

THE PEAK FOREST CANAL 1846–1926

By DAVID HODGKINS

The history of the Peak Forest Canal (PFC) and the associated tramway, quarries and limekilns has been the subject of considerable research, much of it published in the *Derbyshire Archaeological Journal*. Most recently the archaeology and history of the limekiln complex at Peak Forest was the subject of an article by John Barnatt and Antony Dickson which also reviewed traffic on the tramway and canal.¹ However this otherwise comprehensive article does not deal with the period after the lease of the canal and its associated tramway and quarries in 1846 by the Manchester, Sheffield, and Lincolnshire Railway (MSLR), and little has been published which relates to that period. This is partly because when the canal company lost its independence, the records of the governing body ceased and those of the MSLR relating to the canals are not as comprehensive and the material is scattered in the railway company records. Many of the statistics are only available for the MSLR's western canals (i.e. Ashton, Macclesfield and Peak Forest) taken together and from 1864 to 1892 the published statistics generally included the company's Yorkshire canals as well. However despite very considerable gaps in the records, certain matters and periods are covered in some detail and it is largely these which form the basis of this article.²

The PFC reached the height of its prosperity in the 1830s. It then had a virtual monopoly on the transport of stone from the quarries at Dove Holes which it largely owned or otherwise controlled, so that it received income from the sale of stone as well as tonnage from the transport of stone and other goods. The limestone quarries were extended, as was the canal-owned tramway linking the quarries at Dove Holes with the canal at Bugsworth. Its credit was good and capital was borrowed for improvements, including Todd Brook reservoir. Receipts from tonnage carried and limestone sales rose from £18,414 in 1832–3 to £29,126 in 1836–7. In 1838 total tonnage carried reached 442,253. By 1839 a dividend of £5 was paid.³

In the 1840s the position changed radically. This was in part the result of competition from other canals such as the Trent and Mersey, for through traffic to the Midlands which in the 1830s had been sent via the Cromford and High Peak Railway (CHPR), and increasingly from the new railway companies. It was also because of generally poorer economic conditions in the early 1840s and competition in the lime and limestone market from other Peak District quarries and limekilns, particularly those owned by Thomas Gisborne at Harpur Hill on which stone the PFC only received tonnage from Whaley Bridge, and newer quarries and kilns at Dove Holes served by road. The short term loans now became an incubus; the surplus generated in the 1830s was exhausted and the dividend cut to £3 in 1844.

In the railway mania of 1845 the PFC was the subject of interest by two railway companies — the Manchester and Buxton and the Sheffield, Ashton-under-Lyne and Manchester (shortly to be part of the new MSLR). In September 1845, the Buxton company⁴ was expecting an intimation from the PFC as to what might be an

acceptable purchase price, but the PFC soon opted for a perpetual lease to the MSLR, as did the Ashton and the Macclesfield. The canal company secured a guaranteed income of 4¼ per cent on both its capital and floating debt, by then £41,000. The MSLR was planning a line from Hyde to Whaley Bridge. Parliamentary approval was quickly obtained, and work started. In July 1847 a line was authorised from Bugsworth on the proposed Whaley Bridge branch to the Peak Forest Tramway at Bradshaw Edge with a view to reaching Buxton.

How far the MSLR intended to remain a serious player in the canal business is uncertain. Clearly they wanted to 'occupy the district' for themselves and to prevent other railway companies from coming in. Had their plan for a line to Buxton been implemented, reliance on the Peak Forest Tramway and the Canal to market the stone of the quarries which the tramway served would probably have been limited and perhaps even unnecessary. However the MSLR, having expanded all too quickly and spent heavily, could not afford to build the line to Whaley Bridge and so it was one of the casualties of the aftermath of the railway mania. In November 1848 work on the line was stopped; by 1851 the plan for a line beyond Hyde was abandoned because of the small traffic potential, though this decision was to let into the district the London & North Western Railway (LNWR) which, through an associated company the Stockport, Disley & Whaley Bridge (SDWBR), was to reach Whaley Bridge and link with the CHPR by 1857, and to go on to Buxton by 1863.

