

The Bardon Hill Quarries

The Bardon Hill Quarries-1

1858-1918

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Writing in 1787, William Marshall, 1745-1818, the celebrated author of *A General Survey, from personal experience, observation, and enquiry, of the Rural Economy of England*¹, gave his readers the reassuring information that in Leicestershire ‘yeomanry of the higher class’ abounded. Moreover, they had ‘travelled much and mixed constantly with one another’. The 19th century development of the quarries of Bardon Hill and Croft owes much to the initiative and resourcefulness of this local yeomanry of the higher class, as represented by the Ellises, Everards, and Pochins, nonconformist in their religious sympathies and liberal in their politics.

The earliest printed reference to quarrying at Bardon Hill would seem to have come from the topographer William Burton, 1575-1645, whose *Description of Leicester Shire*² was published in 1622:

The hill is in the bottom a large circumference, rising up (not very steeply) to a great height, being (as I take it) one of the highest of that rank, very rough and full of wood, within which there are great quarries of hard stone, which some take to be a kind of limestone.

That he should confuse limestone with granite is excusable, for the term *geology*, as a name for a distinct branch of physical science, as far as is at present known, first occurs in English in 1735³. Burton’s contemporary, Michael Drayton, 1563-1631, a native of adjoining Warwickshire, though he is familiar with Bardon’s height, in his *Poly-olbion*,⁴ mentions no quarries:

The Dryads that were wont about thy lawns to rove,
To skip from wood to wood, and send from grove to grove,
On *Sharply* that were seen, and *Cadman’s* ancient rocks
Against the rising sun to braid their silver locks,
And with the harmless elves on heathy *Bardon’s* height,
By Cynthia's golden beams to play them night by night,
Exiled their sweet abode, to common bare are fled,
They with the oaks that lived, now with the oaks are dead.

But quarries there were as is evidenced by the survival of Bardon Chapel, erected in 1694 as a nonconformist meeting house by John Hood, of Bardon Park, 1647-1715. He not only built the meeting house, but also employed a chaplain to minister to the congregation which originally met in his house.⁵ It was built of Bardon stone and refronted in the same in 1877. So too was the decaying

¹ William Marshall, *A General Survey, from personal experience, observation, and enquiry, of the Rural Economy of England*, completed in 12 volumes, London, 1798.

² William Burton, *The Description of Leicester Shire. Containing matters of antiquitye, historye, armorye, and genealogy*, London, 1622.

³ Benjamin Martin, *Philosophical Grammar*, London 1735: ‘Geology, which treats of the Nature, Make, Parts and Productions of the Globe of Earth on which we live’. *The Oxford English Dictionary*, second edition, CD 1992.

⁴ Cited by J Breedon Everard, *Charmwood Forest*, written for the Leicester Meeting of the British Association for the Advancement of Science in 1907, Leicester, 1907, p.56. *The Polyolbion* of Michael Drayton, 1563-1631, endeavours in hexameter couplets to awaken its readers to the beauties and glories of England.

⁵ Everard, *op.cit.*, p.56, identified it as one of the few endowed Nonconformist places of worship in England. DL Wykes, ‘Bardon Park Meeting-House: the registration of Nonconformist places of worship under the Act of Toleration (1689)’, *The Transactions of the Leicestershire Archaeological Society*, volume 64, 1990, pp.31, 34. p.34. In 1715 it was recorded that there was a congregation of 340 ‘hearers’ at Bardon Park, the largest rural meeting recorded in the survey for Leicestershire.

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moated manor house which Robert Jacomb of Scarning in Norfolk inherited from his kinsman William Hood in 1832 on condition that he changed his surname by letters patent to Jacomb-Hood. There was, also, the stone summer-house built on the summit of Bardon Hill c.1743 and in which tradition had it that in 1840 Adelaide, the Queen Dowager had luncheon, so that it was subsequently known as Queen Adelaide's Bower⁶.

But the quarries on Bardon Hill came into their own in 1836 when Robert Jacomb-Hood decided that his new home at Bardon was 'too dilapidated for residence, and the situation was low damp, and unhealthy'⁷. It was also too near the turnpike to be fashionable and the Jacomb-Hoods, despite their nonconformity, were to embrace the role of Anglican gentry. 'Mr Lugar of London' was employed to build Robert Jacomb-Hood another house higher up on the southern slope of Bardon Hill, with pleasing prospects and views, and he had 'every reason to be satisfied'⁸. The new site also enjoyed a good view of the Meeting House, in the manner of many an Anglican patron of the living, and no doubt Robert Jacomb-Hood had considerable say in the appointment of the Meeting House minister⁹ and an equal influence over the conduct of the chapel's affairs.

Robert Lugar, c.1773-1855, a Colchester carpenter's son, established himself, towards the end of the eighteenth century, in London as an architect, and in due course developed a very widespread practice as a country-house architect, which extended to Scotland and Wales as well as throughout much of England. He was, however, a designer of only limited ability, working in a wide variety of architectural styles including Grecian, Tudor Gothic, and that of the cottage ornée as well as the castellated¹⁰. He was, as it were, the poor man's Nash or Repton and Pevsner dismissed Lugar's work at Bardon Hall as 'uninspiring' tudor gothic¹¹. Much altered in recent years to serve its present function as a company headquarters, in its pristine state the entrance hall, billiard room, and library had perpendicular style panelling, and the library bookcases were surmounted with bratticing¹². The exterior remains stuccoed, as Lugar intended, hoping thereby to give Bardon a touch of fashionable Brighton or Cheltenham.

Work was begun on the new Hall in 1836 and the Jacomb-Hoods moved in the following year¹³. Some stone from the old Hall was no doubt used in the building of its successor, but most of it surely came from the nearby estate quarry. An 1864 Sale Catalogue describes Bardon Hall as 'a stone-built mansion, in the Tudor style'. Mention is also made of 'substantial stone-built farm houses' and extensive stone quarries¹⁴.

More convenient for the road repairs required, first by the parochial Surveyor of the Highways, and then later by the Surveyor of the local Turnpike Trust was the stone from two small quarries situated on either side of the present A 50. One of these quarries straddles the grounds of Bardon Hill House¹⁵ and the *Birch Tree* public house, and so predates both buildings. The other quarry was on the opposite side of the road and disappeared in the 1993 road works to construct the *Birch Tree* roundabout¹⁶.

There was an element of novelty in the landscape beyond the parkland surrounding Robert Jacomb-Hood's new Bardon Hall, for on 27th April 1833 the Leicester and Swannington Railway was opened

⁶ Everard, *op. cit.*, p.56. Perhaps. But in 1840 Queen Adelaide, 1792-1849, was in declining health and was resorting, for its restoration, to Malta and Madeira.

⁷ The memoirs of Robert Jacomb-Hood, cited by Len Noble, *Bardon Hill*, Ellistown, Leicestershire, 1995, p.17.

⁸ Noble, *op.cit.*, p.17.

⁹ According to the *Directory* of H Agar and Co, the Revd David Abel was the minister of the Independant Chapel in 1849.

¹⁰ See the entry for Robert Lugar in the *Dictionary of National Biography*.

¹¹ Nikolaus Pevsner and Elizabeth Williamson, *The Buildings of England: Leicestershire and Rutland*, second edition, Harmondsworth, 1984, p.43.

¹² *Ibid.*, p.89.

¹³ Noble, *op.cit.*,p.18.

¹⁴ Noble, *op.cit.*,p.193. Surprisingly, a 1947 catalogue described the house as 'constructed of Brick, Cement Faced' [Noble, *op.cit.*,p.195].

¹⁵ *Olim Hill Top House*, was built *ante* 1851, the census of that year lists Ann Bainbrigge aged 66, widow, her four grandchildren, and their servant, as living there. Noble, *op.cit.*, p 217, who suggests c.1820-40 as a possible date for the building of this house, which despite its location, is of brick..

¹⁶ Noble, *op.cit.*, p.45. White's Farm, however, in 1864 had a brick kiln and a brick field.

