3 Excavation Results

3.1 Structure 1

This comprised a sub-circular mound, 5–6m in diameter, of collapsed and/or plough-disturbed rubble (illus 2) that underlay a possible turf horizon of silty loam (context 001), which also lay around Structure 2. The edge of the rubble mound overlay and was set into a layer of firm silty clay. Due to the spread and lack of structure of the rubble, the mound was interpreted as a clearance cairn and not excavated further. Over 100 pieces of vitrified fuel ash waste (cramp) were collected from the topsoil over Structure 1.

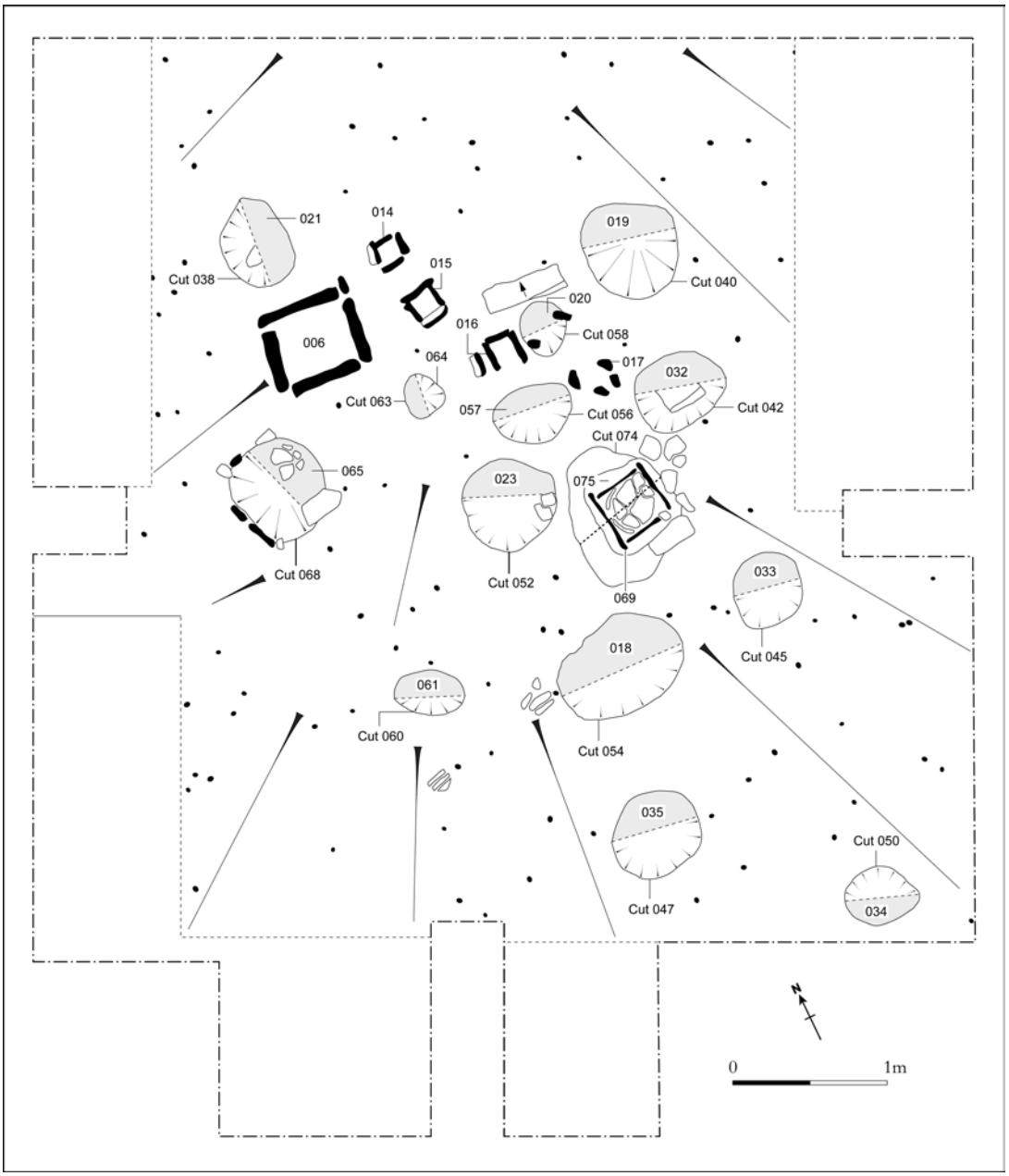
3.2 Structure 2

This comprised an irregular mound of gravel and rubble up to 0.35m high and 4.6–5.4m in diameter (illus 2). The top of a kerb and a cist were visible through this material. The kerb was a sub-circular wall infilled with rubble, which appeared to respect two cists and overlay six of a group of 13 infilled pits cut into the stony silt loam subsoil and the underlying C-horizon of firm pale yellow-brown clay (illus 7). The northern edge of the kerb cut the south side of one of three 'boxes', also set into the underlying natural surface (illus 3). (The term 'box' is used as a convenient descriptive word to denote the shape and small size of these rectangular stone-lined features in comparison with the cists and is not meant to imply a function.) Two small spreads and a cobble setting, which overlay the subsoil, were the only other features noted (illus 7). The fills of cists and boxes were fully excavated, whereas the fills of cuts were half-sectioned. It is possible that the excavation area did not encompass all of the features belonging to the group. During the removal of the topsoil from the area of Structure 2, a flaked stone bar, three pieces of cramp and a few fragments of post-medieval agricultural ironmongery were retrieved.

3.2.1 Pits

The pits (illus 3 & 4) were all sub-circular to sub-oval, with diameters between 0.30 and 1.00m. Only two cuts (contexts 058 and 064) had diameters under 0.50m. The pits were 100–250mm deep, with sides that varied from steep to gentle. Four of the pits (040, 042, 058 & 064) were distinctly concave, whilst the others had uneven or flattish bases. One of the largest pits (context 068) had some small upright stones set around its upper edge. None of the separate characteristics appeared to form