In these circumstances it became difficult for the MSLR to run down the Peak Forest and associated canals. Indeed the MSLR at that time was much more than a railway company. 12½% of its revenue was derived from canals and it had to find £27,000 a year to pay the annuities on the Peak Forest, the Ashton and the Macclesfield. In 1848, when the tonnage carried on the Peak Forest was down to 343,549, total revenue at £23,605 did not quite match the interest payments of £9,052 and expenditure of £15,793; receipts per ton carried were only 7s. 6d. compared with 10s.4d in 1838. The PFC had been managed by James Meadows who was also agent to the Ashton Canal which was in effect the continuation of the PFC to Manchester. The MSLR now appointed Robert Smith to manage these two canals and also the Macclesfield and Chesterfield. He was a senior figure in the company reporting to the general manager. His salary was £300, the same as that of the company's secretary and only £50 less than that of Peacock the locomotive superintendent.⁵

In 1849 the rates on the Peak Forest were raised to the legal maximum, as 6s 3d was being lost per boat on tonnage and 1s on wharfage. However Smith was given power to vary the rates, as there were doubts about whether the higher rates could be made to stick particularly on the tramway. The board considered that it would require some nicety of management before the traders would pay, though it was money the canal could ill afford to lose.⁶ On the Ashton Canal the MSLR developed interchange points with the railway at Guide Bridge, Princes Dock, and at the Old Wharf in Ashton, and at London Road Manchester and ran a carrying fleet themselves linking with the goods train services at Guide Bridge. John Boulton ran a service of packet boats from Marple and Hatherlow to Dukinfield which after the opening of the MSLR branch from Dukinfield to Hyde connected with trains at either Dukinfield or Hyde. Boulton built and ran the Queen's Hotel at Marple. Excursion traffic on Sundays seems to have been important as on that day there were four boats to Marple.⁷ In consequence of a great and increasing demand for stone from the Bugsworth quarries the MSLR Board agreed

in 1853 to purchase more land there for quarrying and to buy for £2,500 Colonel Peel's Hallsteads estate of 45 acres served by the tramway at Dove Holes for quarrying when the lease expired in 1856. At the same time it was noted that the 63 year lease of 48 acres from the Eyre estate would expire in 1875. In August 1853 it was reported that there had been a considerable increase in traffic though the profits did not seem greater. In the previous year the corporation of Manchester had paid £2,000 for water.⁸

In 1854 the three western canals lost over £5,000 after annuity and interest payments. The position did not substantially improve because costs increased. When the Bill for the SDWBR was going through Parliament the LNWR agreed that, in consideration of the withdrawal of the MSLR's opposition to the Bill, the — would guarantee the MSLR from loss on their canal as a result of competition from the railway. In August 1858 however the MSLR reported to shareholders that the canal's traffic had suffered severely from commercial pressure, but it had also been damaged by a ruinous competition on the part of the LNWR at a loss to themselves in defiance of the agreement they had signed.⁹ Nevertheless by 1858 378,889 tons were being carried, an increase of 35,000 tons on 1848, and revenue had increased to £27,000 but receipts per ton were down to 5s. 4d and expenditure had risen to almost £21,000 before interest payments.¹⁰ By 1862 revenue had risen to £34,700, but again a rise in expenditure to over £27,000 meant that when interest payments were taken into account the PFC was working at a loss of £2,000 and the loss for the three canals taken together was £14,000.¹¹ While in 1848 only 44% of revenue from the three canals came from the Peak Forest, it now provided 59%.

The board was not resistant to spending to improve the position. In 1860 a 27 year lease was taken on a farm of 64 acres at Bugsworth to avoid sending all the provender for the 35 horses on the tramway from Manchester.¹² Stimulated by the simultaneous overflow from Hollinswood Reservoir and a breach at Hatherlow one tempestuous night in August 1857, the board instructed Smith to take all necessary measures for restoring and keeping up the works on all canals.¹³ New weirs at Hollinshead were the most expensive item but work was done on the Marple aqueduct where ties were put in the centre arch and the tank replaced — the latter done in Whit Week to reduce interference with traffic — and new quarries were started at Dove Holes and Bugsworth; also a tramway extension was constructed and 20 cottages erected.¹⁴ £13,000 was expended on the three canals in the three years 1860–2. More work was in progress.

In the early 1860s the position of the PFC changed substantially. First, as part of the attempt to improve the PFC's trading position, in 1861 Robert Smith put to the MSLR Board the advantages to the company of converting the Peak Forest tramway to a locomotive line. This would save the expense of a large number of horses and put the company in a better position against its competitors. This was accepted by the board who agreed that, if necessary, powers should be taken in one of the company's bills. The estimated cost was £15,000. Although further powers for this purpose were not sought, the MSLR (Additional Works) Act of 1861 had authorised a railway line from the already sanctioned Marple, New Mills and Hayfield Junction line at or near New Mills to a junction with the Peak Forest Tramway at or near Crist Quarry.¹⁵

However these proposals were cut short by a major change in the MSLR's policy. Late in 1861 it agreed to assist the Midland Railway to extend to Manchester by giving them running powers over their route from New Mills to London Road. To reach New

Mills the Midland had to construct a new line from Blackwell Mill on their line from Rowsley to Buxton, which was then being constructed. The new line was to traverse Great Rocks and Dove Holes Dales so passing through the heart of the well established limestone quarries served by the Peak Forest Tramway.¹⁶ Authority for this line was obtained by the Midland Railway (Rowsley and Buxton Extension) Act, 1862. This gave the MSLR running powers between the junction with their line at New Mills and the limestone quarries at Dove Holes. It also repealed the provision in the MSLR's 1861 Act for a branch from New Mills to the tramway and substituted a branch from the Midland Railway from near Gowholes to a place near the aqueduct over the Goyt west of Bugsworth, the line from there to Crist Quarry remaining the MLSR's responsibility.

