

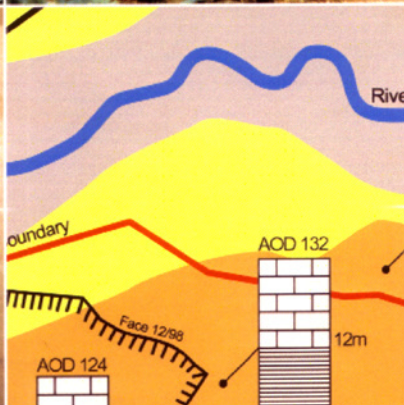
England's Heritage in Stone

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Hopton Wood Stone – England's premier decorative stone

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Whereas Portland is undoubtedly the best known English prestige building stone, historically Hopton Wood Stone quarried in Derbyshire has probably been the most widely favoured British stone for decorative interior work. However the latter has usually only achieved 'footnote' status in architectural descriptions.

Apart from occasional promotional publications and equally rare references in the technical press, there have been no accounts of the stone, its production and applications, until recently. Historical research over a number of years into the subject was presented as part of a review of quarrying in the area as a whole (Thomas 1999 and 2000). This account summarises and further updates that earlier work, concentrating on the history of working.

An unusually high number of myths and misconceptions surround the stone; even its source has been open to serious legal and technical challenge on a number of occasions.

INTRODUCTION

The list of C 19th and early C 20th buildings public and private, in which this beautiful cream stone has been employed for flooring, staircases, interior cladding or sculpture might suggest that few self respecting grand houses, great churches or impressive municipal edifices lacked examples.

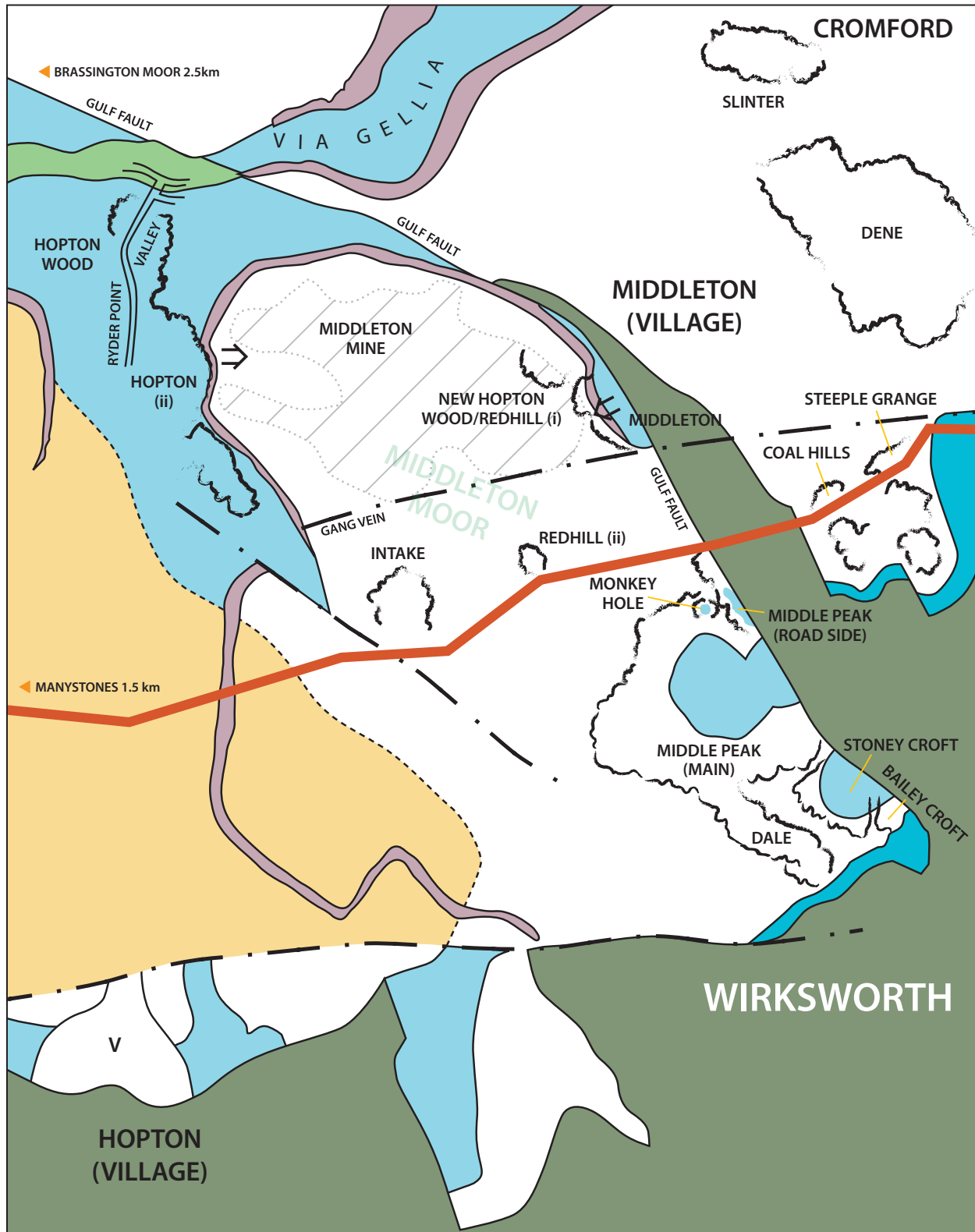
In the trade until the Inter-War period, it was frequently sold as "marble" and even justified as such, using mistaken geological reasoning. The overlying lava was presumed incorrectly to have been a heat source which altered the original limestone to a marble. The lava did not have this effect; ironically where occasionally volcanics did affect the limestone, the latter was rendered unusable.

The original quarry source of both the stone and the name Hopton Wood was only active until about 1790. Almost all the material won subsequently was drawn from nearby Middleton Wood (described here as Hopton (ii) Quarry) and Middleton Quarry in Middleton Village itself. However since about the mid-C19th, at least four other sites have produced the stone under that name "officially",

viz Middle Peak (roadside) and Middle Peak (main), Many-stones and Brassington Moor Quarries. Over time, two or three other units have also attempted to sell the product to a lesser or greater degree. Despite a chequered history and some notable periods when the stone was unavailable, it is still produced and even in high demand.

To complicate the picture even further, the Hopton Wood companies at various times produced a light variety (i.e. here termed "classic" Hopton Wood), and in much smaller quantities, a darker variant. In addition, from other sources, they also quarried and polished a number of fossil and so-called birds eye "marbles", markedly different in appearance to Hopton Wood Stone, dark or light. The firms' association with these co-products, has frequently resulted in these materials being wrongly described as Hopton Wood.

The name itself has been rendered as Hopton Wood, Hoptonwood and, particularly by the company until the 1950s, as Hopton-Wood.



KEY

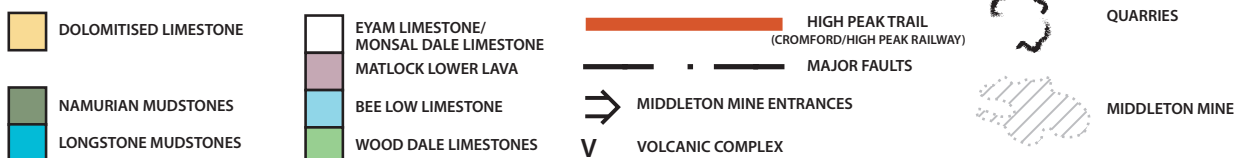


Fig. 1 Hopton Wood Stone: Local geology and quarry locations. (Sketch map - not to scale - from various sources).

