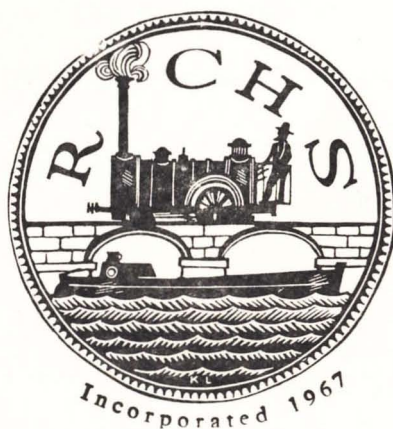


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THE SLOUGH BRANCH OF THE GRAND JUNCTION CANAL

By Alan H. Faulkner

Although the Slough branch was the last part of the Grand Junction Canal to be constructed it nearly had its origin in the very early days of the undertaking.

Whilst nowadays the river Thames is generally in a good navigable condition, at the end of the eighteenth century the situation was very different. In those days the channel was frequently obstructed by mill dams, sections of the river were shallow and swift flowing, and passage for barges was both tedious and hazardous. With the advent of the canal era, which permitted safe and trouble free navigation over a wide part of the country, it was scarcely surprising that thoughts should be turned towards by-passing treacherous stretches of the Thames with canals.

The completion of the Grand Junction Canal from the Thames at Brentford through Cowley to Uxbridge in November 1794 prompted a proposal for a canal from a Mr. Hilliard's wharf at Cowley westwards to the Thames at Boulter's Lock not far from Maidenhead to by-pass a particularly difficult part of the river. The suggestion was made by a Mr. Black in a letter, dated 13 August 1795 to the Grand Junction Company, accompanying a detailed plan and book of reference showing who owned the land that would be affected by the scheme. The Company replied saying they appreciated the advantages of the idea and would be willing to discuss it with the promoters, once the land-owners and their tenants had given their consent. Little more was heard of the plan for several years but the idea was not dead but only dormant and at the end of May 1801 John Holland, one of the Company's engineers, was ordered to survey a line for a canal from Cowley to the Thames at Marlow and for a branch to Reading. Holland also had to make an estimate of the probable cost of the work and he acted under the direction of James Barnes, the Company's engineer, who had probably already had a preliminary look at a possible line.

Whether Holland was unable to carry out the survey, or if it was only a general report that he made is not clear, for in May 1802 almost identical instructions were given to him and a Peter Potter, who was appointed to help with the surveying and the measurement work. In the following month, at the half yearly general meeting, the Company decided to apply to Parliament for powers to build the proposed canal; the Committee being left to sort out tonnage rates and other details as soon as the survey and plans were completed. By September Holland had finished his work and he put forward three alternative proposals. The first was for a canal from Cowley to join the Thames at Harley ford not far from Marlow; the line passing through Iver. Langley, Stoke Poges, Burnham, Taplow and Marlow. The second plan was for a canal from Cowley to the Thames at Sonning near Reading taking the same course as far as Taplow and then passing through Maidenhead, Waltham St Lawrence and Woodley. The third plan was very similar to link up with the river Kennet Canal in Reading, instead of joining the Thames.

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No decision was taken at the time as to which of the three schemes should be adopted and notices were inserted in the *London Gazette* and other newspapers that an application was to be made to Parliament to build one of the alternatives. Armed now with Holland's plan and survey the Company, at their meeting on 2 November 1802, re-affirmed the application to Parliament and selected the route to the River Kennet, unless this was later found to be impracticable when one of the others was to be substituted. It was also decided that any landowners whose property would be affected by the proposed canal should have the right to subscribe at par for one share in the Grand Junction for every $\frac{1}{4}$ mile of land traversed by the canal.

Opposition to the scheme was not slow to develop and a meeting of landowners was held on 28 October at Salt Hill in Buckinghamshire. At this meeting a committee was formed with the Marquis of Thomond, the Earl of Rosslyn, Lord Boston, Sir Robert Bateson and other gentlemen to act for the landowners in opposing the whole project. Their main concern was that the canal would ruin the properties through which it would pass and in any case it was quite unnecessary as there was sufficient water carriage already available to and from London by way of the Thames. On the following day the Thames Navigation Commissioners met at Windsor and they unanimously rejected the whole project on the grounds that it was unnecessary and would cause irreparable damage to the trade on the Thames. The Commissioners also rejected any suggestion that the Thames was not satisfactory, pointing out that there had been virtually no obstruction to the navigation during the year apart from where Boulters Lock was under repair. The opposition of the Commissioners was scarcely surprising and as many of the Commissioners were also large landowners in the vicinity the opposition of the landowners as well can perhaps be partly explained. The landowners held a further meeting at Salt Hill, on 5 November, when the committee was strengthened with the cooption of Lord Francis Godolphin Osborne and six others, whilst there was yet another meeting on 17 November in Maidenhead Town Hall at which another opposition committee was formed comprising Lord Braybrook, Sir Nathaniel Dukinfield, Sir William Clayton, George Vansittart, Esq., M.P., and ten others.

Faced with this formidable barrage of hostility the Grand Junction decided to postpone their application to Parliament. Letters were sent to the Thames Commissioners and to the other objectors saying that the scheme had been put forward in all good faith, but as it had been found objectionable it had been decided to withdraw it for the time being. The Grand Junction remained convinced that good sense would prevail and the objectors would realize their mistake and support the scheme for its obvious public advantages. The Grand Junction were also influenced in their decision by the lack of support from the Kennet & Avon, who probably had enough to occupy themselves in trying to complete their own canal without diverting too much effort to other projects.

The scheme was revived in 1810 when the Kennet & Avon put forward three alternative schemes to by-pass stretches of the Thames; from the Kennet at Reading to the Thames at Cookham and then

from the Thames near Boulters Lock to the Grand Junction at Cowley; from the Kennet at Reading to the Thames at Isleworth; and from the Kennet & Avon Canal at Enbourn near Newbury to the Basingstoke Canal near Basingstoke. The solicitors acting, Messrs Ward & Merriman, approached the Grand Junction in November asking for their support for the Cowley project, but the Grand Junction replied that before they could come to a firm decision they would have to know which of the three schemes was to be adopted and they were also concerned to know the reaction of the landowners. No further action appears to have been taken on any of the proposals at the time but the project for the canal from Boulters Lock to Cowley, which became known as the Western Union Canal, was revived in 1815. This time John Rennie made a survey and his plans were approved by the Grand Junction in August 1816 providing the level of the new canal at the junction at Cowley was 12 inches above the level of the Grand Junction. Negotiations took place with a deputation of the promoters in September but still no action resulted. Two years later Ward & Merriman wrote saying the Kennet & Avon wanted to postpone the scheme for another year.

