CONTENTS

SUMMARY

Headland Archaeology Ltd excavated two Early Bronze Age short cists and several outlying undated features discovered unexpectedly on a construction site at Holm Mains farm located to the south-west of Inverness. The larger of the two cists contained a male individual placed in a crouched position. Accompanying this burial were two barbed and tanged arrowheads, ten other lithics tools and the fragments of a finely decorated beaker pot. The second cist was, by contrast, in a much poorer state of preservation but contained an adult male accompanied by a single beaker pot. Outlying features comprised several pits and ditches, located near the to the cists but which produced no artefacts to aid with dating and there was nothing to link these discoveries to the two cists. The cists uncovered at Holm Mains are part of a group centred in the Culduthel area near the site of the Inverness Royal Academy and the present work provides a secure context through which to view the older discoveries.

Further specialist analysis of the finds and skeletal evidence in particular is recommended to bring the results of this work to publication.

1. INTRODUCTION (Figure 1)

This report summarises the findings of an excavation carried out by Headland Archaeology Ltd during May 2003 at Holm Mains Farm on the south west edge of Inverness. Two prehistoric short cists and other archaeological features were uncovered during topsoiling operations in advance of the second

phase of a housing development being built by Tulloch Homes Ltd. The site is located several kilometres to the south-west of Inverness City centre, on Essich Road (NGR NH 6560 4145). The Essich Road itself formed the eastern boundary of the site while to the west the edge of the present development coincides with the top of a steep bank above Holm Burn. The site occupies largely flat ground, at an elevation of approximately 44mOD, though there are a few potentially significant smaller topographical features the most important of which is the small rise on which the larger of the two cists was discovered. The subsoil in this area comprised fluvio-glacial sands and gravels, though areas of cleaner sand possibly representing palaeo-channels were also present.

The area to the east of the Holm Mains site is remarkably rich in archaeological sites and find spots. A number of cists have been discovered in the vicinity of the site, over the years, the closest being the Knocknagael find (NH64SE33) located 300m to the north-east of the Holm Mains site. This short cist, discovered in 1970, was located on the edge of a gravel pit and contained a skeleton on its left side with the head to the north/north-east. No artefacts were found with the burial and after a brief initial investigation the cist was left in situ. Two cists were found in the vicinity of the Inverness Royal Academy at Culduthel. The first cist (NH64SE30), discovered in 1928, contained a female skeleton complete with jet necklace, small flake of obsidian and fragment of bronze awl. The most significant find, however, was made during the construction of the new Inverness Royal Academy on 22nd November 1975 (NH64SE36). This short cist, located about 900m north-east of the Holm Mains site, contained the remains of an adult male accompanied by a remarkable number of finds including eight barbed and tanged arrowheads, a beaker pot and an archers wrist guard with gold covered rivets. This represents one of the best and richest cist finds ever encountered in Scotland. Other types of site are also found in the vicinity site including a ring cairn (NH64SE26) and a possible barrow (NH64SE71). The cairn, now largely destroyed, was believed to be of Clava type. Together these finds demonstrate the presence of a remarkably rich prehistoric landscape in the Culduthel area.

Previous archaeological studies were carried out in advance of the initial development of the site in response to a planning condition relating to archaeology. These included a desk-based assessment and a field evaluation comprising both trenching and geophysical survey. No discoveries were made in the south of the site where the cists were later discovered (see Figure 2). Some small-scale excavations were subsequently undertaken located at the north end of the site (Halliday 2000). In the intervening period Tulloch completed the first phase of housing at Holm Mains and a start was made on the second phase. It was during the Phase II topsoiling operations that the cists were discovered during April and May 2003. A machine operator discovered a well-constructed short cist. Realising the significance of the find, Tulloch immediately contacted the relevant authorities, the find being reported to the Police and Highland Council on 5th May 2003. A visit to the site by Kirsty Cameron of Highland Council Archaeology Unit and local archaeologist Jonathan Wordsworth identified another cist about 100m further west of the first and several other features including pits and ditches in the area between the two cists. Both cists and additional features were cordoned off while arrangements were made for proper archaeological investigation. A brief for excavation of the features was produced by Highland Council Archaeology Unit (2003). The objectives it laid out were as follows:

- To identify and record the location, nature and extent of any features or objects of archaeological importance within the marked off areas.
- To further understanding of the lives, deaths and burial practices of the community associated with the cist graves through archaeological excavation and scientific study of their remains.
- To make sure that the needs for archaeological conservation and recording are met without causing any unnecessary delay or disturbance to the development project.

The excavation and recording of the cists and outlying features was funded by Tullcoh Homes and was undertaken by Headland Archaeology over six days from the 21st to the 28th May 2003. Weather conditions were dry during the excavation a fact which made the delicate work much easier. Kirsty Cameron, Highland Council Archaeology Unit, made two monitoring visits to the site during the fieldwork.

2. METHOD

All topsoil was removed from the site prior to the commencement of the works. The areas which were to be excavated were already cordoned off and fieldwork was confined to these areas. The exposed deposits were manually cleaned to aid in identification of features, and any features identified were excavated with artefacts and ecofacts retained as appropriate. Both cists were fully excavated including the removal of the side slabs and base in order to garner information about the grave cuts. No markings or carvings were identified on any of the cist slabs. The slabs were then retained on pallets at the site.

All recording was by Headland Archaeology Ltd standard methods. All contexts, small finds and environmental samples were given unique numbers. Bulk finds were collected by context. Colour transparencies, slides and digital images were taken during the excavation. An overall site plan was recorded using Leica Total Station instruments with 1:20 and 1:10 scale plans and sections made of the features. Much use was made of vertical digital photography during the excavation of the both cists. These images, once rectified, allowed plans to be made of the cists, skeletal remains and the locations of artefacts at Headland's offices in Edinburgh, rapidly speeding up the excavation process on-site. Grids used in this process were surveyed in order to ensure accuracy. All recording took place on *pro forma* record sheets.

Archaeological deposits were sampled systematically in accordance with Headland Archaeology Ltd standard environmental sampling practice. Bulk samples of 10 litres and above were taken from the cists with 100% sampling of deposits inside Cist 1.

All human remains were retained for further analysis. Assessment of the human remains and animal bone was carried out by David Henderson, the results are presented in Appendix 5. The pottery was assessed by Anne MacSween. The lithics were assessed by Graeme Brown. Mhairi Hastie assessed the environmental remains.

3. RESULTS (Figures 2,3,4)

The excavation was carried out in two phases with work on both cists being completed before the more ephemeral, outlying features were investigated. The outlying features were found in two main groups; the first group, located near Cist 1, comprised a pit feature and two intercutting linears. At a distance of approximately 25m further to the west, two small pits or postholes were recovered.

3.1 Cist 1

This feature was located in the south-east corner of the site approximately 55m from the Essich Road, on top of a small knoll. A layer of topsoil was still present in the area of Cist 1 and this had protected the surface around the top of the cist. On first inspection it was observed that the capstone had been displaced by the topsoiling machine and deposited back into the open cist (Plate 1). This accidental

opening had disturbed some of the skeletal material and caused some collapse of surrounding material into the cist.

Cleaning of the area surrounding the cist identified a layer comprising medium and large rounded and angular stones (003), raising the area around the top of the cist and providing a relatively level surface. The capstone itself (005) came to rest almost vertically inside the cist after being levered up by the mechanical digger. The capstone was formed from a blue/grey schist and the same material was used for the side slabs. It was irregular in shape but with some broken edges which suggested that it may have once been more sub-rectangular. The capstone, 1.23m long and 0.9m wide, had weathered surfaces, though did not exhibit any traces of dressing or shaping of the stone. The material that had fallen into the cist after the displacement of the capstone (008) comprised poorly sorted small and medium angular fragments of stone mixed with some soil. The collapse was deepest along the eastern edge of the cist, where it reached a maximum depth of 0.3m. A quantity of disarticulated human remains was recovered from this recent collapse including one of the long bones (Plate 2). Under this recently deposited material was an element of earlier collapse and weathering inside the cist (009). This material was composed of small flakes of stone which had delaminated from the walls of the cist probably through the action water running down the side slabs. An element of fine sand was also found at this level, material which probably also resulted from water deposition. The majority of this material had accumulated in the corners of the cist, though in the north end it had accumulated around an element of much earlier collapse (012).

This layer of stone (012) had collapsed over the upper torso and skull of the individual, it comprised seven fragments of angular stone that had fallen into the cist as part of some earlier episode of collapse, possibly in antiquity. The stacked arrangement in which this material came to rest in the floor of the cist give some clue as to the construction of the cist (Plate 3). If the capstone was placed directly on the top of the side slabs, as is the case in many prehistoric short cists, then there is little scope for collapse such as this to enter the cist. However, if the capstone was propped on the side slabs by the insertion of some packing stones then there is a possibility that some slight movement of the capstone would have caused this kind of collapse. Perhaps this packing, also observed in several other places (007), was designed to raise the level of capstone or perhaps it was solely to compensate for unevenness in the capstone itself.

Below the stacked collapse, and surrounding the skeletal remains, was a thin layer of fine sandy material with occasional small gravel (010). This represented the primary silting on the floor of the cist that covered the skeletal remains to a depth of 0.02m. This material was sampled but proved not to contain any botanical remains, though it did contain fragments of pottery, bone and a number of pieces of worked stone. Placed directly on the floor of the cist were the remains of a male individual (006) lying on the left side in a crouched position, the left hand was in front of the face while the right hand was extended in front of the chest (Plate 4). A finely decorated beaker pot (Appendix 5), broken into a number of sherds, was found in the area behind the head with a small barbed and tanged arrowhead located near the left hand of the individual. In the south west corner of the cist a group of ten stone tools was uncovered as if deposited in one event (see Appendix 5). Beside the left knee of the individual part of the right humerus of a sheep or goat was recovered. When the skeletal remains were lifted from the cist another, larger example of a barbed and tanged arrowhead was discovered between the pebbles of the floor. This finely worked arrow point, made in honey coloured chert, was missing one of its barbs (Plate 5).

The floor of Cist 1 (011) comprised a layer of sand and fine pebbles not dissimilar to the subsoil underneath the cist (Plate 6). This floor surface was quite even suggesting that some effort had been put in to compact and level it. The processing of samples from the floor revealed a small quantity of hulled barley and oat as well as some fragments of bone.

