From Cairns to Craters:

Conservation Heritage Assessment

of Burbage

Moors for the Future Report No 8

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Abstract

A total of 157 archaeological features and 19 artefacts findspots have been identified in Burbage by the current survey. Twenty features and all 19 findspots are recorded in the South Yorkshire or Derbyshire Sites and Monuments Record (SMR). This represents a 785% increase in known archaeological features as a result of the current survey. A further 6 sites recorded in the South Yorkshire and Derbyshire SMRs are considered not to be antiquities. Eight features are Scheduled Monuments, two are Listed Buildings. Other features may seem insignificant in their own right, but their importance lies in what they tell us about the overall historic landscape of Burbage.

The earliest features date from prehistory. These include the later prehistoric enclosure on Carl Wark, later Neolithic/early Bronze Age burial barrows and ring cairns, Bronze to Iron Age cairnfields and a round building. There are a number of findspots of stone tools dating from the Mesolithic to the Bronze Age.

During the Medieval period the survey area was within the manors of Hathersage and Dore. The network of long-distance packhorse routes and Millstone production originated in the Medieval period, and an iron-smelting bloomery complex was in operation.

Millstone production expanded in the post-Medieval period, eventually ending in the mid-20th century. Packhorse routes were replaced with turnpikes between the mid-18th and early 19th centuries, and passage was barred by dry-stone walls built as a result of Parliamentary Enclosure of Hathersage and Dore in the early 19th century.

Burbage was enclosed by two Parliamentary Acts. The Hathersage, Derwent and Outseats Act was passed in 1808, with the Award following in 1830. The Dore Act was passed in 1809 and the Award drawn up in 1822. This resulted in the creation of six new farmsteads and the physical enclosure of four moorland areas.

The Duke of Rutland acquired the moorlands in the 1820s, building nearby Longshaw Lodge. He built a scenic drive along Burbage Valley and used the moors for grouse shooting. His tenants continued to pasture sheep on the moors, but this was limited to benefit the grouse.

Rambling became an important aspect of the moorlands by the early 20th century, often pitching walkers and gamekeepers in confrontation with each other. Public access slowly increased after Sheffield City Corporation bought Rutland's estate in 1927 for water, with the Sheffield Clarion Ramblers at the forefront of campaigning for access.

Burbage played two roles in World War 2. A bomber decoy was built on Houndkirk Moor to deflect bombing raids from Sheffield and a number of military units used Burbage Valley for training between 1941 and 1945.

Introduction

The archaeological survey of Burbage has been commissioned by the Moors for the Future Partnership to provide an audit of heritage features and a summary of the area's archaeological history. The report is based on original fieldwork and documentary research.

The aim of the survey is to provide essential information on the nature and condition of surviving archaeological features and the historical development of the area to further the conservation, public interpretation, accessibility and education aims of the Moors for the Future project.

This report accompanies a GIS database of all sites included in the list of heritage features. The database is held by Moors for the Future and the Peak District National Park Authority.

Location, Geology, Topography and Soils

The Burbage survey area is located 2km to the south-west of the edge of the Sheffield city conurbation and 1.5km east of Hathersage village (Illustration 1). It lies at the intersection between the Eastern Moors and the High Peak, immediately north of where the east-west width of the unimproved moorland narrows to less than 1.5km. The vast majority of the area lies within the bounds of Sheffield city, while the very western extremity is within Derbyshire. It comprises Burbage Moor, Burbage Valley, Hathersage Moor and Houndkirk Moor (Illustration 2). Together, these form a block of land measuring approximately 10km^2 centred on NGR. 4270 3819.

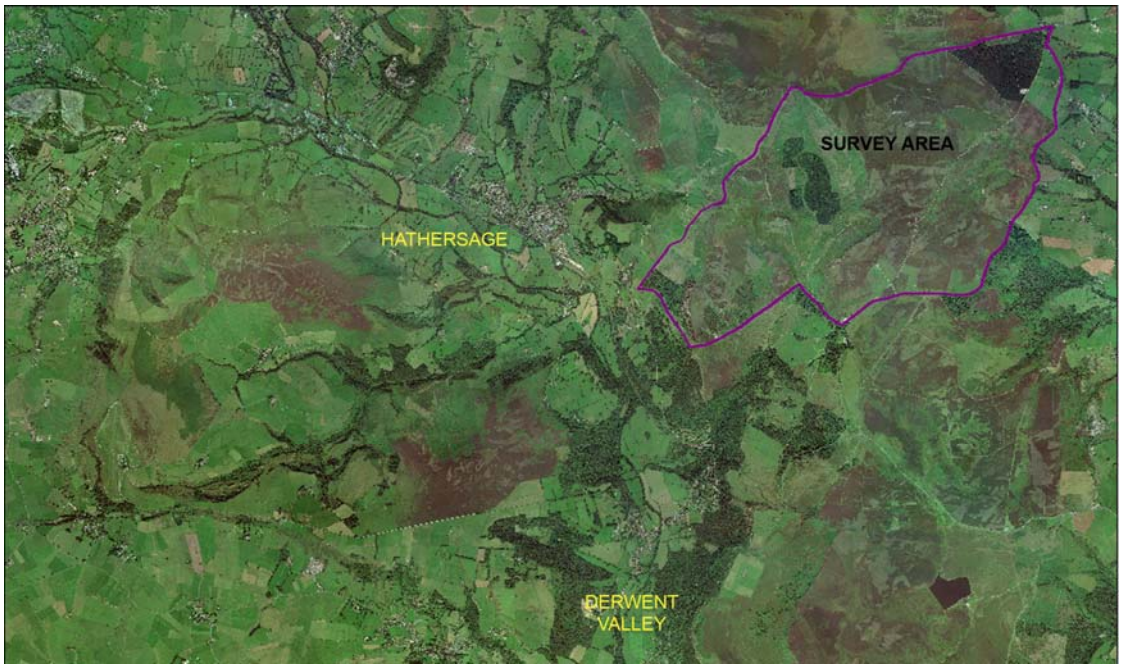

Illustration 1. Location of Burbage survey area.

The whole survey area lies above Millstone Grit (Aitkenhead et al 2002), and includes three different topographies.

The high, heather-dominated plateau of Burbage and Houndkirk Moors forms the eastern half of the area. Reaching to a height of 438m above sea level, the top of the plateau has thin soils with outcropping millstone bedrock and boulder fields. The plateau rises steeply from the east, where it is dissected by two watercourses which drain extensive areas of wet bog on the plateau. A more gradual slope rises from the south, while the west is bounded by Burbage Edge.

Burbage Edge is a southern extension of Stanage Edge and forms the eastern rim of the natural bowl-like amphitheatre that is Burbage Valley. The Valley hangs above the eastern side of the Derwent Valley between 300m and 400m above sea level. The western rim consists of a less precipitous ridge for most of its length, turning into Millstone Edge towards the south. Gently sloping valley sides descend towards Burbage Brook, the watercourse that runs through the valley, draining higher moorland to the north into the River Derwent. Flat-topped and dramatic millstone outcrops called Higger Tor (438m above sea level), Carl Wark (380m above sea level) and Over Owler Tor (380m above sea level) rise above the valley sides. The Millstone edges and outcrops create vertical scarp edges backed by outcropping bedrock and boulder fields. Boulders are scattered across the slopes below the scarps. The outcrops and many of the boulders below the edges are rounded from weathering, though in places more blocky, less weathered material exists on the ground surface. Vegetation is a mix of heather, bracken and coarse grasses.

West of Millstone Edge we find the upper valley side of the Derwent Valley. A relatively steep drop below the ridge gives away to a more gently inclined shelf. Most of this area has been enclosed and improvement attempted.

The centre of Burbage Valley is dominated by a conifer plantation, planted by Sheffield City Council between 1968 and 1971.

Summary of Heritage Features

A total of 157 archaeological features and 19 artefacts findspots have been identified in Burbage by the current survey. Twenty features and all 19 findspots are recorded in the South Yorkshire or Derbyshire Sites and Monuments Record (SMR). This represents a 785% increase in known archaeological features as a result of the current survey. A further 6 sites recorded in the South Yorkshire and Derbyshire SMRs are considered not to be antiquities.

A number of features are given statutory protection by government legislation either as **Scheduled Monuments** (SMs) or **Listed Buildings**.

There are eight Scheduled Monuments (431.1, 431.3, 431.4, 431.6, 431.27, 431.28, 431.33, 431.149). **Any damage or disturbance to the designated areas of SMs is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2006)**. Scheduling covers the fabric of the archaeological feature itself, and may also extend a little distance beyond the obvious earthworks to create a protected buffer zone. In the case of two cairnfields (431.4, 431.28), scheduling incorporates extensive areas that include the land surface in between the

visible archaeological features. English Heritage also consider the setting of SMs and need to be consulted prior to planned ground-disturbing activities in the vicinity of SMs.

Two buildings are Listed Buildings (431.114, 431.153). **Any alteration to a listed building is likely to need listed building consent from the local planning authority. In some cases planning permission may also be required.** Unauthorised alteration of a listed building is a criminal offence. Listing covers the whole of the building inside and out and includes any of curtilage buildings and boundary walls.

Features of National or Regional Importance

There are 47 features of national or regional importance.

Two extensive prehistoric cairn fields/settlement areas. These are Winyard's Nick (431.4), which comprises cairns, linear clearance banks and small standing stones, and Toad's Mouth (431.28) which consists of at least 76 cairns, linear clearance and a possible round house location.

Four prehistoric barrows (burial mounds), probably built between 2500 and 1500 BC (431.3, 431.6, 431.26, 431.33). These are important prehistoric funerary sites.

Two ring cairns, probably contemporary with the burial barrows (431.27, 431.149), which were used for ceremonies by local communities.

The later prehistoric enclosure on Carl Wark (feature 431.1), which was probably a major tribal focal point from the late 2nd millennium BC onwards.

A stone-footed round house (431.5) that could date to the 2nd or 1st millennium BC. Such stone-footed prehistoric buildings are very unusual in the Peak District.

A Medieval bloomery – iron smelting – complex (431.59), comprising two separate areas with a total of eight waste mounds, a small stone enclosure and the strong likelihood of the sub-surface survival of hearths.

A probable Medieval shieling – a temporary agricultural settlement – comprising a small ruined building associated with a trough and corn-grinding stone (431.2).

The survey area is crossed by a significant and extensive network of long-distance packhorse routes (431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). Many of these would have originated in the Medieval period and continued in use until the construction of turnpikes from the mid-18th century and the Enclosure of the moorland under the 1822 Dore Enclosure Award. The routes include a stone bridge (431.81) and an inscribed waymarker (431.103).

Burbage and Hathersage were one of the main centres in England for millstone production from the Medieval period until the mid-20th century. There are three extensive day-working areas (431.8, 431.34, 431.70), and three more industrial-scale

quarries at Mothers Cap, Millstone Edge and Burbage Edge (431.35, 431.40, 431.73). All contain many part-finished products.

Fox House (431.153) and Ringinglow Roundhouse (431.114) are important 18th century standing buildings.

There are two ruined 19th century Enclosure Movement farmsteads with well-preserved layouts. These are Oxdale Lodge (431.104) and Piper House (431.143).

There are two significant uses of the moorlands during World War 2 that have literally left their mark on the landscape. British and Canadian troops trained on Burbage, leaving swathes of bullet- and mortar-scarred rocks and a number of fox holes (431.19, 431.41, 431.54, 431.66). Houndkirk Decoy was one of the first World War 2 bomber decoys built in Britain, and one of only two surviving examples of six original sites built to protect the strategically important Sheffield steelworks (431.87, 431.88, 431.89, 431.138).

Features of Local Importance

All archaeological features of local importance within the surveyed area are of post-medieval date, although some hollow ways may have Medieval origins (see Table 1). The most common types of site are terraced trackways and hollow-ways that are not long-distance packhorse routes. There are a number of redundant structures related to past agricultural use of the moorlands, including sheepfolds, sheepwashes, sheep lees, shelters and other farm buildings. Small areas of stone quarrying exist outside of the major quarries and day-working areas. Buildings include farmhouses, cottages and a chapel. Other features include a line of grouse shooting butts, the Duke of Rutland's Green Drive, and a number of stone cairns which may be prehistoric in date.

Although many of the archaeological features on the moorland, when taken in isolation, may first appear to be of only limited interest, when viewed in total as elements of the overall historic landscape they become of much greater value. They illustrate continuity in the ways the moorland has been used that goes back centuries.

The low-lying nature of much of the moorlands in the survey area has enabled a long and complex pattern of past land use to develop that has resulted in the creation and survival of many types of archaeological features. There has been little destruction of these sites on Burbage, as with the other moorlands of the Peak District, because of the lack of agricultural improvement and intensive cultivation. As well as the features that survive as earthworks, there may be good survival of Prehistoric features below the peat. The finds of artefacts indicate something of this presence.

Summary of Archaeological History

Prehistory: Life, Death and the Mystery of Carl Wark
(see Survey Theme Plan 1 Prehistory)

Little can be said of Burbage for the mesolithic and early neolithic periods. Seven findspots of flint tools eroding from under the peat indicate that people visited the area

(431.159, 431.162, 431.170, 431.171, 431.173, 431.178, 431.179). These were lost or discarded by early hunter-gatherers who visited these high areas, after the last glaciation and before the advent of peat growth (between c. 10,000 and 4000 BC), camping here seasonally (presumably in summer), probably to hunt game such as deer.

More evidence survives from later prehistory in the form of Carl Wark enclosure (feature 431.1), Toad's Mouth and Winyard's Nick cairn fields (431.4, 431.28), four definite burial barrows (features 431.3, 431.6, 431.26, 431.33), four probable barrows, three of which are stone cairns and the other a disturbed mound (431.15, 431.23, 431.25, 431.129), a grouse shooting butt that may have been made in a barrow (431.134), two ring cairns (431.27, 431.149), a stone-footed round house (431.5) and six findspots of flint tools or waste flakes (431.161, 431.163, 431.164, 431.169, 431.174, 431.176). Some of the cairns in the two cairn fields may also contain burials.

Death and Ceremony: Barrows and Ring Cairns

Burial barrows and ring cairns are broadly contemporary, dating from the later Neolithic/early Bronze Age, between the mid 3rd and mid 2nd millennia BC. Over 500 barrows are found across much of the limestone plateau and the gritstone moors (Barnatt 1989, 1996). Locations are very varied, but tend to be on the lower shelves and plateaux overlooking valleys, or on low ridges and hilltops, which themselves overlook the lower shelves (Barnatt 1996). Barrows were built to mark the graves of specially chosen individuals. There are both single and multiple inhumations and cremations found both under and within the barrow mound. Barrow burial was not the normative funeral rite, the majority of people were either buried in unmarked graves or excarnated - left exposed to the elements. Barrows show how important it was to mark the burial places of chosen individuals in the landscape. The prominent mounds would constantly remind the living of their dead. In a time before title deeds and property ownership, this would reinforce their connections to the surrounding landscape. Three of the barrows on Burbage (431.6, 431.26, 431.33) are placed in locally prominent locations that are visible from nearby areas occupied by field systems (431.4, 431.28). This indicates that these permanent funerary markers were probably built by the communities living at the cairn fields to serve their own religious and emotional needs.

Ring cairns are akin to stone circles, and are found exclusively across the gritstone uplands with the majority on the Eastern Moors (Barnatt 1990). They vary in size from 5m to 30m in diameter and character: free-standing stones, upright stones placed in a circular embankment and embankments without orthostats (Edmonds and Seaborne 2001). They were probably places for holding smaller, family-based ceremonies, such as those connected with the agricultural season, fertility and individual rites of passage such as birth, puberty and death (Barnatt 2000; Edmonds and Seaborne 2001). One ring cairn (431.27) is in between two field systems (431.4, 431.28), being approximately 100m from one and over 200m from the other. This ring cairn would have been a place for small ceremonies held by the occupants of either or both field systems. There is no identifiable field system near to the other ring cairn (431.149). It is likely that more ephemeral remains of settlements and fields have been swept away by later improvement associated with the enclosure of this area.

Living and Farming: Cairn Fields

The two later prehistoric cairn fields occupy areas on gentle south and east-facing slopes situated between 310m and 370m above sea level (431.4, 431.28). These now peat-covered podsols would have been light, sandy soils in prehistory. The large number of cairns at Toad's Mouth (431.28) are probably the result of the clearance of stones to facilitate cultivation and pasture improvement, though some may also contain burials. Winyard's Nick (431.4) comprises a rectangular cleared area bounded by cairns and long sections of linear clearance that probably define a field boundary. Both areas may well have contained timber round houses, the evidence for which may still survive below ground. A semi-circular kink in one linear clearance in Toad's Mouth suggests the location of a round building.

Illustration 3. Winyards Nick cairn field.

As yet, we cannot be sure if the barrows and ring cairns are contemporary with the surviving remains of the field systems due to a lack of dating evidence. The close physical relationship does suggest a chronological association between the funerary/ceremonial monuments and some form of settlement activity (Barnatt 1986, 2000). Both cairn fields are undated, and could date anywhere from the early Bronze Age to Iron Age.

Close relationships with barrows and ring cairns, and radio-carbon dates for boundaries on Eaglestone Flat and Sir William Hill, suggest that some cairn fields

originated in the later Neolithic/early Bronze Age (Barnatt 2000). Three of the barrows (431.6, 431.26, 431.33) and one ring cairn on Burbage (431.27) are closely associated with the two cairnfields. Buildings excavated on Gardom's Edge have all been dated to the late Bronze Age/early Iron Age – approximately 1000 years later (Barnatt et al 2002, forthcoming). It is likely that at least some of the areas with surviving cairn fields were occupied in the later Neolithic/early Bronze Age and were re-used and modified over time.

The spatial separation of cairn fields, the proliferation of barrows and stone circles and the siting of these features in relation to local topography, indicates a greater investment in demarcating land associated with smaller communal groups such as kin, families and individual households. It is possible that each cairn field was inhabited by a kin-group or extended family, who saw the fields and associated open pastures as being in their tenure (Barnatt 2000). They may have occupied these areas permanently or moved between a small group of similar areas according to traditions of land-use.

The presence of cairn fields across the Eastern Moors is highly attuned to topography. The majority survive at low altitudes suitable for growing crops, in locations with light sandy soils suitable for prehistoric ards or spades. Much of Burbage and Houndkirk Moors was probably too high for successful, sustained cultivation. Lower slopes along the Derwent Valley may have also been occupied in prehistory, but subsequent agriculture has swept away prehistoric remains. Much of the lower altitudes in the Derwent Valley have heavier, clay-dominated soils, and would probably have been much wetter in prehistory due to an absence of field drainage. The extent to which these were exploited prior to the introduction of iron ploughs in the Iron Age is debatable. Burbage Valley, where the two cairn fields are found, is at an ideal altitude for prehistoric farming.

Enclosure and Enigma: Carl Wark

The most prominent archaeological feature in the area, and one of the most important prehistoric sites in the Peak District, is Carl Wark (431.1). The dramatic 230m long boulder-strewn outcrop, defined to the north and east by vertical millstone edges, is enclosed within a walled boundary. Along the south of the outcrop this takes the form of a low coursed and orthostatic wall built against the top of the scarp. There is a 2m wide in-turned entrance through this southern wall. To the west, it has an impressive 3m high and 8m wide earthen rampart faced with a stone wall on its exterior. There is no boundary along the cliffs around the remainder of the outcrop. Most of the interior is covered in large boulders. An excavation in 1950 through the rampart was inconclusive in dating its construction (Piggott 1951).

Most interpretations of the site have believe it to be an early Iron Age hillfort, though Neolithic and early Medieval dates have also been suggested (Barnatt 2000; Edmonds and Seabourne 2001; Gould 1903; Trustram 1911; Preston 1947 and 1954; Piggott 1951). The boulder-strewn interior precludes extensive settlement of the sort seen at Mam Tor, while the lack of running water makes it unsuitable as a defensive refuge. The closest parallel in the Peak District is the Gardom's Edge enclosure (Barnatt et al 2001). Here, a carefully faced rubble bank, punctured by four entrances, encloses a dense area of earthfast boulders behind a natural scarp edge. Gardom's Edge has been

radio-carbon dated to the later Bronze Age, between 1300 and 900 BC, and was probably a place for ceremonial gatherings (Barnatt et al forthcoming). Carl Wark is most likely to be the same date and use.

Illustration 4. Carl Wark from the north-west.

Was there a Roman Road?

The only possible Roman feature in the survey area is the line of a postulated military road, which is thought to have run between Navio fort at Brough with that at Templebrough, Rotherham. Earthworks of the road have been recorded at a number of locations (431.20, 431.100, 431.160). It has also been postulated that the Houndkirk Road (see page 10) has Roman origins, though these were disputed as early as 1925 (Ward 1925-26, 110-112).

None of the surviving earthworks are convincingly Roman in origin. The route has been postulated as much on the basis that it 'should be there' than strong archaeological or historical evidence. This route crosses relatively good traversable moorland topography, utilising the break in Burbage Edge, on an approximately straight line between the two known forts.

Medieval to Post-Medieval periods: Laying down today's landscape

Medieval landholdings, place names and the county boundary

The placename ‘Burbage’ is derived from Old English and reputedly means ‘stream near a fortified place’ (Cameron 1959). This would seem very apt for the area with Carl Wark being such a prominent landscape feature (431.1). It is first recorded in approximately 1230 AD as the ‘Burbache’ (ibid).

Since the Medieval period, the survey area has lain close to the boundary between Yorkshire and Derbyshire. In 1086, the area was divided between two Derbyshire manors. To the east was Dore, then held by Roger de Beusli, incorporated Houndkirk Moor, Burbage Moor and part of Burbage Valley east of Burbage Brook. Hathersage, was to the west, owned by Ralph Fitzhubert in 1086, and including Hathersage Moor and Millstone Edge. The county boundary ran to the east, through Ringinglow. It stayed to the east until the 1930s when Dore was transferred from Derbyshire to Yorkshire. The county boundary now runs further west to follow the western edge of open moorland below Millstone Edge and west of Higger Tor which was bounded by roads and the limit of enclosed land.

Iron Smelting

There is a small medieval iron smelting bloomery, comprising two distinct working areas defined by small mounds of slag (431.59). Bloomeries were used to smelt iron from the Iron Age until the 15th century, when they began to be superseded by blast furnaces and finery forges. The majority of bloomeries date to the Medieval period, but the technology did continue in use in some areas, such as north-west England, until the 18th century. Bloomeries used hand or water-powered bellows to heat iron ore mixed with charcoal inside the hearth to reduce the ore’s iron oxide into malleable iron. The smelted iron formed a slag-rich ‘bloom’.

The hearths may have used iron ore from ore seams in the Coal Measures or bog iron from a nearby fen, with the charcoal fuel possibly coming from surrounding woodland such as in Padley Gorge or below Burbage Edge. It is unknown who was responsible for smelting, but it would have probably been undertaken under the authority or approval of the lord of Dore manor.

It was also during the medieval period that two significant elements of the historic landscape originated. This was the development of long-distance packhorse routes and quarrying for millstone production and other stone working. Packhorse routes continued in use until the 18th and 19th centuries, while quarrying continued until the mid-20th century. Both leave extensive archaeological features that are difficult to date with any fine chronological resolution.

Communication Routes
(see Survey Theme Plan 2 Communication Routes)

From Packhorse Trains to Turnpike Roads

The complex network of packhorse routes developed over a long time period (431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). The origins of some of the hollow-ways that survive on the ground probably lie in the Medieval period, but some of the routes

themselves could be much older. Packhorse teams searched for suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. These natural routeways were in many instances the obvious directions to follow by people travelling between different areas, so they were probably used for communication long before the Medieval period.

Between the Medieval period and the 19th century, trains of packhorses were the main form of goods transport between market towns, production areas and industrial centres. Raw materials and finished goods included salt from Cheshire, quarried stone and finished stone products from Peak District quarries, bales of wool – anything that was needed in large supply. The growing city of Sheffield was a massive importer of raw materials to feed its foundries and of finished goods and agricultural produce to supply its non-farming population.

A train of packhorses could travel up to 40km in a day, each animal carrying over 150kg. Inns grew up at regular intervals along the packhorse routes. Routes were rights of way, open across moorland and walled into lanes through farmland, that anyone had access to. Topographical constraints, resulting in certain routes being used again and again, caused erosion and the formation of hollow-ways. Braids of hollows often occur where popular routes cross slopes.

The packhorse routes across Burbage directly connected Dore, Totley, Sheffield, Hathersage and Grindleford as well as more distant markets such as Castleton, Tideswell and Buxton. The major directions taken by the routes are north-east to south-west from Ringinglow to Winyard's Nick via a packhorse bridge across Burbage Brook (431.81) and towards Longshaw via Fox House. The immediate destination west of the Nick is Hathersage, from Fox House it is Grindleford. A complicated set of braided hollow-ways runs north to south just west of Burbage Brook, and this appears to have been a heavily used route between Grindleford and Hathersage avoiding farmland. A similarly well-used and braided route runs south from Houndkirk Moor towards Froggatt Edge. This either carried on along the top of Froggat or dropped down to Grindleford via Padley Gorge.

The waymarker on Houndkirk Moor shows the routes' importance in linking market towns (431.103). It signposts Buxton and Tideswell, not the much closer villages, because these were the destinations seen as important to the local authorities. Waymarkers and stone bridges (431.81) were erected from the 17th century onwards. In 1697, an Act of Parliament formalised the erection of guide posts and rebuilding of packhorse bridges in stone to facilitate trade (Hey 1980). Trade had been expanding since the 16th century and the Act was passed in response to mounting complaints from the merchant class about road conditions. The Act called for county justices of the peace to erect guide posts, where cross-roads were remote from villages.