In the following year, however, the Kennet & Avon decided to go ahead with the Western Union project and a deputation attended a Grand Junction meeting on 20 May 1819 to enlist some support. Two months later the Grand Junction approved the scheme but with some stringent safeguards about the loss of water at Cowley, where the level of the new canal was now to be 6 inches higher and a stop lock was to be installed if required. In addition two pumping engines were to be installed by the Western Union to keep the new canal at the higher level. To protect trade on their own line the Grand Junction also insisted on a 4s per ton surcharge on all iron in whatever form entering from the Western Union. It was not thought worthwhile to extend the surcharge to coal since it was claimed very little coal for Maidenhead and Marlow was supplied from the Kennet & Avon in any case. A prospectus for the Western Union was then issued, which showed that the 12 mile long canal, with a branch to Windsor, would cost some £130,000 to build. This sum was to be found by the Grand Junction and Kennet & Avon shareholders.

Considerable opposition was encountered when the Bill was presented to Parliament. Foremost were the Thames Commissioners and they were joined by the Wilts & Berks Canal Company, who were promoting a rival scheme for a canal from Abingdon to Aylesbury. This scheme, which was known as the Western Junction Canal, was in turn opposed by the Kennet & Avon. In May 1820 the Grand Junction decided both schemes would be to their advantage but if the Wilts & Berks and the Kennet & Avon mutually opposed each other it would prevent either being carried out. Despite the opposition of the Thames Commissioners, which took the form of a pamphlet war, the Western Union Bill passed its Second Reading in the House of Commons in May 1820, but by the end of the month the Grand Junction were having second thoughts about the amount of the surcharge for iron and they decided to increase it to 6s per ton for pig iron, and to 8s per ton for bar, rod, hoop and sheet iron and castings

weighing more than half a hundredweight. The Bill ran into difficulties in its Committee stage largely, it seems, on account of the surcharge to which Lord Shaftesbury took particular exception. The Grand Junction would not relent and partly for this reason and partly because of the other opposition the Bill was withdrawn shortly before the end of July.

This was virtually the end of the Western Union project. It was reconsidered in the following year but was deferred as the economic climate was not encouraging and thereafter it faded into the background until part of it was resuscitated in a different form at the end of the 1870s.

On 25 February 1878 Hubert Thomas, engineer to the Grand Junction Company, wrote to his Chairman, the Honourable Richard Howe Browne:

'Referring to the conversation I had with you respecting constructing a Canal from Bulls Bridge into the Slough District with the view of opening up new brickfields for supply of the London Market . . . I have no doubt such a scheme could be cheaply constructed and would offer a large source of revenue to the Company; before however expressing any definite opinion on the matter I should like to take preliminary Levels, so as to plot a section of the country to be traversed, this would enable me to form some idea of the probable cost of constructing the canal and the quantity of brick earth to be opened . . . The expence attending these preliminary Levels would not I anticipate exceed £100, at your request I now beg to submit the proposition to you for consideration.'

Thomas was authorized to make the survey and in July 1878 Messrs Grahames & Co, the Company's solicitors, were instructed to apply to Parliament for powers to build the proposed branch from Drayton to Slough. By the end of October the draft Bill had been approved and the Chairman had been over the line with Thomas. It was estimated that about £80,000 would be needed to finance the work. The eastern end of the branch was now planned to join the main line at Cowley, following very closely the line that had been planned for the Western Union Canal. There was a Special General Meeting on 8 January 1879 when the Company approved the scheme. Thomas had completed his detailed survey work by then and was able to give the estimated cost as £70,549 6s 5d.

By March the Parliamentary proceedings were in full swing. Opposition had been registered by the Regent's Canal Company, who were concerned about the effect of the new branch on the Grand Junction's water supplies. The Regent's Company drew their supplies from the long pound running from Cowley to Paddington, which would now have to supply the new branch as well, and they obviously feared that some of the water to which they were entitled would be diverted to make good evaporation and leakages on the Slough canal. Negotiations were opened with the Grand Junction and various protection and compensation clauses were inserted in the Act. Other opposition was also encountered, notably the Great Western Railway Company, with part of whose line the new canal was to run parallel, and landowners in the Langley area. Notwithstanding this opposition the Bill passed

through its Committee stage in the House of Lords on 26 March 1879. On 13 May certain other petitions were disallowed, leaving the G.W.R., Sir Robert B. Harvey, M.P., Rev W. D. Scoones, Mr W. J. Beadall and Mr Cantrill, Surveyor of Highways in opposition. The Bill was considered by the House of Commons starting on 3 July and after 4 days in committee it was approved, although the Company had to agree to terminate the branch in Slough on the east side of the Stoke Poges road, rather than continue for some distance further west as had originally been planned. This amendment was so as to avoid interference with lands belonging to Eton College and to the Duke of Leeds. The Act (42 & 43 Vict, Cap 178) received the Royal Assent on 21 July 1879.

At the end of July a small sub-committee was set up by the Grand Junction, comprising the Chairman, Winthrop Mackworth Praed and John Stone Wigg, to supervise the work on the branch. In the following month it was decided to build the branch by direct labour with Thomas in charge and the sub-committee conducting the negotiations for the purchase of the land and the supply of materials. Although consideration had been given in November 1878 to issuing new ordinary shares or debenture stock to finance the work it was finally decided, in August 1879, to borrow the money required on mortgage. Little actual construction work was carried out in 1879. Efforts being concentrated on preparing detailed drawings and surveys, taking trial borings and collecting stocks of materials together. Thomas obtained estimates in November for supplying half a million bricks and the tenders of W. Studds (36s per 1,000 with a 2½% discount) and J. Winter (35s per 1,000) were accepted.

Construction work on the branch started in earnest at the beginning of 1880, mainly at the eastern end of the canal where most of the heaviest works were concentrated. In the first 1,300 yards there were 3 aqueducts; over Fray's river, over the river Colne and over Colne Brook. Much of the canal here was on a substantial embankment but at Iver a deep and lengthy cutting was required, whilst nearer Langley more fairly heavy cutting and embankment works were needed. By about the middle of 1881, when work on the eastern section was progressing well, it was possible to divert some of the labour force to the Slough end, where the works were somewhat easier.

On 1 December 1881 the Chairman, Praed, Thomas and Mr Mercer, another of the Company's engineers working on the bench, navigated from Iver road bridge to the main line at Cowley in a steam launch as well as inspecting the rest of the works. The cutting at Iver, which required the outlay of over £10,000 in labourers' wages alone during the 15 months it was being excavated, was completed about April 1882 and the canal was filled with water and opened as far as Down's bridge, near Langley, by the end of May. Thereafter progress towards Slough was steady and on 4 December 1882 Thomas was able to report that the branch was open throughout to traffic.

On the whole the construction works were uneventful. John Winter, one of the contractors supplying bricks, went bankrupt in June 1882 owing the Company £165, but by this time most of the bricks had already been supplied. In May 1881 the Langley School Board applied

for a bathing place to be made in the canal by the Langley Central School so that the boys could be taught to swim. This request was granted with the Board agreeing to pay the £25 for the cost of the work and a nominal rent of £1 per annum. The expenses for the branch were segregated in a separate account in the Company's books whilst it was being built, but after 1 December 1882 all residual expenses were charged to the ordinary expenses account. The outstanding balance on the Slough Branch Canal Account was gradually reduced by crediting to it any surplus profits over and above that needed to pay a 4% dividend and in March 1885 the proceeds of the sale of tow footbridges at Paddington to the Metropolitan Board of Works, totalling over £13,000, were applied to the same account. Eventually in December 1886 it was decided to issue debenture stock under the powers of the 1879 Act to pay off the mortgage and close the special account. The total cost of the branch was about £107,000.