Illus 2 Site location looking south, with Structure 1 in the foreground

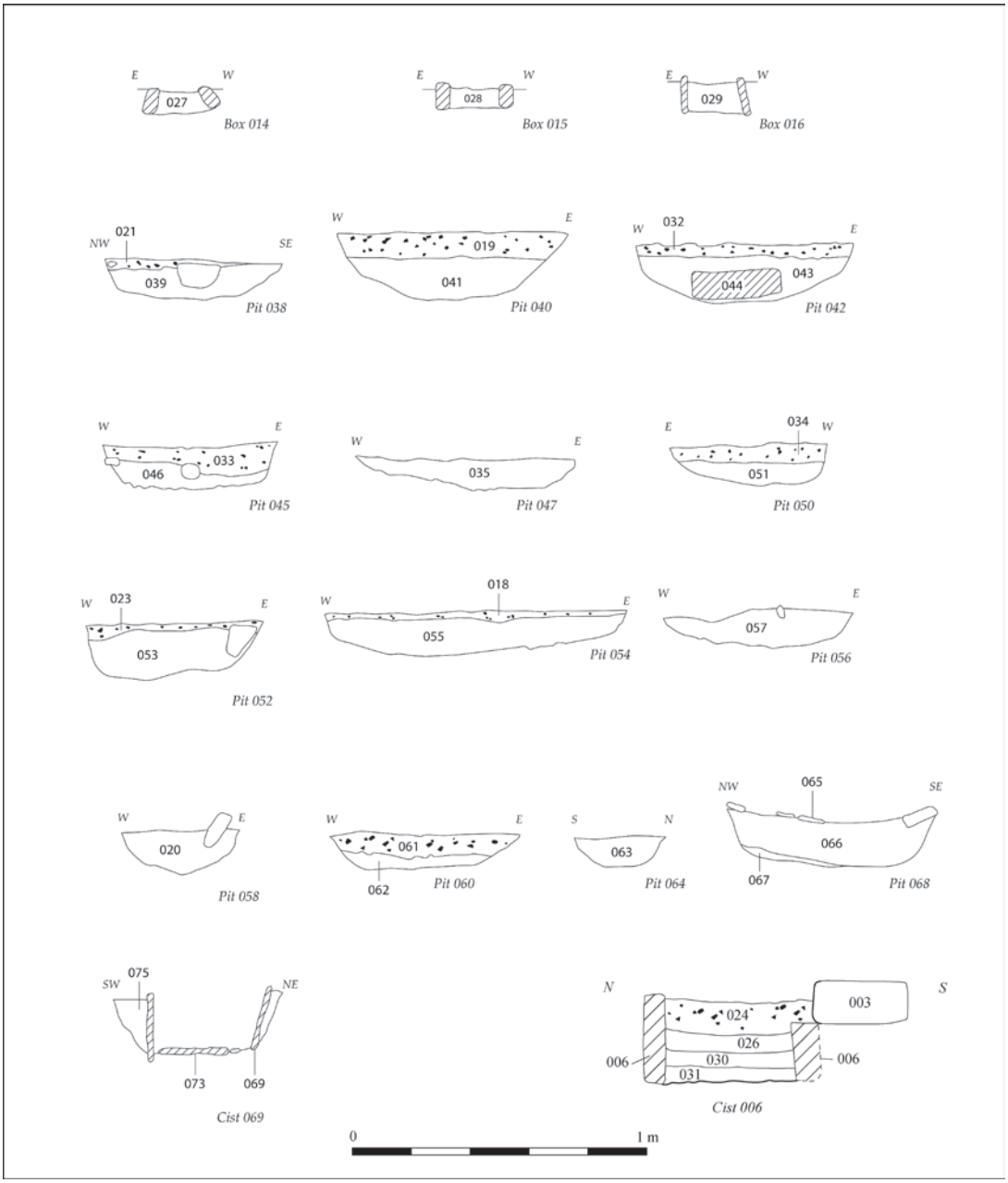


Illus 3 The primary phase of the site

significant groups. It is likely that the pits were filled shortly after they were dug, because there was no degradation of the cut edges and no silt had accumulated in the bottom of the pits by natural weathering processes.

The fills of the cuts comprised up to three types – primary, 'secondary' and capping. Most of the samples processed were from the primary fills, which bore no similarity to the layers through which the pits were dug. They consisted of pyre-derived material – dark ashy and occasionally peaty soils, containing fuel remains such as burnt peat, carbonized heather from heathy turves and wood charcoal from scrub alder, hazel and birch (Table 1). Carbonized wild fuel resources dominate the fills, except context 055 in Pit 054, which was rich in wood charcoal fragments, one of which provided a probable radiocarbon date of 1520–1320 cal BC (Table 2). The material was gathered quickly, because there was no degradation of the charcoal in any of these fills, except for some iron panning deposits caused by groundwater penetration post burial.

Some of the primary fills contained additional or different material (Table 1). As well as fuel debris, Fill 046 in Pit 045 contained 30 fragments of cremated bone and five pieces of cramp. Three sherds of pottery were found in Fill 051 in Pit 050 along with the fuel debris, which provided a probable radiocarbon date of 1520–1310 cal BC (Table 2). Fuel debris from Fill 043 in Pit 042, which also contained a large rectangular block of stone, provided probable radiocarbon dates of 1610–1400 and 1680–1430 cal