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throughout its sixteen miles to passenger traffic. It was the first steam-worked public railway conveying both passengers and freight in the Midlands, and Jacomb-Hood could watch the Company's locomotives *Comet*, *Phoenix*, *Samson*, *Goliath*, and *Atlas* about their work. Indeed, he could have availed himself of its passenger service, for there was a station at Bardon Hill¹⁷. It was a station in name rather than reality, situated on the north side of the level crossing of the Ashby-Leicester turnpike, and consisted of rooms the company had hired in the *Ashby Road Hotel* to serve as a waiting room and booking office. He possessed a specially constructed carriage offering both first and second class accommodation. He would, however, have been expected to walk down the Bagworth incline and to resume his journey from Bagworth station on another train¹⁸. The Company's sabbatarianism which directed 'no traffic is to pass on Sundays and the engine is not to be used on that day without the directors' sanction' would also have commended itself to Jacomb-Hood's nonconformist conscience¹⁹. The line's gate keeper at Ashby Road, who in 1833 received 3s a week for his services, doubled as toll collector at the nearby Birch Tree turnpike toll gate.

It was, however, by the carriage of coal rather than passengers that the Leicester and Swannington Railway made its profits. That coal mining was well-established in the area is evidenced by the place-name *Cole-Orton*, which was in use in 1572, and *Coalville* displaced Long Lane c.1820, taking its name from Coalville House, recently built by William Stenson, one of the owners of Long Lane Colliery which opened in 1827.

Getting local coal to the markets of Leicester, Loughborough, and beyond at competitive prices had proved difficult. The Charnwood Forest Canal, joining the Leicester Navigation at Loughborough, had been unsuccessful, and failed in 1804. The Ashby canal had done no better, so that coal from west Leicestershire had to be taken by packhorse or wagon for sale at Leicester, and this meant that coal from Derbyshire coming by way of the Trent and Soar and their associated canals was still cheaper.

William Stenson, and his partners Samuel Smith Harris and John Whetstone, both Leicester surveyors, saw the construction of a railway from Swannington to Leicester as the solution to the problem of marketing their coal, and in October 1828 Stenson went to see the Stockton and Darlington Railway. Impressed, on his return he wrote to John Ellis, 1789-1862, of Beaumont Leys, to engage his interest.

In 1807 Joseph Ellis I, John Ellis's father, was renting a dairy farm of 374 acres for £370 a year at Beaumont Leys. John Ellis himself was renting the same farm in 1828 for £650 a year, and by 1836 was a corn merchant as well as a farmer and of sufficient prosperity and influence to be called to give evidence to the House of Commons Select Committee on agricultural distress. He was also an opponent of slavery, and a Quaker. It is likely that he is the John Ellis of Beaumont Leys who in 1846 had £475,500 invested in railway shares²⁰.

Ellis was a friend of another Quaker, the merchant and philanthropist, James Cropper, 1773-1840, of Fearnhead, near Warrington, who was a director of the Liverpool and Manchester Railway. Through Ellis, Stenson met Cropper, who, in turn, introduced him to George Stephenson, 1781-1848, then at work on the Liverpool and Manchester line. Stephenson and his son Robert visited Leicester later that autumn and pronounced the construction of the railway to be feasible in terms of engineering and financially viable.

The project's promoters met at the *Bell Hotel*, Leicester, in February 1829, approved the scheme, elected a committee, with John Ellis as Chairman, and the youthful Robert Stephenson, 1803-59, was engaged as Engineer. It was estimated that a single line, 16 miles long, would cost £75,450. There were also to be short branches to the collieries at Bagworth, Ibstock, and Whitwick, and the quarry at Groby. The necessary Parliamentary Act was obtained in 1830 and a board of fifteen directors set up. These included John Ellis, and the Leicester bankers Thomas Pares²¹ and his partner Isaac Hodgson. John

¹⁷ Known from 1833-47 as Ashby Road.

¹⁸ CR Clinker, 'The Leicester & Swannington Railway', *The Transactions of the Leicestershire Archaeological Society*, volume 30, 1954, p. 79.

¹⁹ CR Clinker, 'New Light on the Leicester Swannington Railway', *Railway Magazine*, March XXXX p.198

²⁰ *VCH Leicestershire* II, pp. 236,7.

²¹ Thomas Pares, 1800-1866, of Ulverscroft, Leicestershire and Hopwell Hall, Derbyshire, was High Sheriff of Derbyshire in 1845 and MP for Leicester. It was he who offered Robert Jacomb-Hood

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Ellis took a great interest in the construction of the railway, and his *Journal* for 1st January 1833 tells how he:

Went up to the Railway this day with John Sturge²² and Captain Moorsom RN²³, their object being to see how the smoke and steam of Locomotive Engines would operate on passengers in the Tunnel. They were delighted with the experiment we tried by taking *The Phoenix* through a few minutes after *The Comet*. Met George Stephenson at Bagworth. All three came to dine. They are all interesting men. Captain Moorsom commanded the *Fury* in the battle of Algiers.

Ellis, in fact, was often the board's man on the spot, as in February 1831 when a contractor was detected in using bad mortar, he was requested 'to have an eye on him'²⁴, and he was one of the three directors, forming the sub-committee responsible for making the arrangements for the ceremonial opening of the railway in July 1832²⁵. The directors travelled in a covered wagon, next to the engine, sitting on chairs taken from the board room. The train was decorated with flags and banners bearing such slogans as 'Cheap coal and granite' and 'Warm hearths and good roads'²⁶. From the start the freight brought into Leicester by the railway included 'small stones for macadamizing'²⁷.

John Ellis was later joined on the board by his brother Joseph Ellis II, 1790-1857. Following the family tradition, he also farmed. This was at Glenfield, and in 1839 he began setting up a coal business with depots along the Rugby and Birmingham lines from Leicester²⁸. He was also, in a small way, a maltster. In 1839 he was one of the two directors commissioned by his colleagues to visit other railways to discover the best type of permanent way to avoid the heavy wear occurring on the present track²⁹. They reported back in January 1840.

The Ellis family, as has already been seen, were staunch Quakers, belonging to the Leicester Society of Friends which had its meeting house in Soar Lane, Leicester from 1768 to 1876. Another Quaker director of the railway was William Evans Hutchinson, 1806-1882, a druggist, whose successful 1836 libel suit against the *Leicester Conservative Standard* achieved some notoriety, that paper having written of him as 'Hutchinson, a Quaker, a busy, prating demagogue, whose hypocritical visage may be seen on every occasion where anything disgraceful or unholy is going forward.' Elsewhere he is described as a 'quiet, meditative little gentleman'³⁰. He became a director of the Midland Railway and was its chairman 1864-70.

The local influence of the Quakers is not surprising in the light of the fact that George Fox, 1624-1691, founder of the Society of Friends was a son of Leicestershire. Their influence can be seen in the ethics of their commercial ventures so that, for example, in March 1834 the manager of the Leicester and Swannington Railway was reminded by the board that he must enforce the rule prohibiting work on Sundays, 'the Company preferring to incur the loss which would arise from omitting to work on that day rather than countenance the regular violation of the Sabbath'³¹.

EH Milligan in his study of *Quakers and Railways*³² underlines the fact that Quaker

accommodation in Markfield whilst Bardon Hall was being built. The bank evolved into the Leicestershire Banking Company.

²² John Sturge, another Quaker, and a Birmingham corn-merchant, was one of the first directors of the London & Birmingham Railway, incorporated in May 1833. His brother, Joseph Sturge, was also on the London & Birmingham board. Joseph Sturge's first wife was a daughter to James Cropper.

²³ Richard Moorsom, 1792-1861, rose to the rank of Vice Admiral and became a chairman of the London and North Western Railway Company.

²⁴ Clinker, *op.cit.*, *Transactions of the Leicestershire Archaeological Society*, p.65.

²⁵ *Ibid.*, p.67.

²⁶ *VCH Leicestershire III*, p.112.

²⁷ *Ibid.* p.113, citing the *Leicester Journal*, 27th July 1832.

²⁸ The enterprise grew into Joseph Ellis & Sons, and the 1881 census describes him as coal and lime merchant employing 24 clerks and 50 workmen.

²⁹ Clinker, *op.cit.*, *Transactions of the Leicestershire Archaeological Society*, p. 98.

³⁰ Cited by Milligan, *op.cit.*, p.26.

³¹ *Ibid.*, pp. 70, 71.

³² EH Milligan, *Quakers and Railways*, York, 1992.

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monthly and quarterly meetings were social occasions as well as meetings for business, often involving an overnight stay. The hospitality of a Quaker home might bring together a farmer and an ironmaster, a pharmacist and a woollen merchant, and the conversation, in which strong-minded women Friends would take as much part as men, might well resemble what we would now call an interdisciplinary seminar. From conversations like these new ideas grew.