But a cloud had appeared on the horizon, in the form of the Regent's Canal Company who lodged a claim for compensation on account of water lost from the Long Level, the long pound between Cowley and Paddington, when the new branch was being filled. The Grand Junction tried to resolve the problem in January 1883 but the Regent's Company was then being transferred to a new company, the Regent's Canal City & Docks Railway Company, and negotiations had to be suspended until the transfer was completed on 1 April. In May, Edwin Thomas, engineer to the Regent's Company, tested the Slough branch to determine how much water was being lost from the main line and his tests showed variations in the water level of over $1\frac{1}{4}$ inches in 24 hours. The Grand Junction contended that this was merely soakage and evaporation, which was provided for in the Act, but the Regent's could not accept this, claiming that there must be a leak on the branch for which they were entitled to compensation.

By the summer of 1893 there seemed little likelihood of any settlement and the Regent's decided to ask the Board of Trade to appoint an arbitrator as provided for in the 1879 Act. The Grand Junction challenged the right to have an arbitrator called in, but despite this opposition the Board of Trade appointed a Mr Bateman in the middle of September to act in the dispute. There was an initial meeting between the arbitrator and the two sides at the end of September, but before the second meeting could take place at the end of November the Grand Junction decided to resist any further proceedings and a court action was brought against the Regent's Company. The case was to settle two legal points that were in dispute; whether the appointment of Bateman was valid, and to determine the exact meaning of a clause of the 1879 Act which would decide whether the Regent's was entitled to any compensation. The hearing was on 23 April 1884 before Mr Justice Kay and judgment was given against the Grand Junction on both counts.

The effect of this decision was to confirm Bateman in his appointment with full power to determine the amount of any loss of water and to decide how the loss came about. The Grand Junction realized that they could be in for heavy liabilities if the leakage was proved and they decided to appeal. Judgment on the appeal was given on 9 May

1885 and again the Grand Junction lost, Lords Justices Cotton and Lindley finding for the Regent's but Lord Justice Fry dissenting. However the Court expressed a strong opinion that although the arbitrator could be appointed to ascertain the amount of water lost under section 33 of the 1879 Act he did not have powers to decide how it was lost, and if there was a dispute over this matter, as in the present case, then an arbitrator could only be appointed under another section of the Act. The Court also decided that the Regent's had no power to stop traffic on the branch to test for leaks more often than once in 2 years. Thus although it lost the appeal the Grand Junction's position was slightly improved by this judgment and they decided not to renew the appeal in the House of Lords. Under section 33 the Grand Junction had to bear all the arbitration expenses, but under the other section the costs had to be shared. Similarly as the Regent's were unable to test the branch when they wished they would obviously have to be careful how they handled matters.

Negotiations continued with the Regent's in a rather desultory fashion for the rest of 1885 but after August 1887 they seem to have fizzled out inconclusively. Under the 1879 Act the Regent's were entitled to 200 locks of water each half year as an evaporation and soakage allowance and periodically they claimed this allowance.

On 1 May 1883 the Great Western Railway approached the Grand Junction to construct a siding to the canal at Langley. Their application was approved at a yearly rental of £5 and soon afterwards Langley Station Wharf was built. In March 1883 the United London Angling Association Fisheries Society were allowed to lease the fishery on the branch at a rental of £10 per annum. In August 1886 slips occurred in the deep cutting at Iver on land owned by some brick-makers, and Gordon Thomas arranged with the brick makers to ease the slope of the cutting by excavating the soil, which was suitable for bricks, at a total cost of about £250. Early in 1887 the brickmakers applied for special terms for transporting gravel from these excavations on the canal and this was agreed as it was in the company's interests as well.

The opening of the Slough branch gave a considerable boost to the brickmaking industry in the area and several wharves were established, especially in the Iver and Langley districts. Alongside the brickworks sand and gravel extraction was developed and this industry soon became the largest and most important user of the branch with large tonnages being sent by barge to the ever growing London market.

Year	Tonnage on branch	Tolls for branch
1905	192,202	£7,614 6s 9d
1906	144,691	£5,834 11s 10d
1907	132,482	£4,931 9s 3d
1908	107,309	£3,833 14s 10d
1909	106,949	£3,648 15s 9d
1910	83,355	£3,019 12s 6d
1911	143,715	£4,565 19s 8d
1912	130,746	£3,935 10s 5d
1913	133,072	£4,118 8s 5d
1914	135,835	£4,781 3s 5d

Much of this traffic remained on the branch until well after the Second World War. Although not very large when the canal was built Slough itself was expanding into an important industrial area and several wharves were set up so that coal supplies from the Warwickshire coalfield could be brought in. In addition several firms received their supplies by barge direct from the Port of London. There was a public wharf in the basin at the end of the branch and this was well placed for serving the large Slough Trading Estate, whilst the County Council had a wharf in the basin at one time for receiving supplies of roadstone from quarries in the Midlands.

Despite the rapid growth of Slough after the Second World War traffic on the branch declined rapidly with most being diverted to road transport, especially the sand and gravel. In the mid 1950s one firm was still receiving from 3,000 to 4,000 tons of timber by barge direct from Surrey Docks and there was a little coal traffic, but by the mid 1960s regular commercial traffic on the branch had ceased. Pleasure craft now use the canal in fair numbers, particularly since the establishment of a boatyard at Hollow Hill, between Iver and Langley, but few boats used to penetrate much beyond Langley, and at one time the section into Slough took on an almost derelict appearance. Indeed so little use was being made of this section that Slough Council announced plans to construct part of a new road on the final stretch of the canal. This proposal gave rise to considerable protest and focussed much needed attention on the branch, whose future now seems more assured. Recently also there has been a proposal to construct a short link canal from near the end of the branch to the river Thames so as to shorten the distance by waterway between London and the most popular parts of the river. The link, which would be just under 2 miles long, would have to pass under the main railway line and under the M4 motorway and a flight of locks or a lift would be needed to overcome the 34 feet change in level.

The Slough branch runs in a remarkably direct course from the main line at Cowley Peachey to Slough, a distance of 4 miles 1626 yards. The canal is level throughout, and consists of three long straight stretches. Twelve bridges cross the branch, of which seven carry public roads and the other five are accommodation bridges. Several of the bridges are brick, and the rest are girder bridges, but that carrying the Uxbridge road in Slough is of reinforced concrete and of a modern design. Unlike all the other branches on the Grand Junction these bridges are not numbered. There are few features of interest, the major works being the three aqueducts and the cutting at Iver. Most of the canal passes through pleasant scenery but the final section into Slough is somewhat featureless.

