

The Federal Freight Case

Queensland's North Coast Line (NCL) Rail Duplication

By: Jeffrey Addison

For: The Hon. Warren Truss MP
Leader of the National Party
Member for Wide Bay
Shadow Minister for Infrastructure and Transport

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This report presents the case for joint Federal / State funding to be made available for rail duplication of the North Coast Line (NCL), starting from the single line bottleneck located at Beerburrum, on the Sunshine Coast, through to Nambour/Gympie.

It puts forward the case for rail duplication to improve freight capacity on the NCL.

Why is it also a Federal issue?

The Australian Constitution, the basis of our law and democracy, sets out the responsibilities of the Commonwealth with respect to State railways.

The excerpts on pp1 & 2 in blue ink, quoted in this report are sourced from the Commonwealth of Australia Constitution Act (The Constitution) and include all current amendments and alterations, up to 25 July, 2003.



Commonwealth of Australia Constitution Act (The Constitution)

This compilation was prepared on 25 July 2003
taking into account alterations up to Act No. 84 of 1977

**[Note: This compilation contains all amendments to the Constitution made by the Constitution Alterations specified in Note 1
Additions to the text are shown in bold type
Omitted text is shown as ruled through]**

Prepared by the Office of Legislative Drafting,
Attorney-General's Department, Canberra

Commonwealth of Australia Constitution Act (The Constitution), pp18-19

Chapter 1—The Parliament

Part V—Powers of the Parliament

51 Legislative powers of the Parliament [see Notes 10 and 11]

The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:

- (xxxii) the control of railways with respect to transport for the naval and military purposes of the Commonwealth;
- (xxxiii) the acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State;
- (xxxiv) railway construction and extension in any State with the consent of that State;

Under Section 51, (xxxii)

It is a matter of national defence. In time of conflict it is an avenue that may be used to transport troops and materiel to the State's north, in the defence of our nation.

Under Section 51, (xxxiii)

It allows for the acquisition of any State railways, with the State's consent (not sought here).

Under Section 51, (xxxiv)

The Federal parliament is responsible to make laws for the peace, order, and good government of the Commonwealth with respect to railway construction and extension in any State with the consent of that State;

Commonwealth of Australia Constitution Act (The Constitution), p37.

Chapter IV—Finance and Trade

98 Trade and commerce includes navigation and State railways

The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

Section 98 refers to the powers of the Commonwealth to pass laws covering trade and commerce, including State railways.

These are not arguments for Federal funding of State railways in themselves, but are reproduced here to highlight the areas of federal responsibility for State railways.

The Federal Freight Case

Queensland's North Coast Line (NCL) Rail Duplication

The North Coast Railway Line (NCL) is unique in the nation, for the number and types of services that use it. It forms part of the railway within the federal government's National Land Transport Network (For map, see Appendix A on p13), mainly in recognition of its role in carrying 14 million tonnes of freight each year (as at 2007).

Short passing loops along the length of the NCL limit freight train lengths and capacities. Ironically, the shortest passing loop (at just 683m long) in the 1669km from Brisbane to Cairns, is located at my home town of Palmwoods. The maximum length of a freight train through here is 650m. This is less than half the length of freight trains operating in other states and increases costs for Queensland freight users.

In addition, more freight is being diverted to road with consequential major pavement damage to the Bruce Highway, as well as increasing the likelihood of deaths and road trauma in heavy vehicle accidents. Expenditure on freight rail can ease the costs of Highway maintenance.

*A joint report produced by both Queensland State and Commonwealth Government bodies, the **2007 Brisbane-Cairns Corridor Strategy**, (**2007 Strategy**) exposes the critical need for rail duplication to improve freight services & relieve congestion on the North Coast Railway Line. The corridor supports around 58 per cent of Queensland's population, of 4.5 million people.*

The **2007 Strategy**, in its' analysis under Current Corridor Performance p7, states; **"a major current impediment to the corridor's overall performance"** as **"rail congestion between Brisbane and Nambour."**

This strategy was developed by;

The Australian Government Department of Transport and Regional Services (DOTARS); the Queensland Department of Main Roads (QDMR) and Queensland Transport (QT).