Links were also forged between those who had shared together a Quaker 'guarded education'. It was not until 1871 that the abolition of religious tests enabled non-conformists to enter Oxford or Cambridge. The youthful energy, intellectual curiosity and practical abilities which young Quakers would otherwise have put into academic studies were channelled into industry and commerce, while their interests in natural history and in pure and applied science kept their minds supple. Quakers had a natural tendency to question received ideas, and their innate caution was matched by sometimes ruthless pursuit of first principles³³.

During the first six months of its operation from 17th July to the 31st December 1832 the railway's receipts amounted to £1950 17s 0d. Of this sum, £1004 14s 4d was derived from the carriage of passengers; £766 3s 8d from coal, and, what was to be significant for the present narrative, £82 12s 1d from granite. 4622 tons of stone and slates were carried from Lord Stamford's Groby quarries³⁴. Ballast was used throughout the length of the line from Groby quarries. Stone, slate, paving stones, and bricks were carried at 3d a ton per mile in the railway's own wagons and hauled by the company. The rate was 2½d a ton if the company hauled the owner's wagons, and 2d was the rate if the owner hauled his own wagons, using horses, though this arrangement only applied until the whole line was served by locomotives.

The Leicester and Swannington Railway prospered and

successfully achieved its main aim as a carrier chiefly of coal, lime, and stone; coal alone averaged 136,000 tons a year in 1833-45. It provided a regular service for passengers, conveying 77 a day during that time. These figures look modest, but they enabled the company to pay an average dividend of 5 per cent³⁵.

In July 1845 Joseph Ellis II reported to his fellow directors that George Hudson, 1800-71, the 'railway king', chairman of the expanding Midland Railway Company, had offered to purchase their railway by exchanging each £50 Leicester & Swannington share for a £100 one of its own, on which the Midland was then paying an 8 per cent dividend. The offer was accepted and the appropriate Act became law in 1846. This for the directors of the Leicester and Swannington Railway 'was the reward of good sense. The company wasted no money on fruitless expansion or expensive alliances with weaker neighbours. It remained what its promoters had always intended, a railway between Leicester and Swannington'³⁶.

The immediate effect for Bardon was that the station's name was changed from Ashby Road to Bardon Hill and it was resolved that 'a common desk to be provided for the station master'³⁷. Clinker relates how the Ashby Road Hotel ceased business and in September 1849 the Midland Railway leased the building for 14 years and converted part of it into a stationmaster's house; another part was let as a shop which was converted to a waiting room in 1865. Platforms were constructed in October 1849 and lengthened in 1861, waiting sheds being added in 1875. The station was closed to passengers in May 1952³⁸.

Ellis was elected to Leicester borough council in 1836 and became an alderman the following year, but declined to become mayor on account of 'objections he entertained as a member of the Societv of

³³ *Ibid.*, p.2.

³⁴ Clinker, *op.cit.*, *Transactions of the Leicestershire Archaeological Society*, Appendix G.

³⁵ Jack Simmons in Jack Simmons and Gordon Biddle, editors, *The Oxford Companion to British Railway History*, Oxford, 1997.

³⁶ Simmons, *ibid.*.

³⁷ Clinker, *op.cit.*, *Transactions of the Leicestershire Archaeological Society*, p.109.

³⁸ Clinker, *op.cit.*.

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Friends'. He had in mind by now other railway ambitions, and he was the main mover behind the Midland Counties Railway, which opened in 1839 linking Nottingham and Derby, and in the following year stretched south to Leicester. In 1848, now living in the splendour of Leicester's Belgrave Hall, he became an MP, representing the borough as a Liberal until 1852.

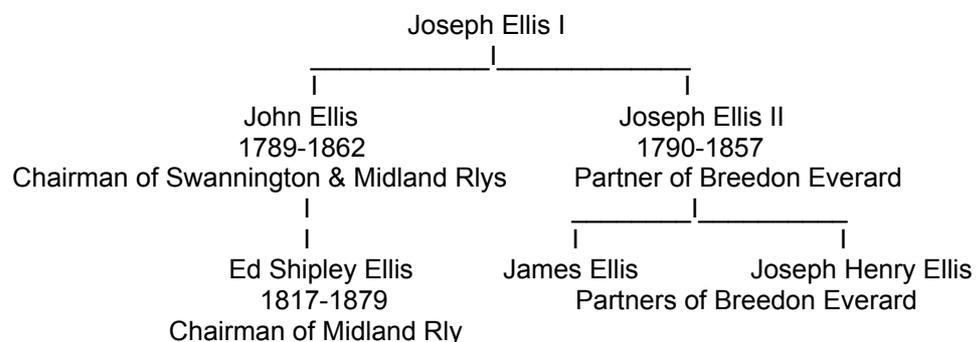
On the downfall of George Hudson in 1849, already vice-chairman, he became chairman of the Midland Railway, an office he held until 1859. When the Midland's affairs were investigated it was stated that:

the accounts had been faithfully kept, and that a strong and powerful directorate had preserved the honour and reputation of the Company unsullied. That this was so, a large measure of praise is due to Mr John Ellis, the hard-headed Quaker, who subsequently undertook the controlling influence³⁹.

John Ellis died at Belgrave Hall in 1862. His son Edward Shipley Ellis, 1817-1879, was also involved with the Midland Railway, of which he was a director by 1868, and was chairman from 1873 until his death. It was his belief that 'the Midland system had become so important, and its continued success so essential to the well-being of its shareholders, as well as the commerce of the country, that its affairs, its policy, administration, and management must absorb the whole commercial life of the men at its head, including that of its chairman' He too was a Quaker and his Quaker values underlay his insistence on 'punctuality in the running of trains and civility and attention on the part of the servants of the company'. He saw late running as a discourtesy and spare locomotives and crews were always maintained for emergencies. One of his achievements was the abolition on the Midland Railway of second class carriages and the improvement of the third class. The shareholders, however, were resistant:

No one who was present at the meeting of Midland shareholders in November 1874 will ever forget the fierce way in which the proposal to abolish second-class was assailed: nor the able way in which Mr Ellis quietly marshalled the facts and announced the determination of the directors to stand by their policy, notwithstanding the great pressure which had been brought to bear by other companies. It was the most notable and memorable railway meeting during the last quarter of a century. A weaker man would have yielded before the storm. Mr Ellis, by his firmness and strength of purpose, as well as the grasp which he had of all the facts and his confidence in the soundness of his judgment, carried the day; and twenty-six years' experience has verified the soundness of his position⁴⁰.

Edward Ellis had been elected to the Leicester town council at the age of 25 and, unlike his father, did not allow his Quaker principles prevent him from becoming its mayor, an office he held in 1860. Though less well chronicled, it is reasonable to believe the Quaker ethos was as firmly maintained in other Ellis enterprises and discussed at the monthly meetings at Soar Lane Friends' Meeting House⁴¹.



³⁹ Milligan, *op.cit.*, p.9.

⁴⁰ *Ibid.*, pp, 26,27.

⁴¹ Milligan notes, p.27, that for 21 of the first 35 years of the Midland Railway's existence there was a Quaker chairman, and that it was said that the 'board was accustomed to arrive at its decisions by 'the opinion of the meeting' after the Quaker manner rather than by a simple majority'.

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Since 1555 every parish was required to have its surveyor of the highways. Chosen at the annual Easter Vestry, for an office which was unpaid, and from which exemption was difficult to obtain, the Surveyor of the Highways was often made more ready to undertake his troublesome duties by the gift of a silver pocket watch or snuff box. It was his responsibility to see that the local highways were kept in good repair and that an ample supply of suitable stone was available. For this he could raise a local rate, and his accounts were examined by the local bench. He could also require the householders of the parish to work under his supervision in repairing the local highways for a number of days a year⁴². This office survived until 1835 when the JPs began to appoint paid surveyors to supervise the maintenance of the highways in groups of parishes.