I am grateful to the Archivist of the British Railways Board Historical Records for allowing me access to the Grand Junction Canal minute books from which most of the information in this account has been drawn.

JAMES FOSTER PETREE, 1893 - 1970

With the sudden death on 14 September of Foster Petree, engineering history has lost one of its foremost exponents, and a wide circle of friends will miss a kindly and charming personality who never refused a request for help, even when this involved working into the early hours of the morning. Much of his research work in this sphere was published in the form of articles and papers to societies, rather than in book form, but his output of original material was very extensive. Equally important was the inspiration and help which he gave to other research workers in the midst of a busy life, and the present writer, who had the privilege of knowing him for forty years, acknowledges his own indebtedness for ever-ready collaboration.

James Foster Petree came from a family with deep roots in the North-East Coast, although he traced his early forbears to Kirkwall, Orkney, whence they worked southward. His great grandfather had a shipyard in Sunderland, and there Foster Petree has been buried at his own wish, with a gravestone inscription stating that he was 'a great-grandson of William Petree, shipowner, of Southwick.' His own contributions to the discussions of numerous papers dealing with some aspects of engineering on the North-East Coast revealed the way in which he had imbibed the traditional lore, such as his recounting the recollections of his maternal grandfather, Archibald Graham Foster, of the Springwell mineral railway, extending back to 1831. His father, was a Lloyd's Surveyor, and transferred his activities to the Mersey, where he had a close association with Laird Brothers, and it was at Prenton, Birkenhead, that Petree himself was born on 23 November 1893, the eldest of four children.

After he had matriculated at Wallasey, he entered on a shipbuilding apprenticeship in the engine works of what in 1903 had become Cammell, Laird & Co. Ltd., which included drawing office work, time on the shop floor, and trial trips of ships. His apprenticeship finished shortly after the outbreak of the First World War, and in 1915 he became machinery inspector to the Royal Hellenic Naval Mission in this country, and was on the Admiralty staff. In 1919 he joined Gwynnes Ltd., of Hammersmith, as senior draughtsman on centrifugal pump work, and later transferred to Worthington-Simpson Ltd. In 1923 he joined J. Hamilton Gibson, Consulting Engineer and adviser to Michell Bearings Ltd., and in 1928 was taken into partnership.

Petree joined the Newcomen Society in September 1930 at the time that its Summer Meeting was held to coincide with the celebration of the Centenary of the Liverpool & Manchester Railway. He became a Member of Council in 1936; served as Honorary Treasurer from 1941 to 1963; was elected a Vice-President in 1944; and was installed as President on 21 November 1951, in which capacity he served for two years. On 1 May 1968 he was awarded the Dickinson Memorial Medal for his lecture on 'Engineering Biography.' Earlier, he had been Chairman in 1931-32 of the Junior Institution of Engineers, of which body he became Vice-President in 1959. He had set up on his own as a Consultant on bearings and lubrication in 1932, and his historical activities flourished from this period. One of his great enthusiasms was

for the work of Henry Maudslay (1771-1831), and our knowledge of Maudslay's work has been greatly enhanced by Petree's researches. He presented a Paper on 'Maudslay, Sons & Field as General Engineers' to the Newcomen Society on 12 December 1934; produced a commemorative brochure in 1949 to mark the establishment of the Maudslay Scholarship; and served as President of the Maudslay Society in 1964-66.

His literary work resulted in the invitation to join the journal *Engineering* as an Assistant Editor, and this he accepted in 1937. On 1 March 1939 he became Joint Editor with Charles Cooper, and effectively sole Editor in 1949 when Cooper's ill health resulted in his virtual retirement. In connexion with a reorganization, Petree retired from the editorship on 31 December 1953, but remained a Director of Engineering Ltd., until the sale of *Engineering* to the International Publishing Corporation as from 1 January 1970. He continued to write occasionally for the journal after his retirement from the editorship, and particularly noteworthy were his annual Centenary articles, of which the last was published on 2 January 1970. Another remarkable exercise in historical research was his treatise entitled *A Hundred Years of Engineering* in which, among many other things, he demonstrated the effect of the activities in this country of the eccentric American engineer, Zerah Colburn (1832-1870). Petree was a Member (latterly Fellow) of the Institution of Mechanical Engineers, of the Royal Institution of Naval Architects, and of the American Society of Mechanical Engineers. He became a regular contributor in his later years to *Mechanical Engineering*, the journal of the ASME. His memberships of societies for the study of history were very numerous. He was one of the early members of the Railway & Canal Historical Society, elected on 28 January 1955, and served it on the Council and in many other ways, not least in connexion with the arduous but unobtrusive work on the file of record cards. Petree gave freely of his time and energy, and both his sound work and his cheerful exuberance will long be remembered.

Charles E. Lee

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A RAILWAY EXCURSION TO LONDON IN 1850

Kingsley Belsten

The story begins with a modest announcement, costing about four shillings, in *Jackson's Oxford Journal* for 31 August 1850, and worded thus: 'Great Western Railway. Cheap Excursion from Oxford, Abingdon and Didcot to Paddington and back. An Excursion Train will leave the Oxford Station on Monday next, September 2nd, at a quarter past 7 in the morning, calling at Abingdon Road¹ at half past 7 and Didcot at a quarter to 8. Will return same evening, leaving Paddington at 8 o'clock. Fares: Oxford, Abingdon Road and Didcot, 1st Class 6s., 2nd Class 3s 6d. Tickets may be obtained on and after August 29th.' (This reference to the 29th in an advertisement appearing on the 31st suggests that handbills had been issued a few days earlier).

The announcement met with spectacular success, more than 3,000 people paying over £570 for tickets. It may seem curious today that so many were able to take a Monday off. but it happened in the University's Long Vacation, when there was usually so little trade in the city that many shops closed down for weeks, and grass grew between the cobbles in the High Street.

Among those who went on the excursion was an un-named reporter from the *Oxford Journal*. In re-telling the story I have drawn on his account² of the affair, paraphrasing in places, quoting verbatim in others. The report begins 'No sooner was this project announced than large numbers of persons of both sexes sought for tickets; during the whole of Saturday, August 31st, there was an eager demand at the Station and at Mr Thompson's in the High Street, but more especially at Mr Plowman's in St Aldate's, which being so centrally situated was beset all day. The confusion and excitement increased tenfold in the evening, when it was intimated about 9 o'clock that the supply was not equal to the demand, and that no more tickets could be issued until 7 next morning at the Station.' There, so many people congregated that ticket issuing had to be suspended some time during the morning until 8 in the evening, when there was again a big crowd. By nightfall about 2,000 tickets had been sold.

So we come to Monday, 2 September. By daybreak coaches, gigs, carts and vehicles of every description were converging on Oxford. From five o'clock there was a continuous stream of country folk and townspeople pouring down St. Aldate's to the Railway Station just across Folly Bridge.