TOPOGRAPHIC CONTEXT

The stone occurs in the south east of the Derbyshire Peak District. The northern limit is defined by the deep, wooded, winding, but generally east-west trending so-called Via Gellia Valley, with its intermittent stream, the Cromford Brook. Running south from Ryder Point is an important subsidiary valley, to the east of which Middleton Moor (1km²) rises to over 350m AOD. Beyond the moor to the east is Middleton Village (a community which until a decade ago, had an uncanny resemblance to many settlements on Portland). Further east still, the land falls away steadily to Cromford with its Arkwright textile mill connections. To the south of the Moor, the original varied terrain has been almost totally modified by Middle Peak Quarry (covering 0.75km²). Wirksworth town defines the southern edge of those workings.

The local geology and the locations of sites discussed are summarised in Figure 1 and Table 1 respectively.

TABLE 1:
NATIONAL GRID REFERENCES OF QUARRIES MENTIONED IN TEXT

Baileycroft	SK 287543
Brassington Moor	SK 235573
Coal Hills	SK 285553
Dene	SK 286564
Hopton (ii)	SK 264555
Hopton Wood	SK 261563
Manystones	SK 237551
Middle Peak (main)	SK 281547
Middle Peak (roadside)	SK 281551
Middleton	SK 277557
Monkey Hole	SK 283550
Redhill/New Hopton Wood	SK 275558
Steeple House	SK 287554
Stoneycroft	SK 286544

GEOLOGICAL SETTING

Hopton Wood Stone was deposited c330 million years ago in warm, clear tropical seas during the Visean Stage (and Asbian Sub-stages) of the Carboniferous (Fig 2). The geological sequence of the area is summarised in Table 2.

Hopton Wood Stone was to be found in what is now termed by geologists, the Bee Low Limestones and in particular the best (ie “classic”) varieties were worked historically below the top c7m in the area broadly between the Via Gellia and Wirksworth. The western extent is less well defined mainly on account of variable dolomitisation, but is now known to run intermittently, at least as far as the Aldwark-Grangemill and Manystones areas. This whole area supported all the main operations. Dips in the area vary in direction and are typically 4-8°. The best material was found in massive beds ranging up to 3 or 4m in thickness (fig 3).

In more detail, the Gang Vein Fault forms the natural southern boundary and the Gulf Fault, the eastern limit, ie

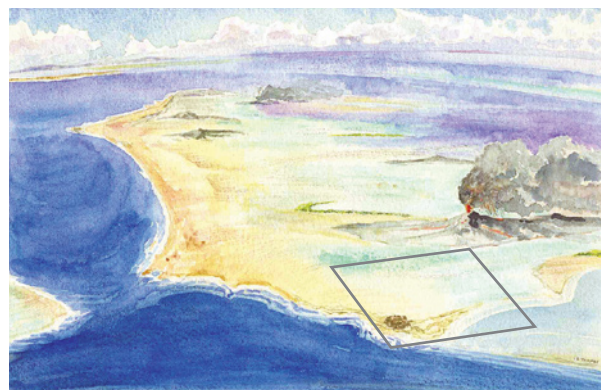


Fig. 2 *The origins of Hopton Wood Stone – “The Derbyshire Coast - 330 million years ago”. Area shown on map is framed (© Ian Thomas).*

TABLE 2

Carboniferous Sub-Stage	Formation	Thickness (m)	Local/Formal Name
Brigantian	Longstone Mudstones	<11	Cawdor Shale
	Eyam Limestones	23	Cawdor Limestone
	Monsal Dale Limestone	50	Matlock Limestones
	Lower Matlock Lava	10-14	
Asbian	Bee Low Limestones	140	Hoptonwood Limestone
Holkerian	Woo Dale Limestones	+50	Griffe Grange Bed

(in part after Cox and Harrison 1980; Aitkenhead et al 2002 etc).

Thicknesses in metres

approximately coincident with Main Street, Middleton.

However to the south of the Gang Vein Fault, the gradual extension of the various quarries eventually coalescing to form Middle Peak Quarry in the area between that fault and Wirksworth, revealed more outcrops (Thomas 2000). The first of these to be exploited for Hopton Wood Stone was a series of small roadside exposures (termed here “Middle Peak (roadside)”), probably initially obscured by scree alongside the existing road from Wirksworth to Middleton. Although further south, Stoneycroft and Baileycroft quarries reached these beds probably by the 1900, there is no evidence of them having been worked for decorative stone purposes. The fact that the character of the Bee Low Limestones changes on moving southwards, to become thinner overall, more thinly bedded, less pure, and reefal in character (Smith et al 1967 p16; Cox and Harrison 1980 p7) may account for this.

“Classic” Hopton Wood Stone is typically a relatively fine shelly, creamy-grey limestone with most of the former voids filled by recrystallised calcite (in geological terms, a biosparite (Folk 1959)), but varieties comprising a limey mud containing some shelly material (a biomicritic) and others with minute pellets set in a crystalline matrix (pel-sparite) are also relatively common; the latter is particularly to be seen in some of the more finely rendered craftwork. Macrofossils are rare.

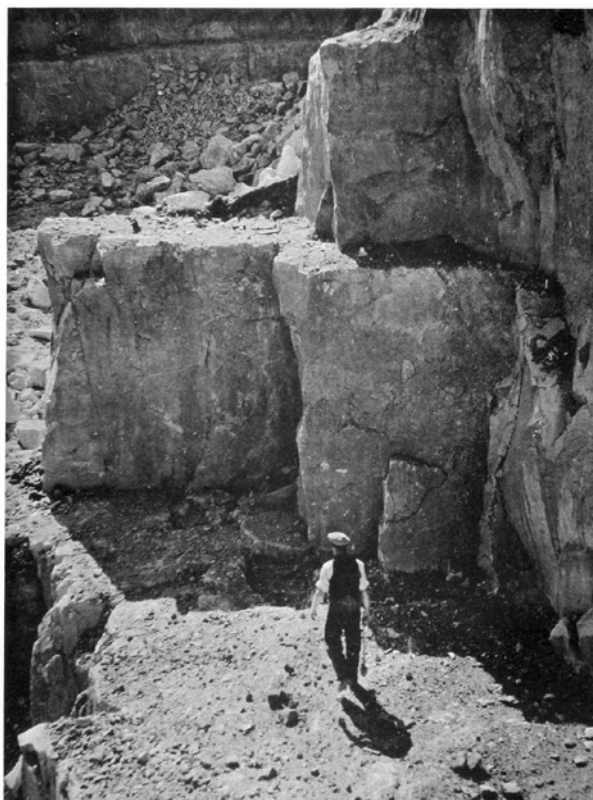


Fig. 3 *Massive bedding in Middleton Quarry (Anon 1947)*

All the stones noted below were frequently referred to and often marketed as ‘marbles’ on account of their ability to take and retain a high surface polish. The trade and some of the geological literature claimed that Hopton Wood specifically was a marble in the geological sense also. For example a promotional pamphlet of c1910 (Anon 1910?) by Hopton Wood Stone Firms Ltd (HWSFL) entitled *Geological Facts Concerning Hopton-Wood Stone*, considers the material to be a geologically true marble, the original limestones having been allegedly recrystallised by the heat (marmorised) of the overlying basaltic Lower Matlock Lava. This line was perpetuated in the trade into the inter-War period (see for example Lamb 1933), but not reiterated in

the company’s well known and for the time, lavish post-War book directed to key potential users (Anon 1947). Nevertheless, this earlier view is often still retold locally. (fig 4)

Whereas the thick, generally impervious weathered volcanic cover (known locally as the Great Clay), probably greatly reduced the extent to which percolating surface waters could iron stain the pure limestones below (so that it retained its light colour), ironically where the presence of this dark basaltic material may have affected the Hopton Wood Stone directly, it did so adversely. In places it appears to have adulterated the stone by introducing iron oxide staining and silica, thus causing it to be rejected by quarrymen. Furthermore it is understood that quarry workers also reported broken limestone surfaces at some points just below the lava, which may have been the result of thermal shock, but no details are known.

