

The excavation of three cairns at Stoneyburn Farm, Crawford, Lanarkshire, 1991

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with contributions from Camilla Dickson, J McKinley, Tony Pollard, Helen Smith & Alison Sheridan

ABSTRACT

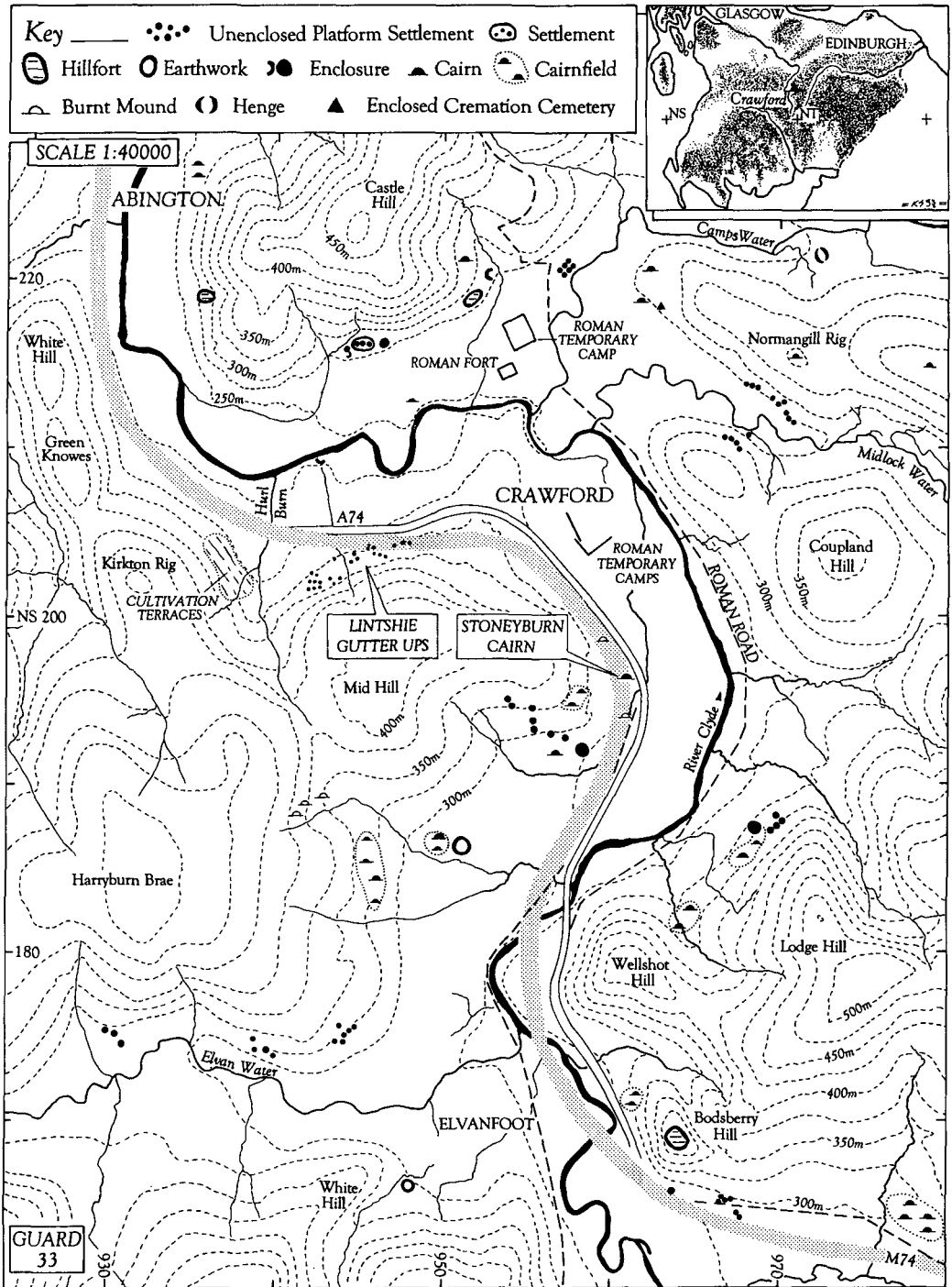
Excavation of three small cairns at Stoneyburn Farm, near Crawford, Lanarkshire, was carried out in advance of the construction work for the upgrading of the A74 to motorway. The two smaller cairns contained burials dating to the Early Bronze Age and produced five faience beads and a complete pygmy cup. The largest cairn covered an area of complex activity running from the early Neolithic to the Early Bronze Age. Sherds of both early Neolithic bowls and of Beakers were recovered. Lithics recovered included finished forms such as arrowheads and utilized waste.

INTRODUCTION

During May and June of 1991, excavations were carried out near Crawford in Lanarkshire by Glasgow University Archaeological Research Division (GUARD) at the behest of Historic Scotland on three cairns at Stoneyburn Farm. The work was funded as part of the continuing programme of excavations necessitated by the M74 (M6 extension) motorway upgrade by Scottish Office Development Department National Roads Directorate. This investigation was carried out concurrent with excavations at Lintshie Gutter (Terry, this volume), which lies some 2 km ENE of the cairns. The site consisted of three small cairns clustered just off-centre of the summit of a small glacial knoll and was first recorded by the Biggar Museum Trust Archaeology Project Officer, Mr T Ward. The cairns are located at a height of 270 m OD in Upper Clydesdale (NS 96051957), just to the south-west of Crawford (illus 1). The background soils on the hillsides around Crawford are predominantly peaty podzols with some peaty gleys and humic iron podzols, overlying Ordovician shales and greywacke parent rock (Greig 1971).

The knoll lay immediately beside both the A74 dual carriageway and the main Glasgow/London railway line. Immediately adjacent to the knoll there was evidence of railway activity consisting of the remains of a building and a workshop, probably dating to the period 1846–7 (Ward 1992a, 168), with some evidence for related industrial activities. The construction of the A74 dual carriageway in the mid to late 1960s involved the removal of the summit of the larger knoll next to that of the site (M Henderson, pers comm); the Stoneyburn site thus survived several previous changes to the landscape caused by transport networks. It has now been largely destroyed by the construction of a motorway bridge over the mainline railway.

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ILLUS 1 Location of Stoneburn cairns (Based on Ordnance Survey map © Crown Copyright)

THE EXCAVATION

The excavation began with the clearance by hand of an area of 19 m by 14 m. The turf and peat was stripped by spade and the mounds were excavated by a mixture of pick and trowel. The A/B horizon (005) surrounding the cairns was cleared by picks and cleaned using trowels, with larger-scale clearance taking place using hoes. Finds recovery even during the larger-scale effort appeared good despite these methods, substantial numbers of lithics being recovered during the turf clearance.

The mounds were not striking from the surface; none exceeded 0.3 m in height, and the possibility that the mounds might be merely clearance heaps had been suggested (Ward 1992a, 167). Upon removing the turf, however, it became apparent that all three mounds were indeed cairns. The largest (002) was around 7 m in diameter while the two smaller cairns (003 & 004) were roughly 3 m in diameter (illus 2). The original intention had been to excavate the cairns by quadrants, but time constraints precluded this and the two small cairns were half-sectioned. Cairn 002 was initially half-sectioned, but the underlying deposits were later excavated in quadrants because of their complexity.

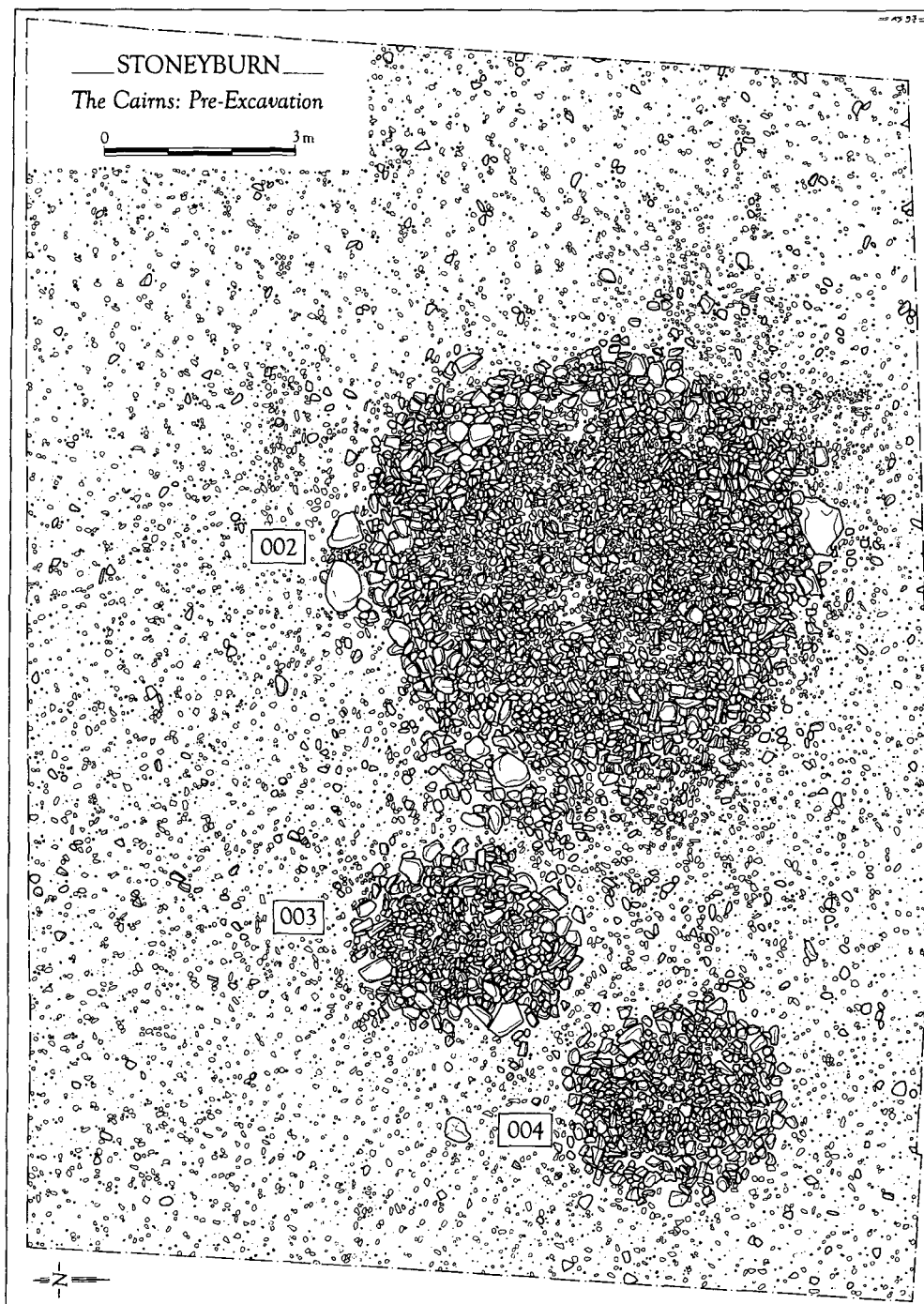
The mixed organic and mineral soil lying under the peat (005) was dark and compact with a high stone content, both large and small. This soil covered the entire trench around the cairns and had built up against their sides. On excavation, it was shown partially to underlie the cairns, the kerb-stones of the cairns tending to lie on top of it. There was, however, no indication of a buried turf line or old ground surface between the A/B deposit and the stones of the cairns. Contained within this deposit were a large number of lithics, including a broken barbed and tanged arrowhead, and fragments of early Neolithic bowls. Underlying the A/B horizon was the B horizon proper (018, termed 013 and 014 under the small cairns), an orange-brown sandy gravel, containing frequent small stones and pebbles, and it was chiefly on this material that the cairns stood. A sherd of an early Neolithic bowl was recovered from the surface of the B horizon.

Adjacent to the larger cairn 002 were two modern features, a pit and a borehole. Fortunately, these were the only signs of recent disturbance to the site.

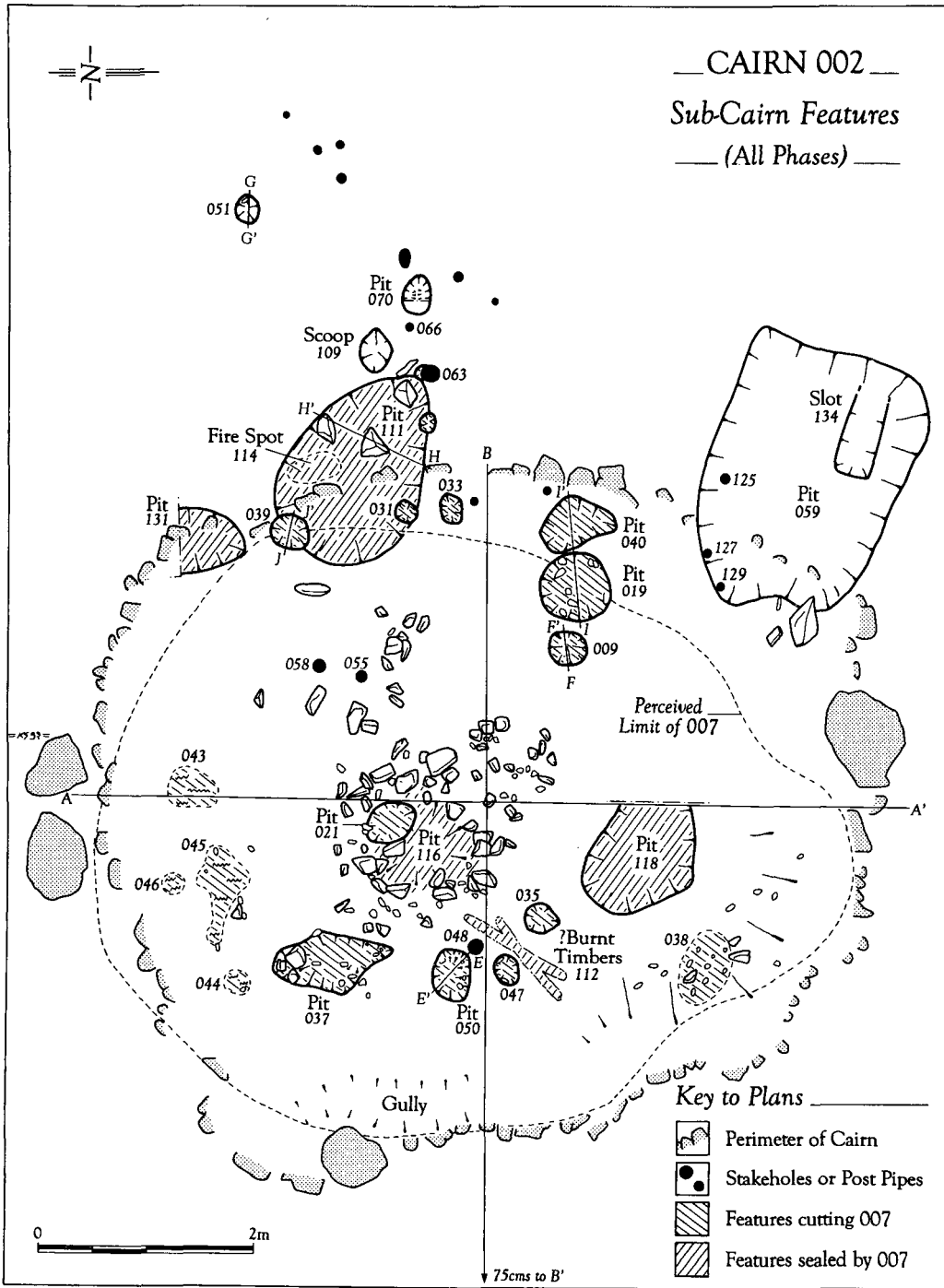
CAIRN 002

This cairn with the underlying features formed by far the most complex element of the site. The cairn itself, measuring 7.3 m by 6.2 m in diameter, consisted of a mixture of rubble and black organic soil, as did cairns 003 and 004. Unlike the simple dumps of 003 and 004, there was evidence of an encircling bank to the construction of the cairn (see section drawing, illus 4), suggesting that the cairn had been built with an initial ring of larger rubble which was then infilled with a mixture of small and large stones and organic soil, with a pair of particularly large boulders to the north opposing a single large boulder to the south (illus 3). There was also a slight depression on the north side of the cairn before it was de-turfed, close to the pair of large boulders on this side. It had been suggested that this might be evidence for robbing of the cairn (Ward 1992a, 167), but upon examination it became clear that the depression was not caused by earlier excavation; nor did it appear to relate to any collapsed feature below it. The explanation appears to be that the banking terminates at the eastern pair of boulders, leaving a gap.

The soil of the matrix of the larger cairn 002 probably represents turf and topsoil stripped from the site during the initial stages of constructing the cairn, used partly for bulk and partly to settle the stones as in any dry-stone construction. Within the soil of the cairn were several lithics, a single sherd of an early Neolithic bowl and two patches of burnt human bone; there was not



ILLUS 2 Exposed cairns at Stoneyburn prior to excavation



ILLUS 3 Features below Cairn 002

enough of the bone to identify age or gender, and it is possible that it represents the accidental incorporation within the matrix of the cairn of material from a pyre.

Below the cairn, the first material encountered was a layer of greasy grey-brown humic soil (008), adhering to a thin layer of black organic material and interpreted as a layer of dumped turf. It lay more or less centrally beneath the cairn but only extended for an area of about 2.9 m by 1.6 m. There was no old ground surface, and it appeared as though the area had been cleaned before the construction of the cairn, with the turf dumped before the cairn was built. Contained within 008 were several lithics and a fragment of an early Neolithic bowl.

Below this deposit and largely, though not entirely, covered by the cairn (see illus 3) was a large area of mineral soil 007, roughly circular and about 5 m by 6 m across. This material was interpreted as re-deposited because, although very similar to the general subsoil, it became apparent as a differential drying mark against the undisturbed natural. The nature of this material as a re-deposit caused difficulties in excavation. Various pits had been cut into it and again backfilled with largely the same material. Such features were difficult to see, especially since the weather was not conducive to differential drying, and several features changed substantially in appearance between initial and final excavation.

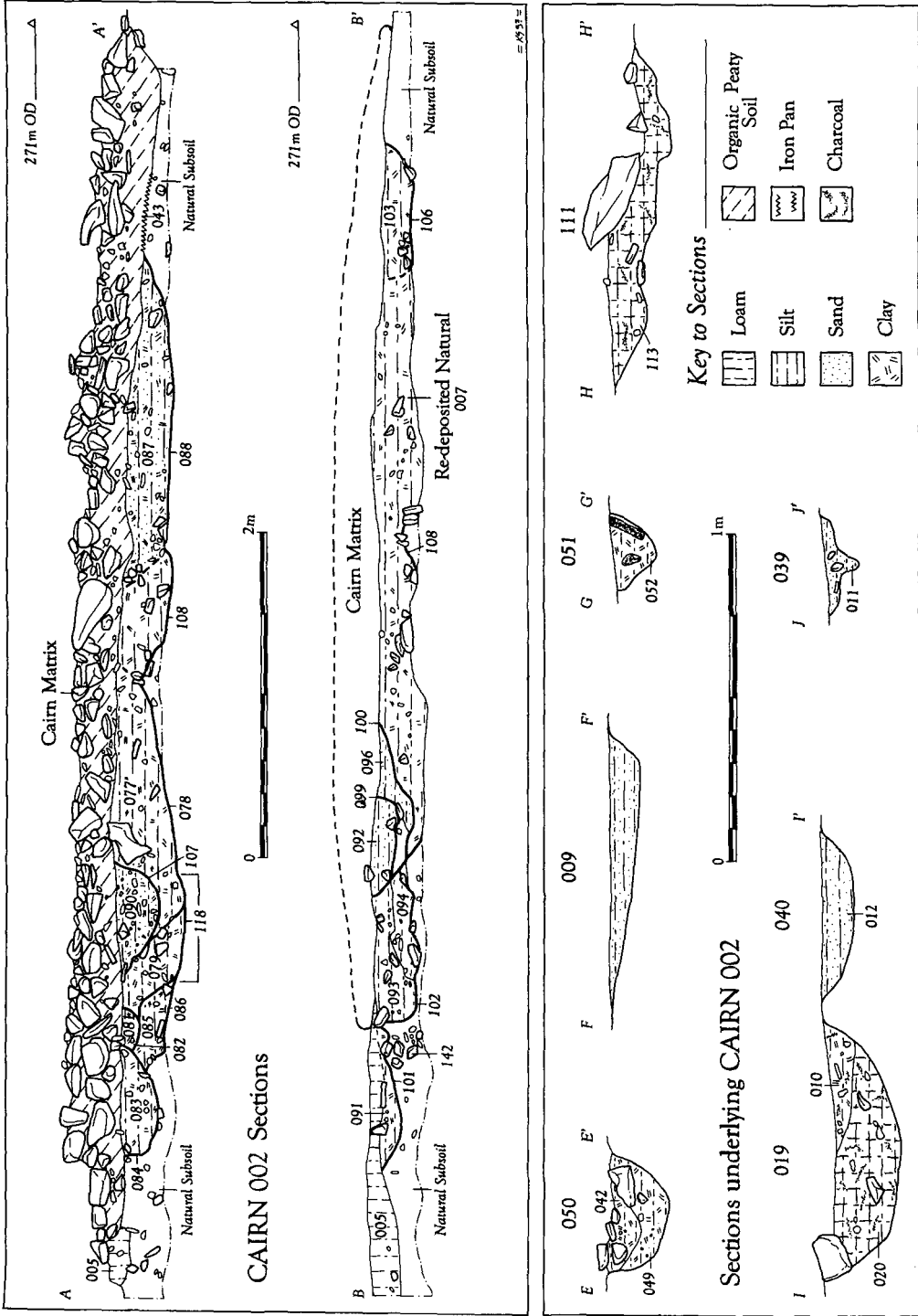
During the cleaning of the surface of 007, a few small artefacts were recovered consisting of a chert flake, a leaf-shaped arrowhead and two sherds of pottery. Once the initial cleaning had finished, several features were apparent. The most obvious feature was a small gully, running partially around the southern and western margins of 007, initially interpreted as evidence for an enclosing fence. However, there was no similar evidence around the rest of the deposit. Of the other features, some proved on testing to be merely amorphous patches of soil and iron-pan filling hollows in the surface of 007, or appeared to be animal burrows. However, there were patches of darker soil which proved to be the fills of pits (009 – 012; 009, F019, 039 and 040).