'By 7 o'clock all who had made up their mind to go were at the Station, which presented a scene of indescribable confusion, the 1st and 2nd Class passengers all being huddled together; affording a striking illustration that, in spite of a difference in the charge, all who are bent on a cheap excursion must . . . submit to an equal share of crushing and inconvenience. But the worst was that the carriages sent for had not arrived from Paddington owing to the coupling chains having broken three times on the way' (scarcely reassuring news) 'and thus 1½ hours were lost, and everyone out of humour. They did at length arrive, and such parties as could not wait to have the doors opened made their entrance at the windows.'³ Eventually 53 coaches were filled, many people taking possession of open cattle trucks rather than be deprived of their day's enjoyment. About 8.30 this monster train, with two engines, got away. There were 2,530 2nd and 134 1st Class passengers. Three more carriages were added at Abingdon Road with 338 more people, and two more at Didcot for another 130, making a total of 3,132 in 58 coaches.'

Half an hour was lost at Reading in waiting for an Up express to pass. 'No sooner was it known that there would be a wait of about 20 minutes than hundreds rushed from the train and besieged all the houses of entertainment within reach . . . At length the railway bell rang, and there followed a rush up the embankment and summersets (*sic*) over the rails to regain the carriages.' There was another stop at Slough, 'to give the horses water, as the puffing engines needed a good supply.'

Paddington was reached at half-past twelve. Although nine years had passed since Thomas Cook organized the first railway excursion it seems that news of mammoth excursion trains still attracted spectators at vantage points along the line, as happened in this case. At Paddington, too, 'an immense number of people had been waiting since 10 o'clock to witness the arrival of a train which they thought must be a long one, but which they never dreamt would reach half its reality.'

In spite of the delays and discomforts (to hint at only one: lavatory compartments had not then been invented) the excursionists alighted in the best possible humour, we are told, and quickly dispersed to shop, visit friends, or see the sights of London.

The principal drawback to the day's enjoyment was the confusion at Paddington before the return journey at 8 o'clock: 'Many passengers were there by 7, and took their seats. Most did not arrive till half past, when there was a terrific rush, no distinction being made between 1st and 2nd Class, all being subject to the pushing and squeezing caused by their having to show their return halves at the narrow entrance to the platform.' The G.W.R. showed judgment and consideration. In order to obviate the difficulties and delays in working such a long train, they attached nine coaches to the ordinary train which left at seven, and thus one detachment was started. At a quarter past eight a 30-coach train left, and the last—with the stragglers—at nine. The first arrived at Oxford at ten, and the second at half-past; the last had to wait at Reading for the Mail train to pass, and did not reach Oxford till midnight. The report concludes 'It is satisfactory to add that no accident of any kind occurred.'

Tail-piece: On that very same day, 2 September 1850, occurred another event, but one of permanent importance in Great Western annals. This was the opening, unheralded in the press, of the single tracked broad gauge line between Oxford and Banbury⁴. It seems odd that the Railway Company should have planned to run a big excursion from Oxford on that day. It appears, however, that the decision to open the Banbury extension was taken at short notice⁵, and as the excursion had already been announced it was thought advisable to let it proceed.

To bring this tail-piece up to date (Autumn 1970): Oxford's 1852⁴ (the second) station has now been demolished to make way for a new one. Sad to relate, many people who have seen the plans think that the new (mini) station will be inadequate, inconvenient, and quite unworthy of the University City of Oxford.

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- 1 *History of the G.W.R.*, by Macdermot, rev. Clinker, 1964, p.88: At this time the station for Abingdon was 3 m. from Didcot, at the over-bridge where the line was crossed by the Abingdon—Henley Road. When the Abingdon Railway was opened in 1856 'Abingdon Road' was re-named 'Culham'.
- 2 *Jackson's Oxford Journal*, Sept. 7, 1850.
- 3 Macdermot (as above) pp. 434-5 and 335. The windows of 2nd Cl. broad gauge carriages were unglazed. After 1844 this type disappeared from ordinary trains but was still used in excursion trains in 1850—as also were cattle trucks, as in this instance.

- 4 Ibid, p. 155. The extension joined the Didcot-Oxford line at Millstream Junction (62nd M.P.). The junction was such that all Banbury trains to and from Oxford Station (1 m. distant) had to reverse at this point. This practice continued until the new station in Park End St. was opened in 1852. The old station then became a Goods Depot and so remained until 1872, when it was closed and the lines leading to it removed (p.88).
- 5 Ibid, p.155.
(A shorter version of this article appeared in the Oxford Times 18 February 1966).

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THE HUDDERSFIELD JOINT OMNIBUS COMMITTEE

by Neil Fraser

On 19 December 1928, the London Midland & Scottish Railway made an overture to Huddersfield Corporation with a view to buying an interest in the motor bus undertaking of the latter's Tramway Department. The outcome was the approval by Huddersfield Town Council, three members dissenting, for the sale of a half interest for the sum of £51,269 13s 8d.

Prior to LMS participation the undertaking had had an undistinguished history. Powers to operate motor buses were obtained in 1913, and again in 1920 for eight specified routes outside its borough boundary. Inauguration was on a commercial basis, but anxious to preserve its lucrative tramway network, representing a capital outlay of £675,056 the Corporation miscalculated the impact of the bus, and its relationship with neighbouring authorities fell to a low estimate when requests for new routes were answered by such observations as 'the area is already well served by existing facilities', or 'we are unable to provide such services at present'. As a result initiative passed to others who were obliged to operate mainly on the unlicensed return ticket system.

The Huddersfield Joint Omnibus Committee which came into being on 16 May 1930 comprised four representatives from each side, the chairmanship being held by the senior member alternately for one year. For the LMS Mr. W. P. Bradbury (Road Transport Assistant to the Passenger Manager) held office from 1931, being succeeded in 1936 by Mr H. N. R. Reed (Assistant Chief Commercial Manager). Between 1948 and 1969 nine different railway officers held this position. The HJOC commenced with nineteen routes, ten of which competed with railway services, and of the 73 buses taken over (subsequently increased to 96) those bearing old fleet numbers were given the LMS name of legal ownership. The livery of maroon and off-white was retained but carried the lettering 'Huddersfield Corporation and LMS RLY Joint Omnibus Services' along with a circular device bearing an adaptation of the arms of the two partners. Since then fourteen further routes were opened, six acquired and six abandoned, including that to Kirkburton, authorized in 1920, opened in 1927, and following the closure of the railway passenger service to that place, sold to the Yorkshire Traction Company in 1933 for £1,500.

The only operator absorbed, Wilson Haigh Ltd. of Holmfirth

occurred in 1934 at a cost of £13,626 17s 4d and ended a seven year epic of fare cutting, overloading, jostling, Ministerial enquiries and court battles. A further takeover, of Hansons Buses Ltd. in 1937 failed to materialize, although the idea was revived twenty years later.

