

Railway Services for Rural Areas

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Early Days

The railway network in Britain was at its most extensive in 1912 when 23,440 miles of route (37,504 route km) were open and every city, town and most villages were served by train. At this stage, the railways were the dominant mode of transport in the country, with little competition from road or the canals, which they had superseded. The railway was a general purpose "common carrier" and, as well as passengers, the country station would have handled the freight traffic of the area, including perhaps cattle or sheep, bales of hay, milk in churns and wooden boxes of fish packed in ice, none of which has now been transported by rail in Britain for over 20 years.

The railway network had grown quickly from the opening of the Stockton & Darlington Railway in 1825, but line closures had started early too, as demand changed or failed to reach expectations. The earliest closure to passenger traffic was probably part of the Stanhope & Tyne railway in Northumberland in 1846. Further south, in Cambridgeshire, 11.5 miles (18.4 km) of the Newmarket and Chesterford railway was closed in 1851, when the Eastern Counties Railway built its own line direct from Cambridge.

Competition

There was strong competition with the railway's monopoly of rural services from buses and cars in the 1920s. No less than 3,500 route miles (5,600 km) of railway lost their passenger services between 1923 (when Britain's railways were grouped into four large companies) and 1939. During WWII, the railways were taken into government control, and huge demands were made on them to transport troops and equipment, while renewals and investment were cut back.

Railways in Britain were nationalised in 1948, and the British Transport Commission was established to plan and coordinate transport by rail, road, sea and canal. At this stage, the only problem with the rail network was perceived to be under-investment, and a major modernization programme was drawn up in 1955 for electrification of key routes, new signalling at major stations and replacement of steam locomotives.

With relatively few cars on the roads, and limited availability of new cars in post-war Britain, the competitive threat from the explosion in car ownership in the 1960s was not foreseen. As a result, no policy was developed to replace uneconomic lines by bus or lorry, and the different modes were managed separately. Until 1955, British Railways operated without subsidy, so that the losses on rural lines were masked by profits on the main lines. Indeed, most railway managers saw them as essential feeders to the main lines as well as performing an important (but unquantified) social function. In the mid 1950s, rural railways were operated as they had been for the previ-

ous 50 years or more, with steam trains, full signalling and even the smallest stations being staffed, often with four or more men. Timetables reflected pre-war travel patterns and services tended to be slow and infrequent.

The Great Western Railway had introduced a small fleet of diesel railcars in 1934 and British Railways introduced the first of its DMUs in 1954, initially on the Carlisle-Silloth branch (now closed). The modernization programme, was implemented before any decisions were made about the future of rural railways, or of the overall size of the rail network. In fact, in the period from 1948-1962, 3,318 route miles, (5,309 km) were closed to passengers.

Consequently, some of the investment was put into routes that were destined to be closed within the following 10 years, while the programme as a whole produced a wide variety of locomotive types, designed to replicate the steam engines they replaced. A number of these classes performed poorly and were withdrawn within a few years.



Scotland: Air-conditioned Class-158 Two-Car Unit Crossing Forth Bridge

(B.R.)

The Beeching Report

The problem of loss-making rural lines was first addressed by a committee set up by the Transport Minister in 1960 (the Stedeford Committee). One of the committee members was Dr Richard Beeching who became Chairman of the newly-formed British Railways Board in 1962. His report, *The Reshaping of British Railways* (1963), was the first coherent plan for the railway network, and the first to consider the national railway as a business rather than as a social service. He identified that one third of the network accounted for only 1% of the total passenger and freight tonne miles carried. It was this third that he proposed to close. The report was debated and approved by Parliament, but railway closures became a political issue in the General Election of 1964 when the Conservative government was replaced by Labour. Nevertheless, Beeching acted quickly to implement his report, and consultation on a major programme of closures was initiated, and implemented throughout the 1960s.

The Basis of Subsidy

In 1965, Barbara Castle (now Baroness Castle), a Labour Member of Parliament, was appointed Transport Minister. She recognized that the full closure programme would not be acceptable politically and that some form of subsidy would be required for "socially necessary" services. The Transport Act of 1968 provided this framework for subsidy which was calculated for each line and awarded for 1 year or 3 years based on a formula developed by accountants, Cooper Bros. (now Coopers Lybrand). Both operating ratio and subsidy per passenger mile were used as a broad yardstick to judge value for money, although in marginal cases, decisions on closure or retention of lines



InterCity Land Cruise on West Highland Line

(B.R.)

were political rather than economic. At this stage, information on costs—and particularly their allocation between services using the same line—was limited, and the subsidy calculations were complex, costly and unreliable.