Pottery and lithics were recovered from all four of these pits. Pit 009 (illus 4.2) contained three fragments of Beaker all from the same vessel, and two flakes of chert. This pit lay towards the eastern edge of 007, but was certainly sealed by the cairn. Pit 019 (illus 4.2) contained a large number of fragments of early Neolithic pottery, all from bowls (one of which appears to have been carinated), and a number of lithic flakes. Charcoal from this pit produced a radiocarbon date of 4530 ± 70 BP uncal, calibrating to 3361 – 3098 BC at the one sigma level (GU-3261). Pit 039 (illus 4.2) produced several sherds of undiagnostic pottery and a small amount of lithic material. Pit 040 (illus 4.2) had several fragments of early Neolithic bowls, but also contained a fragment of corded Beaker. These pits all proved to be towards the eastern edge of the re-deposited material but within the circumference of the larger cairn 002; pits 009, 019 and 040 lay close together, although 040 lay beyond the presumed edge of the re-deposit 007 but still under the cairn, and pit 039 was somewhat separated. Two other pits (0031 & 0033; illus 3) lay around the edge of 007, but contained no artefacts.

A second cluster of features lay more centrally under this cairn; some were pits, 047 was probably the remains of a post-hole (all illus 3), 048 was a stake-hole associated with a sub-oval pit 050 (illus 4.2). There were no artefacts in association with these features and their purpose remains uncertain.

There were a number of stake-holes across the surface of the re-deposit (such as 055 and 058). Unfortunately, there is no obvious explanation for these features as they suggested neither structure nor fence.

Once these features had been fully excavated, 007 was sectioned to test its interpretation as a dump of re-deposited material; given the complexity of the features excavated at that point and the difficulty in seeing them given the soil and weather conditions, it was felt that quadrants would



ILLUS 4 Plan and section of Cairn 002

give the best control over its excavation. Opposing quadrants were removed, leaving running sections north/south and east/west. These revealed an even greater complexity of cuts and fills (see *illus 4.1*), consistent with the interpretation of 007 as a dump of re-deposited material; it was in fact a trampled, heterogeneous surface layer comprising a composite of all the underlying contexts. Many of these contexts varied only slightly and can best be explained as simply part of the back-filling of the scoop. No finds were made in the removal of these fills. There were a few features which appeared to be further pits cut through 007 (081/082, 083/084, 090/107); these were not visible on the surface despite repeated cleaning and did not appear as drying marks, nor were any finds recovered from the excavated portions of the apparent pits.

Since 007 was interpreted as a re-deposit, it was presumed that it must be the fill of a pit or a scoop. However, the complex series of cuts and fills created an undulating surface to the scoop, and it has not been given a single number. Accordingly, context number 007 is used henceforth to describe the whole range of cuts and fills underlying the larger cairn 002.

There were two features which did not appear to be a part of the activities associated with the deposition of 007 but which were immediately adjacent to it (*illus 4.1*). Pit 101 lies outside the apparent edge of 007 adjacent to a patch of stones (142) which are probably natural.

There was a stratum of features which lay at the bottom of the 007 complex (shown as the shaded features in *illus 3*), consisting of a number of pits. Pit 118, lying in the southwest quadrant (*illus 3*), was shown to have been destroyed by the formation of the 007 complex (see section 4.1); only the base cut of this feature was visible. This would suggest that it represents a period of activity prior to the activities relating to 007. Phosphate samples were taken from this feature to determine its function.

Features either as early as 118 or contemporary with the creation of 007 were pits 111, 116 and 131 (*illus 3*). Pit 111, in the north-east quadrant, containing fragments of daub and of hazelnut shell, ran under the edge of the cairn and into the edge of 007. The precise relationship between 007 and 111 was not apparent, although 111 may well have been contemporary with the initial stage of 007. There was a small patch of fire-affected soil (114) within pit 111, suggestive of a fire-spot. It must be emphasized, however, that this was not the site of the pyre, since it measured only 0.5 m by 0.35 m.

Pit 116 was positioned roughly centrally below the cairn within the north-west quadrant and at the base of the 007 complex (*illus 3*). The pit was vaguely delineated by a line of stones, although not enough to suggest a stone lining. There were no finds from the pit, and the fill consisted of a dark grey clay. The proximity of pit 021 which overlay pit 116 is entirely coincidental.

Pit 131 was only partially excavated, but also underlay the edge of the cairn material in the northeast quadrant. It was a long, oval cut with a grey-yellow silty clay fill, and no explanation of its purpose has been made.

It was impossible to determine stratigraphically either the temporal relationship between the pits at this level or their precise temporal relationship with the pits in the surface of 007. However, the lack of any obvious interface between the fills of pits 111, 116 and 131 and the 007 complex would suggest rapid covering before much build-up of silt could occur.

There were a number of features external to cairn 002 which may relate to it or even predate it. There were a number of small stake-holes, some of which may mark the line of a fence. None of them appeared to have been burned since little in the way of charcoal was recovered from the samples collected. There was a post (052) which was possibly burnt *in situ*, but its relationship to the other features on the site was impossible to determine and it was thus not considered suitable for submission for radiocarbon dating; the material has been retained for any future dating

programme. There was also a series of small pits and stake-holes immediately to the east of the cairn, apparently single 'events' (063, 066, 070 & 109). These may have related to pit 111 given their proximity; there is a slight suggestion of some of these small pits ringing 111, although they were stratigraphically higher than 111. It is certainly the case that these pits seem to respect the area of 111, although this may be purely fortuitous.

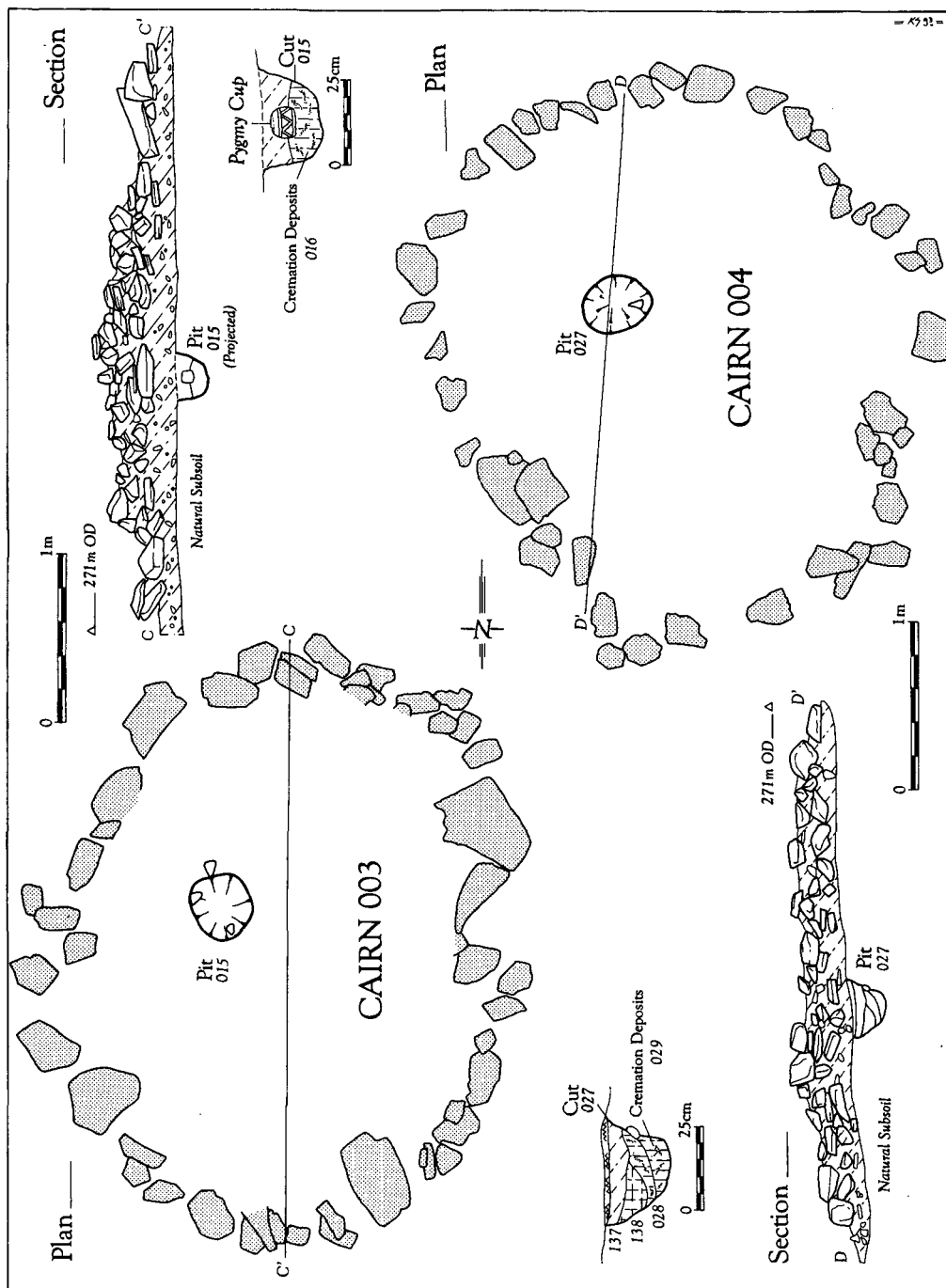
Finally, there was a large pit (059/135) which lay adjacent to the south-east quadrant of the cairn, aligned roughly east/west. The pit ran under the edge of the cairn, thus predating it, while the fact that the cairn only partially overlay the pit may suggest that sufficient time had elapsed that the cairn-builders were in ignorance of its existence. The pit was roughly rectangular, measuring 2.3 m by 1.7 m. The upper fills were very stony, including many very large stones. Indeed, the feature first became apparent as a patch of small boulders set into the sub-soil, and had the appearance of having been deliberately back-filled. Cut into the base of this pit was a small rectangular trench (134) whose function remained enigmatic. The pit itself was edged at the north-western perimeter, closest to cairn 002, by three small stake-holes, while deposit 136 within this end of the pit had the appearance of decayed turf. Samples were taken for phosphate analysis in order to determine whether the pit had been funerary, but it was unfortunately impossible in the time available to carry out a detailed survey of the pit which may have produced firm evidence of inhumation. However, there were sufficiently high levels to suggest a burial (see phosphate report below).

CAIRN 003

This cairn consisted of a mixed deposit of rubble, both large and small stones, and black organic soil. Although generally the stones were quite tightly packed, there were areas within the make-up of the cairn where stones were entirely absent (illus 5). This did not appear to be the result of stone removal and there was no evidence of any disturbance of the cairn after its construction. There were seven worked lithics within the cairn matrix and a burnt rim sherd from a simple early Neolithic bowl, which may well have been an accidental inclusion in the cremation pyre. There was some indication of a charred deposit on the exterior of the sherd.

The cairn was cleared down to the subsoil with the removal of underlying black organic soil of the same material as that within the body of the cairn. This did not appear to be an old ground surface, and it seemed as though the ground on which the cairn stood had been cleared to the undisturbed A/B horizon before the burial took place. Certainly, the soil underlying the cairn was as organic as that within the cairn and very different to the natural A/B horizon, a highly compacted layer bearing large numbers of stones. There was no indication of the cremation pit until the black organic soil had been cleared; there was no sign of a cut through this deposit.

The cremation pit (015) became apparent as a subcircular black stain cut through the A/B horizon some 0.18 m into the orange-brown sub-soil. It was somewhat off-centre under the cairn body; there was no other disturbance of the sub-soil. The pit was half-sectioned, revealing a fill consisting of an undifferentiated black organic soil (016) containing considerable amounts of charcoal and substantial remains of a cremated body (538.7 g). These remains were sufficiently well preserved to enable the identification of one individual, a younger mature female aged 25–30. The whole of her body was not buried; the 538.7 g of cremated bone buried in this pit represents only a third of the expected amount. All parts of the body were represented, even to the level of fingers and feet, and it would appear that the partial deposition was deliberate. It is also possible that there was deliberate fragmentation of the remains as part of the burial rite. The charcoal from fill 016, composed entirely of birch, was radiocarbon dated to 3450±50 uncal BP, 1878–1695 cal BC at the 1 sigma level (GU-3260).



ILLUS 5 Plans and sections of Cairns 003 & 004

A complete pygmy cup or accessory vessel (illus 7.1) was recovered from pit 016. It had been inverted on top of the cremation, and some traces of the cremated material were adhering to the inner face of the cup along with a charred organic residue. Also in the mixture of cremated bone and organic soil which comprised the fill of this pit were four faience beads (illus 7.3–6) and a hammerstone (illus 7.2).

CAIRN 004

As in the case of cairn 003, the construction of this cairn was a mixture of stone and organic black soil. Again, there were areas within the make-up of the cairn where there were few stones, and this also appeared to be a feature of the construction of the cairn rather than later disturbance (see section drawing, illus 5). There were no finds within the matrix of cairn 004 other than a small patch of cremated bone, but a sherd of cord-impressed Beaker (illus 6.10) was recovered from the subsoil below cairn 004 (13).

The cairn was excavated to subsoil with the removal of a black organic soil of the same nature as that within the body of the cairn. As with cairn 003, this was not the undisturbed old ground surface and it must be presumed that the area was cleared of topsoil before the interment of the cremation. There was no indication of the pit until this soil had been cleared, no sign of a cut within it, so it must have been deposited or have accumulated after the pit had been filled. The most likely explanation is that it represents the spoil from the ground clearance episode, being shovelled back on top of the pit and within the cairn as bedding for the stones. The burial pit itself (027) was roughly oval, 0.44 m by 0.36 m by 0.2 m deep, and appeared as a dark stain somewhat off-centre below the cairn.

The fill of this pit was more complex than for the pit beneath cairn 003. The initial layer consisted of the black, organic soil of the cairn, separated from the lower deposits by a thin layer of iron pan. Below this was a organic soil similar to the cairn material (137) which overlay a deposit of mixed mineral soil and organic soil (138). It is presumed that this represented soil from the cairn matrix which slipped into the pit as the cremation deposits settled. There were no finds within this soil and it cannot be considered part of the burial deposits. This in turn overlay a dark organic soil heavily laden with charcoal (028) which sealed the cremation (029). Within the pit fill were three fragments of a segmented faience bead (illus 7.7). The cremated remains were of an older adult, probably female and aged over 40, who had suffered badly from arthritis in the hips and the back and had also suffered from a degenerative disc disease in the hips. As with the burial under cairn 003, the weight of bone present, 519.3 g in this case, represents only around a third of the expected weight from a complete skeleton, while all parts of the body except the feet were present.

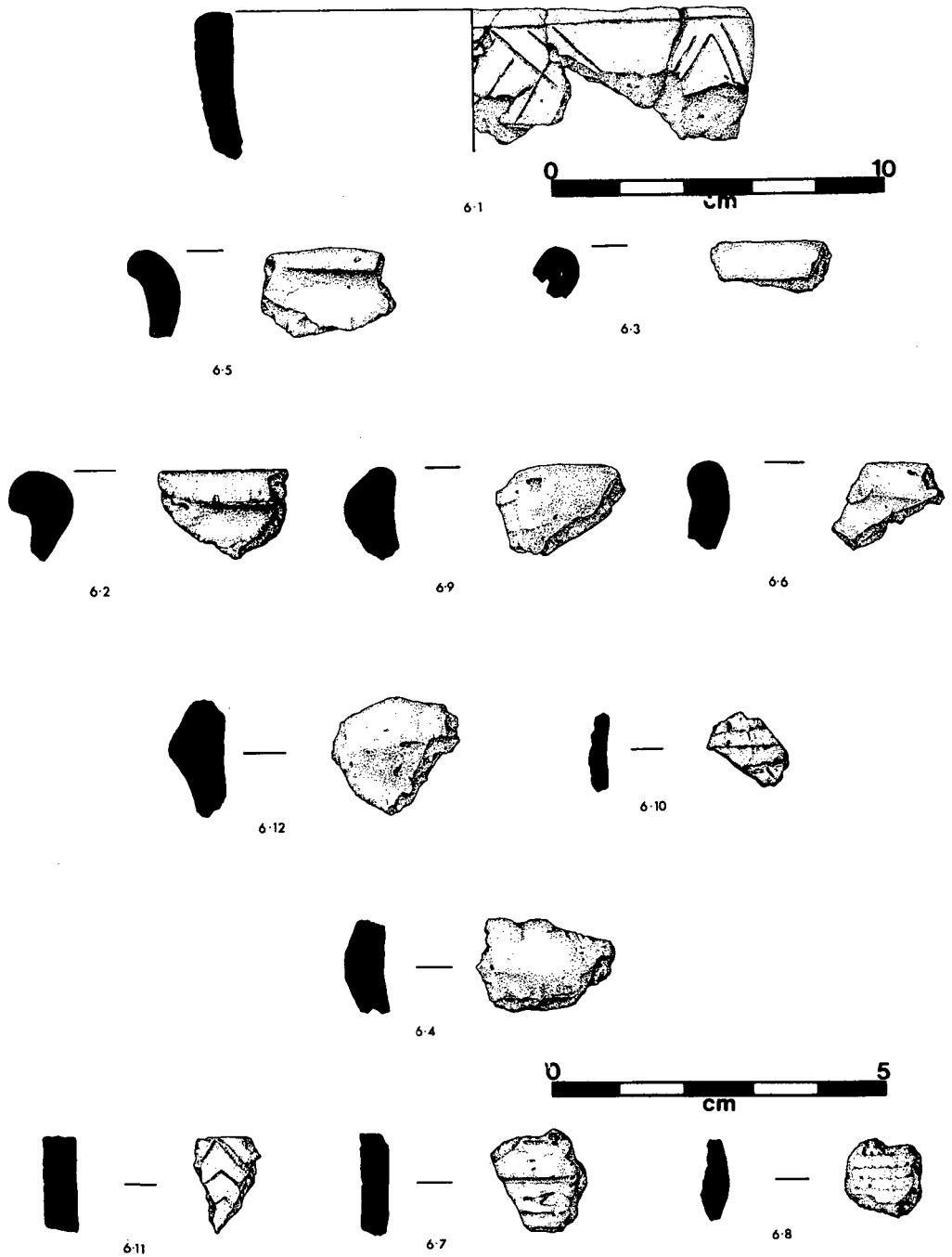
The charcoal of the pyre material consisted entirely of fast-burning birch and produced a radiocarbon date of 3360±50 uncal BP, 1737–1613 cal BC at the 1 sigma level (GU-3259). This is essentially the same date as that for the pyre material under cairn 003 and it is possible that both burials occurred within a short space of time. However, one could guess that the burial below cairn 004 is the later event because it lies further away from cairn 002 than does cairn 003.