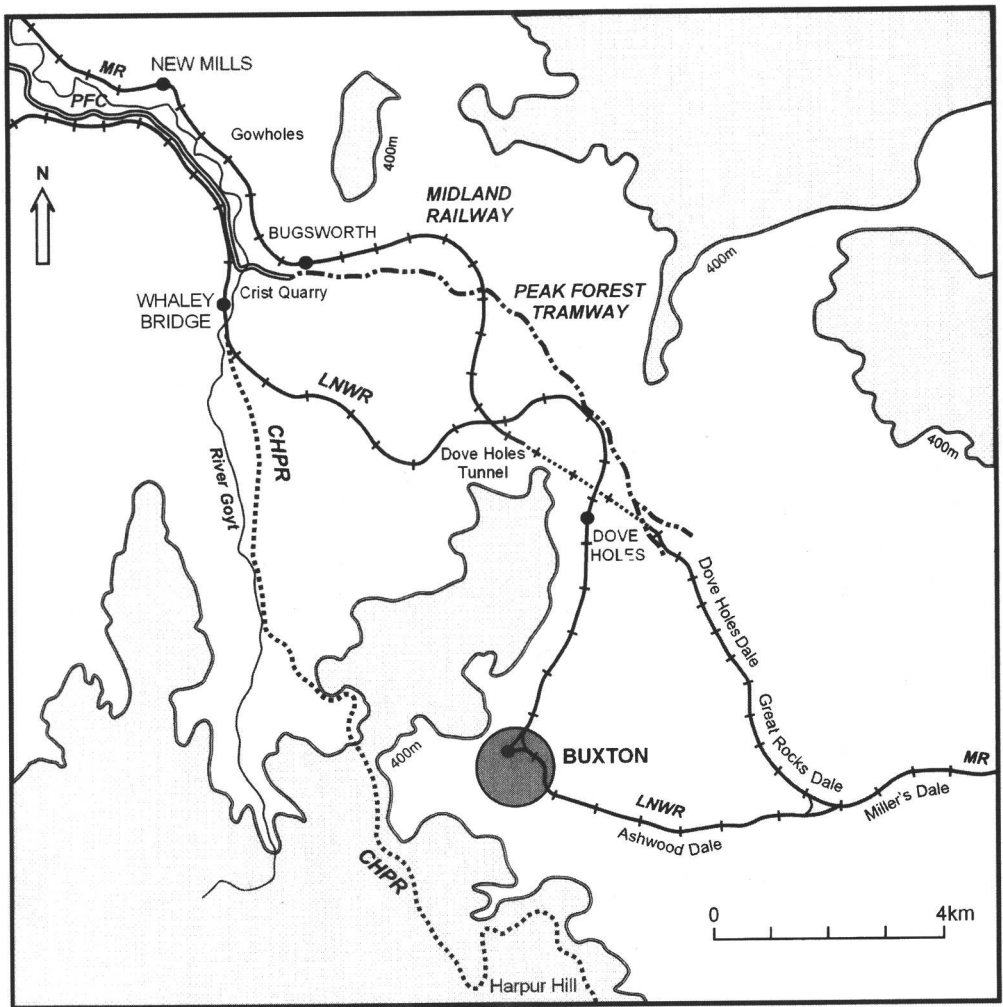


Fig. 1: Sketch map of the interrelationship of the PFC, Tramway and railways after the building of the lines to Buxton and the Midland main line to Manchester.

By 1863 the expenditure on works and the losses on the PFC were of concern to the MSLR board, concern which was perhaps reinforced by the Midland Railway's extension. They appointed a committee under the company's deputy chairman, William Fenton, a Rochdale banker, to enquire into the management of the Company's canals to see what could be done to reduce expenditure and increase net profit. Smith was asked to advise on whether the limestone and gritstone could be advantageously let for a term of years with an arrangement that the whole traffic be sent over the company's canals, which might be thought an inappropriate provision in view of the alternatives opening up on the railways. Smith defended his record. In his view most of the more damaged and dangerous portions of the canals had been renewed. He thought expenditure would be reduced by £2,000 in the current year. The staff was modest for the size of the canal business. The quarries themselves were being worked by contract at a price per ton or per foot delivered into wagons at a small profit, 4½% on limestone and 2% on gritstone, but Smith indicated it was the added income from tolls for carriage of the stone on the canal which really provided the profit.¹⁷ Since 1860 the number of horses had been increased from 66 to 72, 36 of which were on the tramway, and limestone wagons from 225 to 268. More land was being leased from the Duke of Devonshire for quarrying for 21 years.

