Historical overview

GENERAL

When the first formal European settlement schemes in New Zealand began in 1840, the phenomenon of railways – the technological equivalent of today's ultrafast broadband and smartphones – had been a reality only for about a decade in England. Only 30 years later, when the burgeoning colony of New Zealand realised adoption of the new technology would greatly assist the development of the country, many new immigrants would have had direct experience of travelling by rail. Thus it is perhaps not surprising that the development of a railways network was seen as the best way to open the New Zealand countryside for settlement and for the extraction of primary products, particularly wool, timber and minerals.

Initially, European settlement in New Zealand developed around coastal sites chosen because of their access to navigable water. Travel throughout the colony was mostly by sea, with increasingly frequent services plying coastal routes. Overland routes for those travelling on foot, or by bullock carts, wagons and other horse-drawn wheeled vehicles were on poor quality surfaces which slowed progress and made for uncomfortable and sometimes dangerous passage. Many natural obstacles such as mountains, alpine ridges, wide flood-prone rivers, large lakes or swamps, impeded the development of land-based connections between settlements.

Port towns also had frequent services to Australia (particularly the eastern coast colonies) and beyond. Coastal settlements were the norm, with only especially hardy souls venturing further inland. The gold rushes of the 1860s in the South Island increased pressure for better means of accessing these rich pickings and significantly increased the wealth of the southern parts of the colony.

For all these reasons the first railway lines constructed almost all began at a port from where wool and other primary products from the hinterland could be exported. Most of these rail lines were built to open lands for settlement and economic development rather than being justified on the grounds of the provision of transport. The spread of settlement tended to follow the growth of the railway.

VOGEL'S VISION

In 1870 when Julius Vogel became the Colonial Treasurer, there were only 74 kilometres of railway operating throughout the country, most of this in the provinces of Canterbury and Southland. Vogel, however, had a vision for the economic development of the country based on rapid development of infrastructure and, in particular, a rail network. His vision relied on borrowing £10 million to build the required lines at the lowest feasible cost. This was a vast sum of money – today it would be the equivalent of at least 1 billion New Zealand dollars. What's more, the borrowing would plunge into debt a country that still had a tiny population base and little in the way of national income to service the debt. Vogel had, however, planned for the lines to be built by either public or private developers, and that they would generate sufficient return to justify the debt load. He applied a financing model which had worked, to a greater or lesser extent, in the United States, where railways were forging new routes across that vast continental mass.

One of Vogel's key assumptions about railway development in the New Zealand context was that railways could be of relatively light and cheap construction, using a narrow gauge so that rolling stock in turn would also be light and cheap to purchase or build, and able to cope with tight curves

the New Zealand terrain would require. The main function of the new lines would be to provide access to land at a cost related to the likely volume of traffic to be carried. He went further in stating there should be no need for fences or expensive level crossings.

Understanding the policy in favour of cheap railway construction is fundamental to understanding railway development in this country. The railway system in New Zealand would be in sharp contrast to the well-graded heavy track and intensively staffed railway system of Great Britain. It was in making the break with the traditional approach to railway construction and operation that New Zealand was able to expand its railway system so rapidly. It was also the reason that a country with a small population and limited resources could afford to build so many rural branch lines to open up farming areas for settlement.

IMMIGRATION AND PUBLIC WORKS ACT

Vogel's vision for railway construction was authorised by the Immigration and Public Works Act 1870. This allowed for the purchase of 2.5 million acres of land and at least £7.5 million pounds for railways construction. The same act created the Public Works Department to be the government agency to supervise the construction of most of the national rail network. Legislation was also passed to allow private companies to build railway lines, and several were constructed by this means.

The object of the Act was to build roads and railways and to promote immigration. Immigrants would provide the labour force for the public works being planned; these would open up unoccupied country for settlement, in the main by the same immigrants. A broader aim was to unite separate and isolated settlements into one nation.

The Immigration and Public Works Act assumed that main trunk lines north and south would be built first, to be followed by the construction of a network of branch lines. Initially, however, this intention was thwarted by provincial governments, who were more interested in developing shorter lines into their hinterland to support rapid economic development provincially. Another problem was one of the government trying to do too much too quickly. Pressure from local interests also caused many deviations from Vogel's original vision. By the late 1870s the network comprised a proliferation of branch lines, designed to service and bring commercial benefit to the provincial centre that had exerted pressure to build them. Main trunk line construction progressed more slowly, and branches were only able to connect to them late in the decade.