The cist itself (013) was constructed of four large slabs in a tightly interlocked construction, the largest of these was the eastern slab with a maximum length of 1.1m, a width of 0.8m and a maximum thickness of 0.15m. The cist was not strictly rectangular shaped when viewed in plan. The structure was slightly narrower at the northern end (0.6m) with the southern end slightly wider at approximately 0.75m. The maximum length of the cist was 1.25m. The oval shaped construction cut (004) measured 2.6m long and 2.2m wide with a maximum depth of circa 0.95m. The construction cut for the cist had a U-shaped profile and a gently rounded base and was filled (014) with sand and gravel material almost indistinguishable from the natural subsoil.

3.2 Cist 2

Cist 2 was located 80m west of the larger Cist 1 and was discovered during the walkover survey undertaken by Kirsty Cameron and Jonathan Wordsworth. It was obvious that this cist had suffered considerably more disturbance than Cist 1 and from the state of the stone that much of the damage was not recent though undoubtedly some was caused by the topsoiling. On first observation the cist resembled little more than a collection of shattered rock (plate 7). Aligned roughly north-east/ south-west, the cist measured 1.6m on its long axis and 1.1m across. End slabs were visible in the north-east and south-west though no traces of a capstone were visible before the excavation. The spaces within the area of the cist were filled in with a mixture of subsoil and topsoil (101) which included some small fragments of bone. Removal of the upper disturbed material (101) resolved some of the structure of this cist and led to the identification of a less disturbed layer (102) that contained some staining and some sherds of pottery. The capstone (106) was a thin slab of Old Red Sandstone which contrasted in colour with the blue/grey schist (103) used to make the side and end slabs. With the filling of the cist removed an internal space of 1.2m by 0.5m was revealed. In this space were the remains of a single individual (107) interred in a crouched position again lying on the left side (Plate 8). Several large sherds of pottery were also visible in the south-west corner of the cist though many of these were in a poor state of preservation. These sherds have been provisionally identified as beaker and have similar decorative traits to the vessel from Cist 1 (Appendix 5). The skeletal remains were surrounded by a dark staining of the gravel a feature which was also noted below the capstone (106). The capstone was found in a displaced location at the south-east corner of the cist, it was broken into two fragments though the break did not look to be recent. The original dimensions of this stone were 0.9m by 0.4 with a thickness of approximately 0.1m. As the capstone had been buried beneath material that was not recently disturbed it suggests that major parts of the disturbance were not directly connected with the recent topsoiling. It seems, therefore, that this cist had been subject to plough disturbance in the past.

The remnants of the cist slabs were then removed and the cut was emptied. The cut (105) was sub-rectangular in plan with steep sides, it measured 2.4m in length by 1.4m in width. It showed most evidence of disturbance at the south west end where its size was probably increased by displacement of cists slabs.

3.3 Other features

Three oval features and two linear features were investigated as part of the project. The two linear features and one of the pits (115) were located on the strip of ground cordoned off around Cist 1. The small oval shaped feature (115) was located 5m south west of Cist 1. It appeared to be a cultural feature in plan however on investigation it proved to be somewhat more amorphous. The northern edge of this feature was uneven and somewhat deeper than the southern edge. The fill (114) contained charcoal and hazelnut shell though no artefacts. The amorphous nature of this feature suggests that it may have resulted from animal burrowing or perhaps tree root disturbance.

The two linear features were located approximately 10m to the south-west of Cist 1. Ditch (051) was aligned approximately north/south and was approximately 0.6m wide and 0.2m deep with gently sloping edges and a rounded terminal. The fill (050) comprised a dark brown sandy loam with some charcoal inclusions. This narrow ditch (051) truncated part of the larger ditch (053). Ditch 053, aligned roughly north-west/ south-east was a more substantial feature 1.1m wide and with a maximum depth of 0.4m. The ditch had a U-shaped profile though the edges were steeper on the south side than in the north. The ditch remained open before it was backfilled to judge from the gravel inwash against the southern edge (055). The asymmetrical profile also suggests the presence of a bank above the southern edge. Above this cleaner gravel inwash were several layers of charcoal interspersed with gravel (054). Whether this material was burnt on the edge of the ditch or on the bank before washing into the ditch is difficult to say. Samples taken from 054 contained large quantities of cereal grains (oats and hulled barley) which may represent material burnt during food preparation or corn drying. Above the burnt cereal-rich material was a layer (052) of homogeneous material that probably represents deliberate backfilling of the ditch. No artefacts were recovered from the fills to give any indication of date.

In addition to the ditches were two pits located approximately 30m north-west of Cist 1 and situated approximately 2m apart. The smaller of the two (111) was an oval shaped pit with a diameter of 0.45m and a depth of approximately 0.1m. This pit had a bowl shaped profile with gently sloping sides and a rounded base. The fill was mid-brown sandy silt with small and medium gravel inclusions and occasional flecks of charcoal. The other pit had a very similar profile though was slightly larger in size (113). Samples taken from the fill proved to be archaeologically sterile.

4. DISCUSSION

The area to the south-west of Inverness around Culduthel and the Essich Road has seen several discoveries of prehistoric antiquities over the years. A number of prehistoric short cists have been uncovered within a short distance of the present site however there have been no controlled modern excavations until this work at Holm mains Farm. This makes the findings reported on here all the more valuable as they provide a secure context from which to view the other discoveries and to advance our knowledge significantly about the burial practises and lifeways of these Early Bronze Age communities.

There is no concrete link between the Holm Mains Farm site and other cist finds in the vicinity. However, the find at Knocknagael may share some similarities in burial practise. The body (in a crouched position) was placed on its left side with its head to the north/north-east. The lack of artefacts in the Knocknagael cist contrasts sharply with the riches seen in both the 1928 and 1975 Culduthel finds. The cists from Holm Mains falls somewhere between these two examples.

The beaker pottery found in both the cists at Holm mains Farm is finely decorated and the stone tools, particularly the large barbed and tanged arrowhead, show signs of accomplished workmanship. The skeletal material gives a hitherto unmatched level of knowledge about the people buried in the cists. Samples for radiocarbon dating have been taken and will shortly be submitted providing us with the first elements of secure dating for the south west Inverness cist group. Information has also been obtained about the structure of the cists themselves and the effort that was expended in their construction. Cist 1 is a remarkable structure with heavy slabs used for the sides and the capstone. It is obvious that considerable effort was expended in putting these together. The excavation has also provided evidence of structures surrounding the cist. The surface around the capstone suggests that perhaps the capstone was designed to be viewed repeatedly rather than immediately covered over. By extension this would suggest that a barrow or cairn was not heaped up over the cist though we cannot completely discount this hypothesis because of the plough disturbance to the field. Evidence of the

surfaces and features that surrounded prehistoric short cists is all too rare given the often-reported discovery of these features in heavily ploughed fields. Cists 2 provides an example of how destructive plough disturbance can be. The new finds at Holm Mains adds significantly to our knowledge about the prehistoric antiquities of the Culduthel area of Inverness. The picture which is emerging is of a rich Neolithic and Bronze Age burial and ritual landscape.

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7. APPENDICES

Appendix 1: Context Register

Context No.	Description
001	Yellow/ brown sand and gravel, subsoil in the vicinity of Cist 1
002	Dark brown sandy loam, loose compaction, frequent grit and small angular stones, D: ca 0.1m, surrounds 003 and 007, material around top of Cist 1
003	Roughly oval shaped, composed of small and medium angular slabs also included some rounded cobbles, L: 2.6m, W: 2.1m, D: ca 0.3m, surface surrounding top of Cist 1
004	Oval shaped in plan, steep almost vertically sided pit, U-shaped in profile, gently rounded base L: 2.6m, W: 2.2m, D: 0.95m, also contained 003 and 007 in upper part, construction cut for Cist 1
005	Irregular shaped sandstone slab that sealed Cist 1, broken, edges weathered but not dressed, may originally have been sub-rectangular, L: 1.23m, W: 0.9m, TH: 0.12m, rested on corbelling material 007, surviving part of capstone
006	Skeletal material, the individual was interred in a crouched position on its left side, caving in of capstone had disturbed some of the remains, though a collapse in antiquity had also led to some disturbance, largely complete (90%) remains of an adult male
007	Roughly oval shaped setting of stones, composed of fractured but regular sandstone slabs, L: 1.7m, W: 1.4m, resting on 013, corbelled supports for the large capstone
008	Irregular shaped spread of material, comprised poorly sorted angular fragments of stone in a matrix of soil and gravel, concentrated on east side of cist, L: 1.1m, W: 0.4m, D: ca0.3, comprised elements of 007 and broken fragments of 005, recent collapse inside Cist 1
009	Irregular shaped spread of material, comprised flakes of stone delaminated from the sides of the cist and sand deposited through water percolation, majority of this build-up was in corners of cist, in north end of cist it had accumulated around primary collapse (012), D: ca 0.2m, secondary silting in corners of cist
010	Brown/ yellow fine sandy material with rare gravel inclusions, L: 1.1m, W: 0.75m, D: 0.02m, sealed pebble floor (011) and surrounded lower lying parts of skeleton, primary silting in Cist 1
011	Small pebbles and fine sand, not compacted, L: 1.1m, W: 0.75m, D: ca 0.15m, average diameter of pebbles 0.05m, pebble surface which formed base of Cist 1
012	Layer that covered skull and upper body of 006, comprised irregularly shaped stone slabs with stacked appearance, L: ca 0.6m, W: 0.4m, D: ca 0.05m, collapse of the roof corbelling (not recent)
013	Four sub-rectangular stone slabs which formed the walls of the cists (designated N,S,E,W), east slab largest, L: 1.1m, W: 0.8m, TH: 0.15m, tightly interlocked construction, side slabs of Cist 1
014	Yellow/ brown sand and gravel of moderate compaction, contained small and medium stones, D: (max) 0.95m, fill of construction cut for Cist 1
050	Dark brown/ grey sandy loam with inclusions of small and medium stones plus lots of charcoal, L: ca 3m, W: ca 0.65m, D: 0.15m, truncated in north-east