Despite Smith's efforts, Underwood, the general manager, and Ross, the secretary, put in a damning report to the board.¹⁸ The whole arrangement was antiquated and on a scale little in accordance with their necessarily decreasing revenue or with the economical improvement which the experience of working the railways would suggest. The staff was excessive and remunerated in many instances much more than warranted by the nature of their duties. Long service could not be ignored, but the interest of the company was paramount. Smith had to go within 15 months. The general canal office was transferred to the Railway Accounts office, and the work consolidated with the general accounts of the company. Responsibility for stores and building were transferred to the railway surveyor and to Sacre, the engineer, respectively.

Although Smith defended his management of the canal, he went so far as to tell the Committee that the opening of the Midland Railway to join the MSLR line at New Mills would altogether change the character of the canal operations and extensive change from water to rail must of necessity ensue, but he thought it would greatly augment the mineral traffic of both. The powers obtained in the Midland Railway Bill would enable them to discontinue the present mode of working the traffic over the existing tramway by horses and inclined planes, passing it over the Midland railway on payment of a toll of about a third of the present cost of working. He had already made arrangements with the Midland Railway and the contractors to get limestone out of the Midland Railway's cuttings in Dove Holes Dale and from Dove Holes Tunnel on which work was then beginning. He thought that over the next three years this would amount to more stone than could be sold but it 'would pay for saving'. The only other stone the company need get was by following up the Midland Railway cuttings in order to obtain a face of rock sufficient for a siding and for an access to their line. This would open out a series of new markets at present altogether or partially closed to the MSLR by the expense of trans-shipment from tramway to canal.

The proposal for a branch from the Midland line to Bugsworth lived on, though the idea of sidings at Crist Quarry seems to have been abandoned quickly.¹⁹ It was only in

February 1866 that Allport, the general manager of the Midland Railway, reported he had been told by MSLR officers that they had no intention of proceeding with the branch. However the plan for an MSLR siding at the quarries on the Midland main line, south of Dove Holes tunnel, went ahead, though there were complicated negotiations before an agreement was reached in March 1866. The MSLR would have access to, and take the stone from, the land known as Dr Ashton's situated between the Midland's line and the property leased by the MSLR from the Duke of Devonshire.

