

CAPTAIN MOORSOM AND THE ATTEMPT TO REVIVE THE CROMFORD AND HIGH PEAK RAILWAY

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The Cromford and High Peak Railway (CHPR) was built to link the Cromford and Peak Forest Canals.¹ Its route of 33 miles across the limestone of the southern Peak District was open throughout by July 1831, including the nine inclined planes. Although a contemporary of the Liverpool and Manchester Railway, it had few of the features which, by the end of the 1830s, were making railways a success. The new lines were characterised by edge rails, made of wrought iron, smooth gradients, the use of locomotives, the carriage of passengers and the railway company acting as the sole carrier of goods and passengers. The CHPR did have edge rails, but they were of cast iron. The smoothness of the gradient on the long summit between Hopton and Bunsall was itself interrupted by the incline at Hurdlow, and there were of course four inclines at each end of the line which made a formidable obstacle to the development of traffic.² Although there were some early experiments with locomotives on the line, the cast iron rails were unsuitable for them. Traffic between the inclines was horse hauled for many years; the independent carriers remained largely responsible for traffic when they had long since been ousted elsewhere as the locomotive became dominant; as long as horses were in use, stone block sleepers, rather than cross sleepers, were essential.

The capital was insufficient initially, mainly because not all shareholders subscribed the amounts to which they had put their names in 1824. More funds had to be raised to complete the line, although the estimate of the engineer Josias Jessop was not greatly exceeded. Belief in the CHPR's prospects never seems to have been widespread after the initial enthusiasm for building the line had been spent. Increasingly the CHPR came to rely on financial backing from a small number of sources, particularly the Butterley Company, its chief supplier when the line was built and its chief creditor thereafter. Other lines were short of capital or had major teething troubles, but in the case of the CHPR many of the ingredients of a successful railway were also missing. The Manchester and Liverpool could raise the capital for better rails a few years after it started operations because the other signs of success were evident. Francis Wright, for many years the major partner in Butterley and Chairman of the CHPR said in 1862 'We found ourselves getting into difficulties from the third year of our existence.' He added that in retrospect it was clear that the CHPR never had a remote chance of paying a dividend on the original shares.³

Francis Wright lost more than anyone as a result, for his father, John Wright, who with William Jessop, Benjamin Outram and Francis Beresford, had been one of the founders of the Butterley Company, had also been the first chairman and largest shareholder in the CHPR. Francis, John's second son, became a partner in Butterley in 1830 and was 'the driving and directing force of the concern for 43 years'. Not only had he succeeded his father as chairman of the CHPR, but in the 1850s several of his fellow directors were also from families involved in the birth of the CHPR. Indeed Peter Arkwright, the deputy chairman in the 1850s had himself been on the first committee in 1824. Grandson of the great Sir Richard, as a young man he had become a partner in Arkwright and Toplis, the company's bankers at Wirksworth, and was of course heavily involved with the Arkwrights cotton spinning business. He now lived at Willersley Castle.

Thomas Gisborne had been one of the original committee members. He was a prominent local politician, successively representing a number of constituencies —

Staffordshire, North Derbyshire, Carlow and Nottingham from 1830 until his death in 1852. A Whig, one of his chief political rivals was the Tory George Arkwright, who lost the 1837 election in North Derbyshire to William Evans, Gisborne's brother in law, who had stepped in when Gisborne dropped out through ill health. Their rivalry is said to have led to a lawsuit between Arkwright and Gisborne over a trespass by the latter on land at Combs Reservoir, not far from Gisborne's home at Horwich House near Whaley Bridge.⁵ His interest in the CHPR arose from his extensive business interests, particularly the limestone quarries and kilns at Harpur Hill and his colliery at Horwich End. His son Thomas Guy Gisborne became a member of the CHPR committee in the 1840s and served until 1863. Lord Waterpark of Doveridge, another prominent Derbyshire landowner and Whig politician was also a director. Himself a Cavendish, he had been MP for Knaresborough, one of the Duke of Devonshire's pocket boroughs, and later served as MP for South Derbyshire. In 1837 he married the daughter of the Dowager Lady Anson, who had been one of the largest original subscribers to the CHPR.

The other members of the board in the mid 1850s were Captain Francis Green Goodwin, William Jessop, William Needham, George Strutt, John Cruso and David Wheatcroft. Goodwin was a local landowner residing at Wigwell Hall, Wirksworth, who had been a member of the committee since 1825. William Jessop was a nephew of the William Jessop 'the younger', a bachelor, who was a partner in the Butterley Company from 1814 to 1852, and also of the CHPR's engineer Josias Jessop who had died in 1826 soon after the building of the line had been approved. William Needham was also from the Butterley area. He lived at Swanwick Grange near Alfreton, but later at Lenton Hall, one of the Wright family properties. The Strutts had also played a part in the early years of the CHPR. John Cruso, a Leek solicitor, had extensive interests in the area, acting for the Gells of Hopton Hall. He was also clerk to the Cromford and Newhaven Turnpike. David Wheatcroft was a member of the family with extensive interests as carriers on the canals and, of course, on the CHPR itself. The independent and local nature of the CHPR can be seen by the fact that none of these directors was on the board of any other railway company, except Gisborne, who was on that of the Manchester, Buxton, Matlock and Midlands Junction (MBMMJ).

These men were responsible for a railway for which the traffic expected by its promoters had never materialised in sufficient quantities to make it a paying proposition. In the financial year 1840-1 the CHPR's revenue from traffic amounted to only £4837.⁶ Although 30,000 tons of lime and limestone were being carried this was the only item to exceed the estimate made by Josias Jessop in 1824 and it brought in only £650. The major sources of income were the conveyance of coal and coke (£1,350), packages (£1,200) and corn, malt and flour (£1,050). Accounts for other years have not survived, but they were unlikely to have been much better except perhaps for the year immediately following, as the Manchester and Leeds Railway substantially reduced its rates in the hope that traffic from the Trent and Humber river system would be routed via Selby and over their newly opened Normanton to Manchester line rather than via Shardlow and the Trent and Mersey canal. This provoked a rates war in which the CHPR joined and won some carriers temporarily from the Trent and Mersey. But it did not last.⁷ In May 1842 the CHPR Committee considered that nothing could be done to recover the Lincoln flour trade because of the low freight charges by way of Selby.⁸

By 1843 the CHPR had paid no dividends and had incurred debts of £47,000, mainly to the Butterley Company which had supplied both the rails for the entire line and the stationary engines for the inclines. In 1843 a mortgage — the CHPR's second — was authorised to discharge this debt, and in the course of the next few years there were a number of developments which might have improved the prospects of the line, but they came to nothing. There were ambitious plans to link it with the North Midland at Duffield or Crich, and so to the railway system to the south. The Peak Forest Canal Company (PFC) was interested in leasing it, not so much as to secure a canal and railway route under common ownership as better to control a competitor in the supply of limestone to the southern terminals of the canal at Buxworth and Whaley Bridge to

which the Canal's own quarries supplied stone via the Peak Forest Tramway.⁹ Generally the advent of new railway routes in the 1840s further undermined the CHPR's position, although not so much as had been threatened. In the event neither the Manchester and Sheffield and Lincolnshire (MSL) from the north, nor the Midland from the south penetrated the area of the CHPR in this period. Although the former purchased the Peak Forest Canal, its railway lines came no nearer than Hyde. The Midland-backed MBMMJ, in which the London and North Western Railway (LNW) also had an interest, reached Rowsley in 1849, but it was to get no further for over a decade.

The parlous financial state of the CHPR was reflected in an announcement on 27 January 1847 that it proposed to let the tolls, working and maintenance of the railway for a term and inviting tenders.¹⁰ There is no evidence that any were received. However a few years later there was a major change when the Company succeeded in joining up with the railway system to the south. The MBMMJ passed very close to the southern terminus of the CHPR at Cromford and as early as March 1849 the Matlock Company's committee was asked by the CHPR about the possibility of a junction.¹¹ The MBMMJ was most reluctant, possibly because they and their backers the Midland had no wish to assist a rival line to the north, at least not until they had secured certain control of the CHPR's other outlet to the south — the Cromford Canal. Talks between the MBMMJ and the Cromford Canal went on for some time before agreement was reached in 1851 for the Matlock Company to purchase the Canal. The Midland and LNW then agreed to the CHPR making a junction with the MBMMJ. The following year a clause was inserted in the Matlock Company's Parliamentary Bill to permit this.¹² In October 1852 the CHPR let the contract for building the junction, and the extension of three quarters of a mile from Cromford to High Peak Junction was opened on 21 February 1853. Significantly the Derby Mercury when reporting the opening of the junction referred, not to the possibility of through traffic over the length of the CHPR, but to the provision of a better outlet for Hopton Wood stone from the quarry near Middleton particularly to South Staffordshire where it was used in a new method of fluxing iron.¹³

When it could, the CHPR at this time paid interest on its first mortgage which had been raised in 1830 to complete the building of the line, but it was twelve years in arrears and the last such payment was made in March 1851 for the half year ending March 1839.¹⁴ No interest was paid on the second mortgage of 1843. Traffic seems to have been very low in the early 1850s. Indeed in the year ending 27 May 1854 the tonnage dues amounted to £3,452, considerably less than in 1840-1 when they had been £4,637.

