



National Secretary  
Mr Chris Venn-Brown FIEAust CPEng

Engineering House  
11 National Circuit  
BARTON ACT 2600

1 July 2005

ref. RTSA-NS-90

The Director,  
General Purpose Standing Committee No 4  
Legislative Council  
Parliament House  
Macquarie Street  
SYDNEY NSW 2000

Dear Director,

### **Submission re the Pacific Highway July 2005**

1. The Railway Technical Society of Australasia (RTSA) is a technical society of Engineers Australia. The RTSA now has over 800 members and hosted a major Conference on Railway Engineering in 2004 at Darwin with about 400 participants. The present submission, prepared with the assistance of the University of Wollongong and the Rail CRC, outlines member concerns and draws on submissions to various Federal and State transport inquiries (including in 2003 to the NSW Ministerial Inquiry into Public Transport and in 2005 to the Senate Rural and Regional Affairs and Transport Legislation Committee re Auslink Bills - *summary attached as Appendix A*).

2. This submission is also based on a submission re Pacific Highway Upgrade: Kempsey to Eungai that was made to the Roads and Traffic Authority nominated consultants of Parsons Brinckerhoff in January 2004.

3. The RTSA understands from DOTARS and RTA information (August 2002 Pacific Highway Progress Update) that the ten year program, at a cost exceeding \$2 billion, aims to strike a "...*balance between social, ecological and transport needs*"; also the program aims to improve road safety and transport efficiency in a sustainable manner.

4. The RTSA notes that considerable progress has already been made in upgrading the Pacific Highway. This includes to 15 December 2003 completion of 22 major projects (including 3.5 km of dual carriageway at Half Way Creek at a cost of \$21.5m) with three major projects underway (Karuah Bypass; and Taree to Coopernook upgrade with bypass), along with minor projects. The combined benefits include reductions in transit times between Hexham and Tweed Heads of over one hour for heavy trucks.

More recent works in hand include Brunswick Heads to Yelgun and a Tugun Bypass.

5. Since 1996, the Pacific Highway has been progressively upgraded at a cost of more than \$2 billion. Following the opening of the Yelgun – Chinderah highway 28.5 km at a cost of \$348 million in August 2002, the NSW Roads and Traffic Authority (RTA) approved B-Double truck access for the entire length of the Pacific Highway within NSW. This was on the understanding that *“There will probably be a transfer of some of the B-Doubles from the New England Highway, but the total change in heavy vehicle numbers will be relatively small.”*

Completion of Yelgun – Chinderah in August 2002 and approval of the use of B-Doubles for the entire length of the Pacific Highway were followed by a marked increase in the number of heavy trucks using the Pacific Highway.

6. The RTA via its website and by paid advertisements prior to Easter recommended Sydney – Brisbane motorists to consider using the New England Highway. On the website prior to Christmas in 2003 and in early 2004, it is noted that *“If you’re heading up to Queensland, consider taking the New England Highway.”*

7. The year of 2003 was marked by a noticeable number of fatal road crashes on the Pacific Highway: On 19 October 2003, the NSW Roads Minister the Hon Carl Scully MP announced that there would be an inquiry into road safety on the Pacific Highway. By that date, over 40 lives had been lost in road crashes on this Highway.

The Society is not aware of any invitation to the public to have input into what is seen as an important inquiry. The Society suggests that transferring interstate freight from road to rail should be viewed as part of an integrated strategy to improve road safety.

8. Further road crashes involving articulated trucks on the Pacific Highway include the fatal collision of two B-Doubles south of Urunga on or about 10 December 2003, leading to closure of the road for many hours (see Daily Telegraph 11-12-03). By early December 2003, this number of fatalities had increased to 53 (SMH 'Drive' article on the Pacific Highway, Dec., 03).

By the end of 2003, from RTA data, a total of 72 lives had been lost on the NSW section of the Pacific Highway between Maitland and the Queensland Border. In addition, no fewer than 23 of these fatalities were in road accidents involving articulated trucks.

Additional data supplied by the NSW Roads and Traffic Authority to the University of Wollongong shows that for the 10 years to 31 December 2003 and for road accidents on the Pacific Highway from Maitland to the Queensland Border, articulated trucks were involved in 36 per cent (163) of all fatalities (551).

9. In regards to the average cost of road crashes involving articulated trucks, a book *'Back on Track: Rethinking transport policy in Australia and New Zealand'* by Laird, Newman, Bachels and Kenworthy (2001 UNSW Press) notes an average cost of 0.5 cents per net tonne-km for road crashes involving articulated trucks. This estimate is partly based on the Bureau of Transport and Regional Economics (BTRE) 2000 report *'The cost of road crashes'* and is supported by a Queensland Transport 2001 study *'Land Freight External Costs in Queensland'*.