	by machining, fill of ditch 051
051	Linear feature parallel edges, slightly steeper on SE edge, shallow feature, no weathering on edges L: ca 3m, W: ca 0.65m, D: 0.15m, filled by 050, truncates ditch 053 in south, shallow ditch on north-south alignment
052	Mid-brown sandy loam with frequent small gravel inclusions, some root disturbance in centre of feature, only observed in section, L: ca 4.5m, W: 0.9m, D: ca 0.25m, upper fill of ditch 053
053	Linear, parallel edges on south-east/north-west alignment, bowl shaped profile, gently sloping sides, curving base, weathering on south-west edge L: ca 4.5m, W: 1.1m, D: ca 0.4m, truncates 050/051, filled by 052, 054, 055, shallow ditch on south-east/north-west alignment
054	Charcoal layers interspersed with gravel, only observed in section, L: 4.5m, W: 0.5m, D: ca 0.15m, nature of the material and its position suggested that it had fallen in or pushed deliberately from south-west edge, above primary silting 055, backfill of ditch 053
055	Yellow/ brown sandy soil with small and medium stone, L: 4.5m, W: 0.55m, TH: 0.2m, asymmetrical profile of ditch suggested the presence of a bank above south-west edge, primary silting of ditch
100	Yellow/ brown sand and gravel, subsoil in the area around Cist 2
101	Brown/ grey sandy silt of moderate compaction, small and medium gravel inclusions, poor interface with lower material, L: 1.4m, W: 1m, D: 0.3m, disturbed material in upper part of Cist 2
102	Mid-brown sandy silt with small and medium gravel inclusions, moderately compact, indistinct interfaces, visible over an area L: 1.2m, W: 0.7m, D: 0.2m, around crouched inhumation, below 101, less disturbed fill of Cist 2
103	Remnants of cist structure, composed of heavily fractured schist slabs and 2 fragments of ORS, the fragments of ORS were on south side, possibly part of capstone, L: 1.3m, W: 0.8m, D: 0.4m, has suffered heavily from plough damage and more recent bulldozer disturbance, remnants of a short cist (Cist 2)
104	Similar to 102, mixed with crushed bone and a darker staining which probably equates with decay of remains, L: ca 0.4m, W: 0.3m, D: 0.1m, material beneath fragment of capstone
105	Sub-rectangular in plan, steep edges ≥ 45°, west edge had stepped profile, L: 2.4m, W: 1.4m, D: 0.45m, disturbance has increased size of feature, cut for cist
106	Irregular shaped ORS slab, not dressed or other wise modified, broken in 2, L: 1.4m, W: 0.4m, TH: 0.1m, had collapsed into centre of cist in so doing crushing some part of the fill (104), displaced capstone
107	Skeletal remains in poor state of preservation, many skeletal parts missing, from single individual, crouched inhumation from Cist 2
110	Mid-brown sandy silt with small and medium gravel inclusions, some small flecks of charcoal, Dia: 0.45m, D: 0.12m, pit fill
111	Oval shape, gently sloping sides, rounded base, no signs of weathering, Dia: 0.45m, D: 0.12m, pit
112	Mid-brown, moderately compact sandy silt with small and medium gravel inclusions, Dia: 0.5m, D: 0.1m, pit fill
113	Oval shaped, gently sloping sides, rounded base, no sign of weathering Dia: 0.5m, D: 0.1m, pit
114	Dark brown/ black charcoal rich material with few stone inclusions, clear

	interface with subsoil L: 0.7m, W: 0.8m, D: 0.15m, material in hollow/ scoop in subsoil
115	Oval shaped in plan, shallow sides in W steeper in E, channel along E edge, L: 0.7m, W: 0.8m, D: 0.15m, shallow scoop/ hollow probably not cultural

Appendix 2: Drawing Register

Drawing No.	Scale	Description
1	1:10	Cist 1 pre-ex plan
2	1:20	Cist 2 pre-ex plan
3	1:20	Cist 2 after removal of 101
4	1:10	Overlay to plan 1 showing skeletal remains disturbed by capstone
5	-	Plan of Cist 1 after removal of collapse, profiles and diagrams
6	1:20	Plan of Cist 2 showing skeletal remains after removal of 102
7	1:20	Overlay of plan 6 showing slab 106
8	1:20	Overlay of plan 7 to show 104
9	1:10	Longitudinal profile through Cist 2
10	1:10	Cross section through Cist 2
11	1:20	Post-ex plan of Cist 2
12	1:10	Post-ex longitudinal profile of Cist 2
13	1:10	Post-ex cross section of Cist 2
14	1:10	East facing section through 110/111
15	1:20	Post-ex plan of 111
16	1:10	SE facing section through 053
17	1:10	SE facing section through 051
18	1:20	Post-ex plan of 051 and 053
19	1:10	S facing section through 114/115
20	1:20	Post-ex plan of 115
21	1:20	Post-ex plan of Cist 2
22	1:10	Post-ex cross section of Cist 1
23	1:10	Post-ex longitudinal profile of Cist 1
24	1:10	Section through 112/113
25	1:20	Post-ex plan of 113

Appendix 3: Photograph Register

Film type: CP
Film number: 1

Shot	Facing	Description
1	W	Cist 2 Pre-ex view
2	N	Cist 2 Pre-ex view
3	E	Cist 2 Pre-ex view
4	W	Cist 2 after removal of disturbed material 101
5	N	Cist 2 after removal of disturbed material 101
6	N	Cist 2 and skeletal remains after removal of 102
7	N	Cist 2 and skeletal remains after removal of 102

8	N	Cist 2 with broken slab 106 still in place
9	N	Cist 2, material (104) beneath broken slab 106
10-12	N	Cist 2 with fill material removed
13	N	051 and 053 Pre-ex view
14	W	051 and 053 Pre-ex view
15	NW	SE facing section of 051 and 053
16-17	NE	SW facing section of 051 and 053
18	W	Pre-ex view of 110
19	W	E facing section of 110
20	W	Post-ex view of 111
21	W	Pre-ex view of 112
22	W	E facing section of 112
23	W	Post-ex view of 113
24	N	Pre-ex view of 114
25-26	NE	Post-ex view Cist 1 (004)
27	N	Post-ex view Cist 1 (004)
28	N	S facing section of 114

Film type: CS
Film number: 1

Shot	Facing	Description
1-2	N	Cist 1 on first inspection
3	Down	Interior of Cist 1
4	S	View of cist from adjacent spoil heap
5	E	Cist 1 and surrounding spoil heaps
6	N	Cist1 and the area of features to the W
7	S	Cist 2 on first inspection
8	SW	Cist 2 from big spoil heap
9	E	Cist 1 and features from big spoil heap
10	W	Cist 2 Pre-ex view
11	N	Cist 2 Pre-ex view
12	E	Cist 2 Pre-ex view
13	W	Cist 1 after removal of capstone
14	E	Cist 1 after removal of capstone
15	N	Cist 1 before removal of displaced bone
16	Down	Cist 1 bone before removal
17-18	E	Cist 1 primary collapse, includes beaker and lithics
19	W	Cist 1 primary collapse, includes beaker and lithics
20	Down	Cist 1 primary collapse, includes beaker and lithics
21-22	N	Cist 2 after removal of 102
23	N	Cist 2, 106
24-25	N	Cist 2, 104
26	N	Cist 2 after removal of 104
27	N	Cist 2 Post-ex view
28	NW	Cist 2 Post-ex view
29-30	S	Looking towards Cist 1 from top of big spoil heap
31	N	Pre-ex view of 114
32-33	E	Cist 2 Post-ex view

34	NW	Cist 2 Post-ex view

Film type: Digital
Film number: -

Shot	Facing	Description
1	E	Cist 1 on first inspection
2	E	Cist 1 with capstone and displaced bone
3	S	Cist 1 with displaced capstone
4	Down	Displaced bone on first inspection
5	Down	Cist 1 with capstone and displaced bone
6	Down	Vertical view of Cist 1 in disturbed state
7	Down	Vertical view of Cist 1, S end
8	Down	Vertical view of Cist 1, N end
9	Down	Vertical view of Cist 1
10	W	Planning Cist 1
11	E	Lifting out broken capstone (Charlie MacLennan attaching sling)
12	Down	Cist 1 after capstone removal
13	Down	Cist 1, disturbed bone following removal of capstone
14	Down	Cist 1, disturbed bone following removal of capstone
15	Down	Cist 1, beaker sherds among the collapse
16	Down	Collapse in Cist 1
17	Down	Collapse in Cist 1
18	Down	Collapse in Cist 1
19	Down	Surviving in situ material after removal of collapse
20	Down	Surviving in situ material after removal of collapse
21	Down	Close up of skeletal remains and sherds
22	Down	Detail of W end of cist
23	Down	Detail of sherds and upper body at E end of cist
24	Down	Detail of sherds and upper body at E end of cist
25	Down	Detail of sherds
26	Down	Lithics in situ at W end of cist (beside feet)
27	Down	Base of cist
28	Down	Empty cist
29	Down	Floor of cist post cleaning
30	NW	Pebbles filling void at NW corner of cist
33	E	Cist 1, Post-ex view
34	N	Cist 2, Pre-ex view
35	E	Cist 2, Pre-ex view
36	S	Cist 2, Pre-ex view
37	Down	W end of Cist 2 Pre-ex view
38	Down	Middle section of Cist 2 Pre-ex view
39	Down	E end of Cist 2 Pre-ex view
40	Down	E end of Cist 2 Pre-ex view
41	N	Cist 2 after removal of disturbed surface material (101)
42	E	Cist 2 after removal of disturbed surface material (101)
43	Down	Cist 2 after removal of disturbed surface material (101), W end
44	Down	Cist 2 after removal of disturbed surface material (101), W end
45	Down	Cist 2 after removal of disturbed surface material (101), middle section