The highly uneven surfaces over which the lava flowed had been produced by intense tropical weathering so that in some instances, the lava penetrated into cavities many metres below the normal position of the top of the Bee Low Limestones (Waters and Ineson 1981). However Smith et al (1967) indicated that the only instances of thermal alteration (marmorisation) encountered in the Peak limestone (except in Millclose Mine) had been in respect of four intrusive, not extrusive igneous contacts. Furthermore Walters and Ineson (1981) in their detailed analysis of igneous activity in the Peak District make no mention of limestone alteration.

On a related theme, the presence of euhedral quartz (Cox and Harrison 1980 p46) and a marginally higher iron content in the ‘Dark’ Hopton Wood Stone (which occurs at the top of the sequence), suggests that these may have been due to volcanic ash fall in advance of the lava encroachment.

Another economically negative effect of local vulcanicity was the increasing amount of weathered lava which had to be removed to facilitate access to the Hopton Wood beds. This was such that it eventually led to the demise of surface quarrying at both Hopton (ii) and Middleton Quarries. Incidentally, at the original Hopton Wood Quarry, any



Fig. 4 *Middleton Quarry c1910. Hopton Wood Stone occupies lower half of photograph. The lava is within the rough ground immediately above the level with the quarry tubs. Above are the Monsal Dale Beds. A major fault (Gang Vein) runs across the left hand side above the waste chute. The scale can be judged from the ladder (c 7m) on the far right. (Anon 1910?) (NSC collection).*

overlying lava had been removed by natural erosion long beforehand, and the location itself is much lower (c70m) in the Bee Low Limestones succession, so the lava had absolutely no impact, detrimental or otherwise upon the stone at the original source.

The other local varieties of 'marble' (Types (c), (d) and (e) below) associated with the Hopton Wood companies, were all won from a relatively high point in the Eyam Limestone sequence at Coal Hills and Steeple House Quarries, these being to the east of the Gulf Fault

HOPTON WOOD COMPANIES' PRODUCTS

From before 1850, the concerns then or later involved with Hopton Wood Stone were operating quarries at Hopton (ii), Middleton (village), Coal Hills and Middle Peak (roadside). From these sources by 1879 if not earlier, they were producing at least five types of decorative stone, all capable of taking a high polish and frequently cited as 'marble'. These can be summarised as follows:

(a) 'Classic' Hopton Wood – (since the 1870s often known as Light Hopton Wood as distinct from the dark variety – see below) – a very attractive and consistently light cream stone of very fine crystalline calcite with varying proportions of comminuted often only very marginally darker (buff) crinoidal debris (max. cross sectional size typically c 5mm). However in some of the best quality stone, no crinoidal material is visually apparent in polished hand specimens. Some examples of cut stone do display occasional cross sections of large productid shells (up to 100mm across) which are usually seen in a lighter colour (even off-white), but this variety is otherwise virtually devoid of macrofossils. The proportion of voids is very small making this a very compact material (fig 5). When weathered, the stone can show a little more irregularity in that the hard crinoidal debris stands slightly proud of the general surface, but the stone retains a sharp arris even after 200 years in some cases as evidenced by the state of the carving at the 1818 Barmote Hall in Wirksworth.

This classic type accounted for virtually all the uses of note, with the exceptions referred to under (b). Extremely

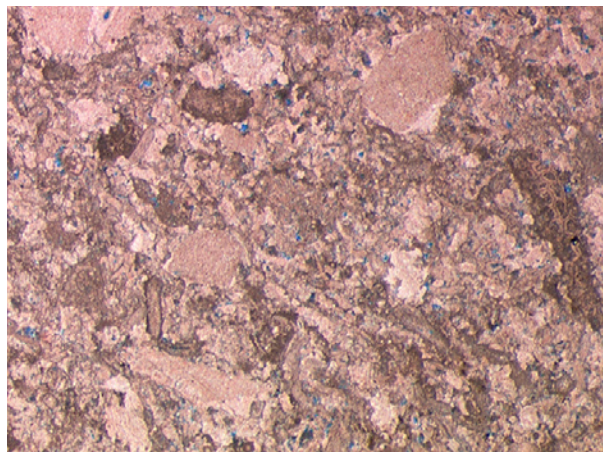


Fig. 5 Hopton Wood Stone – stained thin section (field of view – top to bottom – 8 mm) comprising bioclastic fragments including crinoids, molluscs, coral serpulids and calcareous algae. Porosity (blue) is very low (G Lott, ©NERC).



Fig. 6 Large block of Hopton Wood Stone (original captions vary-120-282 tons) (various sources - NSC collection).



Fig. 7 Hopton Wood was widely used locally for setts and kerbs. The Dale, Wirksworth (Author).

massive, widely jointed beds (providing some blocks up to 4m in maximum dimension) have been exploited, but even the thinner beds worked were c1m in depth and were employed particularly for kerbs and setts (figs 6, 7). Fe_2O_3 content is typically under 0.02%. This type was drawn from almost all but the highest (see below) of the Hopton Wood Beds (Bee Low Limestones) in the Hopton Wood and Hopton (ii) Quarries as well as from Middleton Quarry. For a short period (say c1870-1920), it was probably won from Middle Peak (roadside) Quarry. In addition to the various "modern" (ie post 1954) sources described in the historical narrative below, it was also produced, sometimes under various trade



Fig. 8 Light Hopton Wood (Anon 1910?) (NSC collection). c x 50%.

arrangements with HWSFL, at Manystones Quarry, Brassington from c1860 to some point before 1910, then from the late 1920s and until 1935 (Thomas 2000) (fig 8).

For a short period in the 1990s, until the rights to the Hopton Wood Stone Company name were acquired by the present operators, the name Griffon Wood was employed in respect of the stone (as won from Brassington Moor Quarry) and the material was described as being obtained from the “Hopton Wood Measures”.

(b) **Dark Hopton Wood** – a darker buff/light brown or often mid-grey, even dove grey variety, frequently with a mottled (almost orbicular) appearance. It was apparently slightly less amenable to polishing, sometimes containing veining or stylolites (the latter were usually avoided in pieces as used). This was apparently won from the topmost c7m of the Hopton

Wood Beds in the Hopton Quarries (ii) and Middleton Quarry (and possibly in the 1980s from Middle Peak (Main) Quarry). The potential geological origins have already been described. It was marketed from the first of those sites by at least 1898, but no evidence has been found of the Killer Brothers having sold the darker stone from their Middleton Quarry before the 1905 merger with the Hopton Wood Stone Co (HWSC) has so far come to light; indeed Killers may well have considered it inferior at the time. If this is so, it may indeed partly in part explain why some commentators have challenged the very existence of the darker form as “Hopton Wood” stone.

