

# EXCAVATION OF A PREHISTORIC CLEARANCE CAIRN AND RITUAL PITS ON SIR WILLIAM HILL, EYAM MOOR, DERBYSHIRE, 2000

By ARTHUR WILSON

and JOHN BARNATT

(Archaeology Service, Peak District National Park Authority, Aldern House, Baslow  
Road, Bakewell, Derbyshire DE45 1AE)

With contributions from

PAULINE BESWICK ( )

and

ROWENA GALE ( )

## SUMMARY

*The excavation of a small cairn at the top end of a cairnfield on Sir William Hill, high on gritstone moorland above Eyam, has found evidence for early agricultural clearance of Neolithic or very early Bronze Age date. The cairn was subsequently enlarged over three pits with clear evidence for ritual deposition. These contained placed stones including a saddle quern, sherds from four Beakers including comb-decorated and rusticated forms, flint scrapers, and a token deposit of calcined bone. Associated charcoal gave two radiocarbon dates centred around 2050 BC. A number of scrapers were also placed at the cairn as the enlargement was built or subsequently. These findings confirm agricultural use of the gritstone uplands at an early date and provide insights into associated ritual practices.*

## INTRODUCTION

### The Cairn Excavation

In the late 1990s a small cairn on Sir William Hill, at SK 2176 7828, built at the upper end of a cairnfield, started suffering badly from erosion due to a footpath crossing its western half. Thus it was fully excavated in July-August 2000 by members of *Arteamus* under the direction of the authors. The cairn lies on high land at about 405m OD, on an east-facing slope overlooking extensive lower areas of Eyam Moor which contain large later prehistoric cairnfields, together with stone circles and barrows (Fig. 1). Eyam Moor is part of the largest gritstone outlier west of the River Derwent and is similar in character and the survival of prehistoric sites to the East Moors on the other side of the river.

Immediately before excavation, the eastern half of the cairn, which appeared to be about 2m across and a little under 0.5m high, was heather-covered and had a few stones visible at its crest and side, protruding through a thin cover of peaty soil immediately below the vegetation. To the west footpath erosion, including a rainwater gully, had removed the peaty soil, and parts of the mineral soil beneath, the deepest damage lying

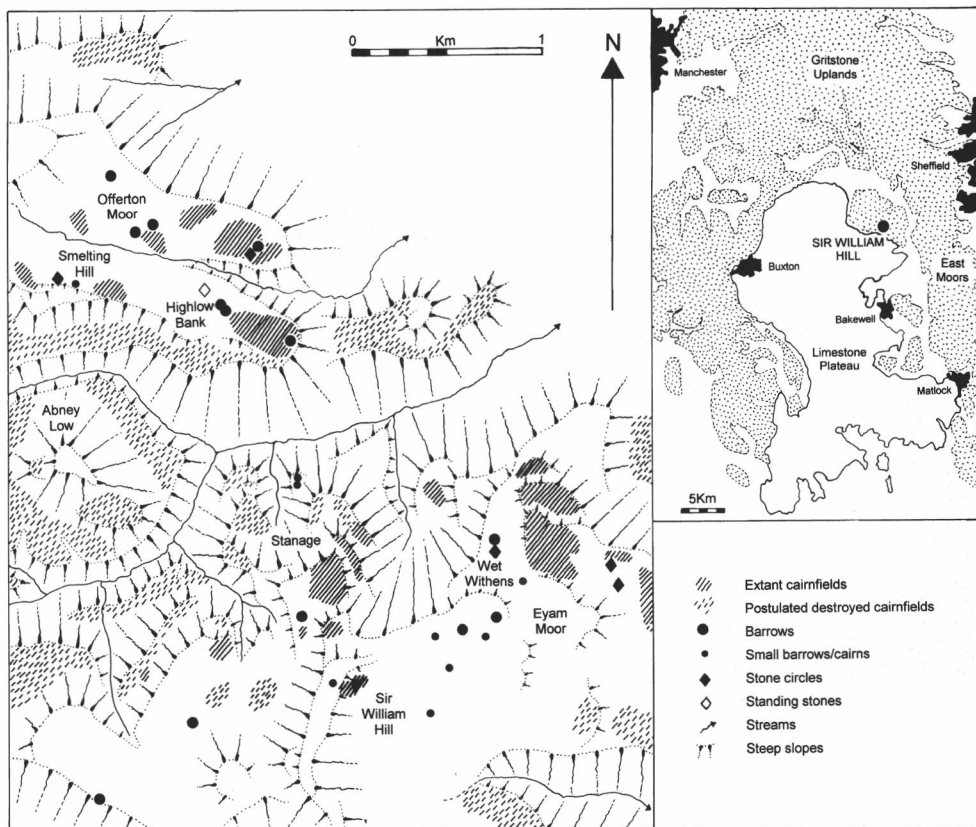


Fig. 1: Eyam Moor and environs, showing the distribution of later prehistoric cairnfields and monuments.

immediately to the side of the cairn. Stones of the cairn were exposed and a few had started to be displaced (Plate 1; Fig. 4).

The excavations were undertaken both to rescue any information that would be lost with anticipated severe long term erosion at the site and to further research into later prehistoric remains on the East Moors generally. No small cairn at such a high altitude has previously been excavated. Previously it had been postulated that this cairn was one of several found in relative isolation above later prehistoric fields and cairnfields which may be funerary in character or the result of short-term episodes of cultivation (Barnatt 1998b; 1999; 2000). Further it has been argued that the fields and cairnfields on the East Moors were used over an extended period in the second and first millennia BC (Barnatt 1995a; 1999; 2000); this has been supported by recent excavations and pollen analyses that have confirmed Later Bronze Age and Iron Age activity at some of the larger suites of remains (Barnatt 1994; 2001; Barnatt, Bevan and Edmonds 1995–2000; 2002; Long 1994; Long *et al.* 1998). These areas also have Early Bronze Age monuments found in close proximity; however, there is still uncertainty about the character of the early farming that went with the monuments. Were field layouts that we can still trace today similar in character over 2000 years, or did earlier phases of activity include significantly



Plate 1: The Sir William Hill cairn prior to excavation, looking south and showing the footpath damage which led to excavation.

different forms of agriculture? The Sir William Hill excavation gave an opportunity to explore these uncertainties further, at a cairn suspected to have an early date.

### **The Excavation in Context — Past Research on the East Moors**

The small cairnfield below the excavated cairn is one of many that survive on the East Moors. This exceptional survival has encouraged much research over recent years, including several overviews (Ainsworth 2001; Barnatt 1987; 1995a; 1996a; 1999; 2000; Bradley and Hart 1983; Edmonds and Seaborne 2001; Hart 1981; Hawke-Smith 1979; Kitchen 2000). This is complemented by reviews of earlier Bronze Age monuments on the East Moors (Barnatt 1990; 1996b; 1996c; 1996d; 1999).

Leslie Butcher was the first to carry out detailed surveys of the extensive fields and cairnfields on the East Moors, carried out in the mid 1900s (Hart 1981; Beswick and Merrills 1983). Subsequently, there has been extensive work, including overall preliminary recording (Barnatt 1986) and metrical surveys of specific sites (Ainsworth 2001; Ainsworth and Barnatt 1998; Barnatt 1991; 2000; Everson 1989; RCHME and PPJPB 1993).

Of the 2000 or so small prehistoric cairns located upon the East Moors a relatively small number has been the subject of careful excavation using modern techniques. Thus, the excavation at Sir William Hill offered a valuable opportunity to gain further insight into the function of these features. From the 1920s onwards Heathcote dug a large number of small cairns and other monuments upon Stanton Moor (Heathcote 1930; 1936; 1939a; 1939b; 1954). The majority (but not all) of the small cairns appear to have

had crude kerbs and contained evidence for cremation burial, sometimes associated with urns and a variety of other earlier Bronze Age artefacts. The excavations here stand in strong contrast with over 20 small cairns investigated by an extensive programme of excavations recently concluded above Gardom's Edge (Barnatt, Bevan and Edmonds 1995–2000; 2002). Here, the majority appear to be clearance features associated with later prehistoric agriculture. However, in one case a small cairn was carefully constructed over an empty pit that may have contained a burial or other ritual deposit which had not survived due to the acid soils. The cairn was later enlarged and defined by a contiguous kerb of small placed boulders. A second cairn also had a kerb, with a deposit of smashed pottery outside this on the downslope side where the kerb was highest.

Further small cairns have been excavated elsewhere on the East Moors. These include two cairns on Ramsley Moor where no funerary remains were found, although both had possible crude kerbs; one covered an empty shallow scoop and the other overlay a Group VI polished axe and a small concentration of charcoal (Henderson 1963; 1979). A complex series of abutted small features at the nearby cairnfield at Eaglestone Flat have also been excavated (Barnatt 1994), including several small cairns, some covering cremations. These were associated with other unmarked cremations in pits, several with urns and other artefacts, cremation pyre debris, and small flat-topped platforms, stone banks and linear clearance. A cairn with another small abutting flat-topped platform was excavated at Highlow Bank but no identifiable burials were found (Barnatt 1991). It is against this diverse background of funerary and other ritual contexts, with other cairns simply interpreted as clearance heaps, that the Sir William Hill cairn is to be placed.

The excavations of small cairns on the East Moors are complemented by those at settlements and fields. These include those at the Swine Sty settlement within the extensive fields on Big Moor (Richardson and Preston 1969; Machin 1971; Machin and Beswick 1975; Hart 1981; Garton and Beswick in prep.), small excavations at field boundaries on the shelf above (Barnatt 2001), and further recent excavations here by Ann-Marie Heath as part of doctoral research. Extensive excavations between 1995 and 2000 on Gardom's Edge sampled a variety of settlement and field boundary features as well as the small cairns noted above.

### **The Excavation in Context — The Prehistoric Remains on the East Moors**

The interpretation of the extensive later prehistoric remains on the East Moors in general have recently been reviewed in some detail (Barnatt 1999; 2000) and only a brief overview is presented here to place Sir William Hill in context. There are over 70 prehistoric cairnfields and associated agricultural features documented on the East Moors. A previous estimate of this being only a 10 percent survival rate (Barnatt 1987), based on the areas of the East Moors that are overlain by later enclosure, may be significantly understated; when areas of land that are suitable in terms of soil type and altitude are considered (Barnatt 1999, 23) this may be nearer 40 or 50 percent. Even allowing for destruction of visible evidence for farming within prehistoric fields, the majority of land was not used for sustained agriculture but is likely to have been open grazing between each of the focal areas used by the family groups farming the East Moors.

The cairnfields are sited specifically on areas of ground where the geology is gritstone or sandstone and the soils were once light if stony, acid brown earths before the onset of podsolisation and peaty-soil formation. Adjacent parts of the shelves and higher moors



have shale bedrock and where there are clay soils which were avoided. In all parts of the East Moors, the locally most-advantageous parts of the land, in terms of soil and altitude, were exploited for agriculture in a sustained way through the second and first millennia BC, while some less-favoured sites have further evidence for smaller-scale activity.

In some locations, as at Dennis Knoll, Callow, Stoke Flat, Big Moor, Gardom's Edge, Gibbet Moor and Beeley Warren, the remains are extensive and have a wide range of features. Clearance cairns are common, created when preparing stony ground prior to or during cultivation and also possibly to improve the quality of pastures. There is also extensive evidence for the presence of field boundaries, probably hedges and fences, used to define fields. These are now visible as linear piles of stone clearance which followed their edges and as low earthen banks that probably result from small-scale soil loss in the adjacent fields. These fields were probably used only occasionally for arable, while much of the time they may have been used for stock and perhaps producing hay. Scattered amongst the fields there is evidence for small yards and house sites, where circular timber dwellings and perhaps outbuildings once stood. Their number and distribution suggests the people who exploited these areas lived in individual farmsteads rather than more nucleated patterns of residence. Whether these were occupied year-round or seasonally is still a matter of debate. Associated with the majority of these farming locations there are ritual monuments, with stone circles and barrows within or at the edges of the fields, and further barrows in the open pastures beyond, often sited near watersheds in a way that strongly suggests that individual farming families claimed tenure over specific pastures. However, undoubtedly these families also had ties with a broader social world and the economic exploitation may have been strongly entwined with that in surrounding areas of the Derwent Valley, the limestone plateau at the heart of the Peak and the Coal Measure foothills to the east. While some of the details of social and agricultural use of the East Moors are as yet uncertain and may be irresolvable, what is clear is that the farming of these areas was sustained over a long period. While extensive areas had been abandoned by the early Roman period, this was probably only contraction to the most favoured areas of the East Moors. Here there is evidence for medieval and later settlement and enclosure and it may be that these areas have been farmed continuously for 4000 years. Similarly, the open land beyond has never been abandoned but has been used continuously up to today for rough grazing, thus preventing woodland regeneration.

Other extensive prehistoric cairnfields on the East Moors, as at Derwent Moor, Highlow Bank and Eyam Moor, have many cairns but poorer boundary definition. These tend to be at a somewhat higher altitude and it has been argued that exploitation here was shorter-lived or more episodic. These areas again commonly have associated ritual monuments.

There are a number of much smaller cairnfields, some having only a handful of cairns, as at Sir William Hill, and these represent the other end of the spectrum when compared with the well-developed 'sites' noted above. There are also a scattering of small isolated cairns in open pastures above the cairnfields; whether these are agricultural or ritual/burial structures is far from clear. The smaller cairnfields and some or all of the isolated cairns may well have been created and used for only short periods of time, either as short failed cultivation episodes, or on a very occasional basis. If they failed this may have been because the soils were poor in the first instance or that they were rapidly depleted

because the altitude and rainfall levels were relatively high, which would have affected the growing potential and fragility of the soils. Potentially these sites could have been created at any time during the second or first millennia BC. However, it is suspected that some at least may be early, created when the potential of different areas was being investigated, at a time when long-term patterns of agricultural use had not been fully established. Whether there were ever associated houses here is not known. Such sites have never been investigated in detail to test these suggestions; the excavation at Sir William Hill is the first to take place.

### **The Excavation in Context — Eyam Moor and Environs**

The main gritstone outlier west of the Derwent, where the Sir William Hill cairn is located, comprises three blocks of moorland, deeply divided at the centre by Highlow Brook, Abney Clough and Bretton Clough. Here the present village and fields of Abney occupy the more sheltered shelves to either side, centred on Abney Low; this area may well have been a focal point for prehistoric settlement but surface evidence for this has been removed. All sides of the gritstone outlier are strongly defined by steep slopes, dropping to the Derwent to north and east, and to the limestone plateau below impressive scarps to west and south. Moorland areas to either side of the improved 'core' around Abney have many surviving prehistoric remains and include Eyam Moor to the south, and Highlow Bank, Offerton Moor and Smelting Hill to the north. To the north-west and west, Abney Moor is higher, mostly at 380–410m OD, and there are no cairnfields; the south-western corner is occupied by the Burr Tor 'hillfort', set apart from the settlements of the gritstone outlier, at a pivotal point between these and extensive areas of the limestone plateau which it overlooks (Hart 1981, 74–75).

Previous modern archaeological work on the main gritstone outlier has mainly comprised survey, including preliminary sketch planning of all cairnfields (Barnatt 1986), more-thorough sketch surveys of those on Offerton Moor (Barnatt 1989) and Eyam Moor (Barnatt 1995b; 2000) and metrical survey of that on Highlow Bank (Barnatt 1991). The last also included excavation of one of the cairns within the cairnfield. This work on the cairnfields has been complemented by detailed survey and assessment of the ritual monuments (Barnatt 1990; 1996b; 1996c; 1996d) and an unpublished survey of the Burr Tor 'hillfort' (Barnatt and Merrony 1990).

Eyam Moor, much of which is heather covered with well-established bracken, particularly on steeper slopes, has very extensive prehistoric remains, including cairnfields, stone circles and barrows (Fig. 1). The largest surviving cairnfield lies on the locally relatively low-lying (although still high at c. 300–350m OD) moorland at the north-eastern end of the Moor. Here the cairnfield is sited on a series of shelves descending northwards, above steep slopes to Highlow Brook to the north and Leam to the east. The Wet Withens stone circle and a nearby large mutilated barrow lie close to, but out of sight, on a shelf to the west. A short distance south-eastwards there are more fragmented cairnfield survivals, with two associated small stone circles nearby, both badly damaged; further features may have been destroyed within the adjacent plantation. There may also have been prehistoric fields and settlements on a now improved lower shelf below Leam.

Further west there is a second focal point for surviving cairnfields, centred on the Stanage ridge. Again there are remains on a series of small shelves descending

northwards, the largest of which also has a mutilated barrow with a displaced cupmarked block projecting from the disturbed centre. The lower shelves are improved and there may have been further prehistoric farming here.

The Sir William Hill cairnfield lies close to the southern end of these remains but is out of sight on land facing east rather than north. Whether it was used by the same farmers or another local community is not known.

Similar shelves lie to either side of those at Stanage. To the north-east there is a small area with cairns and probable house sites on a sheltered lower shelf. To the south-west, on shelves west of Sir William Hill, there is a small cairnfield near Jubilee Plantation with the nearby site of a barrow recorded by antiquarians; again other small areas nearby were suitable for prehistoric farming but these have now been improved. All these shelves, separated by streams from the main Stanage cairnfield, probably had farmsteads developed by other families of the local community.

