AN ARCHAEOLOGICAL SURVEY OF THE LANDSCAPE ON BIG MOOR AND RAMSLEY MOOR, BASLOW AND HOLMESFIELD, DERBYSHIRE (Scheduled Ancient Monument 136)

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BIG MOOR AND RAMSLEY MOOR

NORTH EAST DERBYSHIRE/DERBYSHIRE DALES

DERBYSHIRE

NMR No: SK 27 NE 1,13,18,19,28,35,41,53,54,78-98

NGR: SK 27300 75600

SCHEDULED ANCIENT MONUMENT No: Derbyshire 136

RSM No: -

Surveyed: 1991-96
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INTRODUCTION

The subject of this survey is an area of unimproved moorland (centred at *c.* 427300 375600), extending from White Edge eastwards and including part of the Bar Brook valley, the whole in the heart of the Peak Districts eastern gritstone upland, 4km NNE of Baslow; the area has Scheduled Ancient Monument status (Derbys 136). The majority lies in Baslow parish and forms part of Big Moor. However, that part east of Bar Brook lies within Holmesfield parish. The area surveyed contains one of the largest groups of prehistoric remains in the Peak District; these features are varied in type and layout, and preservation is unusually good. There is also evidence of later communication, industrial and agricultural features, including others related to the use of the moor for military training during World War II.

The Scheduled area, which was designated because of the prehistoric remains, covers approximately two square kilometres of ground, and its full extent was surveyed. The area is also part of the Eastern Moors Estate belonging to the Peak District National Park Authority - (henceforward PDNPA - At the time of the instigation of the project named the Peak Park Joint Planning Board - henceforward 'PPJPB' or 'the Board), and mostly falls within a larger sanctuary area created to conserve the archaeological and ecological interest here. Consequently a detailed survey of the Scheduled core area was desirable to facilitate management of this valuable resource by English Heritage as a Scheduled Ancient Monument and by PPJPB/PDNPA through its Estate Management Plan. The survey was also in line with the research interests of the Royal Commission on the Historical Monuments of England (henceforward RCHME), complementing several recent surveys undertaken to investigate identified evidence for prehistoric settlement (house stances and associated structures) within the cairnfields and field systems of the eastern gritstone upland of the region. The Board also wanted to further the understanding of the extensive prehistoric remains on the eastern moors, building on the recent work of both RCHME (1986; 1987a-d; 1990; Everson 1989) and the Board's Senior Survey Archaeologist (Barnatt 1986; 1987; 1989a; in prep a), and including a previous joint project (RCHME and PPJPB 1993; Ainsworth and Barnatt in press), with the long term aim of interpreting sites on its own land to visitors.

For these reasons, at the suggestion of the PPJPB, a joint project to survey and record the archaeological remains was undertaken by PPJPB/PDNPA and the Keele Office of RCHME.

PROJECT DESIGN

After initial reconnaissance it was decided to survey the Scheduled Area at a scale of 1:1000, the scale at which RCHME Keele Office had previously surveyed other remains on the eastern gritstone moors, including those surveyed during the previous joint project with PPJPB on Gardom's and Birchen Edges. All archaeological features were to be surveyed; in addition, topographical detail and major vegetation boundaries were to be included. While some parts of the boundary of the Scheduled Area are defined by natural and anthropogenic features, including a scarp and roadside wall to the east, and a scarp, stream and field wall to the west, others to north and south cross-cut the topography as arbitrary straight lines joining recognisable features. To the north, Little Barbrook Reservoir was excluded. Flexibility was included in the project design to include archaeological features a short distance outside the Scheduled Area where it was thought desirable for interpretative purposes. In terms of the prehistoric archaeology the Scheduled Area boundary was originally designated to encompass a self-contained set of remains; the survey reported here eventually confirmed this in general terms, the exception being to the north, where east of White Edge scattered features continue a short distance northwards.

In line with both RCHME and PPJPB/PDNPA practice, a multi-period landscape recording methodology was adopted for this survey. This provided a sound basis for interpretation and chronological development and allowed differential destruction of early features to be assessed. Such an approach is essential in the recording, understanding and communication of the archaeological resource as well as providing the necessary information for management purposes.

In the central area of the survey, west of Bar Brook on the main Swine Sty shelf, the survey built upon previously undertaken detailed survey by John Barnatt in 1983, 1987 (Barnatt 1989a) and 1989 (Barnatt unpublished). These surveys, which were originally produced at 1:200 scale, were reduced to 1:1000 scale and incorporated into the new survey. They were then systematically checked, including systematic re-inspection of features, selected re-measurement where it was suspected that redrawing was necessary, and the addition of newly-identified features. The whole survey was tied into Ordnance Survey (OS) National Grid using observations from triangulation pillars on White Edge and Birchen Edge.

The field survey reported here was undertaken between 1991 and 1996, with checking of selected features in 1997.

METHODOLOGY

The survey methodology is described in archive material complementary to this report. An archive of the metrical survey data has also been produced to facilitate long term management of the area (see **Survey Data Archive, Big Moor and Ramsley Moor**).

To complement the survey report, a descriptive catalogue of all archaeological features derived from field-notes has been produced (see **A Catalogue of Archaeological Features on Big Moor and Ramsley Moor, Baslow and Holmesfield, Derbyshire**), hereafter referred to as the 'Catalogue'. To facilitate access to specific aspects of the archaeology on Big Moor, concordances of feature types and survey sheet contents have also been produced. All archaeological features recorded have been allocated a unique number which provides the concordance between this report (numbers appear in brackets), the catalogue and field plans. Due to practical considerations - as two teams were often surveying at once - no attempt was made to use a continuous number sequence and thus there are gaps within that used. Descriptions and National Grid references (12 figure numeric to the nearest metre) of all individual features are given in the Catalogue. The same system of National Grid recording is used in this report.

Selected individual monuments or groups of monuments have been given National Monuments Record (NMR) numbers.

HISTORY OF RESEARCH

The archaeology of the Big Moor/Ramsley Moor survey area appears to have received little detailed attention until this century. The known exception are unpublished excavations on Ramsley Moor by the Sheffield antiquarian, Samuel Mitchell. These are documented in an unpublished letter to Thomas Bateman dated 1850. Mitchell noted that on Ramsley Moor in one day he *'opened ten tumuli, three very large ones, three of medium size and four of a small area'* noting they were all *'in the immediate vicinity of the two druidical circles'* and that two of the small examples lay within the Barbrook II stone circle (1626) [NMR No. SK 27 NE 1]. He observed that he used labourers and that the mounds comprised *'loose piles of stone, mixed with earthy matter and covered with earth'* but that *'Not one of these yielded the slightest indication of funereal matter tho the mounds are of a character to deceive the most practised eye'*, one of the mounds within the Barbrook II stone circle was re-excavated this century and was found to contain a disturbed cremation deposit, illustrating the ineptitude of Mitchell's workforce. Two years before Mitchell's excavations, Bateman, quoting a Mitchell letter dated 1846, had described the Barbrook I stone circle (1465) [NMR No. SK 27 NE 13] and noted that *'in its vicinity are many tumuli'* but did not record further excavations and presumably did not dig here himself (Bateman 1848, 115).

Early in this century, further unpublished excavations took place. The first of these, at around the turn of the century, was located against one of the orthostats of the Barbrook I stone circle (1465) [NMR No. SK 27 NE 13]. This was undertaken by Storrs Fox and Peat, the only finds being three flint flakes. In 1911 or 1912, at the instruction of the Duke of Rutland, Peat, his gamekeeper, dug two further trenches across the circle; no finds are recorded. Storrs Fox and Peat also carried out further excavations on the west side of the Bar Brook stream and elsewhere beyond the area under discussion here (Peat 1965). He described their activities west of the stream as comprising opening *'several mounds near Swine Sty finding a number of burnt bones and a few bits of pottery'*.

The field remains of Big Moor in general were first noted in print in the booklets produced by a local ramblers association, entitled the *Sheffield Clarion Ramblers Handbooks* (Ward 1928; 1948). These largely concentrate on packhorse routes and associated features, although the prehistoric remains on the shelf above Swine Sty are mentioned in passing as *'ancient British pit dwellings'*.

The first detailed investigation of prehistoric sites in the area was undertaken by Leslie Butcher, who surveyed many of the East Moors field systems between the 1940s and 1960s. A detailed survey was undertaken of the extensive remains at and above Swine Sty, thus including a substantial part of the Big Moor Central field system/cairnfield [NMR No. SK 27 NE 80], and a finished drawing produced. This was only published posthumously (Hart 1981, 59; Beswick and Merrills 1983, 33). At a similar date C. E. Exley of the Hunter Archaeological Society surveyed the Big Moor East cairnfield [NMR No. SK 27 NE 18], to the east of Bar Brook on Ramsley Moor (Riley 1960).

In the late 1950s, members of the Hunter Archaeological Society and others, started a campaign of excavations on Big Moor and Ramsley Moor. This appears to have had both research objectives and was also carried out because of a perceived threat to the monuments from afforestation; in the event this never took place. The first site to be excavated was a small cairn on Ramsley Moor dug in 1958 (1561) [NMR No.SK 27 NE 93]. This was a simple cairn with larger stones placed round its edge. No burials were identified but a

Langdale polished stone axe was found under the mound (Henderson 1960). A second small cairn nearby was dug in 1960 (1559) [NMR No. SK 27 NE 94]. This again was a simple cairn with no burials. It covered a possible shallow amorphous pit and the only finds comprised a quartzite tool, a small quantity of lithic debitage and three hazel nuts (Henderson 1979). More extensive excavations started at two nearby sites shortly afterwards. The Barbrook II stone circle was excavated between 1962 and 1970 under the direction of Geoffrey Lewis, then of Sheffield City Museum (1626) [NMR No. SK 27 NE 1]. These excavations have never been published, although Lewis published a radiocarbon date (Lewis 1966) and used a few details in his doctoral thesis (Lewis 1970); summary details have been provided elsewhere (Barnatt 1990, 55-7; 1996a; Barnatt and Reeder 1982). The circle was almost fully excavated and shown to be an embanked stone circle with single entrance, part-blocked by a later cairn, with a second cairn and a cist (probably once covered by a second mound) in the interior. Amongst the discoveries were four cremation burials, two in urns, and several cup-marked stones. Charcoal from within a cremation pit under the cairn in the interior gave a radiocarbon date of 3450+/-150 BP (BM-179). A large burial cairn (1463) above the Barbrook I stone circle (1465) was excavated for the Hunter Archaeological Society between 1964 and 1965 under the direction of Derek Riley [NMR No. SK 27 NE 95]. This proved to be a cairn retained by a drystone wall, with a low platform added to its eastern side. At the centre was a disturbed cremation burial, with other deposits nearby, while the platform covered an intact urned cremation burial; cup-marked stones were found in the make up of the mound (Riley 1981).

The second focal point for excavations in the 1960s and 1970s was at Swine Sty to the west of Bar Brook, within the Big Moor Central field system/cairnfield. Here a stone-footed building and several other parts of the interior of one of the enclosures defined by low banks at Swine Sty were excavated by the Hunter Archaeological Society between 1967 and the late 1970s [NMR No. SK 27 NE 96]. Although several interims were produced (Richardson and Preston 1969; Machin 1971; Machin and Beswick 1975) and a summary has been presented (Hart 1981, 63-65), no full account was ever published. A detailed analysis of the pottery and lithics is in preparation (Garton and Beswick in prep.). The main structures investigated were the small stone-footed building (1305), a possible much larger timber building beneath (1322) and a clearance cairn (1278). Artefacts include extensive pottery and lithic collections, and debitage from production of cannel coal rings of various sizes (Beswick in Machin and Beswick 1975). One radiocarbon date was obtained (3560+/-80 BP - HAR-123), but this does not relate directly to any of the structures.

Extensive analysis and reinterpretation of the prehistoric field remains on the Eastern Moors has been undertaken from the 1980s to date. The first phase has been completed. This comprised a systematic search of the eastern gritstone moors, preliminary survey of discoveries, and the making of interpretative comment relevant to the formulation of subsequent research design (Barnatt 1986; 1987). More general interpretative models for the region have been presented (Hawke-Smith 1979; Bradley and Hart 1983; Barnatt 1989c), questioned (Barnatt 1987; 1989c; 1996b; Barnatt and Smith 1991) and new models proposed (Barnatt 1996d; in prep b). Neolithic and Bronze Age radiocarbon dates have also been reviewed (Barnatt 1995).

Subsequent research has adopted four methodologies. Firstly detailed survey of specific field systems and cairnfields is elucidating their often complex nature. This has included the identification for the first time by RCHME of house stances contemporary with the prehistoric field systems on the Eastern Moors, and more generally the documentation of subtle indications of chronological depth (RCHME 1986; 1987a-d; 1990; Everson 1989; Barnatt

1989a; 1991; RCHME and PPJPB 1993). The house stances are often visible as slight terraces on slopes, such structures are common and previously well known in regions such as the uplands of northern England and southern Scotland (Jobey 1979; 1981a; 1983; 1985; Gates 1982; 1983; Gates and Ainsworth 1979; 1981; Burgess 1980; Halliday 1985; Everson 1989). One of the previously undertaken surveys is that of the central area of the Big Moor/Ramsley Moor survey area under discussion here (Barnatt 1989a). The Eastern Moors survey work has been augmented by detailed assessment of specific monument types (Neolithic enclosures - Ainsworth and Barnatt in press: stone circles/ringcairns - Barnatt 1989c; 1990; 1996a: barrows - 1989b; 1996b; 1996c: rock art - Barnatt and Reeder 1982).

The second research method has been excavation, out of necessity often undertaken on an *ad hoc* basis as a response to rescue or conservation needs. This includes small excavations at field boundaries and small cairns (Barnatt 1991; 1994; in prep. a); an open cemetery (Barnatt 1994); and stone circles (Barnatt 1996a; 1997). Several of these excavations have been within the Big Moor/Ramsley Moor survey area. In 1983 a small trench (619) was dug at a field boundary junction on the shelf above Swine Sty (Barnatt in prep a) [NMR No. SK 27 NE 97]. The earthen banks and soil beneath them contained charcoal which produced radiocarbon dates of 3070+/-70 BP (OxA-2292), 2990+/-70 BP (OxA-2293), 2820+/-70 BP (OxA-2294) and 3190+/-60 BP (OxA-2356) (see Barnatt 1995 for discussion). A pit and hearth below the banks provided evidence for Mesolithic activity dated by a further radiocarbon date to 8130+/-90 BP (OxA-2295). A second trench was dug in 1983 across one of the enclosure boundaries (1318) at Swine Sty; this demonstrated that it comprised a rubble bank rather than being a tumbled wall (Pauline Beswick unpublished). In 1987, Graeme Guilbert emptied the Storrs Fox and Peat trenches at the Barbrook I stone circle (1465) [NMR No. SK 27 NE 13], with the aim of gaining environmental data and restoring the site; the results of this work have not been published. In 1989 more extensive work was carried out at the Barbrook II stone circle after it had been badly damaged (1626) [NMR No. SK 27 NE 1]. While primarily a restoration exercise, it included excavation of stone holes and one of the earlier excavation baulks; a radiocarbon date of 3535+/-70 (OxA-2440) was obtained from under the latter (Barnatt 1996a). More recently research excavations have been started on Gardom's Edge to answer questions raised by the detailed survey here (RCHME and PPJPB 1993; Ainsworth and Barnatt in press) and to assess more general interpretative issues. This project is joint venture undertaken by the Department of Archaeology and Prehistory, Sheffield University and the Archaeology Service, Peak District National Park Authority (Barnatt, Bevan and Edmonds 1995; 1996; 1997). To date excavations have included work at several clearance cairns and linear clearance features, three trenches at a linear stone bank that crosses one of the field systems, and at an 'enclosure' it overlies, trenches at two small cairns which may well have been funerary in character, two trenches across a probable Neolithic enclosure, work round an earthfast boulder with rock art, and the total excavation of a house stance. The last has produced an important collection of Later Bronze Age/Earlier Iron Age pottery.

The third research method involves the systematic collection and recording of artefacts from ploughed fields in zones adjacent to moorlands containing field remains (Myers 1991; Barnatt 1994; Barnatt *et al* in prep.). Evidence for activity for all periods from the Mesolithic to the Bronze Age has been found.

The fourth research method comprises environmental research. This has been undertaken at several of the excavations noted above, and also in nearby bogs as the subject of doctoral research into the palynology of the Eastern Moors (Long 1994; Long *et al.* in press.). This complements earlier work (Hicks 1972), and includes work on one pollen core within the Big

Moor/Ramsley Moor survey area (at SK 273756) and two more in adjacent areas, one at Lucas Moss close by to the north (SK 768266), the other at Stoke Flat to the north-west (SK 255765). This research has demonstrated that several of the better aspected field systems on the Eastern Moors continued in use until the late first millennium BC and possibly into the early Roman period.

GEOLOGY AND TOPOGRAPHY

The main topographical determinants for this part of the Eastern Moors are relatively thick beds of course sandstones of the Millstone Grit Series and Lower Coal Measures (BGS 1974). These form scarps and shelves, while between these are softer beds, predominantly shales interleaved with thinly bedded sandstones, than underlie the lower dip slopes behind scarps and shelves. The Eastern Moors have two main scarps facing the Derwent to the west, with a prominent shelf between and further east beyond the upper scarp there are somewhat higher shelves. The survey area includes part of the upper scarp and land east of this which comprises a series of upper shelves which are cut north/southwards by the Bar Brook stream.

To the west the main topographical feature within the survey area, White Edge, comprises Crawshaw Sandstone. This forms the western edge of the survey area and here is a south-west-facing scarp which rises significantly higher than other parts of the survey area, with a crest at between 320 and 365m above OD. To the south-east, the Crawshaw Sandstone outcrop drops to a prominent shelf, sited above Swine Sty, which runs north-eastwards to a point where it is dissected by Bar Brook. East of the stream the outcrop runs south-westwards with a prominent shelf above. Both these shelves, which consist of flat or gently sloping land, lie between 295 and 320m OD. Behind the shelf east of Bar Brook, and in the area west of the stream in the northern part of the survey, there are underlying shale dominated rocks. In the same two areas there is also an upper bed of sandstone which forms a low knoll west of the stream, known locally in the 19th century as Round Knoll, and a low un-named scarp at the north-eastern edge of the survey area. These reach 332m OD and 321m OD respectively. In the southern part of the survey area, below Swine Sty, there is a band of sandstone which geologically lies below the Crawshaw Sandstone and forms the uppermost bed of the Millstone Grit Series. This sandstone, the Rough Rock, forms a lower shelf, the scarp of which falls within the survey area to the west above Sandyford Brook at between 295 and 310m OD. Between this crest and the Swine Sty shelf is a large area with underlying shales.

A further prominent topographical feature within the survey area is the Bar Brook valley. This stream rises on Totley Moss *c.* 3km to the north and eventually cuts the main East Moors scarp and drops to the River Derwent. Within the survey area it runs north/south and cuts the main Swine Sty shelf as a steep-sided valley that is up to 25m deep. South of the shelf this valley widens out and the land rises gently to the shelf scarps above. Further west, the edge of the survey area is defined by the similar but smaller valley of Sandyford Brook.

A small part of the survey area to the north, on gently shelving land immediately to the west of Bar Brook, is covered with 'head' deposits of periglacial origin. Further south a small un-named tributary of Bar Brook drains down from the shelf area east of White Edge. Here, parts of the dendritic stream gullies contain relatively thick peat deposits. Similarly, the parts of the main shelf east of Bar Brook set back and down-dip from the scarp, where the bedrock is dominated by shale, are overlain by a thin blanket bog which is recognisable from its vegetation as being somewhat thicker than the thin peaty soils found generally across the survey area.

Although the published geological map does not show coal seams within the survey area, the rock sequence present suggests that at least one coal seam, the 'Soft Coal or Coking Bed' should be present. Stratigraphically this lies a short distance above the top of the Crawshaw Sandstone and thus is predicted to outcrop on the shelves in the northern part of the survey area to either side of Bar Brook. That bell pits have been identified west of Bar Brook on

Round Knoll supports this suggestion. The excavations at Swine Sty have demonstrated prehistoric exploitation of cannel coal for producing decorative objects. Whilst presumably the outcrop source is relatively local, it is currently not known.

SOILS AND VEGETATION

The soils within the survey area vary according to the various parent rocks below; the differences are significant when considering prehistoric agriculture. Where the sandstones form the bedrock, the natural soil as present in prehistory was an acid brown earth. These light sandy soils have subsequently degraded, becoming podsols and stagnopodsols, and are often overlain by thin peat or peaty soils. The shales and head deposits produce heavy soils with a high clay content. These are usually stagnohumic gleys, again with a thin peat cover. As noted above, peat development is more advanced on the exposed west-facing shelf situated east of Bar Brook and in the stream gullies on the shelves further west. In the latter, peat depths of up to *c.* 1.5-2.0m have been recorded (Long 1994).

Today, the relatively well-drained sandstone areas are mainly heather moorland. The heather is periodically burnt, usually in small controlled burns, and thus visibility of the archaeology varies accordingly. At the time of survey old 'leggy' heather predominated and may have impeded recognition of some slight archaeological features. In lower areas, where the land is relatively flat, a mosaic of heather and purple moor grass is common. In the areas with underlying shales and clay, tussocky purple moor grass predominates, but again often as part of a mosaic with other grasses and heather. On the wettest parts of the land, feature recognition may again have been impeded in that it is possible that thicker peats mask ancient structures. However, little evidence such as features running under the peat was found to support such a suggestion.

Parts of the better drained areas, most commonly on the steep valley and scarp sides but sometimes also on the shelves, are covered in bracken. These areas were surveyed over several spring times while the bracken was down and before new growth impeded visibility.

The whole of the survey appears to have been open grazing throughout the historic period. It was part of the wastes and commons of Baslow and Holmesfield from the medieval times onwards. The earliest available cartographic documentation is an estate map of 1799 drawn for the Duke of Rutland as lord of the manor, which shows that all the unenclosed land in this part of Baslow parish was known as the 'Moor Common' (anon. 1799). The moorland across the survey area as a whole was granted to the Duke of Rutland in the Enclosure Awards of 1820 for Holmesfield (anon. 1820) and of 1826 for Baslow, Bubnell, Curbar and Froggatt (anon. 1826). The area became part of the extensive Longshaw Estate whose chief *raison-dètre* was grouse shooting. The Duke of Rutland sold this part of his Longshaw Estate in 1928 to Chesterfield Rural District Council who already had two reservoirs on Big Moor/Ramsley Moor (Ward 1929). The area was subsequently managed by the North East Derbyshire Joint Water Committee and in 1984 it was sold to the Peak Park Joint Planning Board by the Severn Trent Water Authority.

RESULTS

The present survey has brought together in one standard format a large number of prehistoric archaeological features that have been known for many years and recorded to a variety of standards. In some cases, as on the White Edge dip slope, this is first metrical survey to be carried out of previously recorded features. A number of newly identified prehistoric features have added to the detailed understanding. Much of the medieval and post-medieval archaeology has been systematically recorded for the first time. In total, over 1800 archaeological features were surveyed and catalogued.

The prehistoric field systems and cairnfields within the area surveyed, which comprise the most extensive surviving visible archaeology, date from the second and probably the first millennia BC and the survey has demonstrated chronological depth and important differences within their organisation and form. A number of associated settlement features and ceremonial/funerary monuments have been recorded. While it is recognised that many of the features are Later Prehistoric in date, and could date from the Bronze Age and/or Iron Age, in the catalogue the term Bronze Age is used throughout purely as a shorthand.

Later features include important packhorse routes, mostly evident as hollow-ways [NMR No. SK 27 NE 98] and associated features such as guide stones [NMR No. SK 27 NE 91], surface quarrying [NMR No. SK 27 NE 74], bell pits, probably for coal [NMR No. SK 27 NE 75], grouse-shooting features [NMR No. SK 27 NE 76] and a reservoir used for public water supply [NMR No. SK 27 NE 77]. A range of monuments relating to the use of the moors for military training during World War II [NMR No. SK 27 NE 78] have also been identified which represent the only intensive use of the area as a whole for anything other than grazing and recreation in the historic period.

DESCRIPTIVE ACCOUNTS AND ANALYSIS

The following accounts provide a synthesis of the archaeology of the survey area, underpinned by the detail of individual features recorded in the Catalogue: the two should be treated as complementary documents. Numbers in ( ) refer to the Catalogue descriptions, numbers in [ ] refer to the relevant National Monuments Record (NMR) number.

PREHISTORIC MONUMENTS

Field Systems and Cairnfields (see Appendix 1) **[NMR Nos: SK 18, 79, 80, 82, 83, 84]**

The prehistoric field systems and cairnfields within the survey area, can be broken down locationally into three large areas, each in a different topographical part of the survey area (see Appendix I). For ease of referencing within this text, the archive and the NMR, they are identified as follows: Big Moor West [NMR No. SK 27 NE 79]; Big Moor Central [NMR No. SK 27 NE 80] and Big Moor East (Ramsley Moor) [NMR No. SK 27 NE 18] (see Appendix 1). While the last lies on Ramsley Moor it seems appropriate to use the Big Moor name, both for consistency with previous published description (Barnatt 1986), and more importantly to reinforce the likely prehistoric inter-relationships which presumably were not divorced by the township divisions of historic times.

In addition to the three main areas just noted, there are between one and three small isolated areas of similar remains. They are identified here as Big Moor North-West [NMR No. SK 27 NE 82], Round Knoll [NMR No. SK 27 NE 83] and Big Moor South [NMR No. SK 27 NE 84].