However the darker Hopton Wood was listed in HWSC promotional material before 1900 and was later employed by a number of sculptors including Henry Moore. It was also applied to specific effect, in contrasting bands with the classic type in flooring and wall cladding, notably in Sheffield City Hall (figs 9, 10).

(c) **Birds Eye ‘Marble’** – A stone with a mid-brown sometimes greyish brown (and very occasionally, a reddish



Fig. 9 Dark Hopton Wood (Anon 1910?) (NSC collection). c x 50%.



Fig. 10 Use of light and dark Hopton Wood, Sheffield City Hall (Tarmac plc/NSC collection).



Fig. 11 Bird's Eye “marble” (Anon 1910?) (NSC collection). c x 50%.

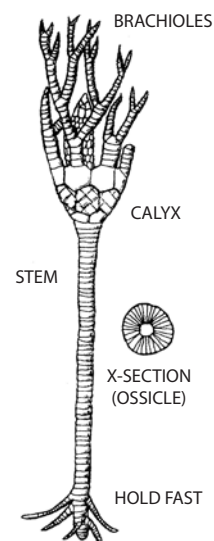


Fig. 12 Crinoid (© NSC/Author).

tinge on account of hematite) fine grained matrix, in which is set densely packed crinoidal fragments of contrasting lighter colour (white or buff). The cross sections mainly of brachioles (“arms” narrower than the main stems), being circular, display the ‘bird’s eye’ features. This variety is comparatively unusual and was almost certainly restricted to a small range of beds at Coal Hills Quarry (now on the National Stone Centre (NSC) site). (fig 11, 12)

(d) **Black “Marble” or Grey or Black Birds Eye ‘Marble’** – This was a black or very dark grey, extremely fine grained bituminous limestone comprising a fine limey mud (micrite), and sometimes completely uniform in colour (ie Black or Grey Marble). More often it contained occasional white flecks, ie sections of fossil calcite, usually of very small brachiopods (c7mm across) or small fragments of crinoids (c3mm across). This was also derived from Coal Hills Quarry and appears to have been confined to only one or two beds each up to 0.3m. (fig 13)

In 1930, encountering a higher demand than it could meet from Coal Hills, HWSFL came to an arrangement to obtain this material from then rivals Constable Hart (previously Josiah Smart and Sons) at the nearby Steeplehouse (or Smart’s) Quarry (also on the NSC site). The product was very similar to Ashford Black Marble (Thomlison with Ford 1996), although the best of the latter (produced until 1905) normally lacked any white elements.

(e) **Derbyshire Fossil ‘Marble’** – A limestone typified by very evident crinoidal material, both as individual os-



Fig. 13 Birds Eye Black Marble, Coal Hills (NSC collection). x 100%

sicles as well as sections of stems, the latter frequently up to 100mm in length and 15mm across. When polished, it tended to have a mid-brown or brownish-grey hue, the crystalline calcite of the matrix and the centre of the crinoidal stems being in contrast, cream or white. This stone was also produced from the company's Coal Hills and was extremely popular in Victorian and Edwardian times especially locally for fire place surrounds, mantle shelves, window sills and thresholds; it is frequently misleadingly referred to in house sale particulars as being of "Hopton Wood Stone". (fig 14)

Comparable material was also available from a number of other Derbyshire sources operated by other concerns, notably Chatsworth's Once a Week Quarry at Sheldon from at least the C17th (and still producing) and in the 1950s, from Dene Quarry Cromford, where it was sold

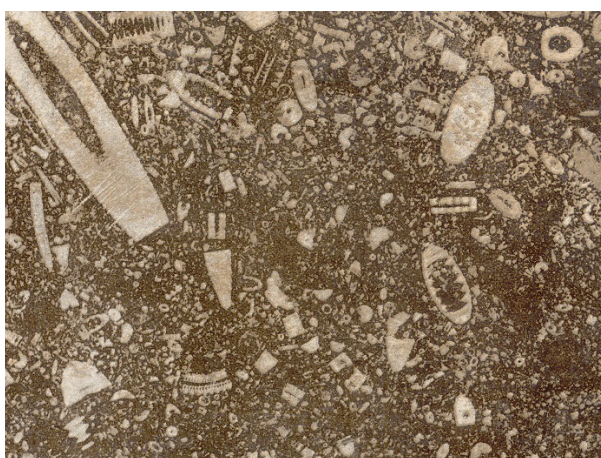


Fig. 14 Derbyshire Fossil Marble (Anon 1910?) (NSC collection). x 100%.

as Derbyshire Fossil or Derbydene. Ricklow Quarry near Monyash was another prolific producer in the C18th and C19th; the stone here often displayed a grey or mauve cast. (Barnatt 2005).

As the five main types above were actively marketed by HWSFL (and before 1905 by HWSC), this probably explains why the first two categories (a, b) correctly, but the others (c, d, e) quite wrongly, were all referred to confusingly (even by apparently authoritative writers from both in and outside the area), as "Hopton Wood Stone".

From just before 1910 until 1924, another company produced so-called "New Hoptonwood Stone, a grey type from the Monsal Dale Limestone, west of Middleton Quarry.

HISTORICAL DEVELOPMENT

The Original Hopton Wood

The name is derived from Hopton Wood in Hopton Parish and ultimately from the eponymous Gell family estate on the southern edge of the Derbyshire Peak limestone outcrop. However the vast bulk of the stone's output did not in fact come from Hopton Wood *sensu stricto*. The original workings were indeed located in Hopton Wood on the Griffé Grange holding in the north eastern extremity of Hopton parish, fronting the road now running along the



Fig. 15 The original Hopton Wood Quarry looking south west (Author).

minor valley leading northwards to Ryder Point. (fig 15)

It has been suggested (Green 1960) that the Romans employed Hopton Wood in a villa at Godmanchester, Cambridgeshire, a claim which perhaps deserves further investigation. For although the Romans mined lead ore in the Hopton area, the likelihood of working, shaping and transporting this stone from such a remote spot appears to be highly questionable. A much more probable explanation is that the stone found at Godmanchester was in fact a similar compact cream variety of Jurassic Stamford Stone (sometimes known as Stamford Marble), a few isolated beds of which are capable of receiving a high polish (pers comm. A Dawn). This was to be found only c48 km distant along Ermine Street.



Fig. 16 Henry Watson's account for chimney piece at Tissington Hall 1757 (Sir Richard FitzHerbert).

Flooring at Hartington Hall, (15 km west of Hopton) closely resembles Hopton Wood Stone. Although no written authentication could be found of it being contemporary with the original construction (early C17th), physical inspection does appear to suggest that this may be the case. However major additions were carried out in the 1860s. Even if the introduction was at the earlier date, the stone could also just conceivably have been derived from another and closer outcrop of the Bee Low Limestones.