On the northern part of the gritstone outlier, beyond Highlow Brook and Abney Clough, there are similar suites of remains, with cairnfields on moortop ridges to the east, but with higher moorland further west devoid of agricultural sites. These display similar repeated relationships between cairnfields and monuments (Barnatt 2000, 70–76).

There is a cluster of mutilated barrows midway between the two main cairnfield areas to the north, at the north-eastern end of Eyam Moor and on the Stanage ridge, sited at a similar distance to areas to the south and south-east which are now improved but which probably once had prehistoric fields. These barrows are set at some distance from these nearest cairnfields, sited on a high and visually isolated part of Eyam Moor at 350–375m OD. This appears to be upland pasture purposefully set aside from the fields and settlements, in a hidden landscape where representatives of several local communities were buried, who through time would have been regarded as ‘ancestors’ (Barnatt 1998a; 2000, 70–76). While animals were presumably grazed here, it appears a decision was made and maintained over the generations not to establish fields in this zone; that agricultural ‘development’ would have probably been feasible is demonstrated by the Sir William Hill cairnfield on even higher land to the west at 390–405m OD.

### **The Excavation in Context — The Sir William Hill Cairnfield**

The excavated cairn within heather moorland on the east facing slope of Sir William Hill, lies at the upper end of a small cairnfield comprising 11–16 small cairns, some with small robber pits within them, and tentative evidence suggests the possibility of the sites of 1–2 houses (Fig. 2). A preliminary sketch survey was undertaken when this cairnfield was first discovered in the early 1980s (Barnatt 1986, 70–71). However, further features were subsequently discovered, including the cairn excavated in 2000, hence a metrical survey at 1:500 was carried out in 2002, plotting all potentially prehistoric features in relation to topography, to place the excavated cairn in context. While the area has little surface stone today, it has been subject to extensive quarrying of a type known as dayworking, where surface boulders have been broken up for building stone and to make products such as lintels, gateposts and troughs. The survey plotted all small stone-removal pits; their distribution illustrates which areas in the vicinity are likely to have been unsuitable for prehistoric cultivation and which are relatively stone-free and thus potentially

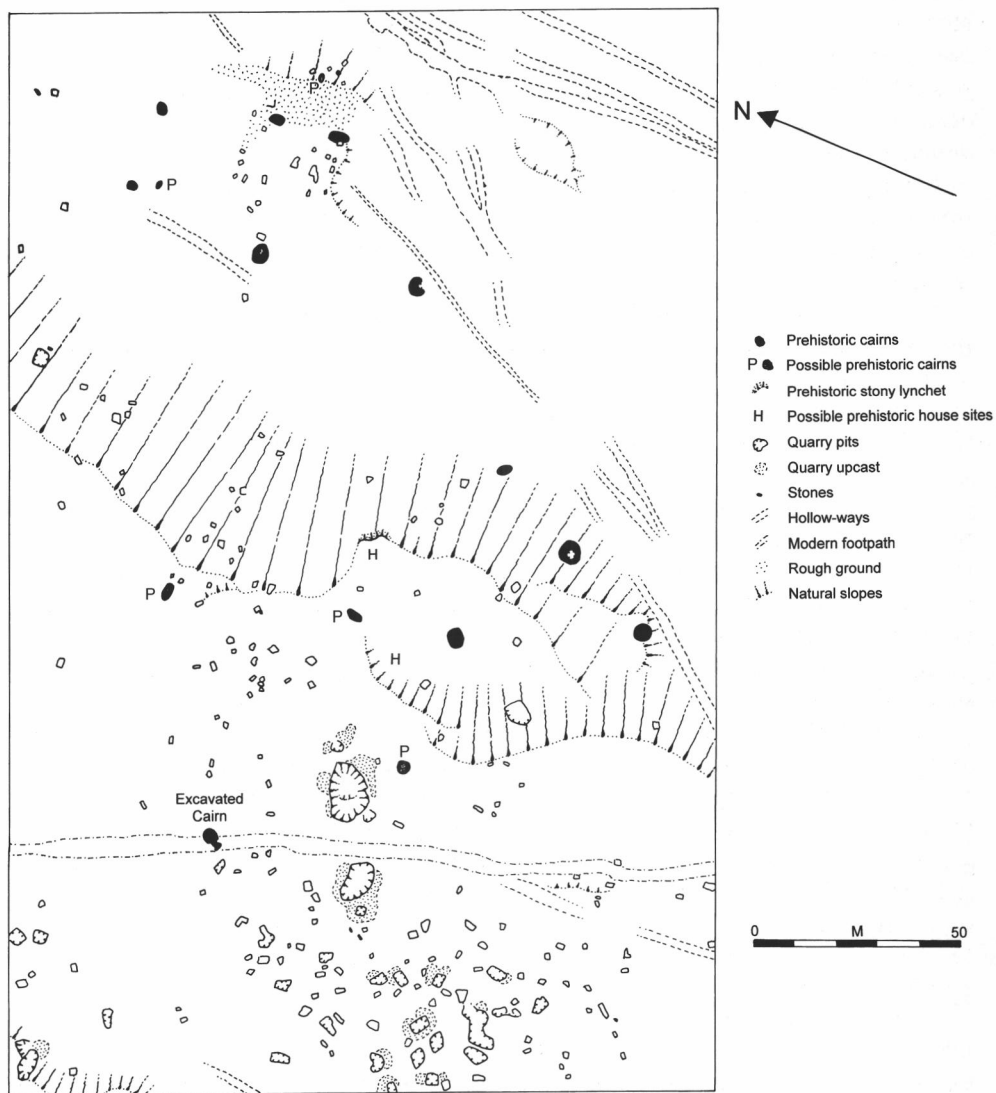


Fig. 2: The Sir William Hill cairnfield.

available for this. Evidence for medieval or later hollow-ways was also plotted to show potential areas where disturbance may have occurred.

The main concentration of cairns lies on relatively flat land below and in the lee of a steeper slope above. Here, to the north, there is a cluster of 6–8 cairns focused on a small stony area at the centre. To the west and south-west, immediately beyond the cairns, there are stone-free areas below the slope that may have been cultivated; a further cairn at the slope base to the south-west supports this suggestion. In contrast, there are no indications that cultivation continued further downslope to the east.

To the south-west there is a second cluster of 3–4 cairns centred on a small relatively stone-free shelf breaking the main slope. At its centre there is a relatively large cairn, with two more of a similar size at the southern end of the slope. To the north is a smaller possible heap, perhaps alternatively interpreted as a small cluster of naturally-placed earthfasts. At the north-east corner of the shelf there is a short flat-topped stony lynchet, which is either linear clearance at a 'field' or 'plot' edge or can be interpreted tentatively as the downslope edge of a platform which supported a circular timber building. In the north-west corner of the shelf there is a second flat area below a curving natural slope; this is a suitable sheltered site for a second circular building, but on the surface there is no positive support for this suggestion.

Above the shelf to the west and north-west there is further potential evidence for prehistoric cultivation. Immediately above the shelf to the west there is a stone-free area with a possible cairn at its northern end; however, this small cairn lies close to a relatively large quarry pit and it may be the product of clearing the surface stone in advance of work here. To the north-west, there is a larger stone-free area. At its edge to the east there is a short stretch of possible linear clearance, alternatively interpreted as a fortuitous natural arrangement of stones. Further west, on the south-eastern edge of the clear ground, is the one certain cairn. Before excavation it was unclear if this was a clearance feature or a small burial cairn. The excavations have demonstrated the strong likelihood that prehistoric cultivation did indeed take place here. However, the lack of further clearance features around the edge of this area suggests that cultivation was short-lived or occasional rather than sustained. They also showed the cairn was enlarged to cover pits used for ritual activity.

The Sir William Hill cairnfield, at about 390–405m OD, is at one of the highest known altitudes for such remains on the East Moors (Barnatt 1987, 404–07). This atypical location, perhaps mitigated to an extent by the shelter from the west by Sir William Hill, invites thoughts about the duration of farming here. When in the long sequence of known farming on the East Moors, which spans much or all of the second and first millennia BC was this cairnfield used? Was there a time, perhaps early in the sequence, where high sites were tried and subsequently abandoned because agricultural yields were low? But, was the prehistoric cultivation short-lived and perhaps a failure because of the altitude, or was it relatively successful? Did farming take place episodically rather than as a single event? Was any occupation seasonal, or did the people who cultivated here live elsewhere and only visit the site to tend cultivation plots? The opportunity for excavation of one of the cairns, presented by the ongoing damage, allowed a start to be made in addressing some of these questions.

### THE EXCAVATED CAIRN

The cairn lay wholly within an excavation trench measuring 8m by 7m. A baulk across the centre of the cairn allowed for section drawing and sampling; this was subsequently removed to check for features in the pre-cairn soils. Because the prehistoric soils beneath a thin peaty-soil were heavily podsolised, removal of the soils above and below an iron pan was executed in a series of relatively thin arbitrary spits. The three pits beneath the cairn were not half-sectioned because of their small size and the nature of the deposits; thus the sections illustrated here (Fig. 7) are schematic. Details of the artefacts, soils,

phosphate levels, environmental sampling, charcoal and radiocarbon dating are given in the Appendices. This section comprises a descriptive summary followed in the next section by general interpretation.

The cairn was built in two phases and all its stones, and a conjoined probable patch of clearance stone, are of local gritstone, the majority rounded and worn with a smaller number somewhat more angular in shape. The stones range in size from 50mm to 600mm across and their character would suggest that they were surface-collected or removed from topsoil during cultivation. The majority could be easily lifted by one person and even the largest could be rolled or lifted by one or two people. Beneath the cairn enlargement were three small pits with a series of placed stones, artefacts and other deposits which strongly indicated structured deposition.

The cairn was placed upon a prehistoric soil sealed beneath the thin peaty-soil. The lower soil, found across the full extent of the trench, was heavily podsolised and now comprises a light grey-brown sandy loam, above a thin iron pan, with a mottled dark-orange loamy sand shading to a lighter orange sand subsoil below. There was a strong contrast to east and west of the cairn (Plates 2, 3). To the east the prehistoric surface was highly uneven and the soils had a large number of stones. These included many in various states of decomposition; some had been reduced to discrete stone-shaped patches of coarse grit. This surface had never been cleared or cultivated. To the west the surface was much more even and there were far fewer stones, all undecomposed, but a few with degraded surfaces. This contrast suggests the western area had been cultivated in prehistory.

Within the soils there were small amounts of charcoal in three areas. These small concentrations were found in prehistoric soils under the cairn extension to the east (although the distinction between primary cairn and extension are blurred here — see below), a short distance away to the north above the lower stones of the cairn extension and well to the west of the cairn. All were of charred oak in contrast to that found in the pits under the cairn extension (see below). While they are undated, given that some of this charcoal was under the cairn extension and may perhaps be significantly earlier than this, two out of three of the charcoal spreads are possibly associated with initial clearance of this land for agriculture.

A small amount of flint debitage was found in the soils beyond the cairn; this is discussed below.

The excavation archive and finds will be placed in Eyam Museum and a copy of the archive is deposited in the Peak District National Park Archaeology Service archive.

### **The Stone Structures**

**The Primary Cairn** — At the centre of the stone heap there was a relatively discrete oval cairn of rounded gritstones, probably c. 2.2x1.8m across (but see below) and perhaps c. 0.25–0.30m high (Fig. 3). The interstices were filled with a light grey-brown sandy loam similar in character to that in the areas beyond the cairn.

The cairn had been placed on a prehistoric soil and there were no associated pits or other features beneath it. The casual build was consistent with it being a clearance heap associated with preparation of an adjacent surface for agricultural use. This interpretation is supported by the placing of the cairn next to the interface between cleared ground to the north-west and an uncleared surface to the south-east.



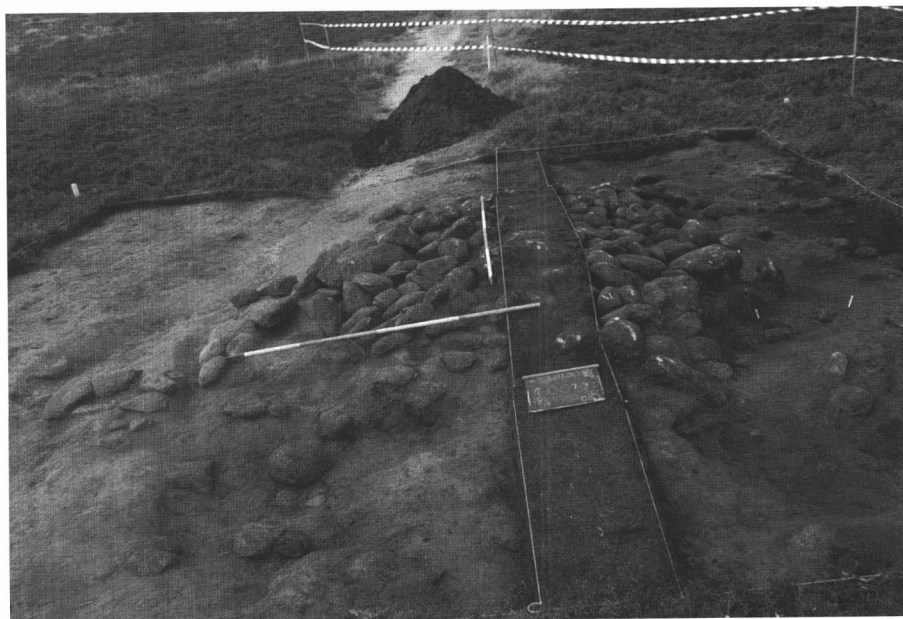


Plate 2: View across the Sir William Hill cairn looking north. Showing the cairn after the peaty-soil below the root mat had been removed, with cleared land and the clearance patch to the west (left) and uncleared land to the east (right).

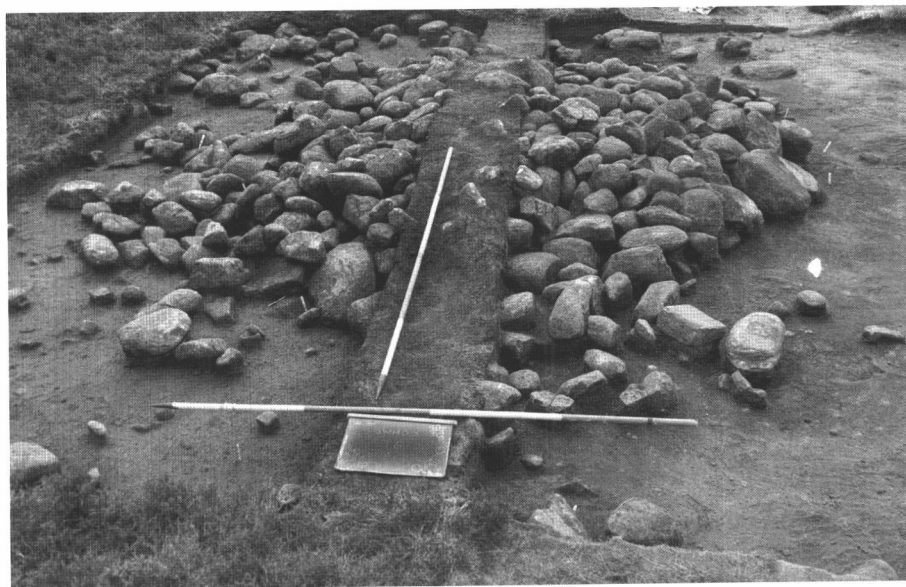


Plate 3: The Sir William Hill cairn, looking south, after the clearance patch and upper tumble had been removed, but with the lower tumble (foreground) and most of the naturally-placed stones (left and behind cairn) still in place.