"The North Coast Railway Line (NCL) is predominately a single line, narrow gauge (1067mm, 3'-6") track between Brisbane and Cairns. The NCL is approx. 1669 kilometres and largely runs parallel to the Bruce Highway for its entire length. The Brisbane Metropolitan section ends at Nambour, about 100 kilometres north of Brisbane." p(ii)

"The corridor supports the transport needs of rapidly growing areas to the north of Brisbane (Caboolture, Sunshine Coast, Gympie, Maryborough/Hervey Bay), important regional centres (Gladstone, Rockhampton, Mackay, Townsville, Cairns), tourism and major export industries (coal, minerals, aluminium, sugar)." p(ii)

"In particular, the Brisbane-Cairns Corridor links Brisbane with major regional service and tourism centres, supports regional industry in Queensland and links service centres supporting some of Australia's major export industries." p(ii)

http://www.infrastructure.gov.au/transport/publications/files/Bris_Cairns_Corridor_Strategy.pdf

Point 1.

Queensland Government Population Projections, 2011 Edition.

<http://www.oesr.qld.gov.au/products/publications/qld-govt-pop-proj-qld-sd/index.php>

The Sunshine Coast will grow by 60% in the next 20 years.

The population today (2009) is 323,400 and is projected to be 508,200 in 2031.

Point 2.

The *2007 Brisbane-Cairns Corridor Strategy*, identified **7 major strategic issues**.

First and foremost being:

“The efficiency and safety of passenger and freight movement in the section between Brisbane and Gympie;” and another:

“The competitiveness of the North Coast Railway Line and its capacity to handle long-term growth in freight;”

TABLE 3 Summary of Transport Issues in Regional Centres, tells us on p13, with reference to Caboolture, Sunshine Coast and Gympie track sections;

“Poor rail track alignment impedes efficient transit times.”

Under Short Term Priorities (to 2015) p19, it recommends;

“Continue the current programme of road and rail works ... aimed at addressing rapid growth on the corridor between Brisbane and Nambour/Gympie.”

This is with reference to increasing rail freight capacity.

Point 3.

Most Likely Future Scenario, p14, predicts;

“up to four per cent a year growth for rail freight.”

This growth scenario is confirmed by the *Bureau of Transport and Regional Economics (BTRE) Demand Projections for Auslink Non-Urban Corridors: Methodology and Projections, Working Paper 66*, (2006).

Table 2.16 (excerpt shown below) shows the expected non-bulk freight growth out to 2025, to be 4.2% for the Brisbane to Cairns corridor, and is the second highest growth.

From Chapter 2, p39, Table 2.16

TABLE 2.16 ACTUAL AND PROJECTED ORIGIN–DESTINATION NON-BULK FREIGHT MOVEMENTS BY AUSLINK CORRIDOR AND TRANSPORT MODE, 1999 AND 2025.

http://www.bitre.gov.au/publications/2006/wp_066.aspx

Rail and Road expected average annual growth rates, 1999 to 2025.

Corridor	By Rail	By Road	
Sydney - Perth	4.4%	3.0%	HIGHEST FREIGHT GROWTH
Brisbane - Cairns	4.2%	4.0%	SECOND HIGHEST FREIGHT GROWTH

Point 4.

The **2007 Strategy** Under Rail, p15, states;

“If freight transport growth was sustained at more than three per cent a year, there is concern that current NCL infrastructure may not enable rail freight to grow at the same rate, thereby resulting in the freight growth over three per cent a year ‘spilling over’ to road transport.”