Packhorse routes were replaced by turnpike roads in the 18th and 19th centuries. Turnpikes were built around and across Burbage from the mid-18th century onwards (Radley and Penny 1972). Parliamentary Acts for the first two roads were passed in 1758. These ran west from Ringinglow roughly following the lines of existing packhorse routes. The Sparrowpit Gate Turnpike Road ran from Sheffield to

Sparrowpit Gate (between Castleton and Chapel-en-le-Frith) along the north of Burbage via Upper Burbage Bridge, Hathersage and Castleton. The Buxton Turnpike, now known as Houndkirk Road (431.99), crossed Burbage Moor from Ringinglow to Buxton via Fox House and Grindleford (431.153). An ornately designed octagonal toll house was built at Ringinglow in 1795 to collect tolls on both roads (431.114). These turnpikes were followed by an Act in 1781 for a road between Hathersage and Greenhill via Fox House which became the road skirting the south of the survey area. The descent of the Sparrowpit Gate turnpike from Burbage Moor into Hathersage was diverted in 1811 to give a gentler gradient, so creating the road that now runs along the west of the survey area below Millstone Edge. The final turnpike to be built on Houndkirk was the Banner Cross to Fox House road, linking the previously constructed roads, which was built after 1812. This skirts the south-west edge of the survey area. A moorland toll cottage lies just inside the survey area (431.145). This road, with the construction of a short joining road from Ringinglow, eventually led to the abandonment of the Houndkirk Road sometime after 1822 (Fairbank 1822).

The Burbage turnpikes are part of a national network of turnpikes that were constructed in the 18th and 19th centuries by trusts formed of the local gentry and merchants primarily to improve the road system for goods traffic. In the Peak District turnpike trusts were set up from the mid-18th century into the early 19th century (Radley and Penny 1972). Whereas previously road maintenance had been the responsibility of parishes, the turnpike trusts levied tolls for the use of roads and were themselves responsible for their upkeep. The traditional system of rights of way was not seen as an effective way of maintaining roads suitable for the increasing volume of traffic, nor were many of the routes in the uplands suitable for coaches and carriages because they crossed moorlands and climbed steep slopes. Capital costs of building or improving a road were raised by mortgage and recouped by collecting tolls from travellers at toll gates (Dodd and Dodd 1974). The first Act in England was in 1663 and by 1830 a total of 3,783 trusts had been set up in England and Wales (ibid.). Turnpikes were the effective commodification of transport, and to start with some packhorse trains avoided payment by using existing packhorse routes to circumnavigate toll bar gates.

The packhorse routes across Burbage could have continued in use into the 19th century. Two main developments eventually forced their abandonment. Most directly, the Enclosure of the moorland by the 1822 Dore Enclosure Award resulted in the building of walls that barred passage along the traditional routes (see below). The other impact was the speeding up of communication along the better roads, allied to improving transport technology, so giving a competitive economic edge to hauliers who paid the tolls.

Gritstone Quarries
(see Survey Theme Plan 3 Industrial)

> "they dig millstones from small delves on Hathersage Moor and Gardom's Edge, whilst elsewhere they quarry the stone from the face of the escarpment."
>
> Defoe 1724-27

Quarries are found throughout much of the survey area. Many are small delves producing stone for nearby walls or buildings. Others are deeper and larger holes with

spoil heaps producing stone for a local need over a short period of time. Some of these are marked on 19th century Ordnance Survey maps. There are also a series of important quarries that produced stone products for wider export. These are largely of two distinct forms. One group comprises extensive distributions of small quarry hollows and individual boulders. The other consists of large intensively worked quarries made into the edges which have high vertical faces. Both produced a wide range of products, including millstones, troughs, lintels, door steps and gate posts. All are excavated into the coarse Millstone Grit which forms the underlying geology of the area.

Illustration 5. Millstone Edge was a major stone quarry from the Medieval period to the 20th century

Millstones

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one stone a fortnight, totalling 312 millstones a year. Given that stones were produced around Hathersage for several centuries, it is likely that tens of thousands were manufactured in total. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). Many millstones and other products are still found amongst the quarries, mostly unfinished or broken pieces, together with some finished examples that were never removed. Stones were abandoned at all stages of production, from roughouts, where only the approximate shape has been defined, to others where virtually all the fine dressing has been done when the stone cracked or a flaw became apparent. Some millstones are still placed on their chock where dressing was taking place.

Most millstones associated with extensive quarries, and with earlier phases of production at the large Edge quarries, have rounded edges. The majority also have one domed surface. From at least the 16th century, these stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour, but became unavailable during the 17th century. Peak millstones left a grey colour in milled wheat. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. The

industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars.

Illustration 6. Domed millstones below Carl Wark.

Rise of the Edge Quarries

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (ibid). Flat-edged stones were also used for industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

It appears that the larger quarries on the escarpments, including Millstone Edge, Burbage Edge and Mother Cap quarries, dominated production in the 19th century with the more extensive delves falling out of use. It was not that the escarpment quarries were new, they had probably been worked since the Medieval period, but economies of scale made them the more profitable method of quarrying in the 19th century. Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

Illustration 7. Millstone blanks exposed from the ground at Mothers Cap Quarry.

Production of crushing stones at Millstone Edge almost ended when the paper mill industry collapsed in the 1920s. The last stones were sold to a paper mill in Sweden in 1939. The surviving stacks of stones date from this period.

Illustration 8. Large crushing stone below Burbage Edge.

Grinding Stones

Some stones were used for grinding, but the pebble beds found in gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling coarse grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

Sand Poachers

Some of the small delves near to Houndkirk Road and Jumble Road (431.99, 431.116) were illegal sand quarries (Ward 1937-38, 133-135). These were excavated in the second half of the 19th century by 'sand poachers' who dodged gamekeepers to dig the sand for sale to builders constructing houses in Dore. The sand was dug out and riddled at night then carried to an agreed meeting place, a load fetching about 25% of a labourer's weekly wage. It was in demand because of the proximity, its good mixing qualities and absence of salt. Small surface stones were also collected from near roadsides for making garden rockeries in the same houses. A ton weight would sell for approximately half a labourer's weekly wage. The reason that these informal sand quarrying and stone collection was seen as poaching was because the whole of Burbage had been enclosed early in the 19th century and therefore privately owned.

Enclosing the Moors
(see Survey Theme Plan 4 Enclosure)

From Common to Privileged

The moorlands of Burbage, Hounkirk and Hathersage had been common land since the Medieval period. They were owned by the respective lords of the manors of Dore and Hathersage but the inhabitants of those manors, tenants of the lords, had certain rights of use. These included pasturing livestock. There is no archaeological evidence for peat cutting for domestic fire fuel, although this was another customary right on many moorlands. Travellers also had rights of access to cross the moorlands, creating the network of long-distance packhorse routes that connected market towns and villages to either side of Burbage (see above). Such rights tended to be enshrined in tenurial documents, often referred to as 'agreed by custom'.

This relationship between landlord and tenant was always a delicate one that was tested by both parties. Landlords would try and limit tenant rights, for example barring their tenants from specific areas, while tenants would try and get as much as they could, such as taking timber reserved for the sole use of their landlord or squatting on common land. The presence of commons in the landscape began to change dramatically in the 18th century as landowners radically changed their perceptions of common land. With the acceptance of the Enlightenment and the development of Capitalism came a more rational approach to the world, with a belief in the benefits of

progress, that improving the world to make it more efficient was a good thing in its own right. Ideals of improvement spread amongst the landowners who saw it as their national duty to improve their own landholdings. Land was one of the fundamental pillars that their social position rested upon, so improvement was a key way to augment social position. Making your land more productive and efficient was perceived as a necessity for enhancing Britain's relationships with other nation states, providing the food to fuel industrialisation, economic strength and military power. Hundreds of Acts of Parliament were passed in the 18th and 19th centuries to Enclose the majority of the common land in England, removing customary rights and placing the common land under direct private ownership. These were brought to Parliament by local landowners to be passed by MPs who were usually also landowners for the great good of the nation. This was effectively a mass land privatisation. Once the Act was passed, the land was surveyed, maps were produced and Awards drawn up that allotted plots of land to the new landowners. These might be a combination of the existing lord of the manor and other farmers in the manor. Land could then by physically enclosed, improved, settled with new model farms, rented out to tenants or sold.

Acts of Privation

Burbage was enclosed by two Parliamentary Acts, one for each of the manors. The Hathersage, Derwent and Outseats Act was passed in 1808, with the Award following 22 years later in 1830 (anon. 1830). The Dore Act was passed in 1809 and the Award drawn up in 1822 (Fairbank 1822). The Duke of Devonshire had acquired both manors by the time of Enclosure, Hathersage in 1705 and Dore in the 1780s.

Both Awards resulted in the physical enclosure of small areas of the moorland common on Burbage, with ruler-straight boundaries subdividing the land into regular fields. In Hathersage, this resulted in a series of new fields on gently sloping ground below, and to the west of Millstone Edge that were probably farmed from Hathersage Booths. Three distinct areas were physically enclosed in Dore. Sheephill was parcelled up into small fields, improved and farmed from a new farmstead – Sheephill Farm (431.108) built between 1822 and 1840 (Fairbank 1822; Ordnance Survey 1840). Ox Stones was divided into two large rectangular areas by a dry-stone wall and a ditch and bank. This was farmed from Oxdale Lodge (431.104), located on the Houndkirk Road and also built between 1822 and 1840. The area of moorland to the west of Fox House (431.153), running along the north side of the current A6187, was divided into a series of regular fields that were farmed from three newly built farms. Parson House (431.154) was built between 1822 and 1840, while Stone House (431.147) and Piper House (431.143) followed between 1840 and 1880 (Fairbank 1822; Ordnance Survey 1840, 1880). Another, unnamed, farmstead was built in Burbage Valley but never occupied (431.60) (Ward 1930-31, 161).

Nineteenth century enclosure therefore resulted in two new physical manifestations to the Burbage landscape – farmsteads and field walls enclosing improved grass pasture. These all appeared within a 58 year time period, between 1822 and 1880. The new walls barred passage along the packhorse routes, so forcing all traffic to follow the recently created turnpikes. Large areas of the private moorland were retained for grazing and grouse shooting. Enclosure also involved a fundamental shift in how the

moorland was accessed, used and perceived. This led to conflicting recreational uses of the moorlands that would come to the fore in the second half of the 19th century and first half of the 20th century.

Landscapes of Leisure: Rights of Recreation
(see Survey Theme Plan 5 Recreation)

> "Burbage Valley – the finest many-tinted moorland valley near Sheffield."
> Ward 1925-26, 110

At the Duke of Rutland's Pleasure

The 5th Duke of Rutland acquired a large estate in the 1820s that incorporated a block of moorland from Burbage and Houndkirk moors in the north to Gardom's and Birchen Edges in the south. He was the first of a succession of five Dukes to use the estate as a recreational retreat.

The Duke built Longshaw Lodge as a 'shooting box' during the 1820s. However different sources give different dates, with a privately held plan made from a survey undertaken in 1824 to 1825 reputedly depicting the house (Ward 1941-42, 145-146) though Pevsner dates it to circa 1827 (Pevsner 1978). The land required for the Lodge and the enclosed fields adjacent were taken out of common land as a result of the 1808 Hathersage Enclosure Act and subsequent Award of 1830 (anon. 1830). The 1820s date of the Lodge implies that some enclosure was commenced before the final Award was made. If so, this shows how confident the Duke was that his position was too powerful for anyone to question how he divided his estate before the Award was finalised. The Lodge comprised accommodation for the Duke, family and guests, servants and stabling for horses.

The Duke's creation of a shooting estate went hand in hand with the Parliamentary Enclosure of Hathersage and Dore. As well as the new fields and farmsteads, the Duke had a number of features built to facilitate his enjoyment of the grouse shooting estate. Various trackways were built leading out across the estate from the Lodge as Drives. These allowed the Duke access to different moorland areas by horse or carriage for grouse shooting and to show his estate to guests. Lines of grouse shooting butts were built, along with shooting lodges where refreshments could be served. Gamekeepers were employed to manage the moorlands for grouse breeding, with a cottage for the keeper on Burbage located at the northern entrance to the Lodge.

Illustration 9. The Duke of Rutland's Green Drive (the yellow line running through the bracken below Burbage Edge).

The Duke had one line of grouse butts built on Burbage (431.134) and at least one refreshments lodge (431.12). These are located on opposite sides of the moorland, showing that butts were not an essential element of a shooting trip. A drive was created along Burbage Valley between 1857 and 1870 and known as the Green Drive (431.57) (Ward 1939-40). This was a gently graded terraced trackway that ran directly from Longshaw Lodge to Upper Burbage Bridge. The northern entrance to the Drive, at Upper Burbage Bridge, was walled up by the Duke in 1922 (Ward 1925-26, 110-112). By November 1925 the wall had been attacked by passers-by and then demolished.

Britain's longest continuous held sheep dog trials are reputedly the Longshaw Trials (Ward 1930-31, 148). They began in 1894 as a competition between the Duke's shepherds and farmers who had sheep on Burbage and Longshaw moors, and possibly the head gamekeeper, to see who was best at controlling a dog. Winners were awarded quarts of beer. The contest led to the first official Trials in 1898 and they have been held every year since, with the exception of the two world wars.

The Duke's farmers and shepherds held spring gatherings every March where all of the sheep were checked for infections and infestations (ibid, 150). The tap room of the Fox House was covered in straw during rough weather so that the sheep could be salved indoors. If thick snow coincided with the gathering, some farmers drove to the Fox House by horse-drawn sledge (ibid).

The 9th Duke of Rutland sold his estate to Sheffield City Corporation in 1927, the city aiming to dam the Upper Burbage Valley and create a reservoir. This never materialized. The National Trust soon took ownership of Longshaw Lodge.

Clarion Call for Ramblers

"A rambler made is a man improved"

GHB Ward

In the final decades of the 19th century people from the cities neighbouring the Peak District, especially Sheffield and Manchester, began to escape the industrial pollution by taking to the moors near to them for recreational walking. Rambling was promoted

as way of improving moral spirit, increasing good health and developing well-rounded individuals. Rambling became a social and political movement for the urban working classes, and the Enclosure of moorlands 50 years or more previously set this movement on a collision course with the rural landed gentry. It was a class struggle focused on the Peak District. The Sheffield Clarion Ramblers were founded in 1900 by a Sheffield engineer called GHB Ward who inaugurated the club with a walk around Kinder. They were one of a national network of Clarion Clubs founded to enable more labourers to go on rambles, and their political aspirations are highlighted in the affiliation with the Labour Representation Committee. As one of the most prolific organisers of walks and campaigners for public access to the Dark Peak, the Sheffield Clarion Ramblers were a leading organisation in the access campaign that eventually led to the creation of the Peak District National Park in 1951. Ward published the Sheffield Clarion Handbook to educate readers about the moorlands and historical rights of access (Sissons 2002). Ward chaired the Ramblers until his death in 1957.

Ward wrote regularly about Burbage and Houndkirk Moors in the Handbook between 1915 and 1945. He concentrated on old place names, traditional rights of way and the injustices of private ownership of moorland common for grouse shooting. The Fox House inn soon became an important landmark for Sheffield ramblers.

Almost all of the traditional routes were barred to the public when owned by the Duke of Rutland. Ward wrote against the inequity of this, and his earlier research was based on proving that that were ancient rights of way crossing the Peak District moorlands that should be reopened. Some of his articles demonstrate that he trespassed on private grouse moors, such as detailed directions given to get to Cicely Low ring cairn (Ward 1941-42, 118-122). The Green Drive was described as ‘so often the track where thundery objections were made by gamekeepers’ (Ward 1945-46, 89).

“…making a new Earth,”

Ward 1941-42, 88-89

The access situation changed after Sheffield City Corporation bought the area from the Duke of Rultand in 1927 (Ward, 1928-29). The Sheffield Clarion Ramblers lobbied the Corporation to reopen some of the tracks to public access that had been closed by the Dore and Hathersage Enclosure Acts. This led to the Corporation creating a concession for the use of two trackways, known as the Dore-Hathersage Bridleway, between October and March and in July every year. They entered Burbage from the east at 4288 3816 and ran west to the north side of Carl Wark (431.1) via the packhorse bridge over Burbage Brook (431.81). From there one ran west to join an existing footpath between Higger Lodge and the road (431.12). The other ran north from Carl Wark across Higger Tor to Upper Burbage Bridge. These tracks are still public rights of way today. Ward thought they were Medieval packhorse routes, which for most of the case is right based on surviving hollow-ways (431.67, 431.131). However, there is no evidence that the line north of Carl Wark was part of a packhorse route, with a line clearly visible running south towards Winyard’s Nick (431.9, 431.20, 431.21). The route over the top of Higger Tor was certainly not a packhorse route, the original route here running to the east of the Tor (431.18). This was an important moment in the city-based ramblers’ campaign for access to the Peak District

moorlands. It was made possible by the work of the Sheffield Clarion Ramblers and the change of ownership of Burbage from the Duke of Rutland to the less hostile Sheffield City Corporation. The Corporation originally only allowed access between December and February because they had rented the land to a grouse shooting tenant who had argued against access, claiming it would disturb grouse breeding. In 1936 access to the Dore-Hathersage Bridleway was allowed all year, but the remainder of the moors remained out of bounds (Ward 1941-42, 88-89). The case demonstrates how GHB Ward used archaeological and historical evidence to promote and campaign for moorland access, basing it on the existence of traditional routes that had been barred by Enclosure.

By 1945 the Green Drive was 'well used', having been opened to the public in 1928 by Sheffield Corporation under an agreement with the National Trust in exchange for the city taking water from Longshaw springs (Ward, 1945-46, 89).

Ward argued for full "Access to Moorlands" throughout the 1940s and 50s, deriding the Sheffield Labour Party for failing to provide agreements on this to city-owned moors and citing disappointment at the 1939 Access to Mountains Act.

A total of ten footpaths were promoted for public use by the Sheffield Clarion Ramblers in 1945 (ibid, 89-94). Many of these routes became the network of public rights of way that still cross the moorland today. Public access to the moorlands was available in practice from the 1950s and was formally drawn up into an agreement between the Peak District National Park Authority and Sheffield City Council in 1991, pre-dating the Countryside and Rights of Way Act of 2000 by nine years.

The Moors in World War 2
(see Survey Theme Plan 6 World War 2)

Burbage and Houndkirk Moors played a role in World War 2, contributing both to the defence of Britain and to the allied invasion of Europe.

Defending Sheffield's Steelworks

Sheffield was the first city in Britain whose World War 2 defences were augmented by the construction of bomber decoys. These were designed to lure German bombers away from their intended urban and industrial targets using fires and lights (Dobinson 2000; Payne 2006). Sheffield was the first city chosen to be defended this way because of the strategic importance of the city's steelworks. The first decoy was built somewhere to the west of the city in August 1940. This was followed by a system of six decoys known as Special Fire (SF) sites, later known as Civil Starfish. The first SF site was built at Curbar Gap by late 1940. Others followed by the end of the year, located at Thorpe Salvin near Worksop, Norton, Bramley, Ulley and Houndkirk. These ringed the city and were originally intended to be operational for up to 18 months (Payne 2006). Houndkirk is one of only two surviving sites, the other being the one at Curbar Gap (ibid).

Houndkirk decoy was decommissioned in December 1945 (ibid). It comprised a system of ditches laid out to represent the city's railway marshalling yard and streets

based on a plan drawn by an artist who had been flown over Sheffield at night (431.89). There was also a control bunker, which was later converted to an experimental radar station, an access track loop and access control point to the south (feature 431.87, 431.88, 431.138). The decoy used controlled fires and lights to replicate the fires of Sheffield's steel furnaces when opened to cool the molten metal, the railway marshalling yard and the sparks made by tram power conductors on the electric cables. An account written in 2000 by Oliver Murphy, a member of the Royal Artillery's Searchlight Regiment during World War 2 describes the laying out of the ditches. Theatre lights were used to duplicate the cooling furnaces. Different sets of fires were also lit to simulate the effects of enemy bombs hitting a city, including basket fires to recreate incendiary devices and other fires erected on scaffolding. Most of these structures have left no archaeological trace, though a cruciform arrangement of ditches and banks may be the foundation remains of a device known as a grid fire (ibid). The decoy was operated by soldiers billeted in Dore who camped on site overnight (Ron Priestley pers comm.).

In 1945 the control bunker was used to test a radar station, Air Ministry Experimental Station 149 (anon. 1992). The station comprised a mobile signal van, fuel store, generators, wooden storage and workshop huts, antenna, telegraph pole with wires to the operators' van and a van used as a rest room. The operators were mostly Royal Canadian Air Force, billeted in Dore.

Apart from the now lost evidence for bomb craters near to the access control point, there is no record of the decoy or surrounding area having been bombed. How successful the decoys were may be gauged by Sheffield having not been significantly bombed after the 'Sheffield Blitz' in December 1940.

Training the Liberators

Burbage Valley was used for military training during World War 2 by a number of units between at least 1941 and 1944. Ron Priestley, whose family grazed sheep on the moorland recalls the moors being regularly closed to the public while training was undertaken.

Illustration 10. World War 2 bullet scars used by climbers for bouldering. Philippa Davey.

The evidence for military training stretches across a large area of the Burbage Valley (431.19, 431.41, 431.54, 431.65, 431.66). It comprises numerous earthfast boulders scarred with bullet holes, mortar shell scars and at least four filled-in foxholes. Some of the boulders give the appearance of concrete pill boxes. The majority of boulders are usually hit only on one side. To the south-east of Carl Wark and below the southern part of Burbage Edge there are groups of shot boulders that appear to show areas where troops advanced in one direction as if assaulting a series of positions. Where these trails of bullet-ridden rocks stretch for hundreds of metres, the direction of assault is always uphill. There are also at least four foxholes (square pits with earthen embankments dug as defensive positions), including three in an approximate line at SK267815 that face north-east towards part of Burbage Edge where boulders are covered in a dense pattern of bullet and mortar scars. An outcrop just south of Upper Burbage Bridge was also the scene of a ferocious assault.

Military training was undertaken on Burbage from at least 1941 until 1945 (Ron Priestley and Mr K. Rackham pers comm). Specific events that we know of comprise the following. The British 2nd Batallion Rifle Brigade fired mortars west from Burbage Edge towards an area south of Carl Wark in 1941 (Mr K. Rackham pers comm.), though this appears not to be responsible for any of the visible evidence. Troops who weren't British, possibly US or Canadian, fired heavy guns north from Toad's Mouth in 1943 (Mr E Drabble pers comm.). Troops advanced west from Burbage Edge to Surprise View a number of times in 1943/44 (Mr Labul pers comm.). The witness was not close enough to see who they were but collected spent .303 cartridges afterwards, which were British army issue also used by the Canadian army

but not the US. Mr Labul thinks they may have been British and Canadian paratroopers who he remembers were based at Totley at the time.

The motor mechanic who had a garage at Fox House in the 1940s and 1950s told a group of archaeologists who visited in the 1950s that American airborne troops had practiced in Burbage valley in World War 2. However, a search of histories of American airborne units based in Britain prior to D-Day suggests that they were all stationed in south-west England and Leicestershire. Some Americans were based at High Green, Sheffield, but these were a transport unit (Steven Acaster pers comm.). An American unit was stationed at Blackshaw Moor, Staffordshire (a few miles north-east of Leek) in 1944 prior to D-Day (Tony Lack pers comm.), but this is probably too far for them to have trained on Burbage. An American unit reputedly camped near Baslow (Joe White pers comm), but little else is known about when or who they were. It is possible that Canadian troops were mistakenly identified as American. The Home Guard also trained in the area, but this appears to have all been further east near to Houndkirk quarry (Steven Acaster pers comm).

Some of the troops who trained on Burbage may have been deployed in the Normandy landings, or subsequent action during the liberation of Europe. Canadian forces were responsible for landing at “Juno” beach on D-Day on June 6th 1944, including paratroopers who dropped on the eastern flank of the bridgehead. British paratroopers were dropped at “Gold” and “Sword”. The following year, British airborne troops landed at Arnhem on September 17th 1944 in an attempt to capture a bridge across the Rhine. On March 23rd 1945 Canadian paratroopers dropped east of the river near the town of Wesel. Any of these units may have been the soldiers who trained on Burbage prior to combat action.

Condition of the Archaeological Heritage

Condition of Features and Potential Threats

MONUMENTS AT RISK

There is erosion on one footpath which passes across Carl Wark (431.1), causing damage to the northern terminal of the western rampart and to the ground surface at the southern entrance. Repair work has been undertaken to the footpath approaching the western end of the rampart from Higger Tor (Ullathorne and Rylatt 2004). The footpath requires monitoring where it crosses the Scheduled Monument, and consideration should be given to redirecting the path to the west of the scheduled area.

Two barrows (431.6, 431.26), have patches of bare earth or minor erosion that require repair and returfing.

A causeway (431.20), Medieval bloomery (431.59), building (431.60) and grouse shooting butts (431.134) are also suffering from minor erosion and require monitoring.

Illustration 11. Footpath erosion on Carl Wark. Left: northern end of western rampart. Right: entrance.

Many archaeological features have survived for hundreds or thousands of years. Each feature is a unique record of past human activity, even though it may be similar to others. Once destroyed, it is gone forever.

An individual archaeological feature is not only important in its own right. Sometimes it is the general archaeological character of a landscape, including its many features of "local importance" that is archaeologically valuable. The 'humps and bumps' identified as archaeology may be the "tip of an iceberg" where more extensive archaeological deposits of settlement or ritual activity are concealed below ground.

Not all archaeological features or landscapes can be conserved, nor is it desirable that the countryside becomes a 'cultural theme park' where everything is fossilised. However, many features can be safeguarded at little or no inconvenience to landowners or tenants.