The National Track Audit which was completed in 2001 for the Australian Rail Track Corporation (ARTC – see [www.artc.com.au](http://www.artc.com.au) for the full report and the Appendix with External Cost estimates for road and rail freight by Booz Allen and Hamilton), found that the average cost of accidents for rail freight in Australia is 0.03 cents per tonne-km. This estimate is supported by data given in the Queensland Transport study cited above and in part by the BTRE 2003 report *'Rail accident costs in Australia'*.

The ratio of accident costs for road freight and rail freight in Australia is accordingly about 17 to one.

10. The increasing use of B- Doubles on side roads near the Pacific Highway is also a road safety concern. For example, the Lansdowne Road, which is a minor road north of Taree, has bad corners, four level crossings and a one-way bridge over the Lansdowne River. It also is an alternative route between Cundletown and Coopernook on the Pacific Highway. When the Highway is closed between these two towns because of accident or flood, traffic, presumably including B - Doubles, is directed along the Lansdowne Road. The Society has also had a reliable reporting of a B - Double on this road, away from the Pacific Highway and on a day the Pacific Highway was not closed.

There is a question whether the Lansdowne Road is approved for the use of B-Doubles, which would be surprising given the condition of the road.

11. In late 2003, the Society had received a reliable report that it was then quite common to see B-Doubles on the streets of Taree. It is understood that either the RTA or the Local Council may approve some routes in advance. However, even if a route is approved, these large trucks on the minor roads of a town like Taree certainly would seem to be a safety problem, whether the route is approved, or not.

As above, following RTA approval for the use of B-Doubles on the entire Pacific Highway in August 2002, there has been an increase in the use of B-Doubles on the main Pacific Highway. This appears to have resulted in B-Doubles 'straying' onto side roads, causing an additional road safety hazard.

12. The RTSA shares the concerns of former Federal MP, Mr. Colin Hollis when he was a Federal MP and Deputy Chairman of the House of Representatives Committee chaired by Mr. Paul Neville MP who produced the reports '*Planning not Patching*' (1997) re roads and '*Tracking Australia*' (1998) re rail. To quote Mr Hollis from Hansard for the House of Representatives on 8 February 1999 re the poor state of the Sydney - Brisbane Railway and the need to address rail when upgrading the Pacific Highway:

"Some 396 kilometres or 41 per cent of this track fails to meet basic fast freight train standards of any curve having a radius of at least 800 metres. This is one reason why the average terminal to terminal speed on intermodal freight trains is little more than 50 kilometres per hour on this corridor. Another reason is the lack of a modern signalling system north of Casino. As found by the 1994 BTCE report for the National Transport Planning Task Force for this rail corridor: *Transit times, reliability and costs are so poor that the corridor may not survive as a commercial freight alternative unless improvements are implemented. ...*

"The Sydney-Brisbane rail corridor was noted as far back as 1989 as being in jeopardy by an earlier Booz Allen Hamilton report for State Rail. Its present outlook, at current levels of upgrading, is poor. **Indeed, the current upgrading of the Pacific Highway to a near four-lane standard by 2005 may prove to be in vain if all it achieves is taking more and more freight off rail and putting it onto B-doubles.**"

On 7 June 2004, the Federal Government's White Paper on 'AusLink' was released. Enabling legislation was introduced to Parliament in December 2004, with Mr Anderson noting, *inter alia*, "We upgrade our roads and immediately they are filled with more cars. We simply have to do it in a more coordinated way and upgrade rail at the same time as we upgrade the roads. We need to do that in a coordinated and sensible fashion so that what belongs on the roads goes on the roads and what belongs on rail goes on rail."

This would include the Pacific Highway.

13. The ARTC 2001 National Track Audit, and other official reports have identified the substandard nature of the Maitland – Brisbane line. Originally a string of branch lines, then joined together and extended between Kyogle and South Brisbane in 1930, over 40 per cent of this “long and winding track” has excessive curvature with radius less than 800 metres. In addition, the Engineers Australia Infrastructure Report Card has twice rated this line as F.

If the line was to be rebuilt to modern engineering standards with a minimum curve radius of 2200 metres (as per Queensland Main Line Upgrade standards applied to over 100 km of rail deviation), and a more direct route taken, point to point distance would be reduced by over 100 km.

On 4 June, 2004 after protracted negotiations, Deputy PM John Anderson and NSW Transport Minister Michael Costa signed an agreement for the Australian Rail Track Corporation (ARTC) to take a 60-year lease on the NSW mainline interstate tracks.

As part of the agreement, ARTC will make a \$872 million investment over five years. This will be supplemented by AusLink funds. The main items are \$432 million for the Sydney - Melbourne corridor (including Stage 1 of a Sydney Freight Priority Project) , and \$450 million for the North Coast line. This will include some track straightening. However, much more work will be needed to make the North Coast Line 'Fit for purpose' .