It was in this period that the failure of the CHPR to become a carrier seems to have had the most serious effects. Although the company did own a number of wagons which it hired to carriers, the latter, particularly Wheatcrofts and Suttons, not only took much of the profits to be gained from traffic, but in the case of through traffic they could decide whether their goods should be carried on the CHPR or by the canals and they used this power to get the rates reduced. As the CHPR became more exposed to competition this was a major limitation and after the MSL purchased the PFC, something of a crisis developed at its northern end.

Francis Wright later alleged that the MSL, through the PFC, bought the whole stock in trade of Messrs Wheatcroft 'to stand the CHPR up and to enable the PFC to get a trade in limestone from another district' (i.e. presumably the Dove Holes area). For seven years, he told the Select Committee of the House of Commons in 1862 the CHPR was almost shut up.¹⁵ They were at their last gasp, the only carriers having been withdrawn from the line, and another trader or two in the lime works also having been taken off the line. 'Two or three of us' said Wright 'myself and Arkwright, saw it was absolutely necessary that a trade should be made, that the CHPR should be enabled to do something — that in fact we must either shut it up entirely, or do something to enable us to pay something or dispose of it. We established the Buxton Lime Company.' This was started in a small way by the CHPR itself, but when, as will be

seen, the necessary authority could not be obtained from Parliament, the small group took it over themselves. For a time the CHPR also leased lime works from Gisborne. Although the capital outlay on the Buxton Lime Works was relatively low (a tenth of that of the CHPR according to Wright) prosperity did not follow and no dividend was paid on the lime works before 1862.

Robert Smith, canal manager of the Ashton, Peak Forest and Macclesfield Canals, put a different complexion on the matter. He said that before he came to the MSL that company had purchased the rolling stock of David Wheatcroft and had used it in connection with a cousin or two cousins of theirs for working the local traffic which they endeavoured to extend as much as they could. He denied using the rolling stock to divert some of the traffic which formerly came to the CHPR. Through Nottingham to Manchester traffic was not likely to continue to pass over the CHPR with its horse traction when other rail routes were available. But they did their utmost to work the local traffic. The trucks they purchased remained on the railway; the traffic took a different route.

It does however look as if the MSL and PFC did all they could to boost the traffic in limestone from their own quarries in the Dove Holes area, and to deter competition from the railway line. Robert Bibbery was a trader in lime and limestone at the Harpur Hill quarries for several years prior to 1855. He said that he had every facility from the MSL for conveying material by his own boats but he thought some of their charges questionable. They charged him more than they did for stone from their own quarries. Whatever the extent of the lengths to which the MSL went in the early 1850s to secure the limestone business for itself, the competitive position was soon to change radically with the arrival of the LNW in the Whaley Bridge area.

In late 1853 the Stockport, Disley and Whaley Bridge Railway (SDWB) was projected.¹⁶ A local landowner Thomas Legh of Lyme Hall, Disley was in the chair at the first meeting of the committee, and other local landowners supported him but the line seems to have been backed from the start by the LNW. The latter however strongly denied to the MSL that the scheme in any way originated with them. They said that the promoters came to them after the project was organized and, in favourably entertaining the application, the LNW directors had no intention of taking a step injurious to the interests of the Sheffield company. They protested that they could not prevent these populous districts from seeking that accommodation which only a railway could afford; a canal could not supply what was wanted. Although Legh put up £6,000 and J.W. Jodrell of Yeardsley, £10,000, the number of local shareholders seems to have been very small and according to the *Railway Times* most were familiar LNW investors.¹⁷

In 1854 however the MSL was prevailed upon to withdraw its opposition to the SDWB. At this time the MSL seems to have been precluded by its own financial difficulties from reviving its own Whaley Bridge project by extending its line from Hyde, or from using the Peak Forest Tramway to reach Buxton. These were an important motive in bringing it into the more general agreement with the LNW in June 1855, although later the LNW's attitude to the SDWB became a principal ingredient in a major dispute between the two companies.

In 1854 the Bill for the Whaley Bridge line met with substantial opposition in Parliament. This came from the Midland, the Stockport and Warrington, and the Duke of Devonshire and landowners on the proposed line. Nevertheless the Act was obtained on 31 July 1854.¹⁸ The LNW took half the shares and agreed to work the line and to pay all working and maintenance expenses and retain 50 per cent of the takings.

The SDWB agreed as early as April 1854 to take power to build a short junction line to the CHPR. The 1854 Act provided that this should start near the end of the line at Whaley Bridge. Although construction of the SDWB started in September 1854, further legislation was required the following year to enable the LNW to subscribe up to £85,000. This second SDWB Act¹⁹ also contained powers to construct a junction with the CHPR approximately a quarter of a mile in length for which the CHPR was required to subscribe £3,750. The main line was not to be opened until the junction was ready.

The advent of the SDWB spurred the CHPR into making ambitious plans to improve substantially its line, particularly at its northern end where it would form a southward continuation of the new line from Stockport to Whaley Bridge. Part of the inspiration for this optimism seems to have come from Captain Moorsom,²⁰ who had recently been appointed engineer to the CHPR. William Scarth Moorsom was an army officer, unlike his father, Admiral Sir Robert Moorsom, and his older brother, Vice-Admiral Constantine Richard Moorsom, who became briefly chairman of the LNW. He was educated at Sandhurst where he did well in military surveying and fortification. He carried out extensive surveys while on army service at Dublin and in Nova Scotia. He left the army as a captain in 1832 and had considerable experience thereafter in building railways in England and Ireland. He helped survey the London and Birmingham Railway. His work on the Ouse Valley section attracted Robert Stephenson's attention. He succeeded Brunel as surveyor of the Birmingham and Gloucester line and his plan was adopted, including the steep Lickey incline where the gradient was 1 in 37. On becoming engineer of the line he imported American locomotives built by Norris of Philadelphia to work the incline. The inaugural train between Cheltenham and Bromsgrove was headed by an engine called W.S. Moorsom. He became an associate of the Institute of Civil Engineers in 1835 and a member in 1849. In 1845 his cast iron viaduct over the Avon at Tewkesbury won the Telford medal. He planned the railway bridge over the Rhine at Cologne and his period with the CHPR had been preceded by a lean spell as far as railway work had been concerned which led to work on gold extraction for the unsuccessful Britannia and Baltimore Mining Company in 1852. After he had finished with the CHPR he went to Ceylon to report on the feasibility of a railway in the highlands to Kandy.

Moorsom certainly thought his experience relevant to the CHPR's needs. The House of Commons Select Committee on Railway Bills (Group No 8) asked him on 3 May 1855²² if he was satisfied that the CHPR could work a considerable amount of mineral traffic. He said that there could be no question about that, for he had worked inclined planes of that kind before at one in seven, and with locomotives at one in nine.

Both the crucial nature of the inclined planes and the need for major improvements in the CHPR can be seen from a description of a journey on the line in the *Derby Mercury* for 20 September 1854. The article, like some other surviving evidence relating to the CHPR, poses questions as well as answers them. It refers to the Company's recent decision to put a passenger train on the line. We know that in 1833 Wheatcroft had obtained a licence to convey passengers from Cromford to Whaley, but it is not clear how long that service lasted, so we do not know whether this venture by the Company itself was a revival of a service long since discontinued or simply a replacement of Wheatcroft's service.²³ The former is more likely and the article in the *Mercury* is perhaps implicit confirmation of this. Moreover another curiosity is that the CHPR did not have the legal powers to run its own passenger trains — as will be seen, it only obtained the necessary authority in the 1855 Act. The train consisted of one passenger carriage — plainly fitted up for the comfort of about 16 outside passengers and 14 inside, drawn by one horse over all the levels, changed at certain stations. The passengers apparently remained in the carriage on the inclines — 'by adding two powerful breaks to the carriage, all danger is avoided, for the conductor told us that he could stop the carriage on the steepest part of these inclines, by his breaks, in about one minute (sic) — consequently no one could feel the slightest fear.' The journey from Steeplehouse (the top of the second incline at the Cromford end of the line) to Whaley took four hours. The article does make it clear that the earlier attempts to use steam locomotives on the line had ceased. It stated that 'upon this level (i.e. north of Hurdlow) as on the one we had passed over, a small engine plied at one time, but only to do the Company's own business. These are dispensed with and sold; but one, which was bought by Mr Gisborne, still plies between his large lime pits and the top of the great incline in the Goyt valley.'