Taking the field system/cairnfield remains within the survey area as a whole, they largely comprise a complex and varied mixture of linear boundaries and small cairns. All three of the main areas also have overtly funerary/ritual monuments which are spatially integral. Similarly, all have evidence for associated settlement. While discrete cairnfields and discrete field systems occur within the survey area, more commonly the two occur together with no recognisable differences in cairn size, nor their morphology and distribution, when compared with cairnfields without boundaries. Of the 473-582 small cairns surveyed, only four have morphological characteristics which suggest they may have an overtly funerary nature (see **Burial Cairns and Platforms**). However, it is recognised that the function of cairns cannot always be determined on morphological attributes alone; some clearance cairns may also contain burials (Barnatt 1986; 1987; 1994; in prep. b; Barnatt and Smith 1991; Barnatt et al. 1995; 1996; 1997). For all these reasons the field boundaries and small cairns are described together within the relevant field system/cairnfield texts, alongside discussion of the distribution of settlement and overtly funerary/ritual monuments. The sections below on **Settlement** and **Ceremonial Monuments** thus confine themselves to morphological considerations and summaries of past excavations.

There are strong morphological contrasts between each of the three main field systems/cairnfields described which offer an ideal opportunity for the study of local differences and change through time. The Big Moor East area comprises a cairnfield with little field boundary definition, although even here there is strong evidence to suggest a primarily agricultural as opposed to funerary interpretation (see below). In contrast, the Big Moor Central area has both well-defined fields and large numbers of small cairns in a

complex palimpsest. The fields are variable in shape and size and only at the northern, eastern and south-western fringes are they poorly defined. The Big Moor West area can be divided into three main zones. To the north and south, boundary development is poor while cairns are common, although in the north the cairns are non-randomly distributed and correlate to intermittent linear boundary development. In the central zone there is a well defined field system with few cairns. The isolated remains at Big Moor North-West, Big Moor South and Round Knoll have poor boundary development.

Although, as just noted, there are strong contrasts between the field systems/cairnfields in the survey area, they all lie within the normal range of variability found on the gritstone moors of the Peak District (Barnatt 1986; 1987; in prep. b). As to be expected, the prehistoric agricultural remains in the survey area are located according to obvious topographic constraints in that relatively flat areas have been chosen while the steeper rocky scarps and valley sides were avoided. Examining less immediately visible factors shows that they also occupy areas where the prehistoric soils were light and sandy; areas with heavy clay soils were avoided, as on the large shelf south-east of Swine Sty (centred *c.* 427500 375000) and that below the scarp at the north-east edge of the survey area (centred *c.* 428000 375800); minor exceptions occur below the scarp of the main shelf of the Big Moor Central area, where small areas of irregular enclosure exist over shale bedrock (centred *c.* 426980 375050, 427650 375300 and 427260 375000). However, these small areas may have been utilised both because of the immediate proximity of settlement foci (see below) and because the clays here may have been better drained than normal because a mixing of sand from the scarp immediately above.

One important interpretative factor that emerges from this survey is that not all areas with prehistoric sandy soils were utilised for agriculture. This is particularly true to the north-west where there are large areas of the White Edge dip slope with no field systems or cairnfields. Large parts of these have enough stone on the surface to demonstrate they have never been cleared for cultivation. While it could be argued that this part of the survey area is a little less favourable in terms of aspect and altitude in comparison with the three main field system/cairnfield areas, and thus it lay beyond the local upper limit of viable agriculture, elsewhere on the Eastern Moors of the Region, such as at Bamford Moor further to the north, there are cairnfields despite being at significantly higher altitude (Barnatt 1987). Thus, it may well be that use and avoidance of areas has more to do with the social dynamics of the prehistoric people who farmed this area and with how they chose to farm. This point is emphasised by a low, flat-topped ridge at the heart of the survey area (centred *c.* 427000 375630). This has no convincing trace of prehistoric settlement or agriculture, despite being adjacent to, and with similar topography to, the extensive Big Moor Central field system/cairnfield (the only features are a short stretch of possible linear clearance (1505) which may alternatively be upcast from a post-medieval bell pit, and a small area of possible clearance stone (1499)).

One interpretative point raised in the Gardom's and Birchen Edge survey report (RCHME and PPJPB 1993, 35-6) is the possibility that not all prehistoric cultivation area may be visible at surface today, particularly in areas where there is little surface stone to be gathered. In the Big Moor Survey area the evidence gives no support to this suggestion and may argue against it. In one part of the Big Moor Central field system (centred *c.* 427250 375450) and in the central area of the Big Moor West field system (centred *c.* 426600 375550) there are virtually no cairns, presumably because there was little stone to clear, but here boundary definition is at its best, the features being earthen and probably formed because of soil loss. No such areas

of earthen boundaries exist beyond the three main field system/cairnfield areas. In the clay soil areas there are three small areas of prehistoric cultivation, as noted above. These are clearly identifiable, while areas in a similar topographical situation elsewhere below the scarp, which presumably have similar amounts of buried stone, have no trace of prehistoric clearance.

Recent research into the field systems and cairnfields of the Peak District's Eastern Moors has identified increasing evidence that their creation and use are not restricted to an Earlier Bronze Age horizon. Continuing exploitation into the Later Bronze Age has long been suspected (Barnatt 1986; 1987) and confirmed by radiocarbon dates from a small excavation within the Big Moor Central field system and from Eaglestone Flat (Barnatt 1994; 1995; in prep. a). Analysis of the pottery from Swine Sty within the Big Moor Central field system has demonstrated that much of this is of Earlier Bronze Age to Earlier Iron Age date, with small quantities of later material including Romano-British sherds (Garton and Beswick in prep.). Recent excavation of a timber house on Gardom's Edge has provided a large collection of Later Bronze Age or Earlier Iron Age pottery (Barnatt et al 1995; 1996). Recent palaeonological work has included analysis of one pollen core from within the Big Moor survey area (Long 1994). This was taken from a small mire west of Bar Brook, close to the confluence of the two main branches of the un-named stream draining the White Edge dip slope (at *c.* 427300 375730 - taken from her location plot - her stated location of SK 273756 appears to be in error). The core had high arboreal pollen levels through Later Prehistory but also included cereal and grassland pollen. The trees may well have been growing in the adjacent poorly drained areas, in the steep Bar Brook valley to the east and on the low ridge to the west where no prehistoric cultivation features have been identified. The cereal and grassland pollen will have derived from the Big Moor Central field system/cairnfield to the north-east and south of the sample site. A radiocarbon date of 1396-1000 cal. BC at two sigma (BETA-67573) was derived from the column at a point which relates to the beginning of a period of opening up the woodland and an increase in ruderal species, indicating increased agricultural activity in the immediate vicinity. At a significantly later date the arboreal pollen levels decreased dramatically and cereal pollen declines. A similar picture occurred at Stoke Flat, 2.1km away to the north-west. Here the arboreal decline was dated to 380 cal. BC - 194 cal. AD at two sigma (BETA-52534) and is probably the time at which the adjacent field system was abandoned (Long 1994; Long *et al.* in press). It remains uncertain if it is appropriate to correlate a date from one pollen core to another except in the broadest of senses. However, the date at Stoke Flat raises the serious possibility that the field systems on Big Moor continued in use into the late Iron Age or early Roman periods. Given that the field systems on Big Moor, taking all the dating factors noted above, thus have a potential date range of *c.* 1000 to 2000 years, it is anticipated that significant changes took place in farming practice and in how individual areas were used. Thus, it should not be assumed that individual features necessarily function together, nor that the significant differences between the three main field system/cairnfield areas reflect activities that are contemporary with each other.

When the agricultural areas identified within the survey area were first divided into bounded fields is another issue which needs consideration; there may well have been prior exploitation which comprised seasonal grazing and cultivation in plots with no formal edges. The evidence for the Peak District strongly suggests the beginning of intensive activity, and probably the creation of field boundaries, took place some time in the Earlier Bronze Age (Barnatt 1996d; in prep. b). However, the creation of some of the clearance cairns may have taken place in the Neolithic or early Bronze Age, at a time before the field systems were created.

As a general rule the only significant disturbance of the field systems and cairnfields in historic times which affects interpretation of the visible remains are the extensive hollow ways that cross them. Where this occurs many of the breaks in prehistoric field boundaries are the result of later traffic passing through. Similarly, where hollow ways are extensive over broad swathes of ground it is often unclear what has been destroyed.

In order to avoid confusion over terminology and interpretation of the field systems and cairnfields within the survey area, several definitions need clarifying prior to the detailed site descriptions being given. While there are a large number of features that reflect the positions of field boundaries, these features may in themselves not be built boundaries. Low and sometimes discontinuous earthen banks and lynchets may reflect erosion as a result of cultivation processes or more commonly because of subsequent soil erosion (cf. Barnatt 1987; in prep. a; in prep. b), therefore it should not be assumed they are built features (see Big Moor Central). Short stone banks, termed here linear clearance, may well be clearance features piled on or against field boundaries or edges of uncleared ground rather than being collapsed walls. Even in the case of longer stone banks there is no positive evidence that they ever comprised anything more than linear piles of stone. Another term employed here is 'boulder scarp'. These comprise lynchets incorporating earthfast boulders along their length. These may only give the illusion of being part of field boundaries. Alternatively they could occur within fields at natural barriers to spatially continuous cultivation. Thus, a distinction should be drawn between fields and cultivation plots, the former being defined here as having possessed formal boundaries, the latter being defined as cultivable areas within fields which in some cases at least may take up only parts of fields or be separated from other cultivation plots within a field by natural features. Other cultivation plots may have existed that were never contained by field boundaries. All features listed as cairns are discrete heaps with at least some height. However, in a few cases, particularly in naturally stony areas, there is evidence that cleared stone was added in small amounts. While the extent of such clearance can usually be defined, it did not develop into discrete heaps.

Big Moor West [NMR No. SK 27 NE 79]

This field system and cairnfield, centred at *c.* 426600 375550, occupies the relatively gently east-facing dip slope of White Edge. To the west it terminates at the White Edge scarp, while to the east it stops short of a wet flush, except to the north-east where there is an eastward extension of the remains. The altitude range is *c.* 330-360m OD. The underlying geology is Crawshaw Sandstone throughout, which in prehistory would have been covered by light sandy soils. The field system/cairnfield's approximate extent is 13 hectares, it occupies a *c.* 750m long stretch of White Edge and is *c.* 110-280m wide. However, the boundary drawn to the south is arbitrary and effectively the Western and Central field systems/cairnfields here are conjoined; it is unclear if the two were conceived as separate entities in prehistory, or whether the division is of our creation, based purely on topographic distinctions. The exact boundary decided upon for the purpose of this report is an arbitrary line (running between 426730 375190 and 42692 375300) which follows a narrow possible break in the cairnfield features. An alternative choice would have been to separate the two systems at the Big Moor ring cairn (1392) which is more topographically correct, but there is no perceivable break in the agricultural remains here.

The main Big Moor West field system/cairnfield can be divided into three areas on morphological grounds and there are two smaller outlying areas to the north and north-east. At the centre the main field system/cairnfield has near-continuous field boundaries, while to

north and south they are less well defined. To the south there are few traces of these and the density of cairns increases. Much of the field system/cairnfield occupies ground which at the surface is now relatively stone free; areas of boulders that were dense enough to inhibit clearance seem largely never to have existed; the exceptions being in patches near the scarp crest and along a ridge at the northern end of the system, where the ground is significantly stonier and in places heavily boulder strewn.

The only previous lower level survey of this field system/cairnfield is a paced sketch survey (Barnatt 1996) and there are no recorded excavations of any of its features.

In total the catalogued agricultural features in the Big Moor West field system/cairnfield comprise:

64-77 clearance cairns
27 linear clearance heaps
1 stone bank
15 earthen banks
15-17 lynchets
5 stony lynchets
4-5 boulder scarps
5 cultivation edges
3-4 patches of clearance stone

The field system/cairnfield is different from the remains at Big Moor Central on the shelf below in that it contains discrete areas where different types of field remains exist. Each of these areas will be considered in turn.

The Central Area

The central area, centred at *c.* 426580 375550, comprises a minimum of 3-5 relatively large fields extensively defined by earthen banks/lynchets, with stony features incorporated. Away from the banks, the interiors of the fields are stone-free and the paucity of clearance cairns stands out in strong contrast to the majority of field system remains within the survey area. Only two such features have been identified (2465/2472) together with one small area of possible clearance stone (2482). The field banks/lynchets are largely earthen but also contain stony clearance features, including eight cairns (2453/2459/2471/2467/2595/2600/2682/2684) and five linear clearance heaps (2454/2458/2475/2477/2599). At cairn 2451 there is no visible boundary immediately to either side but this is on the line of a boundary defined by feature 2452 and meeting the end of 2455. In one case (2418) the field bank appears to be continuously stony for *c.* 50m; it is uncertain if this is an unusually long clearance feature or whether it was built of stone for other reasons. There are generally no indications whether the stony features predate the low earthen banks or are placed on their crests. Recent excavations on Gardom's Edge (Barnatt et al. 1995;1996; 1997) have demonstrated that the chronology of boundary features is usually not this simple, but that they have evolved gradually. Given that the banks themselves may be the product of hedges trapping wind blown soil and of the surrounding field surfaces being lowered (see Big Moor Central), then bank creation and clearance-stone addition may well have been an episodic or intermittent process throughout much of the lives of the fields.

The most obvious fields, and the most continuously defined are two long examples with near-parallel sides. That to the south is the largest, is orientated WSW/ENE and is defined by

features 2418/2464/2468/2598/2599/2601 and possibly 2463/2590/2591. A possible internal subdivision is considered below. At the upslope end it runs from the scarp crest, while at the downslope end it stops well short of the steeper slope and the wet flush below; there is no positive evidence that the field system continued to the top of this slope here. The northern field is orientated west/east and its sides are defined by two closely parallel curving banks (2452/2454 and 2455). The upslope end stops short of the scarp crest and appears to be defined by bank 2526 (although there may be some chronological depth here - see below). The downslope end is not well defined, but cairn 2451 lies on its line. Below this boundary line is a further field defined by features 2452/2460 and possibly 2444/2447/2684. This has a more sub-rectangular shape and occupies the area down to the steep slope and wet flush below.

Between the two long fields described above is a large wedge-shaped area which was possibly one large field at one phase of the field system's life. However, there are three fragmentary boundary lines within this area (2457/2458, 2471/2683/2684 and 2475/2476/2477/2481). The last may be the upslope edge of this field, matching the upslope end of the northern field, and in turn indicating that there was a third long field at right angles to the other two running along the scarp crest. However, the other two boundaries in the wedge-shaped area do not fit comfortably with the field layout as described above. This opens the possibly that the identified remains have significant chronological depth, these two boundaries (and possibly all three) being part of a different and less regular field layout. The internal boundary (2596/2597) within the southern long field is aligned at right angles to that at 2471/2683/2684 and may well be part of the same layout. If this postulation of two field systems is correct, it has implication for the character and use of the fields. Whichever of the systems is the later either had little cultivation, leading to the survival of earlier features, or the nature of cultivation was such that it was not inconvenient to go round barriers. Given that some of these 'barriers' are low and earthen, and thus easily removed, this either suggests little cultivation took place (but see below) or that they were once surmounted by shrubs along the lines of earlier boundaries. That both systems have earthen boundaries suggests cultivation did indeed take place in both systems. As the existence of the visible earthen banks may be the product of soil erosion, differences in the relative visibility of each system cannot be use to determine chronological sequence, as the difference may be the result of different emphases on arable and pasture at different times.

The Northern Area

The northern area of the Big Moor West field system/cairnfield, centred at *c.* 426500 375700, is similar to the last in that large fields can be recognised, but different in that boundary definition is less complete. These boundaries are largely recognisable from lines of spaced cairns and linear clearance heaps in similar arrangements to those in the central area. However, the linking earthen features are usually absent; only three short stretches of earthen banks/lynchets were identified (2489/2527/2529). This lack of banks could be interpreted as being the result of less soil erosion than further south, perhaps because of more intermittent or a shorter period of use for arable. Away from the boundaries, the interiors of the fields are stone-free and again there is a paucity of clearance cairns. Only two such features can be postulated (2443/2490), but their relationship to field edges is far from clear and they could perhaps be interpreted with greater plausibility as being at boundary positions.

The northern area contains at least three fields. At the scarp crest is a large irregular area partly defined to the south by lynchets 2527/2529; to the north-west by cairns, linear clearance and clearance stone (2496/2497/2498/2499); to the north-east by a line of cairns

(1554/2501/2502/2503/2504) and further east by linear clearance (2524/2525) and boulder scarps (2494/2521/2740/2741); and to the east by earthen banks 2489/2526. It may well be that this area originally comprised two sub-rectangular fields, as indicated by the change of angle between features 2740 and 2741. However, no visible trace of a boundary dividing two fields was recognised. Conjoined with the irregular area just discussed on the downslope side is a further sub-rectangular field. This is partly defined to the west by earthen bank 2489; to the north by a line of cairns 2490/2491/2492/2494; to the east by lynchet 2452; and to the south by one of the continuous boundaries of one of the central area fields. A further rectangular field, smaller in size, lies yet further east. This is partly defined to the south by linear clearance 2444/2447 and cairn 2685; to the west by cairns 2442/2443/2490; and to the north by cairns 2435/2437/2436/2438/2439/2440/2442. The eastern side is not visible.

All these fields are conjoined with the long fields of the central area and the only possible indicator of chronological depth is at the north where probable boulder scarp 1553 and lynchet 2500 appear to lie beyond the field edge as defined by a line of cairns.

The Southern Area

The southern area, centred at *c.* 426800 375320, differs from those described above in that boundary definition is poor and in parts cairn density is higher. This is particularly true in an area measuring *c.* 220x100m across centred on *c.* 426800 375310. This runs downslope from a boulder strewn area close to the scarp crest and may well have been a naturally stonier area than much of the rest of the dip slope.

In the area immediately south of the central area of the Big Moor West field system, there is evidence of at least one further large field, although boundaries are fragmentary as in the northern area of the system. This field is partly defined upslope to the south-west by lynchets 2592/2615, cultivation edge 2593 and bank/linear clearance 2611/2613/2614; by a line of cairns and linear clearance to the south-east (2616/2618/2620/2621/2625/2626/2686/2784); and by the continuous boundary of one of the central area fields to the north-west. The north-eastern boundary is ill defined, it may have stopped opposite cairn 2686, but a probable cairn at 2687 and a short stretch of linear clearance at 2688 suggests either the field continued further north-eastwards or that there was further field here. Within the large field just described there is one further boundary feature (2605). This can either be interpreted as indicating the western part of the 'field' was subdivided, or that this feature is a further indicator of chronological depth as found in the central area of Big Moor West. To the south-west, bank 2610, stony lynchet 2606 and linear clearance 1726/1726, all along the edge of boulder-strewn ground, together with bank 2611/2614, probably indicates there was a further sub-rectangular field here.

South of the area just described, beyond a narrow area where no features have been identified, is a cairnfield with 22-26 clearance features. This area is primarily agricultural rather than funerary, as indicated by the irregular nature of many of the cairns, by a house site (see below), and by two relatively long stretches of near-parallel linear clearance (2646/2668) which demonstrate the former presence of field boundaries. A discussion of the agricultural character of cairnfields with few or no presently-visible boundaries is given under Big Moor East.

North-East

To the north-east there is a small area, centred at *c.* 42683 375770, with sinuous boundaries defined by linear clearance and lynchets, together with a few small cairns. While

fragmentarily defined, the impression gained from what is visible suggests the enclosures here were smaller and less regular than the fields on the dip slope to the south-west. The presence of a possible house site (see below) reinforces the view that these are yards and/or garden plots associated with a settlement.

Between this area and the fields to the west/south-west is a small cairn (2425) and a possible cairn (2419). These illustrate the possibility that the ground between the two may have had trial cultivation. However, the generally somewhat stony land surface in this general area indicates that intensive or prolonged cultivation has never taken place.

Far North

To the extreme north, on the other side of the stony ridge here, there is a small area, centred at *c.* 426480 375880, which has further possible prehistoric remains. These were identified in a heather burn and similar features may well exist beyond, not visible because of thicker heather. They were catalogued in the field as cairns (2514/2518/2520) a possible cairn (2516), patches of clearance stone (2515/2742) and cultivation edges (2517/2519), all within an intermittently naturally stony area. In one of the authors opinions (JB), while at least three of the features are very cairn-like, it may well be that this is illusory and that these concentrations of stone are part of the non-random distribution of stone that occurs here naturally.

Settlement

Only two potential house sites have been identified within the field system/cairnfield as a whole. One of these is a probable example (2640) sited within the cairnfield at the southern end of the system. Nearby is a sub-rectangular platform (2647) of uncertain purpose that may well be associated with the settlement. A second settlement focus may well be indicated to the extreme north-east, both by the possible house site (2422) and by the small associated enclosures which have been suggested above to be yards and/or garden plots. As much of the flatter land in and adjacent to Big Moor West is relatively stone-free, their is a possibility that more timber house sites than usual have left no surface trace as they have no clearance against them, although terraced platforms should still be identifiable on the sloping areas.

Monuments

The only potential example of a large overtly ceremonial monument in the system is a cairn (2618). This is either a small barrow or a large clearance cairn. It stands out as different from the other cairns in the vicinity, and while it lies on the postulated line of a field boundary (see above), it may be that the boundary was purposefully aligned on a barrow at a significantly later date than the construction of the ritual structure.

Date

There are few clues as to the exact date of the Later Prehistoric remains in the Big Moor West field system/cairnfield. The possible barrow, if such it is, may indicate Earlier Bronze Age activity, while the large fields may possibly be of Later Bronze Age or Iron Age date given their size and carefully organised character. However, both these observations are tenuous and the indications of changes in field layout in the central and possibly the southern areas may indicated an extended chronology. The increased definition of field boundaries in the central area may be another indicator of prolonged (or more intensive) use of these fields.

Big Moor Central [NMR No. SK 27 NE 80]

This extensive field system and cairnfield, centred at *c.* 427400 375500, occupies much of the main shelf above Swine Sty, located between the White Edge dip slope to the north-west and the Bar Brook stream to the east. It also extends below the shelf scarp to the south and south-east; to further smaller shelves to the north; and to the southern end of the White Edge dip slope. The altitude range is *c.* 270-330m OD. The underlying geology across the majority of the system is Crawshaw Sandstone, except for small areas below the shelf scarp to the south where the rock is shale (centred at *c.* 426980 375050; 427250 374990; 427650 375300). The Crawshaw Sandstones would have had light sandy soils in prehistory, and the normally heavy clay soils within the small shale areas presumably had been lightened by a significant admixture of eroded sand from the scarp immediately above. The systems approximate extent is approximately 32 hectares with a SW/NNE length of at least *c.* 1200m and a maximum NW/SE width of *c.* 500m. The extent to the NNE is uncertain as a few cairns here are uncertainly interpreted as agricultural in character; one may be funerary, the others not prehistoric. The boundary drawn to the south-west is arbitrary and effectively the Western and Central field systems/cairnfields here are conjoined (see above **Big Moor West**). Much of the field system/cairnfield occupies ground which at the surface is now relatively stone free; areas of boulders that were dense enough to inhibit clearance seem largely never to have existed; the exceptions being in small patches near the shelf-scarp crest where the ground is significantly stonier.

Previous lower-level surveys of this cairnfield have been undertaken (Beswick and Merrills 1983; Barnatt 1986) and excavations have taken place at the settlement at Swine Sty and at a field boundary junction on the shelf above (see below).

In total the catalogued agricultural features in the Big Moor Central field system/cairnfield comprise:

299-355 clearance cairns
123-135 linear clearance heaps
16-17 stone banks
1 bank
43-49 earthen banks
0-8 earthen mounds
102-120 lynchets
10-11 stony lynchets
20-23 boulder scarps
1-2 cultivation edges
8-12 patches of clearance stone
11 possible gates
1 possible track
1 possible hollow way
2 possible animal pens
1 possible pond
1 possible hollow
1 possible tree ring

The density of stone clearance features across the system as a whole varies in ways that appear to be most simply explained as a product natural variation in the amount of stone that needed to be cleared. Thus in the proximity of scarps, both above and below, the density is high, whereas stone features become smaller and less common on the higher north-western

part of the main shelf top. In contrast, earthen features are most common in the 'stone-free' area. However, this distribution should not be taken to suggest that the earthen features were necessarily built because of a lack of stone. Another characteristic of this area is that it is the most exposed and it may well be that the earthen features are the product of wind eroding the soils here (see below).