The often-reluctant efforts of the surveyors of the highways and the growth of traffic from coal and lime meant that the Leicestershire roads were often impassable during the winter. From 1726 onwards a series of Acts of Parliament set up Turnpike Trusts empowered to construct lengths of metalled roads, along which passage was allowed on payment of a toll. Roads and bridges, once mainly used by packhorses, had to be widened to accommodate large and heavy wagons, whose wide wheels rutted the road surface. The tolls had to meet the cost of these repairs and offer the Trustees a profit for their investment. Broken stone was in constant demand and the humble occupation of the stone breaker assumed importance with the development of the system of turnpike trusts, which became an inspiration for artists⁴³. The toil of the stonebreaker would have been in constant demand by the Trustees of the Leicester to Ashby turnpike⁴⁴. However, according to Marshall, until the 1770s the Leicestershire roads had been 'in a state of almost total neglect since the days of the Mercians' and in 1789 the principal road from Tamworth to Ashby was 'almost impassable several months in the year'. Wagons were taken off their wheels and dragged on their bellies.⁴⁵

Shortly before 1800 broken granite macadam began to be used in Leicestershire for road surfacing. It was said to have been first used on the turnpike between Market Harborough and Loughborough and was obtained from the quarries at Mount Sorrel where granite was being worked by 1781. A wharf was built on the Leicester Navigation in 1792 at Mount Sorrel to handle the quarry's traffic in granite. Between 1792 and 1809 40% of the total tonnage passing through the Mount Sorrel lock was granite. This pink granite was described in *Lewis's Topographical Dictionary* as 'a valuable material for Macadamizing the roads'. Mount Sorrel's granite quarries flourished and in the late 1820s a team of Scotsmen from Aberdeen, familiar with working granite, came to show the local quarrymen new methods of cutting the rock⁴⁶.

The well-chronicled endeavours of John Loudon McAdam, 1756-1836, and Thomas Telford, 1757-1834, were transforming the British road system. McAdam had been Surveyor-General of the Bristol roads since 1815, published in 1819 *A Practical Essay on the Scientific Repair and Preservation of Roads*, followed a year later by his *Present State of Road-making* which ran to five editions. It was McAdam's conclusion that:

Roads should be constructed of broken stone. The surface of the ground on the track of the intended roads was to be raised slightly above the adjoining land; suitable drains were to be formed on each side of the track; it was to be covered by a series of thin layers of hard stone broken into angular fragments of a nearly cubical shape, and as nearly as possible of the same size; no piece was to weigh more than six ounces. The layers of

⁴² Four days annually in 1555, raised to six in 1563, and those who had them had to provide carts and draft animals. The wealthier could also pay for substitutes to do their duties on their behalf.

⁴³ Eg *The Stonebreaker* by John Brett, 1830-1902, in the Walker Gallery, Liverpool, and *The Stonebreaker* by Henry Wallis, 1830-1916, in City of Birmingham Art Gallery. They were both exhibited in 1858 at the Royal Academy.

⁴⁴ Shown to be in existence on Samuel Wild's 1754 plan of Charnwood Forest.

⁴⁵ In 1800 it required fifty-four hours, and favourable circumstances, for 'a philosopher, six shirts, his genius, and his hat upon it', to reach London from Dublin.

⁴⁶ Pevsner, *op. cit.*, p.59.

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broken stone were to be consolidated gradually by passage of traffic over the road, and the covering of the road would thus become a firm and solid platform, nearly impervious to water, and durable in proportion to the hardness of the stone of which it was made. Granite, greenstone, and basalt was at first thought best suited for the purpose; but basalt proved ineffective⁴⁷.

In 1827 McAdam became Surveyor-General of Roads and there were those who thought his improvements would render the pavior redundant, and the poet Thomas Hood, 1799-1845, wrote:

Thou stood'st thy trial, Mac! and shaved the road
So well, that paviers threw their rammers by.

Others applied his principles to London. One of these was Francis Maceroni, 1788-1846, a Mancunian of Italian ancestry, who despite his conspicuous vanity, was also an amiable and highly accomplished man. In 1827 he contributed to some *Practical Instructions for the improvement of the Carriage Pavements of London: deduced from an examination of the various plans proposed ... by Messrs McAdam, Macnamara, Finlayson, Maceroni, Knight, etc*, to which he added his *Hints to Paviers*⁴⁸, advocating the merits of asphalt paving. It was an awareness of the potential urban market for road stone which led the Leicester and Swannington Railway in 1832 to open a short branch connecting it to the Groby quarries, and when it was brought into use later that year, the 25 wagons using it belonged, like the quarries, to George Henry Grey, the seventh Earl of Stamford and Warrington. The market for road stone was growing.

A stretch of two miles out of Nottingham towards Lincoln was paved with tarred gravel as early as 1840, and Huntingdon High Street was so paved in 1845. A programme of asphalt surfacing was successful in Paris, and the growing amount of traffic in London generated progressive discontent with the use of granite setts for street paving. 'It was uncomfortable, it was slippery, it was intolerably noisy, and being difficult to wash down efficiently was foul and a danger to health as a consequence of the passage of ever-increasing numbers of animals'⁴⁹. The alternative of wood-paving was an improvement, but was slippery and insanitary⁵⁰.

Joseph Ellis II, besides continuing the family tradition of farming, and being a director of the Leicester and Swannington Railway, was also a coal merchant. In this latter venture he entered into partnership with Breedon Everard, 1814-1882, of Groby, where the Everards were long established tenant farmers. They were already acting jointly as agents of the Midland Railway Company in negotiating the purchase of land for its extension from Syston to Peterborough, 1846-48, and they saw the commercial advantages of setting up coal depots at the stations on the line as they opened.

The venture was one of real boldness; there was no ready-made demand for rail-borne coal. Before the railways came, the bulk of the coal used to the south and east of Leicester was North-country coal which was brought by sea and then up the Ouse, Nene and Welland by boat. ... Joseph Ellis and Breedon Everard started their business in the hope, it was far from a certainty, that they would have an advantage in price which would enable them to overcome the inevitable prejudice against unfamiliar types of coal⁵¹.

Their 1851 Account Book shows that the Rockingham depot had in stock 80 tons of Mountsorrel granite and broken and unbroken stone⁵². This local trade, the development of surfaced streets in our towns, and their growing accessibility to distant quarries by rail, caused Joseph Ellis II and Breedon Everard to add quarrying to their coal business. First at Billa Barrow and then in 1852 they purchased

⁴⁷ *Dictionary of National Biography*, CD-ROM, Oxford, 1995.

⁴⁸ London, 1827.

⁴⁹ JBF Earle. *Black Top, A History of the British Flexible Roads Industry*, Oxford, 1974, pp.8.9.

⁵⁰ *The Times*, 18th November 1847 reported that at the Court of Commissioners of Sewers, Guildhall, it was recorded that Mr Lawrence had reported that 'The wooden pavement had been tried in the city, and had been found to be inapplicable to the thoroughfares generally. It has, therefore, been abandoned'.

⁵¹ CDB Ellis, *The Centenary Book of Ellis & Everard Limited*, Leicester, 1948.

⁵² *Ibid.*

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the granite quarries at Markfield. This, in turn, led the ever-competitive Lord Stamford, Everard's landlord at Groby, to reopen his Groby quarries.

Joseph Ellis II, however, died in 1857 and a new triumvirate emerged, consisting of his two sons, James, aged 28 and Joseph, 26, and Breedon Everard who at 43 was the senior partner. In October 1858 they leased for twenty-one years the stone, quarries, and beds of stone on forty acres of land in Bardon Park from Robert Jacomb-Hood II, 1822-1900, of Bardon Hall, his father Robert Jacomb-Hood I having died that year.

Ellis and Everard paid a rent for the quarry of £145 a year, 'and a Royalty of 1½d for every Ton over and above the number of Tons the Royalty on which shall amount to £145'⁵³. The lease made mention of the extraction of stone but nothing is said about minerals. Perhaps Jacomb-Hood had other hopes here, for six years later it was noted that 'the Whitwick and Swannington Coal Fields are in full working within a short distance, and there is every probability of the Estate containing valuable Beds of Coal'⁵⁴. Breedon Everard now abandoned farming, and made his home at Bardon Hill House, *olim* Hill Top House.

The affairs of the Bardon estate at this time were in some disarray. Under the terms by which Robert Jacomb Wood I had inherited Bardon the estate had to be sold on his death and the proceeds divided. In October 1859 it was offered unsuccessfully to William Perry Herrick of Beaumanor. It was then put up for auction in March 1860, but withdrawn at £44,000. In December that year Brook Farm, a constituent farm of the estate, was sold for £4000, to a Mr Ellis⁵⁵, and perhaps one could be forgiven for speculating that this was either James or Joseph Ellis. In May 1862 Jacomb-Hood II offered the Bardon estate again to William Perry Herrick, for £45,000. Again, negotiations failed, and the estate went up for auction once again in July 1864 at Garraway's Coffee House in Cornhill. This time Perry Herrick was successful.