Craven and Stanley (1991) reported the use of Hopton Wood Stone at Longstone Hall and Parwich Hall, both built in 1747. Their otherwise thorough account of Derbyshire country houses makes no reference to the stone appearing in the fabric of Hopton Hall itself, either because it is in fact surprisingly absent or it's presence was perhaps



Fig. 17 1. "Hopton Wood Stone Quarries". Monochrome watercolour by Hayman Rooke (undated but presumed 1780-90s). Probably the original site looking south (c.f. fig 15). (© 2007 Derby Museums and Art Gallery).

taken for granted. A fascinating early example of its usage is the most intricately carved 'gothick' fire surround at Tissington Hall. An original invoice on display dated 1757, is from Henry Watson of Bakewell (fig16) (Watson was one of a dynasty of highly competent wood and stone carvers who worked inter alia extensively at Chatsworth (Tomlinson with Ford 1996; Thomas forthcoming)). The earliest legible memorial stones in Hopton Wood in the floor of St Mary's Church, Wirksworth, date from about the last quarter of the C18th.

The Nottinghamshire antiquarian Major Hayman Rooke produced a watercolour of early quarry operations in hand (undated but thought to be 1780s-90s) (fig 17). Unfortunately its probable date places it during the overlap period between the original Hopton Wood workings and the inception of the new operations at Middleton Wood, termed here, Hopton Wood (ii). The configuration shown in the drawing could be interpreted as either location. However it is likely to represent the former activities (ie looking southwards) as the new workings had probably not advanced to that degree by the dates concerned.

It was also in these early years that the stone contributed to one of its most celebrated showpieces, namely the floor of the so called Marble Hall of Kedleston Hall, seat of the Curzons near Derby. Paved in 1763, the hall was to the joint designs of Robert Adam and John Paine, and the room itself was widely referred to as the 'finest Georgian

interior in Europe (Craven and Stanley 1991). Pevsner (1978) described it as 'one of the most magnificent apartments of the C18th in England'.

In 1770, John Chambers was granted a lease by the Gells to work stone in Hopton Wood. By 1773 Chambers, with an address at Sawley (strategically on the Trent near Long Eaton and only four years before the opening of the Trent and Mersey Canal), was already advertising his services as a merchant of Hopton Wood Stone. Watson (1911 p117) refers to Hopton Wood stone being employed at the Guildhall, London in 1789. It was also in this period that cantilevered staircases in the stone came into vogue.

A recent archaeological reconnaissance (by the author), revealing a trackway running southwards towards Hopton Hall, the seat of the Gells, supports the proposition that these original western workings predate the construction to the north, of the "Via Gellia" (a somewhat presumptuous name echoing the Gell's asserted Roman lineage, but relating to a road completed by that family in 1791-2 to facilitate access to the terminus of the Cromford Canal, itself opened in 1794).

By 1790, the original source appears to have been closed, but the reasons for this do not appear to be documented. They may relate to the growing influence of dolomitisation as one moves westward in the Hopton area, or to the relatively short length of face which could be readily exploited on that side of the valley.

The "Traditional" Sources

The 1770 lease to John Chambers refers to both Hopton Wood and Middleton Pastures, ie Middleton Wood (termed here for convenience, Hopton (ii)). Certainly by 1789, a second suite of quarries had been opened up, still on Gell land in the same small Ryder Point valley and in the same beds, but over the parish boundary to the east in Middleton Wood. Indeed quarries in Middleton parish as



Fig. 18 Hopton (ii) (Middleton Wood) Quarries 2006 - the southern limit of this extensive range of operations. (Author) (NB very few historical images of this site are available).

a whole were to be by far the main source of the stone until the 1950s, The product continued to be marketed throughout, as Hopton Wood Stone. and the Middleton Wood quarries themselves have almost always confusingly been referred to as Hopton Wood (eg Smith et al 1967 p16) or more often by the operators, simply as Hopton Quarries (henceforth referred to here as Hopton (ii) Quarries). In terms of scale for example, the ultimate face of the several combined and extended units at Hopton Quarries (ii) was c0.7km. (fig 18)

The quarries on Gell land were worked under a series of leases. The sequence at Hopton (ii) requires further research, but appears to be as shown in Table 3.

TABLE 3
Tentative Schedule of Hopton (ii) Leases

Unknown pre 1770
John Chambers 1770 – 1791 and possibly to the 1820s*;
George Pickard c 1821- 1842;
James Hayward/Edmund Lloyd Owen 1842-1855;
David Wheatcroft c1855-7;
Hopton wood Stone Co (HWSC) 1857-1905;
Hopton Wood Stone Firms Ltd (HWSFL) 1905 -1935**
Derbyshire Stone Ltd (DSL)1935-1969
DSL via Tarmac Derby Ltd then Tarmac Ltd/plc
1969 - present
Sub let to Croxton & Garry Ltd (later Omya plc)
1991 - 2006

* A schedule of Gell leases refers (without further detail) to a grant of an unspecified quarry at Middleton in 1807 to one, John Wiltshire.

** In 1925 much of the Gell estate was transferred to the Key family and this portion remains in their hands.

It is extremely surprising that Farey (1811) only makes a brief passing mention if Hopton Wood Stone and this, in a section on limestone quarries in general (ie not in his section on “marble”). He was normally assiduous in his detailed and comprehensive descriptions of mineral workings in the county. He does however mention that “black marble” was available one mile to the west of Wirksworth (a location which cannot readily be pinpointed today) and, more significantly, that a marble mill powered by steam was operating in the town. Circumstantial evidence now suggests that this was probably at Wash Green (pers comm. W Holmes), where, as the name suggests, a reliable supply of water was available (unlike in the limestone areas to the north of the town). The reason for Farey’s lack of reference is difficult to gauge. It is just possible that he was writing at a time when production had been halted temporarily (but his general approach was to include everything known whether working or inactive) or being totally deployed to produce flux for the iron industry. As hinted in Table 3, there is some ambiguity over Chambers’ lease-holding in this period.

Middleton Wood, with its developing Hopton Quarries (ii) was located on the western side of Middleton Moor. In 1846, 1.5km away, on the eastern flank of this plateau in Middleton village, a carpenter, William Killer had recogn-

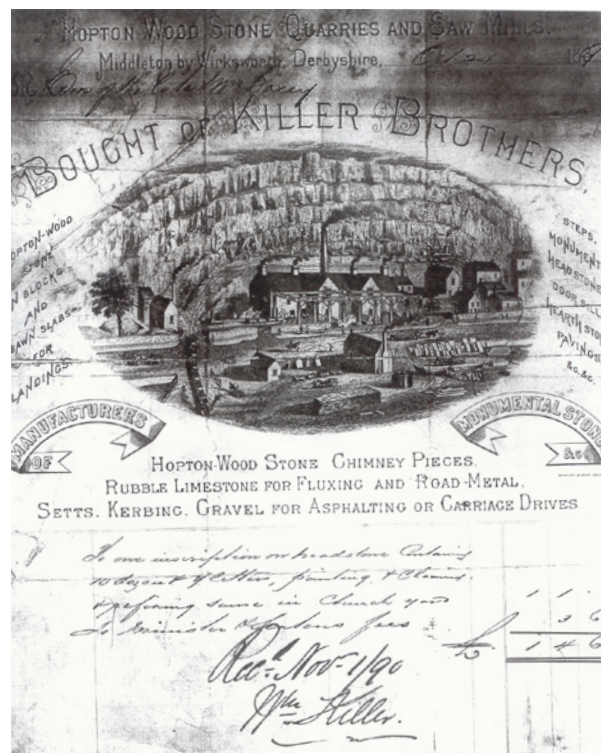


Fig. 19 Killer Brothers invoice showing Middleton quarry and workshops and rail systems immediately west of Main Street Middleton 1890 (Francis/Adrian Lowe)

ised an outcrop of comparable quality when digging footings for a workshop. The timing could hardly have been more fortuitous as the quarries on the other side of the hill were struggling to meet a large order to supply stone paving for the rebuilding of the Houses of Parliament. So he set about supplying block to the established concern. In the following decade, apparently the Killer family began running their own saw and finishing plant at their site, usually known as Middleton Quarry (Smith et al 1967 p16 again confusingly, refers to this site as Hoptonwoodstone Quarry). Over the next 50 years, the Killer Brothers acquired and demolished many more properties in the village to gain access to the best stone (the freeholds of this area ultimately passed to Tarmac plc). Their next notable contract was in