46	Down	Cist 2 after removal of disturbed surface material (101), middle section
47	Down	Cist 2 after removal of disturbed surface material (101), E end
48	Down	Cist 2 102, W end
49	Down	Cist 2 102, W end
50	Down	Cist 2 102, middle section
51	Down	Cist 2 102, middle section
52	Down	Cist 2 102, E end
53	Down	Cist 2 102, E end
54	N	Remains of crouched inhumation (107) in Cist 2
55	N	Remains of crouched inhumation (107) in Cist 2
56	S	Cist 2 during excavation
57	W	Cist 2 during excavation
58	Down	Cist 2 after removal of inhumation, W end
59	Down	Cist 2 after removal of inhumation, W end
60	Down	Cist 2 after removal of inhumation, middle section
61	Down	Cist 2 after removal of inhumation, middle section
62	Down	Cist 2 after removal of inhumation, E end
63	Down	Cist 2 after removal of inhumation, E end
64	E	Cist 2 after removal of broken capstone
65	Down	Cist 2, material 104 below broken capstone, W end
66	Down	Cist 2, material 104 below broken capstone, middle part
67	Down	Cist 2, material 104 below broken capstone, E end
68	E	Cist 2 after removal of 104
69	E	Cist 2 after removal of 104
70	E	Cist 2 after removal of 104
71	Down	Cist 2 after removal of 104, W end
72	Down	Cist 2 after removal of 104, middle section
73	Down	Cist 2 after removal of 104, middle section
74	Down	Cist 2 after removal of 104, E end
75	Down	Cist 2 after removal of 104, E end
76	Down	Cist 2 after removal of 104, E end
77	E	Cist 2, cut 105
78	E	Cist 2, cut 105
79	-	Stone sample from Cist 1
80	-	Stone sample from Cist 1 reverse
81	-	Stone sample from Cist 2
82	-	Stone sample from Cist 2 reverse
83	-	Big barbed and tanged arrowhead
84	-	Big barbed and tanged arrowhead reverse
85	-	Small barbed and tanged
86	-	Small barbed and tanged reverse
87	-	Bifacial knife
88	-	Backed knife
89	-	Backed knife reverse
90	-	Roughout for thumnail scraper
91	-	Roughout for thumnail scraper reverse
92	-	End scraper
93	-	End scraper reverse

Appendix 4: Samples Assessment

SITE CODE	HMF03	**SITE NAME**	Holm Mains Farm, Inverness
AUTHOR	Mhairi Hastie		

SAMPLING STRATEGY

Bulk soil samples, ranging in size from 10 - 20 litres were taken from the fills of two cist burials and a series of outlying features for the recovery of palaeoenvironmental remains and small finds.

METHODOLOGY

All samples were subjected to a system of flotation in a Siraf style flotation tank. The floating debris (flot) was collected in a 250 μm sieve and, once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1mm mesh and air-dried. This was then sorted and any material of archaeological significance removed.

The results are summarised in Tables 1 and 2.

No of samples	15

RESULTS

Cist 1 and 2

In total fifteen samples were taken from the fills of Cist 1 and 2, Cist 1 was well preserved and the majority of samples (13 in total) were taken from this cist fill. Six of the samples contained no finds or palaeoenvironmental remains.

Pottery
Occasional fragments of prehistoric pottery were recovered from Context 009 and 010 (silting deposits) that overlay the human interment in Cist 1 and Context 102 upper disturbed deposits in Cist 2. For detailed assessment of the pottery see A. Mac Sween this report.

Bone
Fragments of unburnt human bone were recovered from the majority of cist samples. For detailed assessment of the bone see D. Henderson this report.

Lithics
One small fragment of lithic debitage was recovered from Context 010, for detailed assessment of lithics see G. Brown this report.

Carbonised plant remains
Low concentrations of poorly preserved oak charcoal were recovered from both cist fills. None of the samples taken from the cist fills contained sufficient charcoal for AMS dating. Occasional carbonised cereal grains were also recovered from a number of Cist fills, particularly the floor deposit of Cist 2. The cereal grains included hulled barley and oat. In addition small fragments of hazelnut shell were recovered from the fill between the cist slabs of Cist 1 (Context 014), ditch fill (054) and a charcoal spread (114).

Uncharred matter

A concentration of what was believed to be rootlets were found attached to one of the long bones of the skeleton recovered from Cist 1. A sample of this material was retained and small sub-sample was examined using a high power microscope. The material appeared to be formed from a large number of single fibres intertwined to create a large mass.

Other features

Other features including pits and ditches were uncovered near to the cist burials. Samples were taken from most of the features.

Fill of pit (113)
No finds or palaeoenvironmental remains were recovered from the fill of this pit, Context 112.

Charcoal spread (114)
This sample contained only small quantities of charcoal.

Lower fill of ditch (054)
This sample was dominated by wood charcoal and cereal remains including hulled barley and oat, with lesser quantities of charred hazelnut shell and small fragments of burnt and unburnt bone.

DISCUSSION

Cist deposits

The quantity of finds and palaeoenvironmental remains was generally low with only small quantities of pottery, bone, charcoal and occasional fragments of hazelnut shell being recovered. In addition a small quantity of cereal remains were recovered from the floor surface of Cist 1.

Of note is the presence of a root mass that was found attached to one of the long bones of the skeleton recovered from Cist 1. This material is likely to be intrusive and thus does not relate to the burial.

Lower fill of ditch

One sample taken from fill (054) contained a high concentration of wood charcoal and carbonised cereal grain. Evidence from the archaeological record suggests that this material represents the remains of burnt debris slumped into the base of the ditch. The date and origin of this deposit is unknown although the predominance of cereal remains throughout the deposit suggests that the material perhaps represents cereal grain that was burnt during food preparation or corn drying.

The cereal assemblage includes hulled barley (*Hordeum vulgare*) and oat (*Avena* sp.)

Similar cereal grains were recovered in small quantities from Cist 1. However there was no evidence from the archaeological record to suggest that the ditch was contemporary or even associated with the two cist burials.

Cereal grain recovered from the ditch fill and from the floor surface of Cist 1 would be sufficient for AMS dating if required.

The plant assemblage includes almost equal amounts of hulled barley and oat. Although wild oat does occur in earlier contexts from other British prehistoric sites the domesticated oat species (*Avena strigosa* and *Avena sativa*) does not commonly appear in Scottish contexts until the later part of the Iron Age. In this instance it was not possible to identify which oat species was present and therefore it was not possible to use this as a chronological indicator.

RECOMMENDATIONS

Radiocarbon dating

Due to the disturbed nature of the Cist burials and the recovery of only low quantities of carbonised material from the sit, the potential for AMS dating is limited. If AMS dating is required it is recommended that the following materials be submitted for dating purposes:

- Cereal remains from Context 011 Sample 15 (cist floor)
- Cereal remains from Context 054 Sample 22 (fill of ditch)
- Hazelnut shell from Context 024 Sample 14 (fill of construction cut Cist 1)
- Human bone from Context 104 Sample 11 (material under capstone Cist 2)
- Human bone from Cist 1

Identification of the individual cereal remains and human bone to be submitted from AMS dating will need to be carried out prior to dating.

Pottery and Bone
For further recommendations concerning human bone and pottery see separate assessment reports.

Plant remains
The origin of the plant assemblages is unknown and further detailed analysis of the plant remains would add little to that gained above.

A summary of methodology and results from the above report should be included in any further/publication report.

Context no	Sample no	Context Description	Pottery	Worked stone	Burnt bone	Unburnt bone	Charcoal Qty	Charcoal AMS	Hazelnut shell	Comments
CIST 1										
002	1	Sand deposit [003]								Archaeologically sterile
009	2	Secondary silting and primary collapse	+			+++				
010	3	Primary silting	+++			++++				
010	4	Interface	++	+		+++				
011	13	Floor of cist								Archaeologically sterile
011	14	Floor of cist								Archaeologically sterile
011	15	Floor of cist				+				
011	16	Floor of cist								Archaeologically sterile
011	17	Floor of cist				++				
011	18	Floor of cist				+				
011	19	Floor of cist								Archaeologically sterile
011	20	Floor of cist				+				
011	21	Floor of cist								Archaeologically sterile
014	24	Fill between cist slabs and cut of cist							++	
CIST 2										
102	10	Disturbed material	+++	+		++++	+			
104	11	Material under slab				+++	+			
OTHER FEATURES										
054	22	Lower fill of ditch			+	+	++	*	+	
114	23	Charcoal spread		+			++	*	++	

Table 1: Composition of retents

Context no	Sample no	Context Description	Cereal grain	Weed seeds	Charcoal qty	Charcoal AMS	Comments
CIST 1							
002	1	Sand deposit [003]	Archaeologically sterile				
009	2	Secondary silting and primary collapse	+		+		Oat x 1
010	3	Primary silting					
010	4	Interface	Archaeologically sterile				
011	13	Floor of cist			+		
011	14	Floor of cist	+		+		Hulled barley x 10 Oat x 6
011	15	Floor of cist	Archaeologically sterile				
011	16	Floor of cist	Archaeologically sterile				
011	17	Floor of cist	+		+		Barley indet x 1 Oat x 2
011	18	Floor of cist	+		+		Hullled barley x 2
011	19	Floor of cist			+		
011	20	Floor of cist	+		+		Hulled barley x 1
014	24	Fill between cist slabs and cut of cist			+		
CIST 2							
102	10	Disturbed material	+		+		
104	11	Material under slab			+		Cereal indet x 1
OTHER FEATURES							
054	22	Lower fill of ditch	++++	+	++++	*	Hulled barley +++ Oat +++
112	21	Fill of pit	Archaeologically sterile				
114	23	Charcoal spread			+		

Table 2: Composition of flots

Appendix 5: Finds Assessment

Lithics

Graeme Brown

Context	Description
010	Brown opaque chert, primary, rolled cortex, some crushing around proximal perhaps bipolar piece, L: 34mm, W: 28mm, TH: 10mm, chunky irregular flake
010	Dark grey opaque chert, primary, rolled cortex, L: 29mm, W: 24mm, TH: 10mm, chunky irregular flake
010	Light grey opaque chert, primary piece with rolled cortex, irregular retouch on proximal possibly an attempt to fashion a crude scraping edge, made on chunky irregular flake, L: 25mm, W: 29mm, TH: 9mm, rough out for thumbnail scraper
010	Honey coloured translucent chert, primary piece with rolled cortex, made on chunky irregular flake, some irregular bifacial working on proximal, forms a crude cutting edge, L: 43mm, W: 39mm, TH: 12mm, crude attempt at bifacial knife
010	Honey coloured translucent chert, some rolled cortex on proximal, made on large regular flake, backing retouch on left edge, some use wear in the form of microflaking on right edge, L: 50mm, W: 24mm, TH: 8mm, backed knife
010	Honey coloured translucent chert, secondary piece, rolled cortex, L: 38mm W: 23mm TH: 9mm, regular flake
010	Honey coloured translucent chert, secondary, rolled cortex, L: 28mm W: 25mm TH: 9mm, irregular flake
010	Honey coloured translucent chert, secondary piece, cortex on proximal, L: 17mm, W: 19mm, TH: 3mm, irregular trimming/ thinning flake
010	Grey opaque chert, secondary piece, some evidence of edge damage on left, L: 39mm, W: 15mm, TH: 7mm, expedient knife
010	Dark grey opaque chert, tertiary piece, made on chunky irregular flake, wide section of irregular steep retouch on proximal forming scraping edge and narrow section of working on distal, failed attempt at re-sharpening on main scraping edge, evidence of use on all edges, L: 29mm, W: 30mm, TH: 12mm, crudely fashioned end scraper
010	Grey opaque chert, short regular and irregular retouch forms edges of the piece, not covering, short tang and barbs, L: 22mm, W: 15mm, TH: 3mm, small barbed and tanged arrowhead
011	Honey coloured translucent chert, irregular and regular retouch used to shape piece, some fine working, numerous examples of step flaking errors, broken barb, few traces of use, elongated shape, tip still intact, L: 35mm, W: 18mm, TH: 6mm, barbed and tanged arrowhead