The Herricks however did not occupy Bardon Hall. In 1864 it was let to a yearly tenant at a rental of £150. The 1871 census gives it as occupied by William Spenser, a 28 year old domestic servant, and his wife, described as the housekeeper. Walford's 1873 directory of *The County Families of the United Kingdom* gives Robert Jacomb Hood II as succeeding in 1857, as still being Lord of the Manor of Bardon, and Bardon Park as his current country address.

But Robert Jacomb Hood II, 1822-1900, had little interest in Bardon Hall or its estate. Educated at Christ's Hospital⁵⁶ and Trinity College Cambridge 1840-41, his father's intention being that he should become a lawyer. But Jacomb Hood, minor had other intentions:

He had, however, been thrown previously with young men engaged on railway construction in the Midlands, and by then he was imbued with a desire to become an engineer⁵⁷.

Another factor was that the move to Bardon in 1832 brought him into close proximity to the newly opened Leicester and Swannington Railway, which for part of its route, ran along the margin of the newly acquired family estate. Consequently he was articled in 1841 with George Watson Buck, Chief Engineer, under Robert Stephenson, of the Manchester and Birmingham Railway. In 1846 he was appointed resident engineer with the London, Brighton, and South Coast Railway, and a year later, in 1847 was elected a Member of the Institution of Mechanical Engineers. He was proposed by George

⁵³ 1864 Bardon Hall Sales Particulars.

⁵⁴ *Ibid.*. *Ryland's Directory of Iron, Steel, and Allied Trades*, Birmingham, 1881, mentions the South Leicestershire Colliery Company, Bardon Hill, as proprietors of the South Leicestershire coal mine.

⁵⁵ Noble, *op.cit.*.p.19.

⁵⁶ Founded 1552 by Edward VI as a charitable institution for the education of the sons of the impoverished, the fact that Robert Jacomb, before his circumstances were changed by inheriting Bardon Hall and the addition of the surname Hood, found a presentation for his son to the Hospital reflects the family's modest position at this time.

⁵⁷ Obituary notice in the Proceedings of the Institution of Civil Engineers, 1899-1900, p.359.

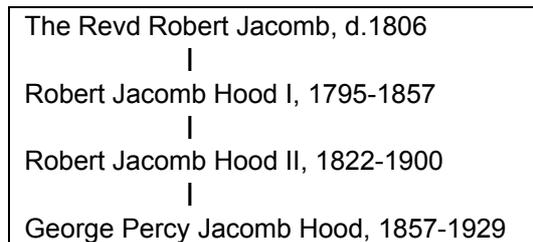
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Buck⁵⁸, supported by Charles Gregory⁵⁹, Thomas Gooch⁶⁰, Charles Fox⁶¹, and John Rastrick⁶². John Rennie, as Chairman of the Council, certified his election⁶³.

Jacomb Hood was for many years resident engineer to the London, Brighton, and South Coast Railway and there may well have been times when he was grateful for his royalties from the Bardon quarry, because the LB&SC did not always flourish financially and

at one stage it put poor Mr Jacomb-Hood, its Resident Engineer, on a sort of unpaid indefinite leave, and pawned some locomotives to trustworthy creditors⁶⁴.

He is remembered as the engineer who designed the original Victoria station for the LB&SC railway⁶⁵ and the famous telescopic bridge over the Arun at Ford in Sussex⁶⁶. He was rewarded for his loyalty in 1883 with a directorship of the company. He lived in south-east London, and none of his six children were born at Bardon⁶⁷.



In 1864 William Perry Herrick of Beaumanor Park, having purchased the Bardon Park estate, renegotiated the Ellis and Everard lease. Under the Ellis brothers and Everard the quarry was prospering and the estate's sale particulars made mention of its valuable stone, which after crushing was 'sold in London and other Markets for Macadamizing Roads'⁶⁸.

The background of William Perry Herrick, 1794-1873, stands in contrast with that of the Ellises and Everards, and in some measure to that of Jacomb-Hood as well. He was of the gentry rather than the yeomanry, though much of the Herricks' great wealth was derived from coal. Educated at Rugby and Oxford, and called to the bar at Gray's Inn in 1821, Herrick inherited Eardisley Park in Herefordshire from his father. He lived there until 1832 when, by succeeding his uncle, he acquired the extensive Leicestershire estate of Beaumanor, with others in Monmouthshire and Staffordshire.. He was High Sheriff for Leicestershire in 1835 and a JP and DL for the county as well. In 1854 he was one of the

⁵⁸ George Watson Buck, 1789-1854, whose masterpiece was the 'massive and noble' Stockport viaduct.

⁵⁹ Sir Charles Hutton Gregory, 1817-98, assisted Robert Stephenson on the Manchester and Birmingham Railway, and was President of the Institution of Civil Engineers 1867-8.

⁶⁰ Thomas Longridge Gooch, 1808-1882, brother of Sir Daniel Gooch, Chairman of the GWR. He was apprenticed to George Stephenson and assisted him in building the London and Birmingham Railway. 1840s.

⁶¹ Sir Charles Fox, 1810-74, another of Robert Stephenson's assistants in building the London and Birmingham Railway, and throughout his professional life was 'engaged in works of magnitude in all parts of the world', including Paxton's Crystal Palace. He died at Blackheath where Jacomb Hood made his home.

⁶² John Urpeth Rastrick, FRS, [the first railway engineer so honoured], 1780-1856, was one of the judges who found in favour of the *Rocket* at the Rainhill trials.

⁶³ Sir John Rennie, 1794-1874, the engineer of London Bridge, was President of the Institution of Civil Engineers 1845-8. 'The Rennies habitual superciliousness provoked immediate hostility and they never saw any railway project through to completion'.

⁶⁴ Hamilton Ellis, *The London, Brighton and South Coast Railway*, London, 1960, p.17.

⁶⁵ It was demolished in 1906 to allow the extension of the Grosvenor Hotel.

⁶⁶ *Ibid.*, p.226.

⁶⁷ His eldest son, George, became a well-known artist, and the second son John was a civil engineer.

⁶⁸ 1864 Bardon Hall Sales Particulars.

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founders of the Leicestershire Archaeological Society and his membership of the Carlton Club reflects his political sympathies. He was a collateral descendant of the poet Robert Herrick, 1591-1674, to whom he erected a monument in 1857 in Dean Prior church, where Herrick was vicar 1654-74⁶⁹. The Herricks never lived at Bardon Hall which, in comparison with the immense mansion, built in the Jacobean style, for William Perry Herrick 1845-7 by William Railton⁷⁰, was the merest bijou. He did however develop the modest agricultural potential of the Bardon estate, though with the reputation for being the richest commoner in England, it is surprising that he had any interest in Bardon at all.

Bardon quarry had a convenient railway station for transporting the stone and for the delivery of machinery to work the quarry. The stone from the quarry at Billa Barrow was mainly for building, whereas from their 1852 Hill Hole quarry at Markfield, Ellis and Everard obtained highly marketable roadstone, stocks, and setts. But Markfield had the disadvantage that the stone had to be taken three miles by horse and cart to Bardon station. Thus, from the point of view of distribution, Bardon quarry was far more convenient, and it was a simple matter for Ellis and Everard to lay a siding from Bardon station across the turnpike and into the quarry.

It was proving difficult, however, to find sufficient local labour, coal mining being more popular, and demand for stone outweighed supply. One remedy was to provide accommodation for the workforce, and in July 1859 Messrs Ellis and Everard leased ten cottages from Jacob Hood for a term of 20 years at £40 rent a year. The second remedy was to become more mechanized and less labour intensive, and in 1859 'powerful machinery' was installed to crush the stone, 'complete with steam driven engines, crushing rolls, belt feeders, elevators and screening riddles'. It was designed by Charles G Mountain, 'of Birmingham' and described in Newton's *London Journal of Arts and Sciences* in July 1861⁷¹. Using some 35 cwt of local Whitwick coal, when working at full capacity, only eight men were needed for its operation:

there are two bells and a steam whistle to call attention, as the noise is so great that the voice can scarcely be heard inside the mill.

The total cost of the plant was £7500, and the production of finished stone varied from 60 to 80 tons per day of 10 hours for each of the plant's two mills, including stoppages. Since the finished stone was produced at 10d a ton, compared with the 2s 6d a ton of entirely manual production, the quarry was very competitive⁷². The crushers were housed in buildings a short distance above the level crossing on the Ashby Road⁷³ and the wear and tear involved were 'considerably less than at first anticipated, one smith and striker being able to keep the whole in good repair'⁷⁴. It was in use until 1873. Bearing in mind that Mountain's crushing plant at Bardon was very much a pioneering enterprise, it is surprising that Mountain seems not to have taken out a patent for such a successful design, and his name does not appear in the *Alphabetical Register[s] of Patentees 1617-1880*. Mountain himself, born in London in 1827, settled in Edgbaston⁷⁵ and was joined in his engineering concern by two of his sons.