Illus 4 Sections through fills and features

BC (Table 2). Fill 053 in Pit 052 contained virtually no fuel debris, but 13 pieces of cramp. Only four pieces of cramp in total were found in the rest of the primary fills. Steatite vessel sherds SF18 were found in Fill 066 in Pit 068. The sample from this deposit was not found. None of the pits cuts another, indicating that they belong to a single phase. The dates obtained overlap closely, indicating that the features not sealed by the structure were statistically no later than those that were. Therefore, it is likely that they are contemporary. The dates place the site firmly in the earlier Bronze Age, spanning the later part of the Early Bronze Age and the earlier part of the Middle Bronze Age.

The dates have been calibrated using the University of Oxford Radiocarbon Accelerator Unit calibration program, OxCal3 (Bronk Ramsey 2001), with atmospheric data from Stuiver *et al* 1998.

The second type of deposit, usually the secondary fill in a pit, occasionally the only fill, was a diluted version of the pyre-derived primary fills, mixed with a small amount of gravel, presumably from the ground surface at the point of collection or deposition. No samples remained from these deposits, but 10 cremated bone fragments from context 018 in Pit 054 and three cremated bone fragments from context 023 in Pit 052 were retrieved as finds SF22 and SF23, respectively.

The third type of fill sealed the top of four pits (040, 060, 058 & 068) and comprised gravelly capping material partly derived from the surrounding subsoil, perhaps from some of the material dug out when the pits were cut.

