

Millstone making in the Peak District of Derbyshire: The quarries and the technology

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Summary: *The millstone grit of the Peak District provided the greatest supply of millstones made of native rock in Britain over many centuries, including the first half of the twentieth. The paper describes and lists the quarries and working areas as completely as possible. It describes the types of millstone made over the centuries and deduces from the archaeological remains the process by which they were made. Ancillary topics such as tools, smithies, transport and mason's marks are briefly touched upon, and the Bole Hill Quarry Railway and its possible connections with the millstone industry is briefly described.*

Introduction

The Peak District of Derbyshire was for centuries, and still is, although the industry is now dead, well-known for the millstones made from its millstone grit.¹ The area concerned is shown in outline in the map in Fig 1. It was the most famous of all the millstone-making areas in Britain, and the quantity made probably exceeded that from all the other millstone-making areas put together. Peak millstones were exported to other countries all over the world by the nineteenth century. Peak millstones for corn-mills were almost invariably of millstone grit, but for edge-runners to be used for crushing and/or grinding minerals and vegetable matter (e.g. wood for wood-pulp), limestone and sandstone were also used. The study of the millstone industry is complicated by the lack of a well-defined boundary between the meanings of the words 'millstone' and 'grindstone'. Grindstone was basically the term used for rotary sharpening stones used in the steel-tool and cutlery trades, notably of Sheffield. Such stones were generally of a finer texture than the millstone grit and came from quarries often clearly distinguished from the millstone quarries, mainly from that part of Yorkshire just north of the Derbyshire boundary, within what is known as Hallamshire. However, many quarries advertised millstones and/or grind-

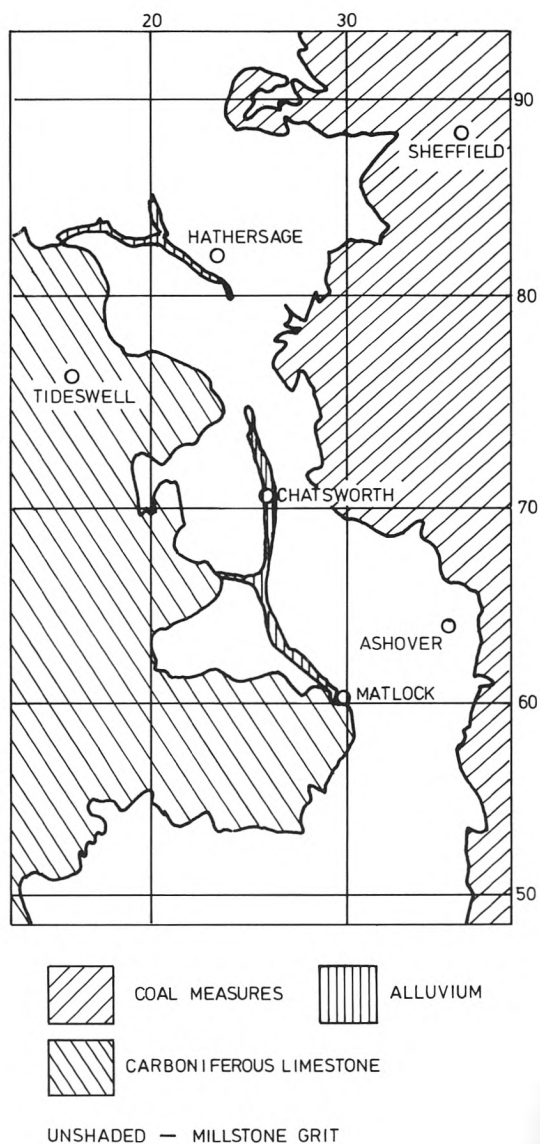


Fig 1 Map of millstone-making area in the Peak District, showing approximate geological boundaries.

stones without a sharp distinction, and it is often not clear in literary references and in directories whether millstones or grindstones are meant when either term is used. At one extreme, the face-grinders used in corn-mills were always called millstones, and at the other, the steel-grinding edge-grinders were always called grindstones; but for the whole range of crushing, grinding and pulping in between, the two terms tend to be used indifferently.

The use of Peak stones in corn-mills would not have increased during the eighteenth and nineteenth centuries in proportion to the increase in the number of corn mills because for the grinding of wheat for flour, the fabricated French-burr millstones came to be much preferred. This type of stone was made in urban millstone manufactories by cementing together small segments of a special stone imported from France.² Nevertheless, even in the later nineteenth century, most country corn-mills had at least one pair of monolithic indigenous stones, generally Peak stones throughout England although Welsh stones were a rival in the western parts of the country; these monolithic stones would be used for coarser grinding of oats, beans and fodder of various types.

The Peak millstone industry is old. Radley, whose paper³ of 1963-4 laid the foundations for any study of the subject, cites a reference to a millstone quarry at Alderwasley in 1257, and others in the fifteenth century. Meredith⁴ gives good evidence for 1466, of millstone making at Yarncliff, and again for c.1720⁵ at Offerton Edge as well as the better-known Millstone Edge, which, according to Hey,⁶ had acquired its name by 1625. Defoe,⁷ describing his tour of c.1730, refers to millstone making to the east of Chatsworth which he apparently witnessed, and this must have been at the same quarry which Hey mentions as being 'above Chatsworth' in 1662.

Long before any of the dates mentioned above, the making of querns, i.e. small millstones of either 'beehive' or flat-disc type, intended to be worked by hand or possibly by animal power, had probably been widespread in the Peak District. At Wharncliffe ('wharn' is presumably the same word as 'quern'⁸) — grid reference c.SK 2997-2998, actually in Yorkshire, not Derbyshire, and well to the north of the millstone-making area — evidence of quern making on a massive scale is to be found,⁹ and

this goes back probably over two thousand years. There has been a good deal of study of querns by archaeologists,¹⁰ but in the present paper consideration will be restricted to millstones intended primarily for wind and water mills, and in the nineteenth century for steam mills. Such millstones would be at least 3ft 6in across (about 1.1m) and could range up to 6 or 7ft (say up to about 2m).