RADIOCARBON DATES

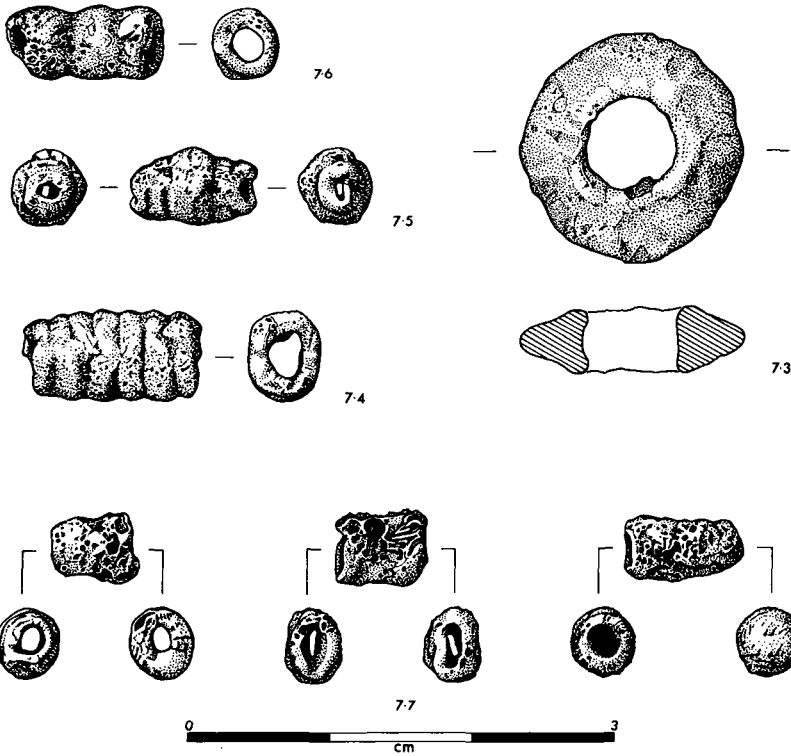
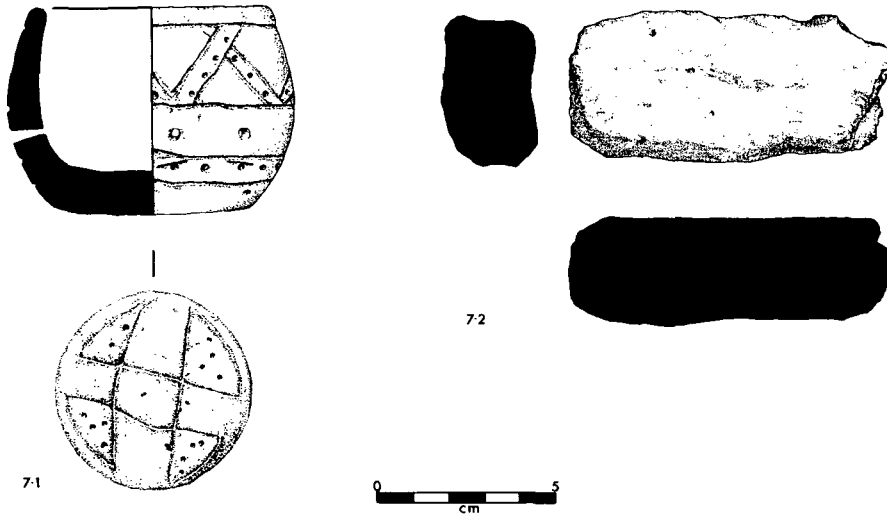
Cremation pit below cairn 004

Betula

GU-3259	3360 ± 50 uncal BP
Cal 1 sigma	1737 – 1613 BC, 3686 – 3562 BP
Cal 2 sigma	1856 – 1520 BC, 3805 – 3469 BP



ILLUS 6 Pottery from Stoneyburn



ILLUS 7 Finds from the burials at Stoneyburn. 7.1: accessory vessel from Cairn 003; 7.2: hammerstone from Cairn 003; 7.3–7.6: faience beads from Cairn 003; 7.7 faience beads from Cairn 004

Cremation pit below cairn 003

Betula

GU-3260	3450 ± 50 uncal BP
Cal 1 sigma	1878 – 1695 BC, 3827 – 3644 BP
Cal 2 sigma	1900 – 1670 BC, 3849 – 3619 BP

Pit 010/019/020 below cairn 002

Alnus, Betula, Corylus, Pomoideae, Prunus avium/padus type, Quercus

GU-3261	4530 ± 70 uncal BP
Cal 1 sigma	3361 – 3098 BC, 5310 – 5047 BP
Cal 2 sigma	3497 – 2935 BC, 5446 – 4884 BP

POTTERY

Helen Smith

A total of 70 sherds of prehistoric pottery (comprising 12 rim and 58 wall sherds) as well as numerous small fragments and one intact accessory vessel were found during the excavation of the three cairns at Stoneyburn. It is estimated that a minimum of eight vessels are represented. The sherds are generally quite small in size (10–30 mm) and most show signs of abrasion. The pots were coil built, with the exception of the accessory vessel, which may have been formed by pinching a single ball of clay. All were probably fired in simple pit kilns or bonfires. The pottery ranges in date from the early Neolithic to the Early Bronze Age. Despite the similarity in the date of the Early Bronze Age pottery to that found at the nearby settlement at Lintshie Gutter, the fabrics and vessel types are very different to those from the settlement and do not suggest any connection between the two sites.

RECORDING AND PROCESSING

All sherds were three-dimensionally recorded on site and each sherd or group of sherds from a single find spot was assigned a unique letter code incorporating the context number (eg 009AA, 009AB, 009AC etc).

The charred deposit on the interior of the intact accessory vessel (016AA) was sampled by Anita Qye of the National Museum of Scotland for analysis by gas chromatography (the results of which will appear at a later date).

The sherds were cleaned by dry brushing and sorted into different fabric and vessel types. The minimum number of vessels was estimated from the number of different rim forms and fabric types present.

FABRIC TYPES

All sherds were examined under a binocular microscope at x20 magnification. Differences in the appearance and texture of the clay matrix and the nature, size and frequency of the inclusions were noted and the fabrics divided into eight groups (1–8) on this basis. Visual identification by Lindsay Ferguson (Glasgow University Department of Geology) confirmed that the inclusions were of quartz, sandstone and various small fragments of mixed igneous rocks, all of which could have been obtained locally.

Fabric 1 Type sherd 018AA. Hard. Smooth texture. Outer surface burnished. Grey/buff outer surface, dark grey core, grey/buff interior. Inclusions: 3% angular fragments of quartz 1–2 mm and occasional angular fragments of igneous rock c 5 mm.

Fabric 2 Type sherd 007AF. Soft. Sandy texture. Pink/buff exterior, dark grey core, buff interior. Inclusions: 5% subangular fragments of mixed rock <0.5–1 mm.

Fabric 3 Type sherd 009AA. Hard. Smooth surfaces. Buff to pink/buff exterior, pinkish buff core and interior. Inclusions: 5% angular grey rock fragments c 3 mm and occasional mixed rock fragments 0.5–1 mm

Fabric 4 Type sherd 011AA. Moderately hard. Slightly rough texture. Buff exterior, dark grey core, grey interior. Inclusions: 3% angular quartz fragments 1–3 mm and occasional sub-angular grey rock fragments c 2 mm.

Fabric 5 Type sherd 010AG. Moderately hard. Sandy texture. Grey/brown exterior, dark grey core, grey/brown interior. Inclusions: 3% sub-angular grey rock fragments c 1 mm.

Fabric 6 Type sherd 013AA. Moderately hard. Smooth texture. Pale grey exterior, grey core, pale grey interior. Inclusions: 3% sub-angular mixed rock fragments <0.5–1 mm.

Fabric 7 Type sherd 010AE. Soft. Coral-coloured fabric throughout. Inclusions: 7% sub-angular mixed rock fragments <0.5–1 mm.

Fabric 8 Vessel 016AA. Moderately hard. Smooth texture. Outer surface burnished. Grey/brown surfaces. Core and inclusions not visible.

CATALOGUE

All sherds found are described below and all feature sherds are shown in illus 6. The position and orientation of a sherd within a vessel is unknown unless otherwise stated.

CAIRN 002

This was the largest and most complex of the three cairns. It is evident that there was pre-cairn activity on the site as sherds of early Neolithic pottery (005AE, 005AF & 018AA) were found in the surrounding soil. A series of pits (019, 039/011 & 040/012) cutting the redeposited material 007 also contained sherds of early Neolithic carinated bowls. Pit 009, cutting 007, contained sherds of Beaker pottery with incised decoration and a sherd of cord-impressed Beaker was found within another (009AA & 012AA respectively). Pit 019 contained sherds of early Neolithic carinated bowls in both its lower (020) and upper (010) fills. The upper fill 010 also contained three sherds with possible grass-stem impressions (010AG). One very small residual sherd (002AO) from a carinated bowl was present in the cairn matrix 002.

Cairn matrix 002 (peat between stones)

- 1 002AO Wall x 1. 4 mm thick. Fabric 1: Grey/brown exterior, dark grey core and interior. Vessel type: early Neolithic bowl.

Subsoil A horizon 005

- 2 005AD Fragment x 1. c 3 mm thick. Fabric 1: Grey/brown fabric throughout. Exterior surface missing. Vessel type: early Neolithic bowl.

- 3 005AE Fragment x 1. c 3 mm thick. Fabric 1: Buff/grey exterior, grey core and interior. Vessel type: early Neolithic bowl.
- 4 005AF Wall x 1, fragment x 1. Fabric 7: Coral-coloured fabric throughout.

Redeposited material 007 below cairn 002

- 5 007AF Wall x 1. 6 mm thick. Fabric 2: Pale buff exterior graduating to thin grey core and buff interior. Charred deposit on interior.

Turf deposit 008 below cairn

- 6 008AA Wall x 1. 5 mm thick. Fabric 1: Brown exterior, dark grey core and interior. Vessel type: early Neolithic bowl.

Fill of pit 009

- 7 009AA Rim x 1, wall x 1 (also conjoining: 009AB rim x 1, wall x 1 and 009AC rim x 1). 9 mm thick. Fabric 3: Pinkish buff fabric throughout. Traces of charred deposit on exterior. Incised horizontal line 3–6 mm below flat rim. Crudely executed decoration below line consisting of incised lines forming rough chevrons and triangular motifs. Vessel type: Beaker. Estimated internal rim diameter 145 mm. (illus 6.1)
- 8 009AB Rim x 1, wall x 1. Part of 009AA.
- 9 009AC Rim x 1. Part of 009AA.

Upper fill 010 of pit 019 (above fill 020)

- 10 010AA Rim x 5. 7 mm thick. Fabric 1: Grey/brown fabric throughout. Out turned rolled rim. Vessel type: early Neolithic bowl. (illus 6.2)
- 11 010AB Rim x 1. 7 mm thick. Fabric 1: Grey/brown fabric throughout. Out turned rolled rim (may be part of 010AA) Vessel type: early Neolithic bowl. (illus 6.3)
- 12 010AC Wall x 32, fragments x 129. 5–12 mm thick. Fabric 1: Grey/brown fabric throughout. Eight sherds have charred deposit on interior. Three sherds have carination. Vessel type: early Neolithic Carinated bowl. (illus 6.4)
- 13 010AD Rim x 1. 7 mm thick. Fabric 4: Buff fabric throughout. Out turned rolled rim. Vessel type: probably early Neolithic bowl. (illus 6.5)
- 14 010AE Fragments x 4. Fabric 7: Coral-coloured fabric throughout.
- 15 010AF Wall x 3. 7 mm thick. Fabric 2: Pinkish buff exterior graduating to grey core. Charred deposit on interior.
- 16 010AG Rim x 1, wall x 2. 7 mm thick. Fabric 5: Buff/grey exterior, grey core, grey/buff interior. Traces of impressed decoration (possibly grass strands) in irregular bands. Slightly rounded rim. Vessel type: unknown. (Rim, illus 6.6; Wall, illus 6.7)

Fill 011 of pit 039

- 17 011AA Wall x 1. 7 mm thick. Fabric 4: Pale buff exterior, dark grey core and interior.
- 18 011AC Fragment x 1. c 5 mm thick. Fabric 4: Pinkish exterior, dark grey core and interior.
- 19 011AD Fragment x 1. c 5 mm thick. Fabric 1: Grey fabric throughout.
- 20 011AE Fragment x 1 (too small to identify fabric)

Fill 012 of pit 040

- 21 012AA Wall x 1. c 4 mm thick. Fabric 2: Pinkish buff exterior, dark grey core, pinkish buff exterior, dark grey core, pinkish buff interior. Lower part of sherd thickens slightly and curves outwards (probably positioned above carination in pot). Four horizontal lines (roughly parallel) of twisted cord impressions. Vessel type: Cord-impressed Beaker. (illus 6.8)
- 22 012AB Fragment x 1. c 4 mm thick. Fabric 1: Grey/brown fabric throughout. One surface missing. Vessel type: early Neolithic bowl.
- 23 012AC Fragment x 1. c 4 mm thick. Fabric 1: Grey/brown fabric throughout. One surface missing. Vessel type: early Neolithic bowl.

Subsoil 018 (below 005)

- 24 018AA Wall x 1. 8mm thick. Fabric 1: Buff/grey exterior, dark grey core, grey/buff interior. Vessel type: early Neolithic bowl.

Lower fill 020 of pit 019 (below fill 010)

- 25 020AA Fragment x 1. c 4 mm thick. Fabric 1: Grey/brown fabric throughout. Vessel type: early Neolithic bowl.
- 26 020AB Fragments x 2. c 3 mm thick. Fabric 1: Grey/brown fabric throughout. Vessel type: early Neolithic bowl.

CAIRN 003

This cairn lay to the west of the large cairn 002. Slightly off-centre to the area covered by the stones of the cairn was a pit (015) containing an intact accessory vessel (016AA) inverted over a deposit containing cremated bone with four faience beads and a hammerstone. The stone matrix of the cairn contained a single rim sherd (003AF) which appears to be scorched, possibly as a result of its incorporation (deliberate or accidental) as part of the pyre deposit.

Matrix of cairn 003 (peat between stones)

- 27 003AF Rim x 1. 5–15 mm thick. Fabric 1: Orange/brown exterior, orange core, orange/brown interior. Traces of charred deposit on exterior. Exterior surface is cracked and sherd appears to have been scorched. Irregular-shaped lump, possibly a lug, on exterior below rim. Vessel type: probable simple (uncarinated) early Neolithic bowl. (illus 6.9)

Cremation deposit 016

- 28 016AA Complete pot. Fabric 8: Grey/brown fabric. Grey/black deposit on interior (samples submitted for gas chromatography by Dr A Quye of NMS). Smoothed surfaces, burnished exterior. Convex profile, inturned simple flat rim, flat base. Decoration: incised horizontal line 5–7 mm below rim. Under this, pairs of incised lines with dot infill create chevron pattern bordered by another horizontal line (30 mm below rim). Two perforations 35 mm below rim, 20 mm apart. Pair of parallel (7 mm apart) horizontal incised lines 40 mm below rim form band filled with dot decoration. Base has central incised diamond shape with four triangles, each joined to points, all with dot infill decoration. Height 55 mm, base c 56 mm diameter external, rim 64 mm diameter external. Vessel type: Accessory vessel. (illus 7.1)

CAIRN 004

This cairn lay to the south-west of 003. A single sherd of cord-impressed Beaker was recovered from the subsoil (13) below the stones of the cairn. No pottery was found in the cremation deposit.

Sub-soil 013 below the stones of 004

- 29 013AA Wall x 1. 4 mm thick. Fabric 6: Pale grey exterior, grey core, pale grey interior. Three horizontal bands of twisted cord impressions, roughly parallel (with traces of a fourth band). Vessel type: Cord-impressed Beaker. (illus 6.10)

OTHER POTTERY FROM STONEYBURN

Pit 139 1 m east of cairn 002. (Retrieved by T Ward of Biggar Museum Trust after the completion of the GUARD excavation. It is believed that these sherds came from a single fill.)

- 30 139AA Wall x 9, fragments x 19. c 11 mm thick. Fabric 1: Buff exterior, grey core, buff/grey interior. Vessel type: early Neolithic bowl.
- 31 139AB Wall x 1. 7 mm thick. Fabric 3 : Buff exterior, grey core, buff interior. Incised nested chevron design. Vessel type: Beaker. (illus 6.11)
- 32 139AC Wall x 1. 6–10 mm thick. Fabric 3: Buff exterior, grey core, buff/grey interior. Raised horizontal cordon. (illus 6.12)

DISCUSSION

Apart from a few undiagnostic sherds (005AF 010AE 010AG 011AA–AE) the pottery from Stoneyburn falls into three categories.

1 Undecorated carinated bowls

Fifty sherds and numerous fragments with a fine quartz-tempered burnished fabric (Fabric 1) were recovered from pits and the sub-soil underlying cairn 002 and from pit 139. Two single sherds were also found in the stone matrix of cairns 002 and 003. A radiocarbon date of 4530 ± 70 BP uncal, calibrating to 3361 – 3098 BC at the 1 sigma level (GU-3261), was obtained from charcoal in fill 010 of pit 019.

Reconstruction of individual vessels was not possible as very few sherds conjoined.

However, despite the small size and featureless nature of the majority of sherds, the presence of everted rolled rims 010AA & 010AB (illus 6.2/3) and carinations 010AC (illus 6.4) suggests that the vessels represented are round-based early Neolithic carinated bowls. This type of pottery is commonly referred to as Grimston style (Piggott 1954, 114; Herne 1988) but the implicit geographical origins conveyed by this name have led to a preference for the 'neutral' description 'bowl style' (Kinnes 1985, 21; Cowie 1992, 280). Rim sherd 003AF with its possible lug (illus 6.9) may be part of an uncarinated closed bowl.

The Stoneyburn assemblage can be compared with sherds from the 'domestic' site at Auchategan, Argyll (Marshall 1980), and with the assemblage from the stone circles at Machrie Moor, Arran (Haggarty 1992). A large quantity of sherds of similar early Neolithic carinated bowls has also recently been recovered from deposits underlying cairns at Biggar Common, Lanarkshire (*Discovery Excav Scot* 1989, 60; 1990, 37; 1991, 66; in lecture, T Cowie). Dates for Scottish early Neolithic pottery range from the late fifth to the third millennium BC, with the main period of currency lying in the first half of the fourth millennium BC (Cowie 1992, 282).

2 Beaker

Twisted Cord Impressions

Two sherds from different Cord-impressed Beakers (012AA and 013AA) were recovered from a pit beneath cairn 002 and the redeposited subsoil underlying cairn 004. The application of cord impressions as a decorative technique seems to have been used throughout the Beaker period. Neither of the Stoneyburn sherds are of the hard-burnished red fabric type generally associated with the earliest All-Over Corded Beakers.

Incised Decoration

Sherds from two different pots with incised chevrons were recovered from pit 009 beneath cairn 002 and pit 139. The decoration on 009AA has been very carelessly executed. The upper portion of a vessel described as a late Long Necked Beaker bearing similar incised chevrons was found at Harehope cairn, Peeblesshire (Jobey 1980a, 104, fig 14.7).

The Beaker sherds from Stoneyburn were not of sufficient size or quantity to permit reconstruction of the vessels represented. Even if the profiles were reconstructable, there is currently no universally accepted scheme of classification for British Beakers into which the vessels could be fitted. The British Museum's dating programme of bone associated with Beakers (Kinnes *et al* 1991) has not clarified this matter and it seems likely that Clarke's typology (Clarke 1970) and Lanting & van der Waals' steps (Lanting & van der Waals 1972) will continue to be used in conjunction purely as 'a convenient form of descriptive shorthand', without implications for the precise phasing of Beaker development (Cowie & Ritchie 1992, 121). The British Museum programme did, however, confirm the period of Beaker currency as being in the range c 2600–1800 BC (Kinnes *et al* 1991, 38).

Accessory vessel

The complete accessory vessel (or pygmy cup) was found under cairn 003 in pit 015 inverted over cremation deposit 016 containing the remains of a young adult female with four faience beads and a hammerstone. Charcoal from the cremation deposit yielded a radiocarbon date of 3450±50 uncal BP, 1878–1695 cal BC at the 1 sigma level (GU-3260).

The term accessory vessel covers a wide variety of small pots generally found in funerary contexts, sometimes contained within or accompanying Early Bronze Age urns. Accessory vessels have been found throughout the British Isles and have no particular point of origin (Savory 1980, 86). More than 20 accessory vessels have been found in south-west Scotland (Morrison 1968, 85). The closest parallels can be seen in two vessels in the Sim Collection (Irving 1855, pl 3, fig 6; Irving 1864, figs 3 & 4) found in the middle of the last century under cairns at Cauldchapel Farm c 4 km north-east of Crawford. (The vessels are listed in the National Museum of Scotland Catalogue as EC15 and EC17 respectively. The latter vessel apparently exists now only as a single sherd.) These two vessels are comparable in size and shape to the Stoneyburn vessel (though EC15 has a rounded base) and the decorative motifs are sufficiently similar to suggest the work of a single potter. This possibility is reinforced by the marked individuality of design normally observed in accessory vessels (cf Cowie & Ritchie 1992, 105).

CONCLUSIONS

The pottery from Stoneyburn, ranging in date from the early Neolithic to the Early Bronze Age, indicates a long period during which activities took place on this site. However, continuity of activity throughout this period cannot be established from the pottery evidence. Nonetheless, the early Neolithic carinated bowl sherds provide a valuable addition to the body of excavated material in Scotland at a time when discoveries of this type of pottery in lowland Scotland are still comparatively rare (cf Cowie 1992, 272; Herne 1988, 10).