Table 1 Summary of number & weight (g) of ecofacts by feature

Feature	Bone (no)	Wild resources	Wood charcoal	Cramp	Bone (weight, g)	Wild resources	Wood charcoal	Cramp
Pit 038	0	129	0	0	0	7.34	0	0
Pit 042	0	191	16	0	0	10.27	3.00	0
Pit 045	30	130	0	5	1.4	21.83	0	0.8
Pit 047	0	87	1	1	0	1.73	0.08	2.3
Pit 050	0	170	4	0	0	10.93	3.05	0
Pit 052	3	7	0	13	1.1	0.01	0	1.4
Pit 054	10	118	25	1	1.6	0.01	34.54	0.6
Pit 060	0	52	0	30	0	3.14	0	10.2
Box 014	0	3	14	16	0	0.05	1.68	4.6
Box 016	0	5	2	7	0	0.05	0.15	1.5
Cist 006	84	4	0	328	5.1	0.14	0	356.0
Cist 069	89	2	0	25	4.6	0.28	0	3.1
Total pits	43	884	46	50	4.1	55.25	40.67	14.7
Total boxes	0	8	16	23		0.10	1.83	6.1
Total cists	173	6	0	353	9.7	0.42	0	359.1

Table 2 Radiocarbon determinations from wood charcoal samples submitted to the Scottish Universities Environmental Research Centre AMS Facility

Lab code	Species	Context	Age BP	$\delta^{13}C$	Calibrated date range (95.4% probability)
SUERC-3746 (GU-12290)	*Larix / Picea*	029: fill of stone box; 016: sealed by structure and capping (002)	3500 ± 45	–23.7	1720 BC (5.2%) to 1680 BC 1940 BC (90.2%) to 1730 BC
SUERC-3759 (GU-12293)	*Betula*	043: primary fill of Pit 042	3210 ± 40	–25.7	1610 BC (5.3%) to 1560 BC 1530 BC (90.1%) to 1400 BC
SUERC-3760 (GU-12294)	*Corylus*	043: primary fill of Pit 042	3265 ± 35	–25.7	1680 BC (1.7%) to 1670 BC 1630 BC (93.7%) to 1430 BC
SUERC-3747 (GU-12291)	*Betula*	051: primary fill of Pit 050	3135 ± 40	–25.6	1520 BC (95.4%) to 1310 BC
SUERC-3748 (GU-12292)	*Corylus*	055: primary fill of Pit 054, sealed by structure	3160 ± 35	–26.7	1340 BC (4.5%) to 1320 BC 1520 BC (93.7%) to 1380 BC

Some of the pits may have been truncated, but the fact that the structure sealed pits with single fills as well as pits with capping deposits and that pits with capping material lay in close proximity to pits with single fills outwith the area of the structure indicates that most pits and fills were not disturbed.

3.2.2 'Boxes'

These three features were set into the ground in close proximity in the northern part of the site (illus 3 & 4). Internally, the boxes were roughly 150–220mm square and 100–140mm deep. The sides were flag orthostats, whilst the bases were formed by the surface of the underlying C-horizon clay (context 037). The south side of box (context 016) was slightly displaced and overlain by the stone kerb. The boxes were filled with single pyre-derived ashy deposits that contained small amounts of fuel debris and cramp, but no bone (Table 1). It is difficult to interpret these features, except that the fact they contain at least some pyre material may indicate that they are containers rather than, for example, post settings. A fragment of driftwood from Fill 029 in Box 016 produced a probable radiocarbon date of 1940–1680 cal BC (Table 2). The date is that of the tree's fall in the Americas, not the fragment's deposition in Orkney, and therefore can only provide a *terminus post quem* for the kerb and, probably, the whole site.