However, the patterns of railway development differed between the North and South Islands, proceeding apace in the former and taking longer to develop throughout the latter.

SOUTH ISLAND

The South Island was the economic powerhouse of New Zealand for the first 60 years or so after European settlement began, more particularly the provinces of Otago/Southland and Canterbury. These provinces were also the most heavily populated. The basis of the wealth was primary products, especially wool (and later frozen meat), as well as minerals (especially gold and coal) and timber from extensive native forests. The southern provinces, therefore, had the resources to begin and then expand railway links. The terrain to be opened up was mostly fairly easy, though bridging rivers would be challenging in some places. Initially, the three main settlements – Christchurch, Dunedin and Invercargill – established rail links to their port facilities at Lyttleton, Port Chalmers and Bluff, providing a direct means of transporting goods to and from seagoing vessels. With coastal shipping neither fast nor reliable, the commercial community could see the value of efficient

overland connections for travel between cities to expand business, via a Main South Line[1] (MSL). Dunedin was the wealthiest and most politically influential settlement in the country, and access to and from other population centres was therefore vital. With the completion of the MSL it became possible to travel from Christchurch to Dunedin in one day.

By 1880 much had been achieved in the South Island. The main trunk line had been constructed from Waipara in North Canterbury to Bluff in Southland – initially called the Great Northern Railway, it later became known as the MSL. Much of the branch line network from the main trunk had been built. In the north and west of the South Island the line from Picton to Blenheim had been built and significant progress had been made on the Nelson Section, whilst on the West Coast short sections from Westport to Ngakawau and Greymouth to Stillwater were operating. Railway workshops making steam locomotives had been established at Hillside in Dunedin (1875) and Addington in Christchurch (1880), and there was a network of other workshops to provide repair and maintenance services.

NORTH ISLAND

The North Island initially lacked wealthy and politically powerful provinces and this was a major factor in the slow rate of intercity main line railway construction. The rugged country and dense bush through the centre of the island slowed the rate at which settlers spread out from the ports. Continuing disputes over land ownership and use between Maori and European also delayed the spread of settlement and the construction of linking railway lines. There was also a different pattern of farm development, and the desire to access the extensive timber resources of the King Country reinforced this.

Despite the balance of population shifting from the South Island to the North Island by 1901, the North Island Main Trunk (NIMT) was only completed in 1908, construction taking more than four decades before the final rail link between Auckland and Wellington had been pushed through the tough terrain of the King Country and the volcanic plateau region. The economic drivers to construct numerous branch lines were mostly absent, and the greatest effort (and resources) went into the construction of the NIMT. Two workshops that built locomotives opened in 1929, nearly 50 years after the ones in the South Island, indicating the later development of the network in the North Island

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Until the completion of the NIMT the most efficient means of travelling between Wellington and Auckland was via New Plymouth. Auckland and New Plymouth were linked by steamers, which had to navigate rough seas and cross a difficult bar at Onehunga. Shipping services were, therefore, particularly susceptible to delays and unreliability. From the end of 1886 travel between New Plymouth and Wellington took around 15 hours. Once the NIMT was completed, travel between Auckland and Wellington became quick and reliable, even with an overnight stop in either Ohakune or Taumaranui (depending on the direction of travel).

An overnight ferry service between Wellington and Christchurch had long been vital for travel between the North and South Islands. Opening the NIMT meant one could travel with comparative ease and speed between Auckland and Invercargill, and to all points on the main trunk lines in between.

For 50 years from the construction of the first major railways in the South Island (particularly the Kingston branch, opened in 1876) train travel was the mass transportation method for the population of New Zealand. Trains were fast and reasonably efficient, and were the best means for people to travel from one end of the country to the other, as well as locally. Very few people had

private motor cars before 1920, and trains were the only way to get both people and freight from one place to another. Railways could transport large quantities of freight long before the lorry and truck became a familiar sight on the roads. Railways provided employment for thousands of people in all sorts of roles, which meant regular wages supporting many families.