The 1930 agreement appears to have worked smoothly. Disagreement appears to have been expressed from time to time, for example, in 1932 the Corporation expressed dismay, when, without informing its partner, the LMS contemplated its own Halifax—Wakefield bus route. The abandonment in 1939 of the Honley tram route saw replacement by augmenting the HJOC Holmfirth service pending the introduction of trolley-buses. In 1941 an agreement for traffic abstraction was concluded whereby the HJOC would pay to the Corporation the annual sum of £2,922 until such services were introduced. These never came about and the agreement lasted until 1965. In 1957 the Corporation sought to re-examine the whole of its agreement with British Railways. The former's General Purposes Committee furnished with HJOC minutes asked to be supplied with its agenda, to which B.R. declined 'as this is not provided for under the agreement.' In 1958 following a managerial appointment B.R. requested that whenever such appointments arose in future, it wished to be consulted to which the Corporation replied 'the agreement between the two parties makes no provision for such an arrangement—the appointment is one for the Corporation alone.' In 1966 on B.R. initiative, with Corporation support, the HJOC made a fare increase application, but when granted was of the barest minimum and deficits occurred during the two following years. In the same year the HJOC and the Corporation's own separate undertaking were abortively offered to the Ministry of Transport as a prototype Passenger Transport Authority. Co-ordination between the two in 1967 enabled substantial economies to be made on a limited number of routes.

The accounts of the HJOC were limited to a statement of operational receipts and expenditure, the surplus being divided, from which each partner had to deduct other charges i.e. loan interest, renewal of vehicles, etc. Railway figures are not available, but those of the Corporation are. On 1 June 1969 the B.R. Holding in the Committee was vested in Amalgamated Passenger Transport Ltd. (National Bus Company) and the HJOC was dissolved on 1 October 1969 when Huddersfield Corporation repurchased the half interest for £165,000 surrendering two routes to the N.B.C. and also absorbing Hanson's Buses Ltd for a further £74,000 the amount being provided under a ten year Government loan.

Providing highly efficient services, with low fares and a safety record second to none the Huddersfield Joint Omnibus Committee elicited some criticism and little praise and it seems reasonable to conclude that patrons of those services derived greater benefit from their operation than did their railway ownership.

Sources of Information. Minutes of the Huddersfield Town Council, (Passenger Transport Committee, Watch Committee). Huddersfield Corporation Abstract of Accounts (Annual) and the *Huddersfield Examiner*.

CORRESPONDENCE

Reprint of R.C.H. Station Handbook (1904 edition)

Sir,—In the interests of accuracy, may I draw attention to two rather serious errors in the blurb?

The wording of the second paragraph indicates that this was an annual publication. As my Introduction shows, this was far from being the case. The Handbook was not published 'only for private circulation'. It was certainly issued mainly for use by railway staff but, although advertised in a very limited way, it was on sale to the public. Prices are quoted both on the title page and in my introduction.

C. R. CLINKER

The Railway to Walthamstow and Chingford

Sir,—Since the book was published additional information has been traced and the following amendments and amplifications are necessary.

Page 21: There was a small ticket office at the east side entrance at Chingford. It was known as No 2 office and was opened in 1910 and closed in 1916.

P.22: The iron overbridge at Highams Park was brought into use in 1887 or early 1888 and the name of the station became Highams Park & Hale End in 1899.

Pp. 29, 38, 39, 42: Bishopsgate, London Fields and Cambridge Heath were closed and the Gospel Oak service reduced 22 May 1916.

P.37: The Stratford—Chingford service commenced Monday 7 June 1880 and ran until Saturday 3 October 1914 inclusive. It was withdrawn at the time of the introduction of the 'Thornton' radical alterations on 4 October 1914.

Pp. 38, 39: The Gospel Oak service began Monday 4 June 1888. The first ticket book was still at Gospel Oak until a few years ago. Previously the service had terminated at Highgate Road as the Tottenham & Hampstead Company did not have the money to complete the last half mile although a bridge over Gordon House Road had already been built. There was no physical junction at Gospel Oak until 1916. Reports which state that a junction existed much earlier are wrong as there was disagreement between the Companies and money was not available.

P.40: The all-night service (strictly early morning) ran six days a week, Monday morning to Saturday morning, commencing Monday morning 21 June 1897. The date originally proposed was altered because of Queen Victoria's Jubilee celebrations at the end of June.

H. V. BORLEY

London Transport's Bar and Circle

Sir,—Although not really relevant to either railway or canal history, some of your readers might be interested in some further details of the origin of the London Transport Bar and Circle, amplifying Mr Lee's note on Page 87 of the October *Journal*. This device certainly seems to have been used on the buses several years before the Underground adopted it; indeed the latter's 'rising sun and tunnel' badge of

1907 seems to me rather different from the bar-and-circle, and I suggest that the bar-and-circle was not used by the Underground Company until after it had acquired the L.G.O.C. on 1 January 1912, this trade mark being one of the assets that it thus acquired.

The earliest L.G.O.C. motor buses until 1905 followed the previous horse-bus practice in displaying 'London General Omnibus Company Limited' in full, along the full length of the main side panels of the bodywork, with the two termini of the route painted in large block capitals just below.

When new motor buses started to arrive in larger quantities from August 1905 onwards a new style was adopted. The five words of the Company's title were set out in full, one above the other, in black letters on a white ground, on a square-shaped shield with curly edges, which appears to have been about 18 or 20 inches square. This device was displayed in the centre of the main side panels, with the two termini painted in large shaded block capitals, probably yellow, direct onto the main body colour, one on either side of the device, so that the appearance was, for example, 'Kilburn & (the shield) Marble Arch'.

After only about two months the device on the side panels was changed. The square-shaped shield with curly edges still remained, and of the same size and same detail shape, and with the same white background, but instead of the Company's title in five lines of plain capitals the bar-and-circle now appeared for the first time. On the horizontal bar was the word 'General', around the perimeter of the upper half of the circle was 'London' and around the lower half of the circle was 'Omnibus'. The 'General' was larger than the other two words, but all its own seven letters were the same size, it not being until over seven years later, and then in publicity matter rather than on the sides of the vehicles, that the 'G' and the 'L' became larger than the other five letters, thus paving the way for the large 'U' and large 'D' later to be used in the word 'Underground'. Outside the circle on the 1905 buses, and in the bottom left corner of the curly-edged square, was 'Co', and similarly 'Ld' was in the bottom right corner, the two top corners being occupied by something looking like the two horns of a cow, if seen from the front, projecting from its head, i.e. the circle. Inside the circle, and relating from the Second 'E' of General, were ten spokes of a wheel, five above the bar and five below.

For the time being this device still appeared in the centre of the main panels, with the two termini of the route on either side. But after a few months it was repositioned so as to appear at the front end of the main side panels from early in 1906, instead of in the centre of the panel. The long-established practice of painting the two termini or other route details onto the main side panels was then permanently abandoned, and from now onwards the fleet name 'General', which until then had never been used by itself without the rest of the Company's title, was painted in large gold-coloured block-shaded ornamental capitals occupying most of the side panel apart from the bar-and-circle-on-shield device at the front end. This arrangement was then used on all the General buses (except the B type) from 1906 to 1912, and also from 1909 onwards on those of the two other equally-

large companies with which it amalgamated in 1908. The famous B type, however, which first appeared in October 1910, never displayed the bar-and-circle, and right from the start it displayed only the single word 'General'.