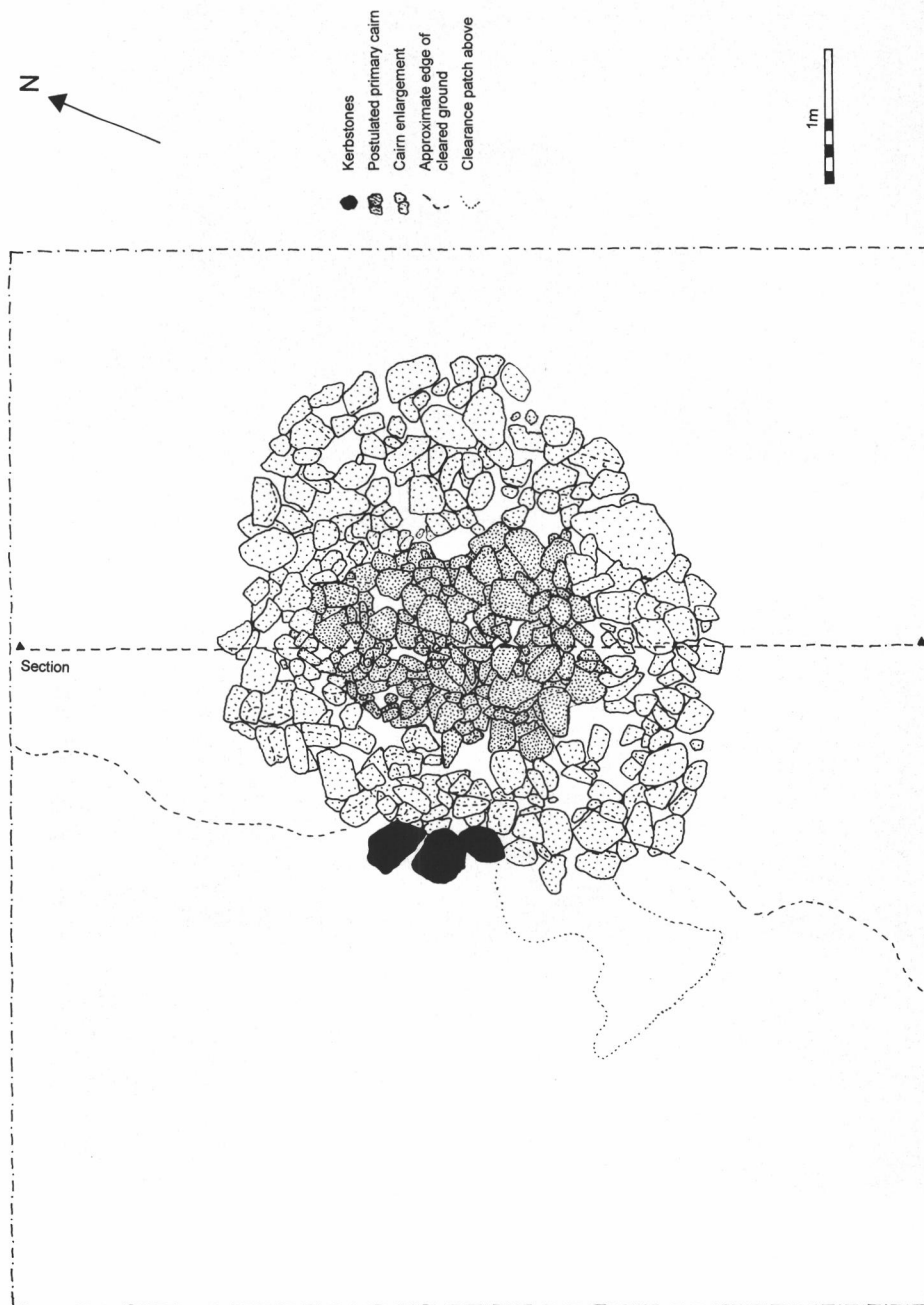


Fig. 3: Sir William Hill cairn: plan drawn with the upper parts of the cairn enlargement removed, showing the differences in build between the primary cairn and the cairn enlargement.



Plate 4: The Sir William Hill cairn, looking east, after removal of the tumble and the upper parts of the surrounding prehistoric soil with naturally-placed stones down to immediately below the iron pan.



Plate 5: The Sir William Hill cairn, looking east, after the upper half had been removed in the western half, showing the kerb, outer addition and gap between this and the primary cairn.

A small amount of flintwork was found in stratigraphic association with the primary cairn. This was found both in the soils associated with its basal stones and the soils immediately under it. It comprised just two flint flakes, a further undiagnostic piece of burnt flint and three tiny spalls, two of flint and one of chert. While it is possible some or all were residual, deposited well before the cairn was built, all are small pieces and may have filtered down through the stone after it and/or the cairn enlargement were created.

A whetstone, made of sandstone, was found below the lower stones of primary cairn at its north-western edge, at the interface with the soil below.

*The Cairn Enlargement and Kerb* — In its final form, with small amounts of tumble removed, the cairn measured 4.3x3.5m across and was 0.5m high (Plate 4; Figs 3, 4, 5). On the north-western side there was clear evidence that the primary cairn had been enlarged in a separate and distinct phase of building (Plate 5). In the lower half of the cairn there was a gap with fewer stones between the two builds up to 0.5m wide. The arc of stones beyond this was 0.4–0.7m wide and near the base comprised somewhat larger stones than above. To the west there was an arc of three somewhat larger stones forming a short stretch of kerb; elsewhere around this side the edge appears to have been defined by relatively carefully-placed stones. The three largest stones were slab-like and higher than the other stones at the cairn edge forming a focal point in the direction of the cleared land.

A separation in date between the two phases of cairn build was perhaps also suggested by a narrow lens of organically-enhanced soil visible in the balk section (Fig. 5). This may be a relic A horizon, formed by vegetation that developed over the earlier structure before the enlargement was made; alternatively and perhaps more probably the layer may be explained by the vagaries of the podsolisation process.

The south-eastern half of the cairn did not have clearly defined differences in build and identifying the junction between phasing is more tenuous; the only clue was the somewhat denser packing of stones at the centre. Similarly, the cairn appears to have been heightened when it was enlarged, but identifying a certain interface at the centre of the cairn proved impossible. Towards the south-east there was a particularly large stone on the prehistoric soil below the cairn rather than earthfast within it.

An alternative interpretation of this side of the cairn is that many of the stones are part of the primary cairn, with the cairn having fewer stones because of how the stones were added by being thrown from the north-west during the building process. If this is the case the primary cairn measures about 3.1x2.7m in diameter. However, on balance, it is felt that the south-east side was enlarged at the same time as that to the north-west. This is not only suggested by similarities in build between the two, but also the deposition here of two scrapers (see below).

The interstices of the cairn enlargement were again filled with light grey-brown sandy-loam but in the upper parts of the cairn there was a highly-leached, pale grey-brown, loamy-sand. In parts the cairn edges, particularly to the south-west and north-east, had been enveloped by the prehistoric soil.

A number of flints, including scrapers, a flint knife, a utilised flake and flint/chert debitage were found in association with the cairn enlargement; these are discussed below.

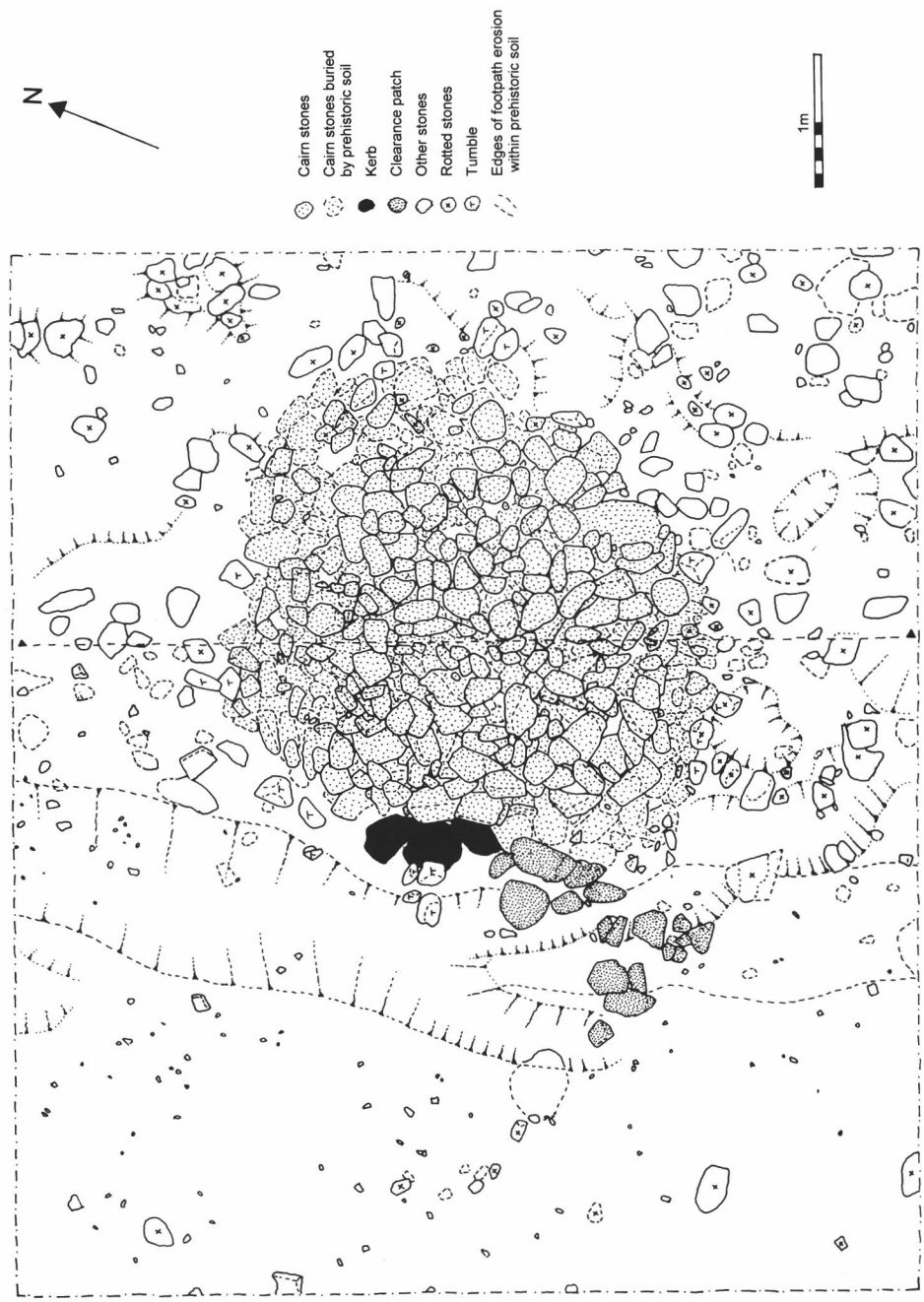


Fig. 4: Sir William Hill cairn: plan drawn after the peaty soil removed, showing the cairn, its buried edges (projected from lower plans) and the differences in land surface to either side.

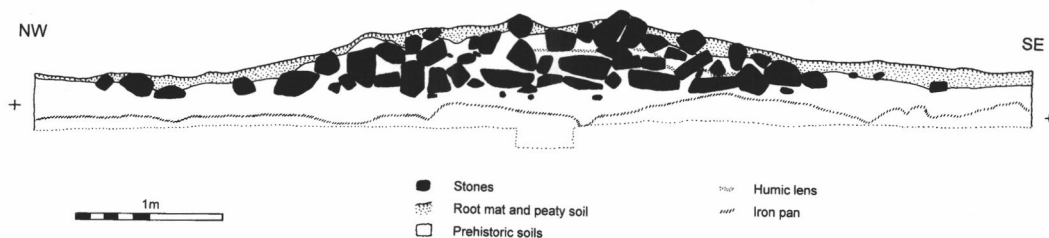


Fig. 5: Sir William Hill cairn: a north-west/south-east section.

**The Probable Clearance Patch** — Adjacent and slightly overlapping the cairn edge, high within the prehistoric mineral soils below the peaty-soil, was a small patch of stones (Plate 2). To one side these overlap the side of the main cairn and probably post-date (or perhaps are roughly contemporary with) the cairn enlargement. The stones seem casually placed but could not be easily explained as ancient tumble and appeared largely undisturbed by the footpath erosion above. They may well be clearance placed here during adjacent prehistoric agricultural activity.

### The Pits

When the cairn stones had been fully removed, three dark stains were noted in the pre-cairn soil underneath the second cairn phase which proved to be small pits (Fig. 6). The pits all contained carefully placed stones and artefacts. They also contained evidence of organic material in the form of small amounts of charcoal and in one case carefully placed fragments of calcined bone. As the soils here are acid, it is possible that other types of organic material had once been present but have now decomposed. It may well be that the pits were dug purposefully to place the deposits here; the possibility that they previously held posts of stones cannot be discounted but there is no positive support for this suggestion.

**Pit A** — This was located beneath the cairn enlargement a little south of west and was initially visible as a patch of dark soil within the upper pre-cairn soil. It had an amorphous oval outline, measuring approximately 460x430mm across and upon excavation, was found to be c. 200mm deep with sloping sides and a flat base (Fig. 7). The irregular shape and form of the pit may suggest that some re-cutting had taken place during the prehistoric period, or perhaps that a naturally placed stone had been removed from the pit side whilst it was being dug; the fill throughout showed no change. This was a dark-brown sandy-loam and differed dramatically from the surrounding orange pre-cairn soil/subsoil. Within the upper levels there was a flint thumbnail scraper (Fig. 8, no. 73), along with six sherds of Beaker pottery from at least two different vessels, one rusticated, the other with comb decoration (Fig. 9, nos 75, 76, 78); the pieces of each identified vessel (2 and 3 sherds), although non-joining, were found in close proximity to each other, all at the west end of the pit. There was also a significant quantity of small fragments of charcoal in the pit fill of oak, hazel and possibly alder. Part-way down the pit was a gritstone slab measuring approximately 130x120x30mm, resting on top of a similar stone placed at the pit base (Plate 6). Carefully placed between the two stones was a well-made thumbnail scraper made of a dark grey-brown translucent, slightly



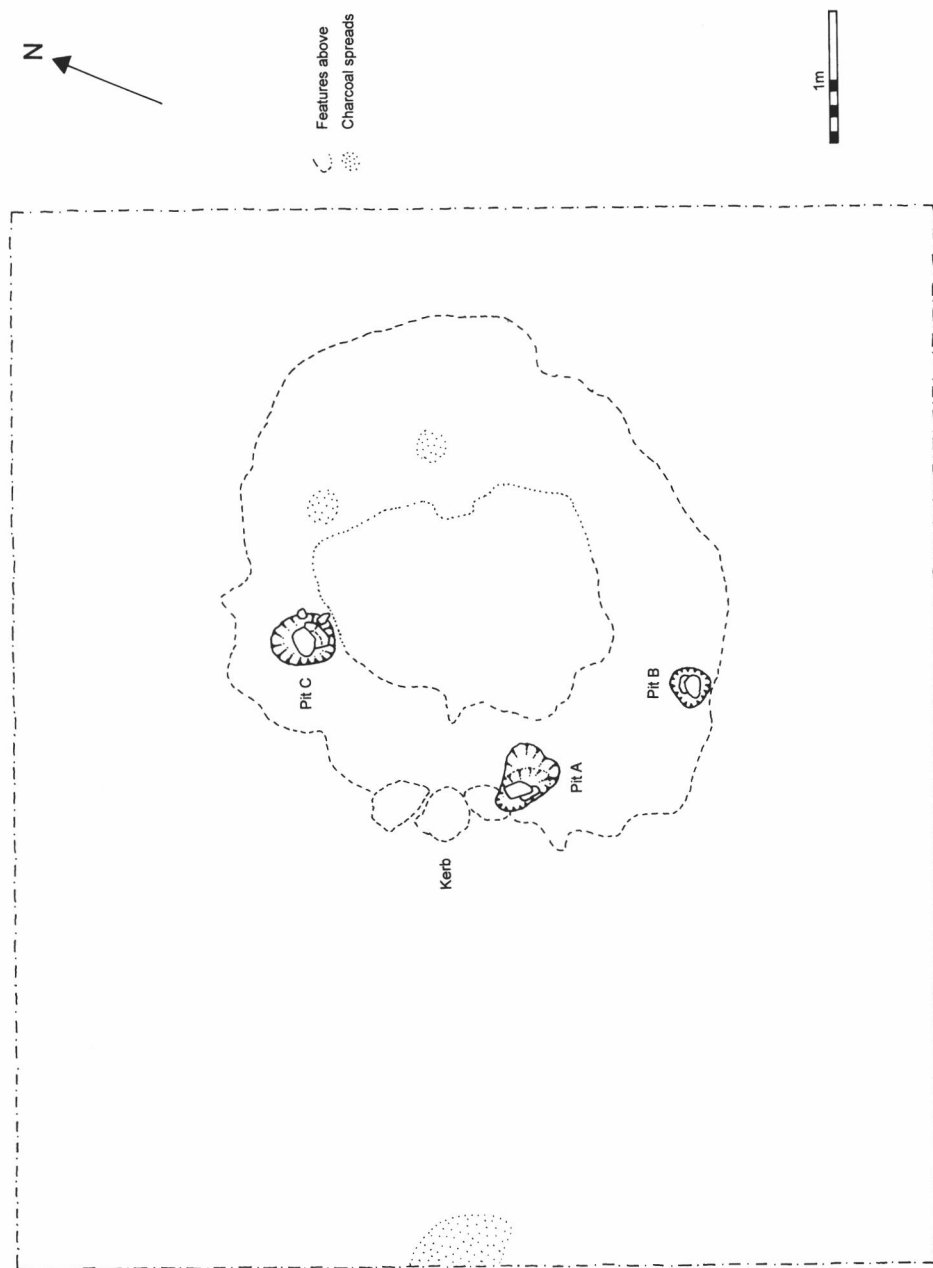


Fig. 6: Sir William Hill cairn: plan showing the pits beneath the cairn enlargement and the distribution of charcoal spreads.