Illus 5 Steatite vessel SF19 with lid SF20 in cist 069

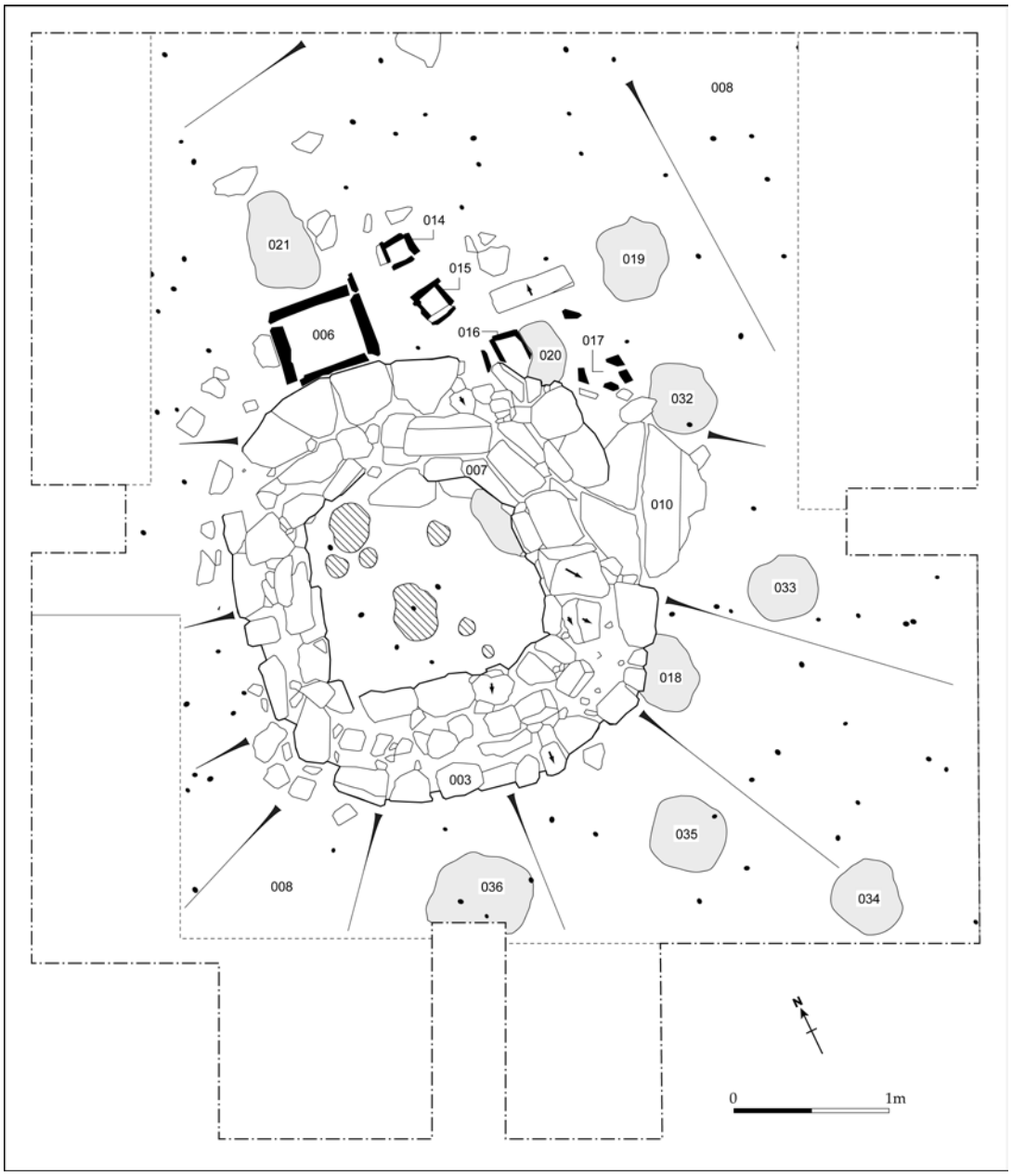
Illus 6 Cobble setting 017

3.2.3 Cists

Rectangular Cist 006 lay to the west of the boxes at the north edge of the kerb wall (illus 3 & 7). It measured 460mm north/south by 560mm east/west and was 300mm deep. The sides were flag orthostats, whilst the base was formed by the surface of the C-horizon clay. The orthostat forming the south side of the cist was slightly lower than the other sides and was built on by the outer face of the kerb (illus 4). The other three sides of the cist stood proud of the surrounding surface, at the same level as the surviving top of the kerb.

The cist contained three black ashy pyre-derived fills. A few pieces of cramp were retrieved from the primary and upper fills as SF25 and SF13, but a sample survived to be processed from the secondary fill (context 030), showing it to be a formal burial. It contained over 300 pieces of cramp and 84 fragments of cremated bone, with only four lumps of burnt peat (Table 1). The fills were sealed after the construction of the kerb wall by gravelly material similar to that capping some of the pits.