Meanwhile the demand for road stone continued to grow. Thus, William Haywood, MICE, 1821-1894, Chief Engineer to the Commissioners of Sewers of the City of London, 1846-95⁷⁶, introduced the use of asphalt for the roadways of the City in 1869 with the asphaltting of Threadneedle Street. By the end of 1873, 60,802 square yards had been laid and this generated a measure of controversy and columns in

⁶⁹ 'With a very rich, quite inappropriate strapwork surround', Bridget Cherry and Nikolaus Pevsner, *The Buildings of England: Devon*, 2nd ed., 1989. But the Herricks were very rich.

⁷⁰ Best known as the architect of Nelson's column in Trafalgar Square. He died in 1877. Pevsner, *op.cit.*, erroneously ascribes the building of the Victorian Beaumanor to Robert Herrick.

⁷¹ William Newton, 1786-1861, editor of *The London Journal of Arts and Sciences*, was a well known London Patent Agent, with an office in Chancery Lane. The Journal advertized itself as 'Containing reports of All new Patents, with a Description of Their Respective Principles and Properties; also, Original Communications on Subjects Connected with Science and Philosophy.'

⁷² Recollection of Mr Gregory Tom, in Tracey Roberts, ed., *Marking Time: Voices from Bardon*, Coalville, 1995, p.7.

⁷³ Noble, *op.cit.*, pp.49-52, quotes at length from the above mentioned paper.

⁷⁴ *Ibid.*, p.52.

⁷⁵ In 1881 he lived at 83 Ryland Road, Edgbaston.

⁷⁶ Best remembered as the architect of Holborn Viaduct, begun in 1863.

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The Times considered the relative merits of granite, wood, and asphalt for street paving⁷⁷. The decision to lay down asphalt in Oxford Street in 1873 brought forth protests from the Capital's omnibus proprietors.

A latent function, however, of growing production and trade was increased risk of accidents at Bardon, and, for example, on 27th November 1872 *The Times* reported that

Yesterday an alarming accident occurred to a passenger train at the Bardon-hill station, on the Burton and Leicester branch of the Midland railway. It appears that an empty stone waggon train had drawn out of the siding connected with the Bardon-hill stone quarries, and was engaged shunting on the main line, when a passenger train which leaves Burton-on-Trent at 8 o'clock [due at Leicester at 9 20] appeared in sight. Before the empty waggon train could be got into the siding or the driver of the passenger train was able to reduce the speed of his engine sufficiently, the latter dashed into the middle of the empty waggon train as it stood across the up and down lines. One of the passengers, named Beckworth, a builder, was severely hurt by his head being forced against the end of the carriage, while several others were severely bruised and more or less shaken by the collision. Fortunately, however, all were able to proceed on their journey. The engine of the passenger train was completely disabled, and another one had to be telegraphed for from Leicester to bring the train on. Although several of the waggons were broken to pieces, the carriages of the passenger trains escaped without any material damage. The breakdown van soon arrived from Leicester and the line was speedily cleared, but, owing to the permanent way being considerably cut up, the traffic was more or less delayed for some time.

In October 1873 James Ellis, Henry Ellis, and Breedon Everard⁷⁸ obtained a new lease of the quarry from William Perry Herrick who died later that year. Consequently, it was his widow, Sophia Perry Herrick, who in 1876 leased 40 recently built cottages and a school house 'which has recently been enlarged, situate near the Bardon Stone Quarries in the Parish of Hugglescote in the County of Leicester'⁷⁹. They were built, in a spirit of enlightened self-interest, by William Perry Herrick, in a row of two blocks of ten and one of twenty and a schoolhouse⁸⁰. Their occupants shared five water taps 'erected for their benefit' and had the amenity of benefit of back yards, kitchens, three communal bakehouses, piggeries, and coal houses'. The lease contained a detailed schedule of the properties, a precaution against vandalism from their occupants:

In each of three Back Kitchens in yards of Cottages N^{os} 1, 6, and 21: Door with hinges and Norfolk handles, oven, and boiler. In Bakehouse: Door with hinges and Norfolk handle, iron door to oven. 20 dust hole doors with hooks latch and catch and iron spouting the length of Cottages at front and back with 48 iron conductors.

In each of 40 cottages Front door with stock lock butt hinges and Norfolk handle glass fan light over door.

Living Room: two doors with butt hinges and spring latches. 2 cupboards in recess each side of fireplace. 2 doors to each cupboard with butt hinges, knobs, and iron button one shelf and top board to each cupboard to each cupboard, wood mantel shelf 3 feet, oven and boiler. One damper all complete.

Kitchen: Oven and sham wood mantle shelf.

Pantry: door with T hinges and Norfolk handle 2 shelves at side and Back Door with T hinges and iron button.

Front Bed Room: doors with T hinges Norfolk handle, small fire grate with hobs, wood mantle shelf. Closet door with T hinges and iron button.

⁷⁷ *Eg* May 1872; October 1873-January 1874; January 1876; and April, 1876.

⁷⁸ Now of Kirby Muxloe, Glenfield, and Bardon Hall respectively.

⁷⁹ Leicester County Record Office. DE 2155/70, 15th September 1876, Sophia Perry Herrick, of Beaumanor and Messrs Ellis and Everard..

⁸⁰ At Eardisley William Perry-Herrick, as Lord of the Manor and patron of the living, gave the land and met the cost of building a National School in 1857. He also met the entire cost of the very expensive 1862 restoration of the parish church besides underwriting several parish charities and contributing to the Alms Houses. Finally, it was through him that the rectorial tithes were returned to the church, the incumbents becoming once again rectors rather than vicars.

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Two Back Bed Rooms; doors with T hinges and Norfolk handle.
 Yard: Privy door with hooks and bands latch and catch.
 Yard door with hooks and bands latch and catch.
 Coalhouse: door with hooks and bands, hasp and staple.
 Iron Scraper in wall at front and back doors.
 Fixtures in Bardon School and Sunday Lecture Room: one stove with piping complete.
 1 Gallery for Children 15 feet
 1 Platform 4 feet x 4 feet x 8 inches.
 1 Lectern
 5 small Children's benches [3 of 7 feet and 2 of 8 feet].
 7 Benches of 7 feet each.
 6 Seats with back rail 7 feet [each]
 2 ditto 10 feet each.
 6 School desks and seats 12 feet [each].
 12 Lamps.
 120 hat pegs and rails⁸¹.

In 1881 the dwellings were occupied by some 206 inhabitants, ranging in age from four months to 85 years, and not all the heads of households worked in the quarry, several were engaged in agriculture and one was a coal miner⁸². There was a cordwainer, the son of a quarry labourer; a pupil teacher, also the son of a quarry labourer; and, perhaps with a sense of humour, a Chelsea Pensioner, aged but 41. 34 males were quarry labourers, of whom 12 were sons of quarry labourers, one of whom was but 15 years old. There were also four general labourers, two boys, aged 14, and an errand boy, aged 15. There were four carpenters and reflecting the progressively more mechanized nature of quarry work; an engine fitter, a stationary engine driver, an engine driver, a railway shunter, and a railway wagon builder, besides a horse driver. Other occupations may have been reflected in those who worked at the quarry but did not live in a quarry house.

By far the greater proportion of the workforce was native to Leicestershire, but a large contingent came from Buckinghamshire and it would seem that related families would move to Bardon looking for work. The company built a lodging house with accommodation for 20. In 1881 it had 17 male occupants, thirteen of whom came from Ireland, one each from Shropshire, Hampshire, Oxford, and Northamptonshire, their ages varying from 17-33, all unmarried. The Irish contingent was aged between 17 and 23, and all the lodgers were labourers at the quarry⁸³.

Counties of origin of occupants of Quarry Row in 1881			
County of origin:	Occupants per house:		Age range of occupants:
Leicestershire	118	9	1 4 months to 85 years
Buckinghamshire	23	8	2
Oxfordshire	10	7	7
Warwickshire	8	6	9
Worcestershire	7	5	8
Cambridgeshire	6	4	5
Gloucestershire	5	3	3
Derbyshire	3	2	3
Staffordshire	3	1	2
Hertfordshire	2		
Middlesex	2	Total:	Number of houses:
Nottinghamshire	2	206	40
Bedfordshire	1		
Berkshire	1	Average number per house:	
Devonshire	1	5.15	
Hampshire	1		

⁸¹Leicester County Record Office. DE 2155/70.