The lithic assemblage from Holm Mains Farm comprised twelve pieces of chert all recovered from inside Cist 1. There are a number of pieces of debitage from the assemblage including two chunky primary flakes, the result of pebble opening. These seemingly unmodified pieces were probably pieces of raw material (blanks) intended for modification. The rolled cortex and the size of these flakes indicates that the toolstone was procured in small pebble form probably from a local gravel source. Colours represented in the assemblage include brown, grey and honey coloured opaque varieties of chert. Several different types of tools were discovered in Cist 1 including two types of edge tools. A large irregular flake was modified on its proximal end to create a bifacial knife. The other formal edge tool was a backed knife created on a large regular flake of honey coloured chert. Both these tools

exhibited traces of micro-flaking consistent with use wear. Edge damage on another regular flake led to its identification as an expedient cutting tool. Two scraping tools were recovered in this assemblage, one of which was a small rough out for a thumbnail scraper with the scraping edge made by the application of a small section of irregular retouch to the proximal end of a chunky primary flake. This tool is perhaps an attempt to create an expedient scraper although it seems more likely that it was a partially finished rough out. The other scraper was by contrast a completed example that exhibited use wear traces and a failed attempt at re-sharpening on its main scraping edge. The fact that this worn piece was retained suggests perhaps that further attempts at re-sharpening were envisaged.

The debitage, edge tools and scrapers that comprise the vast majority of the assemblage (10 pieces) were all discovered in the south west corner of Cist 1. This material probably represents simple cutting tools which, to judge from the wear, had been utilised. Perhaps these pieces represented a set of tools belonging to the individual interred in the cist. Other interpretations of this assemblage are possible however one hypothesis that we can rule out at this stage is that they were made especially as grave goods. Two other tools were recovered from Cist 1, both were barbed and tanged arrowheads. The smaller of the two arrowheads was discovered in the north east corner of the cist near the skull. Made of opaque grey chert the piece was shaped using short irregular retouch. The absence of covering retouch on the arrowhead would have considerably weakened it leading to questions about whether the arrowhead was actually intended for use. Its small size and absence of use wear suggests that this piece was never used perhaps being made especially for interment. The other barbed and tanged arrowhead was of quite different nature. Found below the centre of the body the piece had found its way between the pebble floor of the Cist (011), and was only discovered after the skeletal remains and primary silting (010) were removed. The piece itself, made of honey coloured translucent chert, exhibits much more accomplished workmanship than the other arrowhead. The edges of the piece are quite fresh and the tip is still intact. One of the barbs has broken off in antiquity and the edge of the break has been reworked.

The majority of the lithics from Holm Mains Farm are not culturally or chronologically diagnostic. However, types such as the thumbnail scraper and barbed and tanged arrowheads do fit easily into an Early Bronze Age context, and this dating is confirmed by the beaker pottery. Other short cists have been discovered in the vicinity such as the celebrated 1975 finds at Culduthel on the site of the Inverness Royal Academy. This cist contained a beaker, eight barbed and tanged arrowheads and the well-known gold riveted archers wrist guard. While the finds from Holm Mains do not compare to the number and quality of lithics from Culduthel they are nonetheless significant. The inclusion of two barbed and tanged arrowheads suggests that the individual interred at Holm Mains had some status.

Pottery

Ann MacSween

The assemblage comprises the fragmentary remains of two beakers, one from each cist (Plate 9).

Discussion

The beakers from Holm Mains Farm add two examples to an area which had a sparse distribution when D L Clarke published his corpus of beakers in 1970. Finds from developer funded excavations in particular have gradually added to the picture since then. Where context can be determined, most

beakers accompanied individual burials. A period of 2600 to 1800 cal BC has been defined as the main period of use of Beaker pottery in Britain and Ireland.

Motifs and arrangements vary a great deal from one vessel to another and the complexity of styles makes it difficult categorise the decoration in any meaningful way. Humphrey Case (1995, 64) has noted that '...the range of vessels represented in Britain and Ireland can be seen as part of a widespread and customary European craft, producing goods suitable for everyday life and special occasions, with a set of traditional prescriptions modified according to the purposes for which the pot was intended and presumably the materials which were available'.

Recommendations

Cleaning and conservation
The pottery has been cleaned and the current packing is sufficient. Some reconstruction by a conservator to establish profile would be advantageous.

Cataloguing and discussion
The production of a catalogue describing the vessels is recommended, to provide a full description of form, fabric, surface finish, decoration, abrasion, etc, as well as a discussion to include comparison with material from the region and consideration of dating and style within a wider context.

Additional analysis
There is no residue adhering to the sherds so dating would have to be from associated material.

The main objectives of the analysis are –
- to provide a detailed description of the vessels including a sketch to inform the illustrator
- to determine the date of the pottery by dating of associated material
- to discuss the assemblage in its wider context

Appendix 6: Report on the Human Remains from Holm Mains Farm

David Henderson

BACKGROUND
The human remains recovered from the site were derived from two cist contexts. Both Cist 1 and Cist 2 contained *in situ* inhumations, although both were very disturbed on discovery, particularly Cist 2. Both skeletons were reconstructed as far as was practicable and examined to determine age at death, sex, stature and health.

Preservation and Taphonomy
Bone preservation on the site was variable. The left side of the individual from Cist 1 was well preserved and had remained largely undisturbed on discovery. The right hand side was both more broken and more eroded, particularly by the action of plant roots which had etched channels in the bone surface. The skeleton in Cist 2 was very fragmented and had been scattered around the area of the cist before archaeological recovery. The preservation of the bone in Cist 2 was less affected by root action and acidic groundwater and was classified as “fair”.

METHODOLOGY

Tooth-wear analysis (as outlined by Brothwell 1981, 72) was used to ascertain the age at death of the individuals. Other methods were used to estimate a more exact skeletal age. These were: examination of the pubic symphyses (Brooks and Suchey, 1990); the auricular surface of the ilium (Lovejoy *et al.*, 1985); and the sternal end of the fourth rib (Iscan *et al.* 1984 and 1985). In addition, tooth eruption and skeletal development were used to assess the age of the Cist 2 individual.

Gender was assessed by examining the form of the skull and the pelvis (W E A 1980), with more emphasis being given to pelvic form. Stature was reconstructed using the standard regression formulae from longbone lengths of Trotter and Gleser (in Bass 1987). Skeletal measurements were taken as per Cross and Bruce (1989) and indices were calculated using the formulae in Bass (*op cit.*) Non-metric traits were recorded from those in Brothwell (1981, 93-100). All bones were examined for pathological lesions and, where possible, these were classified according to cause.

RESULTS

Description

The individual in Cist 1 was represented by an almost complete skeleton; although greatly disturbed, it was possible to establish that the body was interred in a crouched position, lying on the left side with the knees tightly flexed, the left hand in front of the face and the right hand extended in front of the chest. The individual was a male, with an estimated height of 1.677 m (+/- 2.99 cm, derived from combined femur and tibia length). Skeletal age indicators all agree, suggesting an age of over about fifty years at death, but tooth-wear is very light for such an age in a Bronze Age individual, with all third molars barely worn. The morphology of the upper jaw appeared to be unusual, with a very straight arc from the third molar to the canine, producing a very rectangular outline, so it may be that this restricted chewing or, perhaps, breathing, and led to the individual eating a softer diet than the norm for the time.

The proximal third of the right humerus of a sheep or goat was also recovered from the cist, the unfused epiphysis indicating that it was from an animal under three and a half years old (Silver, 1969, 255 -6).

The skeleton of the Cist 2 individual was very fragmented and the left arm and right ulna and most of the skull were missing, presumably bulldozed away as the cist was exposed before archaeological intervention. A sub-adult male, around 20 to 24 years of age at death, his stature was reconstructed as 1.694 m tall (+/- 4.57 cm, derived from the humerus length). Apparently the individual was also interred on his left side, in a crouched position.

Bruce (1986) gives an average male stature in Bronze Age Scotland of 1.71 m, so both men are slightly shorter than average.

Very few measurements were available in either skeleton (especially the highly fragmented bones from Cist 2), and no non-metric variations, either cranially or postcranially, were recorded in either individual. A full list of measurements and the non-metric traits investigated is available in the archive.

PATHOLOGY

Arthritic lesions

As would be expected with the Cist 1 individual in the Older Adult category, degenerative changes to joint surfaces were recorded. The proximal radio-ulnar joints of both elbows and the patellar area of the left knee showed extensive bony lipping, indicative of osteoarthritis. The sub-adult from Cist 2 showed no joint changes past Sager's Grade I (Brothwell 1981 150). Both individuals also displayed Schmörl's nodes, in Cist 1 from the 9th thoracic to the 4th lumbar vertebrae and in Cist 2 from the 5th to the 10th thoracic vertebrae. These are pits in the disc surface of the vertebral body which are caused by excessive loading stress on the spine.

The Cist 1 individual showed a suite of lesions in the spinal region which may represent the onset of ankylosing spondylitis, an inflammatory disease causing calcification of connective tissue especially in the spine. The aetiology is unknown, but a genetic predisposition seems likely (Aufderheide and Rodriguez-Martin 1998: 102 - 4). Extensive bony lipping was recorded in the costal facets and costo-transverse joints of the thoracic vertebrae, lipping was noted around the lumbar bodies and the sacro-iliac joints were distorted and surrounded by extensive exostoses. While none of these lesions directly imply a diagnosis of ankylosing spondylitis, together they are suggestive of an early stage of the condition (although it is much more common for the onset of the condition to occur in younger individuals).

Deficiency Diseases

No signs of nutritional stress or childhood illness (*e.g.* in the form of enamel hypoplasias) were recorded from either skeleton.