The early Neolithic pottery does not appear to be connected with the cairn-building phase of the site at Stoneyburn. Small abraded sherds and fragments were found in the subsoil beneath cairn 002 (005AE, 005AF & 018AA) and have also been incorporated, apparently unintentionally, in the matrices of cairns 002 (002AO) and 003 (003AF). A few sherds and fragments of early Neolithic pottery were also found in pits 040 (under cairn 002) and 139 (to the west of cairn 002) along with single sherds of Beaker pottery (012AA and 139AB). The largest concentration of early Neolithic sherds was found in the fills (010 & 020) of pit 019. These belong to at least three different vessels (010AA, 010AD & 010AG). Again the sherds (rim, wall and carinated pieces) were generally quite small and abraded. However, some of the larger conjoining wall sherds (010AC) had fairly clean breaks, suggesting that they had been broken *in situ*. It has been noted that selected portions of the rims and shoulders of carinated bowls have been found deliberately deposited in pits on non-domestic early Neolithic sites (Kinnes 1988, 4; Herne 1988, 23).

The upper portion of an incised Beaker (009AA–AC) found in pit 009 (under cairn 002) may have been deliberately placed. Similar finds of whole or partial Beakers purposefully deposited or smashed in pits without burials are known from Scottish sites, eg St Andrews Castle, Fife (DES 1990, 14; J Lewis forthcoming). The Beaker pottery, with the exception of the rim sherds from pit 009, appears to be mainly residual, but it does suggest some kind of presence on this site in the early second millennium.

The pottery in the least ambiguous depositional context was the complete accessory vessel (016AA), which had been carefully placed upturned over the cremation deposit in a pit under cairn 003. The close similarities to the Cauldchapel pots (Irving 1855, 8; 1864, 39) could suggest either the work of a single potter or of a potting tradition producing vessels of this type in the Early Bronze Age in the Crawford area.

THE LITHICS

Tony Pollard

The excavation of the Stoneyburn cairns resulted in the recovery of some 145 lithics. The knapped materials include flint, chert and pitchstone. One piece of worked mudstone and a sandstone hammerstone were also recovered. The entire assemblage is listed in the catalogue below. For the purposes of this report each context is briefly discussed prior to a more general discussion of the assemblage as a whole.

CONTEXT 001: MIXED TOPSOIL

Twenty-one lithics were recovered from this context (16 chert, three flint, two pitchstone). This portion of the assemblage is dominated, like the assemblage in general, by irregular flakes. A large proportion (13) of these appears to have been utilized, though only four of these bear obvious retouch. The remaining nine bear signs of edge damage which may indicate the utilisation of pieces without retouch. However, without the use of more detailed microscopic analysis it is difficult to state this for certain. There are various factors which may result in the damage of edges which do not relate to the use of that piece; these include post-depositional disturbance, abrasion and weathering.

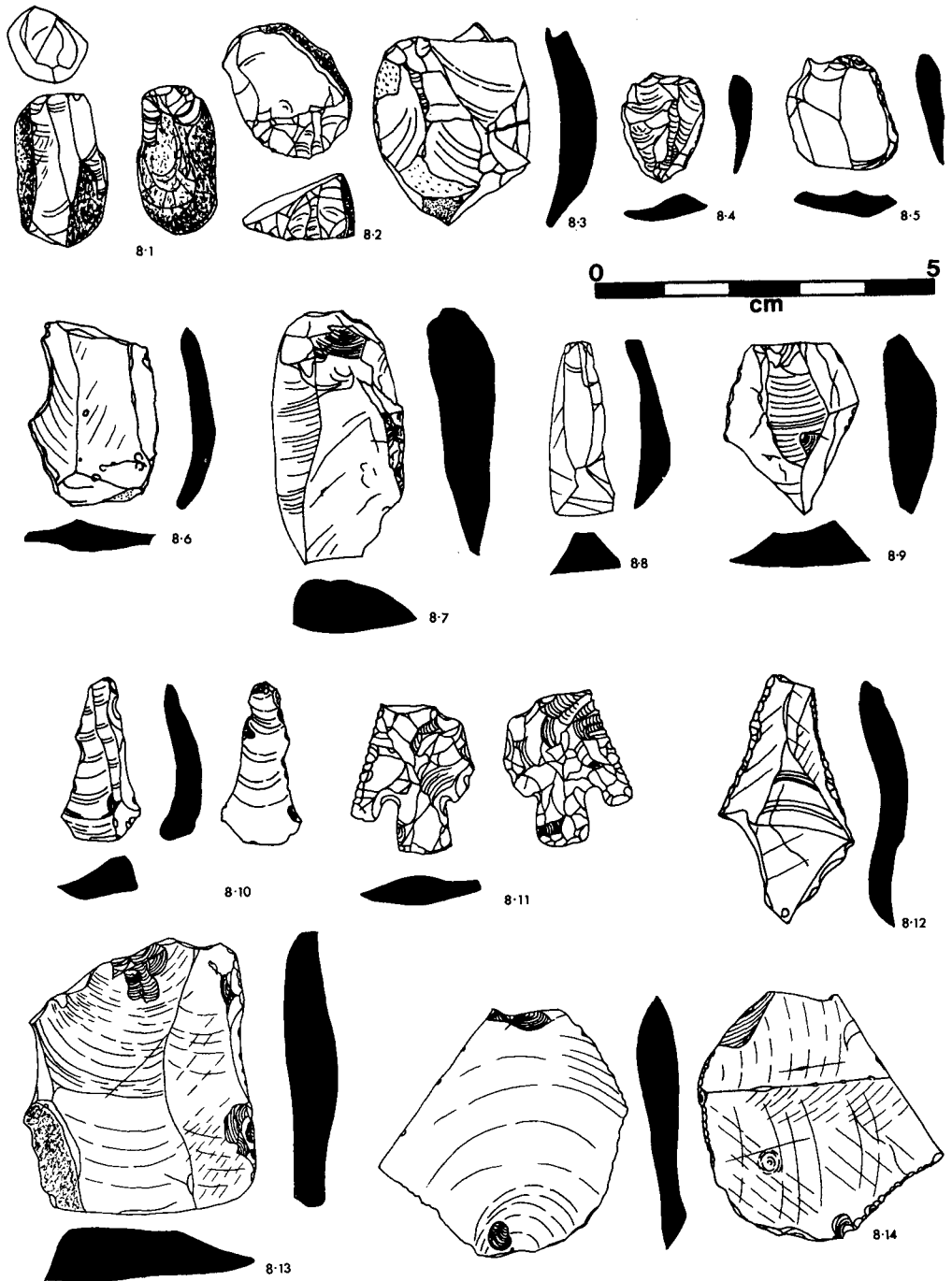
Cortex is present on only two pieces (001AJ & 001AL). The latter is an overshot flake of chert with cortex on its bulbar end. Due to the angle of percussion, pressure has been diverted into the core and has resulted in the removed flake curving inwards and taking with it a portion of the core base. Despite this apparent mis-hit there is damage to one edge which may represent its utilisation as a cutting implement regardless of imperfection in its removal.

Other than flakes, utilized and otherwise, the only forms recovered from 001 were a single platform core of pitchstone (001AK – illus 8.1) and a small scraper of toffee-yellow flint (001AA – illus 8.2). The pitchstone core displays an artificial platform and scars which indicate the removal of several narrow blades. A small piece of flint *debitage* (001AV – illus 8.4) bears multiple flake scars across its dorsal surface. It is likely that this represents waste produced by the surface pressure flaking of a larger piece. The scraper has been created through the application of steep retouch to approximately one-quarter of the circumference of a small pebble fragment.

002: STONE MATRIX OF LARGE CAIRN

Twenty-six lithics were recovered from this context (18 chert, seven flint, one pitchstone). The vast majority of this material again represents irregular flakes, the bulk of which are the by-product of the flint knapping process. Despite the general lack of what are regarded as finished pieces or ‘formal’ morphological types, a good proportion of the examples from this context display macroscopic edge damage which in many cases may be the result of utilisation. This material consists both of larger flakes, which include core trimming and preparation flakes (002AJ, 002AX) and smaller pieces of *micro-debitage*.

Clear evidence of retouch is limited to four pieces: two of chert (002AM & 002AS) and two of flint (002AU & 002AP). The chert pieces represent the most regular of the flakes recovered from this context. The first of these (002AM – illus 8.7) is a long flake with retouch along one-third of one edge. The edge beneath this retouch has been snapped, probably through use. The variable quality of much of the chert is apparent in the irregular appearance of the ventral surface, which displays evidence of irregular fracture due to the intractable nature of some of the material. The other retouched chert flake (002AS – illus 8.9) is of better quality material. The piece has been snapped diagonally across the distal end. The left-hand edge (when viewed from the dorsal surface) has been finely retouched, with pressure being applied from the ventral surface. Small irregular flake scars visible on the right-hand edge may be indicative of utilisation. One of the retouched pieces of flint (002AU – illus 8.3) is pink, apparently due to burning, and its surface also displays



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fire cracking (this was one of only two burnt pieces in the assemblage). This discoidal flake has been finely retouched along part of the left-hand edge, and may have continued further down the piece but the lower portion has been snapped away. The retouch is moderately steep and may indicate that the piece was utilized as a scraper. One regular flake or blade of toffee-yellow flint (002AP – illus 8.6) exhibits some cortex at the distal end and has been notched on its left-hand edge and snapped across the proximal end. The left-hand edge beneath the notch has had steep, blunting retouch applied to it, while the other edge displays damage indicative of utilization. The notch and snap may well represent the deliberate modification of the piece with the proximal portion being removed for some specific purpose. The snapping of regular flakes and blades may represent a technique maintained from the Mesolithic, where the production of microliths entailed a very similar procedure. The single pitchstone flake (002AJ) is extremely small (11mm x 5mm x 2mm) and appears to have been struck from a small prepared core.

003: STONE MATRIX OF SMALL CAIRN

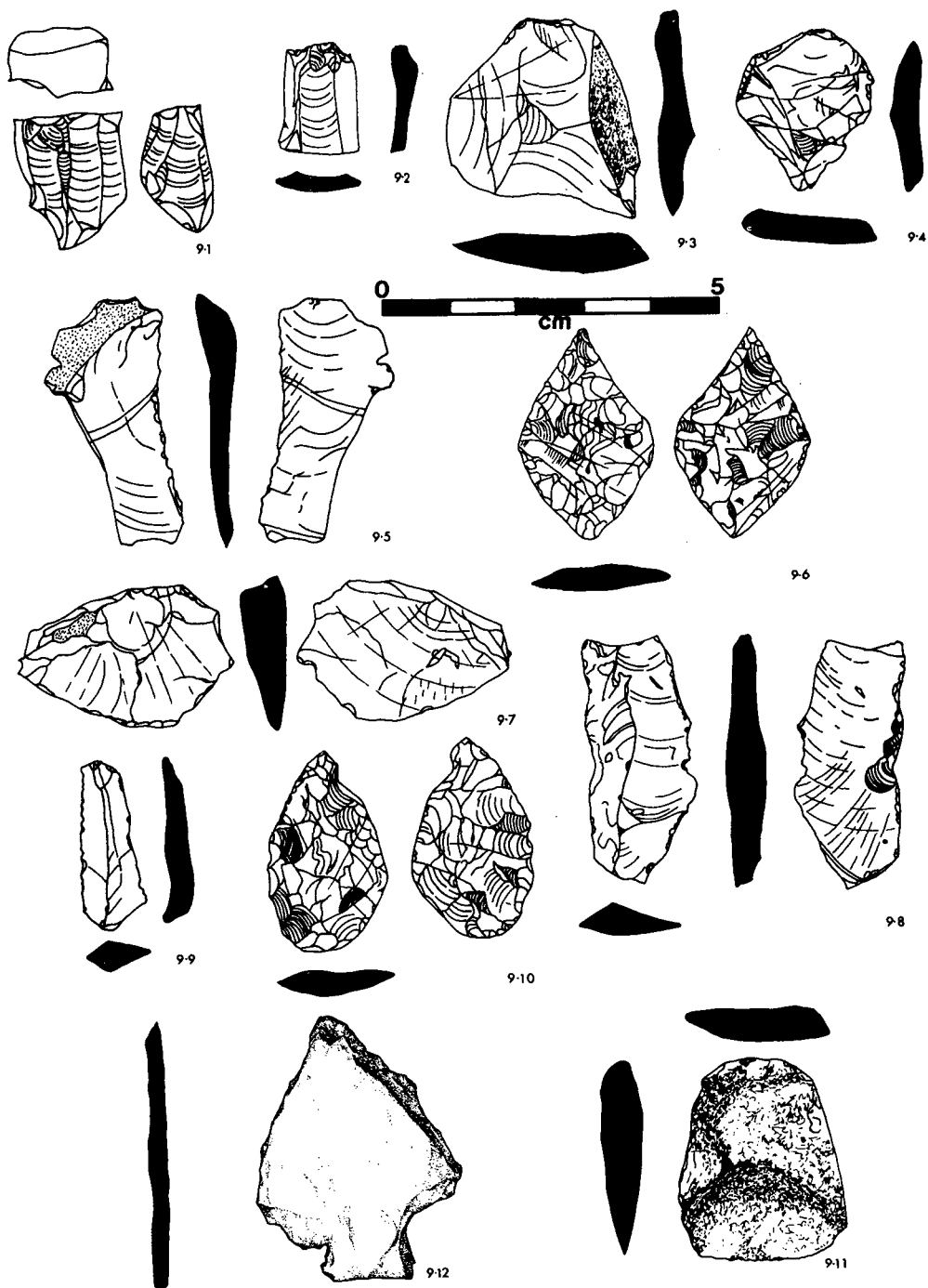
Only seven pieces were recovered from this context (four chert, three flint). Most are small *debitage* flakes representing the waste produced by the knapping process. However, one of these pieces (003AD) is flint and displays retouch along one edge. Retouch on such a small piece (8mm x 5mm x 1mm) is more indicative of its being removed from a larger retouched piece than of retouch being applied to it. Alternatively this piece may have been removed from a retouched tool during its use rather than its manufacture. A roughly chipped fragment of chert (003AH) was also recovered. This piece displays weathered cortex on approximately one quarter of its surface, the form of which suggests that it represented a large weathered pebble prior to its modification. A heavy burin-like removal at one end has produced a substantial point which has been enhanced through retouch. The piece may have been used as a heavy burin or bradawl.

005: BLACK DEPOSIT (MIXED ORGANIC AND MINERAL SOIL)

The largest proportion of the overall assemblage was recovered from this context: 57 pieces (44 chert, 10 flint, three pitchstone). The majority took the form of irregular waste flakes or small fragments; overshoots, wasters, and flawed pieces were all represented. Like the material from the other contexts, the somewhat irregular nature of many pieces has not prevented a good portion of the material from 005 being utilized in some form or other, either with retouch (13 pieces) or simply through the direct use of unmodified pieces (15 pieces).

The few pitchstone pieces are interesting as they represent the working of blades in a manner typical of Mesolithic technologies. These pieces include a small, double platform core (005BJ – illus 9.1). This has been heavily worked and bears clear traces of the removal of narrow blades. An overshoot flake of pitchstone (005AW – illus 8.10) appears to have originated from a similar core, though diverted pressure has removed part of the core's base. One edge of this piece has been lightly retouched and possibly utilised, again indicating the use of less than perfect forms. The third piece of pitchstone (005AK) represents the snapped proximal end of a narrow blade. The vestigial platform has been roughened along its edge to facilitate a controlled removal, which from the medium bulb appears to have been achieved through the application of a medium to hard hammer. The small portions of edges which remain display damage. Like the previously mentioned pitchstone pieces this blade fragment would not be out of place on a Mesolithic site. The production of microliths through the simple snapping of blades, without recourse to the microburin technique, was recorded at the recently excavated Mesolithic site at Kirkhill, Johnstonebridge (Pollard 1993). On the other hand, this material may represent the maintenance of the narrow blade technique at least into the Neolithic (cf Young 1987, 36), perhaps as a response to material which is of good quality but available only in small nodules – though the better known method of working such material is the application of bipolar technique, which was almost totally absent (Wickham-Jones 1990). The heavily worked nature of both pitchstone cores would definitely point to both limited availability and its status as a favoured raw material.

Many of the pieces display evidence of core preparation, with the roughening and faceting of platform edges and the removal of trimming flakes in order to improve the quality of removed flakes, though again the



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majority of these better quality pieces are absent. The appearance of cortex was limited, with only twelve secondary removals present, the majority being inner flakes.

Retouch was limited to seven pieces (three chert, four flint). These include the two largest flakes in the entire assemblage (005BE & 005BI) both of which are of flint. 005BE (illus 8.13) is a thick square flake which terminates in a hinge fracture. The dorsal surface exhibits flake scars which are clear evidence of regular flake removals. One edge appears to have had invasive retouch applied to its entire length, though the central portion has been snapped away, probably through use. 005BI (illus 8.14) has a diagonal snap across the distal end. The remaining edges display irregular retouch and probable edge damage. The prominent bulb suggests a hard hammer technique and the platform has been heavily faceted.

The most thoroughly worked pieces included a barbed and tanged arrowhead, a scraper (005CA) and a snapped biface. The barbed and tanged arrowhead (005AV – fig 8.11) is incomplete, with its point, one edge and barb snapped away. The remaining barb is deeply cut and, like the tang, is rectilinear in plan. The intact edge displays fine denticulate retouch and the tang has been substantially thinned. The scraper (005CA) is on an asymmetrical tanged flake of chert (which may have been snapped along its axis during use). The curved working edge is formed by invasive retouch on both the dorsal and ventral surfaces, with the steeper scraper retouch on the dorsal. The apparently unfinished biface (005CE) consists of the butt end which displays thinning and shaping retouch on both surfaces. The intention appears to have been to create a piece with curved edges.

007: REDEPOSITED MATERIAL BENEATH CAIRN 002

Only five pieces were recovered from this context (three chert and two flint). The flint component consists of 007AB and 007AG. The former is a triangular flake of good quality toffee-brown flint and appears to have been removed in order to create a new platform. The previous platform is evident along the diagonal edge, its lip having been roughened prior to flake removal. The piece has been snapped along the proximal end, removing the bulb of percussion. One edge displays clear signs of utilisation. The other flint piece (007AG) is a small piece of *micro-debitage* which carries cortex along one edge.

The most noteworthy piece to be recovered from this context is the leaf-shaped arrowhead (007AC – illus 9.6). The piece, which is of chert, is kite-shaped with one edge being slightly concave or ogival, while the other is straight. Fine surface flaking has been used to shape and thin the flake on which the piece is made. Invasive retouch along the edges is indicated by the presence of regular rectilinear flake scars on both surfaces, these being overlain by the fine retouch used to trim and sharpen the edges.

The larger piece of chert (007AA – illus 9.7) is a curved flake which displays a prominent bulb of percussion. The curved edge has been irregularly retouched and small notches appear to have resulted from its use. The second piece (007AD) represents a snapped long flake and bears evidence of use along its sharpest edge. There is no evidence for a platform but the bulb is medium to diffuse, suggesting a soft hammer technique.

008: REDEPOSITED TURF BENEATH CAIRN 002

Five lithics were recovered from this context (four chert and one pitchstone), mostly representing waste of one form or another. The most noteworthy pieces are a utilized chert blade (008AF – illus 9.5) and a retouched pitchstone flake (008AE – illus 9.8). The chert blade bears some cortex on its distal end and wear traces down both its edges. The pitchstone flake, more accurately described as a wide blade, has been snapped both at the proximal and distal ends; one edge has been irregularly retouched from the dorsal surface and the other from the ventral surface. This is the largest piece of pitchstone to be recovered from the site, and is also markedly different, in that the other pieces represent either narrow blades or cores used to produce narrow blades.

009: PIT FILL

This feature fill contained three pieces all of which were chert. Two of these appear to have been utilized although only one bears signs of retouch (009AEi).

010: PIT FILL

This feature fill contained 19 pieces (14 chert, five flint). All of these pieces represent waste from the knapping process. Several represent core trimming and preparation flakes, some of them displaying platform edges and blade scars on their dorsal surfaces. The nine smallest pieces were all recovered during the wet sieving of this feature fill. There is evidence for utilization on at least two pieces.

011, 014, 061: PIT FILLS

Very few lithics were recovered from these pit fills. Two were recovered from 011 and one each from 014 and 061. Of most interest is the worked piece of mudstone recovered from 14 (014AA – illus 9.11). The piece superficially resembles a miniature axe head, with one surface clearly ground into shape, the area above the working edge having been hollow ground. The slightly convex working edge is pitted and notched, damage which strongly suggests that it was used. A flake of chert from 011 has been utilised along both of its edges (011AA), while the other piece may represent a rough core (011AB). A partially flaked pebble of chert was recovered from context 061 (061AA).