The millstones were made in several different kinds of location. Sometimes a quarry of conventional kind was used, i.e. the rock was excavated from a sloping hillside and a quarry of roughly semi-circular plan was formed. Examples of this kind are the quarry on Wild-moorstones Edge at SK 265810, believed to have been worked by the firm of W.J. & T. Child in the second half of the nineteenth century and early part of the twentieth; the smaller quarry at Bole Hill, SK 248799, worked around 1880 at least by John Shuttleworth of Hathersage, and Yarncliff Quarry at SK 256793 also worked by Childs although probably very much older than that firm. Much more common than these well-formed quarries were open areas either on the lips of the various 'Edges' that form a conspicuous part of the Peak District landscape or at the base of the almost vertical cliffs forming these edges. Many of these are listed in Table 1 in the next section. Here there were plenty of pieces of rock already broken free, or easily made to fall free, which could be used for cutting out millstones. Nevertheless, there were also numerous places on the edges where the cliff itself was cut away to provide more rock, producing small quarries. On flat or gently sloping ground the rock was often dug out from small quarries or 'delves' as for instance on Beeley Moor, SK 2866. Finally, in many areas, often on open moorland, individual stones were to be found which could readily be made into millstones where they lay. It is understood that such stones were called 'daystones' to distinguish them from quarried stones.

Most of these situations, especially on the lips of the edges, were extremely exposed, at altitudes of about 1000ft (300m) above O.D., and must have been very difficult or impossible for work during much of the winter. The evidence (which will be examined later) seems to be that the cutting and shaping of the millstones was done entirely where the rock was found, and the almost or completely finished millstone then

transported down to the lowlands.

In most of the working areas there is considerable physical evidence of millstone making, usually in the form of unfinished, damaged, or even completely finished millstones. This is, of course, much more useful evidence than purely documentary or literary references as it is possible to deduce something of the techniques of millstone making. It is, however, very difficult to date these remains. There are two main types of millstone to be seen: a large type, from 4ft 8in to nearly 7ft (1.4 to 2m) in diameter with one flat face and the other highly-convex — often called the 'mushroom' type — and a smaller type, typically 3ft 6in to 4ft 6in (1.1 to 1.35m) in diameter and much less convex — often, and very reasonably called the 'modern' type as it corresponds to the millstones used in nineteenth- and early twentieth-century mills, and later as edge-runners. It is reasonable to assume that the mushroom type is often several centuries old, as such stones have not been used in mills for nearly a couple of centuries although there is literary evidence of their use in earlier times.

Many of the modern type of millstone are of diameter outside the range quoted, and of thickness greater than the 12in (0.3m) normally associated with stones for corn mills. It must be supposed that these, like many of the normal-sized stones, were intended to be edge-runners, e.g. pulping stones. This is evidently true of the majority of the many hundreds of millstones abandoned beside the old railway track below the Bole Hill Quarries (SK 248793-248800), as well as of many on Wildmoorstones Edge (SK 264807-271815). Such stones are likely to date from the twentieth century, since the use of wood-pulp for paper making was introduced only late in the nineteenth century. Since most of these stones are undamaged, they must have been abandoned through lack of demand as industrial technology changed.

Location of quarries and millstone-making areas

As far as is known there has not previously been published any comprehensive statement as to the actual sites where millstones have been made, and it is hoped that one of the important contributions made by the present paper is the listing in Table 1 (see Appendix) and the mapping in Fig 2 of the more important places

where millstones were made and where good physical evidence of the industry remains. In Table 2 numerous other places, probably of lesser importance but where there is evidence of some kind are listed. From these tables it can be seen at once how the industry was both extensive and intense. Apart from the four places where limestone was used (see Table 2), and for Alton and Stone Edge Quarries, which were in the Crawshaw Sandstone, all the sites lie on the millstone grit, the boundaries of which are approximately indicated in the map in Fig 1. The grit is not of the same texture throughout; several different strata are involved in the sites in Table 2. However, all the principal sites, listed in Table 1, are on the Chatsworth/Rivelin grit, which lies above the Ashover and Kinderscout grits. Evidently it was the Chatsworth/Rivelin grit which made the best millstones. The author is doubtful of the suitability for corn millstones of the rock in some of the quarries and sites in Table 2, as far as can be judged from the rock that is now exposed.

While the distinction made in the importance of the sites for millstone making, represented by the division into Tables 1 and 2, is fairly clear, it must be emphasised that it is based on the author's judgement from the evidence available. Some of the sites in Table 2 might have had much more relative importance in earlier centuries. That the sites in Table 2 were not generally mainly concerned with millstone-making but had other, more important, uses for their stone seems to be indicated by the entries for quarries in the millstone grit given by Robert Hunt in 1858.¹¹ These have been re-assembled in Tables 3 and 4 for Derbyshire and South Yorkshire respectively. It is likely that many, if not most, of the quarries listed in these tables are the same as those at many of the sites listed in Tables 1 and 2, and therefore produced millstones at least occasionally. Yet only those quarries on 'Burbage Moor' (a name which may well have been used to describe a wider area than that now so labelled on O.S. maps) are shown as millstone producers. It is not possible, of course, to identify most of Hunt's quarries as the names are generally insufficiently specific and no identifiable location is given. The name of the nearest station, as given by Hunt, has been included where it might give a clue to location. It seems likely, however, that Coxbench, Pillough and Stancliff are the same as Coxbench,