The L.G.O.C. published its 'Map and Guide to Omnibus Services' every month from early 1910 onwards, but for nearly three years the title was displayed only in ordinary type. Every issue from March 1913 onwards, right up to the present time, and possibly the first two 1913 issues as well (which I do not possess), had the title on a bar-and-circle device. The word 'General', with larger first and last letters, appeared on the bar, with 'Map &' around the top half of the circle and 'Guide' around the bottom half.

J. C. GILLHAM

Lock Sizes and Boat Sizes

Sir,—Reference books agree that the locks on the Thames and Severn Canal below Brimscombe Port were built to approximately the same size as the Stroudwater Canal locks, but there is some disagreement on the actual lock sizes and the size of boats taken. Examples are:

BRADSHAW: Maximum size of boats 70ft 0in by 15ft 6in.

CANAL RETURNS OF 1905 (ROYAL COMMISSION REPORT): Minimum lock dimensions (excluding Framilode) 72ft 6in by 16ft 0in. Maximum size of boats 70ft 0in by 15ft 6in.

HADFIELD: Canals of South and South East England. Maximum size of boats 72ft by 15ft 6in.

HOUSEHOLD: History of Thames and Severn Canal. Locks 68 to 69 ft. long later lengthened to $74\frac{1}{4}$ to $75\frac{1}{4}$ ft. 16ft 1in or 16ft 2in wide.

As many of the locks are still in existence I have measured them. The varying dimensions quoted above result from difficulty in defining the length of a lock. The lock dimensions given in the 1905 Canal Returns are correct, but the lengths are measured from the upper sill to the mitre of the lower gates. However, due to the arc through which the gates swing, not all of this length is useable by wide boats. The maximum length of *wide* boat that can be passed is determined by the dimension from the upper sill to the lower gate recess. This dimension is 68 or 69ft. as given by Mr Household.

The locks were not lengthened to 74ft. in order to pass standard narrow boats. This was not necessary as the effective length of the locks for a single narrow boat was 72ft 6in in the case of the Stroudwater Canal and $74\frac{1}{4}$ ft. for the Thames & Severn Canal. Of course, narrow boats could not pass the lock in pairs. Presumably because of this, the extra lock built at the junction with the Gloucester & Berkeley Canal was made longer than the rest (about 81ft. to lower gate mitre).

In recent years the locks on the Kennet Navigation at Burghfield and Sulhampstead have been rebuilt to similar dimensions to the Stroudwater locks. This was done partly to minimize costs and partly

for engineering considerations. Both these locks will pass wide boats of a maximum length of about 68ft 0in. Boats up to 72ft 0in long may also pass providing they do not exceed 7ft. beam, or 12ft 0in beam if their stems are sufficiently pointed.

The actual size of narrow boats varies considerably, but they are generally 72ft. long, rather than the 70ft. so commonly assumed.

This shows the factors to be considered when quoting maximum boat sizes and lock dimensions, and shows the importance of checking published figures against site dimensions wherever possible. All figures for maximum boat lengths on wide canals would appear open to dispute, the Leeds & Liverpool Canal, between Leeds and Wigan being a case in point. Certainly any quoted figures should be taken only as an approximate guide, the length, beam and shape of the boats all being relevant factors.

A. RICHARDSON

The Railway Times for 29 January 1870 gives a long account of the agreement between the Brighton and South Eastern on traffic to competitive stations which was supposed to settle, once and for all, some of the difficulties which had been largely sparked off by the row over the independent Caterham Railway between 1854 and 1860.

FIRST SCHEDULE

Competitive Stations and Division of Gross Receipts of
Competitive Coaching Traffic

Between		and	per cent	South Eastern	Brighton
London	...	Croydon	...	25	75
Do	...	Caterham Junction	...	20	80
Do	...	Redhill, Reigate Town and Earlswood	...	80	20
Do	...	Boxhill, Dorking, West Humble and Holmwood	...	55	45
Do	...	Tunbridge Wells	...	80	20
Do	...	St. Leonard's and Hastings	...	75	25
New-cross	...	Croydon	...	25	75
Croydon	...	Caterham Junction	...	20	80
Do	...	Redhill, Reigate Town and Earlswood	...	70	30
Do	...	Boxhill, Dorking and Holmwood	...	55	45
Do	...	Tunbridge Wells	...	60	40
Do	...	St. Leonard's and Hastings	...	60	40
Caterham Junction	...	Redhill, Reigate Town and Earlswood	...	50	50
Do	...	Tunbridge Wells	...	50	50
Do	...	St Leonard's and Hastings	...	50	50
Redhill, Rei- gate Town & Earlswood	...	Tunbridge Wells	...	50	50
Do	...	St Leonard's and Hastings	...	50	50
Guildford	...	Tunbridge Wells	...	50	50
Do	...	St Leonard's and Hastings	...	50	50

SECOND SCHEDULE

This Schedule relates to the charges to be made for joint return and joint season tickets.

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BOOK REVIEWS

THE ITCHEN NAVIGATION, by Dr Edwin Course. *Proceedings of the Hampshire Field Club*, Vol. XXIV. Offprints available separately from Mrs M. Course, Hampshire Field Club, c/o Dept. of Archaeology, University of Southampton, SO9 5NH, at 2s 6d post free.

The canals and river navigations of southern England are now strongly attracting historians, and Dr Course has in this article given us the fullest account so far written of the Itchen Navigation from Winchester to Southampton.

There is evidence that the river was first made navigable in King John's reign, and remained so for more than a century. The work was again authorized in 1665, and seems to have been completed by 1710. Thenceforward it was mostly owned and worked by single proprietors until the last barge passed in 1869.

In itself the Itchen was a small navigation, not unimportant locally. But there were times when it seemed that it might grow in stature: if any of the schemes to connect it with the Basingstoke Canal had succeeded, when it would have become part of a London—Southampton waterway; or if the Salisbury & Southampton Canal had been completed. This planned to join the Itchen at Northam in the estuary, and so connect the navigation to Southampton town and on to Redbridge, the Andover Canal, and Salisbury.

Dr Course has given us as much of the river's history as has yet been found, and has added an industrial archaeological survey of the

navigation, a map and four plates. Every canal enthusiast and historian will want to possess Dr Course's article. And yet it tantalizes, for how little we really know: of the 1665-1710 period almost nothing; of 1710-1767 not much more; of 1767-1820 rather more; of 1820 to closure very little. It is no criticism of Dr Course's painstaking work to say that much remains to be discovered. But what he has done for the Itchen can be done for other navigations and canals about which even less is known, and R. & C.H.S. members would be the richer if his success serves to encourage others.

CHARLES HADFIELD

THE MIDLAND & GREAT NORTHERN JOINT RAILWAY, by A. J. Wrottesley. 207pp. including plates and appendices. Published by David & Charles, Newton Abbot, 50s.