The field system/cairnfield comprises a complex palimpsest of boundaries and cairns in a changing mosaic. For the purposes of description it is divided into thirteen areas. These are based on a mixture of topographic and morphological distinctions that can be drawn. Four main topographic zones exist, most divided from each other by streams or scarps. On the main shelf there are differences in the character of the remains which can be simplified into six broad areas; exact boundaries between these are often somewhat blurred. On and below the southern scarp there are four areas of prehistoric enclosures/fields, separated from each other by steep 'un-utilised' areas. The two northern shelves are separated from the main shelf, and each other, by streams. The remains on the White Edge dip slope run continuously from those on the main shelf; the problems of boundary definition here have been discussed above. The thirteen areas and their main distinguishing characteristic are as follows:

<u>The Main Shelf</u>		
A: North	centred *c.* 427380 375650	complex field layout.
B: Central - North	centred *c.* 427330 375500	large well-defined fields.
C: Central - South	centred *c.* 427280 375250	complex field layout.
D: East	centred *c.* 427460 375430	poor field definition.
E: West	centred *c.* 427180 375400	parallel field banks.
F: South-West	centred *c.* 427080 375150	poor field definition.
<u>The Southern Scarp</u>		
G: Swine Sty	centred *c.* 427250 375050	complex field layout.
H: West	centred *c.* 426980 375050	small area of fields.
I: Central	centred *c.* 427430 375240	small area of fields.
J: East	centred *c.* 427600 375330	complex field layout.
<u>The Northern Shelves</u>		
K: South	centred *c.* 427410 375920	poor field definition.
L: North	centred *c.* 427620 376210	possibly funerary.
<u>White Edge Dip Slope</u>		
M: South	centred *c.* 426880 375200	poor field definition.

Each of the areas will be considered in turn below.

A: <u>The Main Shelf</u> - <u>North</u>

This area is characterised by well defined field boundaries which comprise earthen banks/lynchets often incorporating stretches of linear clearance and cairns. The linear clearance includes three noticeably long stretches (515/527/529), suggesting a preference here for clearing stone to boundaries rather than to cairns, although cairns within the fields are also relatively common. In one small area, centred at *c.* 427360 375600, the boundary/clearance features are exclusively of stone and comprise a complex of conjoined heaps of various shapes that have accumulated over time; there may have been timber buildings here (see below). The number and size of clearance features in area A suggests this end of the shelf was naturally

relatively stony.

The shape of the visibly-defined fields is variable although all are relatively small. Mostly they are distinctly irregular with sinuous boundaries that in some cases may be topographically determined. However, their position and character often suggests there is time depth and that the visible boundaries represent the end result of several modifications to the layout. One exception to the organic nature of these fields is a long thin field, centred at *c.* 427410 375630, with parallel sides (494/497/1021 and 490). Another field, centred at 427370 375670, is particularly small. Other features of note are what might be a complex gate arrangement (513), flanked by banks and cairns, and two curved stretches of linear clearance (527/529) that mirror each other in shape and form for reasons unknown; it appears that a decision was made to clear all unwanted stone in the immediate vicinity into these two banks rather than create clearance heaps within the fields here.

There are several noteworthy specific indicators of chronological depth in addition to those already mentioned. These include:

- The unusual field shape created by features 527 and 562.
- The isolation of feature 1001 and possibly 559 beyond what is probably a later limit to enclosure at 562/558.
- the close proximity of bank 490 to cairn 491.
- The awkward angular relationship between features 418 and 1031.
- The probable overlapping of features 493 and 1021.

The complex area of stone features noted above may well be a settlement focus. Here there are two locations where the clearance features display curved arcs that may suggest they surround the sites of houses (630/2798). The configuration of the boundaries here could indicate they partly-define at least two small yards and/or garden plots. A short distance to the north-west is an unusual feature (502) which is either an artificial pond or the site of a building. It is respected by three clearance features and hence must be prehistoric. It is not normal to find ponds or sunken house platforms in prehistoric contexts on the Eastern Moors of the region.

B: The Main Shelf - Central - North

This area is characterised by continuous field boundaries, with only relatively few clearance cairns on the flatter part to the west. The boundaries are mostly earthen with few or no stone components. One notable exception is the boundary defined by 419/420/535/536/538/539/541/1022 which is over 110m long and defined exclusively in stone. Given that several discrete heaps can be identified it seems likely that this stone has accumulated over time. It is noticeable that there are no clearance cairns immediately south of this boundary, whereas in the southern half of the field there are cairns and the boundary adjacent to them is earthen. Thus, either different decisions were being made within the same field, or the southern boundary is of a different date to the adjacent cairns.

The fields in area B are relatively large when compared with those in area A. Their shape is variable, ranging from roughly sub-rectangular to long and thin. There are short gaps (412/626/1068) in the field banks which may be original gates rather than being the product of later disturbance. Evidence of chronological depth will be discussed below after excavation evidence is reviewed.

A small excavation (619) was undertaken in 1983 at a field boundary junction (363/410) within this area of the shelf (Barnatt in prep. a) [SK 27 NE 97]. This showed that the boundaries here were earthen rather than being stony. Prior to excavation the assumption was that they were stony but were heavily masked by peat. Excavation showed that only a handful of clearance stones had been added to the bank crests. The low earthen banks had no construction ditches, nor were there buried turf lines underneath them. Although the possibility that the banks were built from turves from adjacent cultivation areas cannot be discounted, the excavator (JB) suggests a more likely interpretation is that they mark the sites of hedges and that soil accumulated here gradually. The banks had no visible turves, nor a recognisable buried soil underneath. Even if post-depositional processes had removed visible evidence for these, it seems unlikely that in an area of thin soils, such as here, such a valuable resource would be wasted by creating banks. A strong argument in favour of the hedge hypothesis is the distribution of earthen banks within the gritstone upland field systems of the region. These occur in exposed locations, as at Big Moor Central, where there would be increased likelihood of wind erosion during episodic cultivation. Under such circumstances while the ground surface within fields would be lowered, hedges would trap and drop soil and low banks would slowly form.

Small fragments of charcoal occurred scattered throughout both banks and these were combined to provide four samples for radiocarbon dating. The results, at two sigma, calibrate to 1620-1324 CAL. BC (OxA-2356), 1510-1129 CAL. BC (OxA-2292), 1420-1010 CAL. BC (OxA-2293) and 1253-830 CAL. BC (OxA-2294) (Barnatt 1995). As they were composite samples derived from features that may well have formed over a period of time, these dates only give a broad indicator of the period of use. This said, the podsolised soil of the bank was sealed by peat and thus there is little chance they were contaminated by significantly more modern charcoal. However, the possibility of contamination by earlier charcoal cannot be ruled out. A soil-filled pit, of obscure purpose, sealed under the north/south bank, had scattered charcoal that gave a date of 8130+/-90 BP (OxA-2295). This indicates Mesolithic activity on site; a microlith was found nearby and a patch of burnt subsoil under the south-east corner of the bank junction may well be underlying scorching from a hearth related to this rather than later activity. Given this Mesolithic material, the four dates for the field banks may be artificially early. However, this is argued against by the relative consistency in date of the four samples, which do not become earlier with increased proximity to the Mesolithic pit and hearth.

One of the main reasons for the exact positioning of this trench was to resolve an apparent inconsistency in the horizontal stratigraphy of this part of the field system. At the excavated junction the abutment of boundary 410 to boundary 363 suggested the latter was the earlier. However, at the next junction northwards, boundary 411 continues north-westwards beyond boundary 363 as boundary 413. Both 411 and 413 are low banks and superficially appear to be overlain by 363. This is at odds with the relationship between 411 and 410, which are closely parallel to each other despite having a curved course which does not appear to be determined by the lie of the land. Thus, it is likely they are contemporary with each other, while their respective relationships to 363 suggested this could not be the case. The excavation demonstrated that 410 did not continue north-westwards beyond 363, thus one possible explanation for the discrepancy can be discounted; subtle differences between the soils in both banks indicated that 410 was later in inception than 363. If the hypotheses that the banks were formed under hedges is correct this offers an explanation for all the observed relationships. The excavation showed that 410 was later than 363. Similarly if 411 is later than 363 then this will be lower in height as there is less potential time for soil to accumulate here, thus the appearance of this junction is explained.

Looking at the fields in area B as a whole there are other indications of chronological depth in addition to those noted above.

- Banks 410 and 411 terminate opposite each other to the east, but continue eastwards in significantly reduced form as 428 and 1070.
- Boundary 363 may have continued northwards as 1036 as well as continuing north-eastwards as 420. Given the awkward angle formed this may well have been at a different date.
- The exact position of the junction of banks 336/337 with 338 suggests the latter has been added at a later date than the former.

Taking all these strands of evidence together it is possible to postulate:

- An early curved boundary, defined by 363/420 and associated linear clearance at the north-east end, which defines a large area of better aspected land to the east.
- Expansion beyond this to the south-west, presumably at a later date, defined by boundary 336/337.
- Further expansion to the north-west, defined by boundary 338.
- Internal subdivision, perhaps created at the same time as 338, defined by boundaries 410/411/413 and perhaps 1036.

The evidence of settlement in area B comprises two probable house platforms located close together at 627 and 1067. The former is respected by boundary 338 which curves to avoid it. They differ from the majority of other settlement evidence in the system in that there is no visible trace of small yards and garden plots, and because they lie at a relatively exposed location. They may be relatively early in the sequence in that they appear to predate the postulated visible expansion into this area with the creation of boundary 338.

C: The Main Shelf - Central - South

This area is characterised by a complex series of fields, often well but not continuous defined by prominent stone cairns and linear clearance, with slight lynchets between in a significant number of cases. There are also a significant number of cairns within the fields as visibly defined, the majority perhaps clearance foci within fields from the outset, others probably on the lines of earlier boundaries (see below). The amount of clearance stone indicates this area was naturally stony prior to modification by prehistoric farmers. The slight lyncheting indicates that some soil movement and/or erosion has taken place during cultivation.

The defined fields are moderate to small in size and they tend to be sub-rectangular. Two clusters of small enclosures are associated with postulated house sites and may be yards and/or garden plots (see below). The degree to which boundaries are visible today varies from those which can be traced almost continuously, to others where little more than a line of cairns suggests their former presence, as for example at bank 1148/1153 and cairns 285/295 and possibly 360/362. There are short gaps (230/232/1089/1154) in the field boundaries which may be original gates rather than being the product of later disturbance. Attached to two of the field boundaries are small rectangular structures (352/2564) defined by a low stone banks; this may be the vestiges of animal pens. The only two identified possible examples of routeways through the system occur in area B. At 580 a shallow hollow way, which has an orientation at odds with known historic routes, appears to be respected by boundaries 218 and 220 and to pass through a possible gate (1089) in boundary 354. How this droveway relates to the field system as a whole is unclear. The other possible route (2573) is defined by boundaries to either side (165, 166/198). This may be a part of a droveway between open

pastures on the higher land above to the north-east and those on the lower shelf below. It appears to have passed between settlement and associated fields to the south-west and a separate settlement/field area to the north-east (see below).

Noteworthy evidence of chronological depth exists:

- The acute angle between boundaries 354 and 363 suggests they cannot have functioned together.
- Similarly, The acute angle between boundaries 208/1153 and 282 suggests they also cannot have been in use at the same time. The possible bank at 1148 may indicate one set of boundaries overlies the other.
- This last relationship can be extended to two lines of cairns (283/285/295/?360/?362 and 285/?1152/294297/366) which may well mark boundaries that are at odds with boundary 292/296.
- The offset between lynchet 168 and stone bank 268 suggests a difference in date.
- The exact positioning of the banks at the junction between boundaries 36 and 143 suggest the latter became redundant when the cultivation on the shelf top contracted to 36.

Taking these strands of evidence together, and stressing that some of the modifications to the fields of the area were probably organic in nature and took place over an extended period, it is possible to postulate that radical changes in layout has occurred, as follows:

- An early square field can be partially traced, which includes features 1148/282/283/285, 285/294/297/366, 366/303/304/305/316/315, and 315/314/278/277/275. This has a common orientation with 344/343/336 and 363 and thus may be of similar date to the early phases postulated for area B.
- The early field layout is overlain by rectangular fields on a different orientation, including a series of parallel boundaries at 354, 304/292/296, 280/1153, 231/1156/208/213 and 268/265/245. The presence of boundary 169 and others beyond demonstrates that this same layout extended into area F (see this).

Further to the south-west as second set of relationships can be observed, although their chronological relationship with those just noted is unclear. The two areas are separated by possible track 2573 (see above).

- An area of small fields, yards and/or garden plots existed, with associated probable/possible houses, centred at 427230 375100.
- This was probably later overlain by boundaries 36 and 178.

Three clusters of potential house sites, as well as isolated examples, have been identified amongst the fields of area C. There are two clusters close together to the north-east. One of these has a probable house (236) and a less certain example (1147) both adjacent to the same sinuous boundary. The latter house has several features on the northern side of the boundary which may indicate small yards and/or garden plots were present, but visible development is not as pronounced as at the other two clusters. The other north-east cluster comprises three possible house sites (276/631/1143), again associated with a sinuous boundary. This group appears to have two well defined sub-rectangular yards and/or garden plots to the north. The south-eastern group comprises a probable (2572) and two possible house sites (161/2569), built in an area of patchily stony ground. These houses again are associated with two or more small sub-rectangular yards and/or garden plots. The eastern house (2572) is separated from the rest by boundary 178 which may suggest it is relatively early in the sequence and was

disused when the boundary was created.

Two potential isolated house sites have also been identified. That at 266 is relatively convincing and is sited in a field corner with no obvious signs of associated yards or garden plots. That at 310, on the crest of the shelf scarp, was included for completeness sake and is not a convincing example.

D: The Main Shelf - East

This area is characterised by relatively poor field boundary definition. There is a scattering of cairns and other stone built features throughout, with a concentration, centred on *c.* 427350 375360. This lies to the south-west on higher land where the ground may have been naturally stonier. The boundaries are all fragmentary and have a tendency to be lynchets orientated north-east/south-west. This orientation lies parallel to the scarp below and thus, although the majority of the lynchets appeared to be convincing anthropogenic features in the field, the possibility that they have geological origins cannot be ignored. However, it is often the case that downslope ends of fields have enhanced lynchet formation and this offers an equally plausible explanation for the features. The lack of clearly defined boundaries in area D does not necessarily indicate this part of the shelf was under-utilised in comparison with areas further west. Area D lies on a gentle south-east slope which gives it more shelter than the higher more westerly areas, therefore there may have been less wind erosion of soils in area D. The area also has little surface indication that it was ever particularly stony, therefore the creation of clearance heaps may not have been as necessary as elsewhere. It seem almost perverse to suggest that the prehistoric farmers would not have fully utilised this favourable area.

Not enough is visible to reconstruct the character of any fields that existed here. However there is evidence that settlement extended into this area. To one side of a shallow natural gully is a probable house platform (468) at the upslope side of a pronounced lynchet. Further south-east, on the other side of the gully, is a loose cluster of three possible house sites (622/1078/1082). Individually none of these are particularly convincing, but that they are located relatively close together may give their interpretation more weight. Nearby is a possible sub-rectangular platform (439) of uncertain purpose.

Adjacent to the possible cluster of buildings are two particularly large cairns (369/387) that are almost certainly barrows, one with a sub-rectangular platform attached to one side. It may well not be a coincidence that these mounds are located at the centre of the field system/cairnfield on the main shelf. At the extreme east of the system, on a spur-like section of the shelf which protrudes eastwards, is another barrow (473) sited at the edge of the agricultural area. Further south-west, again just above the shelf scarp, is a free-standing cist beside a large earthfast boulder. This is a fine reminder of ritual activity within or at the edge of areas of agricultural activity (cf. Barnatt 1994).

E: The Main Shelf - West

This small area is distinguished from that immediately to the east (B/C) by its six defined field boundaries, all of which run roughly parallel to each other, orientated ENE/WSW. As with area B these boundaries are largely earthen and, as the topography is identical, the explanation of their formation is probably the same. There are a small number of clearance cairns, both within fields and boundaries, but the area seems to have been largely stone-free.

The rectangular fields defined by the earthen banks are of variable width, with a particularly

narrow one between banks 331 and 332 and a wide one lying adjacent to the south. However, three cairns here (221/1104/1101) may suggest there was originally a further boundary here, making the layout more regular in appearance. One boundary (220) has two breaks (345/1114) which may be original gates. To the east the fields appear to be abutted to those in Areas B and C, suggesting those in area E are late in the sequence, although the possibility that they have been overlain at the east end cannot be discounted. The western ends of the fields are poorly defined, although it is suspected they were never substantially longer than is visible now, because of their relationship with two barrows (see below) and a small stony area, centred at *c.* 427150 375420, which has now been largely quarried away.

Just beyond the western edge of the fields (of the field system as a whole), there is a large barrow (326) and a possible smaller one (201). Field boundary 211 appears to have been purposefully aligned on the latter mound. The siting of these 1-2 barrows at the western edge of the main shelf field system, mirroring that at the eastern edge (473), was probably purposeful.

F: The Main Shelf - South-West

This area is again characterised by poor field boundary development. There is a scattering of clearance cairns everywhere, but also a noticeable stripe of heavier density from *c.* 427000 375100 to *c.* 427170 375170. This reflects an area of naturally stonier ground, small parts of which have never been cleared. The majority of boundary fragments that have been identified are earthen, the exception following the crest of the scarp to the south. From feature 1346 to 36 there are a series of irregular heaps indicating that field clearance has been added over time until in parts the boundary has become continuous. One narrow break (2566) in this feature may be an original foot gate giving access from the fields to the Swine Sty settlement below the shelf scarp.

In the eastern part of area F, there are sufficient number of boundary fragments to suggest that there were a series of long rectangular fields with roughly parallel boundaries, orientated NNW/SSE, as with the contiguous examples in area C. Five such boundaries can be postulated in area F (115/1351, 38/41/137/136/134/120/119, 36/147/148/149/122/125, 169/1159, 1160), although only one can be traced over much of its length. As with the fields in area E, the ends furthest from the shelf scarp are ill defined, although in area F there are sufficient clues (features 117/118/132/133/128) to indicate the fields never extended beyond their visible sides.

There are no convincing examples of house sites in area F. At the crest of the scarp, one feature (31) may be a small shieling. However, its interpretation is far from clear and alternative explanations include a robbed cairn and a cairn that has been built round a mature tree.

At the western end of area F is the Big Moor ring cairn (1392) [SK 27 NE 19]. This is sited, presumably purposefully, at the exact topographical axial point between the Swine Sty shelf to the east and White Edge to the north-west.

G: The Southern Scarp - Swine Sty

This area contains a complex arrangement of yards, garden plots and/or small fields associated with a settlement focus. This is sited to take advantage of the shelter provided by the scarp above and utilises a small area with sandy soil on what is in effect a small shelf at the base of the main scarp. Only a small part of the area, at the extreme south-east probably

has underlying clay soils. Much of the area was relatively stony, hence all the boundary features are stone built, and there is a series of clearance cairns within the enclosures. On the clay land to the south-east, centred at *c.* 427260 375000, the cairns are regularly arranged, suggesting systematic cultivation of this small plot.

The defined enclosures are irregular in shape to the south-west, but to the north-east they tend to become more rectangular. There are several indications of chronological depth in the layout, indicating prolonged activity here, and these will be reviewed below. Area G takes on additional importance because of the excavations which have taken place here.

One of the irregularly-shaped 'enclosures' at Swine Sty, centred at 427210 375020, was investigated by the Hunter Archaeological Society between 1967 and the late 1970s [NMR No. SK 27 NE 96]. Although several interims were produced (Richardson and Preston 1969; Machin 1971; Machin and Beswick 1975) and a summary has been presented (Hart 1981, 63-65), no full account has ever been published. A detailed analysis of the pottery and lithics is in preparation (Garton and Beswick in prep.). The main structures investigated were the small stone-footed building (1305), a possible much larger timber building beneath (1322) and a clearance cairn (1278), while several open areas within the 'enclosure' were also excavated and the edges of most of the trenches are still visible (1277/1299/1302/1304/1313/1320/1321/2288/2696) due to incomplete backfilling and settling of the material replaced. The areas excavated were as follows:

Area 1: This concentrated on the stone-footed building (1305), the underlying larger possible timber building (1322), and a stretch of the 'enclosure bank (1318) immediately to the west and south-west of the other two features. Inside the enclosure the edge of the excavation trench is still visible (1304/1320/1321).

The stone footed building was completely excavated between 1967 and 1969 (Richardson and Preston 1969; Machin 1971). Before excavation it was visible as a slight mound with a few visible stones. Excavation showed that it had an external diameter of 20ft (6.1m) and an internal one of 12-13ft (3.7-4.0m), with an entrance to the west. The stone bank was 1-2ft (0.3-0.6m) high and the amount of tumble suggested it had originally stood to 2-3ft (0.6-0.9m). To the north the inner edge of the stone bank had five to six vertically-set stones in a very irregular arc, possibly purposefully arranged to create two niches or cupboards. Within the building there were several large stones, some natural and possibly protruding above the prehistoric surface, others possibly crude paving stones. There was also a 2-4cm thick black greasy deposit near the base of the soils and above some of the stones just mentioned, mainly at the centre of the building but also amongst the tumbled bank stones to the south and between here and the enclosure bank; all the recovered potsherds were found within this.

A 40ft (12m) stretch of the enclosure bank (1318) was investigated in 1967 and 1969-70 and found to be 7-8ft (2.0-2.5m) wide and standing up to 30 inches (0.76m) high (Richardson and Preston 1969; Machin 1971). It appears that the bank was mostly cleaned down but not removed, the exception being a narrow trench dug across it in 1967. The method of construction was not determined; no positive evidence for a collapsed wall was found. Part of the 'enclosure' bank has a distinctive curve, which together with three to four possible post holes, suggests there was possibly a timber building (1322) that predated the stone-footed one. This had a diameter of *c.* 6.0m and was abutted by the enclosure bank to the south-west. Two of the possible postholes found lay within the interior of the stone-footed building to the west, the other two were outside to the east. Each was identified from small vertically-set slabs in

small crudely rectangular settings set into the subsoil. Following the inner edge of the 'enclosure' bank was a 0.6-0.9m wide band, spreading wider to the entrance to the stone-footed building, which was interpreted as cobbling. Alternatively, these may be naturally placed stones in the prehistoric soil, which because of the proximity to the bank were never cleared during cultivation within the 'enclosure'.

Area 2: This focused on a flat area at the centre of the 'enclosure', including a cairn at 1278 and the stretch of 'enclosure' bank to the south (1280). An area east of mound 1278 has a clearly visible large excavation trench (1277), but documented work to the west, including feature 1278 now has no clearly visible trench edge. The excavations were undertaken between from 1969 for at least four seasons. Before excavation mound 1278 comprised a cairn that was 20x16ft (6.1x4.9m) and 20 inches (0.5m) high. After removal of tumble it comprised a 'fairly carefully piled heap of stone' of 14ft (4.3m) diameter. It was interpreted as a clearance heap. There were potsherds below it and worked shale with flint scrapers and debitage amongst the stones. The open area east of the cairn had large numbers of finds, which petered-out westwards. These included worked shale, pottery and lithics. A flat area 6-8ft (1.8-2.4m) wide immediately north of the 'enclosure' bank (1275/1280) had densely packed cobbles. Below these were two or more rings of *c.* 12ft (3.6m) diameter, defined by stones, some on edge, suggested to be the sites of tents or huts. Not enough information is currently available to re-assess this possibility. No mention in the 1975 interim is made of investigating 'enclosure' bank 1280. However, the way it is depicted on the site plan suggests it had been at least partially excavated.

Area 3: This focused within a large arc in the 'enclosure' bank (2169/2781/2783). The edge of an excavation trench is still visible (2288). However, digging must have been somewhat more extensive than this as the interim report (Machin with Beswick 1975) notes that trial trenches investigated feature 2692 and the enclosure bank nearby, showing that the 'enclosure' bank had been breached in historic times, the stones having been moved to one side to facilitate passage along one of the braids of hollow way 565. A trial trench within the large arc had relatively few small finds and the only features identified were two dubious post sockets. At the time of writing the 1975 interim it was intended to carry out further excavation in this area.

Area 4: This lies within the 'enclosure' at the north-west, where there is another arc (1316) in the bank which may suggest the site of another house. Two small excavation trenches are still visible here (1313). These excavations are recorded in the 1975 interim, which notes that artefact densities indicated activity here and that another circular 'tent' ring similar to those in area 2 was found (Machin with Beswick 1975). The possibility that there was also a timber house here should not be discounted as the excavations may not have been extensive enough to investigate this possibility thoroughly enough.

Area 5: This is at the south-east corner of the 'enclosure' and was noted by Hart but is not detailed in the interims. A small trench is still visible (2696) which suggests that bank 1417 was sectioned near its southern end. Hart notes that the excavation here demonstrated that an apparent break in bank 1417 (north of trench 2696) was the result of packhorse activity rather than being an original feature.

Further excavation took place at the northern edge of the enclosure, that cut into feature 1300, and is indicated by a small visible trench at 1299. This is probably the area excavated in 1967 and referred to as 'on the upper side of the site.... a platform or terrace' (Richardson

and Preston 1969). It was revetted by a coursed drystone wall, 2ft (0.6m) high, covered with a layer of stones to a width of about 15ft (4.5m). It was suggested this was a quarrymans platform. However, this seems unlikely given the small scale of operations on the moor and the lack of obvious quarrying above the platform.

A mound was partially excavated in 1967 and was described as a mound of stones, 15ft (4.6m) across and 2ft (0.6m) high (Richardson and Preston 1969). It was interpreted as a clearance heap placed upon a low natural mound. However, the later may have been a relic area of thicker soil under the cairn resulting from soil loss elsewhere rather than a built mound. A comment by Machin indicates this was not the mound in Area 2 (Machin and Beswick 1975, 204), hence it appears that it was cairn 1296 that was excavated in 1967.

The first interim report notes that the 'enclosure' bank was sectioned in two places. one of these was in Area 1, the location of the other is unknown; Areas 2 and 5 are known possibilities.

It was noted that in 1967 several 'other features' were investigated after a proton magnetometer survey; no details of finds are currently available. Evidence on the ground suggests one such investigation lay immediately east of Area 1, as indicated by a small visible trench (1302).