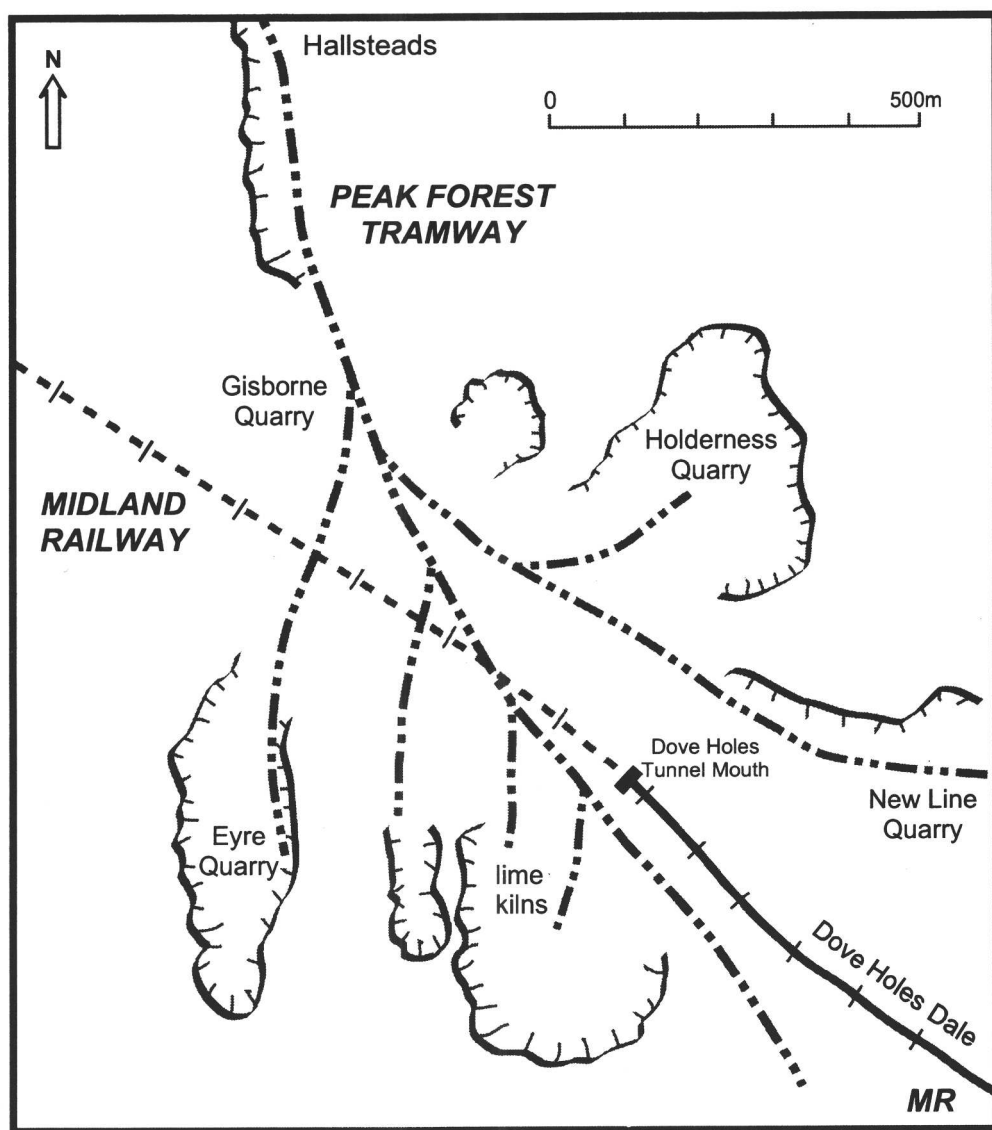


Fig. 2: Sketch map showing the PF Tramway and the Dove Holes Tunnel of the Midland Railway.

Allport was asked in December 1866 to negotiate with the MSLR on the construction of sidings at Peak Forest for their use and in September 1867 permission was given to the MSLR to put in sidings at their cost, though the link with the main line had to be laid by the Midland themselves.²⁰ Thus the PFC's New Line and Peak quarries were served both by these sidings and by the tramway. The MSLR did not pursue the possibility of abandonment of the tramway or its replacement by a standard railway though, according to Findlow and Baines, between 1865 and 1870 a substantial amount of the track was replaced with L section steel rails of 9 and 12 feet lengths, in contrast to the original lengths of a yard.²¹

It is not clear what effect the links with the Midland Railway had on traffic on the tramway and canal, though the Midland line gave an immediate impetus to the establishment of new quarries — the Great Rocks Lime Co was set up in 1864. The only figures now surviving in the MSLR records for tonnage carried by the MSLR's western canals show no major variation but it is unrealistic to deduce from these overall figures that there were no changes in the supply and transport of stone over the tramway and PFC. For the period July 1863 to June 1873 figures survive for PFC limestone and gritstone sales but whether they include sales of stone conveyed by rail via New Mills is not clear as the Canal Department managed the quarries. Certainly the stone business grew. In 1864 86,000 tons of limestone and 32,000 tons of the more valuable gritstone were sold, the latter accounting for nearly £9,000 of the £17,000 sales. This was the peak at least in this period for getting and selling gritstone. For the last twelve months for which we have figures, July 1872 to June 1873 only 22,100 tons of gritstone were sold for £5,500 and 116,000 tons of limestone were sold, realising £19,500, so raising total income from stone to £25,000.²² The increase in limestone sales in the late 60s and early 70s is compatible with the opening of the line to New Mills and of course, if these figures do represent total sales, they could conceal some transfer of traffic from canal to rail.

The dry weather in 1868 may have accelerated the transfer to rail. In September the scarcity of water was such as to result in traffic over a great portion of the canals being discontinued. Sidings were necessary at Woodley and Marple to secure the railway traffic. The MSLR Board insisted however that the works, not exceeding £1,000, should be permanent and part of the general system.²³

1863 saw the opening of the LNWR line to Buxton which increased competition for traffic in the area. Bibbington's Victory Lime Works opened soon afterwards at Dove Holes where the Perseverance works had started about 1847.²⁴ Both were associated with quarries and linked with the LNWR's line. Another factor which may have affected traffic on the canal was the growing appreciation that to haul two tons of stone to make one ton of lime was not economic and the practice of burning lime in Dove Holes Dale which had largely ceased was revived by Joel Carrington, a lime merchant from Hollinwood near Oldham, who built one kiln at Peep o'Day and two more at Holderness, which quarry he had purchased in the 1850s. Others followed his example though kilns remained at Bugsworth at the foot of the tramway.