This was the line to which Moorsom came in 1854. Under his leadership the CHPR put forward plans which, if they had been adopted would have transformed the line in a

number of important respects. The plans were deposited at the end of November 1854, together with a notice to bring in a Bill, by Philip Hubbersty the CHPR's solicitor and Andrew Brittlebank.²⁴ The powers sought included authority for a major deviation from the existing line at or near the north end of the Buxton tunnel to the top of the Whaley Bridge incline, thereby cutting out both Bunsall inclines. An extension was also planned from the top of the Whaley incline to the SDWB so that from the Buxton tunnel there would be a completely new alignment of the track through to the main line system. A 210 yard viaduct would have been necessary for the new junction line at Whaley. The new line would have continued west of the main road at Whaley Bridge, via Taxal to Fernilee and then to Bunsall and climbed to the north end of the tunnel, mainly at a gradient of 1 in 40 with a viaduct 100 yards long en route.

A further deviation was proposed between the old and new Macclesfield roads at Burbage. Power was also sought for a station on the new Macclesfield Road where it went under the railway, presumably as a substitute for Ladmanlow, although only marginally nearer Buxton.

Four other principal powers were sought. First, to purchase, or lease and work, the Harpur Hill lime works with all the quarries and kilns and other plant connected with them. Second, to authorise the company to become carriers on their railway and to convey passengers and goods and to provide engines and carriages for operating it. Third, to obtain running powers over the Midland to Ambergate station. Fourth, the Company sought power to increase its share capital and raise more on mortgage. Any new capital was to have preference in the payment of interest. Francis Wright was listed in the schedule to the Bill as willing to subscribe £20,000, while Peter Arkwright, John Cruso and William Needham were down for £10,000 each. Even the subscribers of lesser amounts had close connections with the CHPR — John Arkwright, Peter's brother who lived in Herefordshire, £1,000, Andrew Brittlebank of Winster £400, F.G. Goodwin £300 and Francis Barton £200, although John Sanders, a grocer of Derby subscribed £600.

A Bill was deposited on 30 November 1854 and presented to the Commons on 2 February. It was substantially amended in Committee where CHPR witnesses were cross-examined, including Moorsom who explained his strategy to the Commons Select Committee. The present traffic was best carried out by horses on the short intermediate levels and in the long levels by locomotive engines, but if the traffic should increase considerably, as it was expected to do, he thought carriage would be by locomotives throughout. Instead of stopping locomotives in the middle level of the line they would in each case descend to the extremity at either end and bring back the traffic. In fact they would work the line throughout as a locomotive line assisted at the planes by the stationary engines. He also explained to the Committee 'that money was needed not so much for improving the stationary engines as for providing better means of working the inclines by the engines, i.e. for ropes and wires.' Moorsom's improvements were seen as less than fundamental by the CHPR. Philip Hubbersty told the Select Committee that they did not require a large outlay because they intended to work the line with locomotive engines of a light character and not to run with anything like express speeds upon it. The Company attached importance to obtaining power to act as carriers. Hubbersty explained that they had always been in the hands of the carriers who had dealt with the CHPR just as they pleased and the Company had no control over them. He added that they expected gross receipts of at least £8,000 a year — more than twice the sum that the CHPR received in the year ending June 1854.²⁵

The Commons did not approve all the CHPR's plans and three key proposals had to be abandoned. First, as the directors explained to a special meeting of the proprietors on 24 May,²⁶ called 'merely to comply with the Lords' standing orders', (i.e. to approve the revised Bill) the powers for the improved line from Buxton to Whaley Bridge met with so much opposition from the MSL and from influential landowners, particularly the Duke of Devonshire, that the CHPR deemed it expedient to withdraw those clauses rather than incur the serious expense which would have resulted from the opposition of such powerful interest. Second, the powers to lease the Harpur Hill lime works were

abandoned as Lord Redesdale regarded them as contrary to the spirit of the Act — he expressed strong objections to railway companies embarking in any other undertaking than that for which they were incorporated. Third, the CHPR lost the possibility of running powers to Ambergate. The Chairman of the MBMMJ, Sir Joseph Paxton, expressed that company's attitude cogently at their half yearly meeting on 7 February 1855, when he criticised the extension and the running powers.²⁷ Their friends, on the left, the High Peak Company, had contrived to get up a proposed extension of that line which, if carried, would be of no advantage to themselves or to the public. It would to a certain extent interfere with the MBMMJ's interests because it would afford a pretext for resisting an extension of their line from Rowsley to the Peak. 'The High Peak Company' he continued 'had thought it in their interests to subscribe £70,000 to amend the position of their line; but as far as regarded the country traffic it would remain a destitute line for the gradients varied considerably.' On the question of running powers and the use of Ambergate station, it occurred to him that there would be no necessity for running powers for if they started a High Peak train at the top of Wirksworth Moor and let it go, the only power required in reality would be the power to stop it. He regarded it as an abortion of a scheme which would never pay sixpence to the proprietors and might prevent the extension of an excellent line through the county. Paxton was strongly supported by John Ellis, the Chairman of the Midland, who commented that it was a most impudent attempt for a little line like the CHPR to make. George Chappell, a director of the LNW who was present, echoed Ellis's sentiments. The CHPR reconsidered the matter and, as Paxton was able to tell his shareholders six months later, decided with great discretion not to proceed.²⁸ The Bill, in its truncated form, passed through the Lords and received the Royal Assent on 26 June 1855.²⁹

In the event therefore the main importance of the Act lay in the restructuring of the finances of the CHPR. The original company was dissolved and the shares of £100 converted into £20 shares in a straight five for one exchange. The Act gave authority for £20,000 — much less than envisaged in the application to Parliament — to be raised by the creation of preference shares to be applied for the improvement of the railway, the construction of works, and to the supply of engines, carriages etc. The shares were to attract 6% and were to be a first charge after the debenture stock A to which the first mortgage — of 1831 — was converted. Class A debentures were to attract 3% compare with 5% on the mortgage, while class B debentures, to which the second mortgage — of 1843 — was converted was to earn 2½%. Arrears of interest were extinguished. The original shares ranked for payment after the B debentures. The new capital could be used to purchase shares in the SDWB. Power was also taken to raise a further £6,000 by means of a third mortgage.

The Act not only authorised the CHPR to become carriers. It was empowered to levy charges for passengers — 2d per mile, first class, 1½d second class and 1d, third class, and permitted to charge for the use of the Company's carriages — 1d, ½d, and ¼d per mile for the three classes.

Some provision relating to deviations remained in the legislation. The Act authorised an extension from a junction with the CHPR near the top of the first inclined plane at Whaley Bridge to a junction to be formed with the SDWB. This largely duplicated the power in the SDWB's own legislation, but it was thought politic to do this with a view to forcing the SDWB to take the CHPR seriously and to ensure that the line was built. A deviation and enlargement of the railway was authorised between the old and new Macclesfield to Buxton roads.

In their report to the first meeting of the new company on 8 August 1855³⁰ the directors explained that their intention to dispense with the necessity of the inclines between Buxton and Whaley and to lease and work the lime kilns at Harpur Hill had been frustrated. Nevertheless they thought that the CHPR would have all the traffic as carriers without the risk as lime burners. It had been agreed by certain parties to take the works for the advantage of the Company. While it was desirable that through traffic should be worked entirely by locomotive power, with the use of wire ropes and improved and powerful brakes, the traffic on the inclined planes could be worked with

as much security as upon other lines. The Board went on to say that they had no doubt that interest on the new capital would be punctually paid as up to the present they had received no income except for the tonnage on goods and minerals. The revenue should prove sufficient to meet the reduced rate of interest on what were now class A debentures with a considerable surplus to meet interest on new capital. They would have profits as carriers and extended traffic on increased outlay.

Moorsom tried again. Two days after the truncated Bill had received the Royal Assent he presented a revised plan to the Board which was within the scope of the powers available, and was less ambitious and demanding, especially financially. This contained the following proposals, costing in all £16,346, including 5 per cent for engineering.

i) A detour to the line near Buxton which would include a proper station. It would cost £2,800 rather than £3,988 as less would be spent on earthworks and masonry.

ii) General improvements to the curvature of the line. He estimated that there were about 60 curves on the line which needed some alteration. He had surveyed 18 of them and carefully pegged them out on the ground. Improvement of these 18 would cost £4,788, including £513 for land. There were 16 other curves similar to those surveyed which would cost £2,588 to improve. A further 26 curves needed smaller improvements costing £780 in all. To improve all 60 curves would therefore cost £8,156. The inclined planes at Cromford and Buxton were now included, although such changes had apparently not been in the previous plan.

iii) Alterations to stationary engines and machinery would cost £2,400 so as to enable maximum use to be made of the engines at the tops of the inclines. Loads at that time could not exceed 24 tons at 7 mph.

iv) He had estimated £3,800 for two locomotives and tenders, but had been offered two at £2,000, so giving an ample margin for any necessary extra expenses and a possible saving of £800.

v) The most difficult item was wrought iron rails which were needed instead of cast iron rails 'at all events on the greater part of the line'. This was of the utmost importance to the security and efficiency of the traffic. The directors had already, in Moorsom's view, allowed the most favourable time for the purchase of such rails to pass.