In the early 1970s, high inflation pushed costs up, while fares were held back as part of an attempt by government and industry to reduce inflation. By 1973, the grant allocation system had effectively collapsed, and deficit financing had been resumed.

Under the Railways Act 1974, line subsidies were consolidated into a single block grant for the whole railway—a compensation payment for operating a rail passenger service "broadly similar to that operating on 31 December 1974". This was also consistent with requirements of the European Community on state subsidy for the railway. The last significant group of passenger closures occurred in 1974 and the network stabilised—as intended by Barbara Castle—at "around 11,000 miles (17,600 km)".

This policy change had little effect on the withdrawal of freight trains from rural lines which had continued in line with the Beeching Plan throughout the 1960s. Only those routes which carried bulk freight such as coal, aggregates, chemicals or oil continued to be a mixed traffic

railway—the bulk of the rural network became passenger only.

Efficiency Measures

Until the mid 1960s, many branch lines were closed with little prior attempt at making economies in operation, other than the introduction of DMUs. However, in the 1970s, the costs of operation of the remaining lines were reduced significantly through measures such as:

- More efficient use of rolling stock;
- Simplification of track and signalling, including singling of lines;
- Withdrawal of station staff and collection of fares on trains.

External Environment

Meanwhile, big changes were taking place in the external environment, with the rapid extension of the motorway network and growth in car ownership. Road access to many towns served by branch lines improved dramatically, and overall mobility increased, while rail's share of the market shrunk.

New housing estates, business parks or industrial estates were established away



Wales: Single-Car Class-153 Train at Dolau, Award-Winning Station on Central Wales Line (B.R.)

from the railway, or were of low density and difficult to serve by public transport. Traditional patterns of travel changed in line with the decline in manufacturing industry.

The railways responded to this with the development of the InterCity network, where the strengths of speed, reliability and city centre terminals could be exploited. Access was improved with the opening of 'park and ride' stations (the first at Bristol Parkway in 1971). Commuter railways too were improved, with further electrification and new rolling stock, and new extensions were built or reopened in Glasgow, Newcastle, Liverpool and Birmingham during the 1970s.

With low volumes, relatively-low speeds, and little road congestion outside the major conurbations, the rural railway had few advantages to exploit. Despite the introduction of a structured grant regime, there was a general view amongst politicians, officials, managers and passengers, that much of the rural network was unsustainable in the longer term. Against that background, management attention was concentrated on developing the InterCity network, which also received the lion's share of investment. Few resources were devoted to the rural railway.

Policy Reviews

In 1977, the Labour government published a White Paper on transport policy which for the first time looked at the role of railway subsidy in terms of national transport policy, rather than in terms of wider social issues and the effect of the consequent taxation on redistribution of wealth. For the first time, the paper made a clear distinction between the "commercial railway" (InterCity and freight services) which should operate without subsidy, and the "social railway" (commuter and rural passenger services) where subsidy would be paid if it offered value for money compared with alternatives such as buses. The British Rail Chairman, Sir Peter Parker, saw this arrangement as a contract payment for local rail services rather than a subsidy, and set out a positive agenda for development, encouraging community involvement.

Proposals to change working practices and reduce staff numbers led to long and damaging strikes in 1982 underlining that the temporary loss of many rural services had little short-run effect on the communities they served. At the same time, a government inquiry under Sir David Serpell, examined options for major reductions in the size of the rail network,

the most extreme being to leave only 3,000 route miles (4,800 route km). Public reaction was hostile and these plans were not developed further, and although the Transport Act 1985 did allow substitution of buses for trains on rural routes, these provisions have never been used.

I worked throughout this period in the Department of Transport, and was involved in drafting the White Paper. The rejection of the conclusions of the Serpell Report on network size marked a turning point for the rural railway, as it signalled that a system of around 11,000 route miles (17,600 km) would remain. It therefore required effective management to reduce the cost base and to maximize social value by encouraging greater use, even though it could never operate profitably.