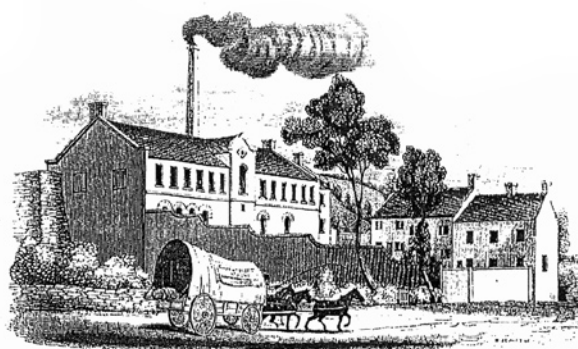


Fig. 20 Wheatcroft's Marble Mills, Sawmills, Ambergate (mid c19th) (unknown date and source).

the early 1880s when they supplied stone to floor the Law Courts in the Strand. (fig 19)

Meanwhile the Hopton Wood Stone Company (HWSC) was registered in 1857 mainly to take over the assets of one of the lessees, David Wheatcroft. Prior to 1848/9, Wheatcroft had control of the Middle Peak (road-side) Quarry (for fluxing stone) and Coal Hills Quarry (producing birds' eye and fossil 'marble') and throughout the 1840s, was a prime mover on the Cromford and High

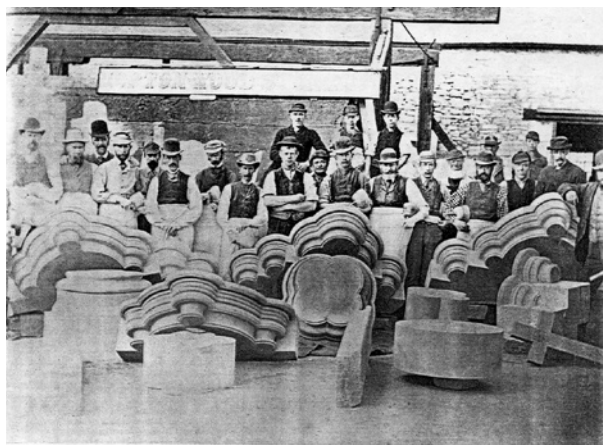


Fig. 21 Workmen probably at Hopton (ii) Quarry Works (undated but likely to be late c19th). (Derbyshire Stone Ltd/NSC collection).

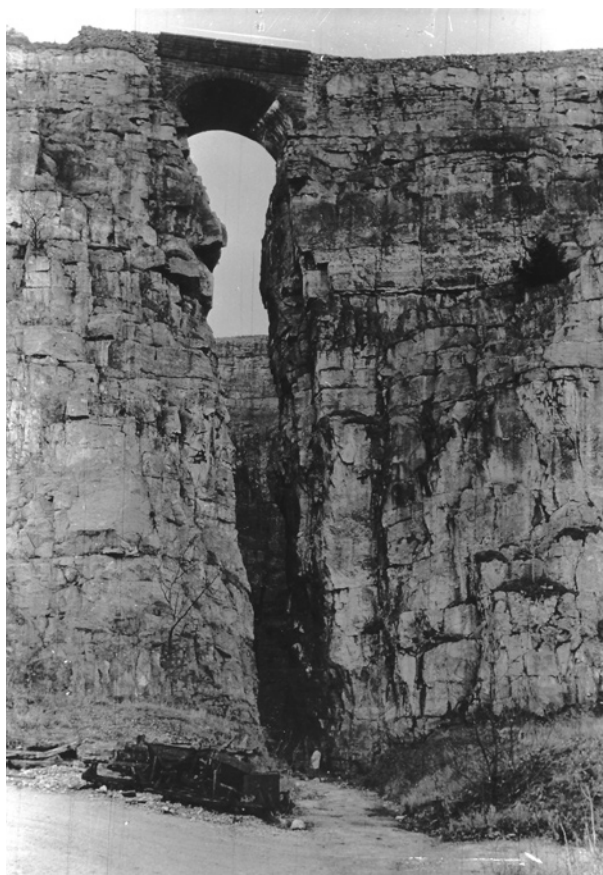


Fig. 22 Monkey Hole Quarry. The old Wirksworth-Middleton Road ran over the bridge; the lower route (front of picture) remains. Hopton Wood Stone was probably won from the lower beds (Late Albert Hallows/NSC collection).

Peak Railway, as a director, carrier, adjacent quarry-owner etc (Hodgkins forthcoming). As noted above, processing appears to have been carried out initially at Wash Green, Wirksworth, but by 1846 (Bagshaw 1846), conducted at Sawmills, a hamlet near Ambergate on the Cromford Canal which took its name from this activity. This was operated by the Wheatcrofts. (fig 20) Later still, sawing and finishing was conducted at the Hopton Quarries (ii) themselves, in buildings, the last of which were demolished in 2006. (fig 21) Well before 1898, the company also ran workshops adjacent to sidings between Coal Hills and Middle Peak Quarries. From 1904 the concern also had the lease of the Monkey Hole Quarry, linked to their Middle Peak unit, and at some stages possibly producing Hopton Wood Stone. This was worked down to the Bee Low Limestone contemporaneously with Middle Peak (roadside) by the company and pictures show block-stone production there. This product, and the need to secure a former higher



Fig. 23 Middleton Quarry overlooking Middleton village (undated but probably c WWI). (NSC collection)

road from Middleton to Wirksworth, could help to explain the somewhat desperate configuration of that operation – a deep cylindrical excavation cut vertically into a plateau of limestone, accessed from the lower road by a narrow channel out into the adjacent scarp. In much more recent times, the main Middle Peak Quarry also produced Hopton Wood Stone for a short period. (fig 22)

HWSC stone contributed to refurbishments at Chatsworth, Sandringham and many other grand buildings in this period.

In 1879, HWSC took action against Killer Brothers for 'passing off', but Killers counter-claimed on the basis that the name Hopton Wood Stone was generic and not specific to HWSC. The result was an amicable settlement. Eventually the two concerns merged in 1905 to form the Hopton Wood Stone Firms Ltd (HWSFL), only to be faced shortly thereafter a further, but more acrimonious challenge to their use of the name. (fig 23)

From 1907, Spencer a local man, then Hodson worked a quarry in the Monsal Dale Limestone for block-stone. They were shortly joined by T T Gething & Co. (both Gething and Hodson had also been agents for HWSFL (Thomas 2000: Watson 1916)). This operation was positioned immediately above and just to the west of HWSFL's Middleton Quarry and was then referred to as Redhill (not to be confused with another Redhill Quarry only 0.7km to the south). It was later known as Water Lane or New Hop-

tonwood Quarry. As they began selling their material as Hopton Wood Stone, HWSFL took action against them in the High Court for passing off. The 1910 judgement was rather ambivalent but resulted in a requirement that the rival company should be restyled New Hopton Stone and Marble Co and their product sold as New Hoptonwood Stone. Watson (1916 p 15) describes it as an alternating brown and fawn compact stone. In 1924, the quarry was sold to HWSFL, who very shortly afterwards, extended their Middleton Quarry, thereby severing the rail link to Redhill Quarry (the quarry had closed by 1930).



