Baillie, W 2012 *Blairbuy, Wren's Egg. Human remains Call of Contract. Data structure report*. GUARD Archaeology Ltd, Project 3507 (unpublished).
- Barber, J B 1982 A short cist at Mordington Mains, Berwickshire, Borders Region, *Proc Soc Antiq Scot* 112, 536-541.
- Barker, H; Hughes, M J; Oddy, W A and Werner, A E 1975 Report on phosphate analysis carried out in connection with the cenotaph problem, in Bruce-Mitford, R L S (ed.) *The Sutton Hoo Ship Burial*, Vol 1. London: British Museum, 550-572.
- Bethell, P H and Smith, J U 1989 Trace-element analysis of an inhumation from Sutton Hoo, using Inductively Coupled Plasma Emission Spectrometry: an evaluation of the technique applied to analysis of organic residues, *J Arch*

Science 16, 47-55.

Brickley, M and McKinley, J (eds.) 2004 *Guidelines to the Standards for Recording Human Remains*. IFA Technical paper no.7, BABAO, Southampton University.

Buikstra, J E and Ubelaker, D H (eds.) 1994 *Standards for Data Collection from Human Skeletal Remains*. Arkansas: Arkansas Archaeological Survey Research Series No.44.

Cunliffe, B 2001 *Facing the Ocean: The Atlantic and its Peoples*. Oxford: Oxford University Press, 215.

Downes, J (ed.) 2012 *ScARF Summary Bronze Age Panel Document*, Scottish Archaeological Research Framework: Society of Antiquaries of Scotland. Available from: <http://tinyurl.com/clxgf5s> [Accessed 26-07-2013].

Fiedler, S; Breuer, J; Pusch, C M; Holley, S; Wahl, J; Ingwersen, J and Graw, M 2012 Graveyards - special landfills. *Science of the Total Environment* 419, 90-97.

Johnson, A H 1956 Examination of soil from Corrimony Chambered Cairn, Glenurquhart, Invernesshire, with special reference to phosphate content. *Proc Soc Antiq Scot* 88, 200-207.

Lambert, J B; Simpson, S V; Szpunar, C B and Buikstra, J E 1985 Bone diagenesis and dietary analysis, *J Human Evolution* 14, 477-482.

Masters, M 1976-78 Excavations at the Wren's Egg, Port William, Wigtown District, *Trans Dumfriesshire & Galloway Nat Hist & Antiq Soc, Series III*, 52, 28-43.

Morrison, A 1968 Cinerary urns and pygmy vessels in south-west Scotland, *Trans Dumfriesshire & Galloway*

Nat Hist & Antiq Soc, Series III, 45, 122, no. 76.

Maxwell, H E (Sir) 1889 Donations to and purchases for the Museum and Library, with exhibits, *Proc Soc Antiq Scot* 23, 147.

Maxwell, H E (Sir) 1891 Donations to and purchases for the Museum and Library, with exhibits, *Proc Soc Antiq Scot* 25, 133.

Maxwell, H E (Sir) 1915 Donations to and purchases for the Museum and Library, with exhibits, *Proc Soc Antiq Scot* 49, 10.

McMaster, H 1910 Donations to and purchases

for the Museum and Library, with exhibits, *Proc Soc Antiq Scot*, 44, 11.

RCAHMS 1912 *Fourth report and inventory of monuments and constructions in Galloway, 1, County of Wigtown*. Edinburgh: HMSO.

Smith, B H 1991 Standards of human tooth formation and dental age assessment, in Kelley, M A and Larsen C S (eds.) *Advances in Dental Anthropology*. New York: Wiley-Liss, 143-168.

Stevenson, S 1995 Beech Hill House, Coupar Angus, Perthshire, *Proc Soc Antiq Scot* 125, 197-235, fiche 2: D1-F14.

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