Many archaeological features have been destroyed in the past due to lack of knowledge of either their nature or value. Once farmers and other land managers realise that collectively such features tell us much about our past, they are usually happy to safeguard them, particularly if there is no significant conflict of interest with the profitable management of the holding.

Only a small number of the most important features are protected by law against ground disturbance and are designated as Scheduled Monuments by the Department of Culture, Media and Sport, advised by English Heritage. Other features can be conserved under schemes such as Defra's Countryside

Stewardship Scheme and Farm Environment Programme or the Peak District National Park Authority's Environmental Enhancement Scheme.

The general condition and survival of archaeological sites is good because of the limited farming activity on the moorland in recent centuries. Signs of active destruction of features was virtually absent. The only identified damage is erosion caused by visitors or livestock.

That little active damage was identified does not necessarily mean the archaeology is safe. In a predominantly moorland landscape like Burbage, any destruction of archaeological features will take place as one-off events, often comprising the levelling of earthworks or hollows. The most likely damage will be from erosion along footpaths where they cross archaeological features. The southern entrance and northern terminal of the western rampart on Carl Wark are particularly vulnerable to such damage. Such activity is normally not identifiable by this type of survey in itself, but needs to be supplemented by periodic monitoring once the base-line survey has taken place.

1. The identified archaeological features are potentially under threat of destruction at any time (with the exception of Scheduled Monuments). Such activity could happen because the nature and value of the archaeological features is not recognised.

2. The overall value of minor archaeological features should not be overlooked, and every effort made to conserve them.

3. All archaeological features should be preserved wherever possible, particularly if conservation of the features is at no disadvantage or inconvenience to farmers. All too often archaeological features are damaged or destroyed because no one recognised their nature or interest.

4. If the plantations in the survey area are felled, the areas should be surveyed to the National Park Authority’s Phase 1 standard. Plantations such as these mask surviving archaeological features that may only be fully recorded after felling.

Methods for Safeguarding the Archaeological Heritage

Surface Remains

After having survived for hundreds or thousands of years, the safeguarding of archaeological features is often easy - they are usually best left well alone, by continuing the management traditional to the field or moor where they are found. When locating new activities or buildings, conservation of archaeological features can usually be achieved by choosing alternative sites which are of little archaeological importance.

Vehicles repeatedly crossing an area will quickly cause damage, especially when the ground is wet. The use of vehicles for moorland restoration work, including heather cutting, could seriously damage archaeological features. All archaeological features should be avoided, however where this is impossible – for example when crossing long-distance hollow-ways, different routes should be followed each time they are crossed. Special care should be taken when turning vehicles because of the intense ground disturbance caused by wheels.

Heather Burning When correctly controlled heather burning does minimal damage to archaeological features and does not pose a serious threat to their survival. However, if the burn is fierce and does not travel across the ground quickly enough it begins to burn into the peat. This can cause serious damage to both visible and buried features and deposits initially through heat and subsequently through erosion of the exposed ground surface. The care that is required for heather burning should be given special attention across the whole of the moors and especially when in the vicinity of known archaeological features. People burning heather should also be made aware of known archaeological features in the area of any proposed burn. Old, woody heather can also mask archaeological features which may lie unrecorded until after the heather has been burnt. We would be grateful if we could be notified of any potential archaeological features revealed after a burn.

Heather cutting should not be undertaken from areas with earthworks or stone features that would be damaged by vehicles.

Ploughing and rotovating may sometimes be necessary from a financial point of view, however, fields containing important archaeological features can sometimes be managed as permanent grass and other fields ploughed with equal profit. In some cases, rotovating or direct drilling cause little damage now, because shallow ploughing has taken place several times over the last two centuries. In contrast, deep ploughing may damage intact burials and other deposits. This said, any ploughing will reduce the height of earthworks.

Livestock damage can be reduced by placing supplementary feeders and licks away from archaeological features, or by moving their locations regularly where remains are extensive, for example, in areas with ridge and furrow.

Tree planting should avoid archaeological features where possible. To avoid damage from pulling or digging out stumps, it is better to cut the trees close to the ground and then to poison the stump and leave it to rot. Trees can seriously damage features through root activity. When trees have to be felled, on or near archaeological features, it is necessary to consider in which direction they will fall, where the brash will be burnt, and the route vehicles will take when removing the timber. With large plantations, archaeological advice should ideally be sought in advance of new planting, replanting, thinning and clear felling. The deep ploughing which is often undertaken when preparing for new moorland planting destroys most archaeological features.

Tipping and dumping (some of which may need planning permission) should be avoided as much as possible as they bury archaeological features, making their recognition and interpretation impossible. If tipping has to take place, a detailed photographic or measured record of archaeological features may be desirable before such takes place.

Field Boundaries

Walls and hedges are often on old boundary lines which go back hundreds of years, and have archaeological landscape value even when they have recently been rebuilt or replanted. all furniture, such as sheep throughs, field stiles, gate posts and water troughs should be retained when walls are rebuilt.

Buildings

A major exception to easy management of the archaeological resource is the care of standing buildings. Once these have become redundant they are expensive to maintain. If alternative uses or sources of repair grant cannot be found, then there is often little choice but to let them decay or to demolish them. In the sad event of this happening, the Peak Park Survey Archaeologists would welcome the opportunity to do further recording, either by taking photographs, or exceptionally, by making measured drawings.

New buildings (some of which will need planning permission) should, wherever possible, be sited to avoid archaeological features.

Metal Detecting

Metal detecting can cause major damage to a feature and the important information it may contain and should not be allowed to take place on archaeological features. Such activities rarely produce anything of financial value and often the only finds that can date a feature are removed. Knowing that a find is from a feature is usually of little use unless its exact relationship to particular structures and layers is known. Metal detecting should not be permitted on land in an agri-environmental agreement without first consulting with Defra, RDS and the National Park Authority.

Specialist Advice

The above notes present a few general guidelines on good practice which we hope will help safeguard the archaeology without causing serious inconvenience.

If there are any specific questions about management or planned development then please seek advice from the National Park Cultural Heritage Team.

If buildings have to be demolished or earthworks levelled, then detailed archaeological recording work should ideally be undertaken. If several months notice is given, then this allows a considered course of action to be followed through, and work to be carried out with minimal inconvenience and delay to the landowner.

Ideally a holistic approach to management should be adopted that also includes ecological and landscape considerations.

Interpreting the Heritage of Burbage

The many archaeological features and the overall historic landscape of Burbage offer great opportunities for promoting an understanding of landscape development and cultural heritage to the wider public. Burbage is a very popular and well-visited area with a good visitor infrastructure. Interpretation has the potential to reach a large audience.

Particular key themes that can be communicated to the public include:

- ✓ The historic development of the moorland from prehistory to the modern day.
- ✓ Personal stories of past occupants of Burbage.
- ✓ How the current landscape is the result of a long history of land-use.
- ✓ How the Burbage landscape has looked very different through the ages.
- ✓ How organisations work in partnership to manage the historic environment today.

Specific key messages include:

- ✓ The Prehistoric world of Burbage, including the impressive Carl Wark enclosure and cairn fields.
- ✓ Changing communication routes, from Medieval packhorse routes to 18th century turnpikes.
- ✓ Millstone working and stone quarrying.
- ✓ Enclosure and the Duke of Rutland's ownership.
- ✓ The access movement and the Sheffield Clarion Ramblers.
- ✓ Burbage in World War 2.

Media that are effective in conveying these themes comprise:

- ✓ Leaflet introducing the historic landscape and archaeology of the area.
- ✓ Popular publication or guide book incorporating a landscape history and guided walks.
- ✓ Self-guided walking trails.
- ✓ Permanent exhibition at the Moorland Centre.
- ✓ On-site display panels at appropriate locations.
- ✓ Historic Burbage website component.
- ✓ Education packs for schools.

Interpretation can be presented in dedicated heritage packages and integrated with other key themes.

List of Heritage Features

431.1. Carl Wark Enclosure (South Yorks SMR 130; SM 29791) (Sheet 1)
NGR: 424940 381470


Illustration 12. Carl Wark from the south-east.

Carl Wark is a hill-top enclosure that occupies a sub-oval Millstone Grit promontory within the centre of the Burbage Valley. Standing at 380m above Ordnance datum, it looks over Burbage Brook to the south and east and is overlooked by Higger Tor to the north-west.

Geology and Topography
The natural promontory is oriented south-east to north-west, and is 230m long and 60m wide. It rises out of the valley side to the west of Burbage Brook and, therefore, the ground around the promontory drops away from west to east. This effectively means that the outcrop gains height and, concurrently, the scarp slopes become steeper from west to east. The slopes form intermittent vertical cliff edges around much of the eastern half of the promontory. These reach a height of 10m at their greatest. The top of the promontory slopes gently down along two places, one running the length of the feature from south-east to north-west, and the other running across it from north-east to south-west. Approximately 50% of the surface is strewn with large earthfast boulders, mostly occupying its eastern half – where the enclosure was built.

Physical Description

Location on promontory
The builders of the enclosure specifically chose to enclose approximately 80% of the promontory, taking in the higher, steeper-sided and more boulder-strewn part. They did not enclose the whole of the promontory or concentrate on the less boulder-covered western area. This would have been a deliberate decision. The enclosure is approximately 180m long and 60m wide, enclosing 0.7ha of land.

Boundary
The precipitous natural scarp edges were used as part of the enclosure's boundary. A walled boundary of large roughly-dressed millstone grit blocks was constructed *towards* the top of the scarp along its southern side and partly at the south-eastern end. It does not form an unbroken built structure, but links sections of sheer cliff and massive earthfast boulders. It was constructed by cutting back the top 1-1.5m of scarp edge to form a steep lynchet. The wall was built against this lynchet, in effect like a stone revetment, on top of the natural slope of the scarp. In places it was built over large earthfasts. The wall is approximately 2-2.5m high and, where it survives well, it rises above the top of the scarp by one course of stones to a maximum of 1m high. In places, a 1.5-2m wide and 0.10m high stone and earth bank survives behind the wall. Towards the wall's eastern end it becomes a line of irregular boulders, some set on edge.

The builders appear to have wanted to mimic the natural stone cliffs, which only rise above the promontory in a small number of places, rather than build a high, defensive, wall. In places, the wall has slipped, often where it crosses sloping earthfasts, however there is very little evidence for tumble further or robbing. There is the possibility that there was a wooden palisade behind the wall, along the line followed by the bank.

The western boundary that crosses the promontory is somewhat different in conception than the scarp-edge wall, forming an impressive built rampart. It comprises an outer facing wall of large, dressed gritstone blocks, some of which have tool marks, which rests against an internal turf bank that slopes steeply down into the interior of the enclosure. This boundary is 40m long, 8m wide at the base and up to 3m high. The wall is formed of two straight sections angled slightly inwards, the change of direction occurring on top of a massive earthfast boulder. The southern end of the wall curves towards the south-east to join with a section of the scarp-top wall along the southern side of the promontory. The northern end also curves to meet the natural cliff. It has been robbed at both ends, most extensively at the south, presumably to construct the small rectangular building that is located immediately outside of the wall (431.2). Rampart foundations survive within both areas of robbing.

The western wall is the only boundary of the enclosure that prevents those in the interior from seeing the ground immediately outside. This creates only mid-distance views to the surrounding landscape, identical to the exterior views gained from anywhere else in the enclosure by looking across the scarp edge.

Entrance

The only visible formal way into the enclosure is a 2m wide in-turned entrance within the southern scarp-top wall, located approximately 10m from the enclosure's western end. The scarp wall is at its most impressive to either side of the entrance, standing to 2.5m high. The entrance is approached from the south via a steep rise through the boulder-strewn scarp slope. When reaching the entrance, you then have to scramble over two large earthfast boulders. Given the erosion suffered in the entrance from walkers, it is impossible to say what the original ground surface within the entrance was like and whether these earthfasts were exposed as they are today. However, what is clear is that entering the enclosure was not made easy through the positioning of the entrance in the scarp-wall and immediately in front of the earthfasts. A much easier passage could have been made through the western wall. The surviving foundations in the western wall's gaps suggest that this was the only original entrance to the enclosure. It may be significant that the entrance is oriented south-south-west, so facing the direction of the only long-distance view from Carl Wark, south along the Derwent Valley (see Topographical Setting).

Interior

The interior of the enclosure is strewn with large earthfast boulders that cover most of the ground surface. Soils appear to be thin, with the possibility that they have suffered from erosion. Immediately inside the western rampart there is a relatively large flat cleared area covering 400m^2. It also appears that smaller boulders may have been cleared from throughout the enclosure's interior. It is likely that cleared areas were created in the process of using boulders from the interior within the enclosure's walls.

The flat area inside the western rampart and two other small level, cleared areas, are the only locations where prehistoric buildings could have been built. The remainder of the ground is either boulder-strewn or slopes with no evidence for building platforms. Taken together, all of the level and clear areas do not allow much space for settlement.

Adjacent later stone-working

There is post-medieval millstone production concentrated outside of the eastern of the enclosure (feature 431.8). It has been speculated whether the enclosure wall was robbed for such later stone-working. The enclosure's western wall certainly was robbed to make a small building that is either medieval or post-medieval (431.2). Two things suggest that there was little robbing apart from this. All evidence for stone working is found below the enclosure's eastern end, over 130m away from the only obvious robbing. The only stone products identified during this survey were millstones, which require larger stones than were used in the enclosure wall. No gateposts, lintels, doorsteps, or other architectural elements have been

found. If the enclosure wall was higher than the scarp edge at its eastern end, near to the millstone production, and had been robbed, we would expect to see evidence for this in the form of part-finished products that had cracked before completion. These are common in other stone-working areas elsewhere (see features 431.8, 431.34, 431.70, 431.80). It is also apparent that quarrying has not significantly effected the natural scarp of the north side with no evidence for stoneworking except amongst the boulder field below the cliff.

Topographical Setting

The Carl Wark promontory is a highly distinctive natural rock formation that is prominent from the surrounding landscape. It can be seen from surrounding moors to the south and east, and from approximately 10km south along the Derwent Valley.

From within Carl Wark, views across the landscape are enabled and limited by the surrounding landforms and altitudes. To the north, Higger Tor and the northern scarp of Burbage Valley limit views to within 1.5km, while both east and west are constrained by watersheds to less than 1km.

Higger Tor must be considered in relation to Carl Wark, because of its similarity in landform and proximity. This larger and higher promontory is only 400m to the north-west of Carl Wark and is 55m higher at 435m above sea level. The striking formation, topped with vertical cliffs and silhouetted outcrops, towers above the enclosure. If the enclosure builders had wanted to choose the most prominent place with the greatest views within this immediate locale, then Higger Tor would have provided the better location. Comparing viewsheds from both Higger Tor and Carl Wark shows that from the enclosure entrance the only long-distance views were to the south-south-west, roughly along the course of the Derwent Valley, and west across the Hope Valley. The view from Higger Tor encompasses this whole area, which forms approximately 40% of Higger Tor's viewshed.

We cannot be sure why Carl Wark was chosen in preference, but the relationship between the two would have been significant. One difference is that Higger Tor is a much larger feature, potentially being bigger than required by the builders of Carl Wark and requiring a much greater effort to build an enclosing boundary. The specific view from Carl Wark is also important. Minninglow Neolithic tomb is visible on the centre of the southern horizon. The desire to manipulate long-distance views is shown by the use of the western rampart to block the view across the Hope Valley to anyone standing inside the enclosure. Perhaps crucially, this prevents a view of Mam Tor which would otherwise have been a prominent landmark when seen from Carl Wark. It appears that those responsible for building the Carl Wark enclosure did not want this large hillfort to be seen.

Interpretation

Most interpretations of the site have concluded that it is an early Iron Age slight univallate hillfort possibly dating from the 8th to 5th centuries BC (Gould 1903; Trustram 1911; Preston 1947 and 1954; Piggott 1951). There has only been one limited excavation of the site conducted by F.G. Simpson in 1950 (Piggott 1951). Simpson cut a narrow slot trench through the embankment upon which the western wall of the site rests. Unfortunately the details of this excavation have never been published and apparently no artefactual or dating evidence was recovered from the excavation. In the absence of excavated evidence the site has been consigned to a number of differing dates and interpretations. Edmonds and Seabourne (2001.0) and Barnatt (2000) believe that elements of the monument could date from as early as the Neolithic. In contrast Piggott (1951) believes that the western wall might have been built as late as the Early Medieval (5th to 6th centuries) as the turf construction of the bank is reminiscent of Early Medieval ramparts in Scotland. Dating the enclosure will greatly inform interpretations of its use.

Settlement?

Many hill-top enclosures and hillforts have produced evidence for substantial occupation, possibly even permanent settlement (Guilbert 1981; Hogg 1984). Good examples are Maiden Castle, Somerset, Danebury, Hampshire, and Moel y Gaer, north-east Wales. The archaeological remains of buildings, internal boundaries, trackways, storage pits, various other structures and possibly even shrines have been identified at these sites.

Illustration 13. Carl Wark from Higger Tor showing natural scarp edge.

Illustration 14. The entrance to Carl Wark, showing build of southern wall.

Illustration 15. Build of the southern wall of Carl Wark.

Illustration 16. Carl Wark's western rampart.

A settlement community requires a largely clear interior for a number of round houses, ancillary buildings and other structures. A natural water supply inside the enclosure is not so important as long as there is one nearby. Burbage Brook is only 300m from Carl Wark. However, the boulder-strewn interior suggests that Carl Wark was not an enclosed settlement. The boulders leave virtually no space for a settlement amongst the earthfasts. The cleared area behind the western wall is barely large enough for one house, and the scale of work evident at Carl Wark implies its construction by a larger community than one family.

If the builders have wanted to make an enclosed settlement, they would have incorporated the western part of the outcrop into the enclosure. Lying immediately outside of the western rampart, are relatively larger areas of level ground that would have made suitable locations for buildings. That they are outside the rampart suggests that settlement was not a reason behind the building of the enclosure.

Defence?
Hill-top enclosures such as Carl Wark were first interpreted as hillforts during the 19th century. Easily defended hill-top locations and impressive ramparts suggested a defensive function to the military-minded Victorian archaeologists, many of whom had been army officers. They assumed prehistoric combat to be similar to medieval or 19th century warfare, involving the defense/siege of fortified positions by competing armies. However, anthropological studies suggest it was more ritualized array of display and posturing through small-scale raids and formal challenges. Large enclosure walls would reduce the chances of a community being easily taken by surprise from raids, especially if they supported high wooden stockades. But formal challenges might require honour to be met by acceptance, and combat would probably then be fought away from the ramparts.

Though Carl Wark is a good defensive position, the enclosure is unlikely to have been built as a defensive site. Without a settlement, who is there to defend? One possibility is the enclosure being a form of refuge for a population living in the surrounding landscape. It is tempting to think of dispersed families flocking together, gaining safety in numbers behind the protection of its walls, as a raiding party rides through the area. But if so, it does not make a very good refuge. It lacks a water supply or the space to graze livestock. Those sheltering behind its walls would only be safe if any aggressors moved quickly away.

Many Uses
During the 20th century, more hillforts were examined in detail and the variations in location, topography, construction, presence or absence of settlement and dates became more apparent (Bowden and McOmish 1987). Some sites were simply not defensive, some had evidence for long-term occupation while others appeared never to have been occupied. A number of enclosures have now been interpreted as livestock corals for communities grazing their animals on shared, open pastures. Others appear to be places where large numbers of communities from a wide geographical area gathered to hold ceremonies.

Social Importance of Boundaries
It is now recognised that boundaries have as much social and symbolic importance as practical defensive uses. For example, they help to define the social extent of a settled community. They can separate the carrying out of special activities and ceremonies from the everyday outside. Boundaries can prominently display the importance of a location to the wider world. Whatever the use of the enclosure itself, the boundaries that define it are as significant as what happens inside.

At Carl Wark, the boundaries are not simply set down to form a complete circuit of the outcrop. They are only built where there is no natural scarp or where it is low. There is no wall along the top of the high cliff face that forms the north and east sides of the outcrop. The wall begins at the eastern end of the outcrop and continues along the lower scarp of the southern side. The whole of the outcrop is also lower along the south and the wall helps to increase its visually impact from the south. The most impressive and highest stretch of walling is across the outcrop's western dip slope, which creates a substantial vertical face.

The boundaries, therefore, make more sense as a whole when Carl Wark is looked at from outside. Their varying height and nature are attuned to the topography of the outcrop to enhance its natural features. The builders seem to want to ensure that wherever viewed from, Carl Wark is visible as an impressive cliff.

If this was not to deter aggressors, then the most likely interpretation is of Carl Wark as a communal ceremonial monument. The Gardom's Edge enclosure is perhaps the closest parallel to Carl Wark in the Peak District (Barnatt et al 2001). Built above a natural scarp edge, a carefully faced rubble bank encloses a dense area of earthfast boulders. Dating to the later Bronze Age, between 1300 and 900 BC,

it was most likely a place for ceremonial gatherings (Barnatt et all forthcoming). Another similar enclosure is at Cratcliffe Rocks, near Birchover, which is also undated.

The alignment of the only entrance on the long-distance view south across the Derwent Valley suggests that those gathering at Carl Wark were somehow connected to this specific area. That the view to Mam Tor was blocked, possibly a contemporary site if Carl Wark's date is similar to Gardom's Edge, also suggests some form of relationship between the communities using each location. Perhaps competition?

Condition
Most of Carl Wark is in good and stable condition. The southern enclosure wall has collapsed in the past, possibly in antiquity, but the tumble from previous collapse episodes currently appear to be stable.

The enclosure is suffering from some erosion focused at a small number of locations.

The enclosure entrance.
The entrance is on the line of a right of way. The steep ground has resulted in erosion of the ground surface which has undermined the wall to either side of the enclosure. Footpath stabilisation and repair has halted damage from erosion at present. The area requires regular monitoring to assess future condition and check for continuing erosion. This is a very important area within this important monument and, therefore, any potential further erosion must be prevented.

The western wall.
The northern end of the western wall is crossed by a right of way that passes through an existing gap in the wall created by collapse or robbing of the fabric. There is a small amount of ground surface erosion on steep ground immediately outside the wall and across the surviving foundations. At the time of the survey, the wall fabric itself did not appear to be suffering from obvious damage. In November 2004, repairs had been made to the footpath approaching the western end of the rampart from Higger Tor (Ullathorne and Rylatt 2004). The area requires regular monitoring to check for continuing erosion.

Rolling Boulders.
In the first half of 2005 someone used wooden posts as levers to loosen a boulder at the eastern end of the enclosure and tip over the cliff edge. This is a significant and serious development, which we hope represents a one-off event. However, it is highly possible that it could happen again in the future. PDNPA notices have gone up at the time of the survey to request people not to damage the monument, and to remind them that harming a scheduled monument can result in a fine. Rangers should be made aware of this incident and asked to check for any suspicious behaviour or further damage while on patrols.

431.2. Building/Probable Shieling/Squatter Settlement (Sheet 1)
NGR: 425847 381475

The ruins of a square, dry-stone building measuring 4m x 5m and standing to 0.5m high. It is built against a large, flat-sided earthfast. Stone blocks from the western wall of Carl Wark (feature 431.1) have been used to construct the walls.

There is a worked flat block inside the building which has a small circular depression pecked into its upper surface, and which has been hit with a WWII mortar, leaving a scar. This appears to be a quern or corn grinding stone. An earthfast at the south-west corner of the building has been carved to create a shallow water trough.

The building does not appear on any historical maps available during the current survey, though the trough is marked in 1880 by the Ordnance Survey.

It is most probably a shieling, a building used for shelter while livestock were grazed on remote pastures away from the farmstead during the summer. Shielings have been recorded throughout the uplands of Britain between the early medieval and post medieval periods. A precise date for this building is unknown; it could have been built anytime between approximately 500 and 1800 AD. It is unlikely to be a stone-worker's shelter because there is no day-working evidence in the immediate

vicinity, the nearest being over 100m to the east (feature 431.8). Neither is the building located at the access point to the workings.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.


Illustration 17. Shelter adjacent to Carl Wark, looking south-west.

431.3. Burial Barrow (South Yorks SMR 4565, SM 29800) (Sheet 1)
NGR: 425205 3813798

A stone sub-circular round barrow, approximately 8m in diameter and 0.4m high. It is a type of barrow built during the later Neolithic to earlier Bronze Age, approximately 3500 to 4500 years ago, as a location for burying the dead. Many similar barrows in the Peak District were constructed containing cremations placed in urns or inhumations (Barnatt 1996). No burials have been found and no archaeological excavations have been recorded at this site.

The barrow is built on the top of a prominent ridge overlooking the Derwent Valley, on a slight rise that increases views to the west and south. The ridge, though not the barrow itself, is visible from Winyard's Nick field system (431.4) to the south.

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

The barrow is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.4. Winyard's Nick Prehistoric Field System (South Yorks SMR 853, SM 29800) (Sheet 1 & 2)
NGR: 42525 38110

Illustration 18. Standing stone with cairn in background, Winyards Nick cairn field.

A prehistoric cairnfield comprising at least 22 stone cairns, 3 sections of stone banks/linear clearance and 4 small standing stones. The cairns are all round or oval and vary in size from 3m to 9m. They occupy an approximately rectangular, 22,000 square metre area of gently sloping cleared ground that drops down to a watercourse 150m to the east. This area has been largely cleared of stone while the surrounding land is boulder-strewn.

There are 3 small probable standing stones associated with this linear clearance (431.4/a). They vary from 0.5m high, 0.5m long and 0.2m wide to 0.7m high, 1m long and 0.4m wide. The ratios of each are approximately the same height and length, with the width being half the height/length. Most are chocked with small stones around their base. There is another, similar standing stone approximately 130m to the south-east, 40m north-west of a burial barrow (431.26).