*Unfortunately, all work ceased on the rail duplication from Caboolture to Landsborough in April 2009. Only partially completed, it left a single line bottleneck at Beerburrum. A briefing note to the then Queensland Transport Minister, dated 15 July 2009, and received under a Right to Information request, confirmed that; **“the benefits of increased capacity would not be fully realised until the rail duplication is completed to Landsborough.”***

Point 5.

Caboolture to Landsborough Rail Upgrade Study: Needs Assessment

By Queensland Transport (2002),

http://www.arup.com.au/clrs/genfiles/needs_assessment_executive_summary.pdf

Conclusion p(iii), states;

“In summary, it has been concluded that the majority of the desired levels of service cannot be met with the existing rail infrastructure. Hence, an upgrade of the Caboolture to Landsborough section of the main north coast rail line is needed.”

The needs assessment found that an upgrade will:

"improve the level of service for passenger and freight rail services in terms of service frequency, hours of service, seating capacity, freight capacity, reliability, and travel time; allow for a progressive increase in rail services throughout the day and a consequent decrease in Rail bus services in the corridor;"

44% of weekday passenger trains between Caboolture and Nambour are actually buses, this is due to the congestion of freight trains, city trains & travel trains all sharing one track and one lifeline, to far north Queensland.

In another Ministerial briefing note I received under a Right to Information request, the rail link was considered so important that when the truncated duplication works to Beerburrum were opened in April (Easter) 2009, a briefing note to the Minister stated;

“PNQ supply food chains in the north of the state. There could be some negative media coverage for QR should any (food) shortages arise over the Easter period, whether or not these issues stem from the commissioning. As a contingency, QR will station a locomotive at Petrie to assist any freight trains that experience operational problems.”

Point 6.

Landsborough to Nambour - Initial Advice Statement

By Arup Engineers (2007),

http://www.dip.qld.gov.au/docs/library/pdf/mp_landsborough_nambour_rail_IAS.pdf

The 'Initial Advice Statement' to the Queensland government for the Landsborough-Nambour rail corridor stated under:

Section 2.3.2.1 "Do nothing" Option;

"It is likely that the region would experience adverse socio-economic effects should the NCL between Landsborough and Nambour not be upgraded."

"Increases in demand are likely to significantly challenge the ability of the current infrastructure to support an acceptable level of rail service in the future."

Point 7.

A 2007 House of Representatives Standing Committee on Transport and Regional Services report titled;

The Great Freight Task: Is Australia's transport network up to the challenge?

noted on p103, 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)."**

Summary of presentation by Dr. Philip Laird of University of Wollongong NSW to the Railway Technical Society of Australasia Qld Division, 11 December 2008, Brisbane.

Point 8.

Submission to Infrastructure Australia re: the Brisbane Cairns Corridor

(2008 from 2006 paper) by Dr. Philip Laird, FCILT, Comp IE Aust., University of Wollongong

http://www.infrastructureaustralia.gov.au/public_submissions/published/files/82_smasuniversityofwollongong_SUB.pdf

Reduction of total costs including external costs. p2,

"Rail is three times more efficient than road in using fuel to move freight."

A special corridor. p5, Section 4B.

"The Caboolture - Nambour track is now probably the most congested section of single rail track in Australia. It was recognised as congested as long ago as 1994 in the BTCE report of the National Transport Planning Taskforce."

This congestion is shown by freight train curfews during peak hours, expanding the Brisbane Rockhampton tilt train transit time from 7 hours (pre-2003) to the 7 hours and 25 minutes it is today, and the ubiquitous (44% of weekly services) rail bus. (26 no. per day).

Point 9.

The *Sunshine Coast Regional Council Interim Roadmap 2010* (2010)
http://www.rdasunshinecoast.org.au/wp-content/uploads/2010/11/Sunshine-Coast-Interim-Regional-Roadmap-Final-20101125-v3_online1.pdf

Section 2.12 Transport, states;

... **“transport demand has been growing strongly as well. There are signs that the current infrastructure is having difficulty coping with the current demand.”**

“Visitors to the region ... are saying that congestion on the Bruce Highway is a deterrent.”