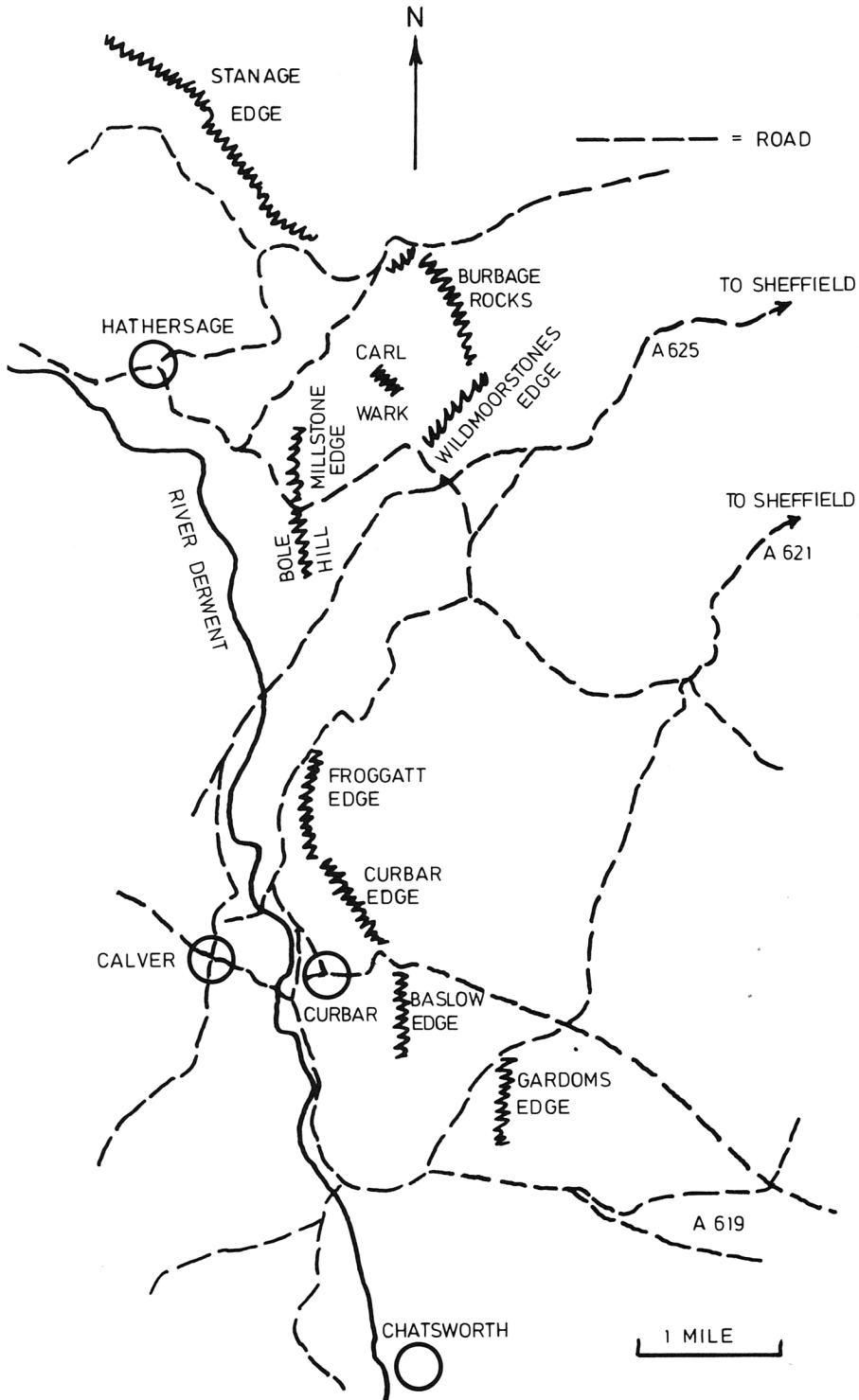


Fig 2 Outline map showing some main areas of manufacture of Derbyshire Peak millstones.



Plate 2 Block similar to that in Plate 1, after splitting, with upper piece supported on small lump of stone. (Photo by R.T. Doncaster)



Plate 3 Block of millstone grit on Hathersage Moor (at SK 251807) evidently intended as blank for a millstone. Centre 'pop' visible, 34in from the three wedge marks, thus indicating intended finished diameter of about 64in.



Plate 4 Partly-finished millstone 56in diameter resting on an undressed millstone blank of same size on Baslow Edge (about SK 260740). Upper face finished flat with hole 7in diameter cut half-way through. Underside rough, convex, and damaged.



Plate 5 Circular block of millstone grit prepared as blank for millstone on Curbar Edge (at about SK 258750); 56in diameter, 10in thick at cylindrical edges, no hole yet cut.



Plate 6 Daystone on Hathersage Moor (at SK 251807) partly worked as millstone, with flat face and circular shape cut, 46in diameter, 8in hole cut about 6in into stone.



Plate 7 Millstone partially formed from daystone on Hathersage Moor (at SK 255805), flat face cut and edges partly cut, 68in diameter, 8in hole cut a few inches deep, not yet turned over for convex surface to be shaped. Total thickness of blank did not exceed 12in, so degree of convexity would have had to be small.



Plate 8 Partially-formed millstone as in previous examples, but turned over for convex surface to be shaped and edges to be cut. (Photo by R.T. Doncaster)



Plate 9 Broken millstone on lip of Baslow Edge (at about SK 260740) with roughly-shaped convex surface facing observer, finished flat surface underneath with hole cut half-way through. The marks cut on surface may well be mason's marks. This was evidently an early mushroom-type millstone.