Dentition

Despite the broken and eroded nature of much of the jaw bones of both skeletons, nearly the full dentition was recovered in both cases. In Cist 2 the upper and lower left molars (except upper first) were missing, in Cist 1 the lower anterior teeth from the left canine to the right lateral incisor and the upper left second molar were not recovered. Several of the upper teeth from the left side were reduced to enamel fragments by post-depositional factors. Aside from the anomalously light wear of the teeth of the Cist 1 individual and a pin-point occlusal caries cavity in his upper left first molar, neither skeleton displayed any pathological or developmental conditions.

SUMMARY

Both skeletons recovered from the cists were male, and had been interred lying on their left sides in a crouched position. One individual was an older adult (probably early fifties), the other was not fully skeletally mature (early twenties). No evidence of nutritional stress or severe childhood illness was recorded. The older individual suffered from some spine problems, possibly affecting his mobility, and was developing arthritis in his elbows and left knee. It is possible that a facial anomaly restricted his diet to soft foods. The second individual showed no evidence of disease. In neither case was it possible to determine a cause of death.

Appendix 7: Highland Council: Brief for archaeological work at: Holm Mains, Inverness

The Highland Council
Comhairle na Gaidhealtachd
SERVING The Highland Community

Brief for archaeological work at:

HOLM MAINS
Inverness

(IN-02-855)

ARCHAEOLOGICAL EXCAVATION

PLANNING AND DEVELOPMENT SERVICE
Archaeology Unit

Version 1.1 1 16/05/03

1) Background

This brief has been produced in order to specify archaeological work required at a housing development at Holm Mains Farm. Previous archaeological studies were carried out in advance of development at the site and included: a desk-based assessment (March 2000); an archaeological evaluation (May 2000) involving a sample geophysical survey of the area and a programme of trial trenching (covering 2% of the total site area); and a programme of targeted excavation at the north end of the site (May 2000). No further work on site was recommended. However, during full site clearing works in May 2003, a well-constructed short cist containing human remains was uncovered by a machine operator towards the southern end of the site. Upon further examination of the subsoil surface, a second, damaged cist was identified at a distance of c.100m to the west. Further features, including spreads of charcoal-stained material and a series of putative postholes lie close to one of the cists. The archaeologically sensitive areas remain open and have been marked-off by Tulloch and avoided by continuing site works. The appropriate authorities were alerted on 05/05/2003 as to the finding of human remains.

The area to the east and south of the site is known to be rich in archaeological sites, including prehistoric burial monuments. Two short cists (SMR: *NH64SE0033* & *NH64SE30*) and a ring cairn (SMR: *NH64SE0026*) are recorded lying to the east of the site (and north-east of the newly-identified cists) between 300m and 800m distant from the development site.

This work is being commissioned as the threat to the archaeological remains can no longer be averted – the cists and their immediate surroundings must be thoroughly investigated and recorded prior to destruction and any human remains present must be carefully excavated and removed. In this instance there is an immediate threat to the archaeological resource that must be dealt with by excavation.

The archaeological work will seek to identify and record any finds or features within the marked-off areas of the development site. Human remains, like the sites from which they come are seen as a non-renewable, highly fragile and ever diminishing resource. The remains at Holm Mains may have particular significance for future studies and should be retained. Where possible, specific deposits should be retained for sampling and dating analyses. Costings should include a contingency amount for taking and analysing samples.

2) Terms of Reference

This brief has been produced for Tulloch Homes who will be responsible for the work, including all tendering and contractual arrangements.

This brief specifies what we consider to be the ***minimum*** acceptable standard of work; proposals that present a higher standard may be offered and accepted. *We will assume that this will form the basis of an agreed approach unless changes are agreed with us in writing before the start of any site works.*

It sets out in detail who is responsible for what, as well as the terms of reference, objectives, method, monitoring and reporting arrangements. The approach set out below aims to establish as far as possible the nature and extent of any features of archaeological interest so that they can be recorded before destruction.

The work must be carried out by an archaeologist approved by the Council. This means that responsibility for all aspects must be taken by either an IFA Registered Archaeological Organisation or an individual Member of the IFA.

3) Objectives

To identify and record the location, nature and extent of any features or objects of archaeological importance within the marked-off areas.

To further understanding of the lives, deaths and burial practices of the community associated with the cist graves through archaeological excavation and scientific study of their remains.

To make sure that the needs for archaeological conservation and recording are met without causing any unnecessary delay or disturbance to the development project.

4) Method

The marked-off areas should be manually cleaned to aid the identification of putative archaeological features. All such identified features should be fully excavated and artefacts and ecofacts retained as appropriate.

Both cists should be fully excavated, including the removal of the stone sides and presumed bases in order to garner information about the grave cuts. The slabs should be retained in a safe place on-site as discussions for their disposal are on-going. The client (Tulloch) has offered assistance with the removal of the larger slabs. The opportunity should be taken if practicable to sample any possible dating material and soils in a systematic manner. Any samples taken must be analysed and the results reported.

Full and proper records (written, graphic, electronic, digital and photographic as appropriate) should be made for all work.

All excavated human remains should be retained for future research. As much information as possible should be retrieved about the antiquity and circumstances of death of any disturbed human remains. All recovered human remains should be promptly examined, recorded and reported by an appropriate specialist, along with the other findings of the project, in an appropriate publication.

5) Monitoring

The archaeologist appointed is responsible for agreeing arrangements for monitoring with Archaeology Unit staff. We will monitor projects as necessary to ensure that minimum standards are met. This is occasionally by unannounced site visit - alternative or additional monitoring arrangements may be made in individual cases.

Prior notice of fieldwork starting dates, with contact names and local addresses, telephone numbers and directions and other arrangements for access must be given to the Senior Archaeologist by the archaeologist contracted to carry out the work.

Any unexpectedly significant or complex discoveries, or other unexpected occurrences which might significantly affect the archaeological work and /or the development must be notified by the archaeologist immediately to the applicant and the Senior Archaeologist. The finds or features must be left until arrangements have been agreed for safeguarding or recording them. In the meantime work may continue on other areas of the site.

6) Reporting

a) Project report

The archaeologist appointed is responsible for producing a report on the work, and for making sure copies have been received by the recipients listed below. The archaeologist appointed should allow for all costs when estimating for the work. We require archaeologists to submit satisfactory reports within the agreed deadline.

Apart from any copies required by the client, at least **five** copies of the project report must be produced by the archaeologist. These must be submitted to all of the following **within 6 weeks** of the completion of the field work.

- One paper copy for the Inverness Area Planning and Building Control Manager, 1 – 3 church Street, Inverness, IV1 1OY.
- One paper copy to be deposited with the Council's Senior Librarian Information Co-ordinator, Libraries Support Unit, 31a Harbour Road, Inverness IV1 1UA. This will be available for public consultation through the public library service.
- One paper copy to be deposited with the Council's Assistant Curator (Archaeology), Museum & Art Gallery, Castle Wynd, Inverness IV2 3EB.
- Two copies for the Archaeology Unit, Planning and Development Service, Council Offices, Glenurquhart Road, Inverness IV3 5NX :
  - One paper copy
  - One copy of the complete report in Adobe Acrobat format (*ie* a pdf file). This can be supplied by email or on a computer disc. Please ensure that all drawings and photographs are included.

The report must include, as a minimum,

- Location plan showing the project area and archaeological sites and features affected. Grid references must be included. It may be helpful to include a plan of the areas covered by previous phases of archaeological work on the site.
- Circumstances and objectives of this work, including a copy of this specification
- Weather and other conditions affecting fieldwork
- Scale plans, sections and photographs of all significant archaeological features identified.
- A full index to any records or other material generated by the project - including its location.
- A brief analysis of the project results drawing in comparative data as appropriate, and a statement of the significance of the results for future research.
- General comments and proposals for future archaeological projects arising from the carrying out of this project.
- A set of colour slides illustrating the main elements of the archaeological excavation and its progress.
- A list of finds, set out in the required format for Treasure Trove reporting. Copies of the necessary forms are obtainable if required from the Council's Assistant Curator (Archaeology), Museum & Art Gallery, Castle Wynd, Inverness IV2 3EB

The report sent to the Highland Council Archaeology Unit and the client (Tulloch Homes) should include a Costed Assessment and Project Design for further work arising from the excavation to aid the production of final publication of the results.

b) Presentation

If significant new archaeological information has been discovered, the archaeologist must arrange a presentation of the project results, to the local community within a year of the completion of the fieldwork. Arrangements must be agreed with the Senior Archaeologist.

c) DES

A brief summary of the results must be sent to the Council for Scottish Archaeology for inclusion in Discovery and Excavation in Scotland.

d) Copyright

The Council will assume author's copyright unless advised otherwise. However, the Archaeology Unit reserves the right to make the report available for reference and research purposes, either on paper, or electronically. The completed report will be made available for immediate public consultation for research purposes at the Highland Council Sites and Monuments Record, and through the public library service. The Archaeology Unit will acknowledge copyright in all cases.

7) Finds

Advice and facilities for emergency conservation and temporary storage of recovered artefacts can be offered by Inverness Museum on consultation with the Conservation Officer and Assistant Curator (Archaeology). A list of services and table of costs are available from the museum.

Archaeologists undertaking fieldwork should notify the Council's Assistant Curator (Archaeology) at Inverness Museum, who will in turn notify local museums of the fact that there is archaeological work ongoing in the area. All finds should be notified for Treasure Trove before the final report is submitted.

8) Insurance

The archaeologist appointed must take all necessary measures to conform with the Health and Safety at Work Acts and be covered by all necessary insurance. Section 24 of the Highland Council's revised Contracts Standing Orders states:

"All specifications issued by and contracts entered into with the Council in connection with the carrying out of work or the provision of services shall provide that the contractor holds a valid insurance policy, approved by the Council, for:-

(1) Employers liability - minimum limit - £10m (statutory limit)
(2) Public liability - minimum limit £5m."

9) General

The archaeologist agrees by undertaking this work to the terms of this brief, including the following:

The archaeologist appointed must:

- carry out the work according to the Code of Conduct, Standards and Guidance of the Institute of Field Archaeologists.
- agree a timetable for the work with the client and the Senior Archaeologist.
- not comment to the press or other media without prior approval from the Senior Archaeologist and the client.
- fully allow for prevailing weather conditions in northern Scotland.