No certain building remains are identifiable, though there is one sub-circular level area terraced into the sloping ground, measuring 9m x 7m, that may be a building platform (431.4/b).

The cairnfield is typical of Bronze Age fields identified on the Eastern Moors (Barnatt 1986, 1987, 1999). Prehistoric cairnfields tend to be found on areas of light, sandy soil suitable for cultivation with wooden spades and ards, situated between 250 metres and 350 metres A.O.D. The cairns were created as a result of clearance and cultivation in the immediately surrounding area. The linear clearance forms the southern boundary of the cairn field and indicates the edge of cultivation, probably from cleared stone dumped against a hedge or fence. Fields such as this one which mainly comprise cairns rather than extensive boundaries are more common above 300 metres A.O.D. while those principally consisting of boundaries lie predominantly below 300 metres.

The cairnfield is associated with burial barrows to the north (431.3, 431.6) and south (431.26), and is crossed by hollow-ways of a long-distance packhorse route (431.9).

The cairnfield and a surrounding buffer is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.5. Prehistoric Round Building (Sheet 2)
NGR: 425670 381060

A stone and earthen bank, which forms a circular enclosure, measuring approximately 6m in diameter and 05.m high, situated next to a watercourse. There is a 0.7m wide gap in the south-east facing side which appears to be an entrance. A line of stones cross the centre of the feature. These are either disturbed from their original positions, form an internal wall or indicate the line of the actual enclosure boundary. If the latter, the feature was originally a smaller, D-shaped enclosure and what appear to be banks either side of the entrance could therefore be bracken stands.

The feature is probably a prehistoric stone-footed round building. It's size is similar to round buildings found elsewhere on the Eastern Moors, such as one building excavated at Gardom's Edge (Barnatt et al 1995; Barnatt et al 2002) and at Swine Sty (Machin 1971, 1975; Richardson and Preston 1969). The majority of known prehistoric buildings are timber-built, with Swine Sty being the only other identified stone-footed example.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

Illustration 19. Round house, looking west.

431.6. Winyards Nick Burial Barrow (South Yorks SMR 853, SM 29802) (Sheet 1)
NGR: 425773 381300

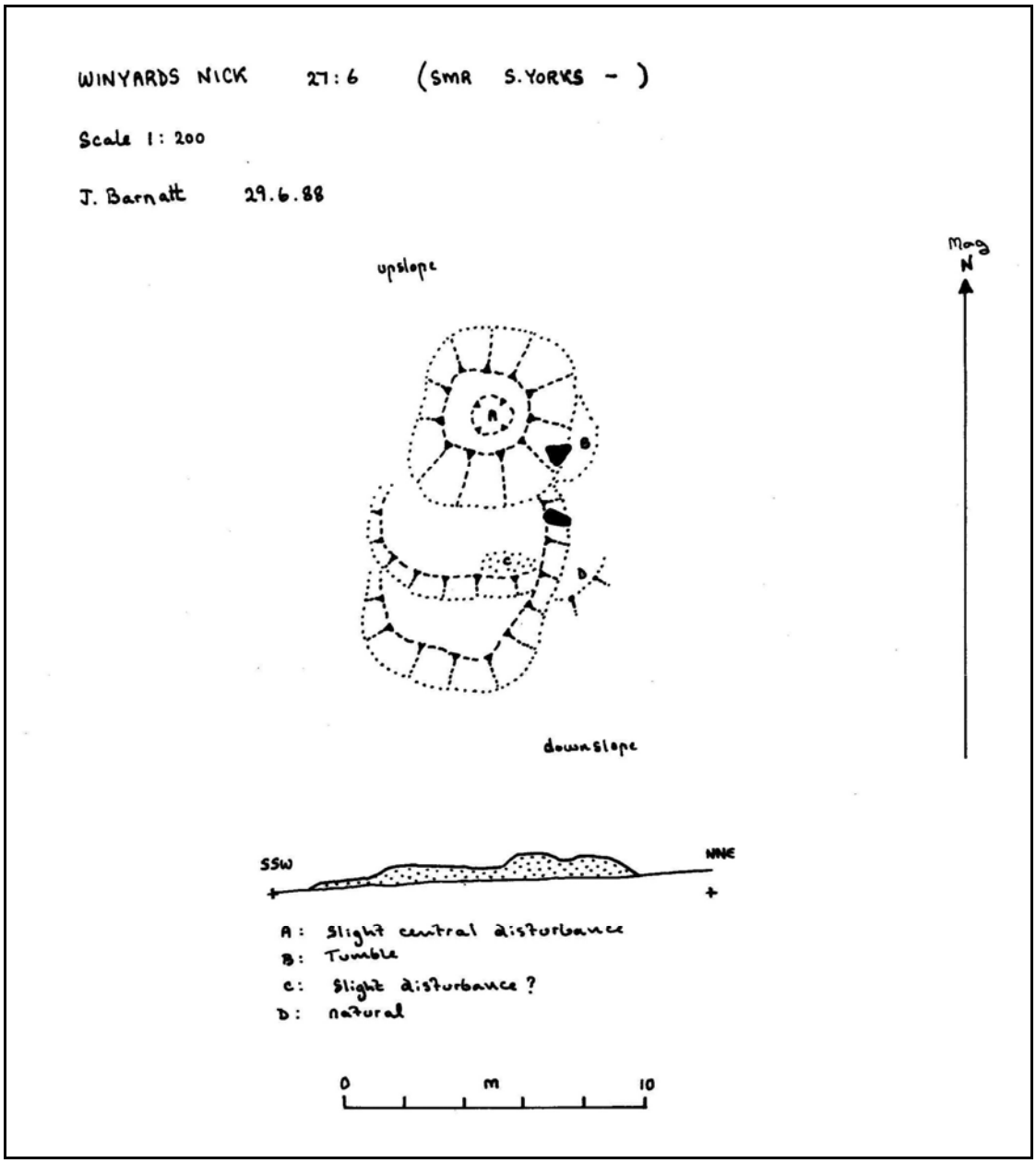

Illustration 20. Plan of Winyards Nick Burial Barrow. John Barnatt.

A stone sub-rectangular burial mound comprising 2-3 barrows or platforms adjoining each other. Approximately 12.5m long, 6m wide and 0.6m high. The feature(s) appear to be formed of two abutting or overlapping subrectangular platforms with a later subcircular barrow built over their northern edge. Together, they form a funerary site built during the later Neolithic to earlier Bronze Age, approximately 3500 to 4500 years ago. It is either a series of barrows for burying the dead or one-two excarnation platforms used for exposing the dead to the elements with a barrow added later. Whichever, and sometimes people changed between these two funerary practices at the same feature, it was enlarged and added to over time during prehistory showing the return to and reworking of this important burial site. There are many similar barrows and platforms throughout the Peak District (Barnatt 1996, 27.6), containing cremations placed in urns, inhumations or the 'left over' bones from excarnating a body. No archaeological excavations have been recorded, though a dished surface in the mound suggests possible robbing in the past. The archaeologist Leslie Butcher mentions urn and bronzes being found here in his field notes of a visit made in the 1950s.

The feature is located on the top of a gentle slope overlooking a cairnfield located approximately 140m to the south (feature 431.4). The feature is visible from the immediate surrounding landscape, including the cairnfield. Visibility from the feature is focused on surrounding land to the south and east, notably the cairnfield and Carl Wark, with longer distance views also constrained to the south.

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

The barrow is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition though the northern barrow is largely bare of vegetation. It requires continuing conservation under the current land management regime with consideration given to returfing the bare stones. The site should be monitored for erosion every five years. If erosion does get worse, the Cultural Heritage Team of the Peak District National Park Authority and South Yorkshire Archaeology Service should be contacted.

431.7. Possible Quern Rough-out (Sheet 1)
NGR: 425880 381460

Within the stone tumble below the southern scarp of Carl Wark is a stone which appears to be worked. It is a pentagonal slab, approximately 05m in diameter and 0.2m deep.

The stone resembles the rough-out of a beehive quern, used for corn-grinding during later prehistory and the Romano-British period. It may, alternatively, be a building block from Carl Wark's enclosure wall (feature 431.1).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.8. Day-working Area (Sheet 1)
NGR: 426040 381380

An area of unfinished millstones, surface quarries and quarry waste within the boulder-field around the east end of Carl Wark (feature 431.1). The area is restricted to a certain type of surface stone. This comprises the more recent, in geological time, tumble from Carl Wark, which comprises the more angular and finer-gritted stone found in the Burbage Valley. More weathered boulders scattered throughout the valley appear not to have been touched for quarrying.

Millstone production appears to have been the main stone-working activity in this area. There are at least 9 domed millstones and another 4 where the type of millstone cannot be categorized. Most have a chocking stone wedged underneath to prop them at a shallow angled to facilitate dressing. There are two distinct clusters of millstones.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into the angled position, where they were carved using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany.

Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured


Illustration 21. Propped part-carved millstone, north-east of Carl Wark.

stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid). It is generally considered that the domed and round-edged stones date from before the 19th century.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.9. Packhorse Route (Sheet 1 & 2)
NGR: 425400 381120

A series of braided hollow-ways run approximately east to west across the western side of the survey area. To the east the hollow-ways ford a stream and join other routes which continue east and south (features 431.21, 431.30). To the west they run through Winyard's Nick, a natural gap in an otherwise steep ridge, before dropping downslope to join another packhorse route (feature 431.16). The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.10. Quarries (Sheet 1)
NGR: 425300 381850 & 425100 381620

Two groups of small quarries and spoil heaps to the south-west of Higger Tor.

The quarries could have provided gritstone for a variety of use, including walling, building and road making. The absence of part-finished products, such as millstones, troughs and gate posts, suggests this was not an area of day-working. They are near the line of a packhorse route (feature 431.16) and a turnpike road built in 1811 (Radley and Penny 1972), both of which could have given access to the quarries.

The quarries do not appear on any historical maps available to the present survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.11. Bank and Ditch (Sheet 1)
NGR: 425304 381673

An earthen bank and ditch that runs north-south to the south-west of Higger Tor. It is associated with a rectangular dry-stone walled moorland enclosure and is likely a drain for this enclosure.

The enclosure is not shown on the 1830 Hathersage Enclosure plan (anon. 1830) or 1840 Ordnance Survey but does appear on the 1880 Ordnance Survey. This suggests it was built as a result of the Parliamentary Enclosure of Hathersage.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.12. Higger Lodge (Sheet 1)
NGR: 425260 381650

Large sub-rectangular area of gritstone rocks, approximately 16m x 16m wide and 0.5m high. There are straight edges on three sides, but an irregular north-east edge, which may be the result of moving the stone.

The feature is the site of a building known as Higger Lodge which was present by 1880 (Ordnance Survey 1880). This was a shooting lodge for the Duke of Rutland. It was occupied by a relative of local farmer Ron Priestly in the 1930s, who used to serve tea to the shooters, and was demolished about 1945 (Ron Priestly pers. comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.13. Building (Sheet 1)
NGR: 425210 381380

A ruined building, approximately 5m x 5m, surviving as a low platform.

The building do not appear on any historical maps available to the present survey, suggesting it either pre-dates 1830 (the earliest map to show this area), or was too short lived to have been mapped.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.14. Gritstone Blocks (Sheet 1)
NGR: 425729 381772

A small dump of square and rectangular worked gritstone blocks, typical of walling and building stone. They were probably left here during transportation from one of the day-working areas or small quarries to the south-east and south-west (features 431.8, 431.10, 431.70).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.15. Cairn and Probable Cairns (Sheet 2)
NGR: 425149 380989

An oval, flat-topped stone cairn and two possible cairns located in a group. The southernmost cairn is oval, measuring 7m x 4m and 0.5m high. It comprises rounded boulders enclosed within larger blocks. This construction indicates that the cairn has been deliberately 'designed' rather than simply dumped. The feature is possibly a prehistoric burial barrow or ceremonial monument and may be associated with a cairn field approximately 80m to the east (feature 431.4). Alternatively, they may be clearance cairns from short lived cultivation.

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

The other two features are similar but less well formed than the definite cairn. They are probably further cairns, though may possibly be natural features.

The group is located on a gently sloping shelf below a steep sloping scarp edge that forms a watershed. There are other cairns (features 431.23, 431.24) built on this ridge.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.16. Packhorse Route (Sheet 1)
NGR: 425200 381600

A series of braided hollow-ways run approximately north to south along the western side of Higger Tor. To the north the hollow-ways fade away near to the line of the modern road which was built in 1811 (Radley and Penny 1972), while to the south they drop down the valley side towards Hathersage but are lost under Enclosure Movement fields created sometime after the Hathersage, Outseats and Derwent Parliamentary Enclosure Award of 1830 (anon. 1830). The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). It is directly connected with one route that runs east (feature 431.9). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton, until the construction of the nearby road in 1811.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.17. Quarries (Sheet 1)
NGR: 425610 382160

A group of small quarry delves, spoil heaps and shallow vertical rock-cut faces that form an area of stone-getting and day-working on the north-western flank of Higger Tor.

The quarries could have provided gritstone for a variety of use, including walling, building and road making. The absence of part-finished products, such as millstones, troughs and gate posts, suggests this was not an area of day-working.

The quarries do not appear on any historical maps available to the present survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.18. Packhorse Route (Sheet 1 & 3)
NGR: 425680 382300

A braided hollow-way that runs approximately north to south along the eastern side of Higger Tor. The hollow-ways would have given local access to the area of moorland between Higger Tor and Carl Wark, possibly for the transport of millstones and other stone products (feature 431.8). They would have also formed part of the network of long-distance packhorse routes that cross the survey area, potentially linking with other routes and a packhorse bridge to the south (features 431.9, 431.16, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). To the north, the route could have continued to Hathersage, Outseats and the 'Long Causeway', a heavily-used packhorse route between Sheffield and Hope.

The route is overlain by the current road at the north-western edge of the survey area.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.19. World War 2 Practice Area (Sheet 1)
NGR: 409431 385979 - 426170 380950

Across a large area between the eastern end of Carl Wark and Burbage Brook are numerous earthfast boulders which have been used for target practice. Each boulder is peppered with bullet holes, usually only on one side of each rock. There is one filled-in foxhole (see feature 431.41).

The majority of bullets have been shot from the south-east, suggesting a mock assault uphill towards Carl Wark from the watercourse. However, at least two boulders have been shot at from the north-west, from the direction of Carl Wark.

Burbage Valley was used for military training during World War 2 by a number of units between at least 1941 and 1944 (Ron Priestley pers comm.). We have personal memoirs of the British 2nd Batallion Rifle Brigade firing mortars west from Burbage Edge in 1941 (Mr K. Rackham pers comm.), of US or Canadian troops firing heavy guns north from Toad's Mouth in 1943 (Mr E Drabble pers comm.) and of British and Canadian paratroopers advancing west from Burbage Edge to Surprise View about 1943/44 (Mr Labul pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.20. Causeway identified as Roman Road (South Yorks SMR 3974) (Sheet 1)
NGR: 4260000 381200

The South Yorkshire SMR contains an entry for the possible line of a Roman road in this area, located at approximately NGR 426000 381200. The area around the location was searched specifically for any remains of a Roman road. No convincing evidence for the level of road engineering employed by the Romans was identified. The only possible feature is an earthen causeway, approximately 7m wide and 0.5m high running south-west to north-east. The feature is cut by a right of way running north to Carl Wark. Inspection of the section created by the footpath revealed no stone fabric in the causeway, neither hardcore bedding material or surface metalling. Nor were aggers (ditches) identified. The causeway is built solely by mounding earth from the surrounding area. There is a break in its line across a boggy area, which would appear to negate its use as a causeway, the precise point that raised trackway would have been most useful. However, the feature may have deteriorated most across the wet ground.

The causeway is on the line of a long-distance packhorse route that connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton. The routes survive as braided hollow-ways and a stone packhorse bridge across Burbage Brook (see features 431.21, 431.67, 431.81).

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The majority of the feature is in good, stable condition and requires continuing conservation under the current land management regime. The only erosion is where the feature is crossed by the right of way and this appears to have stabilised at its present limit. This section should be monitored every 10 years to check if footpath erosion is spreading wider. If so, the PDNPA Cultural Heritage Team should be consulted for advice.

431.21. Packhorse Route (Sheet 1 & 2)
NGR: 425760 381120

A series of braided hollow-ways, and a possible causeway, run east to west between fords across Burbage Brook and a watercourse to the west. They form part of complex network of long-distance packhorse routes that cross the area (features 431.9, 431.16, 431.18, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.22. Packhorse Route (Sheet 2)
NGR: 425330 380930

A series of braided hollow-ways run approximately east to west across the western side of the survey area. To the east the hollow-ways run towards a stream where they fade away. The route probably turned south to join with another route that enters the survey area from the south (feature 431.30). To the west, they cross a watershed, before dropping downslope and turning towards another packhorse route (feature 431.16). The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.23 Stone Cairn (Sheet 2)
NGR: 425150 380890

An oval, stone cairn, measuring 8m by 5m and 0.3m high. The feature is most likely a prehistoric burial barrow or ceremonial monument and may be associated with a cairn field approximately 80m to the east (feature 431.4).

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

There are similar cairns in the vicinity (features 431.15, 431.25).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.24. Possible Standing Stone (Sheet 2)
NGR: 425575 380974

An upright stone, measuring 1.1m x 1.8m and 0.7m high. The stone is similar to probable standing stones within a cairn field to the north east (feature 431.4). However, there are no packing stones around its base and it is relatively isolated, though there are cairns near to the west and north (features 431.15, 431.23, 431.25). It could therefore be an earthfast boulder that has been moved by glacial action.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.25. Stone Cairn (Sheet 2)
NGR: 425125 380689

An oval, stone cairn, measuring 2.2m x 1.8m and 0.25m high. It comprises rounded boulders enclosed within larger blocks that lean against the body of the cairn and may have been added after the fill was deposited. This construction indicates that the cairn has been deliberately 'designed' rather than simply dumped. The feature is most likely a prehistoric burial barrow or ceremonial monument and may be associated with a cairn field approximately 80m to the north-east (feature 431.4).

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

There are similar cairns in the vicinity (features 431.15, 431.24).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.26. Burial Barrow (Sheet 2)
NGR: 425590 380940

A stone-built sub-circular round barrow, measuring approximately 7m x 6m in diameter and 0.5m high. It is a type of barrow built during the later Neolithic to earlier Bronze Age, approximately 3500 to 4500 years ago, as a location for burying the dead. Many similar barrows in the Peak District were constructed containing cremations placed in urns or inhumations (Barnatt 1996). No burials have been found and no archaeological excavations have been recorded, though a dished surface indicates that it has been robbed in the past, as evidenced by a subcircular pit in the barrow's surface.

The barrow is built on a gentle slope below Winward's Nick cairnfield located approximately 180m to the north-west (feature 431.4). There is also a ring cairn 100m to the east (431.27) and Toad's Mouth cairnfield (431.28) approximately 250m to the south-east. It is visible from Winyard's Nick cairnfield and from the edge of Toad's Mouth cairnfield. At the barrow, views are restricted to the immediate surroundings by rising ground except to the north, where Winyard's Nick cairnfield and Carl Wark are visible, and to the south where there are views along the Derwent Valley.

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

The feature is suffering minor erosion from livestock or wildlife, restricted to two or three small areas. It should be monitored every five years to check if erosion increases. If erosion does get worse, the Cultural Heritage Team of the Peak District National Park Authority and South Yorkshire Archaeology Service should be contacted. Otherwise, the feature should be maintained under the current land management regime.

431.27. Ring Cairn (South Yorks SMR 4564; SM 29801) (Sheet 2)
NGR: 425680 380932

A sub-circular enclosure approximately 10m in diameter defined by a line of gritstone blocks forming a boundary 0.2m high, with a south-south-west facing 1m wide entrance. Most of the boundary appears to be a slight bank enclosing a single line of stones, though in places a more constructed wall of at least two courses can be seen. The enclosure is located on an area of almost level ground lying adjacent to the western bank of a watercourse.

The feature is almost certainly a ring cairn, a small, ceremonial structure akin to a stone circle dating from the later Neolithic/early Bronze Age. There are at least 26 small stone circles or ring cairns in the

Peak District (Barnatt 1990). The majority are found on the Eastern Moors, between Peinstone and Matlock. The numbers, small size and relationship with locally prominent locations, suggests that ring cairns were places for holding family-based ceremonies, such as those connected with the agricultural season, individual rites of passage and fertility (Barnatt 2000; Edmonds and Seaborne 2001). However, the similarity of the small monuments across the region shows that small communities were aware and participated in wider social values beyond that of the family (Kitchen 2000).

The ring cairn is likely to be broadly contemporary with burial barrows in the surrounding area (431.3, 431.6, 431.26, 431.33), and possibly with settlement and agricultural plots surviving as cairnfields (431.4, 431.28).

The ring cairn is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.28. Toad's Mouth Cairnfield/Barrow Cemetery (South Yorks SMR 3795; SM 29797) (Sheet 2)
NGR: 425940 380830

A prehistoric cairnfield and/or barrow cemetery comprising at least 76 stone cairns, sections of stone banks/linear clearance and the possible site of a round building (28/a). The cairns are all round or oval and vary in size from approximately 3m to 9m. They occupy an approximately 60 square metres area of gently sloping cleared ground that drops down to the south. This area has been largely cleared of stone while the surrounding land is boulder-strewn.

No certain building remains are identifiable, though there is a curving section of stone bank that may have respected the location of a timber round house when created.

The cairnfield is typical of Bronze Age fields identified on the Eastern Moors (Barnatt 1986, 1987, 1999). Prehistoric cairnfields tend to be found on areas of light, sandy soil suitable for cultivation with wooden spades and ards, situated between 250 metres and 350 metres A.O.D. The cairns were created as a result of clearance and cultivation in the immediately surrounding area. The linear clearance forms the southern boundary of the cairn field and indicates the edge of cultivation, probably from cleared stone dumped against a hedge or fence. Field systems such as this one which mainly comprise cairns rather than extensive boundaries are more common above 300 metres A.O.D. while those principally consisting of boundaries lie predominantly below 300 metres.

The cairnfield is associated with a ring cairn and burial barrow to the west (431.27, 431.33). There is another cairnfield nearby to the north-west (431.4). Hollow-ways of a long-distance packhorse route (431.9) cross the cairn field.

The cairnfield and a surrounding buffer is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

The cairnfield is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.29. Quarry (Sheet 2)
NGR: 425882 381086

A small quarry dug into outcropping gritstone below a north-facing scarp.

It would have been worked to provide stone for a range of building purposes and does not appear on any historical maps available to the survey.

431.30. Packhorse Route (Sheet 2)
NGR: 425839 380539

A series of braided hollow-ways, some deep, which run approximately north to south. They enter the survey area from the Longshaw estate to the south, where the line of the route can be seen to continue. To the north, the various lines join with other hollow-ways that run from east to west (feature 431.21). Different braids have been created that wind between the numerous prehistoric cairns (feature 431.28) that form a dense cairnfield on sloping ground north of the survey area boundary. Four braids that run to the west of the cairnfield are the deepest, suggesting that this route was the most heavily used. It leads to a ford across a watercourse to the north-west and the route continues as further hollow-ways (feature 431.9) via Winyard's Nick to Hathersage.

The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.31. Toad's Mouth Carving (Sheet 2)
NGR: 426069 380675

An outcropping boulder covered in graffiti that includes a single cup and ring carving on the north-east facing side of the rock. There is a small circular cup enclosed within a ring diameter.

The rock bares a resemblance to a toad's head with a fault for its mouth. The carving represents the eye of the toad of Toad's Mouth and is presumably a 19th or 20th century addition.

431.32. Building (Sheet 2)
NGR: 425854 380599

A rectangular gritstone building, measuring 7m x 5m and standing to 1m high. There is a 1m-wide entrance in the south-east facing side. A shallow, 2m-wide trench surrounds the building on the tree sides without the door. This was probably dug to excavate walling material.