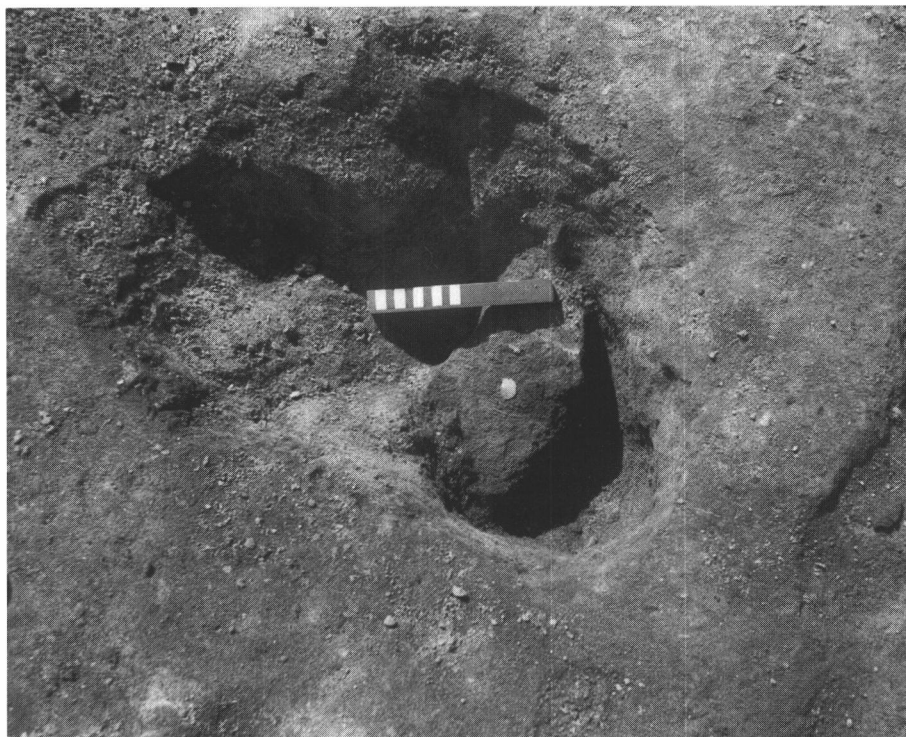
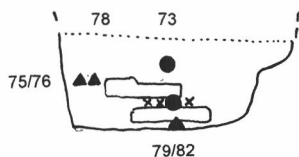
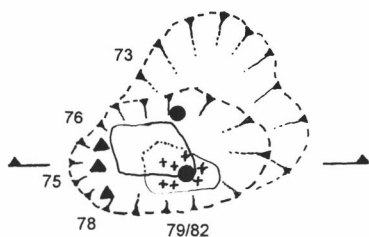


Plate 6: Pit A below the Sir William Hill cairn during excavation, showing the placed scraper (and calcined bone deposit, not clearly visible) on the lower stone.

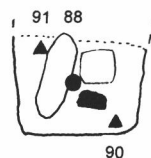
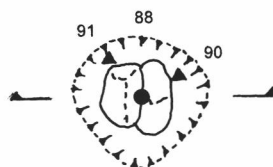
mottled, flint (Fig. 8, no. 79). The bulb of percussion faced upwards and it was surrounded by a thin layer of a much darker soil than that filling the rest of the pit. This darker soil had a somewhat coarser grain size and contained a small quantity of calcined bone along with fragments of charcoal. The latter was of oak, hazel and birch; dating of the short-lived material gave a calibrated date (at 95% confidence) of 2130–2080 and 2060–1890 Cal. BC. When the lower piece of gritstone was removed three conjoined sherds from a third Beaker were found beneath it, presumably broken when the stone was placed above, with the well-decorated face of this high-quality pot placed upwards (Fig. 9, no. 82). The general fill from the pit was wet sieved and a further small quantity of charcoal was found, along with a small sherd of rusticated Beaker (Fig. 8, no. 112), two flint flakes and two small spalls of flint; all perhaps already present in the soil when the pit was backfilled.

**Pit B** — This was located beneath the cairn enlargement to the south. Again, an irregular darker soil stain, sub-circular in plan and measuring approximately 270mm across, was first visible in the upper pre-cairn soil. This was found to be 200mm deep with steeply-sloping sides and a flat bottom (Fig. 7). Two pieces of gritstone, both measuring approximately 150x100x50mm, located side by side and set on edge, projected slightly from within the pit. The fill was a dark-brown sandy-loam and differed significantly from the surrounding orange pre-cairn soil/subsoil. In this fill there were scattered finds,

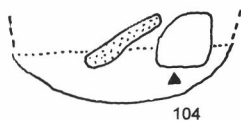
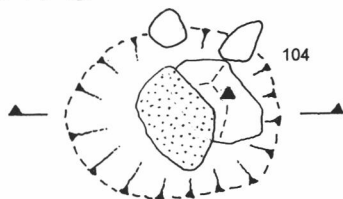
## PIT A



## PIT B



## PIT C



- + + Calcined bone
- Scrapers
- ▲ Beaker sherds
- Chert block
- ◻ Saddle quern
- Stones

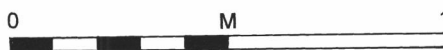
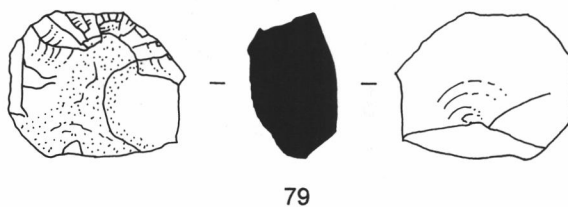
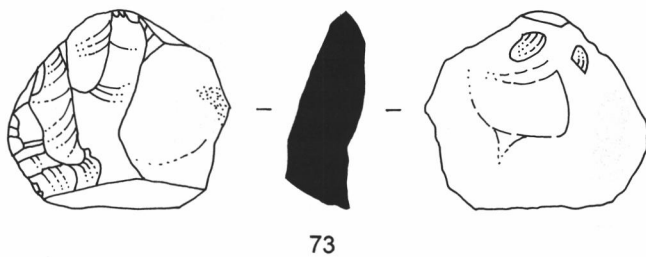


Fig. 7: Sir William Hill cairn: plans and schematic elevations of the three pits underneath the cairn enlargement.

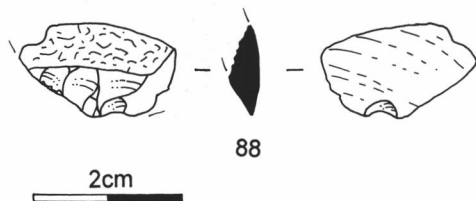
comprising a small quantity of charcoal, a small piece of burnt gritstone and three rusticated Beaker sherds, probably from the same vessel of this type found in Pit A (Fig. 9, nos 90, 91). The charcoal was of oak, hazel and birch; dating of the short-lived material gave a calibrated date (at 95% confidence) of 2140–1940 Cal. BC. A piece of a broken, burnt, black flint scraper was placed between the two stones (Fig. 8, no. 88). Beneath this and below one of the gritstones was a large block of dark chert (Fig. 8, no. 89), which may well have been used as rubbing stone.

**Pit C** — This was located beneath the cairn enlargement to the north-west and was first visible as an oval soil stain in the upper pre-cairn soil, measuring approximately 500x380mm across. The pit was found to be 130mm deep, bowl shaped (Fig. 7) and its

## PIT A



## PIT B



89

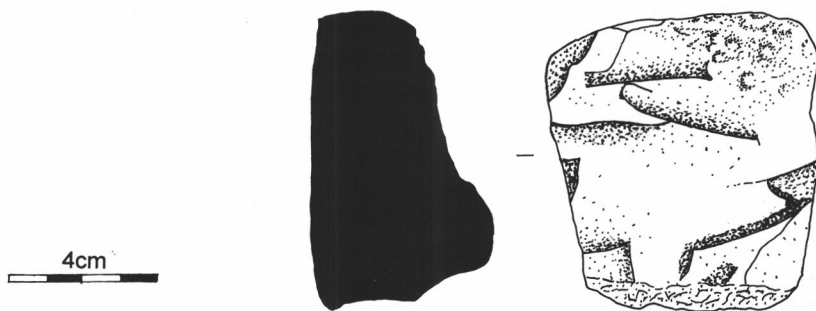
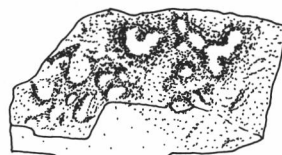


Fig. 8: Sir William Hill cairn: the flintwork and chert block from Pit A and Pit B.

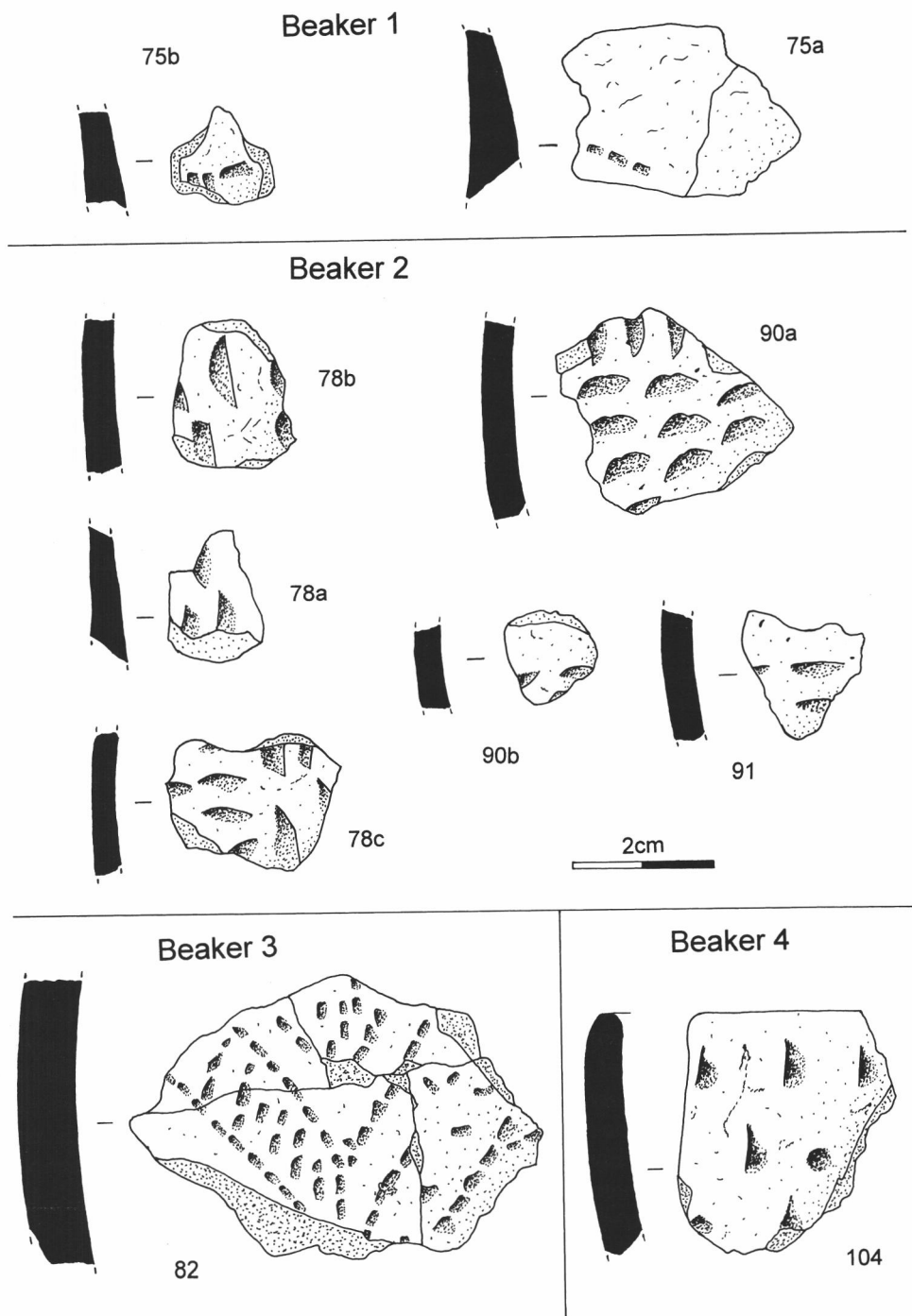


Fig. 9: Sir William Hill cairn: the pottery from Pits A-C, showing the main sherds from Beakers 1-4.



Plate 7: Pit C below the Sir William Hill cairn during excavation, sectioned by the baulk, showing the saddle quern and gritstone block within it, and the stones of the cairn above.

centre was covered by a sandstone saddle quern (Fig. 12, no. 106), placed upside-down and partially overlying an adjacent gritstone block. The saddle quern, made of a material from Coal Measure beds, had probably been imported to the site, originally from a source to the east or south-east. It was placed face-down over the pit at an angle, with the lower end within the recognisable pit fill and the opposing end protruding upwards, although perhaps still in the upper part of the pit where the fill was unrecognisable due to podsolisation; its top was below the basal stones of the cairn enlargement (Plate 7). The recognisable fill of the pit was a dark-brown sandy-loam and also differed dramatically from the surrounding orange soil/subsoil. Within this there were small pieces of burnt gritstone, very small amounts of comminuted charcoal and a rusticated Beaker rimsherd, probably from a different vessel to that found in Pits A and B (Fig. 9, no. 104). This sherd was found decorated-face upwards to one side of the pit, under the gritstone block; whether it was purposefully placed here, or imported with the pit fill, is not clear. Low levels of phosphate, which contrast with a lack of detectable phosphate elsewhere on site, may indicate the former presence of bone within the pit, presumably unburnt, which has decayed due to the highly acidic nature of the podsolised soils.



### Other Artefacts

Artefacts found at the site, from beyond the three pits, are limited in type and number. All are of stone and apart from flintwork, the only find was a small whetstone.

The flintwork has two contrasting distributions (Fig. 10). The first is a highly unusual assemblage of artefacts, in that it comprises almost entirely scrapers associated with the cairn enlargement. These were placed either in the soils between the stones of the cairn, or in five instances placed immediately outside the kerb to the west. There were only two other artefacts, a finely-made flint knife and a utilised flake, both found in the lower soils in the gap between the primary cairn and the enlargement, to the south, close to Pit B. In contrast, flint and chert debitage was found throughout the trench.

The scrapers, of which there are eleven (Fig. 11) in addition to the three found in pits A–C, are all of types consistent with a Later Neolithic or Early Bronze Age date. Taking all fourteen scrapers together, these include thirteen thumbnails, one a very small example, and a fragment which may also be from a thumbnail form. All are made of flint of a variety of types. Most were complete but some have minor damage associated with use, including two which had been burnt. The one from Pit B, and one other, were broken. The quality of workmanship is mostly high, including heavily retouched and well-made symmetrical scrapers (Fig. 11, nos 1, 17, 25, 36, 53), one of which was carefully placed between the stones in Pit A (Fig. 8, no. 79). Only four can be described as relatively poor in aesthetic appearance and perhaps more casually made (Fig. 11, nos 38, 56, 61, 73). One of these came from above the primary cairn, another from the cairn enlargement to the west, the third from beyond the kerb nearby, while the fourth was that within the backfill of Pit A. The trapezoidal bifacially-flaked knife (Fig. 12, no. 67), of dark-brown translucent flint, is carefully made and is both functional and aesthetically pleasing; again it may well have been seen as a special item suitable for ritual deposition.

The close association of this assemblage with the cairn and the restricted range of artefact types suggest they represent ritual deposition associated with the cairn enlargement, some placed in the pits, others placed in the cairn during its construction or soon after it was completed. Only the one exceptionally small scraper lay within the central area, in or above the primary cairn, but given the uncertainty over the mound's initial height it may well have been within stones added later, as it was found at a high level. Alternatively, if this primary cairn was high, it may have fallen down between cairn stones at a later date. Five scrapers lay immediately beyond the edge of the cairn enlargement rather than within it. These were all found close together near the short stretch of kerb (and Pit A under the enlargement) to the west. Their restricted distribution here helps enforce the suggestion that the kerb provided a visual focal point.

The whetstone (Fig. 12, no. 66) is a small rectangular slab, with wear on its two faces, of a sandstone probably imported to the site from further east beyond the East Moors. It was found below the lower stones of the primary cairn on its north-western edge at the interface with the soil below. Whether it was discarded before the cairn was built; purposefully deposited at the time of its construction; or a 'stone' gathered as part of the clearance is not known.