PIECES WITHOUT CONTEXT

Several lithics were collected from the site after excavation had ceased. These include a chert biface which represents a leaf-shaped arrowhead 2(WC1 – illus 9.10). Damage is evident toward the tip in the form of a notch. Also recovered was a rather intriguing piece of shale (WC2 – illus 9.12) which appears to have been snapped into its present shape, with one edge displaying a chamfer caused by abrasion. The piece is reminiscent of a barbed and tanged arrowhead and may represent a deliberate attempt to copy such. It is very doubtful whether the piece could have functioned as an arrowhead and in this respect its presence on a ritual site is interesting. However, the piece was not recovered from a firm context and so any suggestion of a ritual function for the piece would necessarily be tentative.

THE NATURE OF THE ASSEMBLAGE

Though it has been established that the site witnessed activity over a considerable period, which spanned the Neolithic and stretched into the Bronze Age, little can be said about any technological or stylistic changes which may have taken place during this time. It has been noted elsewhere (Wickham-Jones 1983) that cultural parallels or chronological schemes cannot reliably be drawn from the morphological analysis of lithics, particularly from incomplete assemblages as in the case of that recovered from Stoneyburn (the reasons for this incompleteness are expanded upon below). It must also be noted that in the case of Stoneyburn this caveat is due not only to the limited nature of the assemblage but also to the complicated sequence of activity which brought about the deposition of earlier material in much later contexts, such as the inclusion of an early Neolithic pot sherd within the matrix of cairn 002 probably constructed in the Bronze Age. This maintenance, reuse and redeposition of earlier material is a problem which many excavated sites present, but unfortunately not always one that is acknowledged.

The assemblage lacks finished forms or formal types in any quantity and can be seen to be dominated by irregular flakes and waste pieces, which include chips, fragments and mis-hits. The

occurrence of irregular flakes should perhaps come as no surprise, as it has been recognized that lithic technology, both in the later Neolithic and the Bronze Age, exhibited less concern with the controlled production of regular flakes, perhaps as a consequence of the reduced importance of procurement strategies based on mobility (Edmonds 1987). However, this observation should, in the case of the Stoneyburn assemblage, be tempered by the fact that evidence for core preparation, in the form of artificial platforms, edge facetting and regular flake scars, was plentiful.

Despite the presence of waste material, the lack of cores in any quantity may suggest that manufacture on the whole took place away from the site. The apparent lack of pieces bearing cortex (either primary or secondary flakes) may suggest that these pieces were not knapped *in situ*. Such a hypothesis is strengthened by the relative absence of smaller *debitage*.

The two narrow blade cores (001AK & 005BJ) along with the various narrow blades and bladelets, some of which had been snapped, are very similar to those found in the Mesolithic. The presence of these elements in limited numbers may suggest one of two things; firstly that the cores and other pieces are residual and were collected elsewhere in their present form and deposited on the site (such a hypothesis may allow for a Mesolithic provenance), or that the material was worked on the site and that the majority of blades were removed prior to their use and deposition elsewhere.

However, any apparent lack of smaller pieces may also reflect a disparity in retrieval techniques. Though feature fills were sampled and wet sieved, no general sieving programme was carried out on site. Work on samples of trowel spoil removed from the recently excavated Mesolithic site at Kirkhill, near Johnstonebridge, has demonstrated that the recovery of lithics can be substantially increased through the use of such a programme, an increase which clearly demonstrates the difficulties involved in identifying lithics on site (Pollard 1993).

There are several reasons for the incomplete nature of the assemblage, all of them related to the complex taphonomic processes which took place on the site over its long history. These in the main consist of the removal and redeposition of material from its original context at various stages in the sequence of activity which resulted in the monument taking its final form. Similar complicated sequences of activity have been recorded at several other funerary sites, including Boghead, Moray, and Cloburn Quarry, Lanarkshire. At the former site, from which was recovered an assemblage of some seventy three lithics, a lack of formal types and the dominance of waste was interpreted as an impoverishment in the local flint-working technology (Burl 1983, 46). Such a conclusion may, in part, be due to a failure to appreciate the effect of complex depositional processes on lithic assemblages. These processes have also had a part to play at Cloburn Quarry, where an assemblage of 219 lithics, including chert, flint and pitchstone but excluding a number of possibly worked pieces of quartz, contained very few formal types (Pollard 1986).

By and large the impression gleaned from the stratigraphic interpretation of Stoneyburn is a complex process of modification, with soil being removed from its original context only to be redeposited. In such an active environment the integrity of any lithic assemblage is cast into extreme doubt. The apparently high levels of edge damage may in turn be indicative not of use but of post-depositional disturbance of material. However, the configuration and nature of damage scars on sharp edges does suggest the utilization of pieces which might otherwise be regarded as a waste product.

Examination of the assemblage has established that the reduction technique used centred upon the removal of flakes from prepared cores. Retouch was relatively rare but does appear in different forms. Perhaps the most obvious appearance of retouch is to be found on the three bifacially flaked arrowheads, each of which displays fine pressure flaking which has both thinned and shaped the flake utilized. Several flakes displayed edge retouch, though usually fairly irregular

and limited in extent. The high occurrence of edge damage on irregular and waste pieces suggests an opportunistic element to the use of lithic material, with recourse to irregular or less than perfect pieces being commonplace. Most struck flakes, no matter how irregular, will provide a sharp edge which lends itself to use without any further work being required.

The assemblage does not appear to be 'domestic' in nature. Morphological forms such as scrapers, which would be expected on a domestic site, are extremely rare with only two examples recovered. However, once again the complex nature of taphonomic process has limited interpretation, and it is interesting in this respect to consider the very small lithic assemblage from the nearby settlement site of Lintshie Gutter (Pollard this volume). Despite the extensive nature of the settlement, and thoroughness of the excavation, only 28 lithics were recovered, though a high proportion of these displayed retouch. Like Stoneyburn, no on-site sieving took place and the majority of the lithics were recovered from wet sieved feature samples. It has been suggested that this small assemblage may represent a degree of expedience on the part of the settlement's inhabitants, with the use of what might otherwise be regarded as irregular or waste pieces. It is perhaps a little ironic that taphonomic process, in its various guises, has seen to it that expectation and preconception, which would suggest a larger and more varied assemblage on the domestic site than on the ritual site (not contemporary), have been thwarted and just the opposite picture has been passed down into the archaeological record.

CONCLUSION

If nothing else the lithic assemblage from Stoneyburn has served to demonstrate both the complicated nature of the site and the ritual activity responsible for its development. The overall picture is rather fragmented, but does suggest both the redeposition of material from earlier contexts and the presence of material *in situ*. The extensive utilization of unretouched flakes, many of them irregular waste flakes, suggests a somewhat opportunistic or expedient approach to the use of lithics, while the presence of finely retouched pieces such as arrowheads indicates that more refined working techniques were also used. This report has also highlighted the drawbacks of morphological analysis as a means of identifying the periods over which various techniques and styles were favoured. The presence of elements which appear to be very similar to those found on Mesolithic sites would usually be written off simply by classifying them as residual (eg Coggins & Fairless 1983). This may well be the case at Stoneyburn but what is really intriguing is the nature of those processes which brought about the presence of earlier material on the site. It cannot be stated outright that these processes were divorced from ritual activity. The assemblage cannot be regarded as 'balanced' or 'domestic' in form and must be seen as the result of both purposeful selection and complicated, and in many cases random, taphonomic processes.

LITHICS CATALOGUE

Format: Pieces are listed by context. Entries are made in the following order: Finds ref (AA,AB etc); material (flint, chert etc); nature of piece (irregular flake, blade etc); colour (not always noted); presence of cortex; noteworthy features (edge damage, platform visible etc); dimensions (length, breadth, thickness in mm); Morphological type (scraper, retouched blade, debitage etc – in italics).

CONTEXT 001: TOPSOIL (PEAT)

AA Flint; fragment of small pebble; yellow/brown; steep retouch along 1/4 of concave edge; 17x21x10; *scraper*.
 AB Chert; irregular inner flake; grey; coarse material; platform evident; possible use damage to distal end; 21x35.5x7.5; *possibly utilized flake*.

AC Flint; secondary flake; burnt and or corticated; some cortex on dorsal surface; terminates in step fracture; diffuse bulb; possible retouch/use damage along left upper half and near distal end; 22x16x9; *possibly utilized secondary flake*.

AD Chert; inner flake; some edge damage; platform evident; 30x15x6.5; *utilized flake*.

AE Chert; inner flake; triangular plan; edge damage; platform evident; 13x19x7; *platform rejuvenation*.

AG Chert; inner flake; grey mottled; prominent bulb indicates hard percussion; notch snap left edge; fine retouch to concave distal end; irregular dorsal surface; core rejuvenation; 18x30x5; *retouched flake*.

AH Chert; inner flake; grey; poor quality veined material; platform evident; 21.5x26x9; *unutilized debitage flake*.

AI Chert; spall; 9x10x1; *debitage*.

AJ Chert; irregular secondary flake; grey; some cortex; 24x20x10; *decortical flake*.

AK Pitchstone; core; grey/black; negative scars indicate narrow flake/blade removals; 25x14x11; small size indicates maximum usage; not firmly stratified. *Single platform core*.

AL Chert; secondary flake; some cortex on proximal end; core preparation/rejuvenation; some damage to right side; 39x15x7; *possibly utilized flake*; not firmly stratified.

AM Chert; inner flake; poor quality veined material; trapezoidal plan; negative blade scars on dorsal surface; damage to distal end; 16x20x5; *possibly utilized flake*.

AQ Pitchstone; inner flake; prominent bulb indicates hard percussion; edge damage and or retouch along left edge and distal end; 16x16x4; *utilized flake*.

AR Chert; thinning flake; 10.5x13x2; *debitage*.

AS Chert; blade; snapped; possible edge damage; 9x11x2; *utilized blade*.

AT Chert; thinning flake; some cortex; flaked over dorsal surface; 12x7x2; *debitage*.

AU Chert; coarse flake; possible edge damage; 21x8x4; *utilized flake*.

AV Flint flake; prominent bulb; dorsal surface extensively flaked; edge damage; 16x13x2.5; *utilized inner flake*.

AW Rough chert flake; corticated and veined; narrow platform; 26x17x7; *debitage*.

AX Chert flake; retouch on ventral surface along one edge; other edge notched; 25x14.5x3.5; *retouched inner flake*.

AZ Chert flake; narrow negative flake scars on ventral surface; retouch along right edge; vestigial prepared platform; some cortex; 15x14x3; *retouched secondary flake*.

002: STONE MATRIX OF LARGE CAIRN

AA Rough chert flake; grey/black; snapped across proximal end; use damage on right edge; 22x17x11.5; *utilized inner flake*.

AB Chert blade; green/grey; both edges blunted along bottom half; 29.5x9x4; *retouched blade*.

AC Flint flake; large platform with roughed edges; some edge damage; 21x23.5x8; *utilized flake*.

AD Chert flake/core fragment; grey; substantial platform; 18x20x10; *debitage*.

AE Flint flake; snapped; 5x7x1.5; *debitage*.

AF Chert flake; diffuse bulb suggests soft hammer; not firmly stratified; cortex on part of edge 20x22x5; *debitage*.

AG Chert flake; no bulb or platform; 15x9x3; *debitage*.

AH Chert flake; notch snap towards distal end; distal end snapped away; damage to edges; triangular plan; 26x22x3; *possibly utilized inner flake*.

AI Chert flake; cortex on proximal end; vestigial platform; damage or retouch on curved distal end; 18x14x3.5; *retouched or utilized secondary flake*.

AJ Pitchstone flake; 11x5x2; *debitage (core trimming)*.

AK Chert flake; visible platform; 14.75x6x3; *debitage*

AL Chert spall; possibly bulb removal; 4.5x5x1; *micro-debitage*.

AM Chert flake; grey; retouch along 10mm of right edge; remaining edge notched and damaged towards distal end from dorsal surface; 36.5x20x10; *retouched inner flake (fragment from damaged knife?)*.

- AN Flint flake; grey; prominent bulb; terminates in step fracture; from prepared platform core; possible use damage to edge; 32x15x7; *possibly utilized flake*.
- AP Flint flake; regular negative flake scars and abrasion marks on dorsal surface; some cortex on distal end; from regular platform core; proximal end snapped; large notch in right edge; damage to other edge; 27x19.15x4; *utilized secondary flake*.
- AR Rough chert flake; macroscopic damage to right edge; 24x9x3; *possibly utilized core trimming flake*.
- AS Chert flake; grey; diagonal snap across distal end; visible platform; retouch along left edge; macroscopic damage to right edge; 24.5x20x6.5; *snapped retouched flake*.
- AT Chert flake; heavily corticated; some damage to one edge which may be fresh; some cortex – outer surface of pebble; snapped across distal end; 32x22x8; *possibly utilized secondary flake*.
- AU Flint flake; discoidal; pink; burnt and fire cracked; 10mm of steep retouch to edge; some cortex; 30x26x6; retouched and burnt flake; *scraper*.
- AV Flint spall; white/grey; 6x5x1; 0.1g; *micro-debitage*.
- AW Chert flake; snap along one edge; platform; 8.25x11.5x1.5; *debitage*.
- AX Chert flake; grey; veined and coarse; cortex down one edge; damage to distal end; 42.5x20x11; *core preparation*.
- AY Chert flake; 10.25x18x4; *debitage*.
- AZ Chert chip; 14x8x5; *debitage*.
- BA Flint flake; heavy triangular flake; cortex on dorsal surface; 25x16x8; *debitage – core preparation*.
- BB Chert flake; coarse material; 27x21x7; 3.4g; *debitage*.

003: STONE MATRIX OF SMALL CAIRN

- AA Flint/agate flake; pink; lozenge plan; pointed at distal; damage to longest edge; diffuse bulb; multidirectional flake scars on dorsal surface; 11x7x1; *debitage – thinning flake*
- AB Chert flake; diffuse bulb; 14x13.5x1.25; *debitage*.
- AC Chert flake; 13x12.25x3.25 *debitage*.
- AD Flint flake; grey; some retouch; 8x5x1; *scraper damage?*
- AE Chert flake; 17x15x4.25; *debitage*.
- AG Flint flake; toffee brown; 8.5x15x2; *debitage*.
- AH Chert nodule; flakes removed; 2 major cleavage planes; possible damage to heavy point; some cortex; 47x38x26; *roughly flaked and chipped nodule*.

005: BLACK DEPOSIT

- AA Chert flake; irregular; platform; some cortex; macroscopic edge damage; 30x26x9; *possibly utilized secondary flake*.
- AB Flint flake; grey/white; narrow platform; medium bulb; small notch in one edge; 19.75x11.5x2; *inner flake*.
- AC Flint chip; corticated; chip shows red inner; 17.25x12x35; *debitage*.
- AF Chert chip; 13x10.25x7; *debitage*.
- AG flint fragment; toffee brown; bashed proximal end; some cortex; flake scars on dorsal surface; 22x19.5x7; *core fragment ?bipolar*
- AH Chert flake; irregular; 17.75x11.75x3; *debitage*.
- AI Chert flake; 22x11x4.5; *debitage*.
- AJ Chert chip; 13x14x4; *debitage*.
- AK Pitchstone flake fragment; medium bulb; snapped across proximal end macroscopic damage to both edges; 10.75x10.5x3; *utilized flake*.
- AL Chert flake; concave edge with possible use damage; 16.5x16x4; *possibly utilized flake*.
- AM Chert blade; vestigial platform; medium to diffuse bulb; macroscopic damage to edge; 25.25x10x5; *possibly utilized blade*.

- AN Chert fragment; corticated; pebble fragment; 20x15.5x13; *debitage*
- AO Chert; fragment; small fractured pebble; 11x12.75x12.
- AP Chert flake; irregular; some cortex; 20x6x6.25; *debitage*.
- AQ Chert flake; rough; large platform; some cortex; 27x27x11; *core preparation flake*.
- AR Chert flake; 42x19.5x85; *debitage*.
- AS flint spall; 7x4x1; *debitage*.
- AT Chert flake; irregular; 29.5x17x6; *debitage*.
- AU Chert flake; lustre on ventral surface; use related to edge damage; visible platform; some cortex; 21.25x11x4.75; *utilized secondary flake*.
- AW Pitchstone flake; macroscopic damage and some retouch to both edges; 24.25x11.5x5; *utilized flake*.
- AX chert flake; large platform; notch damage to edge; 30x40x10.5; *utilized flake*.
- AY Chert flake; wedge ended; large platform; damage to chisel end; not bipolar core; 27x16.25x9; *possibly utilized flake*.
- AZ Chert fragment; coarse material; 23x26x12.
- AV white flint; finely retouched arrowhead; point and one edge and barb snapped; deeply notched barbs; fine denticulate retouch to intact edge; 22x18x4. *Barbed and tanged arrowhead*.
- BA Chert flake; some cortex; steep retouch along both edges; notch snap at distal end; 36.5x20x5; *retouched and utilized flake*.
- BB Chert flake; rough; bashed distal end; 23x23x5; *debitage*.
- BC Pitchstone flake; wide platform; medium bulb; long proximal edge blunted with steep retouch; 14x25x5; *retouched flake*.
- BD Chert fragment; rough core; flaked facets weathered; 41x41x20; *fragment/rough core*.
- BE Flint flake; toffee brown; terminates in step fracture; right hand edge retouched along its middle portion; snapped; 39.5x32.5x8.5; *retouched flake*.
- BF Chert flake; platform; diffuse bulb; rounded edge with some retouch; 23x22.25x5.5; *retouched flake*.
- BG(i) Chert flake; macroscopic edge damage; distal end snapped; 19x11.5x2.75; *utilized flake*.
- BG (ii) Flint flake; terminates in step fracture; some retouch on corner of distal end 14x10.25x5.25; *retouched flake*.
- BI Flint flake; toffee brown; prominent bulb; retouch along 2 edges and bulbar end; diagonal snap across distal end 35.5x38x5.5; *retouched flake*.
- BJ Pitchstone core; double platform; narrow regular blade scars; white inclusions – evidence of devitrification; heavily worked; 18x17x11; *double platform core*.
- BK Chert flake; macroscopic edge damage; platform; 23x17.25x5.5; *possibly utilized flake*.
- BL Chert flake; steep retouch and use polish at proximal end; use damage elsewhere; no platform but proximal end crushed – ?bipolar 23x21x5.5; *utilized flake*.
- BM Chert flake; some cortex; slight edge damage; 28x17.5x4; *possibly utilized flake*.
- BN Flint flake; vestigial platform; retouch on ventral surface of one edge; snapped along distal end; 19.25x20x5.5; *retouched flake*.
- BO flint flake; regular; snapped across distal end; faceted platform; medium bulb; 15x12x4.75; *unutilized regular flake*.
- BP chert flake; use damage along left edge and distal end; spall removal has produced fine burin-like point; tip damaged; 30x28x5.75; *piercer/borer*.
- BQ Chert flake; crushing on distal end; 37x28.5x14.
- BR Chert chip; platform; core trimming 17x16.5x5.
- BS Chert flake; denticulate retouch along right side; cortex on proximal end; 36x18x4.75; *denticulate secondary flake*.
- BT Chert nodule; Flaked and chipped attempt to produce platform; 50x42x29.
- BU Chert flake; snapped 16.25x15x2.5;
- BV Chert flake; irregular flake; coarse material; 25x20x11; *debitage*.
- BW Chert chip; 10x6.5x4; *debitage*.

BX Chert flake; decortical removal; possible steep retouch along one edge of platform; 36x19.5x13; *core preparation*.

BY Flint flake; platform; distal end terminates in step fracture; damage along right curving edge; *utilized flake*.

BZ Chert flake; 25x11.5x6; crushing at distal end – ?bipolar; notch in left side; some cortex; *utilized secondary flake*.

CA Chert scraper; tanged; bulbar end of thick flake steeply retouched; step fracture across distal end; macroscopic damage across retouched edge suggests use; 30x22x85; *tanged scraper*.

CB Chert flake; Core rejuvenation; some slight traces of retouch across one edge; 14.25x4.5x4; *retouched flake*.

CC (i) Chert flake; regular blade scars on dorsal surface; 19.25x19.5x5; *debitage*.

CC(ii) Chert flake; snapped; 10x6x2; *debitage*.

CD Chert spall; 27.5x8x6.25; *debitage*.

CE Chert biface; pressure flaked surfaces; butt end; ?unfinished – thick; snapped; 15x25x7; *biface, snapped in manufacture or use*.

CF Chert flake; notch snap one side; 23x20x3; *possibly utilized flake*.

007: REDEPOSITED MATERIAL

AA Chert flake; irregular retouch along one edge; apparent edge damage; 24x33x5; *retouched and utilized flake*.

AB Flint flake; facets on dorsal surface; vestigial platform visible; 26x32x5; *platform rejuvenation*.

AC Chert biface; fine invasive retouch; kite shaped; one edge slightly concave; pointed butt; 29.5x20x4; *leaf-shaped arrowhead*.

AD Chert flake; snapped at distal end; medium bulb; damage to right edge; 17x13x1.5; *possibly utilized flake*.