The building does not appear on any historical maps available to the present survey. The lack of slumping around the sides of the feature suggest a relatively recent date, possibly 19th or 20th century. Possible uses may be associated with the Duke of Rultand's Longshaw estate or World War 2 practice.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.33. Toads Mouth Burial Barrow (South Yorks SMR 856; SM 29798) (Sheet 2)
NGR: 425765 380575

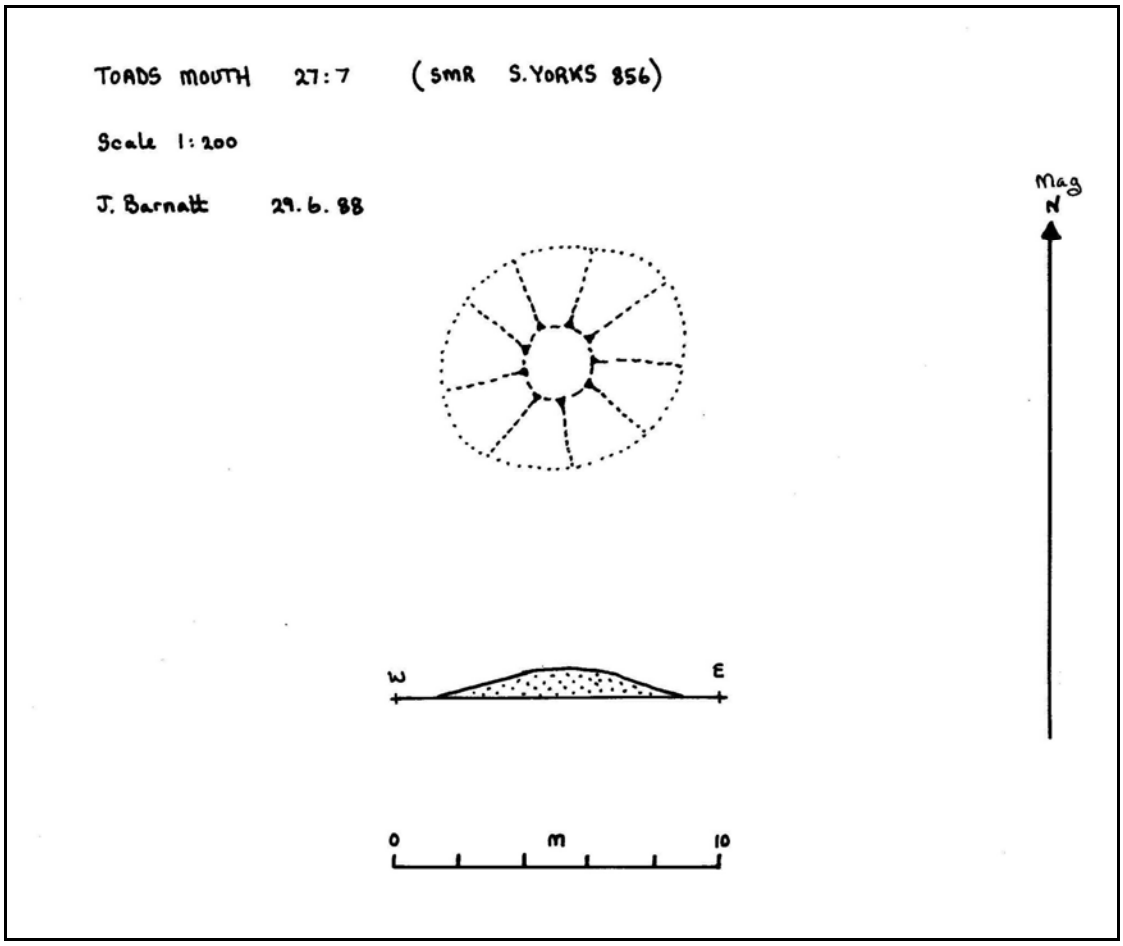

Illustration 22. Plan of Toads Mouth Burial Barrow. John Barnatt.

A small stone-built round barrow, approximately 8m in diameter and 0.9m high. It is a type of barrow built during the later Neolithic to earlier Bronze Age, approximately 3500 to 4500 years ago, as a location for burying the dead. Many similar barrows in the Peak District were constructed containing cremations placed in urns or inhumations (Barnatt 1996, 27.7). No burials have been found and no archaeological excavations have been recorded at this site, though the dished surface suggests possible robbing in the past. The barrow is built on the top of a gently-sloping knoll, which is only prominent from nearby. The barrow is located towards the north of the knoll and is only perceptible when seen from within a distance of 500m and in an arc between the north-west and north-east of the knoll. This makes the barrow visible from the cairnfield (feature 431.28) to the east and ring cairn (feature 431.27) to the north but invisible from anyone approaching from the south.

A barrow makes the location of the burial(s) a prominent feature in the landscape. The barrow's positioning on the knoll with land dropping away in all directions heightens this prominence. Barrows such as this one have been interpreted as helping to remind the living of their ancestry, of their kinship with their community and of their association with a geographic location.

The barrow is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.34. Day-working Area (Sheet 2)
NGR: 425050 380650

An area of unfinished millstones and crushing stones, surface quarries, quarry waste and chisel marks within the boulder-field that follows the outcropping edge of Over Owler Tor. The area is restricted to more angular and finer-gritted stone.

Millstone and crushing stone production appears to have been the main stone-working activity in this area. There are at least 8 domed and millstones 4 flat millstones with rounded edges. There is also one flat-edged stone, which would have most probably been an industrial crushing stone. Another 10 stones cannot be categorized because they have been abandoned very early in the production process. Many have a chocking stone wedged underneath to prop them at a shallow angle to facilitate dressing.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into the angled position, where they were carved using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being ‘dug’ out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn’t discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid). It is generally considered that the domed and round-edged stones date from before the 19th century.

There is a larger-scale, centralised quarry producing flat-edge crushing/millstones (feature 431.35) to the south of the day-working area.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.35. Mother Cap Quarry (Sheet 2)
NGR: 425195 380395

Illustration 23. Mothers Cap quarry.

A deep vertical-face quarry with associated crushing stones/millstones, quarry waste and a building. The quarry is approximately 40m long x 20m wide. It has been blasted into the scarp edge to create the vertical face. A narrow entrance leads into a triangular working area. Quarry waste forms a large, flat-topped spoil heap measuring approximately 30m x 40m. It is located immediately outside the entrance, which was used as a working area towards the latter part of the quarry's working life.

There are at least 20 complete stones, 13 of them stacked inside the quarry ready for sale, the remainder are scattered around the spoil heap. There is another part-finished broken stone. Interestingly, there are two part-worked stones still in situ in two beds of gritstone in the quarry side – cultural objects in the process of emerging out of the natural earth. Identifiable stone types are 17 slightly domed stones with flat edges and 6 flat stones with flat edges. These are all either industrial crushing stones or flat millstones. They vary in size from 0.8m diameter and 0.2m deep to 1.5m diameter and 0.3m deep.

The building is a rectangular gritstone building measuring 6m x 3m and surviving to 0.5m high. It is located immediately outside the quarry entrance on the northern edge of the spoil heap, and oriented east to west. There is a 8m x 3m rectangular platform attached to the western gable.

It is south of an extensive day-working area (feature 431.34).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (ibid). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As

the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

Production of crushing stones at Millstone Edge almost ended as the paper mill industry in collapsed in the 1920s. Stones had been exported to Scandinavia, other parts of Europe, US and Canada. The last stones were sold to a paper mill in Sweden in 1939. The surviving stacks of stones date from this period.

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

The feature is largely in good, stable condition and requires continuing conservation under the current land management regime. It is sometimes used as an informal campsite, resulting in the remains of small camp fires, litter and some graffiti. This, in itself, does not damage the feature; however there has been occasional minor damage from people smashing rocks on unfinished stone products. There would appear little that could be done about this and, at present, the damage is minimal.

431.36. Quarry (Sheet 2)
NGR: 425220 380260

A vertical-face quarry with associated crushing stones/millstones and quarry waste. The quarry is subrectangular in plan and approximately 10m x 10m wide. It has been blasted into the scarp edge to create the vertical face. Quarry waste is piled immediately outside the quarry.

The range of products includes millstones/crushing stones, troughs and dressed stone blocks. There are at least 2 domed millstones, 2 flat stones with round edges and a flat flat-edged crushing/millstone.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (ibid). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

Production of crushing stones at Millstone Edge almost ended as the paper mill industry in collapsed in the 1920s. Stones had been exported to Scandinavia, other parts of Europe, US and Canada. The last stones were sold to a paper mill in Sweden in 1939. The surviving stacks of stones date from this period.

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

431.37. Packhorse Route (Sheet 2)
NGR: 42500 380460

A series of braided hollow-ways run approximately north to south above Millstone Edge. To the south, the hollow-ways appear just north of another hollow-way (feature 431.39). To the north, it drops down a valley side where the route would have connected with other packhorse routes (features 431.16, 431.22), though the hollow-ways fade away before physically joining. The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.38. Quarries/Day-working (Sheet 2)
NGR: 42500 38000

A series of small quarry delves and a flat-edged millstone or crushing stone, situated to either side of a packhorse route (feature 431.39). Some of the quarrying has followed an outcropping bed of gritstone to create a low vertical edge.

431.39. Packhorse Route (Sheet 2)
NGR: 425006 380068

A series of braided hollow-ways run approximately east to west to the southern end of Millstone Edge. To the west, they drop down Millstone edge towards Hathersage. To the east, they appear from under the Surprise View car park. The packhorse route is overlain by the modern line of the A6187, which was built as a turnpike sometime after 1781 (Radley and Penny 1972). The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146,

431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.40. Millstone Edge Quarry (Sheet 2)
NGR: 424850 380400

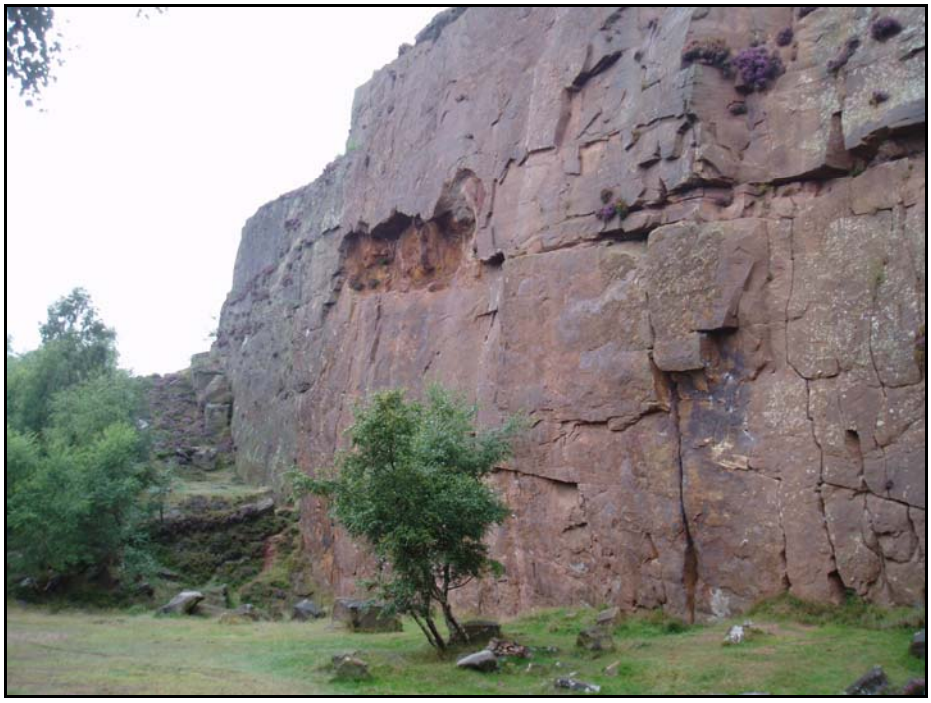

Illustration 24. Millstone Edge quarry face.

A large, deep vertical-face quarry with associated millstones/crushing stones, quarry waste, drill holes, buildings, associated structures and access tracks. The quarry is actually a series of individual working faces created along most of the length of the Millstone Edge natural scarp, formerly known as Booth Edge. The total area covered by quarry activity is approximately 650m long and 100m wide. Vertical and horizontal drill holes survive where the explosive charges were inserted into the rock. The faces are behind level working floors, from 20m to 40m deep, which are in part created by the act of quarrying itself and in part by the building up of quarry waste to form steep-sided spoil heaps that drop down below the edge. Further spoil mounds are piled to either side of each working faces.

Illustration 25. Quarry building at Millstone Edge.

There are six buildings and other structures associated with the quarry.

40/a. Rectangular, mortared gritstone building 8m x 4m and surviving up to 0.5m high.

40/b. Rectangular, mortared gritstone building, 7m x 3m with a flat concrete roof.

40/c. Rectangular, mortared gritstone structure, 14m x 6m. Either the foundations of a building or a working platform.

40/d. Rectangular, brick and concrete building with flat concrete roof and attached working platform. Whole structure measures 20m x 10m.

40/e. Rectangular, brick and concrete building with flat concrete roof and attached working platform. Whole structure measures 30m x 10m.

40/f. Two stone and concrete pillars, each approximately 3m x 3m and 1.5m high, and approximately 3m apart. There are steel securing plates and a girder fixed to the pillars. This was presumably used to support machinery for moving stone blocks.

Products surviving in situ include millstones/crushing stones, troughs and dressed stone blocks. There are at least 5 complete stones surviving; 4 domed millstones and 1 flat-edged crushing stone. There are also 2 practice pieces. These are two irregular shaped, fragmentary blocks with curving edges that have been worked around the edges. They could never have been made into crushing/millstones.

Access to the working faces and buildings are provided by a network of terraced trackways that connect the quarry with the A6187, which was built as a turnpike sometime after 1781 (Radley and Penny 1972).

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). The domes millstones on Millstone Edge date from between the medieval period and the end of the 18th century. There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being ‘dug’ out of small delves on Hathersage Moor and the quarrying of stone from escarpments. The Ashtons of Hathersage Hall bought many of the quarries at Millstone Edge at the end of the 17th century (ibid).

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). These millstones had rounded edges and often were domed on one side. Examples can be found amongst the spoil heaps below Millstone Edge. The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (ibid). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

Production of crushing stones at Millstone Edge almost ended as the paper mill industry in collapsed in the 1920s. Stones had been exported to Scandinavia, other parts of Europe, US and Canada. The last stones were sold to a paper mill in Sweden in 1939. The surviving stacks of flat-edged stones date from this period.

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

The buildings below Millstone Edge would have been used as site offices, working sheds and possibly a gunpowder store. Life expectancy of a millstone maker in the 19th century was 40-45 years. Silicosis was a common problem caused by dust from working in the sheds (ibid).

A.Siddall operated a quarry on Millstone Edge in the 1930s (Tomlinson 1981). Reputedly, he could tell by looking at a block of millstone how many stones could be made from it and what trades they would be suitable for. These included millstones for corn, grinding cork for linoleum, timber pulping in Sweden, cider making, grinding mustard seeds, paint making trade and grindstones for saws and cutlery.

The feature is largely in good, stable condition and requires continuing conservation under the current land management regime. It is sometimes used as an informal campsite, resulting in the remains of small camp fires and litter. This, in itself, does not adversely damage the feature.

431.41. World War 2 Foxhole (Sheet 1)
NGR: 426190 381140

A small, shallow square trench measuring approximately 2m square and 0.2m deep. It is a silted foxhole associated with the use of this area for military training during World War 2 (see feature 431.19).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.42. Day-working Area (Sheet 2)
NGR: 424780 380750

An area of surface quarries, unfinished millstones/crushing stones, worked stone blocks, quarry waste and chisel marks at the northern end of Millstone Edge.

There are two flat millstones with rounded edges and two unfinished millstones/crushing stones of an unknown type.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

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There is the much larger-scale, centralised quarry of Millstone Edge (feature 431.40) to the south.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.43. Guidepost/Livestock Tethering Post/Rubbing Post (Sheet 2)
NGR: 424530 380910

A roughly worked gritstone post, approximately 1.2m high. The post is located within an Enclosure Movement field and is possibly for tethering livestock or placed for livestock to rub themselves against. However, the post would have probably been on the line of a packhorse route. Hollow-ways that represent the lines of packhorse routes drop towards this area from Hathersage Moor to the east (features 431.16, 431.22, 431.37). They all fade away before reaching the field wall but would have most likely have continued through the Enclosure Movement fields towards Hathersage. Enclosure of these fields would have blocked the routes, and later improvement destroyed hollow-ways.

431.44. Sheep Lees (Sheet 2)
NGR: 424600 38106

Two short dry-stone sheep lees, each approximately 35m long and oriented perpendicular to each other.

431.45. Terraced Trackway (Sheet 2)
NGR: 426032 380896
A narrow terraced trackway that runs diagonally up a steep slope from Burbage Brook onto a small inclined plateau. The trackway leads towards the lines of packhorse routes (feature 431.21, 431.40), and may have been part of these long-distance tracks.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.46. Day-working Area (Sheet 2)
NGR: 426060 380710
10 on plan
A small area of surface quarries, a cairn, a worked gritstone block and short terraced trackway within a boulder-field.

Stone troughs, lintels, doorsteps, millstones and crushing stones were all made by small-scale quarrying and stone-carving known as day-working.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.47 Cairn (Sheet 2)
NGR: 425726 380961

A small sub-circular stone cairn, measuring approximately 3m by 2m, placed on an earthfast boulder. The cairn is within an area crossed by the braided hollow-ways of a packhorse route (431.30) and in between prehistoric features, including a cairnfield (431.28), ring cairn (431.27) and round building (431.5). It could be a clearance of stone from one of the hollow-way braids or the remains of a waymarker for the packhorse route, though it is too insignificant to have been prominently visible.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.48. Sheepwash (Sheet 3)
NGR: 426195 382359

A sub-circular stone walled enclosure situated immediately adjacent to Burbage Brook. The enclosure is approximately 14m long by 10m wide and the boundary survives to between 0.1 and 0.3m high. Most of the boundary is a ruined bank, but in places its original construction of a double-faced wall is visible. There is a 3m x 3m internal stone-walled enclosure located within the northern end of feature. A 1.5m wide entrance faces the brook, which has been dammed at this point to create a 4m by 4m pool opposite the enclosure.

The enclosure would have been a sheepwash, used for managing a flock while washing them in the adjacent stream prior to the introduction of chemical dips during the early-20th century. It is marked as a sheepfold on the Ordnance Survey of 1880.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.49. Quarries and Spoil (Sheet 3)
NGR: 425912 382734

A small quarry excavated into the end of a scarp edge, approximately 15m in diameter, and a number of quarry delves with spoil on the land above.

The quarries could have provided gritstone for a variety of use, including walling, building and road making. The absence of part-finished products, such as millstones, troughs and gate posts, suggests this was not an area of day-working.

It is marked on the Ordnance Survey of 1880 as an ‘old quarry’, suggesting it was already abandoned by this date.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.50. Spoil Mounds and Quarries (Sheet 3)
NGR: 425754 382449
A series of large spoil mounds and small quarry delves alongside the road that defines the north-west boundary of the survey area. The feature was probably created as part of the road construction.

The feature does not appear on any historical maps available to the present survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.51. Dry-stone Wall (Sheet 3)
NGR: 426169 382808

A short section of ruined dry-stone wall, approximately 55m long, built next to and parallel with Burbage Brook. The wall appears to be an old property or land-use boundary and may be all that survives of a much longer line.

It is marked on the Ordnance Survey of 1880.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.52. Unfinished Gate Post (Sheet 3)
NGR: 426201 382794

A single, unfinished gatepost lies in isolation near to Burbage Brook. This is evidence for day-working in the north part of Burbage Valley.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.53. Sheepfold/Sheepwash (Sheet 3)
NGR: 426124 382934

A small, sub-triangular enclosure measuring 12m x 10m and situated on sloping ground by the confluence of two watercourses.

The enclosure is a sheepfold or sheepwash, probably used for managing a flock while washing them in the adjacent stream prior to the introduction of chemical dips during the early-20th century. It is marked as a sheepfold on the Ordnance Survey of and 1880.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.54. World War 2 Practice area (Sheet 3)
NGR: 426090 382996

A gritstone outcrop beside the road at Upper Burbage Bridge is riddled with bullet holes from small arms or machine guns fired from the south. There is also one mortar shell scar. Below the outcrop are two shallow depressions which may be day-working quarries or mortar craters (feature 431.55).

Burbage Valley was used for military training during World War 2 by a number of units between at least 1941 and 1944 (Ron Priestley pers comm.). We have personal memoirs of the British 2nd Batallion Rifle Brigade firing mortars west from Burbage Edge in 1941 (Mr K. Rackham pers comm.), of US or Canadian troops firing heavy guns north from Toad's Mouth in 1943 (Mr E Drabble pers comm.) and of British and Canadian paratroopers advancing west from Burbage Edge to Surprise View about 1943/44 (Mr Labul pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.55. Quarries or Mortar Craters (Sheet 3)
NGR: 426106 382979

Two shallow, circular depressions, lying adjacent to each other and approximately 8m in diameter. They are probably day-working quarry delves but could be mortar craters given the proximity of bullet scars on the adjacent outcrop (feature 431.54).

431.56. Quarries (Sheet 3)
NGR: 426177 382974

There are a series of shallow, stone-getting quarries along the line of the Duke of Rutland's Green Drive, a terraced trackway which runs the length of Burbage Valley (feature 431.57). They either provided stone for the trackway or were quarried as a result of the access from the track.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.57. Duke of Rutland's Green Drive (Sheet 3 & 4)
NGR: 426781 381764

Terraced trackway that runs the length of Burbage Valley. The trackway is revetted in places with large boulders and approximately 5m wide. It joins with the road to the south of the survey area, the current A6187. At its northern end, the trackway terminates at a steep, rocky slope. It gives access to the area between Burbage Edge and Burbage Brook from the A6187. A number of other trackways connect with the route, including a number of hollow-ways (feature 431.78) associated with day-working (feature 431.70) and a terraced trackway (feature 431.75) leading to spoil below Burbage Quarry (feature 431.73). It is also associated with a terraced trackway/quarry working area (feature 431.74) and a number of small stone-getting quarries (feature 431.36). The trackway overlies a braided hollow-way (feature 431.67), which formed the Sheffield to Hathersage packhorse route.

The trackway, called the Green Drive, was built by the Duke of Rutland between 1857 and 1870 as part of a network of drives across his Longshaw estate (Ward 1939-40). They were designed and constructed to allow the Duke, his family and guests to take rides to view and enjoy the estate. Opening public access to the track after the sale of Longshaw to the National Trust and Sheffield Corporation was seen by the Sheffield Clarion Rambler's, an organisation who campaigned for open access to moorland, as a major triumph (ibid).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.58. Possible Semi-Natural Ancient Woodland (Sheet 3)
NGR: 426752 382343

There is an area of open woodland below Burbage Edge comprising mostly oaks with a scattering of other species such as rowan. Some of the trees appear to have been roughly pollarded and coppiced, though more informally than conventional management of trees as a crop. The woodland occupies a dense boulder-strewn area, and the boulders have restricted the growth patterns of the trees.

The woodland is shown on the Ordnance Survey of 1880.and is possibly the remnant of much greater tree-cover of the Burbage Valley.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.59. Bloomery (South Yorks SMR 4041) (Sheet 3)
NGR: 426589 381848 & 426602 381792


Illustration 26. Bloomery waste mounds.

Two areas containing mounds of industrial waste and an enclosure, separated from each other by 40m, represent the sites of two bloomeries.

The southern area comprises three mounds and a small, dry-stone walled enclosure are grouped within a $100m^2$ area and represent the site of an iron-working hearth. The mounds are sub-circular and broadly similar in size: 7m x 6m x 0.8m, 9m x 6m x 1m and 7m x 3m x 0.5m. One of the mounds contains iron-smelting bloomery slag, which is eroding from the top of the feature. Adjacent to the southern mound is a small enclosure, approximately 3m x 1m across. The wall stands to 0.5m high. It is built against an earthfast, using the boulder to form one side of the enclosure, and gently slopes with the natural gradient of the valley side. There is no evidence for burning inside the enclosure.

Illustration 27. Bloomery slag eroding from the top of a waste mound.

There are five mounds in the northern area, covering a similar area to the south. The mounds are subcircular: 2m x 2m x 0.5m, 4m x 4m x 0.5m, 6m x 5m x 0.7m, 9m x 5m x 0.6m and 12m x 8m x 2m. One mound has a shallow 1.5m x 1.0m square hole in the top. This could be the result of an excavation that was reputedly carried out somewhere in the bloomery complex in the 1980s (Daid Crossley pers. comm.).

The feature is a complex of at least two bloomery hearths. A bloomery was a type of iron-smelting furnace used between the Iron Age and early post-medieval periods. The mounds – the visible archaeological remains – are waste dumps from two or more adjacent hearths that are not visible above ground surface. The enclosure is most likely an iron ore washing area or ore store.

Bloomeries used hand or water-powered bellows to heat iron ore mixed with charcoal inside the hearth to above 800^{o}C to create a reducing atmosphere where oxygen in the air reacts with carbon in the fuel to produce carbon monoxide. This reacts with iron oxide in iron ore to form carbon dioxide and reduce the iron oxide into malleable iron. The smelted iron formed a ‘bloom’, which included high quantities of slag. Slag, the waste product, is made as the iron oxide reacts with other oxides, such as silica, in iron ore and charcoal. Slag was either allowed to collect in the bottom of the hearth or was tapped through a hole to the outside. The whole process would take approximately a day to complete. Hearths itself were small compared to more modern furnaces and generally made from clay or stone.

Bloomeries were superseded from the end of the 15th century onwards by blast furnaces and finery forges. These could reach temperatures of 1500^{o}C where pure iron was made. The majority of bloomeries date to the medieval period, but the technology did continue in use in some areas, such as north-west England, until the 18th century.

The feature is in good condition but is suffering from ongoing erosion to the top of one of the mounds, which is probably affected by livestock. This mound requires returfing over the erosion scars to prevent further damage. The site should also be monitored every 5 years to identify whether erosion continues. Overall, continuing conservation should be met under the current land management regime.

431.60. Building and Enclosure (Sheet 3)
NGR: 426543 382029

A ruined, rectangular stone building within a rectangular walled enclosure. The building measures 10m x 5m and the walls survive to 1m high. The building is constructed of mortared, dressed gritstone blocks, with tool marks from dressing visible, laid in regular courses. The enclosure measures 24m x 14m and stands to 0.4m high. Its boundary wall is built of regularly laid blocks, with some blocks of the internal face laid on edge, located on a platform/mound above a boggy delve immediately to the north.

It is shown on the Ordnance Survey of 1880. It was reputedly built in the mid-19th century after Parliamentary Enclosure of this area following the Hathersage Act of 1808 (Ward 1930-31, 161). According to the Priestley family, it was built as a farmhouse by a vicar but never inhabited and quickly fell into disrepair.

The feature is in good condition but is suffering from ongoing erosion in the form of wall collapses. This erosion is most likely the slow result of natural processes, but might be hastened by the presence of livestock. It requires continuing conservation under the current land management regime. There is the risk of further collapse of walls over time, and the site should be monitored every 10 years to identify whether the rate of damage is significant.

Illustration 28. Building from north-east.