The directors were not slow to act. Tenders were received for new rails inter alia from the storekeeper of the Great Western Railway (GWR). They agreed that no more than 1,000 tons of the best selected rails from the GWR should be purchased provided that on inspection they were found suitable for the CHPR. The tender of George Farnsworth was accepted for the contracts for work at the Buxton and Cromford ends. A call of 5 per cent was to be made on the new preference stock which would raise £1,000. The CHPR would however only pay its call on the shares it had taken up in the SDWB, amounting to £935, when there were sufficient funds in hand.³¹

In September Moorsom offered to take charge of the engineering of the whole of the works proposed in return for a commission of 5 per cent on the entire cost. This was to cover all his expenses, but the company was to supply the usual day labourers to assist in the making of measurements, as hitherto. The CHPR seem to have agreed that the programme outlined above should be carried out, although wrought iron rails would only be laid as far as the funds of the company permitted. No liability was to be incurred to Moorsom however on the cost of any of the works unless specific authority had been obtained for them from the Board. It was further agreed to pay the SDWB call of £935, but to defer for the time being the works at the top of the first Buxton incline. Robert Broome, on behalf of the Buxton Lime Company, submitted a plan for a warehouse, office, sheds and stables at Whaley. It was agreed to go ahead with this project which should be advantageous to the company. They would build and let to the Lime Company. The Lime Company would pay rent at 6 per cent on the outlay.³²

The directors decided that a review of the company's financial state was necessary.

Peter Arkwright and William Needham were asked to carry this out. Their report of 12 October 1855 described the position as it was on 26 September.³³

Assets

		£
First call		3675
Second call payable 21 November	3675	
Third call payable 21 January 1856	3675	
Fourth call to make up $\frac{4}{5}$ of the whole	835	
Fifth and final call 22 September 1856	2840	
	<u>11025</u>	
		14700

Liabilities - moneys expended and owing

	£	s	d
Moorsom	898	13	8
Stockport Railway first call	935	0	0
Dyson's bill (part paid £340)	700	0	0
Mr Hubbersty's, say	600	0	0
Farnsworth's contract actually in progress	500	0	0
Three calls from SDWB	2805	0	0
Butterley Company for wagons	2100	0	0
Sundry accounts owing	1294	14	5
One wire rope ordered	216	0	0
Proposed alterations to machinery, say	200	0	0
Capital required for the carrying trade	1000	0	0
Buildings at Whaley, say	300	0	0
Rails for four inclined planes:			
4800 yards single road -	£		
240 tons rails at £8 a ton	1920		
4800 sleepers	800		
60 tons chairs	360		
Laying at 1s per yard	240		
Spikes, say	80		
Deduct 600 yards already laid	<u>425</u>		
		2975	0 0
		<u>14524</u>	8 1

It is not clear who Dyson was, but he may have been employed by the CHPR to undertake work in connection with the 1855 Bill. Certainly that was likely to have been the cause of the debt to Hubbersty, which demonstrates the relatively high cost of a Parliamentary Bill for a company with the limited resources of the CHPR. In all they spent £1,756 on the Bill.³⁴

The calculations set out above rightly reinforced the CHPR's nervousness about the path on which Moorsom was taking them. The CHPR had high hopes of being the southeastern outlet of the SDWB. It had statutory authority twice over for the junction line in the shape of its own Bill and that of the SDWB's. But it seems to have been suspicious of the SDWB's attitude towards it and therefore of the LNW. Consequently it was decided to negotiate with the latter as to what facilities the CHPR would attract on the SDWB before incurring further expenditure. Only Farnsworth's contract was allowed to go ahead, although it was also agreed that stationary engines at Sheep Pasture and Bunsall Top should be put into proper repair. The other works were held in abeyance.

To attract traffic CHPR did however agree to a reduction on tonnage rates for the Buxton Lime Company, which intended to build more kilns, provided their tonnage dues amounted to £1,000 a year and one or more kilns were built to compete with those at Dove Holes. The carriage of coal to Ladmanlow was cut from 2s 3d per ton to 1s 6d provided it was for the purpose of lime burning and a special reduction was agreed on lime from the Buxton Lime Company destined for the gasworks at Manchester. Later

that year the CHPR committee agreed that 12 wagons should be built which could be used on the SDWB following a complaint by the Buxton Lime Company about the irregularity of traffic.³⁵

A reply to the CHPR's enquiries came from the LNW before the end of the year. At first Charles Stewart, Secretary of the LNW told Moorsom that the LNW was happy to afford every facility for the development of the traffic originating upon or destined for the CHPR. The CHPR Committee was not satisfied with this general assurance. Moorsom was asked to see what construction the LNW put on these indefinite words. He wrote to Francis Wright on 14 December, having seen Stewart earlier that day, who told him that the LNW had the impression that the traffic contemplated would be that chiefly originating on or going to the CHPR such as a large limestone business and a general traffic to and from Buxton. The CHPR deputation (which had been to see Lord Chandos the LNW chairman earlier that month) did not so much as contemplate a through traffic. Moorsom continued

In considering the points further with me Mr. Stewart states that the interest of the LNWR Company consists in encouraging all possible traffic to and from the CHPR other than a through traffic between Manchester and London. That if the character of our line were to be made first class so as to run through trains at high speeds we should thus become competitors with the LNWR, but while we remain as a second class or third class railway making such speeds on our line as 16 to 20 miles per hour we should be an auxiliary to the LNW which they would encourage by all fair means. If the case were put whether a Stockport manufacturer would be able to book to Nottingham at the same rate per mile via the CHPR as by any other route this case must necessarily be referred to the Lincolnshire line and to the Midland and might stir up jealousy which did not at present exist, and his opinion was that at the present stage we had better rest contented with the general fact that it is in the interest of the LNWR to cultivate all traffic to and from the CHPR other than through competing traffic.

Moorsom advised Wright to accept this view.

Early in 1856 Moorsom presented another scheme. In contrast to his previous proposals for new work and rolling stock costing in all £16,346, which together with the £3,750 subscription to the SDWB, looked well beyond the resources of the company, Moorsom now suggested that he and a contractor should undertake the work of completely equipping the track with wrought iron rails and some other work for £36,000 for which the CHPR would pay six per cent over a period. This would be the first charge on the income from the traffic after working expenses, and the debenture interest on the new preference shares. The sum would be secured by negotiable securities, or so Moorsom proposed. The Committee however rejected the scheme because it was impossible in the present state of the company to give any negotiable security.³⁷

The Directors in their half-yearly report explained that only £13,960 of the additional £20,000 authorised by the 1855 Act had been subscribed and that had been put up by the Directors themselves and by those immediately connected with them. Other shareholders had not been sufficiently impressed with the conviction that the revenue would be so far remunerative as to pay interest on new capital. Otherwise they would have availed themselves of an investment not only advantageous in itself, but leading as it must to increase the value of their other property (i.e. their other shares in the CHPR).

Wright said that the Directors hesitated to spend the capital which had been subscribed on works not absolutely essential and so not much progress had been made in altering the construction of the line. Nevertheless the two inclined planes at Cromford (i.e. Cromford and Sheep Pasture) were being converted into one as were the two inclined planes near Buxton (i.e. Bunsall Upper and Lower). Wire ropes would be used. Two stationary engines would be dispensed with, and about £600 a year saved. The locomotive engine now ran from the top of Bunsall inclined plane to Hurdlow. Another had been purchased and would shortly be at work. This would increase speed and a number of horses would be rendered unnecessary. Although general traffic had increased in the last half-year, net receipts were down by £42 because Hopton Stone

Quarries had been closed. The quarries were now open again. They had produced £224 in the second half of 1854 — before the closure. A carriage had run in the summer from Cromford to Whaley and would run again, but not much traffic was anticipated until the junction with the Stockport line was complete.

The Directors continued to be concerned about the situation and in February 1856 examined a report on the state of the line by two of their number, Thomas Gisborne and William Needham. This covered both the physical stock and the traffic.³⁸

The CHPR still had one locomotive at work on the high level. The other locomotive bought recently was under alteration with a view to making it better suited to cast iron rails. It was however doubtful whether the proposed alteration would entirely obviate the objection arising from its excessive weight. There were 20 horses, and 155 goods trucks, with only one passenger carriage. The wagon stock consisted of the following:

Common wagons without springs used for coal	82
Harpur Hill lime wagons	45
Goods spring wagons	14
Coal spring wagons	4
Trucks	2
Under repairs	7
New sample truck	1
	<hr/>
	155

The report also listed 9 canal boats in the company's stock, eight for coal and one for goods.