POST WORLD WAR 1

During the First World War (1914-1918) railway construction more or less ceased, resuming after men returned from overseas. Over the next three decades most major towns in the country were connected to the main railway network. As roads improved after 1920 and motor vehicle ownership increased, the role of the rural town changed. Farmers purchased trucks and were able to conduct their business directly with agents and others in larger towns, at their convenience. Trucking fleets to service rural needs contributed to the increased flexibility and efficiency of stock and goods movements. On a regional level economic activity become concentrated on regional centres, such as Hamilton and Palmerston North. At the national level this activity was increasingly concentrated on the four metropolitan centres of Auckland, Wellington, Christchurch and Dunedin.

The major economic depression of the 1930s slowed railway construction once again, and the only significant work undertaken was the completion of the link from New Plymouth to Auckland via Stratford and Okahuhura to the NIMT.

By this time motor vehicles had a major influence on both population concentration and commercial activities throughout the country; they hastened rural-urban migration. Rail passenger numbers declined and passenger services ceased to be a regular feature of many branch lines. Commercial functions of smaller settlements also declined, and closures of some branch lines began.

The Labour Government elected in 1935 pursued policies that favoured railway construction and use. State funds were once again allocated to continue rail construction programmes to join remaining regional centres that had previously been isolated from the national rail network. The impact of these policies began to flow through during the next decade or so. Road user restrictions were part of the policy package, but these were gradually eased under successive National Governments until finally abolished in 1983.

Railway construction continued during the Second World War (1939-45). Both passenger movements and freight movements peaked during the war years. Use of private motor cars became restricted because of petrol rationing and increasing difficulties sourcing petroleum products and rubber. Travel by train again became the main way in which the population could move around the country. In particular, troops and equipment were moved to and from training camps by rail and then to ports for embarkation.

BRANCH OPENINGS
1870-1879 - Ten lines opened (nine in the South Island)
Whitecliffs
Southbridge
Kingston
Foxton
Moeraki
Ngapara
Eyreton
Shag Point
Tuatapere

Conns Creek
1880-1889 -Thirteen lines opened (all in the South Island)
Methven
Waimea Plains
Kurow
Wyndham/Glenham
Waimate
Oxford
Fairlie
Dunback
Seaward Bush
Cape Foulwind
Tokarahi
Mossburn
Mt Somers
1890-1899 - Two lines opened (both in the South Island)
Seddonville
Hedgehope
1900-1909 - Five lines opened (all in the South Island)
Makareao
Tapanui
Waikaka
Waikaia
Hokitika Ross Section
1910-1920 Six lines opened (two in the North Island)
Blackball/Rewanui
Ngatapa
Catlins
Gisborne
Ohakune/Raetihi
Waiau
1920-1929 - Five lines opened (three in the North Island)
Donnellys Crossing
Kapuni
Waihi
Roxburgh

DECLINE AND CLOSURES

After the war the railway system was faced with a backlog of under-investment, repairs and deferred maintenance. It was relatively easy to obtain trucks, especially from war-surplus stocks, and priority for capital spending was given to improvements in roads rather than to increasing the maintenance of the rail network. Declining volumes of freight traffic and therefore uneconomic operation, combined with heavy costs of track and bridge renewal, contributed to branch line infrastructure wearing out and many lines facing closure.

In the 1950s, as the efficiency and availability of road transport increased, goods handled by rail became a smaller and smaller proportion of the total traffic moved in rural areas. The haulage and handling methods used on branch lines could rarely compete with the flexible service provided by road transport operators.

In 1953 the rail system reached its maximum length of 5,689 kilometres, but from then on there was a steady decline as branch lines closed. By 2004 there were 4,103 kilometres, a reduction of 1,586 kilometres (28%) over five decades.

In 1962 the rail link between the North and South Islands dramatically improved with the introduction of the Cook Strait ferry service – referred to as "the iron bridge". This new service reduced freight handling and increased speed for delivery of goods by rail. Coastal shipping services declined dramatically as a direct result.

By the 1970s economic activity was increasingly concentrated in major urban centres, especially Auckland, and in response railway services also concentrated on long-distance haulage between these centres rather than from rural areas to nearby ports. The rural branch line was playing a significantly decreased role in the national transport network.