⁸² The fact that in 1871 Bardon had a population of but 59 persons, living in 12 houses, on 1710 acres of land illustrates how the quarries were attracting workers to the district.

⁸³ One wonders whether the appearance of such names as *Irish Cottage* and *Irish House* in the 1851 Census is purely coincidental.

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Lancashire	1
Norfolk	1
Northamptonshire	1
Radnorshire	1
Yorkshire	1

Occupations of occupants of Quarry Row in 1881

Agricultural Labourer: 7 [two were sons of agricultural labourers and 1 lodged in the same house as an agricultural labourer.]
Coal miner: 1
Labourer in Stone Quarry: 34
Sons labourers in Quarry: 12 [1 aged 15]
Boy in Stone Quarry: 2 [both aged 14]
Errand Boy in Quarry: 1 [aged 15]
Carpenter: 4 [1 was also a wheelwright]
General Clerk at Quarries: 1 [lodger, aged 15]
Engine Fitter at Stone Quarries: 1
Stationary engine driver: 1
Railway wagon builder: 1
Shunter on the Railway at Stone Quarry: 1
General labourer: 4
Blacksmith at Stone Quarry: 2
Engine Driver Stone Quarry: 1
Basket Maker & Organist; [Amos Clark, 21, son of quarry labourer.]
Horse Driver Stone Quarry: 1
Cordwainer: 1 [son of quarry labourer.]
Stoker in Stone Mill: 1
Pupil teacher: 1 [17 year old son of quarry labourer.]
Lodger: 8 [1 was an agricultural labourer, and another aged 70 was still a labourer in the quarry]
Chelsea Pensioner: 1 [aged 41, brother of Head of household.]

The Quarry offered the ambitious opportunities for upward social mobility. It has been seen how a quarry labourer's son, living in Quarry Row in 1881, was a pupil teacher. There was upward mobility within the quarry too. Thus, Frank Belward, born in 1863, was a bricklayer's son, who in 1881 was a clerk in Leicester. Ten years later, in 1891, he is married, living at Quarry Farm, and is a clerk in the quarry office at Bardon. He ended his days as company secretary⁸⁴. Similarly, John Ward, 1849-1920, came to the Quarry in 1864 when he was 15. He retired in 1919 as General Manager of Bardon Hill and the Charnwood Quarries. He was manager of Bardon Hill Quarry by his early 30s, and was living in one of the company's *Stone Cottages* with his wife, four daughters, and Libby, their domestic servant⁸⁵.

According to Noble⁸⁶ these cottages were also built in 1873. They were near the railway level crossing, built of Markfield stone, and were intended as model artisan dwellings. They had four bedrooms, a parlour, living room and kitchen. As Ward's career progressed he graduated to the detached and more spacious *Woodside*⁸⁷ near where Bardon church was to be built. He also became a Justice of the Peace, sitting on the bench alongside the Everard brothers, William Thomas and John Breedon, a Rural District councillor, and a Poor Law guardian.

Robert Bennet Grant also lived at *Stone Cottages* and became quarry manager after John Ward⁸⁸. He was also secretary and treasurer of the quarry cricket club⁸⁹, and perhaps Robert Walter Grant, a clerk

⁸⁴ Noble, *op.cit.* p..134:

⁸⁵ 1881 Census.

⁸⁶ Noble, *op.cit.* p..134:

⁸⁷ It was demolished in 1993 to allow for quarry expansion.

⁸⁸ He was quarry manager in 1904.

⁸⁹ For several years from 1895.

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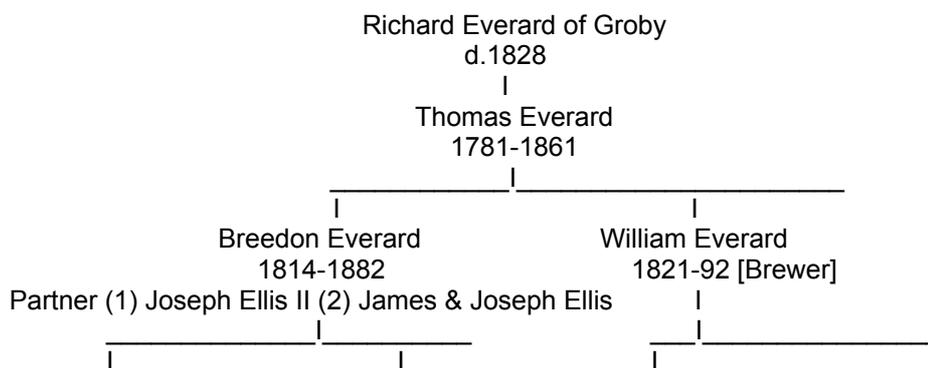
at the quarry, was his son. He was secretary to the Reading Room for some years. Grant was followed as secretary at both the cricket club and the reading room by William G M Bailey, another long serving company office clerk⁹⁰.

The paternalism of the Perry Herricks and Everards, which encouraged the quarry cricket club and the maintenance of the reading room, in 1895 provided the national School at Bardon Hill with a new building to replace its bleak predecessor in the centre of Quarry Row. Providing accommodation for 190 children, its cost, £1400, was shared between Sophia Perry Herrick and the Everards. It was designed by John Breedon Everard, and staffed by a headmaster, an assistant mistress, and an infants' mistress. It closed in 1987. The class rooms were warmed by open fires and oral tradition remembers one long serving headmaster as 'a big fat man', 'a cruel blighter' who monopolized all the heat from the fire⁹¹ by standing with his back to it. Favourite pupils were given desks at the front so as to enjoy its heat.

The Perry Herrick-Ellis and Everard *entente* extended to pastoral provision for Bardon which was in the ecclesiastical parish of Hugglescote and had no parish church of its own. But with a growing population at Bardon, arrangements were made for the Hugglescote clergy to take services in the Bardon school room, 'the expense being defrayed by Messrs Ellis and Everard and Mrs Perry Herrick'⁹². In 1891 the population of Bardon Park was 69, but had risen to over 500 by 1895, the increase being caused by a portion of Hugglescote parish being added to Bardon Park in 1892 and by more workmen's cottages being built for the quarry.

In 1898 St Peter's church Bardon Hill was consecrated by the Bishop of Peterborough. It was designed by JB Everard who, with his brothers, William Thomas and Charles, largely met the cost of its erection, as an act of filial piety to the to the memory of their father who died in 1882. Tradition has it that the choice of St Peter as its dedication was inspired by the dominical injunction: 'Thou art Peter and upon this rock I will build my Church.' Appropriately built in Bardon stone and brick, it has a saddle back tower, such as JB Everard intended in his design for Hugglescote parish church, but happily was not implemented. Pevsner commends Bardon's serious interior and notes that it was quite lavishly done⁹³.

It consists of chancel, with organ chamber and vestry, nave, south transept, north aisle, a western narthex, serving as a baptistery, and a western tower containing 3 bells. The cost of the organ, £290, was met by the parishioners. The Revd William Fowler was curate in charge and was succeeded in 1899 by the Revd Charles Henry Dodwell, MA, of Pembroke College, Oxford. The churchyard was consecrated in 1908 and in 1918 Bardon was established as a separate ecclesiastical parish. The patron was the vicar of Hugglescote, and the incumbent had a stipend of £230, with a newly built vicarage.



⁹⁰ Is he the 'Mr Bailey, the Sunday School teacher' who worked at the weighbridge. [*Marking Time*, p.49.]

⁹¹ *Ibid.*, pp.103,4.

⁹² *Kelly's Directory* 1895.

⁹³ Pevsner, *op.cit.*, p.89.

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Wm Thomas Everard 1840-1909 [Lived at Bardon Hall] JP 	John Breedon Everard 1844-1923 [Built Bardon Mill] JP MICE FRIBA FGS High Sheriff Leics 1913-14 	Thomas Wm [Brewer] High Sheriff of Leics 1905-6 High Sheriff Leics 1913-14
Breedon Newland Everard 1866-1939	Bernard Everard MA Engineer, joined Pick Everard 1879-1963	

A new lease in 1873 resulted in an expansion of the activities of Ellis and Everard at Bardon Hill. Much of this was the work of John Breedon Everard, 1844-1923, Breedon Everard's second son. He served his articles as an apprentice engineer under John Brown of Messrs Brown and Jeffcock, civil and mining engineers of Barnsley and Sheffield. Through the influence of Edward Shipley Ellis, John Ellis's son, and now chairman of the Midland railway, he was taken on as an assistant resident engineer on the extension of the Midland line from Bedford into St Pancras. It was here that he was involved in implementing the designs of Sir Gilbert Scott for this grandest piece of Victorian railway architecture.