By this time, I had moved to British Rail to take charge of the rural, cross country and commuter services outside London and the South East. This group was known as "other provincial services", a title that says a great deal about the low level of importance attached to them at that stage. Plans were drawn up for new investment in the rural railway for the first time in many years, and a team was set up to manage the services as a business, which subsequently became Regional Railways.

A Test Case

One major test case following the Serpell Report was the proposed closure of the Settle & Carlisle line in the north of England. Originally built by the Midland Railway to compete for rail traffic to and from Scotland, the line served few major centres of population, and its role as a trunk route disappeared with the electrification of the West Coast Main Line to Glasgow in 1974. However, the route passed through fine scenery, and had many enthusiastic supporters who campaigned vigorously against its closure. After 4 years of protests, and attempts by

the Government to sell it to private operators, the closure proposal was withdrawn, and the line continues operation today as a popular, if unprofitable, tourist route. Its value to the area it serves has been enhanced by reopening local stations, several of which provide access to a national park, and ridership is three times what it was when closure was first proposed.

Investment

However, this was a special case, and the most significant changes to rural railways during the 1980s reflected my determined attempt to reduce operating costs and improve the attractiveness to passengers through replacement of the rolling stock introduced some 30 years previously under the Modernisation Plan. Most striking was the introduction of lightweight Sprinter trains—two-coach DMUs replacing older and heavier three-coach DMUs or locomotive-hauled trains of four or five coaches. Better availability and more intensive use of the trains allowed a significant reduction in fleet size and the general rule on replacement was two new vehicles for three old ones. Results were impressive, and the total BR coaching stock fleet fell from 16,963 in 1983 to 11,802 in 1993/94. At the same time, service frequencies were increased on many routes and this, coupled with the higher quality of the new trains, led to some cross country routes registering increases of 50% to 60% in ridership.

At the same time, radio signalling was developed and introduced on several long distance rural lines, particularly in Scotland and Wales, while lower axle loads and shorter trains reduced the requirements for track maintenance. Local stations have become unstaffed and the ticket issuing machines used by conductors allow a comprehensive range of tickets to be issued on the train.

Marketing

The pattern of train services has changed significantly too, with several short route sections joined to provide new direct travel opportunities. For example, a number of local services were joined to provide a regular through service between Liverpool, Manchester, Sheffield, Nottingham, Peterborough and Norwich, crossing the country from west to east. New travel opportunities, new trains and imaginative marketing have led to more significant increases in travel in what was previously a static or declining market.

At the same time, changing patterns of residence and employment provided new travel demands, and a number of local stations were reopened and several freight-only lines were upgraded for passenger services. This process was encouraged by the Transport Act (Amendment) of 1982, which allowed new services to be introduced for an experimental period without the need to go through the lengthy and complex statutory closure process if they were unsuccessful. In fact, only one of the 15 services introduced under this Act was withdrawn, and some, such as Edinburgh-Bathgate, have been very successful. In total, 250 new stations have been opened over the last 20 years. Many sections of the rural network have been slowly and lovingly restored by railway enthusiasts as preserved steam railways. Although few of these contribute in any sense to local transport needs, several are significant "heritage" tourist attractions, and the huge number make them a uniquely British phenomenon. In total, 90 small companies operate some 400 miles of track and over 300 stations.

Management

Traditionally, branch lines had been managed as part of the main line network, of-

ten using second-hand rolling stock and always taking second place to the requirements of main line services. BR was split into six geographical regions, with many functions delegated to 16 divisions responsible for operations and infrastructure, marketing and planning of both passenger and freight services. From 1982 onwards, a "provincial" railway sector was established, putting management focus on a distinct part of the passenger market—separate from 'InterCity' and 'London and South East'. While this developed into a 'Regional Railways' business in 1992, management remained locally based in five profit centres with headquarters in Glasgow, York, Manchester, Birmingham and Swindon.

These five businesses became the basis of the train operating companies formed in preparation for privatization, although two additional smaller companies were created to cover the 750 V DC Liverpool suburban network (Merseyrail Electrics) and the South Wales valleys (Cardiff Railway).