As for the track, the report stressed the desirability of the section from Whaley Bridge to Buxton being laid with wrought iron rails. Gisborne and Needham had a report from Edward Reynolds of the Butterley Company on the condition of the stationary engines. The boilers of all the engines were in a very bad state and it would cost £3-4,000 to put them in order. Gisborne and Needham recommended that these two tasks should be insisted on as essential.

The sections of the report which dealt with traffic showed where the main difficulty was arising. The general traffic was above the level attained when the company itself became a carrier following the 1855 Act. The coal traffic had increased and paid well, but the lime traffic was highly competitive. 3,000 tons of coal had been carried in 1855, which had brought in £1,300 from tonnage dues quite apart from profits derived from sale. But the Buxton Lime Company wanted another reduction in the rate for lime without a guaranteed level of traffic. They were valuable customers, but in the competitive state of the trade would merely lead to a reduction on the other side (presumably Dove Holes). The Buxton Lime Company wanted a branch of half a mile built to the Grin Quarries but at the expense of the CHPR. £600 had to be found for the construction of this line and the same sum for the wagons. The CHPR charges for the carriage of lime were unremunerative. If wagons were bought for the use of the lime company the income did not pay for the repairs to the wagons. Gisborne and Needham recommended that the CHPR should apply to Strutt and Salt for trade in cotton to Belper and ale for Buxton.

The main recommendations in the report were followed up in the first half of 1856. On 19 March Moorsom introduced Mr. Goode of Coudor and Goode, contractors, to examine the works and to see what could be done for £12,000, the sum likely to be available. He particularly asked to look into improving the line between Whaley Bridge and Buxton. His tender was however declined by the CHPR Directors on 30 April because it was too high. 600 tons of rails were purchased from Begbies at £7 15s per ton delivered ex ship from Liverpool. They seem to have come from Waterford. They were to be paid for by means of four month bills. The chairman of the CHPR had personally to guarantee the contract. Larch sleepers were to be purchased at 1s 2½d and 1s 3d a foot.³⁹

There also seem to have been staff problems. Mr. Hughes, the traffic manager at

Cromford was to visit Whaley Bridge more often to supervise Mr. Cheetham at Whaley about whose capabilities the Committee had doubts. Daily accounts were to be instituted. If there was no improvement, a change of manager there would be recommended to the Directors, and in fact this was soon done. Probably Mr. Cheetham had proved unsatisfactory, but the management had centred too much on Francis Barton who was the secretary, traffic manager and trade manager. These functions were separated. Matthew Hughes took over independent control of traffic management. Robert Broome was to be his deputy at Whaley and would be in charge of traffic there. Moorsom was to go, although there seems to have been uncertainty as to the precise terms and Moorsom seems to have been dissatisfied at the treatment he received because as late as 25 July 1862 an account he had submitted was considered by the CHPR Board. They only resolved to send him a copy of their minute of August 1856 when he was given £200 in discharge of his claim for all commission or otherwise upon every department. Barton was to act as engineer as no doubt he had until Moorsom had arrived on the scene.⁴⁰

Although it was agreed in July 1856 that those who had paid up the whole of their 6 per cent preference shares — the Directors and their close associates, who had put up £14,000 — would be paid their interest from the time their money was subscribed, the CHPR's financial situation continued to be parlous. While revenue had increased in the first half of 1856, leaving a surplus, after paying the current interest due on the 3½ per cents, it was not sufficient to pay calls on the SDWB shares. At the same time the Directors reported that the junction with the SDWB had been staked out and plans prepared. It could be completed at the same time as the SDWB's main line.⁴¹

The financial difficulties were met temporarily by the Directors present at the August 1856 meeting consenting to take their relative proportion of the unsubscribed capital. This heralded the beginning of a period of considerable activity on the part of the CHPR designed to prove that the company had a role to play south of Whaley Bridge, although the risk that the SDWB would continue to Buxton was very real. That would make the lime trade even more competitive by giving through rail access to the quarries in the Dove Holes area and might even give an alternative route to the quarries on the line of the CHPR itself.

An engineer from outside the company called Blenkinsopp, probably from County Durham, was engaged to superintend the laying of the wrought iron rails between Whaley Bridge and Buxton and the fixing of wire ropes.⁴² He was to be paid £100 for six months work. The Butterley Company was instructed to make the alterations necessary at Middleton incline to work it by means of a single line and a wire rope. 15 wagons at £15 each were authorised. In November Needham reported that he had obtained tenders for the supply of a locomotive engine. He was requested to order it as soon as possible.⁴³ He had been a director for some time, but had come to play an increasingly active part in the CHPR. At the end of the year he was appointed managing director at a salary of £250 a year.⁴⁴ This arrangement did not last long, although it does not look as if it were originally intended as a temporary appointment. Robert Broome, whose connection with the CHPR seems to have arisen through the Buxton Lime Company, was given the task of managing the carrying and trading departments.⁴⁵ In April 1857 he was appointed managing and general superintendent. He was to be paid by results. He was to get 7½ per cent on net divisible profits in the first year, with 5 per cent thereafter together with £100 per annum for expenses. Apparently he was to continue to work for the Lime Company and William Needham continued as a director of the CHPR. At the same time William Smith of Buxton was appointed engineer and secretary at £150 a year with the use of a house at Cromford. He came with testimonials from Curry and Wilmot, agents to the Duke of Devonshire. Barton departed owing £482 to the company.⁴⁶

Efforts to increase trade had been made in late 1856. The Board considered a letter from a Mr. Lacey, a promoter of a company intended to be formed to work the limestone quarries at Middle Peak. They were prepared to allow him 120lbs to the hundredweight and wrote to the Midland and the South Staffordshire Railways to

interest them. David Wheatcroft was given permission to erect a stationary engine adjoining the line near Hopton and lay a wire rope to draw limestone and blocks from the Hopton Quarry. William Wheatcroft applied to make a siding on the Middleton incline to work a quarry there. This was agreed provided he guaranteed the CHPR £150 for seven years. The CHPR offered to reduce the tonnage on stone for the Butterley Company by 1d.⁴⁷

The Directors reviewed the position again in January 1857.⁴⁸ The works between Buxton and Whaley were in rapid progress. The line would be put in such a state of completeness and efficiency as not only to meet the very large goods traffic which might confidently be expected on the opening of the Whaley junction with the Disley line, but also to be worked with perfect safety as a passenger line to Buxton. They expected to secure a considerable additional revenue from the improvements. In February 1857 the directors decided to apply for powers to raise sufficient money to put the whole line in an efficient state, and make it usable by locomotives.

They also decided to petition against the SDWB's Buxton Extension Bill. The CHPR's solicitors were asked to attend and vote at the relevant meeting in London.⁴⁹ The SDWB's Buxton Extension Bill was not liked by either the Midland or the MSL. The former was hostile to it, but did not oppose it in Parliament because it had no *locus standi*. The Midland was still keen on reaching Manchester and saw the SDWB's Buxton extension as a block line, i.e. merely intended to fill up the district to make it much more difficult for other companies to enter. Williams comments that if this were the case it was a clever move on the part of the LNW.⁵⁰ The Midland however was not powerless. In October 1856 it had advised the MSL to survey the line of its own to Buxton, making use of the route of the Peak Forest Tramway. At the same time it expressed the intention of promoting a through scheme of its own from the MBMMJ at Rowsley if the LNW persisted in entering Buxton. The MSL plans for the 1857 Session therefore included the resurrection of the Whaley Bridge line from Hyde, via Romiley and Compstall Bridge, New Mills with a branch to Hayfield, Buxworth, over part of the Peak Forest Tramway and so to Buxton. John Chapman the MSL Deputy Chairman and Edward Watkin the General Manager tried to obtain financial support from the area, but the project was beyond the financial resources of the MSL and largely for that reason Chapman was ready to bring about a complete fusion of interests between the MSL and the Midland which took the form of a common fund for the traffic receipts of the Confederacy, as the LNW, Midland and MSL were known. In May 1857, the MSL Board, as part of an effort to obtain a sufficiently conciliatory atmosphere, decided not to proceed with their Buxton Bill as soon as a *modus vivendi* could be reached with the SDW.⁵¹ At this point the Confederacy's common purse agreement was exposed in cross examination on the little North Western Bill and the Great Northern sued. The MSL decided to terminate its membership of the Euston Confederacy and allied with the Great Northern. The MSL therefore went ahead slowly with the Marple, New Mills and Hayfield Junction Railway — the Act was obtained on 15 May 1860 — but the line never reached Whaley Bridge. The metals to New Mills were the basis of a plan by the Midland in 1861 to extend its line to Manchester.