Any Health and Safety incidents on site involving the archaeologist must be immediately notified to the Health and Safety Executive.

This brief has been produced for the Council's Senior Archaeologist, to whom any enquiries should be addressed. No one else has authority to vary its terms.

John Wood *Senior Archaeologist* *Friday, 16 May 2003*

Plate 1. Cist 1 on first inspection

Plate 2. Skeletal material disturbed by collapse

Plate 3. Stacked stone collapse over skull and upper torso

Plate 4. Crouched inhumation in Cist 1

Plate 5. Barbed and tanged arrowhead from Cist 1

Plate 6. Pebble floor of Cist 1

Plate 7. Cist 2

Plate 8. Surviving skeletal remains in Cist 2

Plate 9. The Beaker from Cist 1

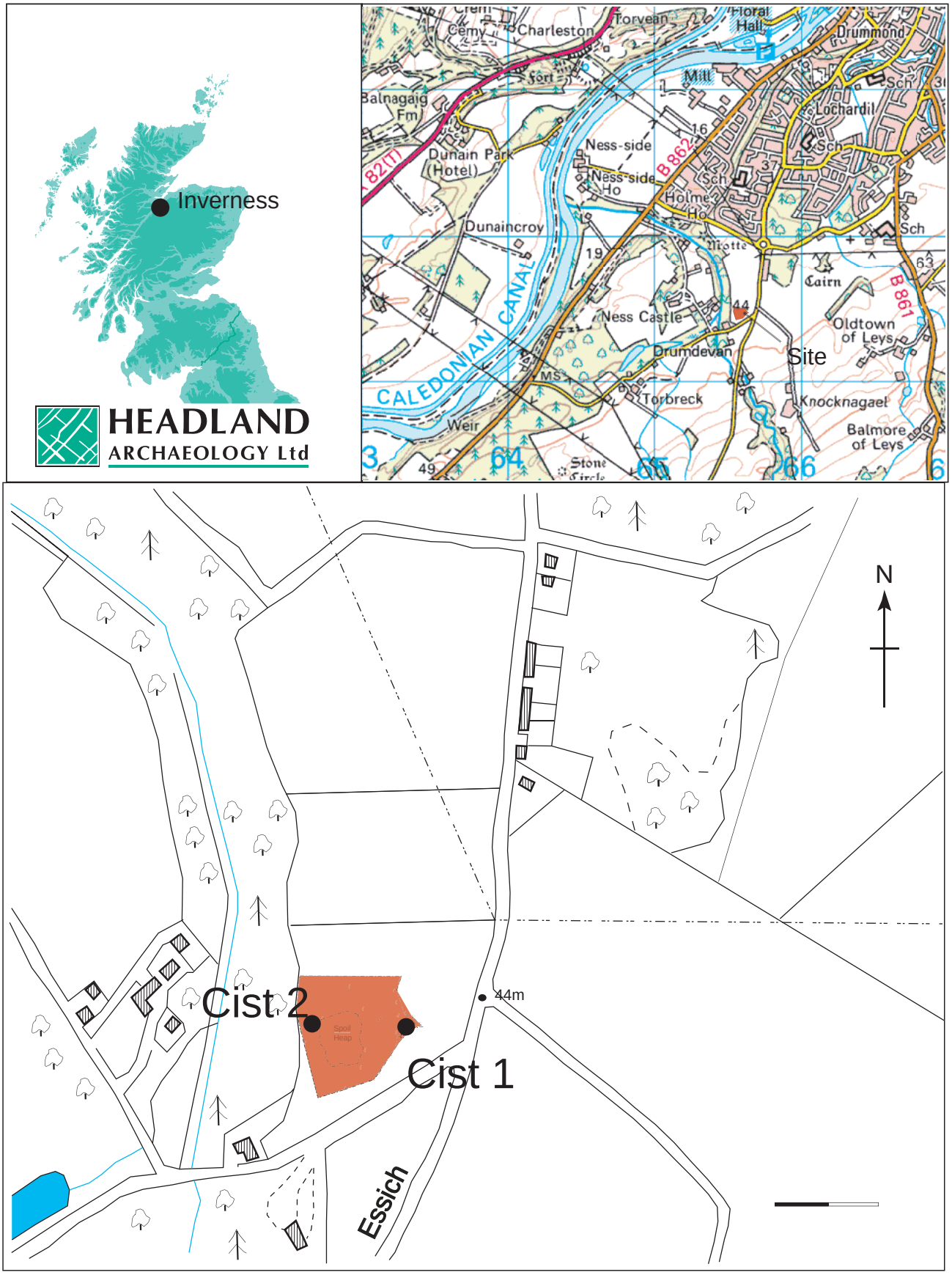


Figure 1. Holm Mains Farm, Site Location

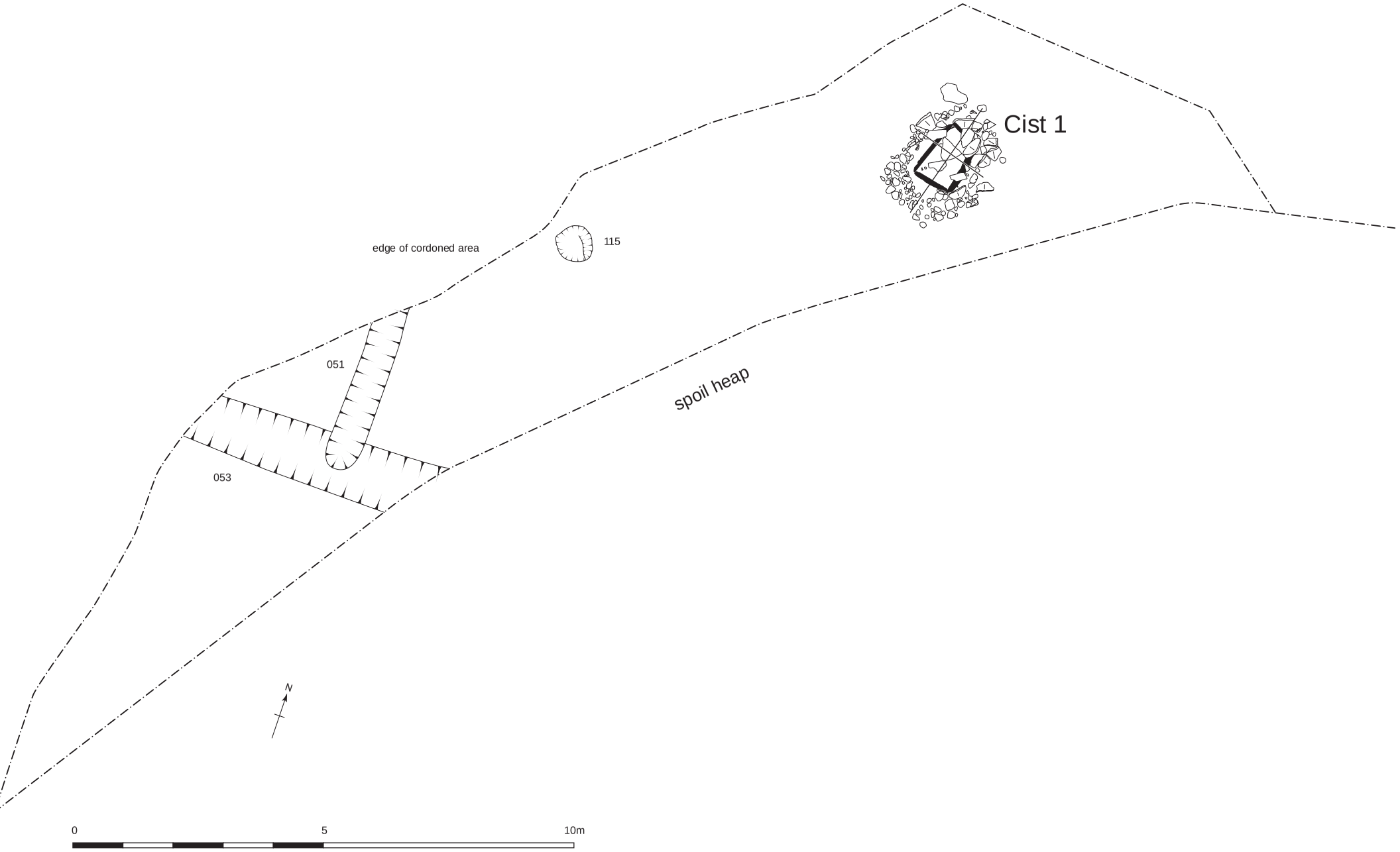
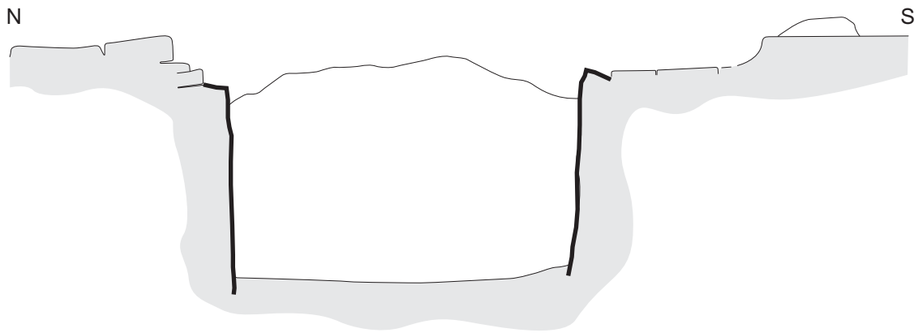
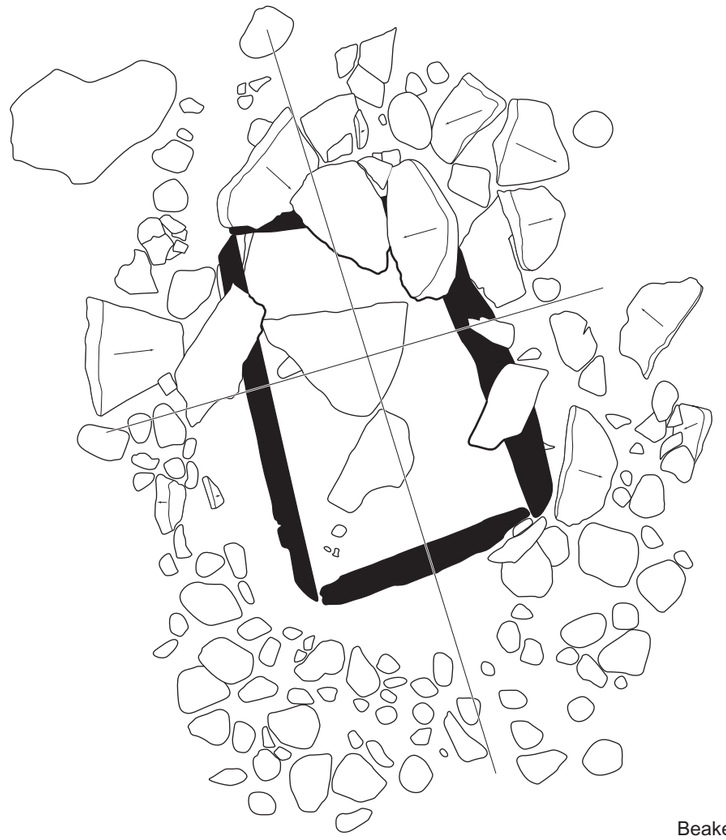
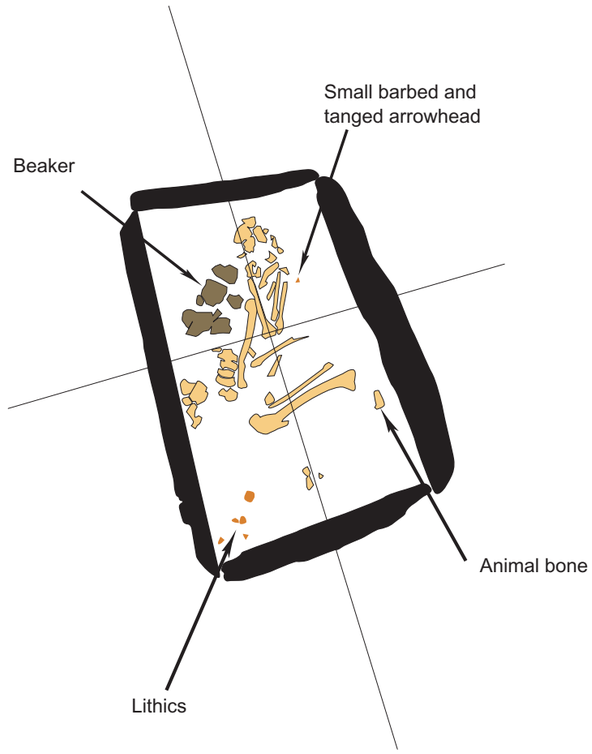
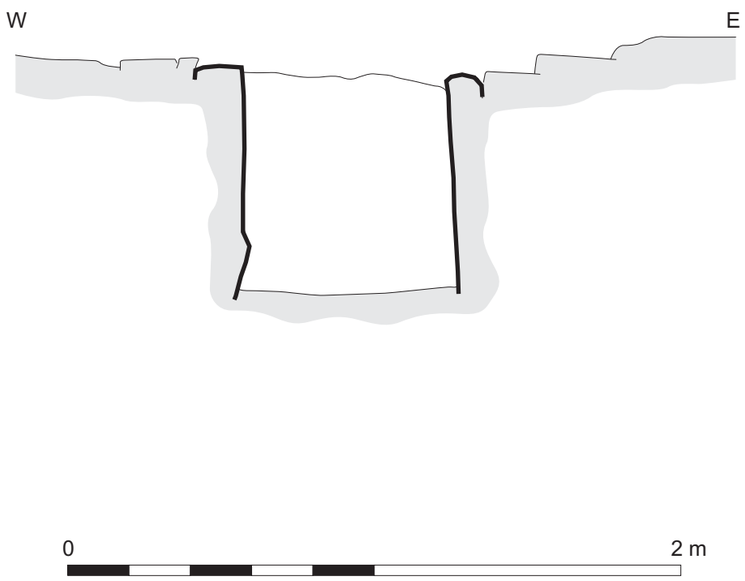