431.61. Cairn and Linear Feature (Sheet 3)
NGR: 426705 381864

A linear stone feature which appears to be a terraced trackway with a low stone- revetment. However, it leads to a locally steep slope that is not easily traversable without any evidence for the continuation of the terrace or the formation of a hollow-way.

Above the linear feature is a small cairn, measuring 1m in diameter and 0.2m high.

It is possible that these two features are connected.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.62. Possible Rock Art (Sheet 3)
NGR: 426540 382680

A large earthfast boulder above Burbage Edge has a series of faint cups, rings and lines. There appear to be three cups, and a faint partial ring or curving line, plus other straight lines. These may represent the weathered remains of prehistoric rock art (Paul Ardron pers comm), though they may also be the result of natural erosion or much later human activity. The cups look more like bullet scars and could be part of the remains of World War 2 military training.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.63. Iron Fences (Sheet 3 & 6)
NGR: 426450 382790

Two iron-fenced square compounds, each approximately 3m across. These are on the line of a water pipeline.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.64. Carved Cross (Sheet 3)
NGR: 426920 381902

A small cross carved into a heart shaped boulder perched on top of an earthfast. This is presumably Christian graffiti.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.65 World War 2 Practice Area (Sheet 3)
NGR: 426726 382185

A small area below Burbage Edge contains at least four earthfast boulders which have been used for target practice. Each boulder is peppered with bullet holes on one side of each rock. Above the Edge there are at least two boulders which have been hit by mortar shells.

Burbage Valley was used for military training during World War 2 by a number of units between at least 1941 and 1944 (Ron Priestley pers comm.). We have personal memoirs of the British 2nd Battalion Rifle Brigade firing mortars west from Burbage Edge in 1941 (Mr K. Rackham pers comm.), of US or Canadian troops firing heavy guns north from Toad's Mouth in 1943 (Mr E Drabble pers comm.) and of British and Canadian paratroopers advancing west from Burbage Edge to Surprise View about 1943/44 (Mr Labul pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.66. World War 2 Practice Area (Sheet 3 & 4)
NGR: 426513 381306

An extensive area below Burbage Edge contains numerous earthfast boulders which have been used for target practice. Each boulder is peppered with bullet holes, usually only on one side of each rock. There are also a number of boulders which have been hit by mortar shells, leaving a distinct explosive type scar. Towards the north end of the area are three silted foxholes, each approximately 2m by 2m wide, which might have been used for machine guns or mortars. One has distinct spoil heaps around three sides suggesting that whatever weapon was fired from it, faced north. Part of Burbage Edge to the north of the foxhole is covered in bullet holes and one mortar hit.

Illustration 29. Mortar scar on a boulder.

Burbage Valley was used for military training during World War 2 by a number of units between at least 1941 and 1944 (Ron Priestley pers comm.). We have personal memoirs of the British 2nd Batallion Rifle Brigade firing mortars west from Burbage Edge in 1941 (Mr K. Rackham pers comm.), of US or Canadian troops firing heavy guns north from Toad's Mouth in 1943 (Mr E Drabble pers comm.) and of British and Canadian paratroopers advancing west from Burbage Edge to Surprise View about 1943/44 (Mr Labul pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.67. Packhorse Route (Sheet 4)
NGR: 426879 381417

A series of braided hollow-ways, some deep, run south-west to north-west between a packhorse bridge (431.81) across Burbage Brook and the gap in the vertical scarp of Burbage Edge. They form part of complex network of long-distance packhorse routes that cross the area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.68. Earthfast with carved panel and socket (Sheet 4)
NGR: 426654 381403

A large earthfast boulder is carved on top and on one side. The top has a roughly circular ‘cup’ 0.5m in diameter and 0.10m deep, with a 2cm wide ledge around the vertical side, and a flat bottom. The south-facing side of the earthfast has a square recess, 0.6m across and 1cm deep.

The cup may have been designed to hold a short wooden or gritstone post, while the recess may have held a panel.

The earthfast is approximately 15m to the north-west of a hollow-way that formed part of a long-distance packhorse route (feature 431.67). The panel faces the hollow-way, and would have been upslope to and visible by people travelling north along the route.

The carvings probably represent the settings for a waymarker or memorial made in perishable materials.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.69. Possible Prehistoric Cup Mark (Sheet 4)
NGR: 426617 381231

A small circular cup in the top of an earthfast boulder. The cup is 0.20m in diameter and 5cm deep. It appears to be carved but could be the result of natural weathering. Roughly circular holes appear in earthfasts in this area, formed by erosion around large quartz inclusions.

Human-made cup marks are found across Britain and date from prehistory, probably from the Neolithic or Bronze Age though they are difficult to date directly. They are usually enclosed within carved rings.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.70. Day-working Area (Sheet 4)
NGR: 426376 380885

A very extensive area of surface quarries, unfinished carved gritstone blocks, chisel marks, blanks (which have had blocks taken off them), quarry waste, working platforms and a shelter that occupies the boulder-strewn sloping ground below the southern half of Burbage Edge. This is an important area of day-working, a small-scale form of quarrying that is found throughout the gritstone uplands of the Peak District. The area is restricted to a certain type of surface stone. This comprises the more recent, in geological time, tumble from Burbage Edge, which comprises the more angular and finer-gritted stone found in the Burbage Valley. More weathered boulders scattered throughout the valley appear not to have been touched for quarrying.

Small sub-circular quarry pits are found throughout the area, with a particularly dense concentration on the gentle slope at the southern end of Burbage Rocks. Various unfinished stone products are scattered throughout the whole area, including millstones, crushing stones, gate posts, troughs and such architectural features as door steps, lintels and roof ridge tiles.

There are at least 31 millstones of different types, including 24 domed, 5 flat with round edges, and 3 that are so unfinished its form cannot be categorized. The majority are found in a 350 long band just below Burbage Edge.

Illustration 30. Chisel marks on a boulder.

There are at least 13 flat edged stones, which vary in size from 1.5m diameter and 0.3m deep to 2m in diameter and 0.5m deep. Most of these are crushing stones, though some may have been used in mills for non-wheat flour uses.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (Tomlinson 1981). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling

course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

The majority of the other pieces of unfinished stone work comprise architectural fragments. These would have been used for buildings throughout northern Derbyshire and the Sheffield area.

One unusual carving is a naturally disc-shaped boulder, approximately 1.2m in diameter and 0.4m deep, which has been worked to create a flat top surface. A small cup, 0.4m across and 0.1m deep, has been carved in the centre of the flat surface and a narrow channel connects the cup to the boulder's outer edge. It appears to have been designed to hold water and allow the water to overflow along the channel without flooding the whole of the top. Its specific use is unknown, though it is similar to grouse water troughs on Stanage Edge.

Evidence for other working comes in the form of large boulders that have had rectangular blocks removed from them, and boulders with chisel marks indicating the early abandonment of working the stone.

There are a number of water troughs. Most are rectangular, and there is one particularly good example of a large, near-finished circular trough.

Two small rectangular stone platforms are found in the southern part of the area. One of these is associated with a short terraced trackway, and the other is associated with a pile of stone waste and would have been a working platform. They would have been used to load finished products onto carts.

At the northern end of the day-working area, there is a small ruined, square, dry-stone, shelter built against a large, flat-sided earthfast boulder. It measures 2.5m by 2.5m and survives to 1.3m high. There are two mounds of stone quarry waste within 5m of the shelter.

Some stones bear the initials of quarry-workers. These include a domed millstone carved with the letter 'S' and a worked earthfast with the letter 'A'. Workers staking claim to those pieces of rock carved the initials. An earthfast boulder above Burbage Edge is also carved with the letter 'S' in identical style to that on the domed millstone.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.71. Terraced Trackway (Sheet 4)
NGR: 426582 381042

A stone-revetted ramp built to access the large amount of quarry spoil at the north end of Burbage Quarry (see feature 431.73). The chronological relationship between the trackway and the spoil is unclear. The trackway may pre-date the spoil, giving access to workings at the bottom of Burbage Edge since covered by the spoil. Alternatively, it may have been used to access the quarry spoil for further working. Products from Burbage Quarry itself were removed by a terraced trackway running south of the quarry (see feature 431.79).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.72 Terraced Trackway (Sheet 4)
NGR: 426669 381111

A terraced trackway leading to a group of part-finished domes millstones within an extensive area of day-working (feature 431.70).

431.73. Burbage Quarry (Sheet 4)
NGR: 426500 380950

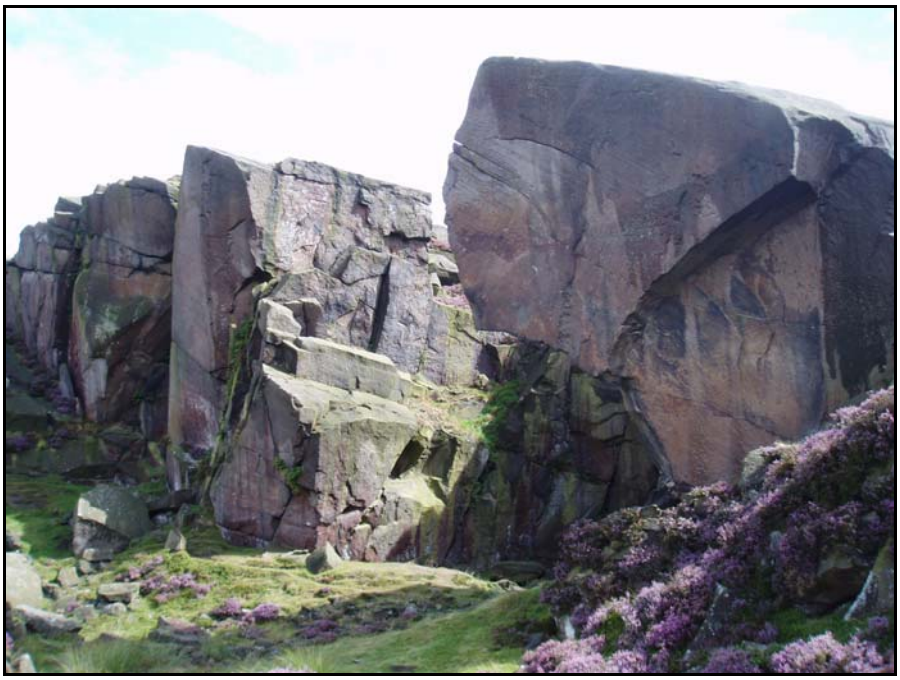
Illustration 31. Burbage Quarry quarry face.

A large, vertical-face quarry with associated millstones/crushing stones, quarry waste, drill holes, buildings and access tracks. The quarry comprises two individual working faces blasted into the Burbage Edge natural scarp. Quarry working may have also been undertaken along the edge between the two obvious faces, The total area covered by quarry activity is approximately 300m long and varies from 20m to 90m deep. Vertical and horizontal drill holes survive where the explosive charges were inserted into the rock. The faces are behind level working floors, from 10m to 20m deep, which are in part created by the act of quarrying itself and in part by the building up of quarry waste to form steep-sided spoil heaps that drop down below the edge. Further spoil mounds are piled to either side of each working faces.

There are three buildings associated with the quarry.

73/a. Rectangular, gritstone mortared building 5m x 3m and surviving up to 0.6m high.

73/b. Rectangular, gritstone mortared building, 4m x 4m and surviving up to 0.7m high.

73/c. Rectangular, gritstone mortared building, 3m x 3m and surviving up to 0.1m high. It is constructed within and on part of the spoil heap.

Towards the north end of the quarry there is a large rock with a near vertical face that faces west. This face is covered in dozens of drill holes but does not appear to have been quarried - the surface is weathered. It is unclear why so many holes should have been drilled in this location.

Products surviving in situ include 22 millstones/crushing stones. Nineteen of these can be identified as flat-edged crushing stones, the majority of which are 1m to 1.2m in diameter and 0.2 to 0.3m deep. There are also 3 unfinished stones which can not be categorized.

Access to the working faces and buildings are provided by a terraced trackway (feature 431.79) that connects the quarry with the A6187, which was built as a turnpike sometime after 1781 (Radley and Penny 1972).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (Tomlinson 1981). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate.

The quarry is shown as in operation in 1880 by the Ordnance Survey, who mark two cranes set immediately outside the two deep working faces.

The feature is largely in good, stable condition and requires continuing conservation under the current land management regime.

431.74. Terraced Trackway (Sheet 4)
NGR: 426359 381011

A terraced trackway revetted downslope with large boulders that parallels and joins with the terraced trackway which runs the length of Burbage Valley (feature 431.57). The area between the two routes has been cleared of stone and levelled, suggesting its use as a stone-working area.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.75 Terraced Trackway (Sheet 4)
NGR: 426288 380894

A terraced trackway, revetted on its downslope side with large boulders, and approximately 2m wide, runs towards the spoil below Burbage Quarry (feature 431.73) from the main Burbage Valley through-route (feature 431.57). The trackway passes between two large stone platforms (feature 431.76), which would have been associated with its use.

The trackway has either been overlain by the spoil from Burbage Quarry or gave access to the spoil for reworking/removing stone. The physical stratigraphic relationship is unclear, but it most likely pre-dates the spoil. If so, the trackway would have been used to access the bottom of the cliff edge for an earlier phase of quarrying than that of Burbage Quarry itself. The level of work put into making the trackway and the presence of the associated platforms (feature 431.76), suggests that such a phase would probably have been on a similar large, intensive scale to that of Burbage Quarry rather than the more dispersed, extensive scale of day-working.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.76 Platforms (Sheet 4)
NGR: 426312 380909

Two large stone platforms located opposite each other to either side of a terraced trackway (431.75). Both measure approximately 10m by 10m. One, to the north, is a free-standing large revetted pile of gritstone boulders, while the other is cut into the scarp of the southern end of Burbage Edge. Remnants of metal fixings survive on the northern pile.

The platforms are clearly associated with quarry working and the terraced trackway, but their exact use is uncertain. The northern platform may have supported a crane or both could have held beams for block and tackle, used to load finished products from the southern platform onto carts. If so, the scale suggests they may have manoeuvred the particularly large crushing stones that are found nearby (431.70). These were probably used in the paper pulp industry, suggesting a later date for the platforms.

The feature does not appear on any of the historical maps available to the current survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.77 Ruined walls and gate posts (Sheet 4)
NGR: 426200 380810

Two ruined dry-stone walls are located near the southern end of Burbage Edge, running just below the break of slope between steeper ground below the Edge and a flatter area east of Burbage Brook. They are aligned approximately north-west to south-east. The northern wall turns to run upslope and contains two gateposts where it is crossed by the Green Drive (431.57).

The north-west to south-east aligned walls were part of a longer, single, boundary between Burbage Brook and the southern end of Burbage Edge that was in place by 1830 (anon. 1830). By 1880 the walls had become reduced to the two shorter lengths with upslope return that survives today (Ordnance Survey 1880). The return and gateposts were probably built in association with the Duke of Rutland's construction of the Green Drive.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.78. Terraced Trackways/Hollow-ways (Sheet 4)
NGR: 426290 380732

There are a series of hollow-ways and terraced tracks associated with the extensive day-working area east of Burbage Brook (feature 431.70). They connect individual working areas with the Green Drive (431.57), suggesting that the Drive utilised an existing and historical trackway.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.79. Burbage Quarry Access Track (Sheet 4)
NGR: 426410 380766

A terraced trackway runs along Burbage Edge, immediately to the west of the top of the edge, from the A6187 to Burbage Quarry (feature 431.73). The trackway is well graded and approximately 4m wide.

The trackway gives access to Burbage Quarry from the road, which was built sometime after 1781 (Radley and Penny 1972). It is depicted on the Ordnance Survey of 1880.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.80. Probable Day-working Area (Sheet 4)
NGR: 426120 380810

An area comprising six round and linear cairns, and an unfinished gate post, which occupies a flatter area of ground east of Burbage Brook.

The cairns are substantial features. The smallest is 3m long, 2.5m wide and 0.5m high while the largest measures 26m x 4m and is 1m high. They all appear to comprise stone that has been dumped on top of and between earthfast boulders.

Within the area is an unfinished gritstone gate post.

The cairns may have been created by natural processes, possibly water erosion or even glacially action. However, it is likely that they represent waste stone within an area of day-working. Stone troughs, lintels, door steps, millstones and crushing stones were all made by small-scale quarrying and stone-carving known as day-working.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.81. Packhorse Bridge (South Yorks SMR 4040) (Sheet 4)
NGR: 426345 381425


Illustration 32. Packhorse bridge.

A single-arch gritstone packhorse bridge crosses Burbage Brook just north of its confluence with another watercourse. The bridge is 1.8m high with a 3m long span. It is 1.5m wide and is topped with a 1m wide gritstone flag path.

The bridge is on the line of a long-distance packhorse route between Sheffield to the east, Hathersage to the east and Grindleford to the south (see features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.97, 431.98, 431.123, 431.140, 431.146, 431.152). It directly links routeways 431.10 and 431.22.

There are bullet scars on the south-facing side of the arch and a mortar scar on the western end of the path from WWII military training.

The bridge probably dates from the 18th century. An Act of Parliament in 1697 formalised the erection of guide posts, rebuilding of packhorse bridges in stone and paving stretches of boggy ground with stone flags (Hey 1980). It was largely in response to complaints from the merchant classes that the Act had been passed.

431.82. Ruined Wall (Sheet 4)
NGR: 426335 381646

A short section of ruined dry-stone field wall.

The wall does not appear on any historical maps available to the current survey. It is likely to be a sheep lee.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.83. Building (Sheet 3 & 4)
NGR: 426482 381774

A small, square building, approximately 3m x 3m with ruined walls standing to 0.2m high. The building is abutting a field wall. There is very little tumble associated with the building, suggesting either that it had timber walls or it has been dismantled and the stone re-used elsewhere.

The wall appears to have been built between 1822 and 1880 as a result of the Parliamentary Enclosure of Dore (Fairbank 1822; Ordnance Survey 1880).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.84. Day-working Area (Sheet 4)
NGR: 426650 380180

An area of occasional surface quarries, worked blocks, worked edges and quarry waste scattered across the moorland.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.85. Cairns (Sheet 4)
NGR: 427050 381100

Two small cairns of weathered stones joined by a line of boulders, some of which could be earthfasts. The cairns are 1.2m diameter and 0.2m high, and 1.5m diameter and 0.3m high.

The feature could date from prehistory onwards, though its relationship to land use of the moor is unclear.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.86. Wall Footings (Sheet 4)
NGR: 426961 380910

A short section of wall footings that runs approximately parallel to an Enclosure Movement wall that is the limit of moorland enclosure behind Parson House Farm (431.154). A ditch or drain runs alongside the footings.

The footings are the remnants of a boundary that enclosed a narrow forestry plantation that was created between 1822 and 1840, following Parliamentary Enclosure of Dore after the Enclosure Award of 1822 (Fairbank 1822; Ordnance Survey 1840).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.87. World War 2 Control Bunker/Radar Station (South Yorks SMR 4353) (Sheet 6)
NGR: 427494 381339

A large, square limestone, gravel and iron slag platform, measuring 21m x 21m wide and 0.5m high. Steelwork is evidence, including a pipe on the east side which may have been part of the air circulation system. It is located on a part of Houndkirk Moor with extensive, uninterrupted long-distance views to the east. With good visibility much of South Yorkshire can be seen, at least as far as Rotherham over 22km to the east.

The platform was built in 1940 as a control bunker for the World War 2 Houndkirk Decoy (431.89) (Payne 2006). Known as a Starfish Control Centre, the bunker was built to a specific design (Dobinson 2000). This comprised a square room set into a level earth and stone mound. The room was lined with a blast-proof concrete wall and was accessed from the side, with an emergency exit on the top.

In 1945 the platform was used to site and test a radar station, Air Ministry Experimental Station 149 (anon. 1992). The station comprised a mobile signal van, fuel store, generators, wooden storage and workshop huts, antenna, telegraph pole with wires to the operators' van and a van used as a rest room. The operators were mostly Royal Canadian Air Force, billeted in Dore.

The feature was reputedly bombed, with craters for at least six incendiary bombs existing on the opposite side of Houndkirk Road until levelled during the laying of the British Gas pipeline.

The feature has been severely truncated from its original height as a control bunker, being reduced by approximately 2m. This is thought to be the result of adjacent pipe line work by British Gas and associated with the deposit of iron slag, (Payne 2006), however it may have been modified when converted to the radar station.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.88. World War 2 Army Truck Trackway (Sheet 6)
NGR: 427860 381408

A terraced trackway that runs south from Houndkirk Road (431.99) into a level area of moorland where it turns back and rejoins itself to form a D-shaped circuit. The trackway is edged with a single course of gritstone blocks.

The trackway was a turning circle for army lorries servicing the decoy, including the delivery of fuel to operate the site (431.87, 431.89).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.89. World War 2 Decoy (South Yorks SMR 3796) (Sheet 6)
NGR: 427660 381560

A rectangular enclosure, approximately 40m by 30m wide, comprising well-defined banks and ditches, a series of short stone banks, two small trenches within a larger dry-stone wall enclosure. The walled

enclosure was probably constructed as a sheepfold as part of the Parliamentary Enclosure of Houndkirk Moor after 1822 (Fairbank 1822). Approximately 7m to the south of the enclosure lie at least four rectangular platforms, measuring 10m x 5m, aligned south-west to north-east. An indistinct trackway runs from the Houndkirk Road (431.99) past the platforms and towards the moorland to the east of the enclosure where there are short ditches. These ditches are the remnants of three larger complexes of ditches that extended to the north east (427890 381700). They were visible on 1945 aerial photographs but are now silted (Payne 2006).

As a group, the features were a World War 2 decoy, known as the Houndkirk Decoy, which was designed to lure German bombers who were aiming for Sheffield (Dobinson 2000; Payne 2006). The decoy was constructed in 1940 and continued in use until 1945 (Payne 2006). It used controlled fires and lights to replicate the fires of Sheffield's steel furnaces when opened to cool the molten metal, the city's railway marshalling yard and the sparks made by tram power conductors on the electric cables. An account written in 2000 by Oliver Murphy, a member of the Royal Artillery's Searchlight Regiment during World War 2 describes the laying out of the ditches following a plan drawn by an artist who had been flown over Sheffield at night. Theatre lights were used to duplicate the cooling furnaces. Different sets of fires were also lit to simulate the effects of enemy bombs hitting a city, including basket fires to recreate incendiary devices and other fires erected on scaffolding. Most of these structures have left no archaeological trace, though the cruciform enclosure may be the foundation remains of a device known as a grid fire (ibid).

It is associated with a control bunker/radar station platform, track loop and access control point to the south (feature 431.87, 431.88, 431.138).

The decoy was reputedly operated by soldiers billeted in Dore who camped on site overnight (Ron Priestly pers comm.). A feature to the north (431.118) though one contemporary account claims that no soldiers were stationed here (Steven Acaster pers comm.).

The Houndirk Decoy was one of many sites known as Special Fire sites, later called Civil Starfish, built across Britain under RAF supervision. There were originally six sites around Sheffield, the only other to survive being at Curbar Gap (ibid).

Apart from the now lost evidence for bomb craters near to the access control point (431.138), there is no record of the decoy or surrounding area having been bombed. How successful the decoys were may be gauged by Sheffield having not been significantly bombed after the 'Sheffield Blitz' in December 1940.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.90. Quarry (Sheet 6)
NGR: 427570 381645

A small quarry, approximately 40m by 20m wide, cut into a scarp edge. Vertical quarry faces remain on part of the bed rock.

The quarry does not appear on any historical maps available to the current survey. It is probably associated with the building of the Houndkirk Road in 1758 to provide surface stone.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.91. Shelter/Building (Sheet 6)
NGR: 427710 381590

A rectangular, approximately 3m by 1m wide, dry-stone building. It is built against the inside of a larger dry-stone wall enclosure, constructed after the Parliamentary Enclosure of Dore in 1822 (Fairbank 1822). The enclosure wall was built between 1840 and 1880 (Ordnance Survey 1840, 1880).

The building is probably a shepherd's shelter and the enclosure a sheepfold.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.92 Gate Post (Sheet 5)
NGR: 427641 383413

A single gate post surviving on the line of a ruined wall, large parts of which are now nit visible or were never finished.

The gate and wall were either built in 1758 when the road was constructed or between 1830 and 1840 as a result of the Hathersage Parliamentary Enclosure Act (anon. 1830; Ordnance Survey 1840).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.93. Bank and Ditch (Sheet 3, 5 & 6)
NGR: 428000 382150

An earthen bank and ditch that runs north-west to south-east across Houndkirk Moor. To the north, it stops at the road running along the northern side of the survey area that was built as the Sparrowpit Gate Turnpike Road in 1758. To the south, it ends at the Houndkirk Road (431.99) also built in 1758. In places, the bank is topped with the footings and ruined remains of a dry-stone wall.

The boundary appears on the Dore Enclosure Award plan of 1822 (Fairbank 1822). Presumably it was built after the award as part of the apportioning of Burbage Moor.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.94. Quarries (Sheet 5)
NGR: 427710 383390

Two groups of quarry delves cut into outcropping rock on Houndkirk Moor.