What the arrival of the Midland in Dove Holes Dale did ensure was that the Peak Forest Canal derived little benefit from the huge growth in the demand for limestone particularly to meet the demand for the new Solvay process to produce soda ash by Brunner and Mond at Winnington on the River Weaver and new methods of steel

making. This encouraged the development of many new quarries in the Peak Forest and Dove Holes and adjacent areas, a considerable proportion of them adjacent to the Midland Railway's new main line or its Buxton branch, though the MSLR in 1882 purchased another small estate of six acres for quarrying at Bugsworth adjoining the company's gritstone quarry.²⁵ The Canal continued to be used for the carriage of limestone particularly by Samuel Taylor who had built up a fleet of barges for use in Lancashire and Cheshire before he went into quarrying to meet the demand for lime in the Runcorn and Widnes district. He bought Holderness Quarry following Joel Carrington's death in 1879. Though the PFC's own quarries were connected to the Midland there is no evidence that the case for closing the tramway and relying on taking the entire output of stone out of Dove Holes Dale by the Midland Railway, as argued by Smith, was seriously examined in this period, let alone pursued, possibly because of Taylor's reliance on the canals.

Although the canals had been long placed directly under the management of the railway, the MSLR until 1883 had to find money to pay the annuities to the shareholders, and the three canals never provided sufficient surplus revenue to meet this charge in full. While revenue held up reasonably well until the 1870s — 1874 was virtually the same as 1848 — expenses, particularly for maintenance, rose and did not fall off proportionately when revenue was reduced. Revenue for the MSLR canals of £103,000 in 1871–2 had reduced only marginally to just under £100,000 in 1878.²⁶ In 1883 the leases of the PFC, Ashton and Macclesfield were terminated and they formally became part of the MSLR itself, their shareholders' annuities being replaced with MSLR 4½% debentures. This made little difference to the PFC, but achieved a substantial saving on interest payments to Ashton shareholders.²⁷

By 1888 revenue on all the MSLR canals had fallen to £84,000 and by 1894 was down to £69,000. In 1888 the revenue of the three western canals amounted to £30,800, compared with £52,500 in 1869. A surprising feature is that only £13,000 came from tolls; the company was still receiving £11,000 from its carrying business, and there was still a positive net revenue of £4,700 without taking into account interest charges. The estimate of 600 tons of lime and lime stone per day (180,000 tons a year) trans-shipped at Bugsworth in the 1880s quoted by Lamb is not necessarily incompatible with the 557,000 tons carried by the three western canals in 1888s.²⁸ However it did not long remain at this level. The Geological Survey for 1894 records that the MSLR's Dove Holes quarries produced 219,858 tons a year, but only 45,723 was sold as stone and 146,572 tons were used in producing the 73,286 tons of lime which was sold and presumably much of it was transported by the Midland rail link.²⁹ By 1895 the total revenue of the western canals only amounted to £17,200, a steep and rapid decline since 1888. Although 13 quarrying firms in the Buxton area merged to form Buxton Lime Firms in 1891, the MSLR and Samuel Taylor in Dove Holes Dale and Bibbingtons at Dove Holes remained outside the combine.³⁰ J. Mason Frith had married Taylor's eldest daughter and in 1902 the firm of S.Taylor Frith was incorporated.³¹ In 1903 additional sidings were provided by the Midland Railway to serve Taylor Frith.

In the 1890's the western canals moved from a profitable revenue position in 1888 to one of loss though by 1898 it amounted to only some £700 per annum. By 1907 revenue was down to £12,000, though expenses only dropped from £24,500 in 1895 to £22,750 in 1907. Revenue on the PFC was only £4.138 in 1905, leaving a loss of £976. It was not surprising that in 1905 the Great Central (GCR), which the MSLR had now

become, objected with considerable success to new rating assessments on its canals by the Stockport and Chapel-en-le-Frith Poor Law Unions.³² In 1905 the PFC's tonnage was only 136,148. Much of this was short haul as ton miles only amounted to 842,772. 27,462 tons were hard stone (gritstone), 15,660 were lime and limestone and 37,446 were coal. Samuel Fay, then general manager of the GCR, told the Royal Commission that there was a decreasing quantity because there was an opening up of other quarries connected by sidings to other railways in the district, but it seems likely that the tramway and canal were losing traffic to the Midland even from the quarries they had long served.³³

By then coal was the largest traffic on the western canals – mainly on the Ashton where even in 1905 105,000 tons was carried. Unmanufactured cotton was conveyed from Manchester to various mills, though, significantly, manufactured cotton goods were sent by road or rail. Grain was sent from Manchester, particularly to Macclesfield. While lime and limestone were still sent in quantities, the traffic was decreasing. The MSLR continued to act as a common carrier on the Ashton and Peak Forest Canals until 1892 when they cased to run their own boats to regular timetables in connection with goods trains to and from Guide Bridge. Underwood, Fay's predecessor as General Manager, told the Board that for some time the earnings had fallen off and were now exceeded by the expenditure.³⁴ In 1906 Samuel Fay told the Royal Commission that there was a margin of profit in carriage from Manchester to Romily and Marple and also from Manchester to Macclesfield, but it was cheaper to deal with the traffic by rail, particularly as the boats could not secure a satisfactory return traffic. In general the canals' charges were governed by the railway rates. They secured traffic by being prepared to accept a little less. There were three regular carriers. Another witness said that the Peak Forest needed dredging in places but was otherwise in fair condition.³⁵