The debitage (excluding that from Pits A–C) comprises fifteen flakes and broken flakes, none of which could be described as blades, twelve fragments and undiagnostic pieces, six tiny spalls and a small core. The utilised flake (Fig. 12, no. 68), noted above,

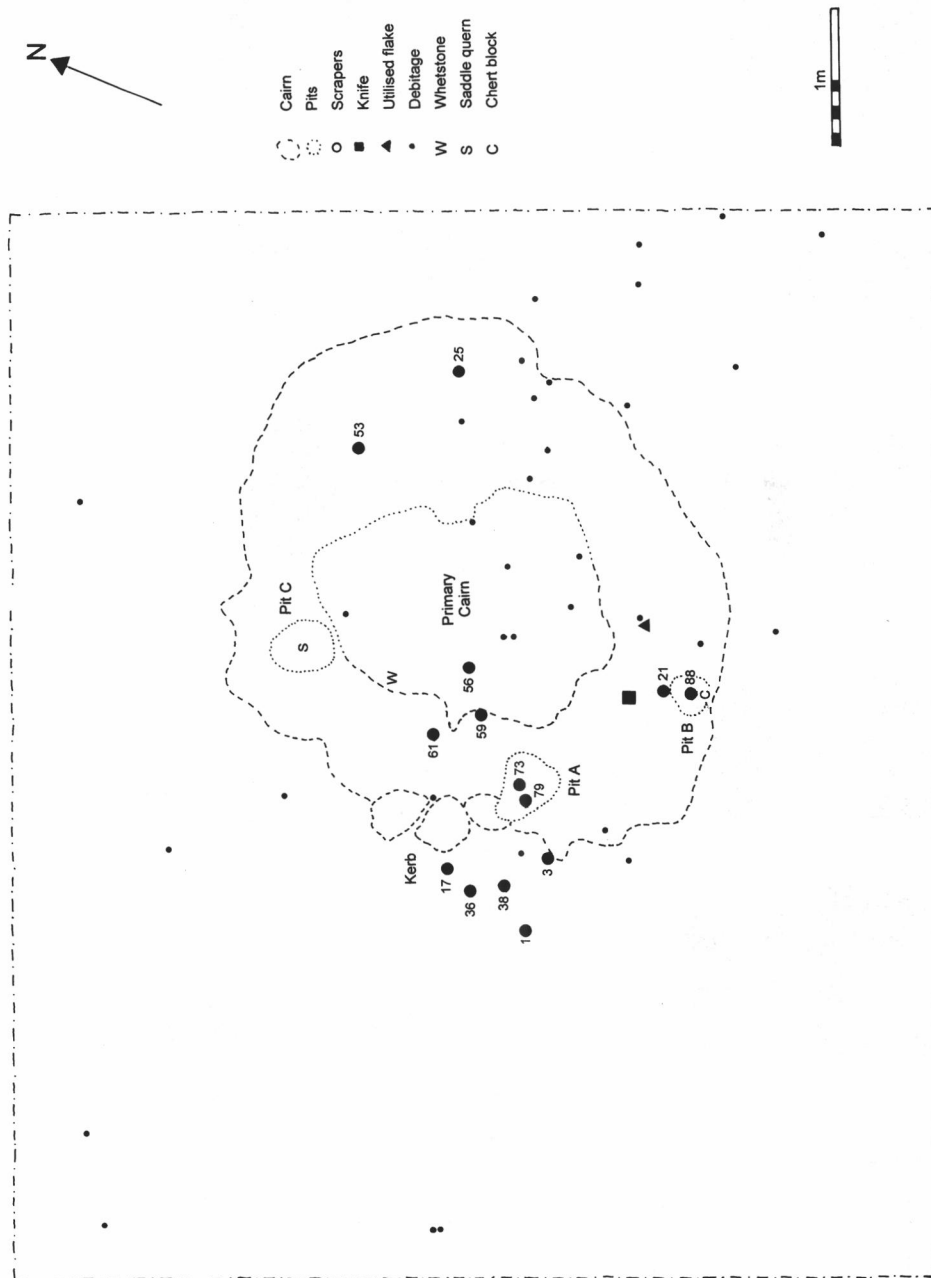


Fig. 10: Sir William Hill cairn: the distribution of the flintwork and other stone artefacts.

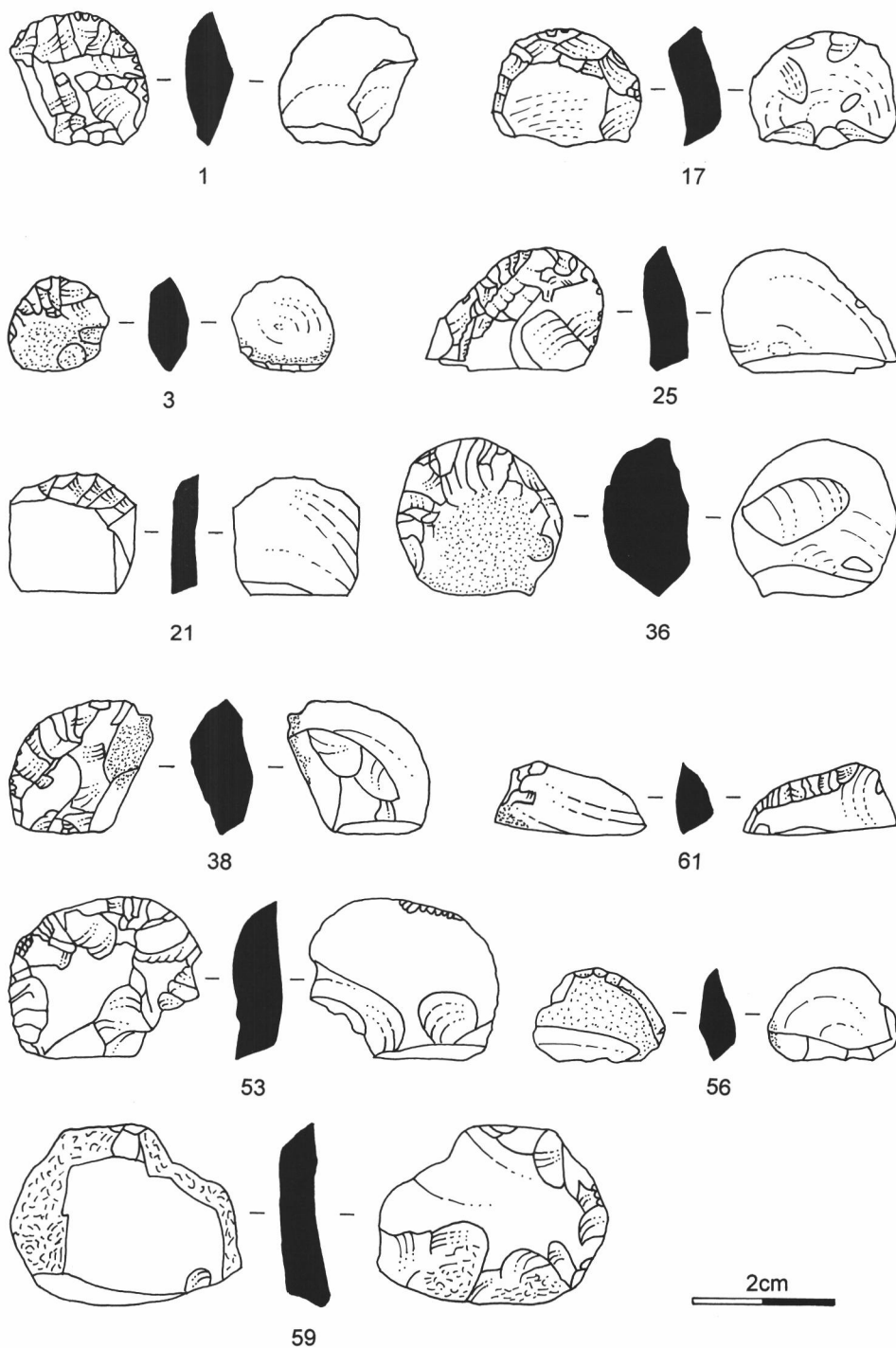


Fig. 11: Sir William Hill cairn: the flint scrapers associated with the cairn enlargement.

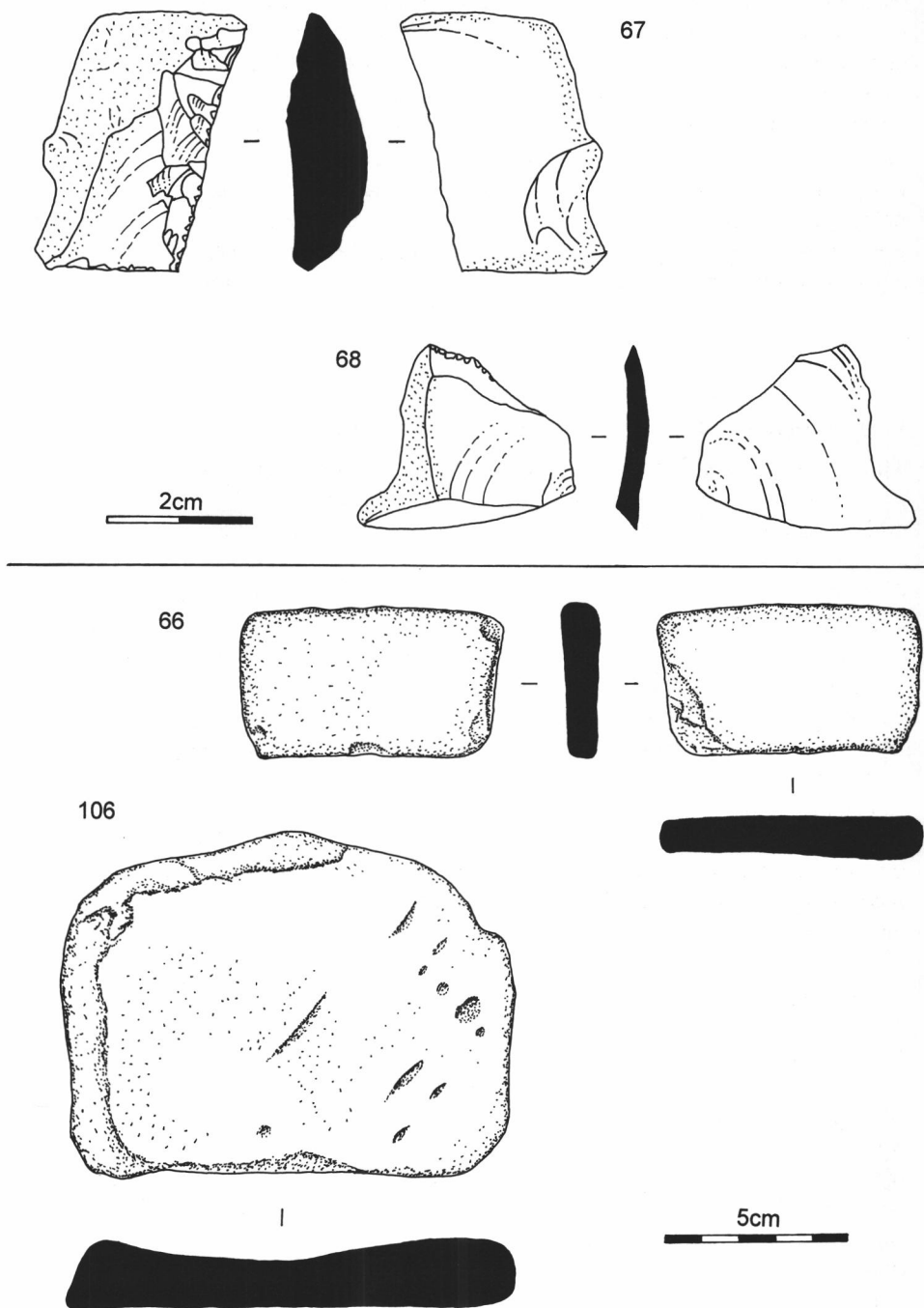


Fig. 12: Sir William Hill cairn: the flint knife, the utilised flint flake, the whetstone and the saddle quern.

may well belong with this assemblage rather than the deposited scrapers and knife. A small amount of debitage was found under the primary cairn, while the majority were within the cairn enlargement, at its edges and across the trench beyond, with something of a concentration to the east. A somewhat wider range of materials is represented when compared with the tools, including a variety of flint and black Derbyshire chert (21% of total). It seems likely that all this material was derived from flint knapping at a variety of prehistoric dates, given the range of materials, and presumably most or all in the general vicinity of the site; however, the quantity of material present is so small, it indicates this knapping probably did not focus on the cairn itself. The possibility that some of the debitage was deposited at the same time as the scrapers cannot be discounted, a possibility suggested by the presence of a small amount of a distinctive flint with orange cortex in both assemblages, which included a large flake and a small core.

## PREHISTORIC ACTIVITY ON SIR WILLIAM HILL

### **Early Agricultural Clearance — The Excavated Cairn**

There was nothing found associated with the primary cairn to suggest it was anything other than an agricultural clearance cairn. This is consistent with the character of its build and its position just beyond the edge of a stone free area to the north-west and the strong contrast with an uncleared surface to the south-east which had obviously never been disturbed. While the cairn enlargement was associated with an episode of structured ritual deposition (see below), the stone used to build it perhaps could also have been derived from further agricultural clearance. The presence of a saddle quern would further suggest that cereals were processed in the general vicinity prior to its deposition in Pit C. That agricultural activity continued after the cairn was enlarged is suggested by the small discrete but irregular area of abutting stones to the south-west, which is likely to represent a stone clearance episode.

The radiocarbon dates for the pits and associated cairn enlargement, which provide an end date for the primary Sir William Hill structure, demonstrate that this represents important evidence for early agricultural use of the East Moors in the third or early second millennium BC. Whether this took place months or years before the ritual deposition is not known. It may be that the ritual deposits relate directly to the people who first cleared the land; evidence for continued agricultural use of this site after the cairn enlargement took place may support ongoing activity with a direct association with what went before. Alternatively, initial clearance may have taken place many generations before, and later activity may represent a separate episode of use.

While the cairn provides the first direct evidence for early agriculture on the East Moors, this comes as no surprise, for such activity is suggested by small amounts of cereal pollen, and thus evidence for clearance, found in deep peat deposits here dating from the Earlier Neolithic onwards (Hicks 1971; 1972). Similarly, evidence for cultivation has been found elsewhere in the region, as for example at Lismore Fields near Buxton, where cereal grains were found in association with Earlier Neolithic buildings (Garton 1991, 13), and at Mount Pleasant high on the limestone plateau, where a saddle quern of probable Neolithic date was found in association with a dense lithic scatter (Garton and Beswick 1983).

Agricultural practices and the social world in which they took place are likely to have seen radical change on the East Moors between the third and first millennia BC. It has been suggested that in the Neolithic, people used the area as an important part of a seasonal round, individual groups sharing tenure over pastures here and perhaps growing crops in episodically-used or temporary cultivation plots (Barnatt 1996a; Edmonds and Seaborne 2001). By the first millennium farming had changed, with significantly greater emphasis placed on sustained farming within long-established fields at specific locales, with clear distinctions drawn between these heavily-used core areas with farmsteads and surrounding fields, and open pastures beyond, each within the defined tenure of individual farming families (Barnatt 1999; 2000). It is not clear where to place the Sir William Hill cairn in the envisaged continuum of change (and possibly times of radical departure) between these two extremes (Barnatt 1996a; 1999; 2000; Edmonds and Seaborne 2001; Kitchen 2000). Arguments have been presented that sustained farming first started to make an impact on the landscape early in the Bronze Age rather than later (Barnatt 1999; 2000); if this is the case, then the Sir William Hill cairn potentially falls at this cusp of change. The presence of Beaker sherds in the cairn enlargement pits suggests the local farming community at this time had embraced fashionable symbols of an emerging new lifestyle, but whether this went hand in hand with changes in farming practice is not known.

### The Cairn Enlargement and Structured Deposition

The three pits under the cairn enlargement at Sir William Hill provide clear evidence of structured deposition. There are strong parallels between them (Table 1). All three have two placed stones (in various combinations), Beakers sherds and charcoal, while two have scrapers in carefully placed association with the stones.

|       | Two<br>placed<br>stones | Saddle<br>quern | Beaker<br>sherds | Flint<br>scrapers | Chert<br>block | Charcoal | Calcined<br>bone | Possible<br>unburnt<br>bone |
|-------|-------------------------|-----------------|------------------|-------------------|----------------|----------|------------------|-----------------------------|
| Pit A | X                       |                 | X                | X                 |                | X        | X                |                             |
| Pit B | X                       |                 | X                | X                 | X              | X        |                  |                             |
| Pit C | X                       | X               | X                |                   |                | X        |                  | X                           |

*Table 1: The finds made in the three pits found beneath the cairn enlargement.*

All the finds give the impression of deposits chosen to represent aspects of people's lives and ritual associated with this. The scrapers, saddle quern and possibly the chert block and charcoal are items associated with everyday activity. The calcined bone, and perhaps the Beaker sherds, charcoal and postulated unburnt bone, have more overtly ritual connotations.

The high-quality and elaborately decorated Beaker sherd below the lower stone in Pit A (and possibly the sherd in Pit C) was probably purposefully placed here as a large individual sherd; Beakers of this type are usually found in burial contexts. Similar observations on placing can be made for two of the scrapers, the chert block, the saddle quern and the calcined bone. In contrast, the charcoal of several tree species, and



randomly scattered Beaker sherds (and flints) in the fills in general, which are not present in the soils elsewhere on site, may well suggest importation of the pit fills from elsewhere as part of the ritual acts, perhaps as redeposited midden material. The character of the postulated unburnt bone is unknown and may have been purposefully deposited as a food offering or as human bone, or it may have been again within midden material. Pits A and B, both with very similar profiles, contained sherds of the same rusticated Beaker, indicating the deposits were placed here at roughly the same time. In contrast, Pit C, which had a different profile, had a sherd of a second rusticated Beaker and may have been dug and filled at slightly different times, or the fill was derived from a different source and the pit dug by a different individual. These two Beakers may well originate from a domestic context. Pit A also had two sherds of a comb-decorated Beaker from an uncertain original context, either domestic or burial oriented. The sherds from this Beaker, and the rusticated Beaker sherds from Pits A and B, had both been burnt and/or had internal blackening, again probably indicating previous use.

|       | Two<br>placed<br>stones | Saddle<br>quern | Beaker<br>sherds | Flint<br>scrapers | Chert<br>block | Calcined<br>bone | Probable<br>imported<br>pit fills |
|-------|-------------------------|-----------------|------------------|-------------------|----------------|------------------|-----------------------------------|
| Pit A | X                       |                 | X                | X                 |                | X                | X                                 |
| Pit B | X                       |                 |                  | X                 | X              |                  | X                                 |
| Pit C | X                       | X               | X?               |                   |                |                  | X                                 |

Table 2: *The purposefully placed deposits made in the three pits found beneath the cairn enlargement.*

Taking the purposefully placed deposits separately (Table 2), then the two characteristics common to all three pits are the two placed stones and probable imported pit fills. In other respects the contents of the pits are more varied. Pit A is the only one with a calcined bone deposit between two stones, while the scraper here is echoed by another in Pit B; perhaps the difference between the disposition of the two placed stones in each reflects the need to place those in A horizontally to provide a surface on which to place the calcined bones, whereas this was unnecessary at B as only a scraper was placed here. Both pits A and B had objects placed under the stone before these were added, the former comprising the large Beaker sherd and the latter the chert block. Pit C differed in that the only obviously 'placed-artefact' was the saddle quern; it is unclear if the rusticated Beaker sherd was also purposefully placed. It may be that the postulated unburnt bone was also placed, but this is unclear.