In 1874 John Breedon Everard, now an AMICE, became a partner in Ellis and Everard, and began work on what he was to describe later as 'an extensive granite works with new stone breaking mill at Bardon Hill'. The work occupied him 1874-8 and he was familiar with building large industrial structures as the breweries he designed in Leicester and Burton on Trent bear witness.

His experience in these buildings and at St Pancras with the great canopy of the train shed, plainly influenced his design for the new Bardon mill house. All the same, it was an act of great self-confidence for a young man of 30. Under a very large gabled mansard roof of slate, its front elevation rose from an arcade of six semi-circular headed arches, each giving access to the interior for a standard gauge railway track. The foundations were of local stone, but the rest of the building was of high-quality brickwork. A narrow transept with a long slim cast iron window frame divided the front into two equal halves above the arcade. The general impression is of strength and order. Inside, cast iron columns supported the first floor. Power was supplied by stationary steam engines and two Broadbent⁹⁴ Jaw Breakers with manganese steel rolls below reducing the stone for screening. The railway wagons were filled from storage hoppers..

The growth of mechanization and the expansion of production had its hazards and gruesome accidents occurred. In February 1876, for example, at Ellis and Everard's sister quarry at Markfield when two men were charging a shot with two other men looking on:

It is supposed a spark communicated with the powder, which immediately exploded. The men were thrown a considerable distance, and when picked up were found shockingly mutilated; one man had his arm blown right away, and part of one of his legs; another had his face fearfully scorched, and his left leg was nearly all carried away. The other two men were also severely injured. They have been removed to the Leicester infirmary⁹⁵.

John Breedon Everard had tried to improve the efficiency of the Markfield quarry. To overcome the slowness and expense of using horse and carts to take the stone to Bardon station he constructed to his own designs an experimental wire rope tramway linking the quarry to the station. It was not a success, however, and fell into disuse, opposition being too great for it to become permanent⁹⁶.

In 1891 Ellis and Everard acquired the quarries at Shepshed from the Charnwood Granite Company, and John Breedon was responsible for laying out the quarry with new machinery and a branch railway. At this time it is said that between 600 and 700 men worked at Bardon producing 175,000 tons of stone a year, and in this optimistic, expansionist mood, John Breedon Everard more than doubled the size of the mill in 1902 to provide accommodation for four more crushing units. Thus the six arched arcade was extended into one of thirteen arches, each one served by a railway track. The extension had a

⁹⁴ Supplied by Robert Broadbent & Son Ltd., Phoenix Ironworks, Stalybridge.

⁹⁵ *The Times*, 17th February 1876.

⁹⁶ L920 EV8 Leicester County Record Office, Memorandum of John Breedon Everard. It would be interesting to know the nature and origin of the opposition: was it perhaps from Herriots?

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double gabled transept, two storeys high, above the arcade, lit by a double row of five cast iron framed windows. The now enormous mansard roof was covered with Welsh slate in preference to the local Swithland equivalent. An 1873 crusher has survived on the highest level of the original section of the building, as have the impressive 1902 tied beams retaining the original steel bracings of the roof.

The result has been described by Dr Barrie Trinder, doyen of modern industrial archaeologists, as 'large and spectacular'. The building has few, if any, known British parallels and some thought deserves to be given to the impact such a building made upon those who worked within or around it. It was a proud reassertion of British industrial and commercial self-confidence after the recent humiliations of the Boer War. The marvel is that the mill has so far gone unrecorded.

John Breedon Everard was an architect as well as an engineer of some versatility, being elected MICE in 1886 and FRIBA in 1887, the year he was President of Leicestershire Society of Architects. His first love may well have been geology, for he was elected a Fellow of the Geological Society in 1870, as a young man of 26. The earlier appeal of the subject as a fashionable pursuit of the well endowed with both leisure and wealth was waning and geology was now a matter of serious science. He retained this interest and when the British Association for the Advancement of Science held its annual meeting at Leicester in 1907 he prepared papers for the delegates on the Charnwood Forest⁹⁷.

In recent years Everard has excited interest as an ecclesiastical architect, reflecting the influence of Butterfield. Pevsner says of the parish church of St John the Baptist, Hugglescote, built in Bardon Hill stone with limestone facings, and in two stages, 1878 and 1887, 'impressive internally as well as externally... that it deserves more notice... and is easily the best 19th C church outside Leicester'⁹⁸. Breedon Everard, John Breedon's father, was buried in its churchyard and is remembered as being largely instrumental in its building, whereby is meant, one assumes, that he contributed generously to its cost⁹⁹.

From the financial fruits of his successful practice of engineering and architecture he built himself a large red brick house, *Woodville*, in Leicester's fashionable Knighton Park Road in 1883. By the end of the century he was in partnership with S Perkins Pick, best known as the architect of the County Lunatic Asylum at Narborough, 1904-7. The partnership was joined in 1905 by John Breedon's son, Bernard Everard, 1879-1963¹⁰⁰ and still flourishes as Pick Everard. The firm has in its archives the 1902 plans, amongst other JB Everard documents, for the extension of the mill.

Breedon Everard, who with the Ellis brothers, James and Joseph Henry, founded the firm of Ellis and Everard in 1858, had a brother, William Everard, 1821-92, who whilst continuing the family's farming tradition by farming some 600 acres at Narborough, also prospered as a maltster and brewer. In 1849 he joined forces with Thomas Hull, a local maltster, and acquired an established Leicester ale and porter brewery, whilst at the same time leasing premises in Leicester's Southgate Street. In due course William Everard's son, Thomas William Everard, entered the business¹⁰¹, and when its prosperity required new and larger breweries, interests having been acquired in Burton on Trent, to whom better could they turn than their kinsman John Breedon Everard? He designed breweries in Leicester in 1870, 1873, and 1876; a maltings at Burton on Trent in 1876 and breweries in 1882, and a brewery at Market Harborough in 1880. Everards are now prominent in the brewery scene of the east Midlands.

It has been the purpose of this paper to illustrate the historical importance of the Ellis and Everard families in the 19th C economic development of Leicestershire. The part they played in the field of quarrying is particularly significant, from their commissioning in 1859 from Charles Mountain of

⁹⁷ Charnwood Forest: a sketch, written for the Leicester meeting of the British Association for the Advancement of Science, Leicester, 1907, and Charnwood forest: a guide for the excursion on Saturday, August 3rd 1907.

⁹⁸ Nikolaus Pevsner and Elizabeth Williamson, *The Buildings of England: Leicestershire and Rutland*, second edition, Harmondsworth, 1984, pp.42, 181, 182.

⁹⁹ Len Noble, *Bardon Hill*, Ellistown, 1995, p.28.

¹⁰⁰ MA, MICE. Both he and his elder brother, Samuel Mumford Everard, were educated at Trinity College., Cambridge. Samuel became a barrister. Interestingly for students of quarry history, Bernard Everard was commissioned in the Quarrying Company of the Royal Engineers 1917-18 and became engineer and manager of Ellis and Everard in 1919.

¹⁰¹ He was to be High Sheriff of Leicestershire 1905-6.

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Birmingham of a pioneer steam driven crusher, on to the erection of the Bardon mill house of 1874 and its enlargement of 1902 to monumental proportions. The proximity of Midland Railway and LNWR meant that Ellis and Everard claimed to have the custom of '20 county councils, 6 cities, 26 boroughs and upwards of 150 urban and district councils'.

Secondly there is much interest in the mill as an example of the versatility of John Breedon Everard as an engineer and architect. It needs to be seen in the context of two of Everard's churches, nearby at Hugglescote and Bardon, both connected with the family, and both now thought to be of architectural distinction. It would seem that Everard built *both* his industrial *and* his ecclesiastical buildings *ad maiorem gloriam Dei*. This, in association with the Everards' provision at Bardon of a church, school, and reading room, as well as housing, makes them worthy of careful study as a Victorian quarry masters of many parts.

Bardon mill also has great structural interest, combining as it does the use of timber, cast-iron, wrought-iron, mild steel, and brick. The alterations carried out as it was adapted to house new processes add to this interest. It also illustrates the 19th and early 20th century evolution of steam power in the aggregate industry.

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