

Further work is needed on Queensland's North Coast railway line

Philip Laird

Whilst the Queensland North Coast line between Brisbane and Cairns is far removed from Canberra and Sydney, it does have a vital role in moving freight to Cairns and other regional centres. This helps keep the supermarket prices in Tropical North Queensland at Brisbane prices.

Up to 1986, the Brisbane–Cairns line was known for its low axle loads and numerous speed-weight restrictions. As part of the civil works carried out in association with Brisbane–Rockhampton electrification during the late 1980s, four major deviations were constructed with a combined length of 42 kilometres.

From 1992 to 1997, an extensive Mainline Upgrade (MLU) program was under way. MLU included the acquisition of new locomotives and container wagons along with the upgrading of hundreds of bridges for heavier axle loads and some 45 rail deviations with a combined length of 120 kilometres.

The work done in the 1990s was to high standards, in a timely and cost-effective manner. It also allowed for improved flood mitigation and fewer level crossings.

Two MLU deviations are of note, each with ruling grades of 1 in 90 and no curve tighter than 2200 metres. One was the 8 km Gunalda deviation that replaced a 10 km section with 4.7 km of tight curves. This reduced the section transit time of the Inter-City Electric train of seven minutes from 11 to 4 minutes. The tilt train takes three minutes.

The other was the 12.5 km Watalgan deviation. As noted by a 1996 QR Facts Sheet this project "... eased the grade restrictions between Brisbane and Rockhampton and permits trailing loads to be significantly increased."

The main purpose of MLU was for heavier and faster freight trains – with the trailing load behind a good locomotive doubling from 750 to 1500 tonnes. MLU also allowed for the electric tilt train to start regular services in 1998. Then it did the Brisbane to Rockhampton journey in seven hours – a vast improvement on mid-1980s times of 14 hours – and was an immediate hit with the traveling public.

In 1999, the tilt train set the Australian rail speed record of 210 km/h north of Bundaberg. This record still holds. However, over the years the transit time of the Brisbane–Rockhampton 639 km electric tilt trains (currently undergoing a major maintenance program) has expanded out to 7h 25m – an average speed of 86 km/h.

Australia's fastest scheduled passenger trains are now to be found in NSW and Victoria, where three trains average just over 100 km/hr.

To get the current average speed of Brisbane and Rockhampton tilt trains up to 100 km/h will require some further track upgrades.

As seen in a 2006 Brisbane–Cairns corridor strategy report: "While there have been deviations constructed as part of NCL upgrades, the horizontal alignments and vertical grades between Nambour and Bundaberg remain poor and are a major impediment to attaining any further improvement in transit times and train length."

The next year, the House of Representatives Standing Committee on Transport and Regional Services chaired by then MP Paul Neville released a report "The Great Freight Task: Is Australia's transport

network up to the challenge?" The 2007 report noted that there is a: "demonstrable need to expedite Caboolture–Landsborough duplication and re-alignment and to start planning for other rail deviations and bridges...".

As an example, the bridge on the Burnett River, near Bundaberg: "... is now subject to a 15 km/h 'flat' speed restriction (i.e. no acceleration or braking)."

Some pinch points

In 2009, the Caboolture to Beerburrum Rail duplication project was completed. But little construction work has been done since then, and the Beerburrum–Nambour section is now the most congested section

of single rail track in Australia. This rail congestion has resulted in peak hour freight train curfews, extending tilt train transit times and the use of a Caboolture–Nambour 'railway bus' that stops at all stations and is slow. This section of track needs straightening as well as duplication. North of Nambour more deviations are needed. Two of the many examples of track with tight curves include Cabbage Tree north of Bundaberg with a 50 km/h speed restriction (and the site of the 2004 costly diesel tilt train accident). Surely, ten years after this accident, the approach curves to this bridge could have been eased.

The second location is Pumphouse Creek south of Maryborough with a 40km/h restriction. This requires the drivers of the north-bound freight trains and heavier passenger trains to apply the brakes some four kilometres ahead on a long downgrade before a 40km/h curve.

Such substandard curves, if located on the Bruce Highway, would have been eased years ago.



The bigger picture

The Mainline Upgrade (MLU) program completed in the 1990s gave a quantum leap in freight train efficiency with benefits to passengers.

Rail freight on the Queensland NCL plays a vital role in keeping supermarket prices in Tropical North Queensland regional centres at Brisbane prices. The Australian government policy includes funding to support rail freight as well as roads.

However, although the Bruce Highway will receive up to \$6.7 billion with \$500 million provided in 2015–16, and, the Sydney–Brisbane railway has received well over one billion dollars of federal funds for its upgrading, the Queensland North Coast line is yet to receive one dollar of federal funding.

It is now time for the Australian government to take a more balanced approach between the funding of freight railways and national highways.

Moreover, the Queensland North Coast line needs to be brought into the twenty first century. More rail deviations built to good standards under a Mainline Completion program would give transit time savings along with improved fuel efficiency for freight and passenger trains.

This is an expanded version of an article in the Bundaberg NewsMail for 21 July 2015. Dr Philip Laird of the University of Wollongong is a frequent visitor to Queensland and contributor to Railway Digest.