The similarities in their content suggests the three pits were created at similar dates to each other, or at least that there was direct memory of the contents of the first when subsequent deposits were made. In the case of Pits A and B, the similarity in pit form, and sherds of the same Beaker in both, indicate a direct chronological link. Presumably, the building of the cairn enlargement took place shortly after all three pits were filled, as an act of closure. This again was accompanied by ritual acts, as demonstrated by the scrapers placed on the cairn and by its western kerb, echoing those in the pits themselves.

These eleven scrapers, which are similar in form to the three found in the pits, stand out as being placed here as part of a ritual act because of the lack of other artefact types on site, the only exception being the fine flint knife which may well also have been placed

here at this time. While some of the scrapers may have been made purposefully for this ritual act, there is no clear support for this suggestion. Indeed, two of these were broken (and the removed fragments were not present on site), while others had indications of use-damage, probably indicating the tools were employed previously for 'functional' purposes. Thus, their deposition may well have had purposeful connotations associated with past activity or the people who used them.

The radiocarbon dates from pits A and B are statistically indistinguishable and could be interpreted as to all intents identical. Thus the deposits may be contemporary and both took place around 2150–1950 Cal. BC. This is consistent with the known date ranges of the artefacts found.

It remains a matter for conjecture, in the absence of further excavation, whether other cairns in the Sir William Hill cairnfield have ritual deposits. However, the non-random siting of the excavated cairn, placed at the upper end of the cairnfield, may suggest it was regarded as a 'special' location best suited for such activity.

As noted above, excavations at other cairns on the East Moors have found evidence that possibly may represent ritual deposition. These include an empty scoop, and a Group VI polished axe and a small concentration of charcoal, at two small cairns on Ramsley Moor (Henderson 1963; 1979). In contrast, in other cases, as on Stanton Moor and at Eaglestone Flat (Heathcote 1930; 1936; 1939a; 1939b; 1954; Barnatt 1994), pits contain human burials; at the latter site those pits which contained urned cremations probably had pyre debris imported from elsewhere. There are also a series of flat-topped platforms attached to small cairns and barrows, several of which have been carefully excavated (Riley 1981; Barnatt 1991; 1994). These appear to have been built as platforms on which to leave ritual deposits and sometimes to place burials within them. Similarly, one of the excavated cairns at Gardom's Edge, with no identified deposit at the centre, had a well defined kerb with a deposit of smashed pottery immediately outside (of a later date), reminiscent of the scrapers in an identical position at Sir William Hill (Barnatt, Bevan and Edmonds 1995–2000). Another cairn here had Beaker sherds and fine quality lithics scattered in and around it.

Throughout the British Isles structured deposition of artefacts within small pits, sometimes in association with token deposits of cremated bone, is well attested from a variety of Neolithic and earlier Bronze Age contexts. Examples at causewayed enclosures are given in the pottery report. Similar structured deposition can also be found at Earlier Bronze Age barrows, as for example at Lockington in Leicestershire, again described in the pottery report. They also occur at other ritual monuments of this date. For example, in Wales the combination of charcoal, burning and 'token' deposits of calcined human bones is a common feature of ringcairns (Lynch 1979). Similarly, the Bronze Age pit circle at Yr Allor in south Wales had pits where structured deposition associated with careful pit backfilling may well have been central to the ritual performances carried out here (Kirk and Williams 2000, 290). Parallels can also be sought at many Neolithic and Early Bronze Age domestic sites across Britain, often only indicated today by lithic spreads and pits, the latter sometimes showing signs of purposeful filling, with carefully deposited sherds, tools and midden material (Edmonds 1999, 18).

There is a noted absence of sites with Beaker pottery on the East Moors, whereas on the limestone plateau nearby these pots are relatively common, particularly in funerary contexts (Barnatt 1996d; 1999, 47–48). Hart noted unconfirmed surface finds of Beaker

sherds at Harland Edge in 1960 (Hart 1981, 50). More recently the picture has begun to be added to, with the finding of the Sir William Hill sherds and further examples of sherds associated with an excavated cairn at Gardom's Edge (Barnatt, Bevan and Edmonds 1995–2000), and possibly at the Swine Sty settlement on Big Moor (Garton and Beswick in prep.).

The close association of Beaker pottery and thumbnail scrapers is common across much of Britain (Edmonds 1995, 140–41). However, direct parallels for the scraper-dominated lithic assemblage at Sir William Hill have not been found.

The inverted placing of the saddle quern that capped Pit C is reminiscent of two examples recently found at Gardom's Edge (Barnatt, Bevan and Edmonds 2002). Here in one instance an inverted saddle quern sealed a pit at the centre of a circular house. Another was placed upside down on a stone bank that sealed the entrance to a second house. Both are interpreted as symbolic acts of closure. While this may also be the case with the Sir William Hill saddle quern, both the Gardom's Edge examples are likely to be significantly later in date, placed there at least a thousand years after that at Sir William Hill. More evidence is needed to confirm whether this was a long-standing practice in the region.

Turning now to a more basic question, why did structured deposition take place in the three pits at Sir William Hill? There are a number of likely inter-linked possibilities. It may be that the deposits represent a dedication to the people who had originally farmed here, placed at the upper end of the cairnfield overlooking the farmed area, perhaps to commemorate them at a time when the initial cultivation plots fell out of use, or as a later re-dedication when they were again to be used. The token deposit of cremated bone, charcoal and Beaker sherds may represent direct links with these people, brought from a place of residence as ancestral relics, as midden material and/or from a cremation pyre at a time of death. Similarly, the sherds, scrapers, chert block and saddle quern may have been personal possessions. The pit deposits may also have been seen as a symbolic reinforcement of tenurial rights, or peoples' attachment to place, by reference to forebears who previously farmed here. Alternatively, they may have been placed here by people who continued to farm this land intermittently and brought objects and/or midden material from other places of residence to reinforce their ties with this land for when they returned. Another possibility is that the deposits were designed as acts of propitiation, at this place where soils may well have been fragile. Deposition to appease spirits of fertility and sustain or improve the productivity of the life-giving soils may have been seen as a vital act; the pits were dug into life-giving soil. The charcoal from fires may have symbolised the cleansing of the land, while the saddle quern and scrapers may have represented food preparation. However, as noted above, that the saddle quern was inverted may alternatively be viewed as an act of closure. Similar observations could be made for the inclusion of what may be purposefully broken pottery in Pit A.

What the significance of the Sir William Hill sherds was to the people who placed them in the pits is far from clear. Perhaps they were the personal possessions of people commemorated, possibly inherited, broken and deposited to symbolise their link with this place and their social identity (*cf.* Barrett 1994, 106; Edmonds 1995, 139–40). The breaking into sherds is perhaps in itself important, serving an important ritual role, linking the living world with that of the dead or with the spirits of the land itself, where

one sherd is deposited while the majority of the vessel is kept in 'the world of the living' (Whittle 1988, 130; Chapman 2000, 68).

The flint scrapers placed within the cairn in close proximity to the pits could be tokens of dedication, offered by a number of different individuals who were in attendance when the rituals were undertaken. The digging of three pits, two of which at least appear to be contemporary, may represent separate ritual acts and may have been dug by, or intended to represent different individuals.

Looked at more generally, a local farming family or other restricted social group who frequented Sir William Hill felt sufficiently inspired to gather a range of materials with origins over a much wider area and purposefully deposit them with some ritual within the confines of what had previously been an 'everyday' structure. Thereby they may well have created links with the past, either as an act of closure, or in order to meet the needs of the future.

Whatever, the correct interpretation may be, what is clear is that the rituals which went with the structured deposition were 'private' statements at a 'personal' or 'family' scale, perhaps meant only for the eyes of those few people taking part. For, once buried, while sealed by a visible cairn, others would have no direct knowledge of what took place here and what was buried. The meaning and ritual essence of the depositions placed in and around these small pits would perhaps carry their powers only for as long as the ancestral memories were sustained. Alternatively, the ritual messages may have been intended for the spirits of ancestors and/or the land, thus from this perspective, assuming a belief that the world of the living was imbued by these spirits, the communication may have been ongoing.

### **The Cairn within its Landscape (Figs 1, 2)**

The location for the primary cairn would have been determined by a choice to clear the land here for agriculture. However, it took on added significance later with enlargement over the pits used for ritual deposition. The cairn lies at the upper end of a small cairnfield, sited on gently-sloping ridgetop land separate from much of the cairnfield on topographically distinct areas below, with possible house sites out of view, giving the site a feeling of relative isolation, which is heightened by the crest of the nearby ridgetop to the west hiding all views in this direction. This may have been one of the attractions for the people who placed the pit deposits here, carrying out rituals in land set aside from the everyday world (*cf.* Barnatt 1998a), but at the same time on land to one side of the ridgetop watershed, rather than on the ridgetop crest itself, where there was thus unambiguous tenure for the local farming group (*cf.* Barnatt 2000).

The views over Eyam Moor as a whole are also rather restricted from the excavated cairn, with parts of the cairnfield below and the land immediately beyond visible, but not the bulk of the main cairnfields further east. In prehistory the views may perhaps have been further restricted by trees and shrubs. Thus, the visual focus of the Sir William Hill cairn is very local in character, with emphasis on the cairnfield and its immediate environs. The cairn is not a prominent marker in the landscape but is a personal statement, a discrete monument possibly known only to a small number of individuals within the local community. The nature of the rituals undertaken, with token deposits of human bone and charcoal, broken pottery and placed flints and stones, reflects this personal aspect.

There is one potentially significant exception to the lack of more distant views, the stone circle of Wet Withens and adjacent large barrow can both be seen, at about one kilometre away. Whilst the excavated cairn itself does not stand out in the landscape, Sir William Hill does. Indeed, it dominates a landscape rich with the evidence of prehistoric activity, including ritual sites such as barrows and stone circles. It may be that the hill was an important point of reference in the local prehistoric farmers cognitive map of the land, perhaps acknowledged at monuments such as Wet Withens. However, whether this intervisibility has any significance requires further assessment, which is currently being undertaken as part of viewshed analysis of Eyam Moor by the authors. Taking the view of the circle and barrow from the excavated cairn for example, it is not known currently if these monuments are widely visible from places across the moor and thus any intervisibility may well be coincidental, or alternatively whether the Sir William Hill cairn is at a 'rare location' which makes the view of potential interest. More fundamentally, it is not even clear whether these two large monuments had been built at the time the Sir William Hill cairn was in use.

### **Observations on Later Prehistoric Farming and Ritual on the East Moors in the Light of the Sir William Hill Excavation**

The cairn at Sir William Hill had two distinct but probably inter-related purposes, as a place of disposal of unwanted stone when land was prepared for agriculture, and as an appropriate place to make ritual deposits. This comes as no surprise, for it has long been thought that people in some past societies are unlikely to have drawn strong distinctions between 'sacred and profane'. In many instances, it may well be that practical acts such as growing food were imbued with beliefs and ritual that many today would regard as non-utilitarian and sometimes positively superstitious. Conversely, ritual acts would be seen as practical if they were thought to influence the well being of people and the land. The small and superficially rather mundane heap of stones at Sir William Hill had an agricultural function to the person or persons who built it, but it was also imbued with emotional and spiritual significance by the same group and their progeny, or those who came later.

It is predicted that future excavations will find similar evidence for ritual practices at a proportion of other cairns elsewhere on the East Moors; a simple dichotomy between clearance cairns and those built for burial can no longer be sustained. Rather, a range of activities is to be expected, with clearance and human burial being only parts of the spectrum.

The early date of the initial clearance, which predates the identified ritual deposition that took place in around 2150–1950 cal. BC, confirms for the first time on the East Moors that agricultural activity, was taking place at cairnfields in the Neolithic or very early part of the Bronze Age. While this is an important step forward, it does not in itself help resolve the debate as to the character of this early agriculture (*cf.* Barnatt 1996a; 1999; 2000; Edmonds and Seaborne 2001; Kitchen 2000). Much further work is needed to establish when and to what extent farming changed between the third and first millennia BC, from early arable plots created as part of a seasonal round, to more sustained agriculture with long-term input into specific locales.

## APPENDIX 1: THE POTTERY

by Pauline Beswick

### Introduction

In total twelve sherds weighing 33g were recovered. Sherd weight varied from 16g for one sherd (no. 82) to <0.5g each for five sherds, with the mean weight at 2.7g. They appear to be from four different Beakers dating from the later third to early second millennia BC and all came from pits sealed below the cairn. Pit A contained sherds from three of the Beakers, two with comb decoration and one rusticated; sherds from the same rusticated Beaker were in Pit B; and in Pit C a sherd from another rusticated Beaker was found.

### Fabric

Macroscopic examination of the fabric showed all to have similar characteristics (Fabric 1). They are oxidised buff or reddish brown and only the thickest (sherd 82 — 7mm) has a definite black core. Average thickness is 4mm. The clay is quartz rich with fine grains of clear quartz and some larger grains comprising rounded clear and opaque quartz, well-mixed. Other inclusions consist mainly of sparse angular and sub-rounded lumps of grog, average size 3mm, poorly mixed. The fabric of one group of sherds, however, is distinct in having a granular appearance in section and voided surfaces, possibly due to a higher portion of rounded quartz grains some of which may have dropped out. An alternative explanation for some of the voids might be the presence of calcareous fragments in the original clay which have leached out in the acid soil, but none has survived so this hypothesis is unproven. This group has been designated fabric sub-group 1A.

The use of clays containing fine quartz sand and some grog is a characteristic of Beaker production (Gibson 1982, 72) and the finer the Beaker the more rigorous the clay preparation. In this respect it is interesting that the carefully placed sherd under the lower stone in Pit A (no. 82) exhibits better clay preparation than the rest.

### Form and Decoration

The pottery will be described by context group. The diagnostic pieces are illustrated (Fig. 9).

**Pit A** — This feature produced the most sherds, eight (Table 3), probably from three different Beakers, with one sherd unattributed (no. 76). Sherds from near the top of the pit (nos 75 and 76) were the most weathered and abraded, and the large sherd from beneath the lower stone at the base of the pit (no. 82) was the least abraded. The sherds of Beaker 1 (no. 75) appeared to have been burnt and, together with one piece of Beaker 2 (no. 78), show internal blackening.

#### *Beaker 1*

A Beaker neck sherd and fragment probably from the same vessel found close by, all in the upper pit fill, with part of a line of comb impressions. Fabric 1 (Fig. 9, no. 75).

An apparent straight, flaring neck profile could belong to a wide range of Beaker shapes e.g. S2, S3 or N2, N3 types (Clarke 1970, 42), or Steps 4, 5 or 6 (Lanting and van der Waals 1972), or Case's Middle (Style 2) or Late Style (Style 3) Beakers (1993). The



|               | Context              | Finds<br>number | Number of<br>sherds                 | Weight (g)                       | Beaker<br>attribution | Condition  | Residue/<br>burnt |
|---------------|----------------------|-----------------|-------------------------------------|----------------------------------|-----------------------|------------|-------------------|
| Pit A         | Upper pit fill       | 75              | 2                                   | 4                                | Beaker 1              | Ab (2)     | Yes               |
|               | Upper pit fill       | 76              | 1                                   | 2                                | unattributed          | Ab         | Yes               |
|               | Upper pit fill       | 78              | 3                                   | 2                                | Beaker 2              | Av (3)     | Yes (1)           |
|               | Under lower stone    | 82              | 1                                   | 16                               | Beaker 3              | Av         |                   |
|               | Sieved from pit fill | 112             | 1                                   | <0.5                             | Beaker 2              | Av         |                   |
|               |                      |                 | <i>Sub-total</i><br><b>8 sherds</b> | <i>Sub-total</i><br><b>25.5g</b> |                       |            |                   |
| Pit B         | Pit fill             | 90/91           | 3                                   | 3.5                              | Beaker 2              | Av (3)     | Yes (2)           |
|               |                      |                 | <i>Sub-total</i><br><b>3 sherds</b> | <i>Sub-total</i><br><b>3.5g</b>  |                       |            |                   |
|               |                      |                 |                                     |                                  |                       |            |                   |
| Pit C         | Pit fill             | 104             | 1                                   | 5                                | Beaker 4              | Av         |                   |
|               |                      |                 | <i>Sub-total</i><br><b>1 sherd</b>  | <i>Sub-total</i><br><b>5g</b>    |                       |            |                   |
|               |                      |                 |                                     |                                  |                       |            |                   |
| <i>TOTALS</i> |                      |                 | <b>12</b>                           | <b>33g</b>                       | 4 Beakers             | 3 Ab; 9 Av | 5 Yes             |

Table 3: Beaker sherds by context, weight, condition (Ab — abraded, Av — average) and attribution.

comb teeth are *c.* 2mm × 1mm but the decoration is too fragmentary to attempt to parallel. It could have been zoned, as there appears to be a blank area above what was probably part of the vessel's waist, but the surface is badly eroded. Beaker pottery was produced in Britain from *c.* 2600 to 1800 cal BC (Kinnes *et al.* 1991, 39), and if the profile has been interpreted correctly this vessel could date from the middle or later stages of this period. This is consistent with the radiocarbon date for the charcoal associated with the calcined bone deposit within this pit.