Meanwhile, in 1857 however, the CHPR continued to be optimistic. Needham was asked to buy rails for relaying the inclines at the Cromford end — the first three inclines and from the top of the second (Sheep Pasture) to the bottom of the third (Middleton), provided credit could be obtained. In the event this relaying seems to have been restricted to the first two inclines — Cromford and Sheep Pasture where an endless wire rope was installed and the inclines worked as one.⁵² The prospect of more traffic, particularly from both the Hopton and Middle Peak Quarries also encouraged the CHPR to take a rosier view of the future.

Needham reported that he had been in communication with Neilsons about the purchase of another locomotive. The proposal was approved and Blenkinsopp went to Glasgow to negotiate.⁵³ The locomotive turned out to be too heavy. The Chairman reported on 30 July that he believed Neilsons were willing to take the new locomotive back on receiving orders for two others of less power and of a lighter weight. He was

authorised to make such arrangements as he deemed desirable. The outcome is not clear. In September however Broome was authorised to hire or purchase two locomotives of the size and specification submitted to him.⁵⁴ This suggests that the CHPR did not obtain two lighter engines from Neilsons. In October Broome was told he could treat for the purchase of an engine then on the Eastern Counties line belonging to Mr. Richardson, provided it did not cost more than £550 and if on further enquiry he thought it applicable for the traffic. George Richardson is known to have been an agent for second-hand locomotives at this time.⁵⁵

The CHPR continued however to be short of the funds necessary to finance its plans. In March 1857 the directors decided that interest of five per cent would be offered to any person willing to take out debentures for 3, 5, or 7 years. In April Wright was expected to take up to £6,000, but he did not do so and in July the directors agreed to advertise for a loan of £6,000. Nevertheless, the directors in their half-yearly report pointed encouragingly to the increase in revenue arising principally from minerals. The Hopton and Middle Peak quarries were about to be extensively worked. The line near Cromford had been improved and there was a prospect of a through line with the SDWB.⁵⁶

By then the SDWB line to Whaley Bridge had been opened: an inspection trip on 7 April had been followed by the official opening on 28 May and the commencement of passenger services on 9 June.⁵⁷ The SDWB's Extension Bill authorising the line from Whaley Bridge to Buxton received Royal Assent on 27 July, although the CHPR directors explained in their report earlier that month that arrangements had ultimately been made by which the injury the company otherwise would have sustained had been obviated. They had applied for an injunction to restrain the SDWB from opening their main line until the junction at Whaley Bridge was completed. This, they said, was an unfortunate misunderstanding and there was a cordial desire to promote their mutual interests.

In fact traffic from the CHPR to the SDWB began in mid-August 1857, although as the viaduct across the river Goyt was not finished, wagons had to be moved across by the contractor, using his own horses. It was reported on 11 September that 'on an average three trucks had been dispatched by every passenger train.' At this stage the through goods traffic seems to have been virtually confined to limestone. From the beginning of November locomotives were able to use one of the lines of the junction and the second line was completed about a month later. In addition a regular daily goods train began running on 1 November and from then on a moderate amount of general goods traffic seems to have developed, in addition to a quantity of minerals — more than 6,000 tons a month by 1860. A provision in the SDWB's Extension Act allowed an increase in the charges to be made for conveyance of goods over the junction line between the SDWB and the CHPR as its construction had proved more costly than expected. Construction of the Buxton extension, to which the LNW contributed £105,000 and the MSL £35,000, did not start until 1859.⁵⁸

The opening of the outlet by rail to the north did not assist the CHPR financially, at least immediately. They had to pay for their own improvements and their contribution to the SDWB had been a drain on their stretched resources. (They did not subscribe to the Buxton extension.) In August 1857 a special meeting was held to consider finance. It was decided to offer the class A debenture holders a £6,000 loan at 6 per cent. A week later it was reported to the directors that the banks were objecting to affording further credit without additional security. Wright and Arkwright gave this in order to prevent the stoppage of the works then in progress between Whaley Bridge and Buxton. In October it was agreed that debentures of up to £1,000 each would be issued to John Arkwright and the Rev. Joseph Arkwright, another brother of Peter Arkwright. Nevertheless it was decided the same month to seek Parliamentary powers to strengthen the finances of the CHPR and also to lease or sell the line to the LNW or the Midland, or SDWB, or MSL, or some of them.⁵⁹

It is not clear precisely what determined the approach. But the go ahead to the SDWB Buxton line was probably the crucial factor. Not only would such a line be likely

to capture much of the general traffic to and from Buxton and the immediately surrounding district where hitherto the CHPR had been the only railway, but it would give much improved access to the limestone quarries to the northeast of Buxton and so cut across the CHPR's chief traffic. The failure of Francis Wright to take up the £6,000 loan earlier in the year may have been influenced by this development, and while he was to continue to support the CHPR financially in various ways in the next few years, this was perhaps a turning point. Indeed his willingness to make so much money available to the CHPR for so long may seem rather surprising, as he was generally regarded as a hard headed businessman. Certainly his motivation was by no means clear, as on several occasions it would seem that the point had come when the natural course would have been to cut his losses. The protection of his extensive existing investments in the CHPR must have played a part. A certain paternalism, both in respect of the railway itself and of his circle of associates who were also involved financially in the CHPR was no doubt at work. Perhaps too, there was a respect for the memory of William Jessop. When asked whether he and the Arkwrights had done it all, Wright replied 'it was established by my partner Mr. Jessop — it was at his instigation it was done.' And of course Francis Wright, who was a partner in the Butterley Company from 1830 until his death in 1873, and for much of that time in command, was a very rich man. He subscribed £10,000 to the Midland Counties Railway. He built Osmaston Manor in 1846-9 at a cost of over £80,000. This was an enormous building, now demolished, which included in the cellar a railway about 300 feet long with curves and a turntable to supply the coal for the house to the coal lift which drew it up to the other floors. It contained an early example of hot air central heating. In 1858 he owned £350,000 of the Butterley Company's capital of £476,000. By 1862 Butterley was producing 700 to 800,000 tons of coal a year.⁶⁰

The Bill was drafted and approved by the directors at the end of 1857.⁶¹ On 25 February they surveyed the CHPR's financial position again. £11,000 was due to their bankers for which the Chairman and Arkwright were responsible. The bank had offered a further £3,000 on the chairman's guarantee. This had been accepted, but the bank had also demanded that no interest on stock or debentures be paid until the debt to the bank had been liquidated by revenue or by the creation of new preference stock. Later that day the Bill was approved by the Annual General Meeting. They were told that traffic was up by only £190 compared with the previous year and the present adverse state of commercial affairs had peculiarly affected the mineral trade. The demand for limestone had been checked. A permanent increase was expected, but meanwhile no dividend would be paid. The repairs to the section of the line from Whaley Bridge to Buxton had exceeded the estimate, and would be charged to capital, but the remainder of the repairs would be charged to revenue. A more rigid system of bookkeeping had recently been introduced.

The Bill however was only a partial success. There were petitions against the leasing clause by the LNW, Midland, North Staffordshire and the MSL. The directors therefore withdrew the relevant clauses on the ground that it was not expedient to obtain powers to lease the line unless arrangements had been made previously with one or more companies. When approached, the Midland said that they would not work or lease the line and moreover they would oppose such powers being given to the LNW. Francis Wright then sought support from the LNW and explained to that company his views on the arrangements which might be made for the development of traffic from the CHPR's district, but the LNW decided, in deference to the views of the Midland, to recommend the omission of the power to lease.⁶³

On 28 May the Bill in the form in which it had passed the Committee stage in the Commons was read to the directors. It received the Royal Assent on 28 June 1858.⁶⁴

In 1858 there was a determined attempt to switch over to locomotive working except on the inclined planes. In May 1858 the directors had decided to build engine sheds at Ladmanlow and Shallcross. In June the new locomotive engine was reported as having been delivered. In October the directors said that they were about to arrange for the hire of locomotives to work the line between Hopton and Ladmanlow. This seems to

have been the fruit of a scheme considered at the September meeting when it was stated that there were great advantages in having the line worked by locomotive power rather than by horse power 'as at present'. But there was insufficient capital to meet the expense of providing engines so a private company was to be formed to raise the necessary funds. The engines were to be rented at an annual sum to give a return of 7 per cent with a sinking fund of 5 per cent. In October £1,000 was put up for the construction of two new locomotives. Peter Arkwright put up £250, Cruso £250, Wright £200, Gisborne £100, Captain Goodwin £100 and Hubbersty £100. A year later, in September 1859, Wright and Arkwright increased their subscriptions to the locomotive fund by £250 each. The additional £500 was presumably to pay for another locomotive. Finally, in January 1860, it was decided that the traders on the railway should be given a month's notice to remove their horses off the line preparatory to the haulage being done by the company's locomotive engines.⁶⁵

The junction with the SDWB continued to give rise to financial problems. The CHPR eventually accepted £1,500 in compensation for the crossing by bridge over their line at Whaley Bridge by the Buxton extension. This did not obviate the need for taking up the loans authorised in the 1858 Act and in October 1858 Francis Wright agreed to take £2,000 in debentures, partly to discharge a debt of £1,400 to the Butterley Company. In February 1859 the seal was affixed to mortgage debentures amounting to £6,000 in all, including the £2,000 to Francis Wright just mentioned. The remaining £4,000 was put up by the Arkwright family, £2,000 coming from Rev. Joseph Arkwright, £1,000 from Robert and £1,000 from Peter.⁶⁶

There was also talk of a further junction at the southern end of the CHPR — this time with the Duffield and Wirksworth Railway. Although the directors thought that this junction would be advantageous to the CHPR, a stationary engine would have been necessary which would have had to be at the expense of the Duffield and Wirksworth. The CHPR directors said firmly that they were not in a position to offer assistance.