In many cases rural branch lines that survived beyond the 1970s were reprieved from closure because of specific local circumstances, especially those servicing construction of hydro dams in the South Island which required bulk quantities of cement and other products. Examples of these were the Kingston/Mossburn line which serviced Manapouri, the Kurow Branch for the Waitaki schemes, and the Otago Central branch for the Clyde. The continuing extraction of mineral and timber resources similarly extended the use of others: for example, timber on the Hokitika-Ross section; coal on the Seddonville branch, and limestone on the Makareao and Ngapara branches.

BRANCH CLOSURES
1930-1949
Tokarahi
Ngatapa
Shag Point
Cape Foulwind
1950-1969
Eyreton
Oxford
Foxton
Gisborne
Donnellys Crossing
Whitecliffs
Wyndham/Glenham
Waikaka
Waikaia
Waimate
Seaward Bush
Blackball/Rewanui
Southbridge
Conns Creek
Mt Somers
Fairlie
Ohakune/Raetihi
Dunback
Roxburgh
Browns
1970-1999
Catlins

Methven
Kapuni
Waiau
Waihi
Tapanui
Waimea Plains
Orawia/Tuatapere
Hokitika Ross Section
Seddonville
Mossburn
Kingston
Kurow
Makareao
Ngapara

OTHER

During the years when railways were the main means of overland transport in New Zealand (roughly 1880-1920) they not only employed many people but also contributed in all sorts of ways to the richness of life for people throughout the country. They provided the means for schools, clubs and groups to organise and take excursion trips. They not only moved stock to and from saleyards but also "specials" were arranged to service the markets created by ewe fairs and other big stock sales. Children caught trains to school, often over long distances, doing homework and playing pranks along the way. Dog kennels provided on many rural platforms enabled farm dogs to be moved from one job to another. Station staff in many of the more isolated locations filled all sorts of roles beyond those of railways business – registering births, deaths and marriages and handling postal business being the most significant.

Working for the Railways provided career opportunities and until recently it was not unusual for employees to remain for the whole of their working life. Locomotive staff progressed through a strict hierarchy to the very skilled work of engine driver. Station staff moved from one location to another to achieve the next level of seniority, again according to highly structured tiers. The railways required mobility as well as providing the means for it!

One of the consequences of this was the need to provide housing. In the early 1920's a scheme was brought into operation to provide houses for the department's employees, with an architectural branch based at head office in Wellington and a house manufacturing factory and a timber sawmill at Frankton Junction (Hamilton). The factory produced standardised cut-to-fit houses. An associated large sawmill cut up logs procured from Government forests. Approximately one house per working day (up to 300 houses per annum) was cut at the factory, but the output was increased considerably if required. The houses were delivered by rail (of course) to wherever they were needed. During the first seven years the scheme was in operation the department erected 1,074 houses for its employees.

Station buildings were also standardised, their designs and fittings being codified into a series of "classes", each with its own set of plans and specifications. Once Vogel had deemed economy was to be applied to all aspects of railways construction, specifications were developed for a range of official designs, from class 1 to class 5 for staffed stations, class 1 being reserved for the biggest and best. Class 5 stations were the most common, there being three times as many as there were in class 4. There were also designs and specifications for shelters at so-called "flag" stations, the name being

derived from the American practice of stopping trains when a flag provided for the purpose was waved. These structures were the most widely used and were simple unlined sheds with bench-type seats around the walls. There was rarely much else other than perhaps a simple platform at such stops. Only a few branch lines had a class 2 or class 3 station, and class 1 was reserved for "top rank" stations. "Vogel-era" stations remained as the standard until 1904 when George Troup refined and updated the designs, revising this work further in 1914. Embellishments such as decorative ironwork started to feature on the larger stations, and verandahs were finally added to many a basic station building. Standardised design work included paint colours, lettering on name and destination boards, gate designs, and any decorative features.

The railways were also used to move the department's infrastructure from one location to another as needs changed. Station and other buildings were dismantled and shifted to meet changing needs, and whenever possible materials no longer used at one site were taken away for use elsewhere. The railway system, in all its complexity, was a key factor in the development of New Zealand, and though much diminished in terms of total length these days rail continues to be a key part of New Zealand's transport network.

[1] Initially called the Great Northern Railway