Artefacts from the excavations as a whole include extensive pottery and lithic collections, and debitage from production of cannel coal rings of various sizes (Beswick in Machin and Beswick 1975). The potsherds were all small and abraded and were initially identified as of Early Bronze Age date (Machin 1971, 13). However, re-evaluation in the light of present understanding of domestic fabrics and forms has demonstrated that while the majority of the pots date from the Earlier Bronze Age to the Earlier Iron Age, there are also sherds of Neolithic, Later Iron Age and Romano-British date present (Pauline Beswick. pers. comm.). The lithics, mostly debitage but including scrapers and other tools, have recently been analysed and largely date from the Neolithic and Bronze Age; the Neolithic lithics are not straigraphically fixed with any of the structures on site and may represent earlier activity of a different character (Daryl Garton pers. comm.). One radiocarbon date of 3560+/-80 BP (HAR-123) was obtained, from scattered charcoal in Area 4, which at two sigma calibrates to 2140-1695 CAL. BC (Barnatt 1995). However, this date is of limited utility as it does not relate directly to any of the structures.

A small trench was dug in 1983 across the south-western part of the 'enclosure' bank (1318), to the south of the Hunter Archaeological Societies Area 1 trench (Beswick unpublished). This demonstrated that the bank was built as piled stone rather than being a tumbled wall or having any formal edges.

The horizontal stratigraphy of area G, as illustrated by the present survey, has several noteworthy indicators of chronological depth which can be set beside the evidence for an extended sequence of occupation demonstrated by excavation. These are:

- The shape of the enclosure within which the excavations took place is such that it has probably been enlarged and/or is an amalgam of two or more smaller units. The changes in angle of the enclosure boundary adjacent to the excavated houses (1305/1322), and that at feature 1300, suggest a boundary once linked these two points. The large bulge at the south-east end of the enclosure may well be an addition and a possible original line may still be visible (2750) which aligns roughly with feature 2175.

- The difference in definition between the main excavated enclosure, which has near-continuous stone boundaries, and the much slighter remains to the south-west suggest the latter area has had shorter or less intensive use. The awkward relationship between features 1326, 1325 and 1315 suggests redefinition of the enclosures here.
- The narrow strip of steep land as defined by boundaries 180/1272 and 1261, and the overlap of features 1261 and 1273, the latter aligned with 182, may well suggest boundary redefinition here.

From these it can be suggested that, although much of the development of area G may well have been organic, two main phases of layout can be identified. The first probably includes all of area G, while the other was confined to the main excavated enclosure and some or all of the rectangular ones to the north-east; this phase is characterised by having greater boundary definition and the area where this occurs may well have been utilised for longer and/or more intensively. It seems likely that this area was the core of the settlement and continued in use throughout its life. The area to the south-west has the appearance of belonging to an early phase which was abandoned with the redefinition of the western edge of the excavated enclosure, which runs continuously with no entrance gaps here. However, the area to the south-east with regularly spaced clearance cairns could be of any date, the differences in morphology being explainable as the product of less surface stone, difference in function, and/or a shorter period of use.

H: The Southern Scarp - West

Immediately below the Swine Sty scarp at its western end is a small area of prehistoric remains. It is separated from the main Swine Sty complex (area G) to the east by *c.* 100m of boulder strewn ground. Area H appears to comprise a single irregularly shaped field taking advantage of a small area of cultivable land between the scarp above and poorly drained land below. However, the north-western boundary is not visibly defined and thus it is not clear how far activity extended here. At the edge of the field there is a possible small platform (1353) at the base of the scarp, of uncertain interpretation.

Some distance to the west, on the lower parts of the White Edge scarp are 2-3 small cairns (1369/1372/1379) of uncertain interpretation.

Roughly midway between area H and Swine Sty is a small solitary cairn (2782) in a small naturally relatively stone-free area. This cairn may indicate trial cultivation here, although the possibility that it is a funerary structure cannot be discounted.

I: The Southern Scarp - Central

This small area of upper scarp and shelf has been utilised for cultivation. It is separated from the main Swine Sty complex (area G) to the south-west, and another series of enclosures to the north-east (area J), by the lower slope of the scarp and by stony ground. Much of the area I shelf has been incorporated in a small irregular field, while a smaller field or yard encloses a small part of the scarp's upper slope. At one end of this is a possible house site (1243) terraced into the slope.

J: The Southern Scarp - East

This area has a complex series of small enclosures similar in character in many ways to those of Swine Sty (Area G). It may well be a second settlement focus sited below the scarp, taking advantage of the shelter provided from the north and west by this low-lying spot. The most obvious feature is an irregular enclosure, centred at *c.* 427600 3753340, with high stone

banks (2023/2028) to either side. The presence of these suggests this enclosure was intensively used, probably over an extended period. In contrast there are much slighter remains above and below. Those below may be less well defined as there was probably less surface stone to clear. Here there are at least two small irregular enclosures, probably best interpreted as yards and/or garden plots; one contains a possible house site (see below). Above the main enclosure the boundary features are discontinuous and, as the ground is relatively stony, this suggests they were less frequently cultivated. Again the visible remains give the impression of small irregular enclosures and there is again a potential house site here.

The two potential house sites identified comprise a small example (2042) on the slope, which lies at what was probably the corner of two small enclosures, and another (2063) below, which is larger and similarly sited at a probable corner of enclosures.

K: The Northern Shelves - South
This small shelf, while lower than the northern part of the main shelf immediately to the south, has only a relatively narrow stripe of well-drained land. This is covered by a number of clearance features and there is fragmentary boundary development. The shelf is also crossed by extensive hollow ways and there may well have been significant destruction of prehistoric features in parts.

South of the centre of the shelf is a fine house site (1038) and this may well have been the main settlement focus for the shelf. There are indications in the area surrounding the house, provided by straight field boundaries defined by linear clearance and lynchets, of a rectangular-type field layout.

The relative paucity of remains across the shelf as a whole, and the poor boundary development, may suggest the settlement and fields here were relatively short lived.

L: The Northern Shelves - North
This small shelf has not been certainly utilised for agriculture in prehistory. There is one cairn which is possibly a burial cairn (1282). While it is of comparable size to many of the clearance cairns within the survey area, that it is relatively isolated and is symmetrical in plan and profile suggests it may be a ritual structure. There are two possible small cairns (or fortuitous/modern features) nearby (1279/1281), which may also be interpreted as funerary, although the possibility that the whole group is agricultural in character cannot be discounted.

A further small cairn (or later feature) at 1294 is located *c.* 150m north-east at the other end of the shelf; the same comments apply here.

M: White Edge Dip Slope - South
This small area on the southernmost part of the White Edge dip slope is characterised by scattered clearance features, together with two visible boundaries (1385/1408) which indicate the area was once divided into fields, perhaps of similar character to those in area F. There is a possible small barrow (1381), now wrecked, at the western end of the area.

Overview - Fields, Settlement, Monuments and Date
Clearance of unwanted stone into cairns and linear features has taken place everywhere within the system wherever this was a problem, the varying density of cairns reflecting natural conditions. In contrast, where field boundary definition is good a variety of field types have

been identified. In places, as in area C, relatively large rectangular fields are the norm, with other examples present in areas B and K. Smaller rectangular fields and/or yards occur at Swine Sty (area G). There is a tendency for fields to become long and thin in area E, with less regular examples in areas F and B and a single example in area A. This last area also has fields which are more irregular than elsewhere. Small areas associated with settlement stand out as often having smaller enclosures, again usually irregular in shape.

Details of the locations of individual potential house sites have been given above. Taken together, these indicate 7-8 focal areas, each with 2-3 identified house sites, together with 3-6 individual sites elsewhere. While two foci occupy relatively sheltered locations below the main shelf scarp, the others are on the shelf top. Given the known extended chronology of the site it is perhaps likely that settlement may have moved around the complex. The number of potential house sites identified supports this view, even allowing for the fact that some may be outbuildings rather than dwellings, it seems likely that there are too many to have all been in use at once. However, this said, the layout of the fields, and differences in their alignment, suggests that there was more than focal area in use at any one time (see below).

The distribution of ceremonial monuments associated with the field system is non-random. Barrows 369 and 387 are placed close together at the centre of the main shelf. In contrast, all the other large monuments are placed peripherally. Barrow 473 lies at the extreme east of the main shelf, while those at 326 and possibly 201 are opposite to the west. The Big Moor ring cairn (1392) is at the south-western end of the system and there is a possible barrow (1392) beyond. Another possible small barrow (1282) lies beyond the northern end of the northern shelf.

Dating evidence for the field system/cairnfield comes from a variety of sources. The associated ceremonial monuments morphologically date to the Later Neolithic or more probably the Earlier Bronze Age (Barnatt 1990; 1996b). The excavations at Swine Sty demonstrate an extended chronology, with both Earlier Bronze Age and Later Bronze Age/Iron Age pottery being common, and with evidence for more restricted activity for earlier and later dates. The radiocarbon dates from the 1983 trench on the shelf above Swine Sty lend support to activity in the Later Bronze Age and the palynological data derived from a bog immediately north of the main shelf (Long 1994) may well indicate that agricultural activity continued well into the first millennium BC.

The survey data reported here demonstrate that there are many examples of horizontal stratigraphy which suggest change to the field system layout through time, the notable ones having been documented above. However, while sequences can be proposed for individual parts of the system (see areas B, C, E, G), it is difficult to correlate these across the system as a whole with any confidence. Given that there are multiple settlement foci, each part of the field layout may have developed organically as a physical entity, in a way that was relatively independent of others, except in terms of the amount of land available for each. In social terms there would have been complex inter-relationships between neighbours and kin, both in terms of who farmed specific areas and in what way. Each settlement focus may well have had varying fortunes. In this respect it is interesting to note that there is evidence for radical re-alignment of fields in the central part of the shelf at a point where shifting boundaries between foci to north and south may be anticipated. In the north a sequence can be postulated that comprises an early focus in area D, initially confined by a curving boundary to the west, but with later expansion westwards. These fields have been interrupted at their southern end by the second phase of fields in area C, which has its own associated settlement foci (which may well have earlier origins, as in area D). At a still later date the

fields in area E appear to have been abutted to both the northern and southern fields. The fields in area A, which are somewhat different from those in other parts of the shelf, have their own settlement focus and may have developed independently to those further south. It is difficult to assess whether the settlements below the scarp at areas G (Swine Sty) and J ever utilised the fields on the shelf above. Both have further settlement foci relatively close by on the shelf above them, which if they are contemporary suggests no land was available here, or perhaps that they were used at different seasons. Given the demonstrated extended chronology at Swine Sty it is difficult to argue for simple chronological distinctions between different specific settlement foci with any confidence. Perhaps models which include seasonal or episodic occupation may in the long term offer better explanation.

Big Moor East (Ramsley Moor) [NMR No. SK 27 NE 18]

This cairnfield, centred at *c.* 427850 375600, occupies a gently west-sloping shelf to the east of Bar Brook stream, with a steep valley side immediately beyond the cairnfield to the west and flat poorly-drained land to the east. The altitude range is *c.* 290-310m OD. The underlying geology is Crawshaw Sandstone throughout, which in prehistory would have been covered by light sandy soils, with shales underlying the apparently un-utilised poorly-drained clay soils to the east. The cairnfields approximate extent is 12-16 hectares, it is at least *c.* 800m long and *c.* 200m wide, with uncertain limits at its SSE and NNW ends, and it can be divided into two parts. The larger of these lies to the NNW, while a smaller area to the SSE is separated by a slight hollow occupied by the Barbrook I stone circle (1465) and barrow 1463. Much of the cairnfield lies on ground which at the surface is now relatively stone-free; areas of boulders that were dense enough to inhibit clearance seem largely never to have existed. The exception is to the SSE end of the cairnfield (centred 428020 375210), where the ground is significantly stonier.

Previous lower-level surveys of this cairnfield have been undertaken (Riley 1960; Hart 1981; Barnatt 1986) and excavations have been undertaken at two of its small cairns, at both stone circles and at a barrow (see below).

The cairnfield is distinguished from the other two main areas west of Bar Brook by its lack of well-defined field boundaries. The catalogued agricultural features comprise:

92-130 small cairns
7-11 linear clearance heaps
1-2 earthen banks
2-7 lynchets
4 stony lynchets
2-3 boulder scarps
0-1 cultivation edge
3-6 patches of clearance stone

The most numerous features and, with the exception of several ceremonial monuments, the most obvious, are the small cairns. These define the essential character of the remains here as a cairnfield. In the past it has been interpreted as funerary in nature and contrasted with agricultural areas west of the stream (Hart 1981). However, this has been argued on several grounds to be a false assumption (Barnatt 1986; 1987; Barnatt and Smith 1991). This view is supported here:

- There is no difference in small cairn density, size range and character on both sides of the stream.
- The number of overtly ceremonial monuments is similar on both sides of the stream.
- There are indications of settlement and agriculture within the Big Moor East cairnfield. Potential house sites exist and there are several linear clearance heaps, earthen banks, lynchets and cultivation edges.
- A significant number of cairns are distributed non-randomly in lines (see below), as if lying on or beside field boundaries such as hedges or fences which are no longer visible as surface features.

The size and density of cairns within the Big Moor East cairnfield varies. In the NNW part the cairns in the flatter upslope areas to the north-east are relatively small, while downslope on steeper land they are often significantly larger. While one explanation of these is that they are small barrows, no examples of barrow cemeteries of more that 2-5 barrows are known in the Peak District (Barnatt 1996b); there are *c.* 10-15 larger than average mounds at Big Moor East. That the cairns are larger here has made them more visible, leading to many having been disturbed, presumably by antiquarians who assumed they were barrows. It seems more probable that the mounds are the product of field clearance, their larger diameters explained by the stonier nature of the ground here, it being closer to the outcrop of the underlying rock, in comparison with the flatter land above. That the prehistoric farmers chose to build large cairns rather than create more smaller examples perhaps reflects the lack of numerous earthfast boulders that could not be moved. More significantly, the choice to build large cairns rather than create linear clearance heaps along field boundaries may reflect real differences in the character of farming here when compared with the field systems on the other side of the stream and at the majority of sites elsewhere on the Eastern Moors. However, the building of larger cairns is known elsewhere, as for example at Dennis Knoll, Winyards Nick and parts of the Gibbet Moor, Gardoms Edge North-West and Birchen Edge South field systems/cairnfields (Barnatt 1996; RCHME 1990; RCHME and PPJPB 1993).

In the SSE part of the Big Moor East cairnfield the density of cairns also varies. Here the cairns are generally relatively small, but there are higher densities both to west and east in comparison with the small number on the flatter central area. This probably reflects natural variation in stone density, as indicated by the topography; both areas where cairns are common are sited where the sandstone bedrock has been truncated by erosion.

The NNW Area

The extent of the NNW part of the Big Moor East cairnfield is well defined except to the north. To the west the ground becomes prohibitively steep, while to the east the geology changes, and the soils are heavy and poorly drained; there is an approximate correlation between the increasingly mixed (but grass as opposed to heather dominated) vegetation, and the eastern limit of the distribution of clearance cairns. To the south-east the limit of this part of the cairnfield is taken to be the Barbrook I stone circle (1465) [SK 27 NE 13] and barrow nearby (1463); the significance of this division is discussed below. To the north the shelf is perhaps less favourable as it is more exposed to northern winds; the cairns here, north of about northing 375950, become significantly less frequent and are uncertainly interpreted. There are only 3 certain examples (1694/1705/1706) and their relative isolation either indicates these are cultivation features associated with trial or short-lived agricultural episodes, or that they are funerary structures. A fourth possible cairn (1704) may be a fortuitous natural grouping of three stones.

Within the NNW part of the cairnfield the distribution of cairns has hints at patterning beyond that noted above and interpreted as reflecting geology and stone density. This takes the form of lines of cairns and areas between that are relatively cairn free. The two most obvious lines occur west of the Barbrook II stone circle (1626). One of these is oriented north-east/south-west and comprises 4-5 cairns (1633/1634/1635/1636/1638), with a possible extension downslope (1615/1617/1641). The other is orientated east/west and comprises 3-5 cairns (1603/1604/1605/1606/1607). These two lines, taken together with linear bands of cairns downslope (between cairn 1588 and barrow 1454) and upslope (between cairns 1593 and 1436), define two large sub-rectangular areas which are relatively cairn free. That to the south-east has a single cairn (1567) at what may be its centre (but the south-east side is uncertainly defined). That to the north-west has two pairs of cairns (1608/1609, 1644/1646) near its centre. These arrangements may well reflect a field system with at least two large fields, the field boundaries of which are otherwise usually not apparent as surface features.

In contrast there are further fragmentary indications of field boundaries that exist as surface features. The two most obvious, in that they are relatively long, are linear clearance 1449 and lynchet/earthen bank 1556. The latter lies on one of the postulated boundaries just discussed, while the former runs parallel and may indicate the fields also ran further downslope. A further indication of this is perhaps two short stretches of possible linear clearance (1577/1578). Further features (1431/1445/1451/1574/1571/1589/1591/1596/1621/ 1650) are short and less obviously placed within a reconstructable agricultural boundary pattern, although this does not mean they do not reflect boundary positions. As noted above, the lack of visible boundaries at cairnfields on the Eastern Moors is not an indicator that they were not present in prehistory (Barnatt 1997; in prep. b). Other indicators of cultivation within the Big Moor East cairnfield are two or three patches of clearance stone (1423/1452/1573).

Two small adjacent cairns (1559/1561), *c.* 60-70m south-east of the Barbrook II stone circle (1626) [SK 27 NE 1], within a cluster of six such cairns, have been excavated. That to the north-west (1561 - but also see **Archaeological Excavations** below) was dug in 1958 (Henderson 1960) [NMR No. SK 27 NE 93]. It comprised a 4.0x3.3m diameter cairn that was 0.4m high. This was built casually of moderate-sized gritstones with several larger stones placed erratically at the sides to the north and east, and four stones in a compact group at the western edge that were set approximately vertically and another that leant inwards to the north-west. Although the excavators suggested that the site had been deturfed and a low soil mound built prior to the construction of the cairn, these observations are probably the result of misinterpretation of the effects of podsolisation on the underlying soils. The only small find was a Langdale polished axe in the soil under the centre of the cairn with a few fragments of charcoal nearby. While the axe may pre-date the cairn by a significant period, it probably indicates Later Neolithic clearance or agricultural activity in the vicinity at that date. A hazel nut was found deep in the soil elsewhere under the cairn. A sample from under a stone at the edge of the cairn had poorly preserved pollen which included several tree species and abundant hazel, grass and heather. The last probably indicated the site was already heathland when the cairn was built.

The excavated cairn to the south-east (1559), at *c.* 7m from the first, was dug in 1960 (Henderson 1979) [NMR No. SK 27 NE 94]. It was similar to the other in that it was a simple pile of stones, 6.3x5.6m in diameter and 0.4m high, with larger stones place round the sides. There was a short interrupted arc of four to five low vertical and leaning stones to the south/south-west, *c.* 0.7-1.5m within the cairn edge; these may have been fortuitously arranged rather than being a purposefully-built kerb. The cairn appeared to cover a shallow

scoop that was *c.* 1.7m across and 0.2m deep, although the possibility that this was natural variation should also be considered; it contained no finds except a crudely-flaked small quartzite tool with what appeared to be bonding resin at the butt end. Lithic debitage and three hazel nuts were found elsewhere.

The SSE Area

The extent of the SSE part of the Big Moor East cairnfield is relatively well-defined. To the east and west are slopes, while to the south the ground is stony. To the north the boundary is taken to be the shallow dip within which the Barbrook I stone circle is sited. There are 12 potential clearance features close together within this dip and south/south-west of the circle (centred 427830 375500). However, only 3-4 of these are convincing (1459/1460/2095/2137) and it may well be these are a part of the SSE area rather than being a distinct cluster of features that have a greater density than elsewhere.

There is a possibility that cultivation extended beyond the sandstone 'ridgetop' occupied by the SSE part of the cairnfield; here two potential areas of clearance stone (2351/2352) and a possible cairn (2350) have been identified. However, none of these are particularly convincing and all may be fortuitous arrangements of stone. Below the shelf to the south is an isolated lynchet-like scarp (1457) below the base of the steep slope. Given the lack of other associated features, this is probably better interpreted as of geological origin.

There are no indications of any patterned distributions of cairns in the SSE part of the cairnfield except those with geological explanations noted above. However, there are several features that suggest cultivation has taken place here. These include linear clearance (2255/2262/2263/2368), clearance stone (2375) and a variety of uncertainly interpreted features (2097/2098/2100/2252/2253/2270/2358/2697). Whether there was ever formal field boundaries or not cannot be demonstrated. However, as noted above, the lack of visible boundaries at cairnfields on the Eastern Moors is not an indicator that they were not present in prehistory (Barnatt 1997; in prep. b).

Settlement

Relatively few examples of potential house sites (1453/1581/1587) have been identified within the Big Moor East cairnfield. All are located in the NNW part of the cairnfield on the lower slope of the shelf that affords the best shelter available. Two are relatively close together and of similar character (1453/1581), which gives added weight to their interpretation. A short distance above these is an unusual platform (1569) of uncertain interpretation which may also be associated with settlement activity.

Monuments

There are several large overtly ceremonial monuments associated with the cairnfield, comprising two embanked stone circles (1465/1626), two barrows (1454/1463) and a probable barrow (2361). The distribution of these in relation to the cairnfield is not random. Barrow 1465 lies at the heart of the NNW part of the cairnfield, while the other monuments can be argued to be peripheral to agricultural activity. The Barbrook II stone circle (1626) lies at the north-eastern edge of the NNW part of the cairnfield, out of view of the house sites noted above. If the two main parts of the cairnfield are separate entities with a short gap between them, then the Barbrook I stone circle (1465) and the nearby barrow (1463) lie between the two, both in a slight dip that render them invisible from most parts of the cairnfields. The other barrow (2361) lies at the north-east edge of the SSE part of the cairnfield.

Date

Direct evidence for the dating of the cairnfield is sparse. The Later Neolithic axe from under one of the excavated cairns may indicate early clearance and/or cultivation, but it is uncertainly associated with the cairnfield. That there are several associated Earlier Bronze Age ceremonial monuments, dated both by their morphology, associated artefacts at Barbrook II and barrow 1463, and in the case of the Barbrook II by radiocarbon dates, suggests that extensive activity was taking place at this time. This postulation is re-enforced by the peripheral locations of four out of five of these monuments, countering the possibility that cultivation took place at a significantly later date at a primarily funerary/ceremonial complex that is fortuitously sited at the same location. This said, it may be that agricultural activity was not restricted to the Earlier Bronze Age (see **Field Systems and Cairnfields** - introduction).

That the postulated fields at Big Moor East cairnfield are large and rectangular may be an indicator that these are late in the sequence, designed for plough tillage rather than had cultivation, perhaps of Later Bronze Age or Iron Age date (this does not preclude the possibility that such fields had not replaced an earlier and very different field layout). However, the environmental evidence from the Barbrook II stone circle (see **Ceremonial Monuments**) may suggest a very different interpretation. This stone circle has a radiocarbon date from charcoal immediately under its bank of 2120-1690 Cal. BC, which provides a terminus post quem for the bank (which itself may be a feature added to an earlier freestanding ring). Thus the bank was built at or shortly after this date, at a time when environmental evidence indicates that a heather-dominated vegetation had replaced the woodlands and grassland previously prevalent at this site. The small cairn nearby (1561) also provided evidence for construction in similar heathland conditions (see above). Barrow 1463 may have been built somewhat earlier (see **Ceremonial Monuments**), in that there was a grass-heath environment at the time the barrow and its attached platform were built, with an increase in heather after the platform was added. Taking the environmental evidence at face value suggests the cairnfield as an area of cultivation and rich grazing had been abandoned by the end of the Earlier Bronze Age. This may be supported by the relative lack of boundary definition, if this is an indicator of chronological depth, when compared with the Big Moor Central and West field systems. However, it may be that the location of the environmental sampling sites are such that the results cannot be accepted uncritically. Given that pollen from buried soils reflects the vegetation in the immediate vicinity (perhaps 50-200m radius), and that the sample sites are all located at the cairnfield edge, then the evidence for change to heathland may be heavily influenced by vegetational changes beyond the fields on the heavy soils to the north-east. Thus, the possibility of intermittent or even prolonged use of the fields in the Later Bronze Age and Iron Age cannot be discounted.

Big Moor North-West [NMR No. SK 27 NE 82]

This small isolated cairnfield is located on the White Edge dip slope, adjacent to the northern edge of the survey area, centred at *c.* 426580 376140. While the survey area was extended here to incorporate all obvious features, the possibility that there are further features beyond the area surveyed, at a greater distance northwards, cannot be discounted. The identified cairnfield is separated from the Big Moor West cairnfield/field system to the south by an extensive area that is free from clearance features. However, the North-West cairnfield is truncated to the north-west by the extensive braids of hollow way 2760; thus it may have once been somewhat more extensive than is now apparent.

The altitude range is *c.* 345-350m OD and the underlying geology is Crawshaw Sandstone which would have supported a light sand soil in prehistory.