Cist 069 lay to the south of the boxes at the east side of the kerb, set flush with the ground surface in a 650mm square, 250mm deep flat-bottomed cut (illus 3 & 4). Internally, the cist was 400mm square and 200mm deep, with flag orthostat sides. After these were set in place, the cut was backfilled against them and broken flag fragments, two of which were shaped, and were inserted to form the base of the cist.



Illus 7 The freestanding kerb wall constructed over pits but respecting the cists

A lozenge-shaped flagstone (context 010) capped the whole feature, overlapped but essentially respected by the outer face of the kerb wall (illus 7).

Steatite vessel SF19 was placed upright into the cist, fitting it snugly and sealed with a shaped circular stone lid, SF20 (illus 5), which had broken and become slightly displaced after burial. The primary fill of the urn comprised a burial of black ashy pyre-derived soil and 82 cremated bone fragments, probably from an infant, with 11 pieces of cramp (Table 1). The upper fill of the urn and the backfill around the urn in the cist included loose ashy soil, several pieces of cramp and a few fragments of cremated adult bone. However, the excavators noted that these deposits might have been the result of/or contaminated by soil percolation, after the flags and lid sealing the cist and urn had cracked. This observation was confirmed by the XRF analysis of a metal flake from the upper fill of the urn. The analysis, conducted by Dr Jim Tate, National Museums of Scotland, showed a modern mixture of iron with a little titanium.

3.2.4 Spreads and cobble setting

North of Cist 069, on the south-east side of Box 016, was a horseshoe-shaped setting, some 160 by 200mm, made of four rounded cobbles set on end (illus 3 & 6). Two similar cobbles lay 300mm to the north in the top of Fill 020 in Pit 058. It is not certain whether these cobbles are part of the setting, or have been displaced from it and included in the fill. The site photographs suggest that the stones may have been cobble tools.

Illus 8 The kerb infilled with rubble as part of the cairn construction

There were two patches of ashy material, one (context 036) at the south-west edge of the site (illus 7) and the other (context 059) south-west of Box 016. The latter contained five sherds of pottery, SF17. There is no record of the ground below them being heat-affected, so it is more likely that these are deposits than the remains of fires *in situ*.

3.2.5 The kerb

A freestanding sub-circular stone kerb was then built on the site, with an internal diameter of 1.5–1.9m and walls 0.5–0.9m thick, standing to a maximum height of 0.26m (illus 7). It was built of an uncoursed mixture of stone, from rounded boulders to angular flags and blocks of variable sizes up to 400 by 400 by 250mm. The masonry was up to three stones high, faced internally and externally and had a rubble and soil core. A patchy compacted surface (context 048) was noted inside the structure, perhaps the result of construction activity. The kerb appeared to be placed randomly over the filled pits, cut the south-west corner of Box 016 and overlapped but respected both of the cists.

3.2.6 The cairn

The kerb was infilled with at least two deposits of gravel, flags and rubble (illus 8). A spread of similar material (context 009) to the north and east of the structure may be related to this activity and it is possible that Cist 006 was capped with context 024 at this time. A gravelly layer of rounded pebbles (context 002) was piled over the infilled kerb to form a cairn or mound. A flint and four flaked stone bars or mattocks were included in this capping material, which may have been brought to the site, because the angular stones in the subsoil were not similar. Clearly, the material had collapsed and spread out from its original form up to 1.6m beyond the outer face of the kerb. A degree of later disturbance is indicated by the displacement of at least one of the stones from the kerb wall.

A possible turf horizon of humic loam (context 001) that contained a broken ard point, SF10, extended across the rest of the area not covered by the collapsed cairn material. It is recorded that the cairn material overlapped (context 001), but there is no record of the full extent or relationships of this layer, which also overlay Structure 1. Therefore, context 001 could be part of the topsoil horizon, with a small overlap from the cairn material resulting from soil creep (there is no sign of ploughing at the site), or context 001 could be a buried prehistoric topsoil horizon. The latter interpretation has the corollary that Structure 1 must be a prehistoric cairn, whether burial or clearance.