Plate 10 Partially-formed millstone with circle cut to indicate hole in convex face. (Photo by R.T. Doncaster)



Plate 11 Completely finished and apparently undamaged intermediate-type millstone at Curbar Edge (at about SK 258750), 58in diameter, hole 8in diameter, thickness 14in in hole, 9in at edge, cylindrical in form. (White bar is 12in long.)



Plate 12 Completed mushroom-type millstone with rounded edges at Millstone Edge (at SK 248803), 72in diameter, 22in thick in hole, 10in at edges.



Plate 13 Finished cylindrical millstone at quarry on Wildmoorstones Edge (at SK 265810), 52in diameter. Probably twentieth century.



Plate 14 Group of completed millstones at Stanage Edge (at about SK 252830). Probably early twentieth century. Dimensions: 1 stone 49in diam, hole 9in diam, 12½in thick at edge: 1 stone 56in diam, hole 11 in diam, 14in thick at centre, 12in thick at edge: 4 stones 60in diam, hole 11in diam, 15in thick at centre, 12½in thick at edge: 1 stone 61in diam, otherwise same as 4 stones above.

same, as evidenced by Plate 15 showing a block at Bole Hill Quarry of only 36 inches diameter with only the circular flat face cut. Most of the abandoned type (3) stones are more or less finished. It is interesting that Radley states that there 'was one prevalent method of working a stone [of new type]. A block of gritstone was hewn into a hexagonal form, and placed on a rough pedestal, trimmed, inverted, and completed. The hole was added afterwards.' The evidence for the hexagonal stage seems very scanty, and it is thought that the generalisation is unsafe.

The pulpstones (or edge runners) made in the Ashover area in the middle decades of the twentieth century were cut from blocks by power-driven machinery. It is likely that stone-cutting machinery was introduced at most of the twentieth-century quarries. The central holes were trepanned, not drilled, for piles of the excised cores remain at the quarries. Photographs of these have been published.¹³

Tools and quarry facilities

Richard Doncaster was given a list of the tools used in millstone making by a man who had worked in the industry in the early part of the twentieth century. Only the names of the tools were given, without any description. The list was as follows:—

- Pick
- Kevel



Plate 15 Block of millstone grit at small Bole Hill quarry (at SK 249799) with flat face and circular shape cut, 36in diameter. Probably twentieth century.

- Mau(l) — a metal tool
- Punch
- Wedge
- Pitcher
- Hammer
- Hadge/Adze/Axe
- Plug and Feather
- Reamer

The last two were not traditional tool-names in the industry.

According to the OED a kevel is a kind of hammer for rough-hewing or breaking stone; a maul is a heavy hammer, more usually of wood; and a pitcher is an iron bar for making holes. A plug and feather is the combination of a conical and flat wedge(s).

The tools, being of iron or steel, would need attention from a smith from time to time. There are indications that crude smithies were built at some of the quarries and edges. Richard Doncaster has found signs of former buildings on Beeley Moor; they were built against rock walls. Radley¹⁴ has described an early smithy just below Gardom's Edge at SK 271727, and Doncaster has found another a little to the south-east at SK 277716; both of these have stones which show grooves which are almost certainly the marks of tool-sharpening. Signs of a smithy remain on Wildmoorstones Edge at SK 265805; this appears to have been about 8ft square with an anvil-stone in the centre, and built against a vertical rock-face which shows a row of holes in which presumably boughs were



Plate 16 Stone cut roughly circular and with crossed grooves cut on plane of face, at Millstone Edge (at SK 248803). The presumption is that the crossed grooves represent the beginning of the face-dressing process, with the remainder of the face to be cut by a less-skilled worker. 60in diameter. Few other specimens like this have been found in the Peak District (only on Beeley Moor), but similar examples of the process have been found in Wales (see ref. 2).



Plate 18 Unfinished hollowed-out (concave) stone at Baslow Edge (at about SK 260740), 72in diameter. Purpose not known.

fitted to make a wood-and-heather (or wood-and-sod) roof.

For lifting the stones, cranes would have been needed. There is evidence of their use. Plate 17 shows what was almost certainly the base-stone for the jib of a tripod-type of crane on Wildmoorstones Edge. On Beeley Moor there are piles of stone in the right positions at the delves for the support of the members of a simple crane. Probably in many situations sheerlegs would have been used on a temporary basis, thus leaving no recognisable remains.

Mason's marks

On a proportion of the older abandoned millstones can be seen inscribed marks which may



Plate 17 Finished stone in millstone grit at Wildmoorstones Edge Quarry (at SK 265810). Probably not a millstone, but perhaps the base of a small jib crane. 48in diameter.

- W BASLOW EDGE, CARL WARK, GARDOM'S EDGE
- W BASLOW EDGE
- JF BASLOW EDGE
- + HATHERSAGE MOOR
- ∩ CARL WARK
- XX WILDMOORSTONES EDGE
- B+ } CARHEAD ROCKS
- P } CARHEAD ROCKS
- B } CARHEAD ROCKS
- T BEELEY MOOR, NOT ON MILLSTONE
- +X GARDOM'S EDGE
- IR GARDOM'S EDGE

Fig 4 Mason's marks.

reasonably be interpreted as mason's marks — or perhaps more accurately as millstone-makers' marks, since the trade of millstone-maker was usually separated from that of stone-mason. These marks are of reasonably consistent size, with a longer dimension of about six inches

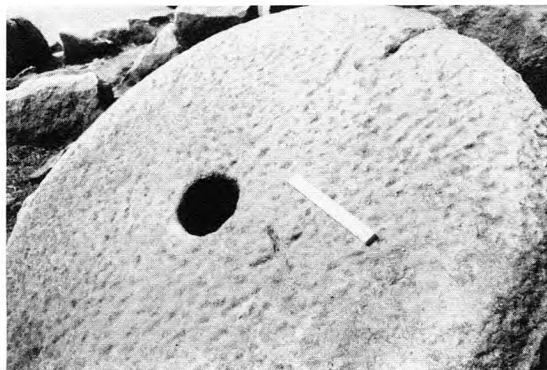


Plate 19 Mason's mark (X) on abandoned millstone of mushroom type on Hathersage Moor (at about SK 255805). (White bar 12in long.)