The cairnfield, as surveyed, comprises 13-14 cairns, 6-7 stretches of linear clearance, 3 patches of clearance stone and 1 short cultivation edge. All the cairns are small and relatively irregular, which together with the presence of the other features, suggests they are primarily agricultural as opposed to funerary in character. The ground is naturally intermittently stony and two small discrete areas of uncleared ground exist with clearance features at their edges. The clearance features are relatively evenly spread across an area measuring *c.* 95x40m in extent and are best interpreted as a discrete area of ground prepared for cultivation in prehistory, possibly only used for a short period, given the lack of evidence for chronological depth or clear definition of boundaries. Although a cultivation edge and linear clearance exists, no clear field or plot edges can be discerned.

One of the areas of clearance stone (1524) is somewhat curved in plan, suggesting it was perhaps dumped at the edge of a circular building; however, this is a far from convincing possibility. No other house sites were identified, although the land here is relatively flat and the possibility that timber buildings stood here should not be discounted.

Round Knoll [NMR No. SK 27 NE 83]

Three features (centred at 427030, 375906) on a shelf below the top of Round Knoll, to the southern side, may suggest this area was prepared for cultivation in prehistory. They comprise a small cairn (1220) with two adjacent possible spreads of clearance stone (1221/1222). If the latter are not fortuitous this suggests trial exploitation of this isolated location to test its suitability for cultivation; presumably it was unproductive as more small clearance feature would be anticipated if sustained cultivation ever took place, for although the area is not boulder strewn there will be a significant amount of stone in the topsoil derived from the outcrop immediately above. However, if the stony spreads at 1221 and 1222 are fortuitous natural features, then the isolation of cairn 1220 may suggest it is a funerary structure.

The altitude range is *c.* 320-330m OD and the underlying geology is an un-named thin sandstone band above the Crawshaw Sandstone which would have supported a light sand soil in prehistory.

A second small cairn (1224), sited on the top of Round Knoll immediately above the features just described, is in a stony location that suggests it may be funerary as opposed to agricultural in character.

Another small feature (2402) on the top of Round Knoll, *c.* 105m to the north-east of the last, is possibly an isolated stretch of linear clearance, but, given the exposed location, it is perhaps more probably a ruined post-Medieval shelter (see **Rough Grazing** below).

Big Moor South [NMR No. SK 27 NE 84]

One to five features (centred at 427100, 374800) on the crest of a small lower shelf south of Swine Sty may suggest this area was prepared for cultivation in prehistory. The altitude is *c.* 295m OD and the underlying geology is Rough Rock, a hard coarse sandstone which would have supported a light sand soil in prehistory. The features comprise a small cairn (2318)

with four possible cairns nearby (2319/2320/2324/2325). If the latter are not fortuitous, this suggests trial exploitation of this location to test its suitability for cultivation; presumably it was unproductive as more small clearance feature would be anticipated if sustained cultivation ever took place. However, it is more probable that the four possible cairns are fortuitous natural arrangements of stone and that cairn 2318, given its isolation, is funerary as opposed to agricultural in character (see **Burial Cairns and Platforms**).

Settlement [NMR Nos. SK 27 NE 85, 96]

A total of 33 potential circular house sites were recorded. These have been identified with varying degrees of confidence. One or possibly two have been positively identified after excavation (1305, 1322) [NMR Nos SK 27 NE 96]. There are a further nine which are regarded as probable from their surface characteristics (236/266/468/627/1038/1067/2042/2640/2572). A further sixteen sites are given additional credence due to proximity to other better defined examples (161/276/502/622/630/631/1078/1082/1143) (1147/1316/1453/1581/2063/2569/2798). Six sites are possible isolated examples (31/310/1243/1524/1587/2422), of which three were recorded for the sake of completeness, but were suggested on only slight grounds (310/1524/1587). The term 'house' used here is one of convenience; it is recognised that some or all could equally be outbuildings rather than dwellings.

One to four rectangular and D-shaped platforms are also described here. In these instances their function is far from clear and it is not known if they ever supported buildings, alternatively they may have been levelled open working areas. At feature 2647 there is a large rectangular platform, measuring *c.* 9.0x6.0m across, with linear clearance above the downslope edge. The other three features are less certainly interpreted (439/1353/1569). Site 439 is small and rectangular but may be fortuitous. Site 1353 is small and sited at the base of a slope and the downslope edge may be a plot edge while the platform-like area above may be fortuitous. Feature 1569 is a large D-shaped terraced platform measuring *c.* 10.5x5.0m across. It is not clear what the function of this was.

All the potential house sites and platforms are associated with the identified areas of field system and cairnfield; their distribution within these has been discussed above. The section below confines itself to a discussion of the morphology of the postulated house sites.

The house sites have been identified from a variety of surface clues. With 1-2 exceptions they all appear to have been timber built with no stone footings and thus are recognised by indirect means. The main exception is the excavated example at Swine Sty (1305). This small circular building had stone footings with an entrance to the west. Excavation revealed that to the north the inner edge of the footings bank had five to six vertically-set stones in a very irregular arc, possibly purposefully arranged to create two niches or cupboards. The only other stone-footed structure is that on the shelf crest above (31). This is significantly small and it is far from clear if it was ever a building; alternative suggestions are a robbed cairn or a cairn built round a mature tree. Other examples of house sites are partly defined by stone banks, but in these cases this appears to be field clearance built up against the house wall rather than footing banks.

The timber buildings have been identified in two basic ways. In fourteen cases on sloping ground there are terraced sub-circular platforms cut into the slope, usually with a built-up lip

on the downslope side (161/236/468/622/627/1038/1067/1243/1453/1581/1587/2042/2572/2640). Four of these also have clearance heaps placed at their edges (161/236/1038/2042), while feature 627 is partly defined by an abutting earthen bank. In the case of probable house 236 the bank-like clearance follows *c.* 70% of the circumference, while at 1038 there are linear heaps at opposite sides of the platform. In thirteen cases linear clearance or stone banks define arcs that are difficult to explain unless it is postulated that they are placed at the edges of buildings or other circular features that are no longer visible (266/276/310/630/631/1147/1316/1322/1524/2063/2422/2569/2798). In the case of one of these at Swine Sty (1322) this was tested by excavation. Around the undefined part of the postulated circumference were three to four possible post holes, adding weight to the suggestion that a timber building once stood here. Recently a similar feature, comprising a platform with a clearance arc to one side, identified as a probable house site during survey on Gardoms Edge (RCHME and PPJPB 1993, feature 1083) has been confirmed by excavation to be the site of a timber building (Barnatt *et al.* 1995; 1996). There are also four atypical postulated circular buildings within the Big Moor survey area. Three of these comprise amorphously shaped platforms with clearance heaps at their edges (1078/1082/1143). One site (502) is defined by a circular hollow with clearance heaps at the edge; this can be alternatively interpreted as a pond site.

The potential timber buildings vary in size. With one possible exception they range from 4m to 10m across; that at 161 is only 3m diameter and uncertainly interpreted. There are a further 5 potential sites of under 5m diameter (236/622/1587/2042/2572). At the other extreme there are 7 potential sites with average diameters of over 7m (266/276/502/1038/1082/1143/2063).

The one or two known stone-footed sites are exceptionally small. The excavated example at Swine Sty (1305) has an internal diameter of only 3.7-4.0m and thus it is debatable if it was ever large enough to be a family dwelling; it may be a shieling (or outbuilding). The excavation failed to provide dating evidence for this feature, but it certainly post-dated the possible timber building which it partly overlay (1322) which had nearly twice the floor area, with a diameter of *c.* 6.0m. It may be the stone-footed example is particularly late in the sequence, built at a time of deteriorating climate when stone footings would have become necessary. Perhaps the field system was all but abandoned except for rough grazing at this time. Site 31 is even smaller, with an internal diameter of only *c.* 2.0m, again an interpretation as a shieling must be considered if this was ever a building.

Given that timber buildings without stone footings are recognised to be the norm on Big Moor, it is axiomatic that the full number of buildings has not been recognised, therefore discussion of their number and distribution amongst the fields need to be treated with caution. Similarly, given the extended period over which the field systems and cairnfields may well have been in use, it may well be there are significant differences in the date of buildings and the possibility of a shifting settlement pattern must not be ignored.

Ceremonial Monuments

A number of overtly ceremonial monuments exist within the survey area, including three embanked stone circles/ring cairns, four to thirteen burial cairns, a kerb cairn, two or three cists and four to five platforms associated with burial cairns. Associated with several monuments there are examples of cup and ring art. All these are described here, but their locations are discussed above under the relevant field systems and cairnfields with which they

are associated.

Stone Circles and Ring Cairns [NMR No. SK 27 NE 1, 13, 19]
Within the survey area there are two embanked stone circles, known in existing literature as the Barbrook I (1465) [NMR No. SK 27 NE 13] and Barbrook II (1626)[NMR No. SK 27 NE 1] stone circles, and a ring cairn or damaged embanked stone circle (1392) [NMR No. SK 27 NE 19] known as the Big Moor ring cairn (Burl 1976; Barnatt 1989; 1990; 1996a).

Barbrook I and II lie east of the Bar Brook stream and are associated with the Big Moor East cairnfield. Although they are only *c.* 245m apart, they are not intervisible, Barbrook I being sited in a shallow hollow in the shelf. The Big Moor ring cairn lies on the crest of the shelf scarp, above and to the west of Swine Sty, at the one point where this meets White Edge. This coincides approximately with the boundary between the Big Moor Central and Big Moor West field systems.

The Barbrook I stone circle (1465) [NMR No. SK 27 NE 13] is exceptionally well preserved. It comprises a 14.5x12.5m ring of twelve orthostats, with a gap to the north-east where one further stone probably once stood. A stone which may well have come from here was identified in 1987, buried in an adjacent early 20th-century excavation trench (Graeme Guilbert pers. comm.). The orthostats are between 0.35 and 0.70m high, with the exception of one to the south-west which is significantly taller at 1.05m. They are set at the inner edge of a continuous low rubble bank which surrounds a flat central area which has probably been terraced into the slope. The only features in the interior are backfilled but visible excavation trenches. The most obvious is the unpublished T-shaped trench cut by Peat in 1911-12 (Peat 1965). The other is a small roughly-rectangular trench in front of the tall orthostat to the south-west and was dug by Peat and Storrs Fox around the turn of the century (Peat 1965). Both were re-excavated by Guilbert in 1987 (Guilbert unpublished). No burials or other ritual deposits appear to have been found. The bank is 2.0-2.5m wide and is retained at the inner edge by a kerb. Traces of this are visible and it appears to comprise both small vertically-set stones and drystone walling. In 1987 a small excavation across the bank to the east demonstrated that the outer edge was retained by a two-course drystone wall at this point (Graeme Guilbert pers. comm.); no trace of this is visible at surface around the rest of the circumference.

The Barbrook II stone circle (1626) [NMR No. SK 27 NE 1] today has been almost fully rebuilt after an unfortunate history from the 1960s onwards, which includes extensive but still unpublished excavation by Lewis and later inaccurate restoration and two episodes of serious damage; this led to further selective excavation in advance of rebuilding in 1989 (Barnatt 1996a). The excavations that took place between 1962 and 1970 investigated the whole interior, while photographs taken in 1974 show that much of the enclosing bank was investigated by persons unknown after Lewis ceased directing the excavation. The excavations demonstrated that the site comprised a 14.5x13.5m ring of nine or ten orthostats set within an inner kerb to the bank which comprised a three to four course drystone wall that stood 0.4-0.5m high. The orthostats had mostly fallen or were leaning inwards prior to excavation and were not obvious. They originally stood 0.45-0.65m high and did not rise significantly above the bank. The exception was one stone to the ESE which was *c.* 0.90m high. The stones are exceptionally irregularly spaced, including a particularly wide gap to the south/south-west and possibly two stones set contiguously to the east; one of these was relatively small and may have originally been conceived of as a kerbstone. The 1989 excavations showed that the orthostats were set in stone holes and this raises the possibility

that the site is multiphased and that further unexcavated stone holes exist in the wider gaps beneath intact areas of undisturbed kerb in the western and southern quadrants. The bank was 1.3-2.3m wide and was defined at the outer edge by a low kerb comprising a single line of vertically-set slabs. Charcoal from under the bank obtained in 1989 gave a date of 3535+/-70 BP (OxA-2440), which calibrates at two sigma to 2120-1690 Cal. BC (Barnatt 1995). The bank was interrupted to the north-east by a narrow entrance that had subsequently been largely blocked by a cairn over a stone filled pit, with a cup-marked stone nearby; this cairn was not rebuilt during the restoration.

The interior contains a *c.* 2.5m diameter low cairn (1627), with a kerb of contiguous slabs at its edge, in the south-west quadrant. The 1960s excavation found a pit under the centre of the cairn containing a collared urn with a cremation burial, a flint scraper and a flint knife, both of which were burnt. A radiocarbon date of 3450 +/- 150 BP (BM-179) was obtained, which calibrates at two sigma to 2192-1430 Cal. BC (Barnatt 1995). Part of a shale ring was found under the cairn. Immediately beyond the cairn to the NNW was a second pit. This contained a cremation burial and burnt flints, above which a fire had been lit after deposition. To the south-east was a ruined cist (1628) which had been previously disturbed. The capstone lay nearby and was cupmarked on one face. Further small cupmarked stones were found during excavation of the bank and cairn in the 1960s (Lewis 1970; Barnatt and Reader 1982), and also in 1989 (Barnatt 1996a). The disturbed cist, which contained fragments of cremated bone, may have originally been set within an earthen mound (Lewis pers. comm.), and may have been the site of excavations by Mitchell in the 19th century (Mitchell 1850). He states he dug two small mounds within the circle without finding burials. In the south-east quadrant, immediately in front of the bank kerb, Lewis found a pit containing a collared urn and cremation burial.

Pollen analysis from soil under the bank of the stone circle sampled in 1989 showed that well before the monument was built there was a landscape of grassland pasture and hazel woodland, whereas immediately prior to the construction of the stone circle heather moorland had developed. The grassland pasture may have been established for a considerable time and lasted until the demise of remaining hazel woodland or scrub. Cereal cultivation also appears to have taken place at a time when hazel was declining but before the heath dominated landscape was fully developed. Dimbleby also sampled pollen from Barbrook II in the mid 1960s; the context is not known. This work remains unpublished, but in the report on a nearby cairn (1463) (Riley 1981), he makes reference to the fact that the pollen from the stone circle had little heather. This stands in strong contrast to the 1989 results and his work at cairn 1463, although he did note high levels of hazel, as found in 1989.

The Big Moor ring cairn (1392) [NMR No. SK 27 NE 19] has never had archaeological excavations, thus its exact design is uncertain. While it superficially looks to be a simple ringcairn, the possibility that orthostats existed cannot be discounted. Those at Barbrook II were not obvious before excavation and the problem at site 1392 is exacerbated by serious damage caused by traffic following hollow way 565 which bisects much of the site. This has resulted in three breaks in the bank and lowering in other places. It is not clear if any of the breaks are original entrances. The rubble bank has an internal diameter of *c.* 15m and is *c.* 2m wide. The best preserved section is to the east where there are vestiges of an inner kerb of contiguous slabs. One of these to the ENE is large but no higher than the bank. Erosion at a footpath that crosses the bank to the south-east shows that there is also a low outer kerb of small slabs.

Burial Cairns and Platforms [NMR No. SK 27 NE 86]

There are 7-11 large cairns, which due to their size and non-random placing in relation to associated field systems and cairnfields, are postulated to be certainly or possibly burial cairns. In effect they are barrows, as a distinction between stone and earthen burial structures cannot be sensibly drawn in the Peak District (Barnatt 1996b). The function of these large mounds is primarily funerary, although a wide range of ritual and symbolic purposes can be documented (Barnatt 1996b). A small number of small cairns either have formal architectural characteristics or occur in isolation, suggesting they may be funerary in character.

Three of the 'barrows' have small flat-topped platforms attached to their sides (369/473/1463). Such structures are a feature of the Eastern Moors of the region and their number and character has recently been reviewed (Barnatt 1991; 1994). Only some have funerary deposits and it may well be that their primary purpose was for ritual offerings in a broader sense. One or possibly two smaller cairns (1575/1576), of presumed agricultural character, have similar platforms abutted. Such platforms attached too small cairns have been excavated at Highlow Bank and Eaglestone Flat (Barnatt 1991; 1994).

East of Bar Brook, associated with the Big Moor East cairnfield, there are three large burial cairns (1463/1454/2361). One of these (1463), close to the Barbrook I stone circle in the dip between the two main parts of the cairnfield, was fully excavated in 1964-65 and subsequently restored (Riley 1981; Barnatt 1996c, site 29.5). It comprised a stone built barrow of 7.5x7.0m diameter, retained at the outer edge by a drystone-walled kerb of two to three courses. Before excavation, because of collapse, the mound appeared to have a diameter of 10.5x9.0m. After restoration the mound is *c.* 1.0m high. At and near the disturbed centre the excavator found two small cremation deposits of undiagnostic bones in the lower stones of the cairn. There was also a disturbed deposit in the soil underneath, comprising charcoal, a few scraps of undiagnostic burnt bone and two sherds, possibly of collared urn, all above an area of burnt subsoil. This disturbance may well be the result of antiquarian investigation; perhaps this site was one of the three large 'tumuli' opened by Mitchell in the 19th century (Mitchell 1850). His workmen made no finds but it is clear the exploration was inept (see **History of Research**). Under the kerb to the north was a pit containing charcoal and sherds, possibly of collared urn. Attached to the eastern side of the mound was a low, flat-topped platform, which is sub-rectangular is shape, measured *c.* 3.5x2.0m across, and was edged by a low kerb of blocks with a rubble fill. After restoration the platform is now over 5m long. Under this, against the kerb of the barrow and protected by two stones, was found an upright biconical urn placed on a slab on the old ground surface. The urn contained charcoal and the cremated bones of a human child of 7-10 years.

The buried soil was an acid brown earth and pollen from the site showed a grass-heath environment at the time the barrow and platform were built, with an increase in heather after the platform was added. This coincided with a decrease in woody species and there was noticeably less hazel than at Barbrook II (1626).

At the centre of the northern part of the Big Moor East cairnfield is a large burial cairn (1454) (Barnatt 1996c, site 29.4). This is *c.* 11m in diameter and just under 1.0m high. There is a shallow pit at the centre with scattered upcast which is probably the location of an antiquarian investigation; the barrow may well be one of the three large 'tumuli' opened by Mitchell in the 19th century (Mitchell 1850); no finds were made but it is clear the exploration was inept (see **History of Research**). At the south-west side is a large but low stony platform, which is somewhat irregular in shape, perhaps best described as sub-

rectangular, and measuring *c.* 8.0x6.0m across. Its top is somewhat irregular and may have been disturbed or robbed. There is a possibility that this platform extends under the barrow, as there is a narrow stepped area at the southern side of the main mound. However, this stepping may be the result of livestock erosion. It is far from clear what the chronological relationship between the two components is, similarly the function of the platform is not known, although a funerary/ritual explanation seems likely given the association. The site has a superficial resemblance to a number of long barrows with superimposed round barrows found on the limestone plateau of the Peak District (Barnatt 1996b, 20-26). However, the resemblance is probably fortuitous as the platform at 1454 is too low and flat-topped to look long barrow-like. A similar site to that described here exists at Highlow Bank on the gritstone upland west of the Derwent, where a large round barrow has what is probably an abutted low platform-like barrow to the south-east side (Barnatt 1991; 1996c, sites 30.5, 30.6).

A third probable large burial cairn (2361) lies at the northern edge of the southern part of the Big Moor East cairnfield. This measures *c.* 12.0m across and has been heavily robbed, presumably to build the adjacent sheep lee (2359/2697). The mound has largely been reduced almost to ground level and at most is only 0.5m high. It has numerous digging scarps and islands of residual material.

West of Bar Brook are four to six burial cairns (201/326/369/387/473/1381) associated with the Big Moor Central field system/cairnfield and a possible example (2618) within the Big Moor West field system/cairnfield.

At the eastern edge of the Big Moor Central field system, on the shelf 'spur' above Bar Brook is a large somewhat mutilated burial cairn (473) (Barnatt 1996c, site 29.6). This measures *c.* 12.5x9.0m in plan and is *c.* 1.0m high. The dimensions have been distorted by the insertion of a shooting butt (604) at the south-east side; it may originally have been more circular with a diameter of *c.* 10.0x9.0m diameter. There is a large central pit with associated upcast, the southern part of which is relatively deep, while there are slighter indications this disturbance extended to the north-west. There is a possible platform attached to the south-west side. This measures *c.* 3.0x1.5m and is 0.3m high.

At the centre of the shelf above Swine Sty, in the heart of the Big Moor Central field system, are two probable burial cairns (369/387) placed east/west of each other, *c.* 28m apart. While their size indicates that they almost certainly have a ritual function, that they are within a dense group of smaller cairns associated with field boundaries, has led to cataloguing them as probable rather than certain examples. That to the east (387) (Barnatt 1996c, site 29.7) measures *c.* 10.0x8.5m across, is 0.8m high and is somewhat irregular in shape. The only sign of disturbance is robbing at the eastern edge. That to the west (369) (Barnatt 1996c, site 29.8) measures *c.* 8.5x8.0m across and 0.6m high. At the centre is a small, shallow pit which may well be antiquarian disturbance. There is a sub-rectangular platform attached to the southern edge which measures *c.* 3.0x2.0m across and is 0.3m high.

At the western edge of the Big Moor Central field system is the largest burial cairn (326) (Barnatt 1996c, site 29.9) in the survey area. This measures 13.5x12.0m across, is 0.6m high and is flat topped. Disturbance appears to have only been superficial. There are three small robber pits in the southern half, while at the crest to the north there is a superimposed cairn (567) which measures 5.5x4.0m across with a possible waymarking stone (1063) at its centre associated with hollow way 565 which passes adjacent to the barrow. It seems most likely that this upper cairn was built in association with the waymarking stone, but the possibilities that

it results from antiquarian disturbance of the barrow, or that it is a Bronze Age feature, cannot be discounted.

A second possible burial cairn (201) lies 143m south of the last. This measures only 7.0x6.0m across and is 0.5m high. While it is thus of comparable size to many of the clearance cairns on the shelf, that it symmetrical in plan and profile, and that it is sited at the edge of the field system, suggests it may be a ritual structure.

Sited *c.* 140m west of the Big Moor ring cairn (1392), is a possible burial cairn (1381). It lies on higher ground above the White Edge scarp, at the western end of the Big Moor Central field system and cairnfield. This feature comprises an arc of stony bank measuring 7.5x1.4m in plan. While it may be linear clearance, it has a sharp inner edge suggesting robbing and there is a possible opposite edge to a robber trench, comprising a shallow break of slope (1382). Thus, the feature can be interpreted as a possible burial cairn of *c.* 8.0m diameter, the bulk of which has been removed. It lies close to a 19th century drystone wall below to the west and the site may have been used as a source of stone for this.

A possible burial cairn (2618) within the Big Moor West field system and cairnfield, lies between the southern cairnfield component and the central area of fields. It measures only 6.5m across and is 0.8m high. While it is thus of comparable size to many of the clearance cairns within the survey area, that it is noticeably larger than others in the vicinity, is symmetrical in plan, and appears to be built of earth and stone, suggests it may be a ritual structure.

Beyond the northern end of the Big Moor Central field system, on a low shelf west of Bar Brook, is a further possible burial cairn (1282) (Barnatt 1996c, site 29.3). This measures only 6.0x5.0m across, is flat topped and 0.2m high. While it is thus of comparable size to many of the clearance cairns within the survey area, that it is relatively isolated and is symmetrical in plan and profile, again suggests it may be a ritual structure. There are two possible small cairns (or fortuitous/modern features) nearby (1279/1281), which may also be interpreted as funerary, although the possibility that the whole group is agricultural in character cannot be discounted. A further small cairn (or later feature) at 1294 is located *c.* 150m north-east at the other end of the shelf; the same comments apply here.

A few other small cairns have evidence that suggests they may be funerary in character. Within the southern cairnfield component of the Big Moor West field system/cairnfield is what may be interpreted as a diminutive kerb cairn (2644). This comprises a 1.9x1.0m ring of small stones with no internal fill. An isolated small cairn (1224) on the top of Round Knoll is in a high, stony location that suggests it may be funerary as opposed to agricultural in character. A second small cairn nearby (1220) is possibly similarly interpreted (see **Field Systems and Cairnfields** above). Another cairn (2431) west of Round Knoll is similarly isolated; this has a cupmarked stone (2433) on its top. Close to the Swine Sty settlement, at the centre of a small rectangular enclosure, cairn 1419 appears to have three kerbstones at the downslope edge, indicating a formality to its construction. On the lower shelf south of Swine Sty, cairn 2318 may be isolated and thus potentially funerary, if the nearby dubious clearance cairns (2319/2320/2324/2325) are fortuitous. To the north-east of the Big Moor East cairnfield, below the upper scarp, three small cairns (1694/1705/1706) may be funerary given that they are relatively isolated.

Two relatively small, adjacent cairns (1575/1576) within the Big Moor East cairnfield, which

are presumably clearance features, appear to have small platforms attached. That to the south-west (1576) is a 5.0m diameter cairn of 0.4m height with a sub-circular or lobate, flat-topped platform abutted to the west which measures *c.* 2.0m across and 0.3m high. That to the north-east (1575) is a *c.* 7.5x5.0m diameter irregular cairn, of 0.5m height, with a platform or second cairn attached to the WNW that measures *c.* 4.0x3.0m across and is of similar height to the main cairn.