In July 1859 the SDWB accepted a tender to build their extension to Buxton and in December the CHPR authorised Broome to make arrangements for rates with the LNW and SDWB with a view to preventing undue competition. They were not to be less than the full Parliamentary rates. The CHPR tried to stipulate that there were to be no preferential rates for the SDWB traffic: the CHPR wanted equal treatment, and the pointsmen at the junction to be paid for by the SDWB.⁶⁷

The CHPR papers give relatively few details about the trends in and problems arising from the traffic on the railway in this period. The problem of paying for the extension for the Buxton Lime Company was resolved in late 1856 when it was agreed to lend 1600 yards of old rails for their proposed branch to the Grin Quarries. The CHPR also sold them the small wagons they were already using. When the superfluous engines and engine houses at both Cromford and Bunsall inclines were sold after the two inclines at each had been merged into one, the Buxton Lime Company purchased the engine at Bunsall for their lime crushing machine. They had however to be paid £40 in compensation when two of their horses were killed on the Bunsall incline on 23 August 1857. Broome attempted to increase the traffic by communicating with Mark Huish of the LNW who proposed to bring over the flour trade from Lincoln, Newark and Grantham. Other developments included an approach from 'Mr. Barton of Wirksworth' who proposed to open a brick and tile yard near Hopton tunnel. This may well have been the former secretary of the CHPR. He was to be charged ½d per mile for carriage exclusive of wagons. Samuel Eadson of the Hopton Wood Stone Company was given 1d reduction provided the Midland Railway granted a similar concession, which they did. The CHPR also agreed to a turnout for a bonemeal factory at the foot of the Hopton incline. In 1860 it was agreed to make a siding at Fernilee for Ellam and Jones to accommodate their barytes traffic to Liverpool and other places. In an endeavour to meet the competition from the new railway to Buxton the CHPR reduced its rates for the Whaley Bridge to Buxton traffic to 2d per ton per mile for coal and 1½d per ton per mile for lime.⁶⁸

The traffic returns for 1859 show a much improved position with very considerable

increases in revenue from all three categories: general merchandise, coal and coke, and other minerals.⁶⁹ This does not seem to have affected the directors attitude. In 1860 they discussed a scheme to raise up to £40,000 by the issue of preference shares, but delayed agreement to enable the auditors to report on the probable effect this would have on the preference and value of the CHPR other stock. At the next meeting it was agreed to offer the new shares to existing shareholders *pro rata* to their existing holdings,⁷⁰ but it seems unlikely that this was done for at the end of 1860 the Chairman laid before the directors a proposition from the LNW to lease the CHPR. Wright, Waterpark and Broome were appointed to negotiate with the LNW.⁷¹ The lease had already been considered by the Special Committee of the LNW on 14 December 1860. The LNW was to pay a rent of £4,000 a year free from all liability save rates and taxes and working expenses. It was claimed that the CHPR was then earning a net income of £3,200 a year. The LNW Committee considered that their interests would be best served by running the risk of a small loss during the earlier years of the lease and that the offer be accepted, subject to the confirmation of the LNW Board and on the understanding that the CHPR pay off or be responsible for the capital and interest on the existing debts of the undertaking.

At a general meeting of the CHPR on 14 February 1861 the directors were authorised to enter into an arrangement with the LNW for a lease of the line and works in perpetuity upon such terms and conditions as they might deem expedient so that the net minimum rent for the first year be £3,500, and for the future £4,000. On 20 March the seal was affixed to the memorandum of agreement. The CHPR was to be entitled to take any old rails and stationary engines, and other stores and materials in course of removal, but which might not be entirely removed before 31 March 1861. Francis Barton offered £25 for the old materials in the Sheep Pasture engine house and the offer of £25 by the Buxton Lime Company for old material in the Bunsall engine house was accepted. An inventory was to be made, and also a valuation of the rolling stock belonging to the CHPR and included in the lease.⁷²

This was approved next day by the LNW Board which gave the Special Committee authority to complete the arrangement, provision being made therein for the traffic of the lime company under the CHPR's control, and other traffic being sent by the line of the LNW in all cases where they were willing to carry it on the same terms as obtained elsewhere.

On 11 September the CHPR agreed to a rent of £4,000 a year to be distributed as follows:

		£	s	d
Bank debt	£14,000 at 4¼%	595	0	0
'A' debentures	£31,910 at 3%	957	6	0
Mortgage	£ 6,000 at 4¼%	255	0	0
Preference shares	£19,630 at 3½%	687	1	0
'B' debentures	£46,915 at 1¾%	821	0	3
		<hr/>		
		£3,315	7	3

The remainder of the £4,000 was to go to the original shareholders, at say, 10s per cent, after deducting other expenses.

On 1 October the CHPR directors considered a draft of a letter to shareholders making it clear that the £14,000 debt was to be a first charge on the company and had to be capitalised. They were told that if the directors proposal were accepted the shareholders would, immediately after the passing of the Act authorising the lease, come into receipt of the proposed dividends, otherwise the dividend would necessarily be suspended until the debt was paid off.

The arrangements for the lease, as incorporated in a draft clause for a Bill, were approved at an extraordinary general meeting of the CHPR on 11 October with one change. The interest on the bank debt was raised to 4½% with the original shareholders being offered only the possibility of 10s per cent. The lease covered the railway line, works, rights, powers and privileges at 'a fixed clear and annual rent.'⁷³

The Bill was examined by a Select Committee which called witnesses.⁷⁴ Francis Wright told the Committee that the line must be shut up, or leased. He would advance no more money. He had talked to Ellis, Paxton and Allport of the Midland, but they were not interested. Much more of the CHPR's traffic went to the LNW (£10 to 12,000 a year) particularly as the trade to South Staffordshire via the Midland had almost stopped in the last two or three years. Wright thought it a public advantage to keep the CHPR open as to close it would put a stop to many works, including his own, at each end. He saw the only solution lay in a lease to the LNW. He saw the opposition from the MSL arising from the fact that the LNW were carving a new line past Dove Holes, (the Buxton extension of the SDWB) so that they would have a chance of getting the lime from both sides, (i.e. Dove Holes and Harpur Hill). Both Samuel Eadson, manager of Hopton Stone, and Thomas Taylor, manager of the Hopton Estate, were content for the line to be leased to the LNW despite the fact that Eadson pointed out that most of the Hopton Stone went south to the Midland. Mason for the LNW said that there was no element of competition on their part for the traffic going to the Midland and nothing in the Bill to interfere with their interests. Indeed they would benefit from the improvement of the line. Wragge for the MBMMJ did argue that the lease would enable the LNW and North Staffs to give facilities to the Hopton Stone and prevent it going via the Midland to the South Staffordshire Railway. The CHPR was worth £4,000 a year for the position the LNW would get in the district. They would make it on the basis of operations for annoying their neighbours. It would give them a voice. They could not want the line as common carriers — there was no business for them to do. The CHPR was a necessary adjunct to the Cromford Canal. The Midland itself, however, decided in view of the evidence not to oppose the Bill further.

The evidence to the Select Committee sheds light on the extent and nature of the CHPR's traffic and of the trade of the firms which were their main customers. Edward Lacy, manager of Buxton Lime Company's works, explained that the lime company had £52,000 capital and employed 290 men. Lime was sent mostly to the north from Whaley Bridge where the company's offices were situated, to St Helens and Liverpool and a large number of other stations. Of the £15,555 tonnage paid in 1861, £3,607 was to the CHPR, £10,199 to the LNW, £1,121 to the L&Y, £299 to the MSL canal, i.e. the Peak Forest, £101 to the MSL itself, £112 to the MR and £108 to the South Staffs. The wretched state of the CHPR rails was an inhibiting factor. There had however been little traffic prior to 1856. Of the traffic to the LNW amounting to 64,000 tons, 18,000 went to St Helens. The goods manager of the LNW thought it capable of very large development.

The Hopton Estate, according to Thomas Taylor, sent 600 tons of artificial manure from the new bonemeal factory over the CHPR, mainly to properties on either side of the line. Samuel Eadson said that in 1861, 34,536 tons of stone were sent by rail by the Hopton Stone Company, 25,296 going on by the MR and 9,420 tons by the Cromford Canal. 11,162 tons went on from the MR to the South Staffordshire Railway. He too saw the rails as limiting the traffic.