This extra work should include a new Karuah Valley Railway. In short, the existing Hexham – Stroud Road route is 91 km length with a ruling gradient of 1 in 80, and poor alignment (22.0 km of track on curves of radius 400m, 12.2 km on curves of radius 400 to 600m, and 7.2 km on curves of radius 600-810m) requiring trains (going either way) to traverse the equivalent of 18.5 complete circles of curvature.

A potential Karuah Valley Railway is 67 km long, has a ruling gradient 1 in 80 and for most of its length has ruling curvature of 2200 metres (as used by Queensland Rail for much of its Main Line Upgrade in the early 1990s). It also requires trains to traverse less than the equivalent of one circle of curvature.

For major rail deviations, it is important that NSW authorities, including the Roads and Traffic Authority, work in close co-operation with the ARTC. The Committee could do much to assist the process of upgrading the North Coast line to a 'Fit for Purpose' standard by inquiring of the NSW Roads and Traffic Authority the extent to which it co-ordinates with the ARTC in planning major Pacific Highway and North Coast rail track upgrades.

14. It is understood by the RTSA that in 2003, the Maitland – Brisbane rail line was assessed as the weakest interstate rail line in Australia. As well as the National Transport Planning Task Force noted by Mr Hollis above, a Booz Allen and Hamilton 1989 Report for State Rail found this line was a candidate for closure, whilst the 1998 report 'Tracking Australia' also considered that if interstate lines such as Maitland – Brisbane were not upgraded, they could face a loss of traffic that would be 'irretrievable' thereby leading to closure.

This makes a total of no fewer than four significant warnings given since 1989 on the long term future of this line. For it to have a future, it will need to be upgraded with some track straightening as outlined above.

15. The BTRE Info Sheet 22 *'Freight between Australian cities 1972 to 2001'* showed that for the year 2001, the Sydney - Brisbane intercapital city road freight movement was about 4.9 million tonnes, with rail having about 0.9 million tonnes. This gives rail a land freight modal share of 15.5 per cent, which has since declined. The BTRE projection in this Info Sheet for 2010 indicates that by then road freight will have seen major growth to about 8 million tonnes, whilst rail will have declined to about 0.6 million tonnes. This means rail will then have a land freight modal share of less than 7 per cent.

These trends are projected to continue through to 2020 with road at 11.4 million tonnes and rail 0.3 million tonnes. This implies rail would have a paltry 2.5 per cent modal share (assuming that the line has not been closed by then).

However, with Sydney - Brisbane track upgrading, rail's modal share of freight would increase on this important corridor. Indeed, the 2001 ARTC Track Audit (summary, exhibit 3.4) put rail's modal share on this corridor after an upgrade to S2 standards at 36 per cent.

16. As demonstrated in Queensland, upgrading track for faster and heavier freight trains with some rail deviations also allows the option of running moderately high speed passenger tilt trains. This was canvassed by the NSW Public Works Committee of the Legislative Assembly in its 1998 report 'The tilt train', and more recently by the NSW Local Government and Shires Associations of NSW 2004 report 'A future for regional passenger trains in New South Wales' by Prof Gray.

17. Improved road pricing is supported by the RTSA as a means of increasing revenue for road construction and maintenance works, and assisting with road vehicle use demand management.

As per our submission to AusLink, road pricing should include congestion pricing within and near major cities, and mass-distance charging for heavy trucks. At present, the road user charges levied on the long distance heavier trucks result in appreciable hidden subsidies (and indeed the present annual NSW charges are less than they were prior to July 1996 when the NRTC first determination charges came into effect, with reductions in fuel excise taking place in 2000-01).

18. The RTSA is supportive of the concept of using tolls to expedite upgrades of the Pacific Highway, as foreshadowed on 31 March 2005 by the Deputy Prime Minister and Minister for Transport Regional Services, John Anderson in his Media Release "PACIFIC HIGHWAY DUPLICATION TO SLASH TRUCKING INDUSTRY COSTS" Mr Anderson noted, inter alia, in speaking to the 2005 Australian Trucking Convention in Newcastle, also that

*"We will direct almost \$1.5 billion to the Hume and Pacific highways. In the AusLink white paper, we set the target of completing the duplication of the Hume Highway by 2012 and the duplication of the Pacific Highway by 2016 in partnership with New South Wales.*

*"Duplicating the Pacific Highway will have safety benefits and will also reduce transport costs -- one estimate is that truck operators could save up to \$132 per trip in time and operating cost savings. That's why I am keen to look at how we can bring forward the duplication, perhaps with a mix of shadow tolling, some direct tolls and increased government funding.*

*"Local residents would be exempt from any tolls, possibly by using e-tags that recognise them. The tolls would be structured so they did not affect the competitiveness of the trucking industry."*

The RTSA also supports local residents being exempt from tolls, and notes the Sydney Morning Herald Editorial of 29 June, "The wrong tollway for the Pacific" which notes, inter alia the increase in heavy traffic on the Pacific Highway. However, part of the solution curbing heavy traffic is also upgrading the railway line..