“A number of initiatives are proposed to alleviate some of the demand and these include: Major network additions (e.g. the proposed CAMCOS public transport corridor, North Coast Rail duplication or the Multi Modal Transport Corridor).”

Section 2.12 Transport; goes on to state;

“However, even these would not adequately meet the projected demand under each population scenario and more would be required to meet the needs of a substantial population increase.”

A reported 87,000 person increase in Sunshine Coast residents (SCD 26.8.2011) in Caloundra South (50,000), Palmview (37,000) and other proposed coast growth areas within 10 years, will require major rail infrastructure improvements between Brisbane & the Sunshine Coast.

Point 10.

National Transport Commission (sic) Rail Productivity Review Submission

By QR Limited (2008),

<http://www.ntc.gov.au/rfcDocuments/QR%20Limited2008100614090277.pdf>

In 2008, it identified the major problem for freight on p11,

“The infrastructure for longer trains also needs to be provided. Train lengths on Queensland’s North Coast Line are limited by the length of the smallest loop (currently 682 metres). The prospect of a doubling of average freight train length on a rapidly growing and potentially rail-friendly corridor represents one of rail’s most significant national productivity opportunities.”

There are about 130 passing loops along the NCL with lengths varying between 455 metres and 1400 metres but predominately about 650 - 700 metres. This constraint on train length could impact on the potential growth in rail freight transport.

‘One 1500 metre freight train can carry the load of 100 semi-trailers, leaving our roads safer and our air cleaner.’ Economic Stimulus Plan; A progress report (2011, p1).

Point 11 itemises the savings to be made by extensions to unspecified short passing loops or other works to below rail projects, along the NCL.

Point 11.

QR Submission to Productivity Commission

By QR Limited (5 July 2006),

Review of the Economic Costs of Freight Infrastructure and Efficient Approaches to Transport Pricing

http://www.pc.gov.au/data/assets/pdf_file/0004/48577/sub053.pdf

North Coast Line Study, p94,

This analysis includes an estimate of the future transport task (based on underlying market growth rate estimates) in the corridor and identification of the economic benefits for government and society associated with investment in rail ...

An investment of circa \$300 million (\$2006) in a number of “below rail” projects on the NCL could result in: (note present value PV = 2006 dollars)

- **Extraction of just over 850,000 tonnes of general freight / containerised traffic from road to rail on NCL markets.**
- **Road accident cost savings of Present Value \$43 million over 20 years.**
- **Environmental gains valued at PV \$23 million over 20 years.**
- **Road pavement / maintenance savings of PV \$94 million over 20 years from reduced heavy truck movements.**
- **Benefits associated with better transit times, improved service reliability and improved service availability valued at PV \$127 million over 20 years.**
- **Benefits to rail operators and customers valued at PV \$143 million over 20 years.**
- **Potential reductions in rail freight costs in the range of 2% to 6% across NCL markets if gains to “above rail” operators are passed on to customers.**
- **An increase in GTKs (gross tonne kilometres) on the NCL associated with additional containerised traffic of 34% ‘over and above’ underlying growth.**

The figures shown above total \$430m (2006 dollars) in potential savings, from a \$300m (2006 dollars) outlay, over 20 years.

\$300m equates to \$361.5m in 2013 whilst \$430m equates to \$519.2m in 2013.

Point 12.

Landsborough to Nambour Rail project

Coordinator-General’s report on the environmental impact statement

November 2011

“The Coordinator-General concludes that the project will deliver a range of direct benefits to the local and regional communities in the form of efficient and timely passenger services, **as well as broader benefits to the state in the form of freight transportation improvements and improved productivity**, therefore, his recommendation is that the Landsborough to Nambour Rail project should proceed.” (-vii-)

Keith Davies

Coordinator-General

9 November 2011

Point 13.