They don't appear on any historical maps available to the present survey. One is overlain by a wall associated with the Parliamentary Enclosure of Dore and appears on the Award plan of 1822 (Fairbank 1822). The quarry must pre-date the wall which was built between 1822 and 1840 (Ordnance Survey 1840).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.95. Building (Sheet 5)
NGR: 427800 383250

A square ruined dry-stone building measuring 4m across and standing to under 1m high. It has a south-facing door, now blocked, and a square bench or fireplace in the south-east corner. The building is attached to a wall associated with the Parliamentary Enclosure of Dore, which was built between 1822 and 1840 (Fairbank 1822; Ordnance Survey 1840).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.96 Possible Hollow-way (Sheet 5)
NGR: 427860 383360

A slight linear hollow which is probably a branch of a braided hollow-way forming a long-distance packhorse route (431.146).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.97. Packhorse Route (Sheet 5)
NGR: 428290 383110

A series of braided hollow-ways run approximately north to south across the eastern side of Houndkirk Moor. To the north the hollow-ways are overlain by the road running along the northern edge of the survey area. To the south they are overlain by a field system enclosed between 1822 and 1840, reaching its final form by 1893 (Fairbank 1822; Ordnance Survey 1840, 1895). They join with another packhorse route (431.98) immediately before the fields. The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.98, 431.123, 431.140, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.98. Packhorse Route (Sheet 5)
NGR: 428790 382660

A series of braided hollow-ways run approximately east to west across the eastern side of Houndkirk Moor. To the west the hollow-ways are overlain by the Houndkirk Road, built in 1758 as the Sheffield to Buxton Turnpike Road to replace the packhorse route. They would have formed a single route with other hollow-ways (431.123, 431.152). To the south they are overlain by a field system enclosed between 1822 and 1840, reaching its final form by 1893 (Fairbank 1822; Ordnance Survey 1840, 1893). They join with another packhorse route (431.98) immediately before the fields. The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.140, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. This particular route, along with others overlain by the Houndkirk Road (431.123, 431.152) was known as the 'Salter's Track' in the 18th century (Hey 2002). Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.99. Houndkirk Road (South Yorks SMR 3832) (Sheet 5)
NGR: 427859 382002

The Houndkirk Road is a major walled lane that runs east to west across the moor from Ringinglow to Fox House (431.153). The road overlies earlier packhorse routes (431.98, 431.123, 431.152) and is associated with a waymarker (431.103) that would have originally been erected for the packhorse routes.

The road constructed in 1758 as the Sheffield to Buxton turnpike road (Radley and Penny 1972). The construction is typical of turnpike roads, comprising a stone pitched surface approximately 6m wide, with broad verges to either side. It is enclosed with dry-stone walls. The walls may be contemporary or built as part of the 19th century enclosure of the moorland. It was abandoned and replaced by the Dore Turnpike Road in 1812.

The road enabled the opening of the moorland to greater land-use, and a building called Oxdale Lodge (431.104) which was built adjacent to it between the 1822 Parliamentary Award and 1840 (Fairbank 1822; Ordnance Survey 1840). During World War 2, the road became the access route for a bomber decoy (431.87, 431.88, 431.89, 431.138).

The feature is largely in good, stable condition. However, most of the original road surface has been lost and the surface is now the underlying bedrock. The original surface does survives between 428370 382490 & 428670 382690 and between 427590 381510 & 427960 382160. This should continue to be conserved under the current land management regime, and consultation with the Cultural Heritage Team of the Peak District National Park Authority should be made before any works are undertaken along the road. The surface should be monitored every 10 years for condition.

431.100. Bank and Ditch (Sheet 5)
NGR: 428640 382790

A wide earthen bank, approximately 130m long, 6m wide and 0.25m high, flanked by ditches approximately 1m wide and 0.1m deep. There is a shorter bank and ditch immediately to the south, approximately 50m long, with a 3m wide and 0.3m high bank and a 4m wide parallel ditch. To the east, the feature is overlain by hollow-ways of a packhorse route (431.97) and to the west by a 19th century enclosure movement road (431.116). There is no evidence for the bank continuing in either direction. However, Lady Canning's Plantation to the east will have masked or destroyed the feature if it continued this far.

The feature had been suggested as the remains of a Roman road between Navio, Brough and Templeborough near Rotherham (Phil Sidebottom pers comm.). This is a possibility but no dating evidence has been found to corroborate this suggestion. Alternatively, it may have been laid out in the 18th century as an attempted route for the turnpike road that became the Houndkirk Road, running close by to the east (431.99).

The bank runs towards a steep drop, beyond which is a 200m wide boggy area. If it was a road it must have bridged this area. It is unlikely that a drop of this gradient would have been incorporated into the road surface without modification. There is no evidence for regrading the drop. It is also unlikely that the boggy area would have been bridged with a wooden bridge in the 18th century, with an earth and stone causeway more likely. There is no evidence for a causeway. However, the boggy area may have been created by the damming effect of the Houndkirk Road and may not have existed to the same extent before this time.

There is a possible continuation of this feature to the north of Oxdale Lodge (feature 431.104). A broad and low intermittent possible bank is visible but it is difficult to state that it is a feature with any certainty.

The feature is therefore something of a mystery that can only be addressed by further documentary or archaeological research.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.101. Turf Bank (Sheet 5)
NGR: 428290 383180

A turf bank which comprises a vertical sided wall constructed of stacked turves that runs along the northern side of a trackway (431.116). This type of wall construction is very unusual in the Peak District.

The wall was probably built at the same time as the trackway. The track runs north-south across moorland to connect three turnpike roads, including the Houndkirk Road (431.99). Houndkirk Road and the turnpike to the north were built in 1758, while the turnpike at the southern end of the trackway was built in 1811 (Radley and Penny 1972).

The bank and trackway would have been built some time after 1758. The trackway appears on the 1822 Enclosure map of Burbage and Houndkirk Moors, though it is unclear whether it was already in existence or to be built as a result of Enclosure (Fairbank 1822).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.102. Quarries (Sheet 5)
NGR: 428700 382640

There a series of small quarries near to the Houndkirk Road (431.99). They probably provided stone for the road, walls or buildings such as Oxdale Lodge (431.104).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.103. Waymarker (Sheet 5)
NGR: 428400 382510

An engraved gritstone squared block, 1.5m high. It is a waymarker for the packhorse route (431.143) and has the following directions carved on the north-east face:

To Miles
Tideswell – 10
Buxton – 17

Though these two locations are not the nearest towns to Houndkirk Moor, they are significant because they held important markets. Tideswell gained its market charter in 1251 and Buxton in 1154. This indicates that long-distance trade and communication between important market centres and Sheffield was one of the main reasons for the development of the packhorse routes across Houndkirk and Burbage. Nearer towns and villages, such as Hathersage, were more staging posts along the longer journeys rather than destinations in their own right.

Many waymarkers such as this were erected in the 18th century. In 1697, an Act of Parliament formalised the erection of guide posts to facilitate trade which had been expanding since the sixteenth century (Hey 1980). The Act called for county justices of the peace to erect guide posts, where cross-roads were remote from villages.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.104. Oxdale Lodge/Badger House (Sheet 5)
NGR: 428292 382459

The remains of a building comprising a series of platforms, floor surfaces, walls, gate posts and garden plots adjacent to the Houndkirk Road (431.99). It is located immediately south of a small watercourse which has been partly revetted and dammed to make a small pond.

A wall reduced to footings runs alongside the road. Behind this is a subrectangular building platform approximately 15m long and 8m wide with areas of preserved stone and mortar flooring. It is subdivided into two areas by a cross wall. A large gritstone slab at the northern edge probably represents the location of a fireplace. There are two doors visible in the wall footings, with the lower parts of door jambs surviving at one. The side of the Houndkirk Road has been revetted north-east of this area.

Upslope and to the north-west of the levelled area is a rectangular building platform, approximately 20m by 8m in extent, oriented perpendicular. This is defined along its north facing side, overlooking the stream, as a steep earth and stone lynchet. There is a gatepost at its north-western end. Parallel to the south-west of this platform is a long stone revetment.

Three small square walled enclosures and a series of hollow-ways (431.117) are associated with the building. The enclosure to the south of the buildings contains a square building platform in its northern corner.

The buildings were constructed between 1822 and 1840 as a result of Parliamentary Enclosure of the moorland (Fairbank 1822; Ordnance Survey 1840). The house is called Oxdale Lodge on the 1840 and 1880 Ordnance Survey. It is depicted in 1880 as an H-shaped range of buildings with the cross bar of the H oriented perpendicular to Houndkirk Road. The surviving door and fireplace were within a small building attached to the outside of this H. There was a long narrow outbuilding alongside the revetment that lies parallel to the platform, a small L-shaped range to the west and two small outbuildings beside the revetment adjacent to the Houndkirk Road. The platform located in the enclosure supported a small outbuilding.

The building appears to be a model farm associated with attempted improvement of the moorland after Enclosure. If so, the lack of adjoining improved fields would indicate that it was unsuccessful and never really developed. Alternatively, it may have been the house of a shepherd or gamekeeper.

By 1921 it was renamed Badger House on the Ordnance Survey. Most of the outbuildings had become abandoned leaving only the H-shaped range and an outbuilding beside the revetment adjacent to the Houndkirk Road. The plot of land depicted on the 1822 Dore Enclosure Award plan that Oxdale House was built on was awarded to a Joseph Badger.

The buildings were described as two houses in 1925, both called Oxdale Lodge, and were thought to have been a public house at one time because of the presence of a skittle-alley slab at the rear of the house (Ward 1925-26, 110-112).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.105. Quarry (Sheet 5)
NGR: 428990 382550

A small quarry with spoil heap. It does not appear on any historical maps available to the present survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.106. Hollow-way (Sheet 5)
NGR: 428990 382540

A short section of hollow-way.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.107 Houndkirk Quarry (Sheet 5)
NGR: 428765 382977

A rectangular quarry excavated between 1880 and 1921 (Ordnance Survey 1880, 1921). The quarry was backfilled at the end of World War 2, during which it was used to dispose of unwanted Home Guard ordnance (Gordon Danks pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime but it's probably best not to jump up and down on it.

431.108. Sheephill Farm (Sheet 5)
NGR: 429150 383090

A gritstone farmstead comprising a 2-storey L-shaped range of barns and cottages, with a gritstone stone tile roof over one cottage, a 2-storey gritstone farmhouse with attached cottage, and a 2-storey barn.

The farmhouse was built between 1822 and 1840 (Fairbank 1822; Ordnance Survey 1840). The plot of land for the farmhouse was laid out on the 1822 Enclosure Award plan and called Sheephill.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.109. Quarry (Sheet 5)
NGR: 429050 382890

A small quarry in the corner of a field. The quarry is depicted on the 1880 Ordnance Survey.

The field was created between 1840 and 1880 as part of the Parliamentary Enclosure of Dore, as laid out in the Enclosure Award of 1822 (Fairbank 1822; Ordnance Survey 1840, 1880).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.110. Turnpike Road (Sheet 6)
NGR: 428577 381425

Lying adjacent to the current A6187 is a semi-circular level area terraced into the sloping moorland.

This is an original bend of the Dore Turnpike Road, built in 1812 (Radley and Penny 1972). It was straightened after 1921 (Ordnance Survey 1921). There was also a quarry along the northern edge of the bend in 1921.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.111. Moor Cottage (Sheet 5)
NGR: 429008 383537

A 2-storey gritstone house with stone tile roof, gritstone chimney stacks and a dressed gritstone wall.

The house post-dates 1895 (Ordnance Survey 1893). It replaced a house called Moorcock House which occupied the same garden plot but was located adjacent to the road in the garden's north-east corner. Moorcock House was built by 1880 with its garden laid out in 1822 as part of the Dore Enclosure Award (Fairbank 1822; Ordnance Survey 1880).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.112. Fulwood Church Mission (South Yorks SMR 3830) (Sheet 5)
NGR: 429067 383669

A 2-storey coursed gritstone building, with a stone tile roof, gritstone kneelers and square cupola on south-east gable. There is a gritstone plaque on the south-east facing gable that calls the building the 'Fulwood Church Mission.'

It is recorded in the South Yorkshires SMR as the Ringinglow Chapel-of-Ease, an Anglican chapel provided by congregationalists in 1864 at the cost of £100. It was a place of worship and day school.

The building was converted for residential use in 1988/89. Some internal and external features survive.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.113 Outbuilding/Sheephill Cottage (Sheet 5)
NGR: 429079 383703

A 1-storey gritstone outbuilding with stone tile roof. There is a modern 2-storey house to the south-west of the outbuilding.

A building was constructed at the location occupied by the outbuilding between 1840 and 1893 (Ordnance Survey 1840, 1893). The original building, oriented with its long side adjacent to the road, was longer and narrower than the current building. The existing building may have been the northern part of this longer structure

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.114 Rinninglow Roundhouse (South Yorks SMR 4248; Listed Building Grade 2 741-1/8/617) (Sheet 5)
NGR: 429085 383717

Octagonal stone building, comprising two main storeys and a third storey in the roof. The walls are now rendered. Casement windows in gothic style with blind quatrefoils above. A number of the windows are now blank. Eaves and with semi-battlements, above which is a pyramidal stone roof that is now tarred. A central chimney stack with two chimneys tops the roof. There are also two small single-storeyed wings/extensions, one with an entrance.

The building is known as the Round House and was originally built in 1795 as a toll house at the junction of two turnpike roads. The roads were built in 1758 and known as the Sparrowpit Gate and the Buxton turnpikes in 1822 (Fairbank 1822; Radley and Penny 1972). The Round House is now a domestic building.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

Illustration 33. Ringinglow Roundhouse, an ornate 18th century toll house.

431.115 Deep Sick Coal Mine (South Yorks SMR 3735) (Sheet 5)
NGR: 429038 383651

A sub-circular mine shaft. The sides of the shaft have collapsed leaving a 3m deep hole, approximately 5m in diameter.

This is the site of Deep Sick Coal Mine.

Farey describes the pit as Ringing-low-bar, naming it after the nearby toll bar associated with the Round House tollhouse (431.114) (Farey 1811). He describes the products as 2nd series coal and ganister (Crowstone). His refers to seeing ganister in the pit itself, suggesting that it was being worked at this time. It is depicted on the 1880 Ordnance Survey as 'Old Coal Pit', indicating that it had fallen out of use by then.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.116. Jumble Road (Sheet 5)
NGR: 428740 382452

A walled trackway running approximately north-west to south-east across Houndkirk Moor. It connects turnpike roads running along either side of the moor, a road built in 1758 and known as Sparrowpit Gate Turnpike to the north and a road built in 1812 which was called Dore Turnpike (Fairbank 1822). The trackway crosses another turnpike, originally known as Buxton or Ringinglow Turnpike and now called the Houndkirk Road (431.99) and replaced earlier hollow-ways (431.97). Houndkirk Road was built in 1758 and abandoned as a turnpike with the building of the Dore Turnpike.

Jumble Road was known as Ox Stone Dale Road in 1822 (Fairbank 1822). It is unclear whether it was already in existence in 1822 or built as a result of the Dore Enclosure Award of that year.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.117. Hollow-ways (Sheet 5)
NGR: 428255 382459

A series of hollow-ways associated with Oxdale Lodge (431.104). The hollow-ways represent the line of a short trackway that gave access to the associated field from Oxdale Lodge. They may also have earlier origins as one line of a packhorse route that ran across Houndkirk Moor from Sheffield to Hathersage (431.98, 431.123, 431.152).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.118. Building/Structure (Sheet 5)
NGR: 428354 382442

A small dry-stone building or structure. Measuring 3m x 2m and standing to 1m high, it is part-revetted into earth that has been built up to form a mound around three sides of the structure. The building does not appear to be a normal outbuilding or shelter and may have been used to store explosives.

It has been suggested that it was used in connection with the World War 2 Houndkirk Decoy (431.89), specifically associated with a troop billeting area, based on finds of artefacts dating to the 1940s (Payne 2006).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.119. Enclosure (Sheet 5)
NGR: 428350 382422

A rectangular enclosure bounded with a ruined dry-stone wall. The enclosure was created between 1840 and 1880 as part of the Enclosure of Houndkirk Moor as laid out in the Dore Enclosure Award of 1822 (Fairbank 1822; Ordnance Survey 1840, 1880). It was associated with Oxdale Lodge (431.104).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.120. Quarry (Sheet 5)
NGR: 429009 382434

A small sub-circular quarry excavated into the sloping moorland and located adjacent to the road running along the south-east edge of the survey area.

The quarry was a gravel pit and was operational in 1880 (Ordnance Survey 1880). It was abandoned by 1921 (Ordnance Survey 1921).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.121. Day-working (Sheet 6)
NGR: 427569 381642

A series of very small day-working quarry areas associated with a gritstone edge to the north-west of Houndkirk Road (431.99).

The evidence is of scattered and small-scale working of earthfasts.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.122. Bullet Holes (Sheet 6)
NGR: 427672 382067

A small number of bullet holes on one side of a gritstone boulder.

The rock may have been shot for small-scale target practice by soldiers operating the Houndkirk Decoy, approximately 450m to the south (431.89).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.123. Packhorse Route (Sheet 5 & 6)
NGR: 428156 382280

A series of braided hollow-ways, some relatively deep, that run approximately north-east to south-west across Houndkirk Moor. The hollow-ways run adjacent to and are overlain by the Houndkirk Road (431.99). The Road replaced the packhorse route.

The hollow-ways form part of a long-distance packhorse route along with other hollow-ways (431.98, 431.152). They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. This particular route, which includes other hollow-ways overlain by the Houndkirk Road (431.98, 431.152) was known as the 'Salter's Track' in the 18th century (Hey 2002). Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right. Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries. The building of the Houndkirk Road as a turnpike in 1758 replaced the earlier right-of-way with a toll road, effectively privatising the route.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.124. Quarries (Sheet 6)
NGR: 428235 382360

A series of small quarries made into bedrock. The quarries cut into, and are therefore later than, hollow-ways that form part of a packhorse route (431.123), and are aligned adjacent to the Hounkirk Road (431.99). They would have been worked to provide stone for the road during construction prior to 1758 or for its boundary walls which may have been built during 19th century Enclosure.

The quarries are not depicted on any historical maps available to the current survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.125. Quarries (Sheet 6)
NGR: 428785 382307

A small quarry made into bedrock. It would have provided stone for general building work or wall construction.

The quarries are not depicted on any historical maps available to the current survey.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.126. Day-working area (Sheet 6)
NGR: 428380 381810

An area of day-working comprising small quarry delves, unfinished blocks and a flat-edged millstones within a boulder-field around Houndkirk Hill.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel (Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (Tomlinson 1981). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.127. Day-working Area (Sheet 6)
NGR: 428590 381680

A very small day-working area comprising a number of small waste cairns.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.128. Quarry (Sheet 6)
NGR: 428710 381650

A small quarry located next to the A6187.

The quarry is shown on Ordnance Survey maps of 1840 and 1880. It was abandoned by 1921 (Ordnance Survey 1921).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.129. Probable Burial Barrow (Sheet 6)
NGR: 428640 381640

A circular round disc of stone and earth, approximately 8m in diameter and 0.2m high. This is possibly the remaining rim of a dug out burial barrow built during the later Neolithic to earlier Bronze Age, approximately 3500 to 4500 years ago (Barnatt 1999, 27:20).

Circular rims such as this are sometimes all that remains of barrows that have been significantly robbed, usually for walling stone. There is quarrying activity nearby (431.127, 431.129). Subsurface deposits, such as graves, may still survive.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.130. Possible Hollow-ways (Sheet 6)
NGR: 428350 381420

A series of at least three narrow, slight channels which are possible hollow-ways.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.131. Hollow-ways (Sheet 6)
NGR: 428520 381550

A deeply incised hollow-way that fans out into a series of braids at its upslope and downslope ends. Downslope it is overlain by the A6187, which was built in 1812 as a turnpike and known locally as the Dore Turnpike (Fairbank 1822; Radley and Penny 1972).

The hollow-ways would have probably formed part of a long-distance packhorse route as well as local access onto Houndkirk Moor. The route probably originated in the Dore/Totley area of Sheffield.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.132. Day-working Area (Sheet 6)
NGR: 427825 381355

An area of small quarry delves, millstones/crushing stones and quarry waste dispersed around and on a gritstone scarp edge.

Millstone and crushing stone production appears to have been the main stone-working activity in this area. There are at least 1 domed millstone, 2 flat-edged crushing stones, and another 6 stones that cannot be categorized because they have been abandoned very early in the production process. Many have a chocking stone wedged underneath to prop them at a shallow angled to facilitate dressing.

Hathersage was the main centre of millstone production from at least the 16th century (Hey 2002). There were thirteen millstone makers living in the township in 1590, each earning about 10d a week which was comparable to other craftsmen. Each maker produced twelve pairs of stones a year, or one a fortnight, totalling 312 millstones a year. Bars and chains were used to manoeuvre suitable boulders into position, which were chocked at an angle to facilitate dressing using a pick, hammer and chisel

(Tomlinson 1981). In 1728, Daniel Defoe described millstones being 'dug' out of small delves on Hathersage Moor and the quarrying of stone from escarpments.

From at least the 16th century, most stones were exported via the port of Bawtry to millstone merchants based in East Anglia (Hey 2002). The 17th century was the most prosperous period of millstone production in the Peak District, especially when war interrupted trade with France or Germany. Millstones from the Rhine and Paris were favoured because they had a superior milling edge and didn't discolour wheat flour. Peak millstones left a grey colour in milled wheat. The industry declined as white wheat bread became more popular but revived during another interruption in supplies of favoured stones caused by the Napoleonic Wars. Small-scale working may have ended in the 18th century (ibid).

Flat-edged stones appear to be later than domes and round-edged stones, and were the dominant type from the 19th century onwards. They were used for a variety of milling and crushing purposes. Oats, barley, rape, peas, beans and animal fodder were milled using Peak stones because the grey discolouration was not a problem. Most county mills had German or French stones for wheat and Peak stones for other uses until the end of the 19th century (Tucker 1977). In Dorset Peak stones were specifically used for barley and farm meals (Tomlinson 1981). In 1874 there were over 20 corn mills and 6 paper mills in Sheffield, and each corn mill had at least one pair of Peak stones (Tomlinson 1981). Flat-edged stones were also used for more industrial processes, including crushing lead ore, pulping wood and crushing ingredients to make paint. Stones were exported to Scandinavia, Russia and North America for pulping wood to make paper, with the last stones from the area being sold to Sweden in the 1930s (Hey 2002).

Some stones were used for grinding, but the pebble beds founding gritstone limited the use of Hathersage and Burbage stones for this purpose, because they would easily explode when used, so causing fatal injuries (Tomlinson 1981). Those that were used from the area were coarse and middling course grades that weren't used for fine work such as knife grinding. Some millstones were used in Hathersage in the 19th century for grinding needles.

Suitable stone blocks were separated from the bedrock in the 18th and 19th centuries by boring horizontal holes in a circle under the block, inserting kiln-dried pegs and wetting them (Hey 2002). As the wood expanded, the block was lifted separate. In the 1851 census, Hathersage had 8 millstone makers, 3 masons, 2 stone getters and 1 stone cutter. Two 10 year old boys are one of the getters and one of the makers.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.133. Cairns (Sheet 6)
NGR: 428040 381350

A group of at least six small sub-circular cairns, comprising weathered and angular stone. The cairns are between 2m and 4m across and up to 0.2m high.

The weathered stone suggests that these are not quarry waste dumps, which would produce angular spalls of worked stone waste, despite the proximity of a day-working area nearby (431.132). They are more characteristic of clearance stone and may represent the surviving elements of a small prehistoric cairn field.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.134. Grouse Shooting Butts/Burial Barrow (South Yorks SMR 1219, 2948) (Sheet 6)
NGR: 428080 381190

A line of six earth and stone sub-circular mounds. Most are similar in form and size. They are sub-circular, between approximately 6m x 6m and 10m x 10m in diameter. Each one varies in height from 0.1m – 0.3m high to the south, to 0.5m-0.7m high to the north. This results in a sloping profile,

descending in height to the south. Each feature has an internal sub-circular dished pit and a shallow encircling ditch to the north-west and north-east..

The one exception to this pattern is the north-westernmost feature, which is a semi-circular stone bank, 2m diameter and 0.2m high. This is recorded in the South Yorkshire SMR as a hut circle (SMR 2948). However, this is unlikely given its alignment on the other butts and because there is no evidence for a building platform on the sloping ground. The size is also suggestive of a grouse butt unless it has been severely disturbed.

One of the features, the third from the west, is recorded in the South Yorkshire SMR as a prehistoric burial barrow (SMR 1219). There is another sub-circular mound approximately 5m to the north-east, measuring 5.5m diameter and 0.6m high with a 0.4m deep and 2m diameter pit excavated into its centre. This second mound is an anomaly for grouse shooting butts. Either this is the barrow, or both features are barrows and the larger one has been re-used as a shooting butt.

Grouse shooting began during the 18th century and active moorland management for game is evident in the region as early as the late 18th century (anon. 1779). The beating of grouse over prepared positions was reputedly introduced during the mid-19th century, only then leading to the construction of grouse-shooting butts (Byford 1981). This line of butts could date from the mid-19th to mid-20th century. The sloping profile indicates that grouse would have been beaten towards the butts from the north, across an area of moorland that gently slopes down towards the butts so creating a near horizon to heighten the 'surprise' of the grouse overhead.

The features are mostly in good, stable condition and require continuing conservation under the current land management regime. There is some minor livestock erosion which should be monitored at regular intervals.

431.135. Quarries (Sheet 6 & 7)
NGR: 428260 381080

A series of small quarry delves and larger surface quarries with spoil. A number of the quarries have been excavated into hollow-ways that form long-distance packhorse routes (features 431.140, 431.152), and were dug after these routes were abandoned, others are associated with field walls. All would have provided walling stone for walls constructed after Enclosure of the moorland through the Dore Enclosure Award of 1822 (Fairbank 1822).

The quarries were part of the transition from common moorland crossed by long-distance packhorse routes used by right-of-way to a more private and highly controlled landscape of fields divided by walls that was circumnavigated by turnpikes for which a toll was paid for passage. This transition occurred between the mid-18th and mid-19th century.

The features are in good, stable condition and require continuing conservation under the current land management regime.

431.136. Building (Sheet 6 & 7)
NGR: 427626 381239

A small, square mortared gritstone building built into the line of the moorland enclosure wall. The building is approximately 6m square, with walls standing to 1.2m high. There is a 0.8m wide door in the east-facing wall.