Cists [NMR No. SK 27 NE 87]
Two or possibly three cists were identified during survey. One of these lies within the interior of the Barbrook II stone circle (1628) [NMR No. SK 27 NE 1]. This is now ruined but appears to have been a small rectangular box with a cup-marked capstone (see **Rock Art**). When excavated in the 1960s the disturbed cist contained fragments of cremated bone, and there was evidence that it may have originally been set within an earthen mound (Lewis pers. comm.). It may have been the site of one of the excavations by Mitchell in the 19th century within the circle (Mitchell 1850); his workmen made no finds but it is clear the exploration was inept (see **History of Research**).

Just over 150m west of Barbrook II is cairn 1612. This 7.0m diameter cairn has a central disturbance that has revealed two sides of a possible damaged cist. One of the stones is a naturally-placed earthfast slab and the whole may be fortuitous.

The other cist (1135) lies on the west side of Bar Brook above the scarp of the Swine Sty shelf. This unusual monument comprises three upright slabs with a fourth at the south-east side which has collapsed and is now covered by a large displaced capstone. It is nor clear if this carefully-built rectangular structure has collapsed naturally or has been robbed after the capstone has been levered out of place. The cist is located adjacent to a large earthfast boulder to the north which effectively hides it from view from most of the shelf. There are no indications that the cist was ever incorporated in any form of mound and it almost certainly has always been freestanding. This cist is one of only two free-standing cists recorded in the Peak District. The other, on Gibbet Moor (RCHME 1990), is far less regular in plan and in one of the authors (JB) opinion it is not certainly a Bronze Age cist.

Rock Art [NMR No. SK 27 NE 88]
Two examples of cup and ring type art have been recorded during survey and other examples have been recovered during excavation.

The one new discovery is a small flat slab (2433) on cairn (2431) that has a single small cup-mark at the centre of one face. Today this stone lies at the crest of the cairn with the cup-mark face upwards. However, the cairn looks to have been seriously disturbed. The isolated location of the cairn, on the dip slope of White Edge west of Round Knoll, may indicate it was funerary in character.

Within the Barbrook II stone circle (1626) is a ruined cist (1628) with a capstone with three worn cup-marks and an unusual groove leading towards the largest cupmark at the centre of the slab (Barnatt and Reader 1982, no. 11). The capstone was broken in two in the late 1980s but both pieces remain on site.

Other cup-marked stones were found during the 1960s excavation of the Barbrook II stone circle, one of which is now in Sheffield City Museum (Barnatt and Reader 1982, no. 10). This has a flat face that has a central cupmark surrounded by nine more. The curving

opposite face has three lines of four cup-marks each, with a fourth line of three cup-marks. One of the kerbstones of the small internal cairn (1628) was cup-marked and this was still visible in the late 1970s and comprised a single cup-mark in the upper face of the kerbstone (Barnatt and Reader 1982, no. 12); this is now missing. Lewis noted a further three cup-marked stones found in the bank (Lewis 1970), the present location of which is not known. A further two simple cup-marks on small stones were identified during the 1989 excavations (Barnatt 1996a). One was found in the bank just north-west of the entrance, the other close to the 1960s spoil heap; it is not clear if these were new discoveries or rediscoveries of examples found in the 1960s.

After the excavation of a burial cairn (1463) immediately upslope of the Barbrook I stone circle (1465) four unworn cup-marked stones were identified when the stone mound was being restored (Riley 1981). One slab has a carving comprising a small cup-mark surrounded by a distinctive wide but shallow ring. One slab has a line of four cup-marks along the edge of one face. Another has a single cup-mark at the centre of one face. The fourth has one or possibly two cup-marks on one face and another on the opposite face.

Artefacts [NMR No. SK 27 NE 89]

Virtually no artefacts have been documented as recovered from within the survey area, with the exception of those from the various excavations of prehistoric features noted above. The only known examples of stray finds are both flint scrapers. One came from the southern end of White Edge in 1952 at *c.* SK 26507545 (DERBYS SMR 1339). The other, of horseshoe form, was found in 1961 in a 'bulldozed firebreak' at *c.* SK 27657565 (DERBYS SMR 8067). This firebreak is presumably either one of the two visible today (2117/2118, 2126/2128/2237) east of Bar Brook, or that alongside the track above (1428). The given map reference appears to be inaccurate and thus it cannot be assessed which of these features is referred to.

MEDIEVAL AND POST-MEDIEVAL MONUMENTS

Quarries

Stone Quarries [NMR No. SK 27 NE 74]

There are no large quarries within the survey area, the quarrying being restricted to relatively small scale activity. Along White Edge there are a series of small quarries (2530/2532/2533) which may have been dug to build the drystone walls below to the west. One of these has a date of 1876 inscribed on one of the quarry faces but this may post-date quarrying by a significant interval. The walls below were mostly planned (and possibly built) at the time of the Enclosure Award of 1826 for Baslow, Bubnell, Curbar and Froggatt (anon. 1826), and had certainly been built by 1848 (anon. 1848).

Above the largest of the quarries (2533) are two mounds linked by a stony bank (2589) which may well be associated with the quarrying, but their purpose in unclear.

One small quarry (2794) on the steep valley side west of Bar Brook may also be for free stone.

Dayworking [NMR No. SK 27 NE 90]

The remainder of the quarrying evidence is for what is locally called dayworking. This comprises the breaking up of boulders, often leaving small pits and quarrying waste. Quarrymen often paid the landowner a rent to carry out this type of work, producing gateposts, lintels and troughs. The direct evidence of what was being produced within the survey area is minimal, comprising four gate post roughouts (1335/1336), a possible lintel (1572) and a slab with tool marks (1541).

The dayworking pits are widely scattered across the survey area, their distribution reflecting where suitable stone was available. Noticeable concentrations occur along the scarp at the north-eastern edge of the survey area (2805), with smaller concentrations on the shelf to the south (2129/2242), at and below the scarp west of Swine Sty (1338/2183/21842187) and on the shelf above (1003/2803/2804).

Within the north-eastern concentration, along a south-west facing escarpment is a possible ruined quarrymans shelter (1722) [NMR No. SK 27 NE 81], comprising a crude tumbled wall between two boulders. Further along the escarpment to the north-west is a possible shelter (1691) comprising a linear heap of stones which is either stacked waste or a windbreak. At the scarp west of Swine Sty is a ruined quarrymans shed (1334), which consists of a small square building of dressed drystone construction. Nearby is a possible shelter (1338) comprising a crude low wall, next to two quarry pits, which is either stacked waste or a windbreak. Similar piles of stone nearby (1339/2183/2187) appear to be stacked waste.

Many of the scattered small dayworking pits and associated waste were not individually catalogued, but are indicated by a symbol on the survey plans. Only when there was uncertainty over interpretation (1382/1551/1586/2014/2096/2584), or specific detail or strategraphic relationships to be recorded (1467/1468/2036/2084/2266) were these catalogued. In one case a boulder with feather holes for splitting was noted (2240). Slightly larger quarry pits were also catalogued (2122/2144/2243/2254/2348/2774).

Track-Building Quarries
One small quarry (2793) may be associated with the construction of the 19th-century track (2048) which gives access to the grouse-shooting butts above Swine Sty (see **Grouse-Shooting Butts and Associated Structures** below).

Reservoir Quarries
A discrete series of late quarries can be identified which relate to the building of Little Barbrook Reservoir (2801) [NMR No. SK 27 NE 77] and to the access track (2795) in the 1880s (see below **Reservoirs and Associated Structures** and **Reservoir Track**); the latter was extended to the larger reservoir further upstream a few years later. The largest two quarries in the survey area (1266/1698) are those immediately to either side of the reservoir, dug to provide material for the dam. There are a series of smaller quarries (1448/1579/1580/1584/ 1696/1710/2701) spaced at intervals along the upslope side of the access track, which were probably dug to provide material for the terrace the track was built along.

Mining [NMR No. SK 27 NE 75]

A discrete concentration of features exist on the east side of Round Knoll which have all the morphological characteristics of bell-pit type coal mining. Although, the British Geological

Survey one inch sheet shows no coal seam here (BGS 1974), this location is at the correct strategraphic horizon for the Soft Bed or Coking Coal to outcrop. Round Knoll rises above the surrounding land and potentially has the coal seam outcropping round its sides in a small isolated pocket, while the coal and beds above have been eroded away from the adjacent area. The coal seams on the eastern gritstone upland of the region were of variable thickness, often becoming so thin as to be unworkable, even using pre-20th century small-scale mining methods. Thus, it is unclear if the mine on Round Knoll ever found workable coal or was more of an ambitious trial. The coal seams in the gritstone upland were often also worked for crow stone, a hard rock now more commonly known as ganister, often found immediately under coal seams. It was used as road metalling and for crucible making (Farey 1811, 190). Thus, crow stone is a second product which needs considering. One of the pits on Round Knoll (1054) has a good quality orange coloured ochre exposed at surface, which may suggest a third potential product.

The most distinctive features of the Round Knoll mines, unparalleled in the region outside the survey area, are two linear features at the south-eastern edge of the complex. These comprise deep but narrow channels, with relatively sharp flanking upcast banks, that are about 50 and 70m in length. These features cross the relatively flat shelf below Round Knoll, on a similar north-west/south-east orientation, the land becoming gradually higher to the north-west. The southern linear feature (1055) terminates at its north-western end at a pit with low spoil heap on the downslope side; this may be site of a shallow shaft. The northern linear feature (1053) ends at a much larger hillock with shaft hollow. This either was a deeper shaft or there was greater horizontal extraction of non-coal/ganister material from the base of a shallow shaft. Running north-westwards from 1053, on roughly the same alignment are two further shaft hollows of similar size (1049/1050), with a series of pits between with no associated spoil (1052/1053/1054). It is not clear if these pits are surface workings (but they have no spoil) or are the sites of collapse of an underground level beneath (see below). To the side of the central mine hillock are the remains of a small stone shed (1051). As the walls are at most 0.5m high and there is little tumble, it is either unfinished or the site has been robbed for stone.

Upslope from the features just described, are four large bell pits (1200/1201/1202/1205). Analogy with other coal workings in the region (Barnatt and Leech 1997) suggests that the workings here were not bell pits in the strict sense, but were shafts down to interconnected workings along a seam, the shafts used for ventilation and probably removal of coal and/or ganister from the mine. Slightly further upslope are two significantly smaller bell pits (1206/1207) and two even smaller mine pits (1203/1204). While these could be unfinished shafts that were intended to reach the same seam as the deeper shafts to the east, this seems unlikely. Given the close proximity of shafts 1205 and 1206, it seems more probable they represent two phases of operation, the smaller shafts to the west being trials into beds higher up the geological sequence. Two short stretches of access track (1228/1229) may be directly associated with these small bell pits.

A further large bell pit (1217) exists *c.* 80m south-west of the others. This may well have been sunk at about the same time as the others, but it is unlikely to have been linked to them by underground workings and may well have been a trial to test the thickness of the seam once its existence had been proved to the north-east.

Two or possibly three further linear features similar to those described above, and associated bell pits, have been located elsewhere west of Bar Brook, all at potential outcrops of the Soft

Bed coal. At about 400m SSW of 1053/1055 is a similar linear feature (1491). This runs westwards from a wet flush into land which slopes gently upwards. It is *c.* 38m long and has 5-7 small bell pits further to the west and south (1500/1501/1504/1506/1537/2411/2556). Its eastern end has a visible stone-lined drain which appears to continue westwards under the channel. A second possible linear feature (1488) exists further down the wet flush, but this is far less certainly interpreted. The shafts must have been shallow. The majority are close enough together to have had linking underground workings. However, that at the extreme west (2411) is too far away from the others for this to be the case. One of the bell pits (2556) has a low drystone wall adjacent (2680) which may have been built to provide shelter. In the wet flush below, possible bell pit 1500 has a small pile of stones (1494) which may also be associated with the industrial activity.

A further linear feature (2230) lies about 200m north-east of 1053/1055. This is only *c.* 16m long and only has a low upcast bank on one side of the channel. It may be unfinished; there are no associated bell pits.

One bell pit shaft (1521) was recorded at the extreme northern edge of the survey area. This again is sunk close to the outcrop of the Soft Bed or Coking Coal (BGS 1974). There may well be further examples beyond the survey area to the north.

The explanation of the function of the 4-5 linear features is far from clear. The presence of one in isolation (2230) may suggest they were the first feature created at a time of exploration, as a form of trial trenching. However, their careful construction, as graded channels and adjacent banks, with regular profiles, indicates they probably had further functions. The stone lined drain at 1491, and their position downslope of the bell pits, may well indicate they were used to dewater the mines. However, if they were simply to take away water that was being pumped up the shafts there would have been no need to have such long channels. Therefore, it seems likely that they were designed to lead to horizontal adits or drainage soughs. The presence of a line of hollows north-west of 1053, which may indicate collapse in such a level, may support this suggestion. Why two such features (1053/1055) are found together fits uncomfortably with this suggestion, unless one was driven slightly too high, or collapsed, necessitating the construction of another. The strong contrast between feature 1055, with only a slight feature at the top end, and 1053 with large shaft mounds, linear hollows and a shed, suggests it was the latter that was the focus for prolonged activity.

Little is known of the coal mining of the eastern gritstone upland. The use of coal for local iron and steel smelting and for local lead smelting became important from about the mid 18th century (Hopkinson 1957; Flinn 1984; Crossley 1990; Riden 1991; Barnatt with Rieuwerts and Roberts 1996). However, local mining of coal is documented as early as 1560 on Beeley Moor (Hopkinson 1957). The only comprehensive list of mines is that produced by Farey in 1811, which included active mines and those worked within recent years; this does not include the mines within the survey area on Big Moor. Thus, they must either date from the 18th century of from after *c.* 1811. The 19th-century date seems the less likely, both because the mines on the eastern upland were already in decline in the early 19th century (Barnatt with Rieuwerts and Roberts 1996), and because there is no indication of tracks leading to the present road network, as might be predicted for 19th-century mines. It seems most-likely that the mines upon Big Moor date to the 18th century, although an earlier date cannot be discounted. An 18th century date is supported by the known increase in consumption of coal at this time, and by the fact that feature 1053 cuts hollow way 1285, a route that may not have fallen out of use until the mid 18th century (however, this is not necessarily the case,

as it may be the parallel route at 565 that was used at this time - see below).

Hollow Ways, Tracks, Paved Paths, Bridges and Guide Stones

Hollow Ways (see Appendix 2) **[NMR No. SK 27 NE 98]**
A complex network of hollow ways cross the surveyed area. These are pre-turnpike packhorse routes, some of which may also have been used for carts. An overview of their destinations beyond the survey area is provided from aerial photograph analysis of this part of the Eastern Moors (Barnatt and Smith 1997, 94, fig. 56). Many may have origins in the medieval period but traffic probably increased with industrial production in the post-medieval period up until the mid 18th century, when turnpike road started to be built. By the early 19th century the traditional routes had ceased to be used (see **Turnpike Roads**). Some of the better known products transported on the packhorse ways were salt from the Cheshire Plain, lead and agricultural produce from the Peak District and a multitude of 'industrial' products and pottery from the emerging industrial centres east of the region between Sheffield and Chesterfield (Dodd and Dodd 1980, Hey 1980).

Prior to the Enclosure Awards of the early 19th century (see **Turnpike Roads** and **Grouse Shooting**) the survey area was part of the extensive wastes and commons of Bubnell, Curbar and Holmesfield and wayfarers could wander at will. This said, the identifiable routes follow sensible courses that avoid the most difficult of topographic barriers. The easiest routes up steep scarp slopes were sought, the wettest land and the precipitous parts of the Bar Brook valley were avoided.

Several major hollow ways exist in the survey area, all trending north-east/south-west. Each comprises multiple tracks that not only braid locally to avoid weathering on tracks, but also take alternative routes round or over obstacles. The form of the hollow ways vary from being deeply incised, to being only slight features. On steeper slopes braids tend to be deeper because of increased surface water erosion. In contrast, on wet, relatively-flat land the course of some routes is untraceable due to the subsequent silting of the erosion hollows. Less important routes tend to have fewer and shallower braids and to be only intermittently traceable.

Route 1
The first of the major routes (565) enters the survey area at the south-west on the slope above Sandyford Brook, rising diagonally up this and the shelf scarp above. One short stretch of the route contains a paved path (1378). At feature 1373 and possibly 1369, stone appears to have been cleared from the route to facilitate its use. One minor braid (2779) may have rejoined the route below the base of the scarp. At the crest the route ran over the prehistoric ring cairn (1392) causing significant damage to this. Just beyond is a small cairn (566) which may once have contained a waymarking stone which would have signalled the route for travellers coming from the north-east.

An important alternative route to this part of 565 is provided by 2734/2735 which ran slightly further north, coming diagonally up the scarp at a higher point. A minor alternative route still further north can be traced on the scarp at 2733.

As 565 and 2734 run north-eastwards over the shelf above Swine Sty they eventually merge

close to the prominent burial cairn at 326. This mound may also have supported a waymarking stone (1063) set within its own cairn (567). At one location (1028) stone appears to have been cleared and placed beside a braid to facilitate its use.

Route 565 continues north-eastwards to meet the un-named tributary stream draining the White Edge dip slope at the only sensible crossing point, below extensive wet flushes and above where the stream drops precipitously to join Bar Brook. Immediately before this point the route is joined by route 570 from the south (see below) and there is a guide stone (locally known as 'stoup') (568) at the junction. At the stream the braided route focuses on a boulder that may have supported a clapper bridge (2223). On the north side of the stream a group of hollow braids (2777) head to point upstream of the postulated clapper and may indicate an earlier course of 565 prior to the creation of a bridge.

Route 565 continues beyond the stream, continuing north-eastwards following the top of the steep Bar Brook valley side. After a short break where the route is interrupted by quarry 1266, it continues north-eastwards as hollow way 1284 (and possibly 2722), where it is narrower and less braided (see second and third routes below), to the edge of the survey area. There is a paved path (1289) amongst the braids leading to the remains of a clapper bridge (1719) at the survey edge. At two locations (1287/1718) stone appears to have been cleared and placed beside a braid to facilitate its use.

The guide 'stoup' (568) at the junction between routes 565 and 570 indicates these routes were in use in the 18th century. The inscriptions confirm that the destination of route 565 north-westwards was Sheffield and south-eastwards it led via Curbar Gap to Tideswell.

Route 2

The second major route (1285/2766) runs roughly parallel to that just described and may well be an alternative route with the same destinations. To the north-east, 1285 runs a short distance above 565/1284 on a relatively flat shelf of relatively well drained land below wetter land to the north-west. Near the north-east edge of the survey area here there is a hollow way (1288) which cut diagonally between 1285 and 565/1284 indicating the two were to some extent interchangeable, while short sections of hollowing (1291/1292/1293) at a steep stream bank indicate the area between the two routes was also used, if less frequently, by traffic. There is a similar short section of hollow way (2776) further south-west which probably has the same explanation. That traffic may have used all these variations of the route rather than confining itself to continuing north-eastwards on 1285 could explain why 1285 is narrower and less braided than 565. Amongst the braids of 1285 is a deep continuous one which is consistently wide and may well have been used by cart traffic. Along one stretch of this there are piles of stone which appear to have been cleared from the route (1178 and possibly 2397/2799).

After crossing the un-named tributary stream draining the White Edge dip slope, route 1285 appears to branch in two directions. One carries straight on but rapidly fades as wetter ground is approached; it almost certainly joined route 565 on the other side of the wet flush. The other (2766), which cross-cuts the first and is thus probably later, turns westwards but eventually also fades in wet ground. It may well have continued in this direction and run to hollow-ways 2448/2469 and possible 2449, although this last may well have continued north-eastwards rather than turned eastwards to 2766 (see below). Routes 2448/2469 are shallow and run close to the crest of White Edge where they fade away. From here it is likely travellers went down the scarp diagonally without leaving much trace, to join the complex

hollow ways of route 2759/2760/2761 (see below) which, as with 565/1284, ran to Curbar Gap.

This second route has the same destinations as the first. However, it is unclear if they were used contemporaneously, or whether there is chronological depth. Given that 565/1285 was in use in the 18th century, up until the time such routes were replaced by turnpike roads, there is a possibility that 1285/2766 is earlier. In support of this suggestion may be the mine feature at 1053 which overlays and renders the route redundant. However, another possibility is that routes 565/1284 and 1285/2766 were use respectively as winter and summer routes. 1285/2766 crosses wetter ground than the other and may have been difficult to use in winter. It crosses flatter ground and has fewer slopes to negotiate, and that it is less worn than the other and contains what is probably a cart way, may indicate summer use.

Route 3

The third route (1592/1703/2213/2236/2797) is probably a further variation on 565/1284 and may well have the same destination to the north-east. Again, that traffic may have used this rather than continuing north-eastwards on 1285 could explain why 1285 is narrower and less braided than 565. The third route leaves 565 at the un-named tributary stream draining the White Edge dip slope and is only intermittently traceable. It negotiates steep slopes and the lack of extensive erosion here suggests it was only intermittently used. A short stretch of 'hollow-waying' (2213) over boulder strewn ground indicated some travellers followed the south bank of the un-named tributary stream rather than continuing north-eastwards along 565/1285. After crossing Bar Brook several routes (1592/1703/2236/2797) can be traced following the steep valley side, all heading north-eastwards towards Sheffield. All are relatively slight.

A further variation on the third route is indicated by several slight and intermittently-traceable hollow ways (1686/1688/1690/1692/1695/1707/1708/2718/2719/2228/2720/2721/2723) crossing the shelf east of Bar Brook. These may have left 565 further to the north-east and crossed Bar Brook upstream of the confluence with the un-named tributary stream draining the White Edge dip slope, although no clear indications of this exist except for the orientation of the hollow ways to the east. At the top of the eastern valley side several individual braids are visible (1695/1707/1708/2228/2718/2723). The braids fade eastwards over wetter land but are traceable again as they rise up the scarp at the survey edge (1688/1690/1692/2719/2720 and possibly 1686/2721). This minor route is heading eastwards and the Dronfield area rather than Sheffield may be the destination.

Route 4

A fourth important route (570/2317) branches from 565 at the guide 'stoup' (568) adjacent to the un-named tributary stream draining the White Edge dip slope, heading south across the shelf above Swine Sty. At the northern end route 570 has two main braids, the eastern of the two taking a sharp angle change at the top of the scarp top. Travellers leaving the guide 'stoup' effectively appear to have taken the wrong direction because of bad visibility, correcting themselves once it was clear that it was impossible to continue eastwards. A minor braid here (2726) is similarly explained. The erection of the waymarking stone at 573 may have resulted from this problem. A further stone (2791), to the south, kept travellers heading in the same direction. At Swine Sty the hollow way descends the scarp diagonally and fades away as wetter land below is reached. Ward suggests that the hollow way here gave Swine Sty its name, 'to swin, or, to swun, is to go diagonally, or slantingly, and sty is a step or ladder' (Ward 1948, 94). Slight indications of the route exist below the scarp (2174/2310/2311/2750), one braid continued across the wet area by a fine paved path (2309).

At the crest of the lower scarp is a further waymarking stone (2316), with a braided hollow way (2317) running down the scarp diagonally. A slight possible hollow way (2323) a little to the west may mark a pre-paved path part of the route. At one location (2692) a feature appears to have been moved and piled beside a braid of the route to facilitate use of the route.

The guide 'stoup' (568) at the junction between routes 565 and 570 indicates these routes were in use in the 18th century. The inscriptions confirm that the destination of route 565 north-westwards was Sheffield while route 570 ran southwards to Bakewell via Baslow. Ward notes that in 1816 this was recorded as the Sheffield to Baslow bridle-road (Ward 1948, 95).

Route 5

A fifth route, which runs approximately parallel to 565/1284, lies south of the latter and thus largely avoiding the shelf above Swine Sty and the steep section of the Bar Brook valley. It can only be traced intermittently, the braids are generally slight, and it was presumably less used. East of Bar Brook there are three main braids (1461/2130/2133), with minor braids between (1568/2089/2101/2103/2115) spread over a wide area of the well-drained shelf above the stream valley. They fan out north-eastwards and fade as wetter land is reached. Only slight traces occur (2713/2714 and possibly 2715/1686/2721) on the scarp at the edge of the survey area in this direction. On the crest of this scarp is a pile of stones (1689) which has either been cleared from the adjacent braid, or it is a waymarker cairn. As the three routes approach Bar Brook to the south-west, the northern two (2130/2133) appear to cross each other, with 2101 probably overlain by the other and continued to the south as 2092.

Route 2103 crosses the stream immediately below where the steep valley section opens out, continuing south-westwards following the scarp slope along a route that has been partly re-used by a 19th-century grouse-shooting track (2048 - see below). One braid rises diagonally to the scarp top (2048/574) and can be traced intermittently beside and beyond the later track (309/321/1249/2746). Slight braids lower down the slope (1237/1258/2035) can also be traced intermittently. Hollow way 583, which runs up a spur, provides a second route to the shelf top. Further west isolated sections of hollow way (1348/2710/2711/2712) may well also be continuations of the route, indicating it was heading towards Curbar Gap.

A further route, rises more steeply up the shelf west of Bar Brook and can be traced intermittently (586/1071/1073/1084/2773) heading straight to waymarking stone 2791 on route 570. One explanation for this is that travellers coming south-west on the east side of Bar Brook may have seen this stone and headed there in the hope this was a guide 'stoup' that would have given them directions.

Route 2101 can be traced intermittently further south-westwards as single braids where it crosses the low but steep slopes to either side of the stream (2056/2057/2058/2060/2068/2106/2107). To the south-west it immediately fades on wetter ground.