Queensland Input for the COAG National Infrastructure Audit Part A – 30 June 2008

By Queensland Government – Department of Infrastructure and Planning

Chapter 5.6.2 Rail – North Coast Line,
p51, states;

“The most severe congestion exists between Caboolture and Nambour (due to competition with Sunshine Coast passenger services), in the Home Hill to Townsville area during the May–November sugar season, and in the Brisbane area with passenger services having priority over freight.” ...

“The Queensland economy has been growing strongly at rates in excess of 3%. As part of a Brisbane-Cairns corridor freight task analysis, **a growth parameter of 3.1% per year was applied and the total inter-regional freight task on the average corridor segment was forecast to increase from 5.5 Mt (Mega-tonnes) in 2003 to 7.7 Mt in 2013 to 9.4 Mt in 2020.** If Queensland records growth rates in excess of this assumed rate, it can be expected the total freight task will exceed this forecast, as shown below.” p52,

“Under the growth scenario (where rail captures 105% of its current mode share) annual interregional rail volumes were forecast to increase from 3.18 million tonnes per annum in 2003 to 4.50 million tonnes per annum (mtpa) in 2013 and 5.5 mtpa in 2020. **Identified North Coast Line capacity constraints in accommodating this forecast demand are: “**

- ❖ The metropolitan system, where there are a limited number of commercially attractive train-paths available through the metropolitan network.
- ❖ The prevailing **crossing loop lengths of 650-700 metres,** compared with the operation of 1300-1500 metre trains on some other parts of the AusLink Network. **This limits the ability to provide an efficient channel for exports through the ports serviced by this line.**
- ❖ While deviations have been constructed as part of line 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.**
- ❖ **Uncompetitive rail transit times (nearly 50% longer than road) tend to be the result of low operating speeds due to poor alignment between Landsborough and Bundaberg, and to other factors such as ageing timber bridges and the prevalence of level crossings.** (Refer Point 7, p6)
- ❖ Rail’s freight service reliability (on time arrivals) is thought to be 40-50% worse than road reliability from Rockhampton north. The availability of rail freight service (train or slot on train available at desired departure time) is only about 40% that of road.

Point 14.

National Transport Commission (sic) Rail Productivity Review Issues Paper

Queensland Projects, p11,

“Queensland is projected to continue to experience strong population growth and spatial expansion of metropolitan areas, **combined with strong growth in urban passenger and freight demand.**

“For a seamless and productive intermodal Melbourne to Cairns freight corridor, **issues north of the Queensland border also need to be addressed. Chief among these are upgrades to the passenger and freight rail network in metropolitan Brisbane (including the Inner City Rail Capacity Project), and changes to grades and loops to permit the efficient use of 1500 metre freight trains (more than double the length of current trains).”**

Point 15.

Landsborough to Nambour Rail project

Coordinator-General’s report on the environmental impact statement

Environmental impacts, p33,

Although acknowledging stakeholders’ concerns about local social and economic impacts, **the EIS highlighted a range of potential economic benefits of the project** to the region including:

- improvements to the overall public transport network in the region, **savings in time taken to travel** for commuters, local passengers, long distance tourist trips **and freight**
- savings in private vehicle operation costs and a **reduction in road accidents**, enhancement of local business opportunities, and employment clusters—in particular, encouraging the economic development and the economic function of Nambour as a major activity centre
- a total of **\$4.57 billion of output generation into the Queensland economy (including SEQ)** over the entire construction period (seven years) and a total of 2786 jobs on average at any point in time.

Rail duplication from Landsborough to Nambour will provide \$4.57 billion of output generation into the Queensland economy.

Current estimates for construction of these works is approx. \$2 billion, thus giving a cost benefit ratio of 2.285

On a per net tonne-kilometre (ntk) basis, moving freight by rail is between 13 and 23 times safer than shifting it by road, according to the Australasian Railways Association.