AG Chert spall; some cortex; micro-flake scars to dorsal surface; 10x4x2; *micro-debitage*.

008: REDEPOSITED TURF

AB Chert chip; core preparation; large platform; flake scars; 17x13x1.5; *debitage*.

AC Chert flake; 9.5x8.5x6; *debitage*.

AD Chert flake; 23x12x6; *debitage*.

AE Pitchstone flake; devitrification inclusions; snapped at both proximal and distal ends; fine retouch to both edges and edge damage; 35x27x5; *retouched and utilized flake*.

AF Chert flake; some cortex on bulbar end; both edges damaged (micro notching) along entire length; 25x9.5x35.5; *utilized flake*.

009: PIT FILL

AD Chert flake; 32x20x6; *debitage*.

AE (i) Chert flake; regular flake scars on dorsal surface; flaking over bulb; some edge damage; 16x10.75x3; *slightly retouched and utilized heavy flake*.

AE (ii) Chert fragment/nodule; several fracture planes; damage to one edge; 34x48x21; *utilized fragment*.

010: PIT FILL

NB: All marked * were recovered from sieved sample.

* Chert flake; some cortex on edge; platform; 29.5x35x7; *secondary flake*.

* Chert flake; micro-notch damage to one edge; flaking over bulb; regular flake scars on dorsal surface; 16x10.75x3; *utilized and retouched flake*.

* Chert flake; large platform; medium bulb; snapped across distal end; regular flake scars on dorsal surface; some edge damage – looks fresh; 17x18x9; *possibly utilized flake*.

* Chert flake; platform with roughed edges; fine edge damage; 10x14.75x4; *utilized flake*.

* Chert flake; possible retouch on one edge – obscured by ferrous concretion; snapped; rough material; 14x13.5x4; *possibly retouched flake*.

* Chert flake; Snapped at proximal end; Medium bulb; 11x11.5x3; *debitage*.

* Chert flake; 20x7x1.5; *debitage*.

* Flint flake: 9x7x1.5; *debitage*.

AH (i) Chert flake; regular flake scars on dorsal surface; platform preparation; prominent bulb; 21.5x19x5; *debitage*.

AH(ii) Flint flake; terminates in step fracture; vestigial platform; regular flake scars and abrasion marks on dorsal surface; fine damage to both edges; 17x13x2; *utilized flake*.

011: PIT FILL

AA Chert flake; damage on both edges – micro-notching; 19x22x7.5; *utilized flake*.

AB Chert nodule; struck facets; half covered by cortex - pebble; 19x19.5x15; *rough core*.

014: PIT FILL

AA Worked mudstone; slightly convex working edge; surface grinding; hollow ground on upper surface toward edge – to sharpen edge?; slight damage to sharp edge – possible use damage.

061: PIT FILL

AA chert pebble fragment; cortex covers c. 1/2 surface; several struck facets; *possible rough core*.

WC: WITHOUT CONTEXT

AA chert biface; fine retouch has shaped and thinned piece; notch damage below tip 3x2.8x0.4; *leaf-shaped arrowhead*.

AB shale; snapped into shape; apparent barb; 4.1x3x0.3; *possible barbed and tanged arrowhead copy*.

THE FAIENCE BEADS

Alison Sheridan

Five complete and fragmentary beads were found during the excavations: four were associated with a cremation, hammer stone and accessory vessel in the pit under Cairn 003, and the fifth (in three fragments) was associated with a cremation in the pit under Cairn 004. All the beads showed signs of having been burnt, most likely in the funeral pyre(s). Non-destructive analysis, using X-ray fluorescence and SEM-based energy dispersive microanalysis, was carried out on the quoit bead (016AB) from Cairn 003 by Paul Wilthew (NMS Analytical Research Section) to investigate its vesicular texture and areas of red coloration.

CAIRN 003 (ILLUS 7.3–6)

016AB: small quoit-shaped bead (illus 7.3)

Shape: irregular circle, with eccentric, slightly lipped perforation, and uneven surfaces.

Dimensions: external diameter: 16 mm (max); diameter of perforation: 7 mm; thickness at perforation: 4.5 mm.

Colour: variable – reddish-buff, with small darker red patches and a pale and medium-blue patch which runs around a third of one side and extends to the other.

Texture: surfaces slightly rough and vesicular; tiny area (within medium-blue patch) where surface texture is slightly glassy.

Other features: pock mark 1.5 mm across on one surface; black, grit-like object c 2 mm across projecting from one edge of the perforation.

Analytical results: analysis of the surface composition, using X-ray fluorescence spectrometry, revealed that the reddish areas did not differ from other parts of the bead. Copper was present, as was iron (in smaller concentrations), tin (smaller yet) and zinc (in variable concentrations). Both copper and iron can impart a reddish colour under certain conditions, and either could have been responsible for the observed coloration. The presence of copper and tin (which have been found in other British faience beads) suggests that the copper had been deliberately included as a colourant. In its oxidized, cupric state, copper appears as a blue or blue-green colour (as seen on other faience beads). In its reduced state, it can produce a red colour in glass and similar materials. The analyst concluded that it was possible that a blue/blue-green colour had been the original, intended colour (as suggested by the small blue patch), and that the red had been produced by subsequent fire alteration. (Alternatively, one could not rule out the possibility, on the grounds of colour alone, that the bead's red colour was due to an initial misfiring.)

As for the bead's vesicular nature, the analytical results did not offer any evidence to confirm or disprove that this was due to fire alteration.

016AC: segmented bead (illus 7.4)

Shape: stubby tubular bead, with seven segments of uneven widths and shapes. Segment divisions slightly indistinct, but clear enough to reveal that the bead had not been spirally segmented; appear to have been executed by crimping or incision, and then to have lost some definition. Perforation an irregular D shape, marginally bigger at one end than the other.

Dimensions: length 12.25 mm; thickness (max) 6.1 mm; perforation 2.9 mm x 1.9 mm at one end and 2.9 x 2.0 mm at the other. Broadest segment c 1.8 mm wide.

Colour: predominantly dark red, with bluish-cream mottles (present as a band along one part of the bead, and as tiny patches elsewhere).

Texture: surfaces slightly uneven and vesicular; matt.

Other features: traces of probable rootlet material in the perforation.

016AD: segmented bead (illus 7.5)

Shape: tripartite – a central, large segment flanked by two smaller segments (one of which has a slight indentation, but not enough to create a fourth segment). Segment divisions not crisply defined. Perforation of variable shape: a narrow, vertical, irregular ellipse at one end, and a horizontal ellipse at the other. (Just inside the latter, the perforation appears to be closed.)

Dimensions: length 8.8 mm; thickness 5.1 mm (central segment), tapering to 2.25 and 2.5 mm at the ends. Perforation: 1.5 x 0.5 mm at one end, 1.5 x 0.75 mm at the other.

Colour: dull purplish-grey with patches of whitish-blue, reddish-brown and cream.

Texture: uneven, knobbly surfaces; slightly vesicular, matt.

016AE: segmented bead (illus 7.6)

Shape: tripartite, once more with a slight indentation in one of the segments. Segment divisions not crisply defined; segment widths decrease slightly from one end of the bead to the other. Perforation a slightly flattened circle.

Dimensions: length 10.9 mm; thickness 5 mm; width of segments 4, 3.1 and 2.5 mm respectively. Perforation: 2.0 mm x 1.8 mm.

Colour: basically dark red-purple-grey, with creamy and slightly bluish-grey patches.

Texture: slightly vesicular in areas where the red-purple colouration is most intense; elsewhere smooth but not glassy.

Other features: perforation clogged with sediment.

CAIRN 004 (ILLUS 7.7)

028AA: segmented bead, in three fragments (illus 7.7)

Shape: much distorted from its original shape; hints of the former presence of four or six segments, formed by regular, all-round crimping. The two end fragments taper, and in one case the perforation is completely closed at the outer end of the bead. Elsewhere, the perforation varies in shape, much deformed from its original, probably tubular shape; in the middle fragment, it has become a narrow oval. The ends of the fragments are all smooth and rounded; they do not show signs of fresh or abraded fracture.

Dimensions: estimated original overall length: 19.5 mm. Length of fragments: 8, 6.5, 6 mm respectively. Thickness: 5.1 mm (max), tapering to 2.75 mm.

Colour: dark grey, with creamy patches.

Texture: vesicular, matt.

DISCUSSION

Alteration by fire is evident in all the specimens, manifesting itself in the beads' discoloration and in structural deformation. The latter is seen most clearly in the fragmentary bead from cairn 004, where the perforation has been substantially deformed and fused shut at one end and where the fracture surfaces have been reformed as smooth, rounded surfaces. The evidence suggests that the beads may originally have been bluish or blue-green (at least in surface colour), and if not glassy in texture, then at least smoother and much less vesicular than they are now.

The question of how the beads were manufactured – whether by application of a surface glaze to a pre-fired core (as appears to be the case with a star-shaped bead from Dryburn Mains, Berwickshire, for example), or by one-stage firing of paste mixed with (or buried amongst) colourant (Tite & Bimson 1986) – is hard to resolve, given the beads' present condition and the fact that no clean fracture surface is available for examination. Either method is possible, although the former appears slightly more likely, given the thin 'skin'-like appearance of the surviving light-coloured patches.

These five beads from Stoneyburn bring the total of Bronze-Age faience beads found in Scotland to around 95 (Warren & Sheridan forthcoming). The findspot is not particularly close to any of the known clusters or scatters of beads: it lies to the north-east of the Wigtownshire

concentration, and south-west of the Ayrshire/Dunbartonshire scatter (although it is linked with the latter by the Clyde).

Compositionally, the analysed bead is consistent with the other Scottish beads in its copper-to-tin ratio. Although the case for localized Scottish production at more than one location has not been unequivocally proven, the existing analytical and distributional evidence tends to support such an hypothesis, and points to the sandhills of the two above-mentioned areas, and to Sandhills in Fife (Tentsmuir) and Moray (Culbin Sands) as areas deserving of further investigation.

The cairn 003 artefactual assemblage – comprising the four beads (probably strung as a necklace) with an unburnt accessory cup and a hammerstone – is consistent, chronologically and culturally, with other Scottish Bronze-Age faience bead associations. Although many beads have been discovered as stray finds, a significant proportion has been associated with cremation burials in urns – particularly cordoned urns. This suggests a period of currency around the early to mid-second millennium BC.

THE CREMATIONS

Jacqueline I McKinley

Cremated bone from five contexts was received for examination, comprising two unurned cremations 016 and 028 from beneath cairns 003 and 004 respectively, and from contexts 002 (cairn), 004 (cairn) and 010 (fill of pit 019 below cairn 002).

METHODS

Each cremation was passed through a stack of sieves of 10 mm, 5 mm and 2 mm mesh size. The weight of bone from each sieve (presented as a percentage of the total weight in Table 2), and maximum fragment sizes for skull and long bones, illustrate the degree of bone fragmentation (Table 2).

The identifiable bone was separated for further examination, being divided into the categories of skull, axial and upper and lower limb. Table 2 shows the amount of identifiable bone as a percentage of the total bone weight, and percentage of identifiable bone in each of the four skeletal categories. This may illustrate any deliberate bias in the skeletal elements collected for burial.

Full details of all identified bone in the archive report include: any variation in colour from the normal buff/white for individual bones; detailed descriptions of pathological lesions with diagnoses where appropriate; any measurements other than those presented in Table 2. Anatomical terminology is taken from Gray (1977) and McMinn & Hutchings (1985).

Number of individuals is detected either by obvious age-related differences in size and epiphyseal fusion or the duplication of several recognizable bones. Care must be exercised, however, that duplication is not a result of contamination from a neighbouring cremation, or from inefficient clearance of a re-used pyre site (see McKinley 1989 and 1994).

Age was assessed from the stage of epiphyseal bone and cranial suture fusion (McMinn & Hutchings 1985, Webb *et al* 1985), and the general degree of degenerative changes to the bone. Age categories, rather than age in years, are used in view of the difficulties surrounding the accurate assessment of age for adults over 25/30 years (that is, following final epiphyseal fusion), a problem compounded where the entire skeleton has not been recovered, as it rarely is in cremations. Age categories used are: mature adult – 25 – 40 years (younger 25–30, older 31–40); older adult – 40+ years.

The sex of the adults was assessed from the sexually dimorphic traits of the skeleton (Bass 1987), including maximal cranial vault thickness '1a' and '1b' according to Gejvall (1981) (see McKinley 1993 and 1994 for discussion on reliability and inherent bias of Gejvall's methods). A combination of methods and scoring of traits has been used in order to overcome any methodological bias or variations in sexual morphology within the group. Levels of reliability used were: ?? for possible, ? for probable and unquestioned.

RESULTS

TABLE 1
Results of analysis

Context no.	total weight (g)	age	sex	pathology
002	0.3	unknown	unknown	unknown
004	1.2	unknown	unknown	unknown
010	3.	unknown	unknown	unknown
016	538.7	younger mature adult	female	cyst – talus
028	519.3	older adult	?female	o.a.-temporo-mandibular, cervical, lumbar; ddd – cervical; mv – wormian bone

o.a. = osteo-arthritis; ddd = degenerative disc disease; mv = morphological variation.

TABLE 2
Percentages of identified bone

Context no	total wt (g)	percentage bone in each sieve			max frag. (mm)		% bone ident.	% bone ident. in each skel. area			
		10mm	5mm	2mm	sk.	lb.		sk.	ax	ul	ll
002	0.3	–	100	–	–	–	–	–	–	–	–
004	1.2	83.3	16.7	–	–	24	–	–	–	–	–
010	3.7	54.0	43.2	2.7	–	17	–	–	–	–	–
016	538.7	49.6	40.9	10.4	31	40	30.4	44.3	24.6	18.6	12.5
028	519.3	49.4	40.3	8.5	47	69	45.5	16.3	8.9	16.5	15.9

DISCUSSION

The cremated bone is all of a buff/white colour indicative of full oxidation of the organic components of the bone. Although the majority of the bone was in the 10 mm sieve, the maximum fragment sizes are relatively small and in general fragmentation was heavy. Much incidental fissuring and breakage of the bone takes place during the cremation process and on collection for burial (McKinley 1989 and 1994), and it has been shown elsewhere by the writer that unurned cremations are often comprised of smaller sized fragments than urned cremations (McKinley forthcoming (a)). The bone from both cremations was worn from the passage of water through the burial medium, which adverse conditions are likely to have increased fragmentation. In this case, however, although the writer believes it unlikely, deliberate fragmentation of the bone prior to burial may have occurred.

In both cremations, a maximum of 33.7% of the quantity of bone expected from an adult cremation is present (by weight of bone). Although a certain amount of bone will be lost as 'dust' (c 10 – 20%), it is a common feature of cremations that not all of the bone was collected from the pyre for burial. The few grammes of cremated human bone recovered from the two cairns 002 and 004 are probably accidental inclusions and may represent scattered fragments of bone not collected from the pyre for burial. The presence of such bone in the cairns would suggest that the pyre site (or sites) was not far removed from the place of burial. That cremations were carried out in the area prior to the construction of cairn 002 is also indicated by the small amount of bone from pit 019.

THE PALAEO-ENVIRONMENTAL EVIDENCE

Camilla Dickson

Samples from beneath the three cairns were examined for carbonized plant remains. Table 1 shows their distribution in the archaeological features. The complete plant list is given in the catalogue.

CAIRN 002

Post-holes 030, 034, 051

The charcoal identified from three of the post-holes is tabulated. The interpretation of post-hole fills is problematic. If a post decays *in situ* or is removed, plant remains from the occupation may form part of the infill. The fill 051 (context 052) was mainly of *Betula* (birch) charcoal with fragments of *Alnus* (alder) and *Corylus* (hazel) with a grain of *Hordeum vulgare* var. *nudum* (naked six-row barley). It is probable that a birch post was burnt *in situ*. The few fragments from fills 030 and 034 of *Betula* and *Quercus* (oak) respectively are less likely to represent the remains of posts.

Stake-holes 056, 066, 071, 073, 075

The charcoal from the stake-holes is generally <5 mm; although three or four stake-holes produced only *Quercus* charcoal, it is by no means certain that these are fragments of the original stakes.

Pit fills 009, 010, 011, 022, 113

The contents of five pits show the use of a mixture of woods: *Alnus*, *Betula*, *Corylus*, *Pomoideae* (includes *Crataegus/Malus*, hawthorn/crab apple), *Prunus avium/padus* type (wild cherry/bird cherry type) and *Quercus* together with two *Hordeum* grains and a fragment of hazelnut shell were identified from context 010 which was radiocarbon dated to the early Neolithic. *Salix* (willow) was present in two of the pits; all are of small charcoal fragments. These trees could have grown together in open woodland with *Alnus* and *Salix* in wetter areas. The presence of *Corylus* and the wild cherry types indicates better soils.

CAIRN 003

A single cremation pit produced abundant *Betula* charcoal.

CAIRN 004

A similar cremation pit produced only *Betula* charcoal. The charcoal from both pits gave an Early Bronze Age date.

DISCUSSION

Radiocarbon-dated charcoal shows that a pit beneath the large cairn 002 was in use in the early Neolithic period. Pottery from this and pit context 011 and various other provenances is of early Neolithic age and Beaker period pottery was recovered from context 009. Artefacts from both underlying deposits and the cairn show that activity from the early Neolithic to Early Bronze Age took place at the site. It is probable that the post-holes and stake-holes, though lacking artefacts, also date from these periods.

As already noted, cairns 003 and 004 both date from the Early Bronze Age. As shown in Table 1, there are relatively few charcoal fragments and these are by no means sufficient to reconstruct the woodland present in the early prehistoric period in the vicinity of Stoneyburn. Such information has, however, been tentatively deduced from the nearby unenclosed platform settlement of Lintshie Gutter (Dickson in Terry this volume), in use for several hundred years during the Early Bronze Age and perhaps earlier. There, it is suggested that the analysis of the charcoal, consisting of over two thousand fragments, could indicate the composition of the former

woodland. The charcoal is dominated by *Betula* and *Corylus* with some *Alnus*, but with *Quercus* only present in a few contexts. There are, unfortunately, no pollen diagrams from the Crawford area of the Clyde valley, but pollen analyses from 28 km to the north and up to 50 km to the east suggest that *Betula* with *Corylus* woodland with some *Alnus*, predominated in the upland areas and that *Quercus* with *Ulmus* (elm) was restricted to more favourable lowland sites.

The apparent use of *Betula* wood for a post at Stoneyburn when *Quercus* heartwood would be more durable and certain, and the use of *Betula* for the two funeral pyres, when *Quercus* wood would produce more heat, suggests that suitable oak timber was not readily available. It is not possible from this scant evidence to ascertain whether oak had become less common since the Neolithic. It is clear from the charcoal identifications from Lintshie Gutter, however, that a mixed woodland existed in the vicinity throughout the Early Bronze Age.

PLANT CATALOGUE

All tree and shrub remains are of charcoal unless otherwise stated.

Contexts	Species	Weight in g
009	<i>Betula, Corylus</i>	>10.0
010	<i>Alnus, Betula, Corylus, Corylus</i> nut (fragment), <i>Hordeum vulgare</i> var. nudum 1 grain, <i>H. vulgare</i> sl. 1 grain, <i>Pomoideae, Prunus avium/padus</i> type, <i>Quercus</i>	4.2
011	<i>Alnus, Betula, Quercus</i>	0.2
016	<i>Betula</i>	30.5
022	<i>Betula, Corylus, Quercus, Salix</i>	0.4
028/029	<i>Betula, Salix</i>	38.4
030	<i>Betula</i>	0.3
034	<i>Quercus</i>	0.4
036	<i>Ajuga reptans</i> 1 nutlet	
044	<i>Betula</i>	<0.1
052	<i>Alnus, Betula, Corylus, Hordeum vulgare</i> var. nudum 1 grain	61.0
056	<i>Quercus</i>	<0.5
057	<i>Corylus, Quercus</i>	0.1
066	<i>Quercus</i>	0.3
071	<i>Betula, Corylus, Salix</i>	0.1
073	<i>Quercus</i>	2.4
075	<i>Betula</i>	<0.1
103	<i>Betula</i>	0.7
108	<i>Betula, Quercus</i>	0.5
112	<i>Corylus</i>	<0.1
113	<i>Betula, Corylus, Quercus, Salix</i>	0.1

THE PHOSPHATE ANALYSIS

Iain Banks

In the course of the excavation of the largest of the cairns at Stoneyburn, various pits were located which contained no finds. Three of these pits in particular suggested that their original purpose may have been burial: 059/135, 116 and 118 (illus 3). 059/135 was a large pit, measuring roughly 2 m by 1 m, and thus suggestive of an inhumation; 118 was truncated, only the base of the pit

actually surviving, but interpreted as dating to roughly the same period as 059/135; 116 was a smaller pit cut into the base of the 007 complex and ringed with stones. Given the funerary nature of only a small part of the remains at Stoneyburn, the question of whether these pits were sepulchral or not was of great importance.