Route 1461 similarly can be traced intermittently further south-westwards as single braids (1455/2074/2083/2086/2108/2109/2110/2112/2113/2114/2752/2753/2754/2755/2757) and again to the south-west it immediately fades on wetter ground.

It may be that both these routes had a similar destination south-westwards as 2103, but they are not found again within the extensive wet area that extends to the survey edge. It could be that all three are relatively early routes, for although there is no direct dating evidence, most of the braids are cut by the narrow stream terrace scarp to either side of Bar Brook, and route

2130 appears to be overlain by route 570.

Route 6

A sixth route is only very intermittently traceable. This minor route lies south of those discussed and is generally only traceable on the slopes immediately to either side of Bar Brook. There are a few individual hollow way braids (2075/2077/2756) found immediately south of those associated with 1461 just discussed, which trend east/west and thus the destination eastwards may be the Dronfield area rather than Sheffield.

Route 7

A seventh area of routes is found in the north-west corner of the survey area. This area is part of a major routeway complex (2759/2760/2761), which came northwards from Curbar Gap and/or Baslow Bar. Within the survey area there is a broad swathe of hollow way braids, some cut deeply. The White Edge scarp is breached in two main locations (2760/2761). At one location (2511) stone appears to have been cleared and placed beside a braid to facilitate its use.

Above the scarp, after a complex intermixing of routes (including hollow ways 2739/2796 which do not fit comfortably with any of the three main numbers), two main routes branch at the survey edge. That running to the north-east (2759) heads to Sheffield. Ward notes that in the 1781 Gleadless - Greenhill - Holmesfield - Froggatt Edge - Calver - Tideswell - Buxton Road Act this route was noted as a daily used Curbar to Sheffield bridleway, and that in an 1816 parish boundary dispute this was called the 'upper road' (Ward 1948, 90). The other route (2760) turns to the north beyond the survey boundary and follows White Edge and drops back into the Derwent Valley to Hathersage.

Somewhat further south along White Edge there are less well used hollow ways (2522/2523/2729/2730/2738) that are only intermittently traceable and mirror the main route. These probably merged with 2759 at 2744/2745 near the northern edge of the survey area. At one location (2495) stone appears to have been cleared and placed beside a braid to facilitate its use.

Even further south is a similar mirroring route (2469) which fades to the north; it is unclear whether this also merged with 2759 beyond the edge of survey.

Route 8

An eighth route (2416/2417/2636/2762/2763/2764/2778), of uncertain date and destination, is the only one of note that breaks the normal north-east/south-west trend. This is only traceable on one part of the White Edge Dip slope and trends NNW/SSE. At its southern end it may well have turned abruptly westwards to joint route 2734 (see above). To the north it fans out and becomes untraceable at a wet flush. Where it went beyond here is far from clear. One possibility is that it gave access to the mines to the north-east of the flush (see **Mining**); there are possible traces of a track which may support this (2413). However, this must be a subsidiary function of the route as a whole, as most of the braids head in the wrong direction. The route is also of interest in that it has unusual associated features. One short stretch of 2762 is causewayed (2678), while at the base of a slope adjacent to the flush, eroded material from the hollow way braids appears to have formed causeway-like banks and mounds (2414/2415) extending into the flush. However, at 2677 there appears to be a genuine causeway in an identical topographic situation.

Other routes

A number of short, minor hollow ways also exist that do not fit with any of the routes described above. None can be traced over any distance and all are probably of little consequence. They are as follows:

- Hollow way 2594, a narrow, shallow, single hollow on the White Edge dip slope.
- Hollow way 2765, two narrow hollow way braids on the White Edge dip slope which cross route 2734 at an angle.
- A short narrow hollow way (2743) on the White Edge dip slope which crosses hollow ways 2744/2745. It may be an outlying braid of route 2759 which lies a short distance to the north-west.
- Hollow way 1391 on the scarp above Swine Sty, running NNW/SSE, cut by route 565. Possibly a southern continuation of route 2417 (see above).
- A short stretch of track (582) on the shelf above Swine Sty. Possibly an outlying braid of route 570. Stone to one side (386) may have been placed here when the track was created.
- A short narrow stretch of hollow way (1000) at the northern end of the Swine Sty shelf that heads for the steep Bar Brook valley side.
- A possible short stretch of hollow way (2157), running north/south, on the lower shelf south of Swine Sty.
- Isolated hollow way braids (1476/1478/1479) east of Bar Brook at the southern edge of the survey area, trending NNE/SSW.

Tracks

Two minor stretches of barely visible track (1228/1229), probably part of the same route, and a possible third example (2399), are associated with the mining remains at Round Knoll. These may have been used exclusively by carts removing material extracted from the bell pits. As the tracks can be only traced over such short stretches they do not give clues as to the direction material was taken from the mine.

Paved Paths and Clapper Bridges

There are two good examples of paved paths within the survey area, both built of single contiguous lines of gritstone slabs. The most obvious is feature 2309 running south from Swine Sty across relatively wet land. This continues route 570 southwards, linking with a continuation at 2317 on the slope below. The route as a whole ran from Sheffield to Bakewell via Baslow and is known to have been in use in the 18th century (see **Guide Stones** below).

The second example is at 1289, which appears to be relatively continuous, but many of the slabs are buried and have been located by probing. This is within the extensively braided hollow way route 1284 which is a continuation of 565 to the south-west, which in turn 570 branches from. Thus it may be that both the good stretches of paved path were on the same Sheffield to Bakewell route and were constructed at the same time (but see below). At the north-east end of 1289 are the end supports for a small clapper bridge (1719) of similar width to the path. Possible evidence for a second clapper bridge further south-west along route 565 is provided by a boulder (2223) at the edge of the un-named tributary stream draining the White Edge dip slope, at a point where a crossing point is anticipated to have been needed.

A third stretch of paved path (1378) lies below the shelf scarp west of Swine Sty within the extensively braided route of 565. It originally continued westwards, but presumably has been robbed when the nearby walls were built in the first half of the 19th century. As this path lies on the same main Sheffield to Tideswell route as 1289, the suggestion made above that 1289

and 2309 can be directly linked can be questioned.

A fourth stretch of paved path was noted by Ward in 1927-28 but was not identified during the present survey (Ward 1928, 99). This lay within route 565 immediately south-west of guide 'stoup' 568 and was described as 'evidences of some rude gritstone flag pavement'.

A worn slab (2212) in route 2213 is a further minor reminder of the traffic that formerly crossed the survey area.

All four stretches of paved path lie on major routeways and their presence probably reflects the heavy use these received and the resulting problems with erosion and waterlogging. When the stone paths were added is not clear. It is known that such paths elsewhere in upland Britain were built from the medieval period through to much more recent times; there is no identified Peak District documentation for path building. One possibility is that the paths were created in the 18th century as part of general improvements which included guide 'stoups' and probably stone waymarkers.

Guide Stones [NMR No. SK 27 NE 91]
There are 4-5 guide stones associated with the main hollow way routes across the survey area, all situated west of Bar Brook.

One of these (568) is an inscribed guide 'stoup' (Ward 1928, 98; Tudor 1934, no. 48; Smith 1996, 56-57). This was damaged in 1939-45, when part of the top was removed and the rest peppered with bullet scars. Before this date the north-west face was inscribed 'TO TIDESWALL' and the north-east face read 'TO SHEFEILD' and 'TO BAKWAL'. Elsewhere on the stone are additions which read 'IS 1737', '1775 IS', and 'H 1775 RC'. The stone is probably of early 18th-century date, as an Act of Parliament of 1697, enforced locally in 1709, required that such stones should be set up by road commissioners (Radley 1963, 43; Dodd and Dodd 1980, 84; Smith 1996, 4-7). The dated inscriptions for 1737 and 1775 may have been added by road commissioners to signify dates of inspection.

The stone lies at the junction between routes 565 and 570 and indicates these routes were in use in the 18th century. The inscriptions confirm that the destination of route 565 north-westwards was Sheffield and south-eastwards it led via Curbar Gap to Tideswell. Route 570 ran southwards to Bakewell via Baslow.

The other stones in the survey areas are waymarkers rather than stoups (Smith 1996, 58-59). Stones 573, 2791 and 2316 all lie in route 570 and its southern continuation 2390/2317. They are placed so as to appear as skyline features at points along the route where way finding may otherwise have been a problem. Stone 573 has 'BAS' inscribed on its western face, which presumably stands for Baslow. However, why it was placed here is uncertain; the parish boundary between Baslow and Holmesfield has been Bar Brook to the east since at least the early 19th century (anon. 1820; anon. 1826), and may well be a traditional manorial boundary of much greater age. Ward noted in 1927-28 that the inscription read 'R. BAS' and stood for Road to Baslow (Ward 1928, 100). Stone 2971 is inscribed 'SI' on the eastern face; the interpretation of which is obscure. Ward suggested the S stood for Sheffield (Ward 1928, 100). This stone has been inserted in a small prehistoric cairn (424). Ward also postulated a further fallen waymarking stone about 300 yards south of the last described, 5 foot 6 inches long, fallen since before 1897, sited before the track dropped down the shelf scarp (Ward 1928, 100; Ward 1948, 95); this was not noted during the present survey. The date of these stones is not known; while they could be of greater antiquity, they may well have been

erected at a similar date to the guide stoup (568) to the north, as part of a scheme to improve the highways here. Waymarking stones are not common on the Eastern Moors of the region and the presence of three together on one short stretch of road may indicate acute routefinding problems may have been encountered here, or their presence may reflect the actions of a particularly conscientious local road commissioner or parish official. Further evidence of the special treatment of this route is provided by the paved path at 2309, and possibly by that at 1289, with associated clapper bridges at 1719 and possibly 2223.

On top of barrow 326, which lies adjacent to route 565, is a small, recently erected, upright stone (1063) that is well placed as a skyline feature when travelling the route. However, it is far from clear if this stone has been re-erected at a traditional location, or whether it is a modern creation. A small cairn (566) further west on the line of route 565 has a disturbed top which may indicate that a further waymarking stone has been removed.

Turnpike Roads

The public road at the eastern edge of the survey area is the 1803 Baslow to Owler Bar Turnpike (Radley and Penny 1972). This was built to improve communications across the Eastern Moors between Sheffield and the Derwent Valley together with Bakewell, Tideswell and Buxton beyond. The first such turnpike road linking these places had been built further north in 1758/1759 and subsequent improvements to the road network had been made in 1781.

The public road from Curbar gap to Curbar Cross Roads a short distance south of the southern edge of the survey area was part of the 1759 Chesterfield to Hernstone Lane Head Turnpike, as part of an extensive road network built at this time linking Chesterfield with the Peak District.

These turnpike roads meant that the hollow ways that cross the survey area would have had decreased use from the mid 18th century and would have effectively been made redundant by 1803 at the latest, except for those who wished to avoid tolls. The Enclosure Awards of 1820 for Holmesfield (anon. 1820) and of 1826 for Baslow, Bubnell, Curbar and Froggatt (anon. 1826) make no reference to any of the traditional routeways and effectively from this time they ceased to be rights of way.

Shooting Tracks

A track (574/2048/2081/2082) gives access to the grouse-shooting butts on the west side of Bar Brook (see **Grouse-Shooting Butts and Associated Structures**). This was certainly already present in 1876, but may well have existed by the early 1830s. This earlier date is suggested by the depiction of Robin Hoods Shooting Table (2046) on Sanderson's 1836 map (Sanderson 1836). As this lies adjacent to the track it strongly suggests the route existed at this time, as well as indicating that shooting was already taking place. It may well have been built in the 1820s when the Duke of Rutland acquired his Longshaw Estate (see **Grouse-Shooting Butts and Associated Structures**).

The track (2081) left the 1803 turnpike at roughly the same location as the later reservoir track (2795). It was only just under 2m wide and was carefully levelled into the slope, at first following the contour. For a short stretch it is overlain by track 2795, then runs down the steep valley side along a diagonal course (2082). At two locations surface water is carefully culverted underneath (2085/2087/2089). The track crossed Bar Brook by a bridge (2047). An abutment of coursed stonework survives but the bridge itself was probably of timbers laid

horizontally. In 1927-28 Ward described it as a 'rapidly decaying grouse shooters' foot bridge' (Ward 1928, 97).

The track ascends the opposite valley slope diagonally by way of a hollow way (574/2048), the lower part of which (2048) may well be part of an earlier route (see above). Once 574 reaches the crest of the slope it follows the contour, running about 55-75m behind the butts. Shortly after reaching the crest there is an adjacent rectangular hollow (611) fed by a drain (612) which may have been used for watering horses. Below there is a small quarry (2793) which may have been used to build or repair track 2048.

Running north-east from the bridge (2047) is a second narrow terraced track (2121) running diagonally up the steep valley side to join the reservoir track (2795). This is not shown on the Ordnance Survey 1880 1:2500 map (Ordnance Survey 1880), whereas 2048/2081/2082 is; it is shown on the 1922 edition (Ordnance Survey 1922), suggesting it was built after the creation of the Barbrook Reservoirs and their access tracks (see below), to allow the butts to be approached from the north-east.

Reservoir Track [NMR No. SK 27 NE 77]
The last track to be built in the survey area (together with 2121 - just described) is that following the contour to the east of Bar Brook still in use today (2795). This was built in conjunction with Little Barbrook Reservoir (2801) in the 1880s and follows the same line as the outflow pipe southwards, which runs to Ramsley Reservoir (SK 286747) (see **Reservoirs and Associated Structures** below). When further reservoirs were built upstream, the track was extended northwards to run to these. However, it is known that two reservoirs existed here and it is not known which is to be associated with the track extension. The first, which was relatively small, was started shortly after 1890 but was later subsumed under a much larger one that was completed in 1908 (Ward 1928, 121; Harris 1971, 136). At the northern edge of the survey area the track crosses Bar Brook over a simple bridge (1709). There is a second bridge (1717) at the upstream end of Little Barbrook Reservoir which gives access to moorland to the north-west.

The track follows the contour, as was necessary because of the pipe below to the south, and has generally been terraced into the slope. A number of quarries exist which are probably associated with its construction; these have been described above in the section on quarries. At one point the terrace has been widened to create a passing or turning place (1447) with a series of seven upright stones (2123) placed at the downslope edge of the track to discourage vehicles from dropping down the slope. A short distance along the track to the south-east is a small sub-rectangular platform (2125) which is presumably associated with the outflow pipe. A scarp similar to that at 1447 is found further south-east at 1425, but this may well be only part of the track terracing rather than a purposeful widening of the track at this point. Where the track crosses shallow gullies there are upslope drains (1458/2265/2267) leading to culverts which keep surface water off the track. Below 1458 the water may also have been controlled by the use of a drain (2134).

Rough Grazing

Archaeological evidence for the use of the moor for rough grazing takes two main forms, the provision of sheep lees which gave shelter for stock, and the presence of small shelters which may well have been used by shepherds.

Sheep Lees [NMR No. SK 27 NE 92]
There are two lees within the survey area. The largest of these lies east of Bar Brook on the flat top of the shelf here (2359/2697). It comprises a ruined wall, possibly unfinished, which is *c.* 25m long with a possible shorter arm at an angle at the north-western end; it appears to overlie prehistoric features and a large barrow nearby (2361) may well have been extensively robbed to provide stone. A small pile of stone (2360) adjacent to the feature may be a builders heap. On the other side of Bar Brook is a second smaller lee (2401) on a sheltered shelf on the east side of Round Knoll. This ruined wall is *c.*14m long and there is a short arm at an angle at the western end.

Shelters [NMR No. SK 27 NE 81]
There is one obvious shelter of a type common on the gritstone uplands of the region. This comprises a small sub-rectangular structure (1337) on the crest of the shelf scarp above Swine Sty. A natural 0.7m deep hollow here, the sides largely defined by boulders, has been enhanced by drystone walling, leaving a small entrance gap. It was presumably roofed with timber laid across the top and covered with turves or possible thatch.

There are three possible shelters elsewhere of atypical type, two of which may be alternatively interpreted as military features, the other as of prehistoric date. The first two (2770/2788) are close together a short distance north of Swine Sty on the shelf above and comprise short, low, stretches of crude drystone walling set into the sides of prehistoric features. The third feature is a short stretch of possibly collapsed walling (2402) on the crest of Round Knoll. It is far from clear if any of these three features ever had any associated timber lean-to roofs.

Grouse-Shooting Butts and Associated Structures [NMR No. SK 27 NE 76]

The main concentration of grouse-shooting butts lies west of Bar Brook on the shelf above Swine Sty. Here there 16-17 butts in a complex arrangement that suggests that grouse-shooting has taken place over a long period; at least three episodes of butt replacement can be identified. The survey area was part of the Duke of Rutland's extensive Longshaw Estate until this area was sold to the Chesterfield Rural District Council in 1928. The fifth Duke of Rutland probably bought this estate and built Longshaw Lodge (SK 26447988) in the early 1820s (and certainly by 1825) and his prime reason for this was his interest in grouse shooting (Ward 1929; 1940; 1942). The Enclosure Awards of 1820 for Holmesfield (anon. 1820) and 1826 for Baslow, Bubnell, Curbar and Froggatt (anon. 1826) may well have been instigated by the Duke to formalise his rights over the moors and to exclude others in order to protect his game birds. Subsequent Dukes continued to shoot on the estates with varying degrees of enthusiasm until the sale of the Longshaw Estate in 1928. It is not fully clear if shooting continued after 1928, but the butts have been ruined since at least the 1970s (JB personal observation); no shooting has taken place since the land was acquired by the Peak Park Joint Planning Board in 1984. Ward's comment that the bridge over Bar Brook that gave access to the butts was 'rapidly decaying' in 1927-28 may indicate no organised shooting has taken place since (Ward 1928, 97). However, he also later noted that in 1928 the Chesterfield Rural District Council let the Big Moor, Totley Moor and Ramsley Moor shooting rights to Major W. Wilson of Horsley Gate Hall, Holmesfield, the master of the Barlow Foxhounds (Ward 1929; 170).

The most common form of butts are today visible as sub-circular earthen banks, with an

overall diameter of *c.* 6-8m (including spread) and with either an entrance gap to one side or with one open side. Originally these would have comprised turf walls, probably a little over 1m high, possibly with timber internal retaining, although there is no surface evidence to support this suggestion. Variations in form result from insertion into prehistoric features (597/604). In the case of 604 this includes the use of large stones to retain a sub-rectangular interior. In the case of butt 595 the presence of an internal sub-rectangular drystone wall, and the spatial location of the butt in relationship to adjacent prehistoric features, suggests this is also a converted prehistoric cairn. Some of the butts have a shape which is perhaps more sub-rectangular than sub-circular (224/587/596/600), but this may reflect how they collapsed rather than their original form. Butt 588 has a slight external ditch to one side, presumably the result of turves for its construction having been dug here. One possible butt (1384) is a low mound and may be better interpreted as the remains as rabbit activity rather than a butt, especially as it does not fit spatially with the lines of butts on this part of the moor (see below).

The most obvious arrangement of the butts is a straight south-west/north-east line of 10 butts all of which face north-west, the direction from which the grouse would have been driven. The irregular spacing on these butts, which is not normal in the region, and subtle differences in their form, indicates there are two phases of butts here, one of which replaced the other. One line comprises six butts (588/593/595/599/602/604) set *c.* 95-110m apart. In every case these have narrow entrances and the two inserted into pre-existing features have internal stone retaining. The other line, which is somewhat shorter, has seven butts (593/594/598/599/601/603/604) set *c.* 65-80m apart. This has three butts in common with the other line (593/599/604), while the other four are horseshoe-shaped with one open side rather than a narrow entrance. This combination of forms, in contrast with the other line, suggests the line of seven butts was constructed as a replacement for the other.

There are 6-7 butts in the same vicinity that are sited away from the two coincident lines just described. These are harder to ascribe to specific phases of shooting, although it is unlikely that any of them could have been in use at the same time as either of the two lines, as they again all face roughly north-west and were either in the line of fire or fired across the two lines. It may be that butts 1370/587/224/597(or 595)/600 form a third sinuous line of widely spaced butts. Butts 596/1384 do not fit with this arrangement, although the latter may be a fortuitous feature rather than a true butt. Two other butt-like features in the same vicinity (2700/2788) are interpreted here as more probably military structures or crude shelters (see below). However, the possibility that they are butts which form a line with 596/597/598 cannot be discounted.

One row of possible butts exists elsewhere in the survey area, situated further north but again west of Bar Brook (1057/1169/2220/2229). However, all these features are uncertain grouse butts; they may alternatively be interpreted as military features (see below). These are cut into a slope, face west, and are smaller that the norm at only 4-5m across. At least three are more rectangular than square.

The access track to the butts on the west side of Bar Brook is that described above (574/2048/2081/2082) (see **Hollow Ways, Tracks, etc**). This was certainly already present in 1876, but may well have been present by the early 1830s. This is indicated by the depiction of Robin Hood's Shooting Table (2046) on Sanderson's 1836 map (Sanderson 1836). As this lies adjacent to the track it strongly suggests the route existed at this time, and its name indicates that shooting was already taking place. Robin Hoods Shooting Table

comprises a small rectangular platform with two dressed slabs forming a level top and it lies adjacent to a small spring of clear water. Its exact function is undocumented, but it may well have been used as a table by shooting parties; Ward noted that it was erected by the Fifth Duke and was used as an 'al fresco dining table' (Ward 1928, 97-8). Alternatively it could have been used as a seat or a horse-mounting step.

Further to the west, soon after track 574 reaches the shelf on which the butts are located, there is a shallow rectangular hollow (611) with a narrow drain (612) leading to it from higher land to the north-west. This 'water tank' may well have provided water for the shooting parties; perhaps used for watering horses.

Reservoirs and Associated Structures [NMR No. SK 27 NE 77]

The land on which Little Barbrook Reservoir (2801) stands was sold by the Duke of Rutland to the Rural Sanitary Authority of the Union of Chesterfield in December 1880 (PDNPA archive). Legal documents dated 1890 (copy held by PDNPA) which deal with transfer of land for the proposed building of a reservoir further upstream (SK 2279771) contain a map which shows Little Barbrook Reservoir, indicating it had been built in the 1880s. Ward, writing in 1927-28 stated it had been completed about 45 years ago, thus it may have been finished around 1882-83 (Ward 1928, 121). The surrounding land, including all the area surveyed here, was acquired by the Chesterfield Rural District Council from the Duke of Rutland in 1928 (Ward 1929), for use by its North East Derbyshire Water Board.

The small reservoir on the Bar Brook (2801) was built in conjunction with the larger Ramsley Reservoir (SK 286747) to supply water to Chesterfield. It comprises an earthen dam, with stone-stepped overflow retained by stone walls at the centre. The reservoir is somewhat silted at the upstream end, where there is a simple bridge (1717) which gives access to moorland to the north-west. The south-eastern side of the reservoir is defined by the embankment for track 2795, which is probably contemporary with the reservoir, and there is a quarry (1698) dug to provide material for the dam. The north-western side also has a quarry (1266) dug to provide building material. There is also a broad bank beyond the silting on this side, which, possibly together with the scarp at 2722, is associated with earth movement at the time of the creation of the reservoir.

The outflow pipe leaves the reservoir at its south-eastern corner, possibly associated with a sluice (1721), and runs southwards under the main access track (2795). Here several ruined sandstone inspection covers remain. The eventual destination of the outflow pipe is Ramsley Reservoir. The track (and associated features), which follows the contour, as was necessary because of the pipe below, has been described above (see **Hollow Ways, Tracks, etc.**). A number of quarries exist which are probably associated with its construction; these have been described above in the section on quarries.

A second outflow pipe crosses the survey area further to the east. This presumably runs from the main Barbrook Reservoir to Ramsley Reservoir. The main Barbrook Reservoir was completed in 1908 (Ward 1928, 121) and replaced a smaller reservoir at the same site which was started shortly after 1890. The 1922 Ordnance Survey 1:2500 scale map (Ordnance Survey 1922 - revised 1919) shows an outflow pipe further to the north, outside the present survey area, suggesting the southern pipe was disused by this date. Surface indications of the southern pipe include a stretch of slight terrace along the slope (1711) associated with a vent pipe (1712), small piles of stone removed from the pipe trench (1700/1701), and a further

stretch of earthworks to the south-east (1723).

Although the main source of water for Little Barbrook Reservoir was the Bar Brook stream flowing from the north, this was supplemented by water from tributaries to the south-west, with an open conduit or contour leat leading north-eastwards to the reservoir (2218/2239). At the south-western end a short stretch is piped underground (2219) and the 1922 Ordnance Survey 25 inch map (revised 1919) shows this was the case by this date. Drains both lead into the leat (2233) and take off excess water (2225/2226/2232).

A further series of features, of 20th-century date, appear to be associated with Water Authority activity, but their interpretation remains uncertain. They are found in a discrete area centred at 427710 375550. They comprise two roughly-parallel bulldozed features, each about 13-16m wide, running down the steep slope between the reservoir track (2795) and the stream below, with a similar feature at right angles immediately above the track. The upstream slope-feature has irregular banks to either side (2117/2118), that to the north-west being the larger (2118). The downstream slope-feature is similar, with a larger bank to the south-east (2128) and more intermittent features at the other side (2126/2127/2143/?2145/2237). The bank above the track (1428) defines one edge of a feature of similar width if the track is included, and stops at points opposite the two larger outer banks of the slope-features. One of the authors (JB) remembers these features in the 1970s when they appeared relatively fresh and had not re-vegetated. Why they were created is not clear. They have the appearance of bulldozed fire breaks, although why this specific area was protected in this way is unclear, unless they are associated with the disused water pump at the stream side (2806) in a levelled area where the slope has been cut back (2090).