19. In regards to a preferred new route between Kempsey (503.56 km) and Eungai, the RTSA notes that all routes come near the North Coast Railway south of Kempsey, north of the location marked Collombatti Rail on the RTA December 2003 Brochure, and near Eungai. As above, the RTSA would request that consideration be given to the option of identifying a land corridor that can be used for both road and rail track deviations.

Another aspect of integrated transport planning is the use of telecommunications. Rail telecommunications on the NSW north coast is antiquated (a coaxial cable system based on frequency division multiplexing) and is unsupportable from the manufacturer, as well as being at risk of failure. Rail would benefit from a more modern system.

Both the RTA and ARTC could well benefit through a combined telecommunication bearer (fibre optic) to support both road and rail telecommunication services (eg Safe-t-Cam

cameras, Variable Message Signs etc for roads as well as signalling and communications systems for rail).

Both rail and road would be increasing their use of telecommunications services in the future. The combining of their requirements would not only deliver an efficient outcome for the NSW government but also increase net worth in the NSW assets. As well, other regional government agencies may also be able to use excess telecommunication capacity.

20. To this end, the RTSA requested in its submission of January 2004 that consultation be undertaken with the Rail Infrastructure Corporation (or its successor the ARTC) re Kempsey to Eungai. The reply was less than encouraging, and suggested that this was not part of the consultants brief. The RTSA also requested that a copy of the Environmental Impact Statement be provided re Kempsey to Eungai, and that the EIS and Representations Report comment on the issues raised in our submission of January 2004.

Examples of the use of shared land corridors for road and rail upgrades can be found in Queensland, including south of Rockhampton in the 1980s, and planning for a corridor west of Toowoomba. It would appear that there is scope, with potential cost savings, for shared corridors on the Pacific Highway, however, this may well require an agreement between the Roads and Traffic Authority, the responsible rail authorities including the ARTC, and planning authorities.

21. The RTSA also notes that Environmental Impact Assessment is currently underway for the section Moorland to Herons Creek, including 22.2 km of new dual carriageways and bypasses of Johns River and Kew.

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National Secretary,  
Railway Technical Society of Australasia

## **APPENDIX A Summary of submission re AusLink 2005**

*Summary of Submission to Senate Rural and Regional Affairs and Transport Legislation Committee re Auslink Bills from the Railway Technical Society of Australasia (RTSA)*

**Introduction** The current inquiry into the AusLink proposals and transport planning is timely. The 2004 OECD report on Australia and recent statements by the Reserve Bank of Australia show that Australia is now facing serious economic problems due to bottle necks caused by inadequate transport infrastructure. Other factors supporting a closer look at AusLink are that; since the start of 2005 oil prices have continued to trade above \$US40 per barrel, and that 'Peakoil' is something Australia may well need to address.

**Freight movements** AusLink is a good start but the first five year plan needs some modification to provide some funding for rail on each of the Brisbane - Townsville and Burnie-Hobart corridors. Advanced planning for a second five year track upgrade programme (2009-2014) for the North South rail corridor is also needed and this will require track straightening on the NSW Main South line. As is well known from experience, road or rail deviations have long lead times to address environmental impact assessment and land acquisition. Rail corridor protection at an early stage is essential.

It is necessary to restore the intended funding of \$400 million for regional strategic transport initiatives including rail as proposed by the AusLink White Paper. The need for grain line rehabilitation is urgent in most mainline states as is the need to make provision for major developments in regional areas. This includes the timber industry in South Australia and New South Wales. RTSA has serious reservations about increasing mass limits of heavy trucks and the current road pricing for these vehicles.

**Passenger movements** A disappointing feature of the Auslink initiative, as outlined in the White Paper and the current bills, is its failure to provide funding for urban transport. Efficient urban transport systems are essential for efficient and healthy cities. The problem is particularly acute in Sydney. The submission draws attention to external costs and suggests that there is a role for the Federal Government in improving urban transport.

For improving regional rail passenger services, RTSA commends the 'Queensland model' of upgrading mainline track for faster and heavier freight trains, and the use of medium high speed trains.

**Other** RTSA supports the formation of a National Infrastructure Advisory Council and a National Transport Advisory Council. We also support calls for a CoAG sponsored microeconomic reform program to focus on freight and passenger transport. This includes a reassessment of road pricing for cars in major cities and the heavier long distance trucks.