Fig. 24 The masons' shop, Middleton c late 1920s (NSC collection).

By this point almost any country house of substance, numerous (mainly) northern municipal edifices, as well as many churches and cathedrals subjected to Victorian make-overs, now possessed grand staircases, flooring or wall cladding in Hopton Wood.

The rigours of World War I were followed by a demand for countless local memorials, as well as 120,000 headstones for the Imperial War Graves Commission, now to be seen in dozens of cemeteries in Western Europe and the Near and Far East (Portland Stone being the other major source). (fig 24)

The Inter-War years saw the stone being utilised for example in the Liverpool (Anglican) and Westminster (Roman Catholic) Cathedrals, The Bank of England, Broadcasting House, South Africa House, Winchester College Cloisters, Shell Mex House, Sheffield City Hall and Leeds Civic Suite. (fig 25) This was also the acknowledged high point in the use of Hopton Wood as a sculpting medium (although there has also been a resurgence in the last decade). It became one of the English stones of choice for eminents including Eric Gill, Jacob Epstein, and later, Henry Moore

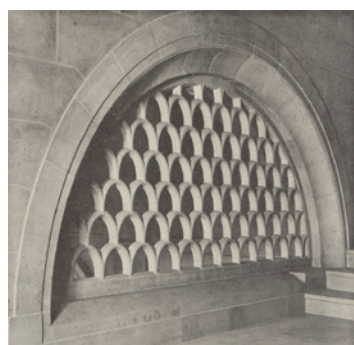


Fig. 25 Hopton Wood Stone grills in the Bank of England (Anon 1947).

and Barbara Hepworth. (fig 26)

The headstones contract and general urban rebuilding led to a buoyant period for the works at a time when many classic English stone producers were in demise. But this was not to last. At some point in 1930, the Hopton Quarries (ii) stopped working and when they resumed, concentrated largely on industrial stone. Trade agreements and disputes were rife. Another ploy to sustain the market was to merge and this became the

norm with combinations such as the British Quarrying Co (1929), Roads Reconstruction (1934) and Amalgamated Roadstone Corporation (1935), all being formed in the south and west of England and Wales to stabilise matters in those areas. HWSFL with its building/decorative stone sales was the odd one out in a group of five leading companies (plus subsidiaries) which were driven together largely by the persuasive powers of John Hadfield, all the others being primarily concerned with construction aggregates. In 1935 they formed Derbyshire Stone, which came to dominate the open market for stone in the Southern Pennines over the next 33 years, ie until its merger with Tarmac Ltd in 1968 (briefly to form Tarmac Derby Ltd, then reverting to Tarmac Ltd). (fig 27)

History repeated itself after World War II, with a further substantial order for headstones, now from the Commonwealth War Graves Commission (CWGC). As to the volume, reports are confusing and will only become better known when CWGC complete digitisation of their records. Suffice to say that Post-War references to a further 120,000



Fig. 26 The Sower, Eric Gill, BBC Broadcasting House 1931. (NSC collection)

SAWN SLABS.	
Random sizes—not exceeding 5 ft. in length.	
Per Foot Slabs	Per Foot Slabs
1" thick 1/10	1 1/2" thick 2/10
2" thick 2/1	2" thick 3/8
1 1/2" thick 2/6	2 1/2" thick 4/6
Over 2 1/2" thick .. 21/6 per foot cube.	
Slabs over 5 ft. and up to 6' 6" in length 10% extra.	
" " 6' 6" in length .. 15% extra.	
BLOCKS.	
Roughly squared, random sizes.	
Up to 5 ft. in length and not exceeding 23 cube feet ..	11/-
From 5' 1" to 6' 6" in length not exceeding 50 cube feet ..	12/-
Over 6' 6" in length and/or exceeding 50 cube feet ..	13/-
DERBYSHIRE MARBLES.	
Rough blocks as quarried.	
Black Bird's Eye ..	13/6
Grey Bird's Eye ..	10/-
Derbyshire Fossil ..	10/-
N.B. All blocks are sold subject to the nature of the stone, and no claims are allowed for any imperfections that may be discovered in the setting or working.	
DERBYSHIRE MARBLES.	
Sawn Slabs and Scantlings	
Prices on application.	
CRAZY PAVING & ROCKERY STONE	
Crazy Paving, in irregular shapes and random sizes, varying in thickness from a feather edge up to about 3", sawn at least one side, 17/6 per ton.	
Rockery Stone, rough lumps as quarried 5/- ..	
Hopton-Wood Stone for Pavements, Staircases, Window Sills, Jambos, etc.	
We can generally supply ex stock considerable quantities of blocks, sawn slabs, scantlings, etc. of second grade stone with markings which render it unsuitable for monumental or high-class architectural work, but which in soundness of texture and durability is equal to the best Hopton-Wood Stone. We can offer this material in full truck-loads at prices varying from 50% to 75% below those quoted on this list.	

Fig. 27 Hopton Wood Stone Firms Ltd price list 1932 (Frank/Adrian Lowe).

headstones being produced in this period appear to be likely to be simply a repetition of figures quoted before 1939. Post War repairs and further quality building commissions, albeit now on a much smaller scale, resulted in a further burst of activity. Although in balance sheet terms sales of Hopton Wood Stone were not dissimilar to Pre-War levels, in the money of the day, they were c60% down. Logistical problems of increasing overburden removal forced a radical rethink by Derbyshire Stone Ltd. Major investment would be required if the preferred Hopton Wood beds were to continue to be quarried. Working at greater depth could be justified by the industrial limestone market but, the relaxation of post War building licences (which had hitherto inhibited prestige building) had come too late and architectural tastes had changed, so a decision was taken reluctantly in February 1954 to cease production of Hopton Wood Stone as soon as the current order commitments had been met. Small amounts of the other 'marbles' were obtained from Steeple House Quarry into the 1970s eg for Blackburn Cathedral.