World War II Military Fieldworks [NMR No. SK 27 NE 78]

The survey area has extensive evidence for military training, mostly in the form of slit trenches, small pits or foxholes, and bullet/mortar scars. It is known locally that the Eastern Moors, including Big Moor/Ramsley Moor, Gardom's Edge (RCHME and PPJPB 1993) and Gibbet Moor (RCHME 1990), were used by the US Airborne Division for training in World War II. This is said locally to have occurred on two separate occasions, one of which was just before their action at Arnhem (1944?). It is also possible that British troops used the area for training. During survey a number of cartridge cases were recovered, these were all for .303 bullets and dated 1942; American troops are not known to have used weapons of the calibre. No documentary evidence of any wartime activities on the Eastern Moors has emerged, except that by Ward. In a discussion on access to Big Moor, Ramsley Moor and Totley Moor, noted that in previous negotiations in 1943 'military occupation was an obstacle' (Ward 1948, 75), and in discussing guide stoup 568 he noted that 'in 1944 the silly military used them [the guide stones] for machine-gun targets, knocked off almost 12in. from the latter [stone 568]' (Ward 1948, 95).

The most diagnostic remains are those of individual slit trenches, which take the form of sharp-sided rectangular hollows that are usually 2.0-3.0m long and about 0.5m wide. Between 122 and 131 have been identified and they are usually simple individual trenches, often sited in spatially discrete groups (see below). However, there are atypical examples. Those at 1150/2631/2632 are distinctly wedge shaped. At 2078/2079/2259/ 2512/2619 there are chevron and L-shaped shaped arrangements; it is unclear if these were designed as such, or whether there is chronological depth at each, with two trenches dug at different times on different orientations. The latter is probably the case at 1124 where two trenches more clearly

overlap. In only a few instances upcast from the trenches is clearly visible (2120/2215/2378). Similarly, only a few cut earlier features, the catalogued exceptions being features 1420 and 2587.

Often spatially associated with the slit trenches are pits which usually are 0.5-1.0m across, although larger examples have been recorded which are up to *c.* 2.5m across. Their shapes vary from square or rectangular to circular or oval; occasional chevron and L- and T-shaped examples were also recorded. Their depth can be up to about 1m deep, but in the case of shallow examples it is suspected that many have silted significantly. The majority are probably foxholes. Between 244 and 257 such pits have been identified. As with slit trenches, the majority have no distinct upcast mounds, although there are a higher percentage of pits that do (615/616/617/621/1020/1127/1279/1283/1290/1475/1642/1652/1713/2005/2006/2412/2584/2633). At 2080, the height of the pit had been made up using large stones placed around boulders. At 2250 the location on a slope results the features here being more terraced platforms than pits in the morphological sense. Pit 1485 is unusually large with a minimum diameter of 2.7m. Amongst the pits there are a number of instances where, during fieldwork, it was felt these may have been purposefully paired (614/1060/1061/1066/1085/1094) (1107/1115/1254/1497/2258/2307/2321/2505/2506/2507/2635). Whether this is the case remains far from clear; if so an explanation is elusive. A significant number of the pits are cut into earlier features (610/1125/1130/1254/1270/1364/1394/1396/1502/1503/1549/2059/2062/2268/2322/2582/2628/2679/2706/2767), while many others are placed close to features for added protection.

A small number of atypical features may well also be military in character. At 2555 there is a small platform terraced into a slope, with several slit trenches and pits nearby. Three crude drystone walls (2680/2770/2788), one adjacent to a pit, the others inserted into prehistoric features, may in effect be above-ground 'foxholes', although they could alternatively be interpreted as non-military shelters (see **Mining** and **Rough Grazing**). A similar, if cruder, structure (1345) probably has a similar military interpretation, as do a low linear mound (1098), and a pile of stones (1545), both near several pits and slit trenches. A series of small earthen mounds (126/129/202/380/399/402/423/620) on the shelf above Swine Sty are less certainly interpreted; they could be military, however, all but feature 620 (which may be fortuitous) are more probably of Bronze Age date. A line of four equally spaced features (11057/1169/2220/2229), cut into a slope and mostly with upcast banks, are either small shooting butts or military features. None of the other slit trenches and foxholes appear to be arranged in spaced linear fashion, hence, if military, these features must have been used differently.

The final common category of evidence for military activity is scarring on rocks where they have been hit by bullets and mortars. Such evidence is documented in the survey catalogue and the survey number overlays, but not on the survey sheets themselves. Usually the scars comprise irregular and somewhat angular 'cup-marks', usually 5-10cm across, which pepper upstanding rocks. It is likely these have normally been created by bullets, although shrapnel from mortars may well have caused some of the scarring. On the rocky scarp above and to the west of Swine Sty there is an unusually high density of scars (2786), many rocks being extensively covered. Amongst the scars here are several distinctive examples created by small mortars landing near-vertically onto near-horizontal rocks. These have a central irregular and shallow impact hollow, usually 30-50cm across, with many small radiating scars beyond this caused by shrapnel (Barnatt and Smith 1997, 113, fig. 71). During the excavations at Swine Sty in the 1960s-70s (see **Archaeological Excavations**), which lies close to the 2786 area,

'four unexploded mortar bombs and other war time relics' were found (Machin 1971, 5). Guide stone 573 has a fragment of mortar embedded in its eastern face. Two shallow pits (2246/2247), located east of Bar Brook, have tentatively been identified as mortar craters.

Although a significant number of slit trenches and pits are found singly, in pairs, or in ambiguous association with other such features, there is extensive evidence that many are arranged in discrete groups (see Table 1). In one area on the shelf above Swine Sty, centred at 427320 375390, there is over 45 pits and slit trenches scattered in a loose group over a wide area, which while clearly a palimpsest of different episodes of activity, these cannot now easily be subdivided. In some instances the discrete groups are exclusively of slit trenches (6 cases - here and henceforward following Table 1) or pits (9 cases). However, the two types of feature are often found together (18 cases). While the two types of feature have different functions in that one is designed to be laid in while the other was for crouching (and possibly standing), the mixing of features in some groups suggests that the choice of which to dig may have been left to the individual. In some instances the trenches/pits are tightly grouped, while elsewhere they are more widely scattered (see Table 1). The number of slit trenches/pits in each concentration varies from 3 to 25, with 3 to 13 being common. Exceptionally high numbers may reflect the same location being used more than once. In other instances the number may be under-represented as some individuals may have chosen to shelter behind banks, cairns and other features rather than dig foxholes or trenches. Where slit trenches occur, these give clues about the orientation the troops were facing. In all cases the orientations within each group varies, usually widely, suggesting positions were being defended from all sides.

Table 1: Slit Trench/Pit Groupings

Key
Column 1: designated group identifier used in text
Column 2: catalogue number(s)
Column 3: number of features in the group. Where a + has been included there are outlying examples that have not been included.
Column 4: type of features present.
ST: slit trench
P: pit
O: other.
Column 5: type of cluster
C: closely spaced features
W: widely spaced features.

Note: in some instances features are common over wide areas and these may well be palimpsests of different episodes of activity; these have been omitted.

1	2	3	4	5
1A	2378	5	ST	C
1B	2379/2380/2383/2384/2385	5	ST/P	W
2A	2336/2337/2338/2339/2340	5	P	C
2B	2158/2159/2167	4	P	W
3A	1365/1366/1367/1368/1374/1375	6	ST/P	W
3B	1394/1395/1396/1397	4	P	C

3C	1360/1361/1362/1363/1399/ 1400/1401/1403/1404/1405/ 1406	11	ST/P	C
3D	2638/2654/2655/2656/2657/ 2660/2661	7+	ST	W
3E	2631/2632/2633/2634/3635	6	ST/P	W
3F	2604/2617/2619/2622/2623/ 2628	7	ST/P	W
4A	2536/2537/2538/2539/2540/ 2541/2542/2543/2544/2546/ 2547/2548/2549	13+	P	C
4B	610/2567/2568/2580/2581/ 2582/2583	7+	ST/P	W
4C	2305/2306/2307	4	P	C
4D	1493/1495/1496/2555/2557/ 2558/2559/2560/2561/2679	10+	P	W
4E	1064/1065/1066/1110/1111/ 1112/2551/2552/2553/2554	12+	ST/P	W
4F	1060/1061/1105/1106/1107/ 1108/1109	10+	ST/P	W
4G	1256/1702	4	ST/P	C
4H	2294/2295/2296/2297/2298/ 2299/2300/2301/2302/2303	10	ST/P	C
4I	1244/1725	8	ST	C
4J	1233/1234/1238/1239/1241/ 1246/1247/2293/2702/2703/ 2704/2705	20	ST/P	W
5A	2259/2260/2261	3	ST/P	W
5B	2250	4+	P	C
6A	1546/1547/1548/1549	4	ST/P	C
6B	2505/2506/2507/2508/2509/ 2510	9	P	C
6C	2483/2484/2485/2486/2487/ 2488/2512/2528	11	ST/P	W
7A	2478/2479/2480	3	ST	C
8A	1508/1509/1510	3	P	C
8B	2214/2215/2216/2217	4	ST/P	C
8C	2149/2150	7	ST/P	C
9A	1599	3	ST	C
9B	2120	13	ST	C
13A	1713/1714/1715	3+	ST/P	W
13B	1662/1663/1664/1665/1666/ 1667/1668/1669/1670/1671/ 1672/1673/1674/1675/1676/ 1677/1678/1679/1680/1681/ 1682/1683/1684/1687/2707	25	ST/P	C

The clusters and scattered slit trenches and pits are widely distributed across all the survey area (and presumably beyond), indicating that training took place over an extensive area, with small groups of men digging in either to defend positions or as a preliminary to attacking designated targets. Although widely scattered, there is a particularly high density of features

on the shelf north of Swine Sty, and to a lesser extent both below the shelf scarp north-east of Swine Sty and on the other side of Bar Brook below the scarp at the north-east edge of the survey area.

The distribution of bullet scars is also widespread if more localised due to the restricted occurrence of boulders where the evidence is found. There is a relatively high incidence of scars along the steep sides of the Bar Brook valley, but this may reflect only the higher number of rocks here. In strong contrast, the exceptionally high density of scaring on the shelf scarp west of Swine Sty is probably highly significant; here there are also mortar scars. This prominent outcrop must have been used frequently as a target. It may also be significant that there are no slit trenches and pits in the immediate vicinity. Thus, as with the distribution of slit trenches and pits, the general vicinity of Swine Sty can be identified as a focal area for military activity.

Archaeological Excavations

This section confines itself to describing what is visible today indicating previous excavations. The results of these explorations have been summarised above (see **History of Research** and **Prehistoric Monuments**).

A number of features associated with 20th-century archaeological excavations have been identified. Although a large number of cairns east of Bar Brook and occasional examples elsewhere have obvious disturbance it is not possible to determine which of them were the subject of known 19th and early 20th-century antiquarian/archaeological activity as opposed to stone robbing or military activity. There may well have been further antiquarian activity which has gone unrecorded. The following burial cairns and cairns have signs or possible signs of disturbance:

White Edge dip slope: 1381
Swine Sty and the shelf above: 17/31/46/105/106/113/155/252/257/283/297/326/362/369/387/422/473/566/1296/1372/2196/2318/2693
Round Knoll and the shelves below: 1282/2388/2431
Ramsley Moor: 1424/1426/1429/1430/1441/1454/1563/1575/1583/1605/1608/1612/1613/1614/1615/1620/1631/1639/1641/1643/1651/2251/2264

Most of the disturbance appears to be small scale, with the exception of many of the larger cairns on Ramsley Moor east of Bar Brook, where robbing has been extensive.

The trenches dug by Storrs Fox and Peat (Peat 1965) early this century at the Barbrook I stone circle (1465), and re-excavated by Guilbert in 1987 (unpublished), are still visible as shallow depressions resulting from settling of the backfill [NMR No. SK 27 NE 13].

Nearby, the excavations of the 1950s-60s at various sites are also still identifiable. Upslope from Barbrook I the stone-built barrow (1463) [NMR No. SK 27 NE 95] excavated by Riley in 1964-5 has been fully restored (Riley 1981), but the extent of trenches and positions of three baulks are still visible because of settling and/or incomplete backfilling. The low bases of two small spoil heaps are traceable to the south and east.

The extensive excavations of the Barbrook II stone circle (1626) [NMR No. SK 27 NE 1] by

Lewis in 1962-70 (unpublished) were backfilled, as detailed in the account of partial re-excavation and restoration in 1989 (Barnatt 1996a). Thus, the outer edge of the excavations, just beyond the outer edge of the enclosing stone bank, cannot now be traced. However, the interior was only partially backfilled to allow details of the monument to remain visible, with the result that two low spoil mounds remain to the north-east (1629/1630).

Two small cairns within a group of six such cairns south-east of Barbrook II were excavated [NMR Nos. SK 27 NE 93, 94]. While Henderson identified cairn 1563 as that excavated in 1958 (Henderson 1960, barrow 9; Riley 1960, barrow 9), the description fits with cairn 1561 (Riley 1960, barrow 8). This has clearly been excavated, the excavation trench edge is visible, the cairn has been restored and left exposed, and there is a small spoil heap to the south (1560). If it was cairn 1563 that was excavated, a possibility that cannot be fully discounted, then no account of excavations of 1561 exists; this seems an unlikely scenario given that several members of the Hunter Archaeological Society that were involved in excavations on Big Moor and Ramsley Moor are still alive and have no memory of this. Comparison of the excavation plan with what remains today at 1561 suggests the regular kerb is a product of over-restoration, there having been only 5 vertical stones found during excavation. The small cairn (1559) excavated in 1960 (Henderson 1979) was subsequently backfilled and there are no traces of the excavation trench. However, there are gaps between the stones where there is no soil in the interstices, confirming this cairn has been disturbed in modern times. A small possible excavation trench (1471) at a cairn to the north-west (1605) does not correspond to any documented excavations, and is either the result of an illicit or much earlier excavation, or is a robber pit. One cairn (1585), which appears to have been intact until 1992, had its centre illicitly robbed; it was later restored by PPJPB.

West of the Bar Brook stream one of the 'enclosures' at Swine Sty was the focus of excavations in the 1960s and 1970s [NMR No. SK 27 NE 96]. Several trenches were dug (Richardson and Preston 1969; Machin 1971; Machin and Beswick 1975; Hart 1981) and the edges of most still visible today due to incomplete backfilling (1277/1299/1302/1304) (1313/1320/1321/2288/2696). Bases of spoil heaps are visible, most of which are low and earthen (1298/1303/1314/1323/2170/2785). However, one high stack of stone (2168) also exists which was never re-introduced to the trenches. The stone footings of a small prehistoric building (1305) were restored, an earthen heap (1278) was placed at the site of an excavated cairn, and part of the enclosing bank (1280) was either replaced or was covered in an earthen spoil heap, changing its surface character from stony to earthen.

The small excavation at a field boundary junction on the shelf above Swine Sty carried out in 1983 (Barnatt in prep. a) [NMR No. SK 27 NE 97] was fully backfilled, but its edges are just visible now the backfill has settled (619). A second small trench dug in 1983, adjacent to the earlier trenches at Swine Sty, is now not traceable.

A small possible excavation trench (576) at a stony bank above Swine Sty does not correspond to any documented excavations, and is either the result of an illicit or much earlier excavation, or it is a robber pit.

Other Features

This section includes features which fall into two main categories, a number of minor features which mostly defy interpretation, and others which are natural but included here to prevent future confusion.

Of the minor features to listed within this section a few are of known interpretation. These include:

- A small stone set upright next to the Barbrook I stone circle which marks a dogs grave (1464), which was exhumed by the police at the time survey fieldwork was underway, because of the possibility of human remains having being buried here.
- A posthole for a large wooden stake, lying adjacent to its hole at the time of survey (1693).
- The edge of what could be a robber trench (1382) where a prehistoric cairn (1381) may have been largely robbed away.
- The foundation trench (1380) on the upslope side of a drystone wall, at the western edge of the survey area.
- Small drains (1456/1488/1492) which have been dug to de-water small wet flushes. One has stony upcast to one side (2698).

The less certainly interpreted minor features include:

- A narrow trench defining a small sub-rectangular area (1376).
- A small curved setting of stones placed on the ground, probably in recent times (2132).
- Small piles of stone (2055/2531) that look to be of post-medieval as opposed to prehistoric date, although why they were placed here remains obscure.
- A small pile of stones that is either prehistoric or post medieval in date (1294).
- Small pits, some with upcast, of uncertain explanation (624/625/1471/1558/1582/2398/2400).
- A small possible earthen mound with no associated pit (1558).
- A short possible scarp or low bank (2145).
- A recent-looking small scoop dug into a slope (1172).
- A short, narrow, linear hollow (2399).

The natural features which have been catalogued are:

- A small stony spread (2231) exposed in a hollow way; not a prehistoric built feature.
- Small, vertically but naturally-placed stones (1433/1466/1550) which could be confused with orthostats.
- A natural hollow (2716) which looks superficially like a dug pond.
- A small drainage gully (2209).
- A slight natural terrace (1002) which looks lynchet-like.
- Low natural mounds (2111/2186/2403) with superficial resemblance to prehistoric features.
- Small mounds (618/1214/1218/1462/1535/1536/1538/1653/1655) some of which at least may well have been created by burrowing animals.
- Larger areas of heavily disturbed ground caused by burrowing animals are common behind White Edge (2456/2461/2462/2470/2473/2474/2732), with another on the shelf further east (623).

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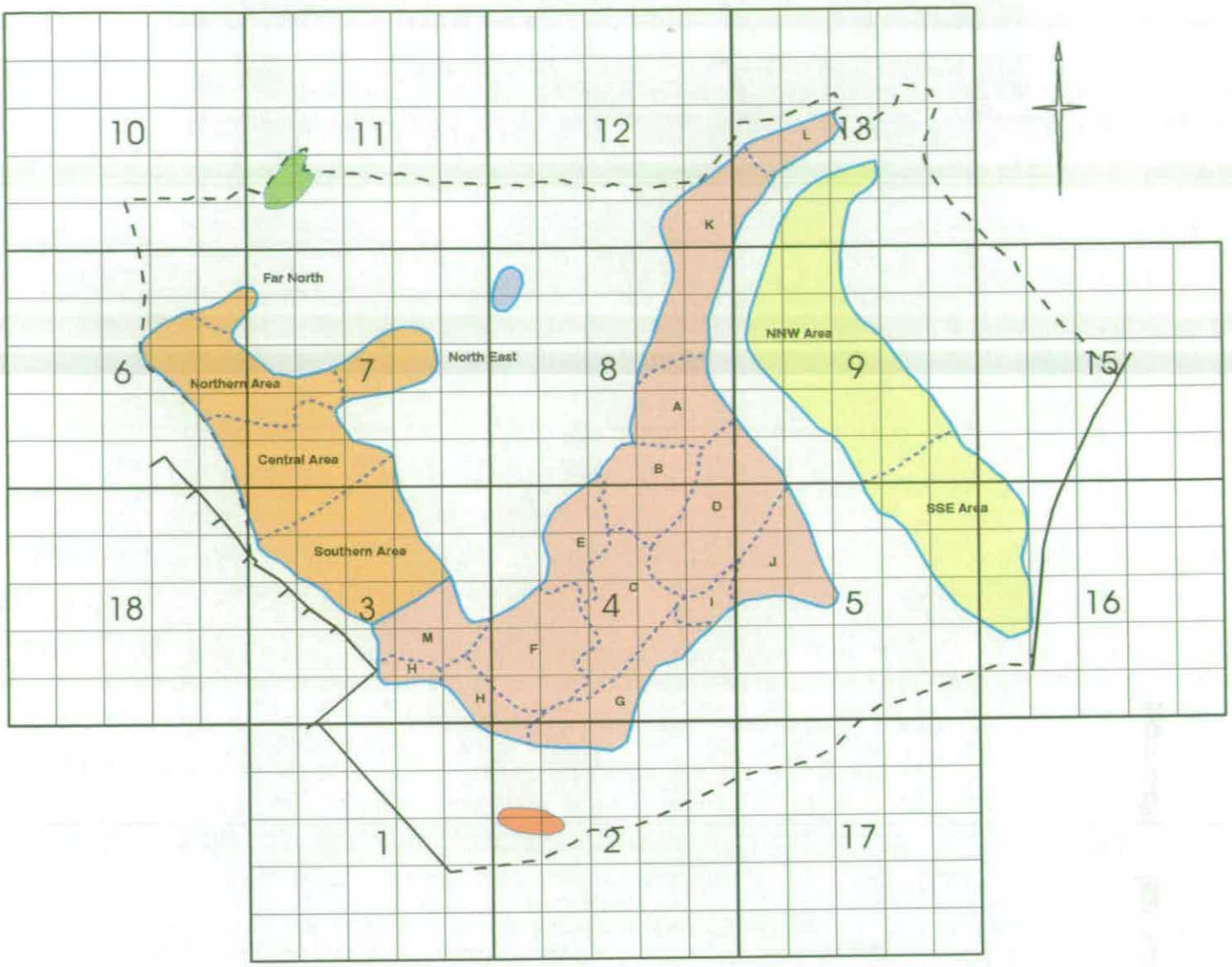
FIELD SYSTEMS



BIG MOOR EAST (RAMSLEY MOOR)

BIG MOOR NORTH WEST

BIG MOOR CENTRAL

BIG MOOR SOUTH

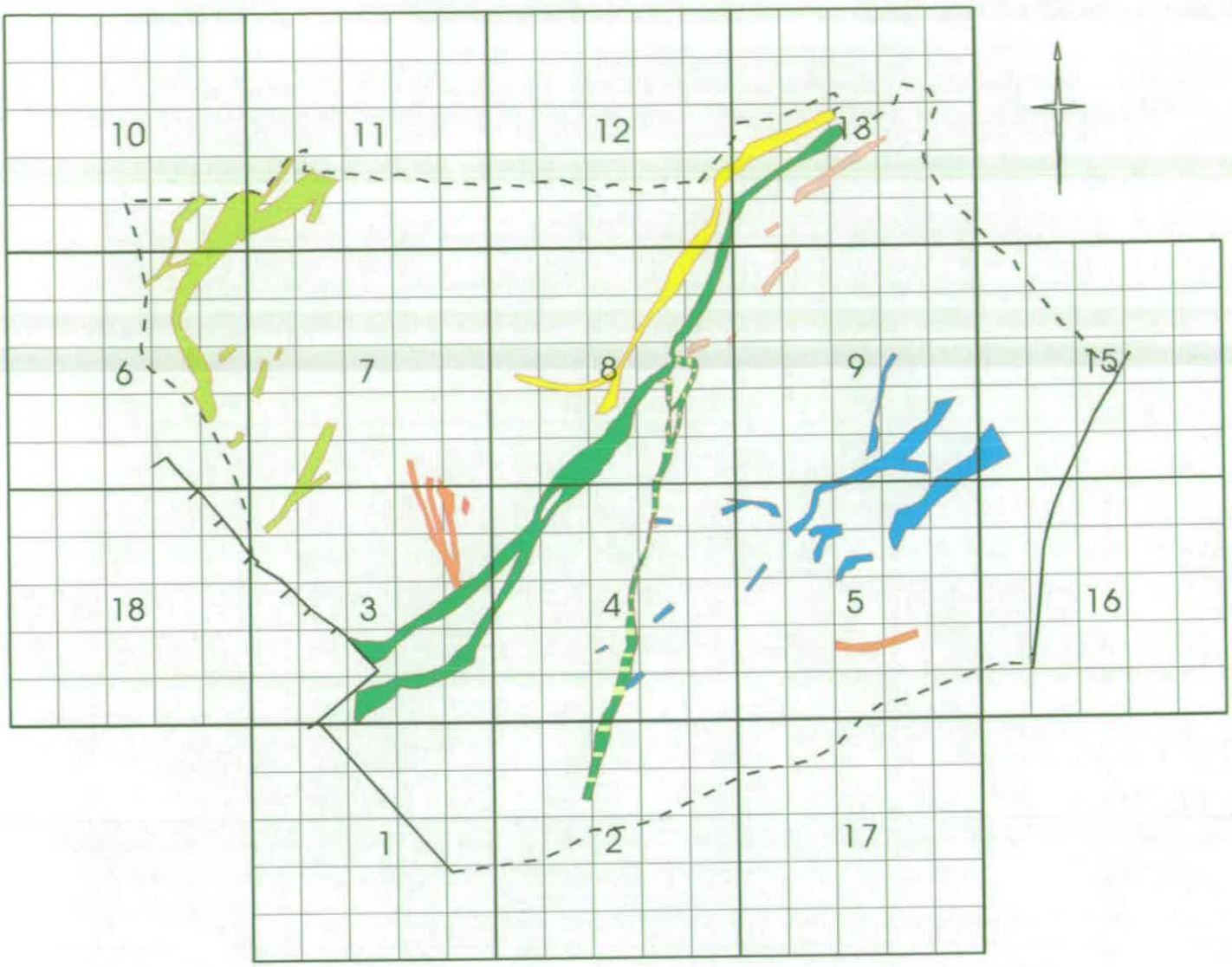
BIG MOOR WEST

ROUND KNOLL

9 SHEET NUMBER

LIMITS OF SURVEY

HOLLOW WAYS



ROUTE 1

ROUTE 2

ROUTE 3

ROUTE 4

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LIMITS OF SURVEY