Privatization

Apart from this, railway privatization has led to major changes in the structure and funding of railways in Britain. Ownership and control of track signalling and stations has passed to Railtrack—since May 1996, a company quoted on the London Stock Exchange. Ownership of trains has passed to three private rolling stock leasing companies (ROSCOs). Trains are operated by 26 train operating companies, and the franchises to run 25 of these (typically for 7 years) are being offered for sale by the Director of Rail Passenger Franchising—a non-departmental government agency. Such a structure means that local management attention to rural services is possible, concentrating on marketing and customer service, without the responsibilities of ownership of either rolling stock or

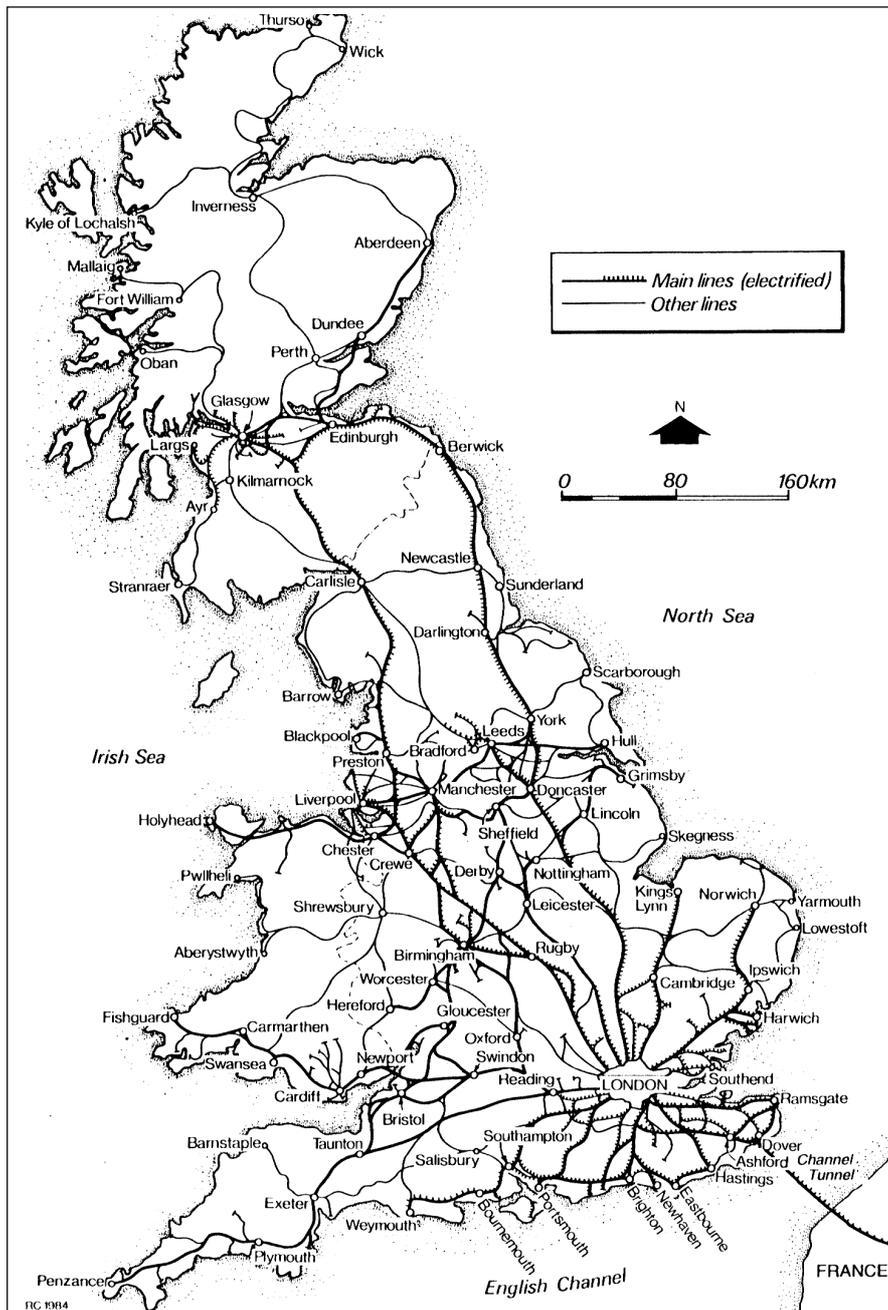
infrastructure. Other advantages are a guaranteed subsidy level for (typically) 7 years, at a level sufficient to pay for the maintenance or renewal of assets during this period.

However, the way in which services have been grouped for franchising means that responsibilities are usually divided between operators of main line services and those of their connecting branch lines. This calls for a higher degree of cooperation between the parties (in a competitive process) to ensure a coherent timetable as well as comprehensive train service information. Coordination on through-ticketing is a requirement of the operating licence.