The kilns at Bugsworth closed in 1915. Some idea of the limited traffic on the tramway and canal immediately after World War I can be obtained from a return Samuel Fay sent to Sir Herbert Walker in connection with wage setting as part of a more general enquiry. The tramway employed one brakesman, two wagoners, two assistant wagoners and three labourers. The canal maintenance department employed eight banksmen, one ganger and one dredgeman. There were two lock keepers, two reservoir keepers and three banksmen employed elsewhere than in the maintenance department.³⁶

In 1920 the GCR's estate agent set out to the Land and Property Committee various possibilities for reducing or ending the company's interests in Dove Holes Dale, the New Line and adjacent Peak quarries already having been taken over by Buxton Lime Firms.³⁷ One proposal from Taylor Frith was for a railway from these quarries and Hallsteads along the line of the tramway to link with the LNWR line to Buxton, but Buxton Lime Firms, now owned by Brunner Mond, would not go along with this plan. They were however prepared to purchase all the plant and equipment that the GCR owned on the land which the Midland had leased to the GCR, provided they could be connected to the tramway in order to work over it stone for their kilns at Bugsworth and for carriage on the canal. At this stage the BLF were strongly averse to closing the tramway. They suggested purchasing the PFC's wagons and using the tramway as a toll road, the PFC giving up all its plant to the BLF and the land and houses at Hallsteads and Peak Forest wanted by Taylor Frith.

Officers reported that the material could not be used elsewhere by the GCR. The stone-crushing plant at Bugsworth was worn out and that at Peak Forest was an old type. The 280 wagons were unsuitable for any other use as they were built for the L plate rail of the tramway. They could be stored at the top of the inclined plane at Chapel but to have so much standing idle would give rise to comment in the district. The opportunity should be taken to sell to BLF. Although an immediate decision was taken to sell the surplus rails and wagons on the land recently leased and also the crusher and siding on the Midland 's land, no decision was taken on the tramway.³⁸

On 9 December 2 1920 it was agreed to sell 27 cottages and 40 acres of land at Hallsteads and Peak Forest to BLF for £7,400 and in July 1921 it was agreed to sell the BLF the working plant and materials at the Peak Forest quarries for £3,501. In 1922 the estate agent was left to sell the buildings and sidings on the Midland's land for the best terms possible.³⁹

The BLF then decided that it no longer wished to take over the tramway. Although used to some extent by Taylor Frith, the railway company (now the London & North Eastern (LNER)), then decided to close it owing to what they called 'its practical disuse'. Doubtless an influence was the agreement by the Midland Railway to improve and extend the sidings provided in Dove Holes Dale. Their General Manager told the Traffic Committee that £136,000 had been derived from the stone traffic in 1922. This included the a realignment to remove the the steep gradient on the line into the quarries. The proposed new siding, opened in 1926, would enable 1,500 to 2,000 tons of stone to be handled per day.⁴⁰ The LNER had obtained a clause in their Act of 1925 to abandon and discontinue their 'Peak Forest Tramway'. The BLF and the Duke of Devonshire objected to the proposal in Parliament but this was probably a bargaining counter as their opposition was removed by offers by the LNER to sell to them 3 and 2 acres respectively.⁴¹ Taylor Frith sent their last load down the tramway in 1926.⁴²

Subsequently the rails were removed. The closure of the tramway meant that the main economic purpose of the Peak Forest Canal above the Marple Locks was to convey water from its reservoirs to the lower canal which served as a link between the Macclesfield and Ashton. Its further decline and subsequent restoration is another story.

NOTES

¹ *Derbyshire Archaeological Journal*, 124 (2004), 141–215. For the canal, D. J. Hodgkins, 'The Peak Forest Canal — lime and limestone 1794–1846', *DAJ*, 107 (1987), 73–93.

² The records were also drawn on in a more wide-ranging, but less detailed, survey of the canals owned by the MSLR in the North West of England and Yorkshire, The Manchester, Sheffield and Lincolnshire Railway, Sir Edward Watkin and canals, in *Cooperation and Competition: The History of the Railways Relationships with other Transport Modes*, the proceedings of a conference published in 2000 by the Railway and Canal Historical Society.

³ The financial data are from the PFC records — The National Archives, Kew, RAIL (henceforth RAIL) 856/3; the tonnage from Return relating to Inland Navigation and Canal Companies, (*Parliamentary Papers* (henceforth *PP*) 1870, XVI).

⁴ Revived in 1846 in the form of the Manchester, Buxton, Matlock and Midlands Junction Railway.

⁵ RAIL 463/61, 23 September and 14 December 1847.