Plate 20 Mason's trident mark on a block of millstone grit on Hathersage Moor (at about SK 251807).

(15cm). Those observed by Richard Doncaster and the author are shown in Fig 4. See also Plates 19 and 20.

Possibly all *finished* millstones, removed from the site of manufacture for sale, had such marks to enable the maker to be correctly paid for his produce. What is puzzling is that Radley gives a rather different picture from the author's. Referring to what he calls the 'Old Type' of millstone (our type 1) he says:—

Each stone carries a mark, which looks like a mason's or lading mark. The different marks are listed below; the frequency of X might imply illiteracy:

Place	Mark
Baslow-Curbar	SG
Carl Wark	XX, RT, TC, TC8W, R7W, TXX8W
Froggatt	XX, XD, W, IW
Gardoms	XXW, W
Hathersage Moor	XO
Wildmoorstones	XS, DX, WR, T, RX.

There seems no possibility of reconciling this with the present author's observations.

Transport of millstones

In some areas (e.g. on Beeley Moor) there are trackways linking the quarries or delves to recognisable roadways. However, in general it has to be said that practically nothing is known of how millstones were transported between the place of making and the main arteries of transport; neither of the common suppositions that either sledges were used or the millstones were rolled in pairs joined by a wooden pole seems to bear any serious consideration. In the former case the tractive effort required on the level and uphill parts of the route would be prohibitive, and in the latter the chipping of the finished

millstones on rocks in the path would surely have been unacceptable. It is probable that, at least in the last hundred years or so of operation, special wheeled vehicles would have been used.

The Bole Hill Quarry Railway

This railway runs down from near Millstone Edge, past the Bole Hill quarries, to Grindleford. Much of its upper course is lined with hundreds of abandoned millstones and it seems natural therefore to connect it in some way with the millstone industry. Nevertheless, the connection is tenuous. The railway was built in 1903, to standard gauge, to link the larger Bole Hill Quarry (SK 248793-248798) to the Midland Railway at Grindleford Station, and its purpose was to carry stone blocks for the construction of the Derwent Valley Water Board's dams in the Upper Derwent Valley. When these dams were completed in 1910-11, the Bole Hill Quarry Railway closed. A good account of it is given by Bowtell.¹⁵ It was an interesting short railway, with a rope-hauled incline up from Grindleford station, and with zig-zags on the upper stretch, which was worked by locomotives. Unfortunately there are discrepancies between Bowtell's map and the Ordnance Survey six-inch revision of 1915, and between both of these and what can be traced on the ground.

Starting at the upper end of the line, there is a well-graded, embanked formation which extends from the tracks below Millstone Edge (SK 248800-248807), across the A625 road at SK 248800 and then on a down-grade in a straight line below the small Bole Hill Quarry