Summary:

The issues identified are:

1. Significant population pressures on the Sunshine Coast.
(Source Qld. Gov't statistics)
60% growth projected between 2009 and 2031.
2. The **2007 Brisbane-Cairns Corridor Strategy** identified 7 major strategic issues. First and foremost being: **"The efficiency and safety of passenger and freight movement in the section between Brisbane and Gympie;"**
3. The **2007 Brisbane-Cairns Corridor Strategy** Most Likely Future Scenario, predicts; **"up to four per cent a year growth for rail freight."** With 4.2% up to 2025 predicted.
4. The **2007 Strategy Freight growth exceeds predicted capacity resulting in freight 'spill-over' onto roads.** This increases Bruce Highway road pavement damage and results in increased road deaths and trauma.
5. 2002 **Caboolture to Landsborough Rail Upgrade Study: Needs Assessment** by Queensland Transport, cites; **"the majority of the desired levels of service cannot be met with the existing rail infrastructure. Hence, an upgrade ... of the main north coast rail line is needed."**
6. 2007 **Landsborough to Nambour - Initial Advice Statement** by Arup Engineers cites; **"It is likely that the region would experience adverse socio-economic effects should the NCL between Landsborough and Nambour not be upgraded."**
7. 2007 **House of Representatives Standing Committee on Transport and Regional Services** report noted there is a **"demonstrable need to expedite Caboolture - Landsborough duplication and re-alignment** and to start planning for other rail deviations and bridges...".
8. "Rail is three times more efficient than road in using fuel to move freight."
"It is probably the most congested section of single line track in Australia."
9. **Sunshine Coast Council** 2010 report... **"transport demand has been growing strongly as well. There are signs that the current infrastructure is having difficulty coping with the current demand."**
10. 2008 **National Transport Commission (sic) Rail Productivity Review Submission** by QR Limited identified the major problem for freight; longer trains are required for better efficiency, but they are limited by short passing loops.
Longer freight trains being one of rail's most significant national productivity opportunities.

Summary continued:

11. 2006 **QR Submission to Productivity Commission**
For a \$361.5m outlay (\$2013) on the NCL, there can be \$519.2m (\$2013) in savings.
12. November 2011; Keith Davies, then Queensland Coordinator-General, gives go-ahead on Landsborough to Nambour rail duplication. This will expire after 4 years.
13. Queensland Input for the COAG National Infrastructure Audit Part A – 30 June 2008
By Queensland Government Department of Infrastructure and Planning cites that **“the most severe congestion exists between Caboolture and Nambour.”**
14. National Transport Commission (sic) Rail Productivity Review Issues Paper, cites;
“... issues north of the Queensland border also need to be addressed. ... upgrades to the passenger and freight rail network in metropolitan Brisbane, and changes to grades and loops to permit the efficient use of 1500 metre freight trains.”
15. Landsborough to Nambour Rail project Coordinator-General’s report on the environmental impact statement cites; **“potential economic benefits of the project to be \$4.57 billion of output generation into the Queensland economy, over 7 year construction period.”**

Objectives: What do I hope to achieve?

That a coalition Federal Government will acknowledge the special and unique case that is Queensland’s North Coast Railway Line (NCL) and recognise its contribution to both the State and national economy, as shown in these reports.

That a coalition Federal Government will financially contribute (in conjunction with the State) towards the construction cost of rail duplication of the North Coast Line (NCL) from Beerburrum through to Nambour, given that this line is part of a significant national (shared) freight artery. A State government submission for the NCL rail duplication from Beerburrum to Landsborough, is currently before Infrastructure Australia.

*The duplication of the line will improve rail freight services that provide significant benefits to the State, all the way up to far north Queensland.
It can result in savings to freight costs of between 2% - 6%.
It can benefit Queensland’s economy to the tune of \$4.57 billion over 7 years.*

Conclusion:

*The evidence of the urgent need for the North Coast Railway Line duplication from Beerburrum to Nambour and beyond is well documented.
It requires a national response for its nationally unique case.*

Appendix A
National Land Transport Network – Rail Corridors Queensland