- ⁶ RAIL 463/1, 22 August and 17 September 1849.
- ⁷ Charles Hadfield and Gordon Biddle, *The Canals of North West England*, 2, 444.
- ⁸ RAIL 463/2, 7 June and 463/3, 30 Dec. 1853 and half yearly report August 1853.
- ⁹ RAIL 463/4 report of half yearly meeting.
- ¹⁰ RAIL 1110/304. (MSLR Directors' Annual Reports). Unattributed figures for traffic and revenue are taken from this series).
- ¹¹ Figures for tonnage for 1862 comparable to those for earlier years are not available. One reason for the higher loss on the other two canals was that the MSLR was paying 7 per cent on the annuities of the Ashton compared with 4¼ per cent on the Peak Forest.
- ¹² RAIL 463/5, 25 May 1860.
- ¹³ RAIL 463/3, 28 Aug. 1857.
- ¹⁴ RAIL 463/3, 28 Aug. 1857 and 463/5, 25 May 1860.
- ¹⁵ RAIL 463/6, 27 Sep. 1861; Manchester, Sheffield and Lincolnshire Railway (Additional Works) Act, 1861.
- ¹⁶ The impact of the Midland Railway on the tramway and canal has received scant attention from historians. Some plans of the tramway do not indicate the Midland's presence in Dove Holes Dale, eg Brian Lamb, *The Peak Forest Canal, Bugsworth Complex and Tramway, A Discourse*, 1983 ed. and Alan J Findlow and Don Baines, 'The Peak Forest Tramway: 1796–c1927', *Archive*, 3, (nd), 25
- ¹⁷ RAIL 463/62, 20 March 1863. In 1862 of the total profit of £2,800 on stone, £2,100 had come from tonnage.
- ¹⁸ RAIL 463/62, 17 April 1863.
- ¹⁹ RAIL 491/313, Midland Railway, New Mills Extension Committee, 6 April 1864 'unlikely to be required by the MSLR'.
- ²⁰ RAIL 491/313, 7 March and 4 Dec. 1866, 5 March and 3 Sept. 1867.
- ²¹ Findlow and Baines, 26.
- ²² RAIL 463/161 — MSLR Canals Department, Abstract of Stone Sales.
- ²³ RAIL 463/10, 25 Sept. 1868.
- ²⁴ Leslie Jackson, 'The Buxton Lime Trade', *Cement, Lime and Gravel*, 25, 1950, 142.
- ²⁵ RAIL 463/18, 10 Feb. 1882. This may have been the plot of land which in 1900 the Great Central, not having made use of it for quarrying purposes, sold to the Midland for £3,691 to assist their Chinley to New Mills widening scheme. (RAIL 226/33, Great Central Land and Property Committee, 24 May, 4 and 25 Oct. 1900).
- ²⁶ *PP* (1890) LXIV, 818–9.
- ²⁷ The MSLR had been paying 7 per cent to Ashton shareholders.
- ²⁸ 600 tons per day is quoted in Alan Findlow and Martin Whalley, 'Bugsworth Basin' in *Moving Manchester*, ed. Derek Brumhead and Terry Wyke, 2004, 110, based on an unacknowledged source in Brian Lamb, 4. The estimate of total traffic in excess of a million tons a year (Findlow and Whalley, 111) seems unrealistic. Whatever the figure for stone and lime traffic trans-shipped at Bugsworth it was unlikely to have been matched by incoming traffic from the Canal.
- ²⁹ The survey gives no data for output from other quarries in Dove Holes Dale, so presumably they were less significant producers.
- ³⁰ Jackson, *ib.*
- ³¹ Bill Hudson, *Through Limestone Hills*, 1989, 184.
- ³² RAIL 226/33, 23 March and 19 Oct. 1905.
- ³³ Royal Commission on Canals and Inland Waterways, III (Cd 3718) 1908, Question 20762. Fay said that lime, limestone and stone to the extent of 81,000 tons passed over the canals during last year to Manchester and district, but from the breakdown he gave, 81,000 tons must include coal.

- ³⁴ RAIL 463/25, 12 February, 1892.
- ³⁵ Evidence to Royal Commission, Q 20791 and Q 20802, and V, Appendix 11.
- ³⁶ RAIL 226/192, Pay and service of staff employed on railway owned canals.
- ³⁷ RAIL 226/375 Feb. 1920, report of 3 Jan.
- ³⁸ Idem, 4 March 1920.
- ³⁹ Idem 9 Dec. 1920, 23 July 1921 and 9 Nov. 1922.
- ⁴⁰ Hudson, 184.
- ⁴¹ London and North Eastern Railway Act, 1925 (15 & 16 Geo 5, ch lii) section 54; RAIL 390/39, LNER Property Committee, 29 Oct. 1925.
- ⁴² Findlow and Whalley, 113.