STRATEGY

Samples were taken from arbitrary points across the floors of the pits, the locations recorded in plan. It was unfortunately not possible in the time available to sample on a 10cm grid as was done at Temple Wood in Kilmartin (Máté 1989, 117–21); this strategy produced the apparent outline of a crouched inhumation in the contouring of the phosphate levels. The only level of information possible in the circumstances at Stoneyburn was thus a simple presence/absence of inhumed remains. It was decided to test both for total levels of phosphate, in order to determine whether phosphate levels had been enhanced, and for inorganic phosphate (phosphates held in inorganic compounds with aluminium, iron or calcium), which would tend to be a larger proportion of the total phosphates present if the source were bone.

LABORATORY PROCEDURES

In the laboratory, the samples were air-dried and sieved to 106 microns. The samples were then divided into two sub-samples and analysed for total levels of phosphates following Andersen's ignition method (Andersen 1976). One of the sub-samples is boiled in HCl, the other ashed for an hour and then boiled in HCl. The former reveals the level of inorganically bound phosphates, the latter the total amount of phosphate in the soil sample. Organic phosphate levels are taken as the difference between the two amounts. Results were obtained colorimetrically at 470 nm using a blue molybdenum complex; the full list of results has been archived.

RESULTS AND INTERPRETATION

Phosphate levels at Stoneyburn ranged from around 1600 ppmP to 150 ppmP. Pit 059/135 had five samples taken. Of these, three showed considerable enhancement, in excess of 1000 ppmP, while the other two had enhanced levels, but not high enough to suggest burial in themselves. Five samples from pit 118 were tested, all of which had enhanced levels, above the background average, but below 1000 ppmP and thus are not suggestive of burial. Pit 116 had levels of between 300 ppmP and 600 ppmP and thus within the range of the levels from the background samples.

The phosphate levels in 059/135 were the highest of the three pits. There was a deposit at one end of the pit interpreted as decayed turf; this was also presumed to be the likeliest end for the head of an inhumation to rest. The sample from this point was strongly enhanced, the total phosphate level being 1671 ppmP against a background average level of 381 ppmP. Moreover, this sample consisted of around 80% inorganic phosphates, and it is unlikely that this enhancement derived from the turf deposit. This was the highest phosphate level on site, and it is consistent with having derived from the decay of the skull. The other high phosphate levels came from a line of three samples 0.5 m to the east; the middle sample of the three, at the point which might be expected to have been the location of the torso, was enhanced with mainly inorganic phosphates, as was the sample on this line to the north. The other sample on this line, to the south, showed enhanced phosphate levels not consistent with burial, being 780 ppmP. The fifth sample, towards the bottom end of the pit, was similarly enhanced but not to the levels necessary to suggest a burial.

If these levels are indicative of a burial, then the best explanation for the differences in the levels is that, since phosphates are bound very tightly into the soil at the point of entry, the areas of the pit not actually in contact with the body would show lower enhancements than those that were. All five of the samples were mainly inorganic, the lowest proportion being 52% inorganic against a background of 34% inorganic, which does tend to support the suggestion of burial. It must be emphasized, however, that these levels are not high enough to be unequivocal about their source.

Pit 118 showed enhanced levels, ranging from just over 600 ppmP to 867 ppmP. However, these are certainly not high enough to suggest burial, while the context was extremely disturbed and it is not possible to assess the reasons for the enhancement in this pit. Pit 116 showed no particular enhancement over the natural levels.

SUMMARY OF SITE PHASING

PHASE I

Early Neolithic (pre c 3300 – 3000 BC): Probable burial in pit 059/135, digging of pit 118

PHASE II

Early Neolithic (pre c 3300 – 3000 BC): Digging of large scoop, containing pits 111, 116 and 131 (truncating pit 118), backfilled with series of deposits 077, 079, 085, 091, 092, 093, 094, 095, 096, 103

PHASE III

Early Neolithic (c 3300 – 3000 BC): Digging of series of small pits 019, 039 and 040 with deposition of carinated bowls

PHASE IV

Beaker period: Digging of pit 009 with cord-impressed Beaker

PHASE V

Beaker period or later: Formation of layer 007 and construction of cairn 002

PHASE VI

Early Bronze Age (c 1900 – 1500 BC): Burial of two females in separate cremation pits under cairns 003 and 004

SITE INTERPRETATION

The site of Stoneyburn seems to have had six phases of activity. The earliest phase consists of pit 059/135, which is probably the remains of an inhumation, and the truncated pit 118. It can only be dated as earlier than the radiocarbon date from pit 019/010/020. The next phase, similarly not capable of close dating, relates to the digging of the scoop containing the 007 complex with the

pits at the base of this scoop (111, 116 & 131) and also precedes the early Neolithic radiocarbon date. It is impossible to guess the time-lag between these two earliest phases. The third phase consists of the pits below cairn 002 and cut into the 007 complex, which produced both pottery and a radiocarbon date from the early Neolithic. The fourth phase covers pit 009 with its sherds of Beaker pottery, while phase five covers the construction of the cairn 002, containing as it does a residual sherd of early Neolithic bowl in its matrix, and the formation of the 007 layer as a trample of the underlying fills. The 'cultural' dating is incapable of refinement to calendar dating. It is possible that there is no real difference between the fourth and fifth phases. The final phase relates to the two smaller cairns, and is dated to the Early Bronze Age by radiocarbon and by pottery.

Pit 059/135 from the presumed earliest phase produced three phosphate samples with levels sufficiently enhanced to suggest burial. At the site of Boghead, Fochabers, two features (hollow G, on the western edge of the mound, and the central pit) resemble the 059/135 pit at Stoneyburn, although both are smaller (Burl 1984). The interpretation of the central pit at Boghead was a grave, relying upon its position, its depth and the fact that it was deliberately backfilled. The two latter points are also true for the Stoneyburn pit and thus also suggest burial. The phosphate results at Stoneyburn unfortunately leave some degree of ambiguity. Overall levels are not as high as might be expected (although they fall within the range associated with burial deposits), while two of the five samples are too low to demonstrate burial. This could be explained by the fact that phosphates from a human corpse will remain largely where they entered the soil; it is therefore possible that the lower readings represent areas where the body did not lie.

The Neolithic sequence revolves around the radiocarbon date of 4530 ± 70 BP uncal, calibrating to 3361 – 3098 BC at the one sigma level (GU-3261), from pit 10/19/20 in the surface of the 007 complex. All pits below the 007 surface are thus earlier, while the other pits on the surface are judged to be roughly contemporary. The precise antiquity of the earlier material is impossible to determine, but a simple guess would be that it is still early Neolithic in date. However, a pre-Neolithic date cannot be ruled out.

The probable burial pit 059/135 is suggested as predating the 007 complex. The cairn-builders were commemorating some aspect of the 007 complex, so it is unlikely that the burial in 059/135 is more recent since this was ignored by cairn 002. Pit 118 certainly predates 007 because it was largely destroyed in the course of the construction of the scoop.

The 007 complex may have been excavated and back-filled by work-gangs, much as it was in the twentieth century during excavation; the base of the 007 complex is uneven, the sections showing how the deposits rise up towards the central point of the area, suggestive of conjoining scoops. Of the pits cut into the base of this scoop, no explanation can be offered from the excavation results. Since the excavation proceeded from the assumption that cairn 002 was funerary, possible burial pits were investigated through phosphates in order to find any funerary material. The obvious contender for a burial pit (116) at the centre of the complex, had no indication of enhanced phosphate levels, while only 111 contained any artefacts, in the form of a fragment of nutshell and a couple of pieces of daub, all of were probably accidental inclusions. A small fire was lit on the surface of 111, while the remains of what appear to have been burnt timbers were left on the base of the scoop. These ephemeral features surely represent a range of activities which were at best only tangentially related to burial.

The pits dug into the surface of the 007 complex are small and several contain pottery. However, none was a burial pit for a cremation or an inhumation, despite the presence of fragmentary bone within the fill of pit 019. Once these pits had been backfilled, it is most likely that the area was allowed to grass over. It is also possible that the area was covered with a slight mound, since the later builders of the cairn knew of its presence. Because they cleared any

overburden down to the surface of 007 before building the cairn, this will never be known. They probably churned the surface of the 007 complex, masking all the differences below and possibly truncating some of the pits. Into this surface they cut a further pit (indeed, the only one which cuts 007 the layer directly) and deposited some sherds of Beaker. Sherds of Beaker pottery also found their way into pit 040 and pit 139, probably as accidental inclusions in the earlier deposits.

After burying the pottery in pit 009, the cairn builders dumped the turf they had removed over the top of the 007 complex and then built the cairn. This was done by creating an outer ring of large stones, within which the centre of the cairn was built using medium and small stones, the occasional larger boulder and an organic soil which appears to be the material removed at the start of the process.

The dating of the construction of the cairn relies upon the presence of Beaker material in pit 009, providing a *terminus post quem* for the cairn construction, while the sherd of early Neolithic carinated bowl contained in the soil matrix of 002 was heavily abraded and probably old at the time of the cairn's construction. The cairn also post-dates the probable burial pit 059/135 because this pit is only partially covered by the cairn, also suggesting that the cairn-builders were unaware of its existence. The top deposit of 059/135 consisted of a large number of medium-sized stones; the apparent ignorance of the cairn-builders of this pit would suggest that it was covered by turf and topsoil. This, together with the building of the cairn during or after the Beaker period directly over the early Neolithic activities, would tend to suggest that the presence of the activities represented by 007 had been marked in some manner.

The soil matrix of cairn 002 contained 27 lithics, while that of cairn 003 had a single lithic and 004 none. This might suggest that, while there were lithics around in the soil at the time 002 was built, there were very few around when the two small cairns were built, and that cairn 002 was built at an earlier point to 003 and 004. Unfortunately, given the problems of taphonomy on site, this evidence can only be taken as suggestive.

It is presumed that the large post 052 was erected between the time of 007's creation and the construction of cairn 002; the longevity of interest in the knoll, from the early Neolithic to the latest Neolithic/Early Bronze Age, would suggest that there was some form of marker. Cairn 002 would thus be a continuation of a tradition of marking this area of activity. However, this post cannot possibly have survived from the end of the fourth millennium BC to the late third millennium BC, especially since the post was apparently of birch which would last only a short time in the acid soil conditions. Consequently, there may have been an earlier marker which was removed for the building of 002.

Cairn 002 had a slight depression in the surface towards the northern edge. There are numerous examples of similar-sized cairns with such a depression in Upper Clydesdale. The largest cairn in a group located 670 m from Stoneyburn on Ellershie Hill has this hollowing, as do the cairn at Knock Leaven (RCAHMS 1978, 70), a small cairn adjacent to a barrow at Black Hill, Crawfordjohn (RCAHMS 1978, 11) and a grass-grown cairn on Wildshaw Hill (RCAHMS 1978, 117). Such depressions have normally been assumed to be the result of robbing (RCAHMS 1978; Ward 1992a, 167), and it had been assumed before excavation that the largest cairn at Stoneyburn had probably suffered in this way. On excavation, it was apparent that this was actually a 'design-feature', although there was no obvious explanation for its existence.

The two cairns 003 and 004 date to the Early Bronze Age, according to the radiocarbon dates obtained from the pyre material included with the burials. The dates are statistically identical, and it is possible that the two burials happened within a very short space of time. However, it can be argued that 003 predates 004 from the fact that it is closer to 002.

The assertion that the ground was cleared in advance of the digging of the various pits under

the three cairns is based on the lack of any buried turf line or old ground surface. In addition, while the matrices of the cairns were a deliberate mix of stones and organic soil, there is no indication of where the soil came from, no quarry ditches or pits, and the explanation of ground clearance is the most likely in this circumstance.

The environmental picture is not easy to recreate from the samples collected at Stoneyburn, and, as can be seen in the plant report, most of the evidence must be taken from the later material present at Lintshie Gutter. However, there is nothing in the Stoneyburn data to contradict this environmental reconstruction, and it is reasonable to assume from the available material that conditions in the late fourth millennium BC were little different to those in the late third and early second millennium BC. It is disappointing, however, that the palaeo-botanical evidence from Stoneyburn is so ephemeral since there is so little known of the Neolithic of Upper Clydesdale.

The lithics, particularly in 005, are of interest in terms of the 'time-depth' of the site. The lithics recovered from the site, particularly from 002 and 005, show the utilization of flakes. As Pollard discusses in his report, it is unlikely that this indicates specialised activity. Rather, it suggests that the knoll was visited and that it was not cut off because of its perceived ritual or symbolic status. The lithics at Stoneyburn could be seen as an indication of activities at the site which have not left concrete traces, covering times not apparent in the styles of pottery or the radiocarbon dates. Archaeological material, unlike historical, reminds us that the past occurred as a flow of time rather than a series of discrete events.

The faience beads from the two cremations have been shown to have passed through a fire after their manufacture; this is taken to mean that the faience beads represent a decorative element for the bodies and that the beads were not deliberately included in the grave deposits. In that respect, only 003 had grave goods – the accessory vessel and the hammerstone. It is presumed from the lack of any part of the typical Beaker assemblage in these deposits that they date from a period after the main currency of Beakers. The burnt sherd of uncarinated bowl in the matrix of 003 can be taken as an indication that sherds of pottery from the earlier episodes were present, this sherd apparently also having passed through the cremation fire. The presence of a sherd of Beaker on the subsoil under 004 is similarly irrelevant to the dating of the cairns; the ground clearance which preceded the digging of the grave pits would allow residual material to be re-deposited.

A point which needs explaining is the coincidence in pit 040 of both early Neolithic pottery and a sherd of Beaker, with a similar coincidence of material in pit 139, discovered by T Ward of Biggar Museum immediately prior to the destruction of the site. There has been some debate over the dating of the different pottery traditions; as Herne has argued, however, there is no good evidence for the carinated bowl tradition continuing into the currency of later styles (Herne 1988, 14–15). The occurrence of a fragment of cord-impressed Beaker with sherds of carinated bowls within pit 040 is not evidence for the longevity of pottery styles from the early Neolithic to the currency of Beaker forms; the sherd from 040 was on the surface of the fill and is coincidental to the pit. Indeed, the circumstances of deposition at Stoneyburn could be taken as support for Herne's arguments. The association of pottery of differing dates within single contexts on a site with a long period of activity suggests that it is not unusual. Sites initially occupied by people with carinated bowls were re-used by communities making Beakers at a later date, and material was moved around. This point helps in accepting the chronological gap between the early Neolithic material at Stoneyburn and the Beaker pottery; sites discussed by Herne, both in Scotland and England, have similar sequences of material with no obvious activity in the interim periods.

GENERAL DISCUSSION

LITHICS IN RITUAL AND FUNERARY CONTEXTS

Tony Pollard

The presence of artefactual material in a ritual or funerary context immediately raises various questions as to the nature of the deposition of that material. The first and perhaps most pertinent of these can be phrased along the lines of, 'was that material deposited purposely as a form of grave good or ritual offering?' There are certainly many cases of lithics being used to accompany burials, perhaps most obviously in the deposition of barbed and tanged arrowheads with 'Beaker burials'.

Beaker fragments were recovered from Stoneyburn but no evidence for 'classic' Beaker burials was detected, though a barbed and tanged arrowhead was recovered. Can the depositional processes involved be regarded in anyway similar to those found in Beaker graves? It has been noted elsewhere (Grinsell 1961) that the snapping of barbed and tanged arrowheads may have ritual connotations, and it is certainly the case that the Stoneyburn example lacks both its tip and a barb. However, it is equally, if not more, valid to suggest that this breakage was accidental and may even have led to the discard of the piece (the piece was recovered from 005 outwith the area covered by the large cairn). As Green has pointed out, an arrowhead represents only one element of a composite artefact, much of which (the shaft, the flights, the bindings) rarely survives within archaeological contexts. In the case of a complete arrow the most obvious form of ritualistic breakage would be to simply snap the shaft (Green 1980), a process imbued with much more theatrical value than the breakage of smaller elements such as arrowheads. The possibility that copies of recognised artefact types may have been utilised in this fashion should perhaps be mentioned, especially in the light of the recovery of what may be a shale copy of a barbed and tanged arrowhead (as this piece has no firm context, it must be treated with caution).

Ritual, as evidenced archaeologically, is a rather vague concept, difficult to expand beyond its interpretation as a device through which social relations are negotiated and positions of power reinforced. Ritual practice which involves the purposeful deposition and/or destruction of artefacts is often couched in terms of the offering, a term which carries with it ideas of value, worth and prestige. If such interpretations are valid then it can be suggested that there are factors other than deliberate breakage which may appear to reinforce the logic of interpreting such artefacts as ritual deposits.

The production of the barbed and tanged arrowhead recovered at Stoneyburn has clearly involved a greater degree of labour than any other element of the assemblage, only the leaf-shaped arrowheads even approaching the effort and skill involved. To the archaeologist's eye this time/labour differential is striking enough but when complemented by the unique nature of the raw material – a fine quality white flint totally absent elsewhere in the assemblage – then this ritual correlation is naturally strengthened. However, comparison with the rest of the assemblage does raise an important point, this being that we are not simply dealing with a limited package of material (such as a flint knife, arrowhead, bracer and Beaker in a cist with a corpse), but with a relatively large collection which includes various elements distributed throughout a number of contexts. The assemblage as a whole must therefore be considered. In his discussion of the 29 leaf-shaped arrowheads (mostly fragments) recovered from the cairn at Lyles Hill, Antrim, Evans (1953, 51) states, '... it is unlikely that they are all casual finds and it would appear that offerings were made around the edges of the fire or fires within the sacred area later delimited by the kerb'. Here the excavator chooses to isolate the leaf-shaped arrowheads from the rest of the assemblage,

which numbered several thousand pieces, suggesting, largely on the subjective grounds discussed above, that at least some of them were 'offerings', with the remainder of the assemblage interpreted on the level of earlier 'domestic' activity on the site.

To assign value or prestige to artefacts like the arrowheads involves a value judgement which need not necessarily reflect prehistoric attitudes to artefacts. Though the barbed and tanged arrowhead may, to an archaeologist, appear to be the result of much work, there is evidence to suggest that an experienced knapper could turn out a similar piece in less than half an hour (J Downes, pers comm). This is not to say that everyone was an experienced knapper, a factor which may have resulted in the circulation of such pieces being controlled by those capable of their production. However, the 'worth' or 'value' of such artefacts may equally have had as much to do with what they symbolised as with what they were – the arrowhead is representative of a powerful weapon which could be utilized both in hunting and in war, both activities heavily imbued with ideas of virility, prestige and power. Though it has been noted that Beaker burials are predominantly male (Edmonds & Thomas 1987), a general reading which moves away from a purely masculine association centres upon a more universal motif of power over life and death.

In straight comparison with barbed and tanged arrowheads recovered from other sites, the example from Stoneyburn, with its extensive surface flaking and deeply cut barbs, could be said to be a fine example of the type, but again this is a value judgement based upon a modern aesthetic which fails to take into account both function and symbolic meaning (cf Thomas 1991). The Stoneyburn example also bears a resemblance to some of those recovered from Carse Law during fieldwalking (Clark 1989), none of which appears to have originated from any form of ritual context.

The only stone artefact which can truly be described as a 'grave good', in the sense that it was purposefully deposited along with the dead during the funerary ritual, is the hammerstone (the only example found during the excavation) which was recovered from the cremation pit beneath cairn 003. The fact that a simple, unmodified stone of local origin was chosen for inclusion with the cremated human remains and accessory vessel, rather than a finely worked piece of flint, should be proof enough of the need to consider the symbolic meaning of such objects. This meaning may well transcend simple ownership and possession and prove to be even more difficult to interpret than symbols related to either status or gender. Here it may be feasible to consider the complex relationship between language and identity, an interaction which may even have involved the use of puns, with the same words used to describe objects also being identified with individuals, either as names or as personal attributes (cf. Samson 1992). Unfortunately these motives cannot be established archaeologically and the suggestion that they may have had a part to play in prehistoric funerary practice, for the present at least, achieves little more than to reiterate the highly complex nature of ritual deposition.

It can be suggested that the barbed and tanged arrowhead, due to the unique nature of its raw material, represents an artefact imported from elsewhere. The presence of flint and pitchstone in itself is enough to establish that some form of trade took place (Wickham-Jones 1986), though whether this involved the movement of raw material and/or finished artefacts is difficult to say; certainly the lack of cortex indicates that the primary treatment of nodules and pebbles is not well represented on the site. Despite the presence of obvious imports the assemblage does contain material of potentially local origin (ie chert), some of which has been worked with a high degree of skill (eg the leaf-shaped arrowheads). The lack of formal types elsewhere in the assemblage may therefore be taken as indicative of specific depositional processes rather than of any impoverishment of local technology.