It is clear that the purchase of the Cromford Canal by the Midland had reduced the through traffic to and from the CHPR to the Canal. In 1851-2 this amounted to 42,485 tons including 17,609 tons of coal and coke, and 23,355 of limestone. By 1861 the total was down to 20,028 tons, mainly limestone. The interchange of other goods at Cromford had virtually stopped and that had been the case since Wheatcroft had been 'bought off' said Broome.

On 17 April 1862 an extraordinary general meeting of the CHPR approved the Bill, as amended by the House of Commons.⁷⁵

The CHPR was driven into giving up its independence by its chronic financial difficulties, perhaps inherent from the beginning, but made irreversible by its failure to become part of a main through route across Derbyshire, or to become the principal company to serve the Buxton area. In 1856 its income was less than it had been in 1840 — largely because there had been a very considerable reduction in the amount of general merchandise carried on the line and a corresponding fall in receipts which had

not been offset by a substantial increase in mineral traffic, especially minerals other than coal. It was not of course the only line to be in poor financial shape. In 1855 E.D. Chattaway, a director of the North British Railway, published a book 'Railways, Their Capital and Dividends'. Of the 59 English railways examined, 15 i.e. a quarter, paid no dividend at all.⁷⁶

An important reason why the improvements made in the late 1850s did not bring greater success was that the company did not carry them through as proposed and agreed plans stopped short at crucial points. The line was relaid with wrought iron rails from Whaley Bridge to Ladmanlow, but most of the mineral traffic at the northern end of the line came from Harpur Hill and beyond, so it had to travel for two or three miles 'on our old cast iron rails which the heavy trucks of the Midland and LNW broke up on every journey' as Wright put it.⁷⁷

Nevertheless, at the time the line was leased to the LNW the CHPR seems to have been doing rather better financially. Details of the traffic and receipts from 1856 to 1861 in the form in which they survive are set out in Appendix 1. Summary figures for those years and a comparison with 1850-1 are given in Appendix 2. There were two years in which there was a distinct improvement in the railway's receipts. The first came in 1859 when the receipts seem to have doubled due to a very big improvement in the amount of other minerals carried and also to a considerable rise in the receipts from general merchandise, although the quantity carried was hardly above that in 1858 and below the 1856-7 level. Then in 1861 receipts rose sharply again, this time as a result of increases in the revenue from general merchandise, although again the growth of revenue was proportionately more than the tonnage. The inference must be that the goods were of a kind chargeable at a higher rate, or travelled further. It is also possible that there was something of a lag in recording receipts.

By 1861, however, the CHPR had at least lost its unenviable position of 1860 when its working expenditure amounted to 82% of receipts, a proportion only exceeded among English railways by the London, Chatham and Dover and by four small lines whose mileage taken together amounted to less than the CHPR's. The average proportion was 48%.⁷⁸ In 1861 the CHPR's proportion was down to 58% there having been little change in the total of expenditure, but a big increase in receipts (Appendix 3).

Passenger income never amounted to much. In the second half of 1856, which included the summer season, just over 1,000 passengers were carried, but the number steadily declined and was down to little more than 100 by 1861. Receipts from passengers amounted to £90 in 1856, but only £8 in 1861.

At the time the line was leased to the LNW there were 108 staff, an increase of 50% on 1856, although there had been more in 1857, due to the large number of labourers employed — presumably on the improvements to the line, (Appendix 4).

The lease to the LNW was by no means the end of the story of the CHPR as a railway. Much of it remained open for just over 100 years, its financial weaknesses no doubt being less apparent in the larger concerns in which it was subsumed. It became wholly owned by the LNW in 1887 and later in turn part of the London Midland and Scottish Railway and of British Railways. But the lease did mean the end of the CHPR's struggle to keep its head above water as an independent concern and the termination of a significant contribution on the part of a group of local industrialists and landowners to develop and nurture a railway designed at a time when the main path along which railways would go was by no means clear.

APPENDIX I

CHPR TRAFFIC AND RECEIPTS 1856-1861

Traffic	1856		1857		1858		1859		1860	1861
	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half		
Number of passengers	383	1019	165	551	207	613	192	261	285	121
Miles travelled	10416	15876	2927	9789	3898	11301	3773	5081	-	-
Number of passenger trains	10	150	312	316	310	310	310†	316†	-	-
Miles travelled	500	3825	10296	10428	20460	20460	20460†	20460†	-	-
<i>Tons carried:</i>										
General merchandise	3194	3285	4822	2664	3171	2558	3030	3105	8731	9259
Coal	13217	12879	11733	14234	15511	18457	19342	22420	45073	38403
Other minerals	30365	27329	35064	38079	32883	41257	52361	56443	109447	116223
Total minerals	43582	40208	46797	52313	48394	59714	71703	78863	154520	154636
Number of goods trains	-	312	1404	-	310*	310*	-	-	1252†	1252†
Miles travelled	-	10296	22305	-	20460*	20460*	-	-	41316†	41316†
<i>Receipts</i>										
Passengers	24	66	12	41	16	47	16	21	21	8
General merchandise	317	315	390	256	287	232	1255	2688	3419	7587
Coal	785	850	742	855	838	997	1440	1545	3450	3300
Other minerals	837	830	957	1074	938	1210	2103	2295	4596	6201
Total mineral	1623	1680	1698	1929	1776	2208	3543	3840	8046	9501
Total goods	1940	1996	2089	2186	2062	2440	4797	6528	11465	17088
Total goods and passengers	1964	2062	2101	2227	2078	2487	4813	6549	11486	17096
Source - Parliamentary Papers	1856, LVI, 601	1857, XXXVII, 381	1857-8, LI, 560	1857-8, LI, 515	1859(1), XXXV, 670	1859(1), XXXV, 708	1859(2), XXXVII, 808	1860, LXI, 177	1861, LVII, 4	1862, LIII, 4

* entered separately for both goods and passenger trains and miles travelled in the Parliamentary returns.

† described as mixed trains. For 1859 entered in the passenger section, but for 1860 and 1861 entered in the goods section of the return.

APPENDIX 2

CHPR TRAFFIC AND RECEIPTS 1840-1861

Traffic (Tons)	1840-1	1856	1857	1858	1859	1860	1861
General merchandise	14606	6479	7486	5729	6135	8731	9529
Coal	16810	26096	25967	33968	41762	45073	38403
Other minerals	32983	57694	73143	74140	108804	109447	116223
Total mineral	49793	83790	99110	108008	150566	154520	154636
Receipts (£)							
General merchandise	2450	632	646	519	3943	3419	7587
Coal	1358	1635	1597	1735	2985	3450	3300
Other minerals	1029	1667	2031	2148	4397	4596	6201
Total mineral	2385	3303	3627	3984	7383	8046	9501
Total goods	4837	3936	4275	4502	11325	11465	17088

Sources:

For 1840-1 DRO see note 6

For later years Parliamentary Papers see Appendix 1

APPENDIX 3

CHPR Expenditure

	1860	1861
Miles open	34	34
	£	£
Maintenance and renewal of way	1151	1846
Locomotive power	1893	2242
Repairs and renewals of locomotives and wagons	340	145
Traffic charges	2332	2669
Rates and taxes	136	183
Damage and loss of goods	86	32
Miscellaneous expenditure	3542	2852
Total working expenditure	9481	9969
Total receipts	11486	17096
Net receipts	2005	7127
Percentage working expenditure to receipts	82	58

Sources:

Parliamentary Papers, 1861, LVIII, 256; 1862, LIII, 24

APPENDIX 4

CHPR STAFF 1856-60

	30 June 1856	30 June 1857	30 June 1858	30 June 1860
Secretaries or managers	2	3	2	2
Engineers	1	2	1	1
Accountants or cashiers	1	1	3	3
Inspectors or linekeepers	1	1	-	-
Station masters	7	7	7	7
Clerks	3	3	-	2
Engine drivers	10	8	9	13
Assistant engine drivers or firemen	11	14	2	6
Guards or brakemen	6	5	5	4
Artificers	13	15	15	18
Switchmen	1	1	-	-
Porters or messengers	6	7	10	3
Platelayers	-	13	-	18
Labourers	10	54	18	12
Miscellaneous			14	19
Total	72	134	86	108

Sources:

Parliamentary Papers 1856, LIV, 660; 1857(2), XXXVII, 335; 1857-8, LI, 518; 1860, XLI, 154.

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- ² At the southern end the inclines, all within 5 miles of Cromford canal wharf where the line started, were Cromford, Sheep Pasture, Middleton and Hopton. At the northern end they were Bunsall Upper and Bunsall Lower, sometimes referred to as the Buxton inclines, Shallcross and Whaley Bridge, again all within 5 miles of the terminus. The ninth incline was at Hurdlow, almost exactly halfway.
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