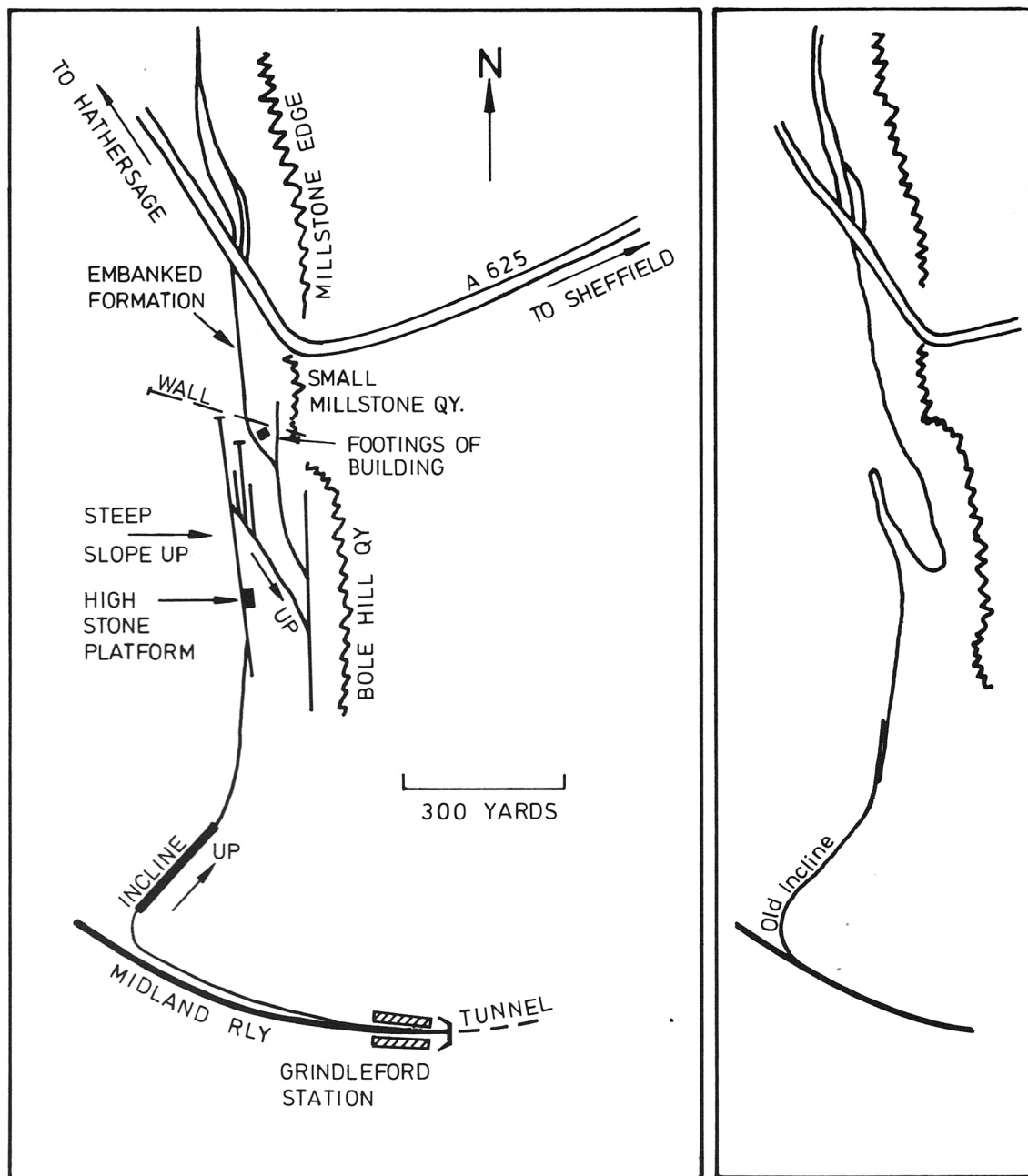


Fig 5 *Left:* Bole Hill Quarry railway as determined by ground indications, June 1981.
Right: As shown on six-inch O.S. map of 1915.

(SK 248799) — which was undoubtedly used for making millstones — until it passes through a wall, shown in the author's survey map in Fig 5. It then diverges and joins other tracks as indicated. The tracks as so far described were

shown as tramways on the 1915 revision of the six-inch O.S. map as shown on the right-hand sketch map in Fig 5. They look like tramway tracks. But, according to Bowtell, the railway started below the wall and the track so far



Plate 21 Abandoned twentieth-century millstones alongside the track leading to Bole Hill Quarry, looking up the slope.

described was only a 'footpath'. Below the wall, on the east, is the large Bole Hill Quarry which was used to provide stone for the Derwent reservoirs. The railway layout shown on the 1915 O.S. map was undoubtedly erroneous, and that shown by Bowtell very nearly correct, at least from the wall downwards; but the present author presumes to state that his version in Fig 5 makes some significant corrections to the layout of the northern end of the line. The sharp reverse curves of the O.S. map are not supported by physical evidence.

As already stated, all along the sides of the track from the road down to the site of the old railway sidings facing Bole Hill Quarry lie hundreds of abandoned but mostly completed millstones; see also Plate 21. It is reasonable to ask why they should be abandoned in this place unless they had been customarily carried down to Grindleford by the railway during the years it was running. As already stated, they are obviously millstones of comparatively recent age, and could well date from the period of

operation of the railway. It is even possible that the closure of the railway was the reason for their abandonment.

Acknowledgement

It will be clear from the frequent references to him that Richard Doncaster has rendered outstanding assistance in the work for this paper, and the author is extremely grateful to him. He has given unstintingly of his time and knowledge both in the early field work when he acted as guide to the remains on Hathersage Moor and Wildmoorstones Edge, and in the actual preparation of the paper when, among other things, he visited or re-visited nearly all the sites listed by the author and also added substantially to their number.

Notes and references

1. Millstone grit is essentially a type of sandstone containing a high density of small rounded quartz pebbles, usually well under 1cm in maximum dimension.

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6. D. Hey, *Packmen, Carriers and Packhorse Roads*, (Leicester, 1980), 140-1.
7. D. Defoe, *A Tour thro' the whole island of Great Britain*, Edition of 1927, Vol.2, 582-3.
8. A.H. Smith, *The Place-Names of the West Riding of Yorkshire*, English Place-Name Society (Cambridge, 1961), Part 1, 299-300.
9. L.H. Butcher, 'Wharncliffe: quern workings', *Archaeological Field Guide, Sheffield*, Prehistoric Society (1970), 36-7.
10. E.g. S. Caulfield, 'The beehive quern in Ireland', *Journal of the Royal Society of Antiquaries of Ireland*, 107 (1977), 104-138 (includes review of querns in Britain); R.H. Hayes *et al.*, 'The distribution and lithology of beehive querns in Northeast Yorkshire', *Journal of Archaeological Science*, 7 (1980), 297-334.
11. R. Hunt, List of Quarries in *Mineral Statistics*, H.M.S.O. (1858).
12. Radley, *loc. cit.*
13. F. Rodgers, 'Stones for mills', *The Field*, 13 September 1962; also Anon., *Countryman*, Autumn 1965, 203 and 206.
14. J. Radley, 'A millstone maker's smithy on Gardom's Edge, Baslow', *Derbyshire Archaeological Journal*, 84 (1964), 123-7.
15. H.D. Bowtell, *Reservoir Railways of Manchester and the Peak*, Oakwood Press (c.1980), 68-88.