The assemblage recovered from Cloburn quarry was slightly larger than that from Stoney-

burn and was dominated by chert but also contained flint, quartz and pitchstone (Pollard 1986). Here again the various contexts from which lithics were recovered had resulted from the redeposition of considerable amounts of material. The presence of lithics in both the topsoil which covered the Cloburn cairn, and in the stone matrix itself, may suggest that lithics were also carried to the monument after its construction, where activities such as manufacture, or at least repair, as well as use, took place. At Stoneyburn, too, lithics were recovered from the topsoil and from within the cairn matrix, though the latter may well have been introduced with the earth matrix (see below). Though it has been suggested that such evidence may indicate an 'ordered' dimension to this later activity (Edmonds 1987), it should perhaps make us think a little more about the function of sites which in the past have all too readily been viewed as 'sacred', 'taboo', and generally out of bounds to large elements of the groups which constructed them and lived nearby. It is more likely that they were very familiar places, serving not only as a focus for ritual or acting as territorial markers but also as meeting places where various activities not related to ritual would be carried out (cf Fraser 1983, 423). Though it is not suggested that they are immediately relevant to the interpretation of Stoneyburn, there are various ethnographic parallels for this cross-over between ritual and 'domestic' activity. One of these relates to the use of the 'god house' – the community's public, religious structure – as a place for flint knapping by Lacandone Indians in Mexico (Clark 1991).

The lithics recovered from the matrices of the cairns at Stoneyburn (contexts 002 & 003) appear to have been incorporated along with the soil matrix, having been removed with the soil from its original context. It is not necessary to envisage the importation of this material from elsewhere, though this should not be ruled out as a possibility. The construction of the cairns appears to have been preceded by a stripping of the surface soil in preparation for their construction, this same material then being redeposited within the cairn matrix. Any lithics present on that former surface will have been removed with the soil, perhaps unintentionally. However, intentional or not, the presence of flints within this material points to earlier activity, a historical dimension of which the cairn builders may well have been aware as they reworked this material into the construction.

It is unlikely that all of the material on the site was redeposited from earlier contexts. The largest number of lithics came from the undisturbed mineral soil (005) which lay under the peat and around the cairns. This portion of the assemblage (57 pieces) included the barbed and tanged arrowhead, several retouched pieces – including a snapped (possibly unfinished) chert biface and a large proportion of utilized flakes, many of them quite irregular. The distinct lack of cores and the varied nature of the material (ie very few pieces appear to originate from the same piece of raw material) strongly militates against much *in situ* knapping having taken place, though the removal of both cores and better quality pieces may have gone some way to create the present impression.

It is reasonable to envisage at least some of the assemblage recovered from 005 being utilized on the site in a variety of ways which may have included ritual activity, such as the preparation of food, as well as during the construction of the monument itself; a number of stake-holes have been recorded on the site, a presence which strongly suggests woodworking. It is impossible to establish whether or not all elements of the material recovered from this context were roughly contemporary; deposition may well have taken place over a considerable amount of time, both predating and post-dating the construction of the cairn. Only those pieces beneath the cairn can assuredly be assigned to the pre-construction phase (this proviso is based on the assumption that cairn material was never temporarily removed in order to enable the insertion of material beneath). It may be the case that material found within the matrix of the cairns was removed from this context during the process of topsoil stripping discussed above.

It is apparent that some of the material from other contexts (eg 007) predates the cairn to some considerable degree, and relates to activities taking place on the site prior to its construction. Such activity may even predate the initiation of ritual activity on the site, despite the fact that their final context appears to have had ritual connotations. The nature of any earlier activity will remain obscure, for the ritual activities evidenced by the removal of the old ground surface and the digging of pits will have removed any interpretable evidence. The presence of daub in pit 111 is itself representative of an earlier structure, though this need not necessarily have been on the same site – but in any case is suggestive of ritual activity related to the reworking of earlier material through redeposition.

There is a growing body of evidence to suggest that sepulchral and ritual monuments were constructed on the sites of earlier activity, including, the construction of a chambered tomb over a Mesolithic settlement at Hazelton North, Gloucestershire (Saville 1990); the construction of round barrows over Grooved Ware ‘houses’ at Trelystan, Powys (Britnell 1982); and the location of a chambered tomb over an earlier shell midden at Glecknabae, Bute (Cormack 1985). It should therefore come as no surprise that the material recovered from Stoneyburn should represent a long-lived history of activity.

Identifying the taphonomic processes responsible for the inclusion of lithic material in funerary and ritual contexts is undoubtedly problematic (Wickham-Jones 1983, 225). Ritual sites like Stoneyburn certainly represent complicated, and in many cases long-lived, processes of activity, which include various phases of construction and modification. Though there may well be a ritual element to much of the deposition of lithics apparent at Stoneyburn, they cannot simply be interpreted as ‘offerings’ or ‘grave goods’. It has been suggested that at least some of this material has been redeposited from elsewhere, along with quantities of earth and soil. Such a process may relate to ideas of memory and transformation, with components of earlier activities being incorporated within a monument which existed in the present but retained elements of the past.

STONEYBURN IN THE LANDSCAPE

Iain Banks

Morphologically, the cairns at Stoneyburn Farm would seem to be a part of the local landscape of cairns. On the other side of the valley, on Lodge Hill, is a turf-covered mound of similar dimensions to the largest mound at Stoneyburn (RCAHMS 1978, no 79); a smaller example, closer in size to the other two, at 280 m OD on Fall Hill to the north (RCAHMS 1978, no 55) and excavated in 1967, contained possible burial pits but had been disturbed (Maxwell 1974, 5). Farther up the Midlock Water, two cairns are located on the flanks of Mossy Dod at Normangill Rig. Normangill Rig I, roughly 26 m across and largely destroyed in 1855, produced an inhumation (RCAHMS 1978, no 95, 63). Normangill Rig II has been heavily robbed (RCAHMS 1978, no 96, 63) but exists as a low mound about 8 m with traces of an annular ditch and a possible external bank. Closest to the Stoneyburn site both spatially and morphologically is the group of three small cairns at Ellershie Burn (NS 956191) at 285 m OD (Ward 1992, 164). Like the Stoneyburn examples some 670 m to the north-east, this group consists of two small cairns (4.5 m and 3.7 m in diameter) with one larger example (10 m in diameter).

Several of these cairns in Upper Clydesdale have been excavated, although few were properly recorded. The stimulus to this activity has generally been construction: of roads in the latter part of the 18th century and of the Caledonian Railway in the mid-19th century. Normangill Rig I has already been mentioned above, an inhumation being uncovered in 1855, but there are a

number of other examples. In the late 18th century, an urn with cremated bone was uncovered at Castle Crawford Farm (RCAHMS 1978, no 129), while c 1770, at an unrecorded point near Wandel (RCAHMS 1978, no 166), several urns were uncovered in the course of road-building (NSA vi, 818). A cairn at Raggengill Burn (RCAHMS 1978, no 98), destroyed in 1855 (Name Book, no 41, 65), stood at 230 m OD and had a diameter of 18 m and a height of 1.5 m. No finds were recorded. A cairn near Crawford, possibly within Castle Hill fort, was excavated in 1850 (RCAHMS 1978, no 35), revealing two cists with a Beaker and a bronze armlet (Anderson 1883, 451–2). During the construction of the Caledonian Railway, a cluster of four cairns was destroyed at Cauldchapel Farm (RCAHMS 1978, no 31). The first contained several human bones; the second covered two cists with possible body stains; the third had no finds recorded and thus may not have been sepulchral; the fourth covered several urns containing cremations and an accessory vessel (NSA vi, 817; Irving & Murray 1864, 11). Consequently, the small cairns are normally associated today with funerary remains.

Precise parallels for the Stoneyburn cairns are hard to find in south-west Scotland. However, there are some similarities within the general area of Stoneyburn and with other sites elsewhere in Scotland. The currently unpublished site of Cloburn, Lanarkshire, consisting of a much larger cairn covering various deposits, had been scooped out and then backfilled (T Pollard, pers comm). The cairn on Fagyad Hill (RCAHMS 1978, no 51) revealed a single pit containing burnt material but lacking any indication of bone and a collection of around 20 pieces of chert (CFA 1992, 68).

A few miles to the south-west of Stoneyburn, the presumed Bronze-Age site of Falls Kneesend (NS 98001615) consisted of several small cairns with other features which may have been houses (Downes 1992). Several of the cairns also had the area below the cairns scooped out and then backfilled before the construction of the cairn; furthermore, at this site, several cairns had no evidence of burials.

The East Marcus cairn in Finavon, Angus, resembled cairn 002 at Stoneyburn. Consisting of a stone mound with rough kerb and a slight centre-hollowing (Sherriff 1983), the cairn itself covered what was described as a layer of brown earth with pottery scattered on the surface of the deposit and bone and charcoal mixed throughout. This material seems to have been imported to the site, and, more significantly, this material lay directly on the subsoil, suggesting that the site had been cleared prior to the effort of construction.

The excavations at Boghead, near Fochabers (Burl 1984), provide several similarities to Stoneyburn. This site also originated in the early Neolithic with pottery of the carinated bowl tradition; it was reused by people depositing Beakers; it was the focus for later burials drawn by the presence of the cairn, although in this case the later burials probably date to the Iron Age. A further similarity can be discerned in the presence of pits akin to pit 059/135 and a large post which may once have marked the site, interpreted as predating the Beaker material (Burl 1984, 55).

There is nothing in the recovered evidence to suggest a need to look beyond Clydesdale for the community responsible for Stoneyburn. The pottery can be seen entirely in a local context; the accessory vessel in particular has very close analogies within a radius of about ten miles; the chert derives from the local area. Only the faience beads and the flint suggest that the community which buried its dead at Stoneyburn was not isolated; rather, they were within an exchange network that linked them with the coasts.

There are difficulties in discussing the site in its local context; the Royal Commission *Inventory* for Lanarkshire could cite only four examples of Neolithic monuments: the long cairns at Burngrange (NT 030495) and at Greens Moor (NT 022495), and the two henges at Normangill (NS 972221) and at Weston (NT 030457). Of these, only the Normangill henge is anywhere near

Stoneyburn. However, the Commissioners did point out that '[taking] all the evidence into account, including the radiocarbon date of about 3000 BC from Chatton Sandyford, Northumberland, a date within the Neolithic period seems likely for the initial phase of these groups of small cairns in Lanarkshire. Quite apart from their numbers, there is some reason for believing that the construction of such small cairns may have continued for a considerable period of time' (RCAHMS 1978, 10).

Since the *Inventory* for Lanarkshire was published, the site of Biggar Common (NT 002338) to the north has been excavated (Sheridan 1989; Ward 1989; Johnston 1990; Johnston 1991; Ward 1992b), and there are traces of settlement evidence at Wellbrae (NS 97114010) from the late Neolithic (CFA 1991) but settlement evidence for the early Neolithic period is still sadly absent from Upper Clydesdale. Thus, the evidence for the societal context of Stoneyburn is unfortunately very sparse. At the start of the concurrent excavations of Stoneyburn and Lintshie Gutter (Terry this volume), it had been considered most likely that the community responsible for the cairns at Stoneyburn would have been from Lintshie Gutter, or at least be contemporaries of theirs. However, there is no overlap in the artefactual material, while only one of the Lintshie Gutter radiocarbon dates is as early as the latest Stoneyburn date. The implication is that there was not a connection between the two sites.

One of the most striking aspects of Stoneyburn is that the material relating to cairn 002 covers a period ranging from the early Neolithic, to the Beaker period at the end of the Neolithic and start of the Bronze Age. This means that there was a long period of time in which the importance of the knoll seems to have remained in the awareness of the local communities. This is despite the lack of unequivocal evidence for activity on the knoll during this period, and some explanation must be made as to how this awareness was maintained in the absence of an obvious marker such as a cairn. It is suggested that there may have been a low earthen mound covering the 007 complex before the construction of the cairn. The construction of the cairn must relate to a decision to create a more substantial and permanent marker of the area.

There was no indication of burnt material in the pits below cairn 002, nor was there a layer of blackened soil and charcoal below the cairn; the presumption is that the pits do not indicate a mortuary structure. The lack of inhumations within the 007 complex is also a strong argument against the suggestion.

This lack of evidence for a burnt mortuary structure is matched by the absence of the funeral pyres on which the Bronze-Age bodies were cremated. These fires must have been elsewhere in the landscape, and it can be seen that the archaeological remains at Stoneyburn essentially form just a fragment of the original whole. At Boghead, Fochabers, there was reasonable evidence of a pyre on the western side of the mound (Burl 1984, 47; *op cit*, 54). The black layer under the cairn at Boghead consisted of a layer of blackened sand and charcoal containing numerous sherds of pottery, flakes of flint and fragmentary traces of cremated bone. This deposit has been considered representative of the raked-out remains of a pyre at various sites from Fochabers and Easterton of Roseisle (Walker 1968) in Scotland, to Lyles Hill (Evans 1953) and Carnanbane (Evans 1939) in Northern Ireland. Such evidence is absent at Stoneyburn. There is a burnt sherd of carinated bowl in the matrix of 003, a burnt flint flake in the soil of cairn 002 and there are fragmentary traces of cremated bone in the matrix of cairn 002 and the fill 010 of pit 019; there is no pyre and no obvious human remains. This evidence thus represents only a small part of the events which created it. The later burials from the Early Bronze Age, those in cremation pits 016 and 028/029, appear to contain some of the pyre material in the crematory deposit; however, there is no sign of a layer of pyre rakings, nor the abraded artefactual material from such layers on other sites, nor is there evidence of the pyre. Even in the Early Bronze Age, the cremations which ended up at Stoneyburn were the final part of a process begun elsewhere.

The primary importance of the deposits under cairn 002 is that none of the pits relating to the 007 complex shows any evidence consistent with the primary activities of burial. There are no human remains and no grave goods present. The bone from pit 019 is extremely fragmentary and cannot be considered a burial. However, the site cannot be explained as domestic despite the presence of daub in pit 111. There is nothing in the excavated evidence which would suggest specific domestic activity, such as the disposal of rubbish. This leaves a problem in explaining the creation of these deposits: the deliberate burial of artefacts divorced from a human context in an area of specialised activity. This form of archaeological evidence can only be explained by argument from analogy, and the explanation will only have the force of persuasion.

Activities which produce similar physical remains can be found in funerary ritual in modern Bali (J Downes, pers comm). In the cremation ritual currently practised, the body is burnt on a pyre and the fragments of bone collected by the women and children. The fragments are then washed in bowls of water and taken away for burial. The bowls are smashed, the fragments collected and then removed to a burial area where they are interred in pits. This area is separate from the cemetery and represents the disposal of secondary material from the funeral process, which material has, through its involvement in the funerary process, taken on a ritual existence beyond its original domestic manufacture.

In terms of the material at Stoneyburn, it is not argued that the modern-day rituals of Bali can be exported to the early Neolithic of south-west Scotland; however, the processes recorded indicate the way that materials only tangentially involved in the funeral take on a ritual importance which causes them to enter the archaeological record in a particular way divorced from the obvious signs of burial such as human remains; the site can then be seen as a cemetery for artefacts. In such a way, the use of the knoll as part of a funerary process which ranged across various different elements of the landscape could create an awareness of the importance of the site in such processes across a substantial period of time.

Another analogy which can be made comes from Christian ritual of the past two millennia. In the course of taking Scottish kings for burial in the royal cemetery on Iona in the medieval period, the funeral party would stop at particular locations along the route for small meals and prayers. The relationship to the site of Stoneyburn would thus be the use of the knoll as a point in the landscape along the route of the funeral procession, with the deposition of the pottery as an integral part of that procession. In such an explanation, the pottery may have been either symbolically or actually the possessions of the deceased, the burial of these objects being an integral part of the journey of the personality involved. The knoll then takes on the aspect of an object-cemetery.

The Beaker material is similarly divorced from obvious funerary material. The burial of this pottery may have been to associate the depositors with the activities presumed by them to have occurred within the 007 complex, the continuation of an assumed tradition of which they can have had no knowledge. This demonstrates that 'tradition' is not static before that process of fossilization which is writing; rather, traditions can be evolved very rapidly to fit the current understanding of life and the landscape.

The construction of the cairn 002, a form which is normally associated with burial deposits, suggests more strongly some relationship to the funerary process. By this later stage, the perception of the 'tradition' surrounding the knoll had probably changed from an object-cemetery to a human cemetery. The construction of the mound prevented further additions of material to the 007 complex, and the temptation is to explain this as a particular group or section of society seizing control of a symbol of ritual importance; alternatively, it could be argued that it was a process of safely sealing an area of dangerous supernatural power. Certainly, the construction of

the cairn must have provided an occasion in which the accepted structures of society could have been expressed to a wide community.

The interest of the site of Stoneyburn lies largely in the fact that surface archaeological remains of little apparent complexity cover a long chronological sequence of complex activities. It demonstrates the validity of viewing the conceptual existence of such sites as longer-lasting than the original events which caused the physical traces in the ground, a concept which would inevitably have changed and developed over generations as the individuals expressing these concepts, and the reasons for that expression, altered according to circumstance. The process behind the activities in the 007 complex during the early Neolithic phase, the burying of objects rather than people, seems to have survived into the Beaker period, but the underlying concept may have changed substantially. The landscape must have been codified symbolically in a mental map, as a part of oral tradition unless there were some durable, physical expression of the knoll's importance and function. Furthermore, it is possible to argue that the physical remains were a part of a greater process, much of which is either preserved elsewhere, has vanished or left no physical traces, and which tie the site into the landscape as a whole.

In their discussion of this function and nature of small cairns in the *Inventory* for Lanarkshire, the Royal Commission inclined towards the funerary explanation for a number of reasons: the inclusion of considerable amounts of earth in the matrix of the cairns; the presence of other remains 'of a funerary or ritual nature ... within the clusters of small cairns' (RCAHMS 1978, 10), such as long cairns; the proximity to various clusters of land unsuitable for cultivation much better suited to the disposal of clearance material. The opinion of the Royal Commission was that '... the majority of cairns ... would, if found in isolation elsewhere, be unhesitatingly regarded as sepulchral monuments' (RCAHMS 1978, 9). The first element in the Royal Commission's list is certainly true of Stoneyburn; the cairns were not field clearance and contained substantial amounts of highly organic soil, supporting the assertion that this construction denies a purely mundane motive for building the cairns.

The opposing view is summarized in the discussion of small cairns in south-west Scotland by Michael Yates, who argued that the majority, being roughly built and in close association with lynchets, were most likely to be agricultural in origin (1984, 219); he also argued that high phosphate levels under small cairns were as likely to derive from sheep burials as from human. It is indeed impossible to source the precise origin of phosphates from burials. However, Yates' assertion that burials are found under the larger, better-constructed cairns is undermined by the fact that at Stoneyburn the burials were under the smaller cairns, of around 3 m diameter. Again, although Yates noted that few excavations of small cairns have shown evidence of burials, the results of Stoneyburn demonstrate the fact that obvious traces of burial will not necessarily be found below cairns.

Perhaps it is a mistake to attempt to define function too rigidly. The duration of activity at Stoneyburn was extremely long, lasting from the early Neolithic into the Early Bronze Age. Cairns of the size and shape of the Stoneyburn group are quite common in Lanarkshire as a whole and they frequently occur in large groups, the largest example being at Easton-Medwin Water (RCAHMS 1978, no 46) where over 400 cairns are spread across the hillslopes. The size of these small cairns generally fall within the range of 2.4 m to 3.8 m diameter and 0.2 m to 1.2 m in height but also include examples up to 9.1 m in diameter (RCAHMS 1978, 8). Without excavation, it is impossible to guess the period of time over which the 400 cairns at Easton-Medwin Water accumulated. It is certainly possible that such large clusters of cairns contain examples of both funerary monuments and of field clearance heaps. Later communities may well have added clearance heaps to an area where cairns already stood, this ground already having been removed

from agricultural production. Equally, burial cairns may have been constructed in areas of existing field clearance heaps, the mourners possibly believing that these older remains were also funerary. Accordingly, it is necessary to perceive sites such as Stoneyburn as a part of a whole landscape with time-depth rather than consider such sites as removed from the cultural landscape and locked away in a ritual landscape.

The opportunity to excavate a small cairn group in Clydesdale has been a welcome side-effect of the construction of the new motorway. Few of these small cairns have been excavated in recent years, and many remain untouched. The results of the excavation underline the importance of excavating apparently unimpressive sites. The cairns show a long sequence of use within the landscape from the early Neolithic onwards, a date not to be expected on the basis of previous excavations. Furthermore, the nature of the preserved remains has allowed the material to be viewed in a wider context than the purely funerary. The lack of obvious burials in the early phases forces consideration in terms of an integral part of a cultural landscape, which the community used for different reasons at different times. It appears to have been a part of ritual activities which covered the landscape, forming only one stage in a larger process. This holds true both for the Neolithic remains and for the Bronze Age material. It was also part of the physical landscape, and the presence of the remains drew successive populations to the knoll. Stoneyburn thus underlines the difficulties inherent in any attempt to divorce ritual or symbolic actions from the pragmatic.

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