Modern Sources

By 1959, for safety and logistical reasons it proved impossible to continue extending Middleton Quarry at depth. Bold decisions were necessary. It was therefore agreed to deploy the company's mining expertise gained from large scale lead vein exploration at Matlock Bath, to develop Middleton Mine for the production of ultra-high purity industrial stone. This operation continued until closure in autumn 2006, typically producing at a rate of 4-500,000 tpa. (fig 28)



Fig. 28 Middleton Mine (Ron Duggins 1991)

Incidentally it is perhaps worth noting that from the initial Hopton Wood operations in the C18th, right through to the closure of Middleton Mine, the main product in terms of volume from the operations surrounding Middleton Moor has probably always been high purity industrial limestone, particularly as a metallurgical flux, and not Hopton Wood as building or decorative stone. (fig 29)

In 1979, sufficient blocks of Hopton Wood were located to provide new flooring for Birmingham Cathedral, by the then operating company, Tarmac plc (which had also acquired parallel interests in decorative stone finishing capacity – including Frank England Ltd of Retford who later became sole agents for the stone). This order stimulated



Fig. 29 Hopton (ii) limestone fillers processing plant, occupying some of the mid c19th buildings shortly before demolition in 2006 (Author).

a feasibility study in 1981 of possible sources of Hopton Wood and led investigators to the company's extensive Middle Peak Quarry. The main operation here, largely in Monsal Dale Beds, had concentrated on producing fluxing stone for over 150 years, turning to aggregates in the 1960s. (fig 30) At this point, working depths had extended far enough to encounter the underlying Bee Low Limestones, including the Hopton Wood Stone (also extracted much earlier at the nearby Middle Peak (roadside) Quarry). The Hopton Wood production team faced considerable difficulties in locating material sufficiently distanced from the effects of modern blasting, but getting was in hand until at least 1986 (Anon 1986), mainly in order to supply a contract for the new Glasgow Sherriff's Court. (fig 31)

Further commissions were received for 3,500 m² of dark and light Hopton Wood in respect of an unspecified prestigious Westminster office development. In the late 1980s the stone was again no longer being won. In 1990, Tarmac plc (which in 1989 had sold off most of its building stone interests, including Frank England), again changed policy, establishing a new state of the art stone saw mill at Cawdor Quarry, Matlock and resumed the search for new sources of Hopton Wood Stone, but this time, to no avail.

In 1992 however, a well-established local specialist masonry concern, Francis N Lowe Ltd teamed up with the independent company, Longcliffe Quarries Ltd to form



Fig. 30 Overview of Middle Peak Quarry. The 1980s extraction of Hopton Wood took place on the bench to the right, just below the low boundary face. Immediately beyond was Wheatcroft's/Hopton Wood Stone Co's c19th Middlepeak (roadside) operation. (Author)

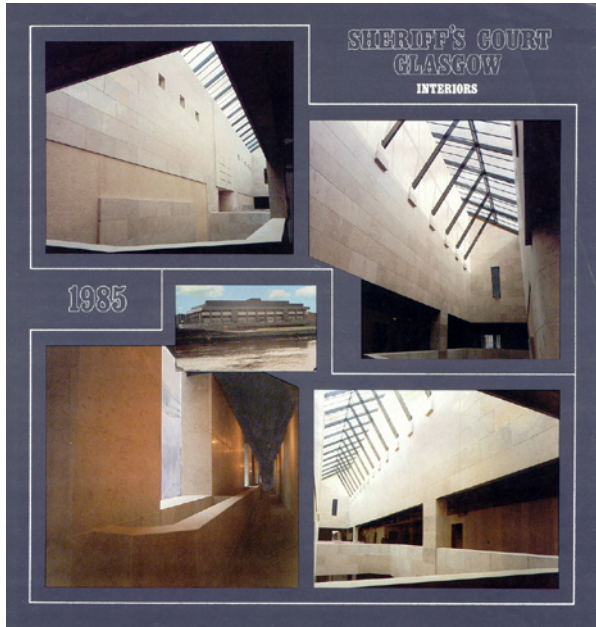


Fig. 31 *Glasgow Sherriff's Court, the 1985 project which prompted Hopton Wood working at Middle Peak (main) (Tarmac plc/NSC collection).*



Fig. 32 *1.Primary saw and sawn block at Brassington Moor Quarry (© Longcliffe Quarries Ltd 2007).*

Allied Marble and Granite Ltd. (fig 32) They now extract and saw stone from the Bee Low Limestones at Longcliffe's Brassington Moor site near Aldwark, finishing it at Lowe's Marble Works, Middleton. Initially for legal reasons, this was marketed as 'Griffon Wood Stone' but in 1998, Lowes obtained the rights to use 'Hopton Wood Stone Firms Ltd', since when the material has been sold under the Hopton Wood name. This venture was prompted by the demand from the Commonwealth War Graves Commission and production in recent years has been running at 100-200 headstones annually. In addition there has been a demand for refurbishment works eg in the Palace of Westminster, Bank of England, the Albert Memorial in Hyde Park and Tower of London, as well as 'bread and butter' requirements in paving, staircases, wall cladding and sculpture generally for the premier class end of the market. A shortage of available suitable blockstone in the last few years will be remedied by the planning approval in 2007 (subject to a S106 agreement) to extend the quarry.

Also during the 1990s, the then lessees of Middleton Mine, Croxton and Garry (wholly owned by the Swiss group, Omya), experimented with obtaining Hopton Wood block from the mine, but it is understood that too many problems were encountered, (particularly resulting from the effects of blasting), to make the operation viable. (fig 33)



Fig. 33 *Blocks produced experimentally from Middleton Mine (1990s) at entrance to Middleton Quarry (Author).*

Elsewhere locally there have been at least two other companies in the last decade attempting to use the Hopton Wood Stone name.

Following the closure of the mine in 2006, some of the last large physical remnants of the traditional industry, namely 'the Green Shed' and the so-called 'Preston End' (former wooden masonry workshops at Middleton of 1920s vintage), were demolished, as were buildings at Hopton Quarry (ii). (fig 34) A number of the latter may have dated back to the first half of the C19th. The lower parts of the Hopton (ii) Quarry complex have been leased to the Derbyshire Wildlife Trust as a nature reserve since the late 1960s. Close inspection of boundary walls in the vicinity of Middleton and Rise End shows squared blocks, some of which may be rejected headstones. (fig 35)



Fig. 34 *"The Green Shed" which housed the Middleton masons in the interwar period (2006 – immediately before demolition) (Author).*

Not only does the tradition of production continue at Lowes, another local company, Middle Peak Marble Ltd still occupies the HWSC's former yard at Middle Peak sidings, where some early buildings (c late C19th) still remain. (fig 36)

Only 3km away, near Cromford, from the 1940s into the 1960s, Dene Quarry produced a rather greyer buff Derbyshire fossil "marble" and "Hadene" stone, the latter



Fig. 35 Rejected material (possibly headstones or related blanks) in wall opposite former Middle Peak (roadside quarry) (Author)



Fig. 36 Middle Peak Marble Ltd yard – alongside the former Hopton Wood Stone Co siding from the Cromford and High Peak Railway. The older buildings date from before 1900.

being darker, but fairly similar to (and often mistaken for) Hopton Wood. These materials were employed in the Royal Festival Hall and in the Palace of Westminster in the early 1950s. That undertaking led to the establishment of the High Peak stone works, 1km south of Cromford, which later, under the management of Pisani plc still maintains there, what is claimed to be the largest imported marble and granite stockyard in the UK. Apart from serving a national market, this enterprise supplies the numerous small stone finishing enterprises concentrated in this area, a legacy of well over 250 years of “marble” working in the district.

This paper has intentionally concentrated on unravelling the terminology, the chronology of workings and sources rather than Hopton Wood Stone products. Further research is in hand during which it is proposed to include a compilation of a reference inventory of buildings and features utilising Hopton Wood Stone.

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NOTE ON MARBLE

The historical definition of marble conventionally related to stone capable of taking and retaining a polish and (to distinguish it from “granites”) usually composed of relatively fine crystals. In the past, most of the so called British marble did not comply with the stricter geological definition. Recent European labelling regulations require materials sold as “marble” to accord with the geological definition of marble i.e. a metamorphosed carbonate rock. Failure to comply can incur substantial fines.

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Sizing up Hopton Wood block c 1910
(watercolour after photograph © 1984 Ian Thomas)