Joint lines are almost invariably of special interest, showing as they do the tensions arising when those highly individual concerns, the great pre-grouping companies, had to work in harness, and the M.&G.N.—known affectionately(?) by East Anglians as the Muddle and Go Nowhere—is among the most interesting of any. It had features which arouse the curiosity—only one tunnel on all the over 180 miles of its system (though, as Mr Wrottesley points out, north Norfolk is anything but flat); a string of intriguing place names—Cuckoo Junction, Twenty, Counter Drain, Clenchwarton, Corpusty, Hind Olvestone; and, whereas other lines built themselves pseudo-Elizabethan manor houses as stations, the M.&G.N. had a real one. It is surprising to find, therefore, from Mr Wrottesley's bibliography, how little serious writing there has been about the line (though astonishingly, he omits the most recent, Mr Clarke's plum pudding of a book published in 1967). Clearly, Mr Wrottesley has set out to remedy this by a great deal of research, and the research is a comprehensive if compressed history of the line in all its aspects. Over-compression it shares with most modern books—the day of the three-volume history seems to be over, alas. It is most apparent in the earlier sections, where the doings of the numerous small companies which were formed, or failed to get formed, in the area, are apt to lead to a sentence like—to take an extreme example—'The L.&F. and Y.&N.N. now decided that what they really wanted was a complete amalgamation of their lines with the Y.U., the M.&E. and the P.W.&S.B.'—whereupon the reader is liable to depart in search of an IPA. But even here, the author fortunately pauses to dwell on some striking moments of history—the sad affair of Sutton Docks, for instance, which, after the first three or four ships to enter had somehow scrambled out again, were never again used, and ended up as a golf course; and the intriguing case of Potter Heigham bridge, which Parliament said was tidal and a High Court judge ruled was not, though the tide marks could be seen. Once he has got the M.&G.N. Committee established, however—and the steps leading to this are shown with great lucidity—Mr Wrottesley has more room to expand, and his account of the development of its service to its area is well told. The interaction of the growth of the popularity of the Norfolk coast and the rival railway services to it, is brought out very well, and it is interesting to note that

the area appreciated what was done for it—Cromer UDC in 1896 publicly congratulated the M.&G.N. on its service, a pleasant change from the castigation railways usually get from their beneficiaries. The holiday passenger service, and the pioneer holiday camps served by the line are well known, but Mr Wrottesley shows the wide variety of traffic and its importance to the region—the important fruit and vegetable production which arose on the rich black soil of the Fens, and the fisheries which brought the drifter and trawler fleets into Yarmouth and Lowestoft. From the same cause came the decline of the line's trade: apart from the rise of road competition from the sea-side traffic (and of course the local passenger traffic such as it was), in the 'thirties East Anglian fruit growers had to face foreign dumping, and the movement of the shoals away from their old haunts brought about the decay of the fish traffic. Hence, the decline and ultimate near extinction of the M.&G.N. system, the story of which the author handles with admirable impartiality, in view of his obvious love of his subject.

The photographs are well chosen, except perhaps for one or two of the type beloved of trainspotters, where a $\frac{1}{2}$ view of a train shows an excellent likeness of the locomotive's smoke box door and not much else. The sketch maps are helpful, but the general map is an optician's delight, not to be used without a lens under penalty of severe eye-strain. The most serious defect is the lack of references to specific statements, such as any work of historical scholarship claiming to be 'definitive' should have. It is a major flaw, and in this respect, railway historians, with a number of honourable exceptions, have much to learn from the Hadfield school of canal historians, who are careful to document each important statement in their text by detailed reference to the source for it. But this apart, Mr Wrottesley's book is a worthy addition to the growing number of serious railway histories.

PHILIP A. STEVENS

THE LANCASHIRE & YORKSHIRE RAILWAY by John Marshall.
Vol II. 327pp. David & Charles. 63s.

I had the pleasure of reviewing the first volume of this book in October 1969. Now, having the second volume to deal with, I feel that about all I can do is reaffirm what I then wrote.

This is not only a most interesting and readable book but also a most valuable work of reference, owing to the very complete appendices: giving lists of opening dates, Acts of Parliament, running powers (both L.&Y. over other lines and vice versa), tunnels etc., as well as the excellent maps and gradient profiles.

Mr Marshall has definitely taken his place among the all-too-few who have produced really first class histories of the greater railways of this country. The third volume, in preparation, is to deal largely with the locomotives and rolling-stock.

M. D. GREVILLE

THE HUMBER FERRIES, by Alun A. D'Orley. 74pp. map, 25 black and white plates. Pub. by Nidd Valley Narrow Gauge Railways Ltd., Orchard Croft, Crag Lane, Knaresborough (1968). 12s 6d.

THE KNARESBOROUGH RAILWAY REPORT 1819. Reprint, 36pp. + 3pp. notes. Pub. as above. 17s 6d.

Ferries have been generally neglected by historians. Yet in earlier centuries they formed an indispensable part of inland transportation even on smaller rivers. That the Humber should still require ferry boats in 1970 is one of those dismal facts about English regional neglect of which only lovers of paddle steamers may feel some pride. Mr D'Orley covers the fascinating history of the Humber ferries from the earliest times to the present day. He includes many of the familiar anecdotes and draws upon a wide range of printed sources. One of the most interesting sections deals with the acute embarrassment of the unreformed Hull Corporation by that impudent agitator, James Acland, who in 1831 actively challenged their ancient ferry rights between the port and Barton. Indeed one of the strengths of this booklet is its willingness to examine the wider context of ferry operation and its avoidance of excessive treatment of the boats alone.

Nonetheless the vessels are by no means forgotten and a useful table summarizes the known statistics of the steamboats from the *Caledonia* of 1814 to the stalwart 'Castles' of today. The publication is aptly illustrated and well produced.

Another booklet from Nidd Valley Narrow Gauge Railways Ltd—this time facsimile reprint—is *The Knaresborough Railway Report*, 1819. Lack of space makes it impossible to summarize the contents of the pamphlet here. Suffice it to say that it was produced by a local committee of worthies originally anxious to connect their town by canal with the Ure near Boroughbridge. The proposal for a railway came after Thomas Telford had demonstrated in 1818 that the nature of the ground was against a waterway. The report is thus a valuable early examination of the viability of a public railway (the idea was to have a line extending from Pateley Bridge to Bolton Percy on the Ouse) and includes useful estimates of the probable traffic. A most worthwhile reprint—if a trifle expensive—but could not a map have been added to the introductory notes?

BARON F. DUCKHAM

★ ★ ★

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★ ★ ★

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HOW FFESTINIOG GOT ITS RAILWAY, by M. J. T. Lewis, 2nd (Revised) edition. Frontispiece and 2 pull-out maps. About 60 pp. Cloth binding and dust jacket, Price 63p post free (53p to publication fund subscribers).

A SHORT HISTORY OF THE LIVERPOOL & MANCHESTER RAILWAY, by G. O. Holt (Revised edition). 38p post free (32p to publication fund subscribers).

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