The building is possibly a shepherd's shelter, contemporary with the Enclosure of the moorland after the 1822 Dore Enclosure Award (Fairbank 1822). It has also been interpreted as a shelter associated with the World War 2 Houndkirk Decoy (Mike Anderton quoted in Payne 2006). However, an eye witness account of the decoy in operation refers to soldiers billeted at Dore camping at the decoy site overnight (Ron Priestly pers comm.).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.137. Hollow-way (Sheet 6)
NGR: 427677 381265

A short hollow-way that runs up the steep slope at the southern end of a gritstone scarp edge.

The hollow-way was probably created as a result of local access to this area, for stone quarrying or shepherding, or as a short-cut between different long-distance packhorse routes (features 431.97, 431.152).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.138. World War 2 Houndkirk Decoy Southern Access Point (Sheet 7)
NGR: 427400 381100

A rectangular levelled area, measuring 13m x 5.5m, to the east of the Houndkirk Road (431.99). within the levelled area there are a number of concrete slabs set into the ground, a series of steps and at least two sections of iron pipe. There are two small trenches to the west and south.

The feature is thought to be the site of a wooden building that controlled access to the Houndkirk Decoy situated approximately 300m to the north (431.87-89) (Payne 2006).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.139. Quarry (Sheet 6 & 7)
NGR: 428320 381010

An extensive quarry comprising a defined rectilinear area containing delves and spoil heaps.

The quarry is not depicted on the 1880 Ordnance Survey and unfortunately the 1921 OS was unavailable to the present survey. There is something which could be a quarry marked here on the smaller scale 1840 Ordnance Survey, however the feature is not clear. Most of the quarry is enclosed within walls built as a result of the 1822 Dore Enclosure Award (Fairbank 1822), and appears to post-date their construction.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.140. Packhorse route (Sheet 7)
NGR: 427640 380630

A series of braided hollow-ways run approximately east to west along the southern edge of the survey area, parallel to the current A6187. To the west, they run in the direction of Fox House Inn (feature 431.153), and their line is continued as a short hollow-way (feature 431.157). To the east, they appear in the survey area from under the A6197 at NGR. 428340 380970. The route goes via Piper House farm (feature 431.143) and Stone House (feature 431.147).

The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.67, 431.81, 431.97, 431.146, 431.152). These directly connected Sheffield, Hathersage and Grindleford, feature 431.140 running between Sheffield and Grindleford as well as more distant markets including Tideswell and Buxton.

The hollow-ways are overlain, and therefore right of way blocked, by field walls built as a result of the 1822 Dore Enclosure Award (Fairbank 1822). The route was replaced by the line of the modern A6187, built as a turnpike in 1812 and known locally as the Dore Turnpike in 1822 (Fairbank 1822; Radley and Penny 1972). The route actually circumvents a toll bar on this turnpike and may have continued in use as an alternative, free right of way until Enclosure in or after 1822.

Packhorse routes were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. They were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.141. Day-working Area (Sheet 7)
NGR: 428260 380850

An area of extensive day-working comprising small quarry delves, the worked edges of bed rock and earthfast boulders and part-finished gateposts/door steps/lintels.

The area overlies and is later than the hollow-ways of a packhorse route (431.140). It may therefore be contemporary with enclosure of the moorland in and after 1822 (Fairbank 1822).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.142. Terraced Trackway (Sheet 7)
NGR: 428240 380790

A terraced trackway that connects Piper House farmstead (431.143) with the modern A6187 (originally built in 1812 as a turnpike road). The trackway also leads to a day-working area (431.141) east of Piper House. The route will be mid to late 19th century in date, contemporary with the farmstead and/or quarrying.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.143. Piper House Farm (Sheet 7)
NGR: 428220 380810

A ruined farmstead comprising a range of adjoining buildings/rooms measuring approximately 20m long by 7m wide, and located on a level platform terraced into the sloping hillside. The main building is a house comprising four main rooms arranged in a cross pattern, with at least one adjoining ancillary room to the north. A narrow building, probably an outbuilding, adjoins the southern gable. There is a series of small outhouses and a wall to the south-west. All of the walls are mortared gritstone and stand to a maximum of 1.5m high. Most of the rooms are part filled with building rubble. Worked door jambs and window frames survive. Those that are visible were blocked before demolition or collapse.

The building was built between 1840 and 1880 as a result of the 1822 Dore Enclosure Award (Fairbank 1822; Ordnance Survey 1840, 1880). The plot of land it occupies was laid out on the 1822 Award plan. It takes its name from Henry Piper who bought the plot from the original awardees soon after the Award was finalised (Ward 1945-46, 77).

It is depicted on the 1880 Ordnance Survey in the floorplan preserved by the ruins and known as Piper House. An outbuilding is shown to the south-east, approximately where a roadside field boundary now exists (431.143a).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.144 Pond (Sheet 7)
NGR: 427891 380762

A small circular pond dug into the corner of two moorland enclosures. The pond is probably contemporary with the walls, which were built as a result of the Dore Enclosure Award of 1822 (Fairbank 1822).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.145. Stony Ridge Toll Bar/The Broom Shop (South Yorks SMR 3826/3827) (Sheet 7)
NGR: 427660 380614

A square gritstone building, approximately 5m square with walls standing to 0.3m high, situated adjacent to the roadside wall. Three metres to the south of the building is a large square, gritstone block engraved 'STONY RIDGE TOLL BAR CLOSED 1884'.

The building is probably the toll booth for the toll bar associated with the Dore Turnpike road. The bar was a gate across the adjacent road where tolls were collected. The turnpike was built in 1812 to replace an earlier turnpike across the moorland (431.99) (Radley and Penny 1972).The cottage and surrounding garden wall are depicted on the Dore Enclosure Award plan of 1822. The Ordnance Survey of 1880 calls the building Stonyridge T.P.

In the early 20th century the house was known as the 'Broom Shop' and was occupied by the Peat family lived and made besoms (Garland & Young, 1973). The Peat family reputedly made besoms since the building of the house by Mr Hancock of Dore (Ward 1930-31). Ward thought the house was built in 1826, though its appearance on the 1822 Award plan, when other houses built as a result of the Award aren't depicted, suggests its earlier construction. Heather to make the besoms was cropped from adjoining land which had been awarded to Hancock in the Dore Enclosure Award of 1822.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.146 Packhorse Route (Sheet 6 & 7)
NGR: 427715 380770

A series of braided hollow-ways run approximately north to south across Houndkirk Moor. To the north, the hollow-ways appear at the base of a steep scarp after crossing an area of level moorland where no hollow-ways formed. The route would have continued north towards Sheffield and joined with other hollow-ways (feature 431.123) that have been overlain by the Houndkirk Road (feature 431.99). To the south to exit the survey area at the edge of the A6187 and would have continued towards Grindleford. The hollow-ways form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.39, 431.67, 431.81, 431.97, 431.140, 431.146, 431.152, 431.157). These directly connected Sheffield, Hathersage and Grindleford as well as more distant markets including Tideswell and Buxton.

Packhorse routes were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. They were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography.

Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.147. Stone House Farmstead (Sheet 7)
NGR: 427468 380678

The remains of three gritstone buildings and a walled yard are visible. Two of the buildings survive as part-ruined walls and piles of rubble, one 15m x 6m (147/a) and the other 10m x 8m (147/b) . Walls stand up to 1.5m high. All that survives of the third building is one wall containing a small window, standing to 1.6m high (147/c). The farmstead is associated with a small pond (feature 431.148).

The farmstead is built into the corner of a field created during the enclosure of the moorland as a result of the 1822 Dore Enclosure Award (Fairbank 1822). It was built between 1840 and 1880 (Ordnance Survey 1840, 1880). In 1880 the farmstead formed a 'zig-zag' range of buildings, two of which correspond to visible remains. The third 1880 building is to the south of the surviving sites and is part preserved as the line of a field wall.

Most of the feature is in good, stable condition and requires continuing conservation under the current land management regime. However, the farmstead site is used for activities related to livestock pasturing on the moorland, including sheep sorting and folding. In one way this reduces the visual impact of constructing a new sheep fold on open land. However, associated activities may damage the settlement site and a management plan should be put in place with the owner/tenant to mitigate impacts on both above ground and sub-surface archaeological features.

431.148. Pond (Sheet 7)
NGR: 427427 380671

A circular pond associated with Stone House (feature 431.147).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.149. Cicely Low Ring Cairn (South Yorks SMR 852; SM 29816) (Sheet 7)
NGR: 427509 380779

A circular enclosure approximately 20m in diameter defined by a low earth and stone bank 0.3m-0.5m high and 3m wide. There is a north-west facing 4m wide entrance. The enclosure is located on an area of gently sloping ground.

The feature is a ring cairn, a small, ceremonial structure akin to a stone circle dating from the later Neolithic/early Bronze Age. There are at least 26 small stone circles or ring cairns in the Peak District (Barnatt 1990). This feature is one of the larger examples.

The majority of stone circles and ring cairns are found on the Eastern Moors. The numbers, small size and relationship with locally prominent locations, suggests that ring cairns were places for holding family-based ceremonies, such as those connected with the agricultural season, individual rites of passage and fertility (Barnatt 2000; Edmonds and Seaborne 2001). However, the similarity of the small monuments across the region shows that small communities were aware and participated in wider social values beyond that of the family (Kitchen 2000).

There are no broadly contemporary features in the immediate surrounding area.

Stone was recorded in the 1880s as having been robbed from the cairn during the building of the adjacent field wall between 1822 and 1840 (Ward 1941-42, 118-122).

The ring cairn is a scheduled ancient monument. Any damage or disturbance to the site is illegal without scheduled monument consent from the Department of Culture, Media and Sport (as at 2001).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.150 Pond (Sheet 7)
NGR: 427545 380895

A small oval pond.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.151. Day-working Area (Sheet 7)
NGR: 427500 380980

An area of small rectangular pits, quarry delves, quarry waste, square blocks and chisel marks dispersed across an area of outcropping gritstone and moorland to the south. There are a number of steep-sided rectangular pits that vary in size from 0.8m x 0.5m x 0.2m to 2m x 1m x 0.3m. The cut, vertical face of an earthfast boulder forms at least one side of each pit. Each pit is where one or more rectilinear stone blocks has been removed.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.152. Packhorse route (Sheet 7)
NGR: 427210 380690

A series of braided hollow-ways run approximately south-west to north-east across Houndkirk Moor. To the south-west, they run in the direction of Fox House Inn (feature 431.153), where they join with another series of hollow ways (feature 431.140). To the north-east, they are overlain by Houndkirk Road (feature 431.99) and would have formed one route with other hollow-ways overlain by the road (431.98, 431.123). They form part of complex network of long-distance packhorse routes that cross the survey area (features 431.9, 431.16, 431.18, 431.21, 431.22, 431.30, 431.37, 431.67, 431.81, 431.98, 431.123, 431.140). These directly connected Sheffield, Hathersage and Grindleford, as well as more distant markets including Tideswell and Buxton.

They were used to transport goods between markets, salt from Cheshire and the various stone products that were made on the moorland. This particular route, along with others overlain by the Houndkirk Road (431.98, 431.123) was known as the 'Salter's Track' in the 18th century (Hey 2002). Packhorse routes were created by packhorse teams searching out suitable topography to navigate across the landscape, seeking out the paths of least resistance through sometimes difficult terrain of steep slopes, cliffs, watercourses and bogs. They were used by right Certain routes would become used again and again over time, often constrained by the topography. Hollow-ways were formed by erosion along these repeatedly used routes, and braids of hollows often occur on popular routes across slopes and through wet areas where erosion was greatest. They originated in the medieval period and were replaced by turnpike roads in the 18th and 19th centuries.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.153. Fox House Inn (South Yorks SMR 3828. Listed Building Grade 2 784-1/8/413) (Sheet 7)
NGR: 426600 380250

A 2-storey gritstone inn with stone tile roof. An irregular group of gritstone buildings enclose 3 sides of a courtyard that opens to the south-west. The main building is architecturally built in Nineteenth century Elizabethan character with elaborate gables, mullioned hanstoned windows and bays. The back

range has stone door jambs, the west range mullioned windows and coach doors. It has been greatly altered and extended over time, with the rest range recently being converted into accommodation.

One room bears the date 1690 but on evidence of wills has been postulated to have been built in 1773 (Garland and Young 1973). According to the memories of the Fox family, who lived in Callow during the early 20th century, Fox House was originally been built 'about the middle of the 18th century' as a two-room cottage and occupied by a shepherd (Ward 1930-31, 152). This original building is reputed to be the range that that adjoins the rear of the inn. The building was converted to an inn sometime between the end of the 18th century and the mid-19th century to service the turnpikes that pass adjacent.

A range of buildings is depicted on this site in 1822, 1840 and 1880 (Fairbank 1822; Ordnance Survey 1840, 1880). It is called Fox House in 1822 and 1840 and Fox House Inn in 1880. It took its name from a member of the Fox family of Callow near Hathersage who supposedly built the original cottage (Garland and Young 1973). It was greatly extended by the Duke of Rutland's agent in the 1840s (ibid). The map evidence suggests that extension work was carried out between 1822 and 1840 (Fairbank 1822; Ordnance Survey 1840). The western range appears to have been added to a simple rectangular building situated on the approximate site of the inn between these dates. The floorplan was much as it is today by 1880 (Ordnance Survey 1880).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.154. Parson House Farm (Sheet 7)
NGR: 427750 380910

Two ranges of 2-storey gritstone buildings forming a large farmstead comprising a house, barns and outbuildings built around a central courtyard.

The farmstead was built as a result of the enclosure of the moorland under the 1822 Dore Enclosure Award (Fairbank 1822). This was contemporary with the physical enclosing of the land adjacent to the farmstead, the field system of straight walls being created for the farmstead. Prior to this date, the area was open moorland. The farmstead and outline of the field system was created by 1840 (Ordnance Survey 1840). It was called Parson House by this time.

By 1880 the northern range of buildings were constructed and followed the approximate floorplan they do today. The southern range was added sometime later. It is now an Outdoor Pursuits Centre.

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.155. Square Pit (Sheet 7)
NGR: 426927 380611

A small, flat-bottomed square pit, 1m by 1m wide and 0.25m deep.

The feature is similar to, though smaller than World War 2 training foxholes found in the Burbage Valley (features 431.41).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.156. Platform (Sheet 7)
NGR: 426929 380575

A subrectangular platform, approximately 8m by 8m and 0.7m high. There are steel fixings or brackets immediately to the north-east of the platform.

The date and use of the feature are unknown, but it is likely to be 20th century in origin. It may be associated with the World War 2 Houndkirk Decoy (431.89).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

431.157. Hollow way (Sheet 7)
NGR: 426880 380470

A short section of hollow-way that runs parallel to the main road along the south boundary of the survey area. It is a continuation of braided hollow-ways to the east that form part of a long-distance packhorse route (feature 431.140).

The feature is in good, stable condition and requires continuing conservation under the current land management regime.

Findspots and Discarded SMR Entries and Other Unidentified Sites

431.158 Findspot of a Prehistoric Blade (South Yorks SMR 3136) (Sheet 1)
NGR: 425616 382106

A Prehistoric flint or chert blade was found at this approximate location.

No further details are available at time of writing.

431.159 Findspot of Mesolithic Flints (South Yorks SMR 854) (Sheet 1)
NGR: 425587 381883

A Mesolithic arrowhead and flint miscellaneous tool were found at this approximate location.

The tools are types used between 10,000 and 6,000 years ago and show that the area was visited by nomadic hunter-gatherers sometime during this period.

No further details are available at time of writing.

431.160. SMR entry for possible Roman road (Derbys SMR 422830060; South Yorks SMR 3974) (Sheet 1)
NGR: 425994 381206

The Derbyshire and South Yorkshire SMRs record the possible line of a Roman road at these two locations. The road reputedly ran between Hathersage and Ringinglow.

No earthworks likely to be that of a Roman road were found during the current survey. The area of the Derbyshire SMR entry was under bracken at the time and it is possible that an earthwork was masked by vegetation. There are earthen causeways to the south-west and south-east of the South Yorks SMR area (431.20, 431.21). These represent the line of a raised routeway that could be Roman in origin, however, they are more likely to be elements of medieval packhorse routes.

431.161. Findspot of Bronze Age Knife and Blade (South Yorks SMR 864) (Sheet 1)
NGR: 425889 381390

A flint knife and blade dating from the Bronze Age were found at this approximate location.

They show that this area was visited or inhabited sometime between 2,000 and 800 BC. They could be contemporary with Carl Wark or the two cairnfields nearby (431.1, 431.4, 431.28).

No further details are available at time of writing.

431.162. Findspot of a Mesolithic Flint (South Yorks SMR 869) (Sheet 1)
NGR: 425200 381200

A Mesolithic flint was found at this approximate location.

It dates to between 10,000 and 6,000 years ago and shows that the area was visited by nomadic hunter-gatherers sometime during this period.

No further details are available at time of writing.

431.163. Findspot of a Neolithic/Bronze Age Flint (South Yorks SMR 855) (Sheet 2)
NGR: 425200 381200

A Neolithic/Bronze Age flint was found at this approximate location.

This could be contemporary with the nearby stone cairn (431.23).

No further details are available at time of writing.

431.164. Findspot of a Neolithic/Bronze Age Arrowhead (South Yorks SMR 855) (Sheet 2)
NGR: 425200 380900

A Neolithic/Bronze Age flint arrowhead was found at this approximate location.

This could be contemporary with the nearby stone cairn (431.23).

No further details are available at time of writing.

431.165. Record of Bank (South Yorks SMR 3132) (Sheet 2)
NGR: 425300 380900

The South Yorkshire SMR records a bank earthwork at this location of unknown date.

No feature was identified in this area, covered by heather, during the current survey.

It is possible that the SMR entry refers to a misinterpretation of natural topography or a mislocating of the linear clearance bank which is part of Winyard Nick's cairnfield, approximately 90m to the north (431.4).

431.166. Record of Barrow (South Yorks SMR 3132) (Sheet 2)
NGR: 425330 380900

The South Yorkshire SMR records a burial barrow at this location.

No feature was identified in this area, covered by heather, during the current survey.

It is possible that the SMR entry refers to a misinterpretation of natural topography or a mislocating of one of two stone cairns in the vicinity (431.23, 431.25).

31.167. Record of Neolithic/Bronze Age Cist (South Yorks SMR 1785) (Sheet 2)
NGR: 425100 380700

The South Yorkshire SMR records a burial cist of Neolithic or Bronze Age date at this location. A cist is a small stone box that held a cremation or inhumation.

No feature was identified in this area during the current survey. The area is a shoulder of boulder-strewn land and it is possible that such a small stone feature as a cist was overlooked.

31.168. Record of Hut Group (South Yorks SMR 3794) (Sheet 2)
NGR: 426100 380900

The South Yorkshire SMR records a hut group at this location, most likely referring to a series of prehistoric round buildings.

No appropriate features were identified in this area during the current survey. The area is sloping ground, mostly covered by a wet flush, above Burbage Brook and is an unlikely location to find prehistoric buildings.

431.169. Findspot of a Neolithic/Bronze Age Flint (South Yorks SMR 855) (Sheet 2)
NGR: 425000 380500

A Bronze Age flint arrowhead was found at this approximate location.

No further details are available at time of writing.

431.170. Findspot of a Mesolithic Blade (South Yorks SMR 857) (Sheet 3)
NGR: 426700 382700

A Mesolithic flint or chert blade was found at this approximate location.

The blade was a type of tool used between 10,000 and 6,000 years ago and shows that the area was visited by nomadic hunter-gatherers sometime during this period.

No further details are available at time of writing.

431.171. Findspot of a Mesolithic Microlith (South Yorks SMR 3142) (Sheet 3)
NGR: 427000 382000

A Mesolithic flint or chert microlith was found at this approximate location.

The microlith was a type of tool used between 10,000 and 6,000 years ago and shows that the area was visited by nomadic hunter-gatherers sometime during this period.

No further details are available at time of writing.

431.172. Findspot of Medieval Pottery (South Yorks SMR 3146) (Sheet 4)
NGR: 426410 381400

Medieval pottery was found at this approximate location.

The pottery may be associated with the nearby packhorse route (431.67, 431.81).

No further details are available at time of writing.

431.173. Findspot of a Mesolithic Arrowhead (South Yorks SMR 2710) (Sheet 4)
NGR: 427200 381200

A Mesolithic arrowhead was found at this approximate location.

The microlith was a type of tool used between 10,000 and 6,000 years ago and shows that the area was visited by nomadic hunter-gatherers sometime during this period.

No further details are available at time of writing.

431.174. Findspot of a Bronze Age Arrowhead (South Yorks SMR 2709) (Sheet 4)
NGR: 427400 381500

A Bronze Age flint arrowhead was found at this approximate location.

No further details are available at time of writing.

431.175. Location of a Cairn (South Yorks SMR 1328) (Sheet 7)
NGR: 427300 381100

The approximate location of a cairn recorded by the SMR according to a documentary record.

No feature was identified in this area during the present survey.

431.176. Findspot of a Bronze Age Arrowhead (South Yorks SMR 867) (Sheet 7)
NGR: 427500 381100

A Bronze Age flint arrowhead was found at this approximate location.

No further details are available at time of writing.

431.177. Findspot of Prehistoric flints (South Yorks SMR 2711) (Sheet 7)
NGR: 427700 381100

Unknown Prehistoric flint flakes were found at this approximate location.

No further details are available at time of writing.

431.178. Findspot of a Mesolithic Arrowhead (South Yorks SMR 870) (Sheet 7)
NGR: 427700 380900

A Mesolithic flint or chert arrowhead was found at this approximate location.

No further details are available at time of writing.

431.179. Findspot of a Mesolithic Arrowhead (South Yorks SMR 858) (Sheet 7)
NGR: 427500 380800

A Mesolithic flint or chert arrowhead was found at this approximate location.

No further details are available at time of writing.

431.180. Findspot of a Chamber Pot (South Yorks SMR 3148) (Sheet 5)
NGR: 427950 383060

A late 18th century stoneware chamber pot was found in this approximate location after heather burning. Approximately 90mm high, 100mm diameter with 1 handle. The pot was found on an area of open moorland, at an exposed location known as the Ox Stones. It may be associated with a small area of quarry working to the west but seems a pessimistic requirement for the level of quarrying suggested by scant evidence. The nearest farmhouse (431.104) is approximately 67m to the south, a rather inconvenient distance for a convenience.

No further details are recorded on paper.

431.181. Findspot of a Wedge (South Yorks SMR 3144) (Sheet 5)
NGR: 427950 383060

An iron wedge was found at this approximate location. It was a stone masons iron wedge found in gritstone concretion buried in roadside.

No further details are available at time of writing.

431.182. Locations of Hut Circles (South Yorks SMR 2947, 2948, 2950, 2951, 3133) (Sheet 6)
NGR: 428370 381770

The approximate locations of eight earthworks reputed to represent the sites of Prehistoric round buildings.

No features were identified in the vicinities of any of these areas during the present survey. Some areas are clearly unsuitable for locating a prehistoric building, including the exposed tops of scarp edges and a bog. The locations are of course approximate may only be associated with these topographic features because of that.

431.183 Findspot of a rubbing stone/microburin/flake (South Yorks SMR 3135) (Sheet 6)
NGR: 428100 381900

A small group of Prehistoric stone artefacts were found at this approximate location. They included a rubbing stone, microburin and a waste flake from tool production.

No further details are available at time of writing.

431.184. Location of a Cairn (South Yorks SMR 1218) (Sheet 5)
NGR: 428700 382600

The approximate location of a cairn, possibly a funerary site, is recorded by the SMR.

No feature was identified in this area during the present survey.

Recommendations for Further Work

1. If and when the conifer plantations are felled, permission should be sought to survey the felled areas to the National Park Authority's Phase 1 Archaeological Survey standard.
2. To understand the date and function of Carl Wark requires more intensive archaeological investigation. This is an important site for understanding the prehistoric development of the moorlands.

   2.1 Watching briefs should be undertaken during any future footpath work across or near the scheduled area.

   2.2 The 1950s excavation trench should be re-opened to retrieve archaeological and environmental deposits that may furnish dating, environmental and cultural data.

   2.3 A metrical contour survey should be undertaken of the scheduled area to establish a detailed record of the nature and condition of the monument.

   2.4 A geophysical survey of the interior and area of outcrop to the west of the western rampart should be carried out to identify the potential existence of sub-surface deposits.

   2.5 Archaeological excavations should be considered on the basis of work carried out under 2.3 and 2.4, targeted at identified features that may help greater understanding of the monument and to assess the condition of buried deposits and structural features. Both the boundary and the interior should be investigated.

3 A sample of prehistoric features, including barrows, cairns and round buildings, should be given more intensive archaeological investigation. This is required to gain adequate dates, identify the associated environment, fully understand their function and to assess the condition of buried deposits and structural features. A programme of work should involve metric contour survey, geophysical survey and archaeological excavation. These are important sites for understanding the prehistoric development of the moorlands.

4 The iron-working bloomery should be investigated to understand the technological processes carried out at this site, to identify its date and to assess the condition of buried deposits and structural features. This should take the form of metric contour survey, geophysical survey, slag characterisation and small-scale archaeological excavation. Burbage Valley should be surveyed for possible sources of iron ore.

5 A detailed analysis of stone-working and quarrying sites should be carried out to more fully understand the millstone and other stone-production industry of this important area. This should involve detailed characterisation of individual stone products and quarry sites.

6 A detailed building survey of all standing and part-ruined buildings and the packhorse bridge should be undertaken to identify architectural traditions, as well as the importance and condition of surviving architectural features.

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