Appendix

TABLE 1
PEAK DISTRICT OF DERBYSHIRE
Principal Millstone-making Areas (listed from south to north)

<i>Name</i>	<i>Grid ref. (all SK)</i>	<i>Evidence to be seen</i>
Gardoms Edge	272726-272737	Numerous mushroom-type millstones
Baslow Edge	261737-260747	Numerous mushroom-type millstones One concave stone
Curbar Edge	261747-251760	Numerous mushroom-type millstones A few millstones of apparently modern type in early stages of making
Froggatt Edge	251760-252773	Numerous mushroom-type millstones
Bole Hill quarries (‘Millstone Quarry’ on 1st edn 1in O.S.)	248793-248799	Numerous modern-type millstones, mostly finished
Millstone Edge (or Booth Edge) (‘Millstone Quarries’ on 1st edn 1in O.S.)	248800-248807	Numerous mushroom-type and numerous modern-type millstones. One millstone with crossed grooves.
Hathersage Moor generally, between Burbage Rocks and Millstone Edge		Some mushroom-type, but mainly intermediate- or modern-type millstones
Wildmoorstones Edge	264807-271815	Numerous modern-type millstones. Some of mushroom type
Carl Wark	261814-258815	Numerous mushroom-type and a few modern-type millstones
Burbage Rocks	268817-263829	
Stanage Edge	252830-224856	Numerous modern-type millstones

TABLE 2
PEAK DISTRICT
Other Millstone-making Areas (listed from south to north)

<i>Name</i>	<i>Grid ref.</i> <i>(all SK)</i>	<i>Product</i>	<i>Reference</i>
Coxbench	37 43	Millstones or grindstones	10
Alderwasley	c.32 53	Early grit millstones	1
Salters Way	c.29 59	Limestone burrs	1
Poorlots Quarries	337606	Pulping stones	2
Lumsdale	316609	Modern-type millstones	10
Burycliffe Quarry	217615	Millstones, pulping stones, etc	15
Robin Quarry (Cocking Tor?)	342616	Millstones, pulping stones, etc	3, 10
Overton	c.35 62	Limestone burrs	1
? (Ashover)	340623	Probably pulping stones	10
Duttons (Ashover)	336626	Probably pulping stones	10
Matlock Moor	c. 30 63	Mushroom-type millstones	4
Stanton Moor	244634	Possibly only grindstones in recent times	10, 18, 19
Stanclyffe Quarries	267638	Pulping stones (1910 period)	5
Alton Quarries	362644	Possibly only grindstones	5
Pilhough Quarries	250646	Pulping stones (1910 period)	5
Beeley Moor	c.28 66	Mushroom-type millstones	4, 6
Peasenhurst Quarry	315665	Pulping stones (1910 period)	5
Harewood Moor/ Millstone Sick	c.30 67-68	Probably mushroom-type millstones	10
Stone Edge	340672	Millstones/grindstones	3, 5
Sheldon	172675	Edge runners in limestone	2
Chatsworth	266703	Mushroom-type millstones	10, 17
Dobb Edge	277716	Mushroom-type millstones	10
Jumble Hole	273720	Mushroom-type millstones	10
Longstone Edge	c.21 73	Limestone burrs	1
Blackstone Edge	265737	Mushroom-type millstones	10
Stokehall Quarry	236769	Pulpstones (in 1950s)	7
Eyam Moor	c.22 78	Mushroom-type millstones	4
Stoke Quarry	c.24 78	Millstones, pulping stones, etc	16
Tedgeness	253784	Millstones	10
also at 255778, 255780 and 254781		'Mill Stone Quarry' on 1st edn 1in O.S.	
Flask Edge	c.284783	Mushroom-type millstones	4
Yarncliff Quarry	c.256793	Millstones	8
		'Millstone Quarry' on 1st edn 1in O.S.	
Millstone Car	298796	So named on 1st edn 1in O.S. (Doubtful site)	
Offerton Edge	212808	Mushroom-type millstones	9, 10
Houndkirk Quarry	288830	Modern-type millstones	10
Carhead Rocks	241828	Mushroom-type millstones	10
Cattis-side	240835	Mushroom-type millstones?	4, 11
Bamford Edge	214843-207857	Early grit millstones	1
Millstone Hole	269867	So named on 1st edn, 1in O.S. and 1:10,000 O.S. (1980)	12
Bell Hagg Quarry	308872	Millstones and grindstones	13
Rivelin Rocks	276873-283874	Mushroom-type millstones	4, 10
Cluther Rocks	074878	Millstones	7
Wharncliffe	c.29 97	Querns	14

Notes and references to Table 2

1. J. Farey, *A General View of the Agriculture and Minerals of Derbyshire*, London, 1811, pp.220-221 and 272.
2. Dr Lynn Willies, personal communication.
3. The Geology of the Country around Chesterfield, Matlock and Mansfield', *Mem. Geol. Survey GB*, 1967, p.71
4. J. Radley, 'Peak millstones...', *Trans. Newcomen Soc.*, 36, 1963-4, pp.165-173
5. 'The Geology of the Northern Part of the Derbyshire Coalfield', *Mem. Geol. Survey GB*, 1913, p.123
6. O.S. maps show 'Millstone Sick' or 'Millstone Sich' here; this must be a clue to location, but local enquiries led to no further information. N.B. Sich or Sitch is a small watercourse that dries up in the summer (O.E.D.)
7. 'The Geology of the Country around Chapel-en-le-Frith', *Mem. Geol. Survey GB*, 1971, p.354.
8. Rosamond Meredith, 'Millstone making at Yarncliff in the reign of Edward IV', *Derbyshire Archaeol. J.*, 101, 1981, pp.102-6.
9. Rosamond Meredith, 'Hathersage affairs 1720-1735: some letters from Thomas Eyre of Thorp', *Trans. Hunter Archaeol. Soc.* (Sheffield), 11, 1981, pp.14-27.
10. Richard Doncaster, personal communication.
11. The name 'Cattis-side', used by Radley, appears on 6in O.S. Derbys. 10 NE of 1919, and 'Old Quarry' nearby at the location given by grid ref., but no remains of millstone industry are apparent.
12. The name appears on 1:10,000 O.S. map of 1980, but no feature is shown.
13. Bell Hagg Quarry, Manchester Rd., Sheffield, given under Andrews, E., and Sons Ltd. in *Directory of Quarries*, 1931, p.20.
14. L.H. Butcher, *Trans. Hunter Archaeol. Soc.*, 7, p.38
15. Burycliffe Quarry, Elton, Derbys. given under Burycliffe Stone Co. Ltd. in *Directory of Quarries*, from 1933 to 1944.
16. Stoke Quarry, Grindleford, given under Percy J. Turner Ltd in *Directory of Quarries*, from 1933 to 1939.
17. D. Defoe, *A Tour thro' the whole island of Great Britain*, Edition of 1927, Vol.2, 582-3
18. F. Rodgers, 'Stones for mills', *The Field*, 13 Sept. 1962.
19. Anon. *Countryman*, Autumn 1965, pp.203 and 206.