The Franchising Director sets out the 'passenger service requirement'—a guaranteed service specification based on (but not identical to) the timetable offered by BR. Bids are then invited to operate these services and, in general, the company offering to provide the specified service, perhaps with some improvements, for the lowest subsidy, or the highest contribution, wins the franchise. At the time of writing, none of the 'Regional Railways' franchises has yet been sold, but those for Scotland and the West of England and South Wales are at an advanced stage in the bidding process. The South Wales & West Railway, and the Cardiff Railway franchises were transferred to the private sector on 13 October 1996.

Subsidy

The new financial structure of the railway in Britain means that the majority of rail—including all the rural railways, require subsidy. Rail operates under a competitive disadvantage in most countries, in that its full costs are transparent and, in the absence of Government measures, fall as a charge on the users. However, the road system is paid for through general taxation and is generally free at the point of



UK Railway Network

Source: Railway Gazette

use. Rail subsidy can help to redress this balance and is a crude proxy for the social value of the external benefits which rail offers.

In an ideal world, external costs of each transport mode would be identified and charged to users on the 'polluter pays' principle. A recent study covering European countries suggested the total external costs of transport, including environ-

mental and accident costs, amounted to a staggering 4.6% of the combined GDP of the countries concerned. Of this 4.6%, road transport accounted for 92% of the cost, while rail was just 1.7%.

Only when all these costs are properly internalised to users of each mode can we really expect a framework in which we can make informed choices about the journeys we make or the way goods are

carried. Such a policy would, in general, bring considerable advantages to rail operators, but we should recognize that this would be the case only where rail is used for the purposes for which it is best suited—inter-urban or commuter passenger services, or freight. There is little environmental benefit in retaining 100 miles of rural railway for three railcars a day, each carrying an average of 40 passengers. Equally, there are no resource benefits in using an 80-tonne locomotive of 1,750 hp to haul two or three wagons to remote destinations and returning empty. In a few cases, the railway has a focused role to play in reducing traffic in a national park or a historic town, which may justify a special subsidy, but in general, this level of business would be better handled by other modes.

Currently, there is no way of judging value for money for the subsidy paid to the rural railway. The public service obligation grant has been replaced by a subsidy to franchise operators based on the costs of service provision, without reference to value to the community. The Franchising Director is required to set out his criteria for payment of grant, and when he does so, is likely to renew the debate on value for money, and the cost of the rural railway, particularly in the remoter parts of Great Britain.

Conclusion

Over the last 30 years, there has been a revolution in patterns of demand, operating practice and in the management of rural railways in Britain. The rolling stock fleet has been largely renewed in the last ten years, with consequent reductions in costs and in increased attractiveness for passengers. Many of the routes have modern signalling systems which have also helped to reduce the cost of operation. Apart from local transport, many lines have found a new role in serving a new



England: Older DMU (since replaced) from Marylebone approaching Little Kimble near Aylesbury

(B.R.)

tourist market. They are offering better value to both passengers and taxpayers than for many years.

However, the problem remains that many lines are still very expensive to operate in relation to the number of passengers they carry. In the worst cases, passenger income covers only 5% of the costs involved. In terms of subsidy and investment, they impose a disproportionate claim on the resources available in total to the railway industry. Nevertheless, the new structure of the industry guarantees their continuation into the next millennium. The franchise agreements (typically of 7-years duration) guarantee the continuation of service levels, while track access charges are set at a level sufficient to pay for maintenance and renewal of the infrastructure.

Many of these lines serve the remoter and

most scenic parts of Britain—they are well worth a visit. The Britrail pass gives access to all these lines and is highly recommended to anyone visiting Britain from abroad.



John Welsby

Mr John Welsby, CBE, was appointed Chairman and Chief Executive of the British Railways Board from 1 April 1995. Before becoming Chief Executive in 1990, he was responsible for private-sector initiatives, and the Channel Tunnel project.

After studying at Exeter and London, Mr Welsby joined the Electricity Council as an economist and then moved to the Ministry of Transport as an Economic Adviser in 1966. From 1969 to 1971, he was Assistant Professor at the Business School of the University of British Columbia, Canada, before returning to the Department of Transport as a Senior Economic Adviser.