Figure 2. Holm Mains Farm, Cist 1 and immediate environs









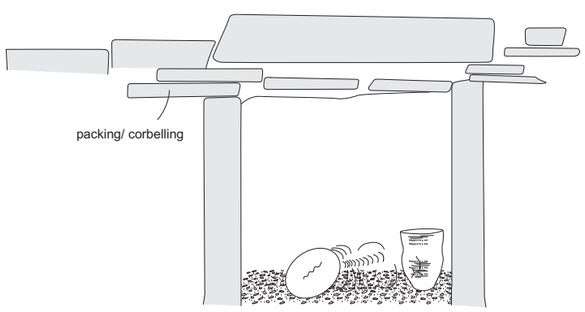


Figure 3: Holm Mains Farm. Detail of Cist 1

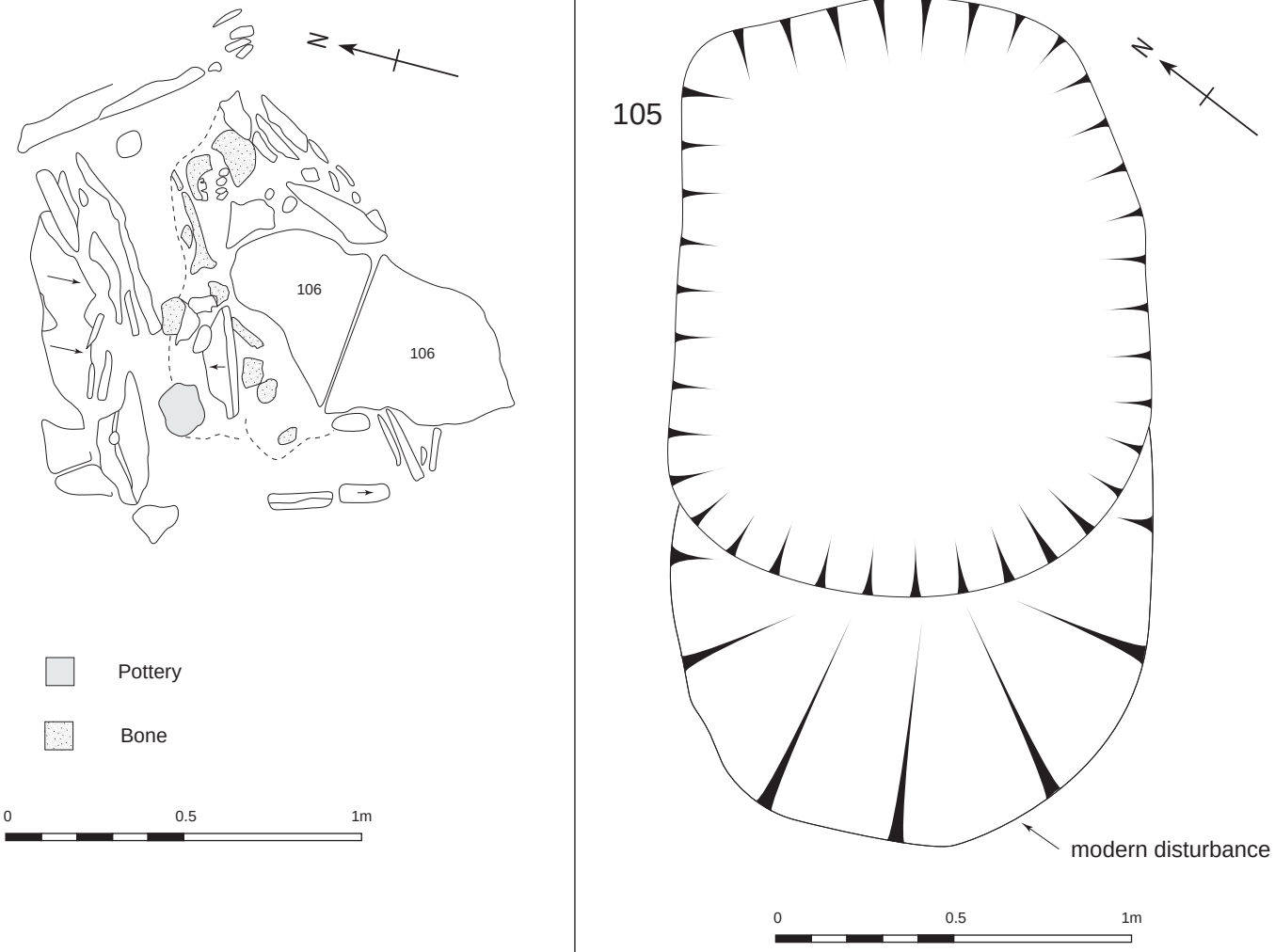
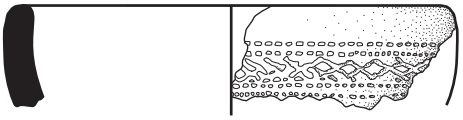
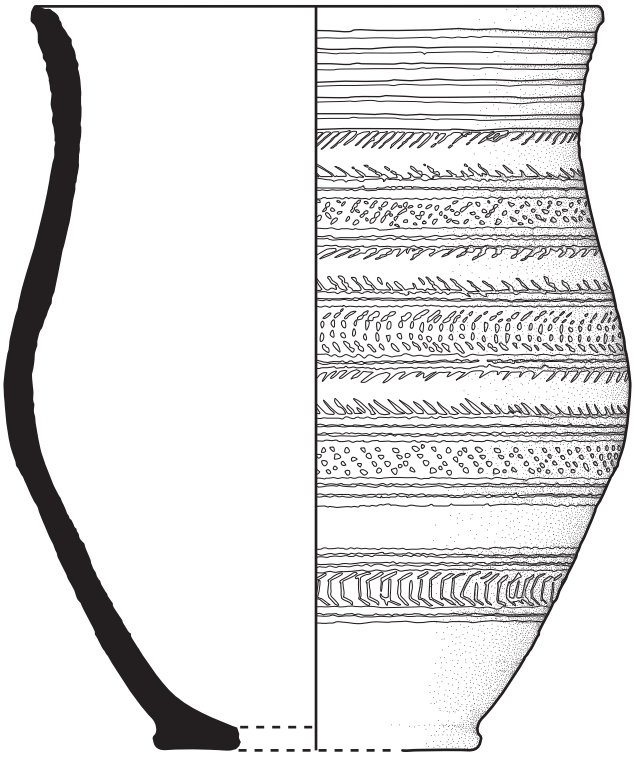


Figure 4. Holm Mains Farm, Cist 2



Cist 2



Cist 1