TABLE 3

MILLSTONE GRIT QUARRIES IN DERBYSHIRE LISTED BY ROBERT HUNT IN MINERAL STATISTICS, 1858

Hunt's No.	Name of Quarry (with name of nearest station in some cases)	Quarryman	Freeholder	Purpose	Price at quarry	Average annual produce
2	Ashover	Mr. Lee	—	Hearths, buildings	—	—
3	Ashover	J. Watts	—	Hearths, buildings	—	—
4	Axe Edge	Buxton Lime Co.	—	Building limekilns	—	500 tons
8	Blakelow (Ashover Stn)	Wm. Ward & Sons	W. Milnes	Arkwright Church, etc	7½d/cu ft	30,000 ft
12	Brigstock (Chapel-en-le-Frith Stn)	—	—	Buildings	—	—
14	Burbage Moor	Robert Outram	Duke of Rutland	MILLSTONES for grinding	Average £7 per pair	320 pairs (800 tons)
15	Burbage Moor	Wm. Hattersley	Duke of Rutland	corn, colours	"	150 pairs
16	Burbage Moor	J.A. Shuttleworth	J.A. Shuttleworth	oils, etc	"	150 pairs
17	Burbage Moor	late Thos. Marples	- - Maynard	"	"	60 pairs
18	Chevin (Belper Stn)	J. Barton	Lord Scarsdale	Paving, etc	8d/cu ft	—
20	Coxbench (Derby Stn)	- - Chambers	—	Building	—	—
24	Darley Dale	- - Lawton	—	—	—	—
28	Duffield Bank	J. Barton	Lord Poulett	Bridges	1s.1d cu ft	—
29	Dukes (Crich Stn)	S. Sims	Duke of Devonshire	Docks and bridges	7d/cu ft	—
31	Fox Holes (Wirksworth Stn)	J. Barton	—	Docks and bridges	8d/cu ft	—
41-44	Little Eaton	King, Smith, Thomson, Swinnerton, resp.	—	Buildings	—	—
48	Matlock Moor	Wm. Ward & Sons	Misses Jalland	Building, etc	7d/cu ft	60,000 cu ft
52	New Works (Matlock Stn)	Wm. Ward & Sons	Bonsall Free Schools	Building, etc	7d/cu ft	50,000 cu ft
54	Outwoods (Derby Stn)	J. Barton	—	—	—	—
56	Pillough (Rowsley Stn)	- - Marsh	—	Building	—	—
59-60	Stancliff or Darley Dale	—	A.H. Heathcote and J. Whitworth	Building	1s.5d/cu ft	—
61	Stanton (Ashbourne Stn)	—	—	—	—	—
64	Sydnope (Matlock Stn)	J. Barton	- - Clarke	Building	—	—
65	Sydnope (Matlock Stn)	- - Lawton	—	Building	—	—
71	Whatstandwell	- - Somes	—	—	—	—

TABLE 4
MILLSTONE GRIT QUARRIES IN SOUTH YORKSHIRE (near Sheffield) LISTED BY ROBERT HUNT IN

<i>MINERAL STATISTICS, 1858</i>						
<i>Hunt's No.</i>	<i>Name of Quarry (with name of nearest station in some cases)</i>	<i>Quarryman</i>	<i>Freeholder</i>	<i>Purpose</i>	<i>Price at quarry</i>	<i>Average annual produce</i>
8	Bell Hagg (Sheffield Stn)	W. Townsend	Vicar of Sheffield	Ashlar, walls	10d/cu ft	1200 tons
20-27	Brincliffe Edge (Sheffield Stn)	Various (specified)	Various	Flags, sills etc	1s.0d/cu ft	13,600 tons total
28	Broadhead's at Greenside (Sheffield Stn)	G. Broadhead	Rev. H. Gatty	Building, grindstones	9d/cu ft	10,000 cu ft (13 cu ft = 1 ton)
29	Brocco Bank (Sheffield Stn)	J. Fidler	J.E. Adams	Flags, sills, walls, etc	1s.0d/cu ft	1600 tons
30	Brocco Bank (Sheffield Stn)	Thos. Broomhead	Thos. Broomhead	Flags, sills, walls, etc	1s.0d/cu ft	2000 tons
179	Riveling Rocks	J. Tingle	late W. Wright	Ashlar, walls	10d/cu ft	1800 tons
180	Riveling Rocks	W. Fearn	late W. Wright	Ashlar, walls	10d/cu ft	1800 tons

N.B. Although Hunt shows all these quarries as in the Millstone Grit, it is arguable that some may have been in adjacent sandstone.

TABLE 5
List of quarries or worked areas in Millstone Grit in Peak District which have been visited but for which there is no evidence (documentary, literary, or physical) of millstone making

<i>Name/Area</i>	<i>Grid ref (all SK)</i>	<i>Probable product</i>
Lumsdale	315609	Daystone-worked, but no remnants
Bentley Brook	316611	No remnants
Lumshill	316613	No remnants
New Works/New Park	243628	Grindstones?
Stanton Moor	245633	Grindstones?
White Edge Quarry	316673	No remnants
Longside Moor	c.31 68	No identifiable remnants