### Beaker 2

Three body sherds found close together (but non-joining) in the upper pit fill and a small sherd from sieving, all decorated with finger nail impressions, are from a rusticated Beaker. Fabric 1A (Fig. 9, no. 82) (see also Pit 2).

Too small for reconstruction, the larger sherd with multi-directional fingernail impressions appears from its profile to be from the main belly of the vessel with the rest possibly from the neck. The rusticated decoration classifies this as an everyday domestic vessel (Gibson 1982, 75; Clarke 1970, 258–59) a type which cannot be closely dated. Often this type of single fingernail impression occurs either in vertical or horizontal lines covering the whole vessel but occasionally is found in multiple directions (e.g. Case 1993; figs 11, 13; Clarke 1970; figs 429, 439). Although usually found in 'domestic' contexts, occasionally a rusticated Beaker accompanies a fine Beaker in burials (Clarke 1970, 201) and sometimes, as at Stakor Hill, Buxton (Clarke 1970, fig. no. 910), it is the only vessel deposited.

### Beaker 3

One large, thick (7mm) Beaker body sherd decorated with comb impressions, found under the lower stone at the pit's base with the decorated face upwards. Fabric 1 (Fig. 9, no. 82).



The main metope appears to be a filled triangular motif carelessly executed, around which are traces of other designs (*cf.* Clarke 1970, 427, 428: Motif Groups 4 and 5). A comb at least 15mm long with rectangular teeth 2mm × 1mm was used to create the majority of the impressions. This sherd is likely to have been from a large, elaborately decorated Beaker of Van der Waal's Steps 5 or 6 (1972), or Cases's Late Style or Style 3 (1993), and to date from the late third or early second millennia BC. It would have been a fine ware Beaker of the type usually chosen for burial (Clarke 1970, 4) but also occurring in 'domestic' contexts (Gibson 1982, 75–76). No exact parallel has been found for this particular design but it is representative of Beakers found all over Britain featuring big panels of geometric comb decoration particularly using triangular and lozenge designs. A number are known from Peak District burials (Clarke 1970: e.g. fig. nos — 776 Alsop Moor, 819 Brassington, 822–3 Bradwell, 842 Middleton and 939 Swinscoe).

**Pit B** — Three small body sherds (Table 3), found scattered in different parts of the pit fill, are all relatively unabraded and decorated with linear finger nail impressions. Most likely they are from *Beaker 2*, the rusticated Beaker described above. Fabric 1A (Fig. 9, nos 90, 91).

The sherds' fabric, body thickness (4mm) and style of decoration match that of *Beaker 2*. In particular one of the fingernails used to make some of the impressions has an oblique angle at one end (?broken edge) and this nail impression appears on sherds from both pits. The larger sherd confirms that the nail impressions on this Beaker were, at least in part, in both horizontal and vertical lines.

**Pit C** — A relatively unabraded Beaker rim sherd (Table 3) was found in the pit fill, underneath the two stones and with the decorated face upwards.

#### *Beaker 4*

A rim sherd from a rusticated Beaker, decorated with shallow, random fingertip impressions and a possible comb impression (Fig. 9, no. 104, bottom left-hand side). Fabric 1.

The convex neck profile suggests a Late Style Beaker, Style 3 (Case 1993) or Step 5 or 6 (Lanting and van der Waals 1972) from late in the third millennium BC or from the early centuries of the second. It is unusual to find comb impressions combined with finger tipping but examples are known (e.g. Huckwold cum Wilton; Gibson 1982, 427 nos 23, 27). Given the likely trace of a comb impression it is just possible that sherds from *Beaker 1*, Pit A, are part of this vessel but their outer surface is too abraded to see if there were ever finger tip impressions and the comb impression on the *Beaker 4* sherd is longer (3mm). In addition the neck profile appears to be different. On balance, therefore, this sherd is likely to be from a fourth vessel.

#### **Discussion**

Close typological definition is not possible on such small quantities of *Beaker* (Table 3) but all appear to date from the later stages of Beaker development in the late third or early second millennia BC, and all could have been buried more or less contemporaneously. The occurrence of sherds from the same *Beaker* (no. 2) in Pits 1 and 2 strongly

suggests that they were filled at the same time and is supported by the similarity in the pits' shapes and fills, which in both contained fragments of charcoal and burnt stone. Pit 3's different profile and a smaller amount of charcoal in the fill, however, perhaps suggests that this pit represents a different event at a different time but following a similar social practice of deliberate and carefully structured deposition. The three pits were placed outside the perimeter of the small primary cairn on the south (Pit A), west (Pit B) and north-west (Pit C) sides, but none was found to the east. It was not possible to determine whether these pits were dug specifically for such ritual events or had an earlier function, such as post or stone holes.

The presence of cremated bone in Pit 1 and the possibility of its being human (see above) could link the deposits in Pit 1 to a cremated individual and possibly that individual to Beaker 3, a type of Beaker usually found in graves (see above), either in a complete state or in larger quantities. Like the small amount of bone, the one sherd may also represent a token deposit. The smaller fragments from the pit fill include abraded sherds of Beaker 1, one probably burnt, and there are traces of internal blackening on both Beakers 1 and 2 (Table 3). Sherds of Beaker 2 from Pit 2 also show this feature, but one is comparatively large and unabraded which could imply careful selection. These sherds could represent vessels used on a nearby occupation site or be from special activities at the pyre site which were incorporated in the pit fills when the material was brought deliberately to the cairn site. By association, therefore, the contents of Pit 2 are likely to have been linked to the same ritual as Pit 1. Pit 3 cannot be linked to possible burial but appears to represent a related commemorative social practice, with the rim sherd of Beaker 4 perhaps chosen to represent a particular individual. Recent research has suggested that Beakers through their size, form and decoration, may have been concerned with expressions of personal identity and status (Boast 1995, 71). Furthermore, Chapman (2000, 82) has argued that in Central Europe in the Neolithic and Copper Age the practice of structured deposition in pits using parts of pots and other artefacts with or without burials, represents a process of enchainment, or extending social relations through objects. Pots appear to have been broken deliberately and sherds from certain vessels selected for deposition with perhaps different sherds representing different persons present at the event.

Structured deposition of the type used in the pit fillings at Sir William Hill is now widely recognised as an important social and ritual practice in Neolithic contexts from tombs, pits and causewayed enclosures which was possibly used as a means of exerting influence on a particular place (Thomas 1999, 62–88). Usually pits were dug deliberately and backfilled relatively quickly with a fill showing evidence of burning but containing unburnt artefacts which include pottery sherds representing only parts of vessels selected from more substantial amounts. At Windmill Hill enclosure, Wiltshire, detailed analysis of deposits led the excavators to interpret them as evidence of 'gathering and shared value that was periodically invoked by occupation' (Whittle *et al.* 1999, 380). The use of Beaker sherds, however, in such deposits is not common. For instance at Etton enclosure, Cambridgeshire, only one pit was found containing Beaker pottery as well as flint and burnt bone, and that was located away from the main concentration of Middle Neolithic pits. The excavator suggests that by the Late Neolithic direct continuity of the ritual had lapsed (Pryor 1998, 213). Recent review of pottery from Windmill Hill has suggested that the patterns there of deposition of Beaker pottery make more sense as isolated areas

of occupation than as continuity of the ritual of structured deposition (Whittle *et al.* 1999, 374), as was claimed previously (Bradley 1984, 78, 80–81). On the other hand the evidence from the pits at Sir William Hill demonstrates that in some areas such practices did continue using Beaker sherds.

Other examples of related practices in association with burial and ritual monuments continuing into the Late Neolithic/Early Bronze Age include Lockington, Leicestershire, where more ‘conspicuous consumption’ of wealth is demonstrated. Here a pit containing two incomplete probable Beakers, two gold armlets and a copper dagger, was found adjacent to a multi-period barrow, and produced radiocarbon dates calibrated to 2580–2200 BC and 2190–1880 BC (Hughes 2000, 9–10). Woodward (2000, 58–59) is of the opinion that the incomplete Beakers, an unusual find in such a context, may have been old at the time of burial and may have been regarded as heirlooms imbued with personal ancestral power so that perhaps the missing parts were shared among family members or even ground up for grog for inclusion in the next generation of pots. In another pit group on Site V, Lockington, the primary deposit in pit 84 included five fragments from four different Beakers, a clay pulley object and cremated bone, one fragment of which was pig but it is not known if a human burial was also associated (Hughes 2000, 56–57, 102). Later a Late Bronze Age vessel was also inserted into the pit.

The occurrence of Beaker sherds under and within Bronze Age burial mounds is more ambiguous and has been seen to represent ritual or domestic activity or a combination of both using midden material ritualistically (*cf.* Gibson 1982, 1; Whittle *et al.* 1999, 354). A number of regional examples are known, e.g. from a barrow at Roystone Grange (Hodges *et al.* 1989, 12–13), Aston-on-Trent, Barrow 1 (Reaney 1968, 72–73) and Lockington barrow (Woodward 2000, 54–55).

Apart from Sir William Hill, no other example of structured pit deposition using Beaker sherds or any earlier types of pottery has yet been recognised in the Peak District. The majority of known Beakers are complete or near-complete and from 19th century discoveries with inhumation burials on the limestone areas (Clarke 1970; Barnatt 1996c, 30–31). On the gritstone moors bordering the River Derwent, such as Eyam Moor, the only other certain Beaker sherds were found in recent excavations on Gardom’s Edge, near Baslow, but no directly associated features were identified (Barnatt, Bevan and Edmonds 1995–2000, 5th interim, 17, 20). Possible Beaker sherds from Swine Sty on the adjacent Big Moor are less certain diagnostically (Machin 1971, 13; Garton and Beswick in prep.).

For the first time, the discoveries at Sir William Hill hint that complex social and ritual traditions were practised in the Peak District at the turn of the third to second millennium BC which elsewhere have been shown to be present from earlier in the Neolithic.

## APPENDIX 2: THE STONEWORK

### The Flintwork

The flintwork (see Figs 8, 11, 12) is highly unusual in that the artefacts comprised a collection of fourteen scrapers with a discrete distribution centred on the cairn and pits underneath (see Fig. 10). The only other artefacts were a finely worked knife and a utilised flake, also found in association with the cairn, both in the lower soils in the gap between the primary cairn and its enlargement to the south. In contrast, debitage was

more widely scattered (see Fig. 10), had a broader range of materials used, including black chert, and appears to have been deposited independently of the artefacts.

Three of the scrapers were found in the pits under the cairn enlargement, one between placed stones in Pit A, another in the backfill of this pit, and the third again between placed stones but in Pit B. The other eleven scrapers were associated with the cairn enlargement. Only one scraper lay in or above the primary cairn, but given the uncertainty over this mound's initial height, it may well have been within stones added later as it was found high in the mound. Alternatively, if the primary cairn was high, this small scraper could have fallen down between cairn stones at a later date. Five scrapers were found amongst the stones of the cairn enlargement, three between the south and west (one above the gap between the primary cairn and enlargement) and two to the north-east (one near the edge under what may have been tumble). Five scrapers lay immediately beyond the edge of the cairn enlargement, placed close together near the short stretch of kerb to the west.

Taking all fourteen scrapers together, including the three found in pits A–C and the eleven found elsewhere in association with the cairn enlargement, thirteen are of thumbnail type, including one very small example, four are relatively small, and one is a broken piece too small to categorise but again perhaps from a further thumbnail form. These are all consistent with a Later Neolithic or Early Bronze Age date. All are made of flint including two of a distinctive black flint, one of which came from Pit B (Fig. 8, no. 88), the other from above the gap between primary cairn and enlargement near Pit A (Figs 10, 11, no. 59). Four others are of a dark-brown translucent flint, one deposited with the calcined bone in Pit A (Fig. 8, no. 79), the others found outside the kerb to the west (Figs 10, 11, nos 3, 17, 36). One small example is in a distinctive grey-brown flint with orange cortex (Figs 10, 11, no. 56), found above the primary cairn; similar material was also found in small quantity amongst the debitage. Another small scraper, found near Pit B, was made from a pale grey flint with orange mottle (Figs 10, 11, no. 21). The other six were made in a range of pale to dark grey-brown mottled flint (Figs 8, 10, 11, nos 1, 25, 38, 53, 61, 73). Most are complete but some have minor damage associated with use. Both examples in black flint have been burnt and have distinctive fracture lines, while one has heat-spalled surfaces. That from Pit B was only a small piece, the rest of the artefact is missing, but this was certainly not part of the scraper from near Pit A. Another of the scrapers (Figs 10, 11, no. 61), found in the upper stones of the cairn enlargement to the north-east, was also broken.

The finely-made bifacially-flaked knife (Figs 10, 12, no. 67), found in the gap between the primary cairn and its extension, was made from dark grey-brown translucent flint and carefully worked using shallow invasive retouch into a trapezoidal shape that is comfortable to hold when using its cutting edge.

All these artefacts may well be associated with ritual deposition connected with the three pits under the cairn enlargement and the building of this covering of stone.

The debitage (Table 4), excluding that from Pits A–C, comprises only nine complete flakes, six broken flakes, twelve fragments and undiagnostic pieces, six tiny spalls and a small core. The utilised flake has a one edge with use-damage (Figs 10, 12, no. 68) and may well belong with this assemblage rather than the deposited scrapers and knife. None of the complete flakes are particularly large, mostly with lengths under 15mm, with only three larger than this. All but two are from tertiary stages of reduction, all are relatively

squat, and none could be described as carefully prepared blades. A somewhat wider range of materials is represented when compared with the tools. Imported flint comprises 79% of the assemblage, including one broken flake of dark grey-brown translucent flint, three pieces in a distinctive mottled grey-brown flint with an orange cortex, and others in a variety of brown and grey-brown flint, some mottled. The orange-cortexed flint included the largest flake recovered and the one core, a small one-platform example with only a few flake scars; one of the scrapers was also made of similar material. Derbyshire black chert was also present (21% of total), mostly comprising undiagnostic fragments, some perhaps not worked. About a quarter of the debitage (24%), distributed randomly across the trench, showed signs of damage from heat, presumably from fires at the site after they were deposited. In addition to this assemblage, a number of small unworked pieces of chert were recovered; such material is relatively common in gritstone contexts and some at least is best interpreted as residual from glacial deposition.

|                                    | Dark grey-brown translucent flint |       | Orange-cortexed flint |       | Other flint |       | Black chert |       |
|------------------------------------|-----------------------------------|-------|-----------------------|-------|-------------|-------|-------------|-------|
|                                    | unburnt                           | burnt | unburnt               | burnt | unburnt     | burnt | unburnt     | burnt |
| Utilised flake.                    |                                   |       |                       |       | 1           |       |             |       |
| Flake from a polished tool.        |                                   |       |                       |       | 1           |       |             |       |
| Other complete flakes.             |                                   |       | 1                     |       | 5           | 1     | 1           |       |
| Other broken flakes.               | 1                                 |       |                       |       | 5           |       |             |       |
| Fragments and undiagnostic pieces. |                                   |       | 1                     |       | 1           | 4     | 6           |       |
| Small spalls.                      |                                   |       |                       |       | 5           |       | 1           |       |
| Core.                              |                                   |       | 1                     |       |             |       |             |       |

Table 4: The flint/chert debitage found at Sir William Hill (excluding that found in Pits A–C).

While a small amount of debitage was found in stratigraphic association with the primary cairn (6 pieces), most came from the interstices of the cairn enlargement (including one high above the primary cairn) or soils at its edges (14 pieces), or from soils beyond the cairn (14 pieces) (Fig. 10). Those associated with the primary cairn were found both in the soils associated with its basal stones and soils immediately beneath. They comprised just two flint flakes, a further undiagnostic piece of burnt flint and three tiny spalls, two of flint and one of chert. None of the pieces found in association with the cairn enlargement were clearly sealed beneath it, but could have dropped down through the stones after it was built. Other pieces were found across the trench beyond the cairn, all within the upper prehistoric soils both in the cleared and uncleared areas. Much of the flintwork appears to be randomly distributed, although there is a slight tendency for it to concentrate around the outer edge of the cairn enlargement and on the uncleared ground to the east. However, there are no apparent differences in material used in these areas when compared to the flintwork distribution as a whole.

The sources of the raw materials used are largely unclear. The main exception is the black chert, which outcrops in thin beds and nodules on the limestone plateau just a few

kilometres away, as for example around Ashford. The flint has been imported into the region but a variety of sources are known. Nodules commonly occurs in chalk, as in the Yorkshire and Lincolnshire Wolds and areas further south, but it is also found as pebbles closer to the Peak District, in the Trent river gravels to south and east, and in glacial deposits as on the Cheshire Plain to the west. Thus, sourcing flint is often problematic and the flintwork from Sir William Hill as a whole could potentially derive from any of these areas, with one possible exception; Wolds flint is often a distinctive mottled light colour and none of this material occurs at Sir William Hill.

While it is possible some or all of the six pieces associated with the primary cairn were residual, deposited well before it was built, all are small pieces and may have filtered down through the stone after it and/or the enlargement were created. Taking the available indicators of relative date as a whole, all the debitage could be contemporary with or later than the primary cairn and/or its enlargement.

### **The Whetstone**

A whetstone was found below the lower stones of the primary cairn, at its north-western edge, on top of the soils beneath (Figs 10, 12, no. 66). This rectangular stone measures 143x81x19mm and is made from a very fine-grained equigranular sandstone, the grains predominantly of quartz. This material is not normally found in the immediate locale, but commonly outcrops on the fringe of the Coal Measures to the east, around Chesterfield, Dronfield and Sheffield (Bob Toynton *pers. comm.*). The whetstone comprises a flat block of stone and has well worn edges; it may well be a carefully selected stone rather than having been shaped before use. One end is ragged and may have been broken accidentally during use or from using it as a hammerstone; alternatively, this is accidental damage sustained when it was buried beneath the cairn. Both faces have distinctive concave profiles derived from use as a whetstone. A whetstone made from a similar material was excavated from the nearby cairnfield cemetery at Eaglestone Flat (Barnatt 1994, 334) and several examples have been found during the recent excavations at Gardom's Edge (Barnatt, Bevan and Edmonds 1995–2000).

### **The Saddle Quern**

Pit C was partially covered by a small inverted saddle quern (Fig. 12, no. 106). It comprises a rectangular slab, measuring 243x182x37mm, of fine-grained quartz-rich silty sandstone in which the mobilisation of iron has resulted in the formation of 'boxstone'. This is a material that commonly outcrops in the Coal Measures to the east and south-east of the Peak District (Bob Toynton *pers. comm.*). The underside face is flat, undamaged and appears to be unmodified with a naturally weathered surface. The upper or working face has a well-worn concave profile resulting from use. The grinding face is cut by shallow grooves and a number of 'peckmarks' to one end; this may represent an attempt to roughen the surface making it more suitable for cereal grinding. Similar features have been noted on a group of saddle querns found at Breedon-on-the-Hill in Leicestershire (Wacher 1964). The upper edges of one end and a side of the Sir William Hill stone have a chamfered bevel, a feature also noted on a quartzite saddle quern discovered at Mount Pleasant near Middleton by Youlgreave (Garton and Beswick 1983, 35). Both chamfers and roughening have been found on a saddle quern made from fine gritstone discovered at the Mam Tor hillfort above Castleton (Guilbert 1995, 33).



In the western part of the trench, beyond the cairn, two small pieces of gritstone were found, each with one face apparently worn smooth; these may possibly be fragments from a second but broken saddle quern.

### **The Chert Block**

This sizeable block of banded black/dark-grey chert (Fig. 8, no. 89) was found carefully placed within Pit B. It measures 74x72x47mm and both ends are rough, with a micro-stylolitic surface resulting from a bedding fracture (Bob Toynton *pers. comm.*). One end has a red colouration caused by the natural action of ferrous salts and there are crinoid fossils visible at the surface. The source is presumably somewhere on the limestone plateau to the south and west several kilometres from the excavation site, where 'massive' chert beds are common in the Eyam and Monsal Dale Limestones. There was no evidence that the block had been worked, apart from at one end, where the upper surfaces of the pitted mineralised area was worn smooth, probably a result of use as a rubbing stone.

## **APPENDIX 3: THE SOILS**

### **The Soils and Subsoil**

The cairn and surrounding prehistoric land surface was masked by a dark humic-rich peaty soil. Including an upper root mat, this was between 0.05m and 0.15m thick, and often about 0.10m. It is unclear when this peaty-soil started to form but it is associated with the deterioration of the original soils below and their podsolisation; it is assumed here that it was sometime in late prehistory or slightly after, as seems to be the case for many if not all prehistoric features on the East Moors, as for example on Highlow Bank, Eaglestone Flat and Big Moor (Barnatt 1991; 1994; 2001); this assumption needs more rigorous testing.

All the prehistoric soils on site have been highly podsolised, which made identification of prehistoric soil horizons difficult. All visible colour differentiations were the product of these post-depositional changes rather than reflecting prehistoric interfaces between soils and subsoil.

The upper parts of the prehistoric soils were a light grey-brown sandy loam, shading in parts to a light to mid-brown at depth, below which was a thin iron pan, variable black/red-brown in colour, at 0.08–0.30m below the prehistoric surface. Below this the soil/subsoil was a mottled dark-orange loamy sand, found particularly where the iron pan was at higher horizons and thus the soils above it were thinner, in the range of 0.08–0.15m. This loamy sand shaded into a lighter pale to bright orange subsoil sand below. Any recognisable original interface(s) between prehistoric soil and subsoil, potentially visible as a colour or texture change, had been lost due to the podsolisation.

Strong differences in the character of the soils to east and west of the cairn were observed. To the east the soil surface was very uneven, with several irregular high points and hollows. Here the soil was somewhat more compact than in the west and contained a significantly greater number of stones, often much larger than those to the west. They ranged in size from 60mm up to 200mm across, were mostly rounded in shape and found from the surface downwards. Notably, many had 'rotted' *in situ*, some with surfaces decomposed to a coarse grit, others totally decomposed but recognisable as stone-shaped



patches of the same coarse grit. The character of the soils and stones here strongly suggests this area had never been cleared or cultivated.

In contrast the soil surface to the west was relatively flat, except where breached by modern footpath erosion. There were fewer stones than in the east and no evidence for rotted stones. The stones present were relatively small, with weathered, rounded surfaces. The soils were also of a relatively uniform consistency. The contrast with the area to the east suggests the land immediately west of the cairn had been cleared of stone and cultivated. Although it may well have been less stony in the first place there were no rotted stones and the land surface appeared artificially flattened.

The soils in the interstices between the cairn stones were similar to those surrounding the cairn. The upper parts comprised a highly leached, pale grey-brown, loamy sand, for a depth of up to about 0.10–0.20m, particularly noticeable to the west; whereas below they were a light grey-brown sandy loam similar to that in the surrounding areas at the same horizon. To the south, in the cairn side, there was a thin lens of darker brown sandy loam with enhanced humic content, at about 0.10–0.15m depth below the base of the peaty-soil. This could be a relict topsoil that had established after the primary cairn was built but before the cairn was enlarged. However, it could be interpreted with equal or greater plausibility as the result of post-depositional podsolisation. All these soils were presumably a product of upwards accumulation due to action of worms and other soil living species, perhaps combined with wind blown material, deposited after the cairn was built (and enlarged), the latter derived from the surrounding area, perhaps predominantly to the west in the adjacent cultivated area. Below the cairn the soils were a mid-brown sandy loam similar to those at equivalent depth in the surrounding area. The soils in the surrounding area eventually enveloped the lower sides of the cairn by about 0.10m; to the south-west and north-east the edges of the cairn were largely buried.

#### APPENDIX 4: THE CALCINED BONE

A small amount of calcined bone was found deposited between the two stones in Pit A. The diminutive size of individual fragments and their small quantity was insufficient to conduct a detailed analysis. However, Andrew Chamberlain of the University of Sheffield carried out a microscopic examination of the larger pieces to a magnification of x20. He commented that the fragments showed surface channels indicating that they were from the inner parts of the bone or bones. The colour is a strong white and some surface cracks are visible, both good indicators of burning at temperatures in the region of at least 900° centigrade. This is a temperature consistent with bone from a funeral pyre, suggesting that these fragments may possibly derive from a human cremation.

Whilst a small quantity of charcoal was found in close association to the bone deposit there was no evidence to suggest that a substantial fire had taken place within the pit or the trench limits. The bone was found within a distinct dark soil, placed between the two flat pieces of gritstone. This fill was not found anywhere else on site, suggesting the possibility that the bone deposit and associated soil was cremation pyre debris from elsewhere purposefully brought here for deposition. The amount of bone present is significantly less than would be expected to remain after burning on a pyre, even if the cremation was that of a child, thus this deposit must be regarded as representing a token deposit or symbolic gesture.

## APPENDIX 5: PHOSPHATE LEVELS

A series of soil samples were taken during excavation with the aim of testing these for phosphate content. Samples were taken on a 1m interval grid across the trench as a whole, each of several grams, at three levels:

- At the surface of the prehistoric soil.
- At 10cm depth below the surface of the prehistoric soil.
- At the level of the base of the prehistoric cairn.

In the case of the first two, a few samples were not available at the cairn itself because of lack of soil at the grid points.

In addition to the above samples, the fills of Pits A, B and C were retained and these were also tested for phosphate content.

In all cases small samples of soil were analysed using a qualitative rapid spot test following recommended procedures (Eidt 1973). In the second and third spit a 50% sample (every other soil sample) was tested, while in the uppermost spit a 33% sample was examined. Three samples from each of the pit contexts were analysed, in each case giving consistent results.

In the first and second spits all samples gave no indication that any phosphate was present. In the lowermost spit this was also the case with the majority of the 36 soil samples tested. However, a very slight blue colouration on the filter paper at 5 samples, randomly distributed across the trench, indicated very low levels of phosphate present. These results contrasted with those from two of the pits. The calcined bone itself from Pit A gave a pale-medium blue discolouration indicating moderate amount of phosphate, while the associated soil and the soil in the pit in general had no detectable phosphate. Similarly, the soil from Pit B had no detectable phosphate. The soil from Pit C gave a pale blue discolouration, indicating low levels of phosphates present.

Because of the low levels of phosphate present, no further analyses have been undertaken, but the samples have been retained.

Given the sandy nature of the soils, it may be that the generally low levels of phosphates present may result from leaching during the podsolisation process. This said, the positive results from the recognisable bone in Pit A, and from the soil in Pit C, when contrasted with lack of phosphates elsewhere on site, may indicate that bone was once present in the latter pit, as well as the former. Given that it was unrecognisable to the naked eye, in contrast with that in Pit A, any bone in Pit C was presumably unburnt and has thus decayed because of the highly acidic nature of the soil here.

## APPENDIX 6: ENVIRONMENTAL SAMPLES

A series of soil samples were taken by Ann-Marie Heath from the central baulk, with the intention of carrying out detailed assessment, including particle size analysis, loss of ignition levels, magnetic susceptibility and soil micromorphology. These could have been used to identify characteristics of different soil levels that were not visible to the naked eye, such as original topsoil horizons obscured by podsolisation and the presence of wind blown material. However, the questions that potentially could have been addressed successfully by these analyses were mostly answered in other ways during the excavation and thus they were seen as inessential to the understanding and publication of the site.

Provisional observations on the soils have been provided by Ann-Marie. The identification of the buried soil surface beneath the cairn was already clear from the baulk section, but soil analysis may have told us something about its depth. When trying to identify wind blown or water borne material derived from soil erosion within prehistoric arable plots, her recent Doctoral research using soils in similar contexts on the East Moors, shows that this is problematic when assessing soils in the interstices between cairn stones; there are too many factors affecting each area of soil to provide meaningful interpretation. It is often only possible to assess this issue by studying soils which have built up on the upslope sides of cairns but this was impossible at the Sir William Hill cairn because the footpath erosion had heavily disturbed this area.

Two columns initially taken for work on soil micromorphology are also potentially suitable for pollen analysis. This was not undertaken, but they have been retained in suitable environmental conditions and are available for future study.

## APPENDIX 7: THE CHARCOAL

by Rowena Gale

A quantity of charcoal was hand excavated from pits A and B and wet sieving resulted in further small amounts from all three pits. Further small quantities of scattered charcoal were found elsewhere in the excavation. The recovered charcoal was examined to identify suitable species for radiocarbon dating.

### Materials and Methods

The charcoal from pits A and B was poorly preserved and friable, in contrast to much of the charcoal from elsewhere on site. The samples were prepared for examination using standard methods (Gale and Cutler 2000). Charcoal fragments were supported in washed sand and examined using a Nikon Labophot-2 microscope at magnifications up to x400. The anatomical structures were matched to prepared reference slides and, where possible, the maturity (i.e. heartwood/sapwood) of the wood was assessed.

### Results

The charcoal analysed is summarised in Table 5 and discussed below. Where a genus is represented by a single species in the British flora this is named as the most likely origin of the wood, given the provenance and period, but it should be noted that it is rarely possible to name individual species from wood features, and exotic species of trees and shrubs were introduced to Britain from an early period (Godwin 1956; Mitchell 1974). In badly degraded material it is sometimes difficult to distinguish unrelated taxa; as for example between *Corylus* and *Alnus* in the sample from the general pit fill of Pit A. Classification follows that of Flora Europaea (Tutin, Heywood *et al.* 1964–80).

The anatomical structure of the charcoal at Sir William Hill was consistent with the following taxa or groups of taxa:

|             |   |                |
|-------------|---|----------------|
| Betulaceae. | <i>cf. Alnus glutinosa</i> (L.) Gaertner, | European alder |
|             | <i>Betula</i> spp.,                       | birch          |
| Corylaceae. | <i>Corylus avellana</i> L.,               | hazel          |
| Fagaceae.   | <i>Quercus</i> , spp.,                    | oak            |

| Context  | <i>Alnus/<br/>Corylus</i> | <i>Betula</i> | <i>Corylus</i> | <i>Quercus</i>     |
|--|---------------------------|---------------|----------------|--------------------|
| Pit A — charcoal associated with calcined bone between the two central stones.   | —                         | 2 (< 1 gm)    | 4 (< 1 gm)     | 1r (< 1 gm), 1h    |
| Pit A — charcoal from the general pit fill.  | 6 (1 gm)                  | —             | 3 (< 1 gm)     | 8/s/r (< 1 gm), 3h |
| Pit B — charcoal from the upper part of the general pit fill.  | —                         | 3 (< 1 gm)    | 7 (< 1 gm)     | 2r (< 1 gm), 8h    |
| Charcoal in the prehistoric soil under the cairn to the east, probably under the extension rather than primary cairn.                      | —                         | —             | —              | 4h                 |
| Charcoal in the prehistoric soil above the lower stones of the cairn to the east, probably within the extension rather than primary cairn. | —                         | —             | —              | 6h                 |
| Charcoal in the prehistoric soil well beyond the cairn to the west.  | —                         | —             | —              | 8h                 |

Table 5: Charcoal analysed from the excavations at Sir William Hill with number of fragments identified and total weight given for radiocarbon samples (h=heartwood, r=roundwood, s=sapwood).

Pit A — The charcoal from between the two stones was very degraded but included oak (*Quercus* sp.), hazel (*Corylus avellana*) and birch (*Betula* sp.). That from the general pit fill comprised oak (*Quercus* sp.) and hazel (*Corylus avellana*), together with a few fragments recorded as either hazel (*Corylus avellana*) or alder (*Alnus glutinosa*).

Pit B — The charcoal was equally poorly preserved and included oak (*Quercus* sp.), hazel (*Corylus avellana*) and birch (*Betula* sp.).

Other Contexts — This comprised well preserved charred oak (*Quercus* sp.).

## Discussion

Given the context and finds from the pits the charcoal is likely to have been derived from fuel gathered in conjunction with the structured deposition here, perhaps from the local vicinity, and this included oak, hazel and birch. The significance of charcoal in these ritual deposits is unknown. The close correlation in the types of charcoal present in pits A and B, together with the similarity of the other deposits in the three pits and the two similar radiocarbon dates, suggests contemporary construction and use of these.

The character of the charcoal from pits A and B stands in contrast to that collected from under, within and around the cairn, which consisted entirely of oak heartwood. The origins of this charcoal are unknown. Since one of the samples occurred immediately beneath the cairn enlargement to the east, associated charcoal represents on-site activities predating the construction of this, perhaps even from the clearance of trees in preparation of the site before the primary cairn was built.

The site is located on gritstone upland that in prehistory probably had acid soils. Evidence from the charcoal analysis suggests that oak woodland or stands of oak and birch, with hazel, were growing locally. A Bronze Age cemetery on the gritstone uplands

at Eaglestone Flat provides comparable environmental data (Barnatt 1994). Charcoal from burial pits identified local woodland components of oak (*Quercus* sp.) and birch (*Betula* sp.), with small quantities of hazel (*Corylus avellana*), poplar (*Populus* sp.) and Pomoideae (probably *Sorbus* sp. — rowan or whitbeam).

#### APPENDIX 8: RADIOCARBON DATING

Two out of three suitable samples from charcoal within pits A and B were submitted to Beta Analytic, Florida, for AMS radiocarbon dating. The results, which are calibrated using the INTCA L98 calibration (Stuiver *et al.* 1998), are given in Table 6.

| Sample Code   | Sample Source  | Material Dated  | Measured Radiocarbon Age BP | Calibrated Age at 2 Sigma (95% probability) |
|---------------|--|---|-----------------------------|---|
| Beta — 171350 | Pit A — Charcoal from between the two stone at the centre of the pit, associated calcined bone | Charcoal — <i>Betula</i> , <i>Corylus</i> and <i>Quercus</i> (roundwood only) | 3630 ± 40 BP                | Cal BC 2130–2080 and 2060–1890              |
| Beta — 171351 | Pit B — Charcoal from the upper part of the general pit fill                                   | Charcoal — <i>Betula</i> , <i>Corylus</i> and <i>Quercus</i> (roundwood only) | 3670 ± 40 BP                | Cal BC 2140–1940                            |

Table 6: The AMS radiocarbon dates from pits A and B at Sir William Hill.

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