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24 May 2010

The Infrastructure Coordinator
Infrastructure Australia
GPO Box 594
CANBERRA ACT 2601

→ John Astle

Dear Madam/Sir,

Re draft National Ports Strategy

Please find enclosed a submission. It would be appreciated if you would acknowledge it and I would be pleased to provide further information on request, or provide the text of the submission in electronic form.

Could you please advise if you are holding information sessions to elaborate on the draft Strategy.

Yours sincerely,



RECEIVED 27 MAY 2010

**Submission re draft National Ports Strategy
Philip Laird University of Wollongong May 2010**

1. Introduction

This submission is based on research conducted at the University of Wollongong. However, the views and research findings are the responsibility of the writer.

The overall concept of a National Ports Strategy is supported, along with improved long term planning and lower landside total transport costs (including current external costs). Less 'red tape' needs to be qualified, as does how externalities shall be minimised (page 5). Ports can often impose significant adverse environmental impacts on those who live either near the ports or major roads that are used by large numbers of heavy trucks accessing the ports.

Two text book examples of adverse impacts include the movement of containers to and from Port Botany, and the transport of coal for export through Port Kembla with plans to further expand Port Kembla without substantial upgrades to the rail infrastructure.

Major airports are now required by the Australian government to produce draft Master Plans for public consultation. A Master Plan is then issued and revised after a few years. This may be useful for sea ports as well as airports.

It is suggested that reference should be made in the final strategy to the findings of the 2007 House of Representatives Standing Committee into Transport etc report *The Great Freight Task: Is Australia's transport network up to the challenge?* This report outlined Australia's growing land freight task and gave numerous examples of inadequate transport infrastructure. In this report, Committee Chairman Mr Neville MP noted that despite some progress since 1998 when the Australian Rail Track Corporation or ARTC was formed, "... it is now even more obvious that bold measures will be necessary to see a more serious movement of freight from road to rail."

Consistent with the findings of this Parliamentary report is the proposition that for ports to operate efficiently and effectively without adverse environmental impact, they require good rail connections to their hinterlands. This sometimes is the case in Australia, as shown by the world class iron ore export chains in the Pilbara region of WA. However, there are also examples of poor practice in Australia, with over-reliance on road transport due to inadequate rail infrastructure and/or the failure to properly price road access for heavy trucks (both through under-recovery of road system costs from articulated trucks

and the toleration of high external costs including road crashes involving such trucks along with air and noise pollution, and in major cities, road congestion costs).

Examples of poor rail access to a port include that from the Darling Down region of Queensland to the Port of Brisbane, with freight trains having to negotiate a 19th century line descending the Toowoomba Range that is long past its use by date.

Rail constraints often result in agricultural produce grown in one state directed to a port in that state, as opposed to finding a least cost rail path to a port in another state.

In addition, major ports can often be induced to improve the efficiency of their operations by having good rail connections between them, allowing those of consign freight by sea to exercise a choice of port. The standard of rail efficiency would appear to be the standard practice in Canada and United States mainlines of moving containers double stacked. However, this can only be done in Australia east of Parkes and Adelaide (to Perth and Darwin).

Rail freight productivity measures need addressing, in a manner to complement that of the discussion papers section 7.6.3 on Truck efficiency.

As noted on page 11, more attention needs to be given to land and corridor preservation for port related activities. This should extend to railways serving ports.

Australia also has demonstrated a willingness in recent decades to inflict unnecessary high social and environmental costs on people who live near major ports, with the movement of containers by road, and in some cases, bulk commodities. An example involving NSW ports follows.

2. Some recent history

As noted in a 2001 joint authored book¹, and 1986 article², most cities with a major container port have a story to tell about the movement of containers, often using old articulated trucks, and sometimes on narrow streets that were never designed for large trucks. One case in particular has been the movement of containers within Sydney, firstly from Mort Bay near Balmain, and then from Port Botany. Another problem has been bulk haulage of coal for export in Newcastle and Wollongong.

¹ *Back on Track: Rethinking Transport Policy in Australia and New Zealand* P Laird, P Newman, M Bachelors and J Kenworthy UNSW Press, 240 pp ISBN 086840411X

² Laird, P G (1986) A tale of two ports', *Current Affairs Bulletin*, August, 1986. p.24-31

2.1 NSW Containers

Most imports into New South Wales come through Sydney. The movement of containers to and from Sydney's ports by heavy trucks has presented severe problems since 1969. The operation of Mort Bay as a container terminal serviced only by trucks in the suburb of Balmain from 1969 to 1980 was one of the worst urban blights in Australia and was even recognised by the NSW Maritime Services Board as '*. . . a situation that is clearly unacceptable*' (Kirby, 1981)³. The Mort Bay facility with container trucks persisted until Port Botany was handling containers.

The NSW State Cabinet resolved to have containers compulsorily moved by rail between Port Botany and the Western Suburbs, as recommended by a Commission of Inquiry (Kirby, loc.cit.) with the unanimous support of seven affected local government councils. However, this plan was quickly overturned in 1982 following industrial action involving the Transport Workers' Union. Road has since then continued to carry the majority of containers to and from Port Botany (except for those being moved interstate). This road haulage was accompanied by truck queues near the Port for many years, and ongoing severe environmental impact, despite the ability of rail to clear containers to decentralised depots away from the port. Although it was not in rail's comparative advantage to service short-distance movements, the use of such a system (with concentrated volumes, regular cycles and appropriate pricing structures) would offset the remoteness of Port Botany from the main industrial areas of Sydney and the tortuous road links that existed for many years (Inter-State Commission, 1989)⁴.

More use of rail for container movements between Port Botany and Sydney's Western Suburbs evolved in the late 1990s. However, the failure to reserve such container movements to rail has punished Sydney suburbs such as Bexley with large-scale trucking operations to move shipping containers through residential and commercial areas with severe adverse social and environmental impacts. The solution favoured by the NSW Government for two decades has been to construct a new urban freeway that was rejected by the Kirby Government inquiry of 1981. The proposed freeway met with strong local

³ Kirby D (1981) Report of the Commission of Inquiry into the Kyeemagh - Chullora Road, NSW Govt Printer, Sydney

⁴ Inter-State Commission (1989) *Waterfront Investigations, Special Study, "Rail access to Ports"*

opposition in the 1980s and the 1990s, and was finally approved as the M5 East in 1998. It is due for completion in 2002 at a cost of some \$400 million. [As it turned out, the cost was about \$800 million].

2.2 Road haulage of coal

A second urban freight horror story was the movement of millions of tonnes of coal, for export, through the streets of Wollongong during the late 20th century. The main export from New South Wales is black coal, the volume of which had grown from about 12 million tonnes in 1970 to over 60 million tonnes in 1999. Most of this export coal is delivered to port by rail. However, for most of the 1970s, 1980s and 1990s, over 4 million tonnes per annum (mtpa) were delivered by road to Port Kembla with a smaller amount delivered by road to coal export terminals at Newcastle. In addition, significant quantities of coal were hauled by heavy trucks on public roads to rail loading points in the Hunter Valley until the commissioning in 1997 of a new coal loading facility near Muswellbrook.

Undoubtedly, the most severe coal trucking impacts were felt by Wollongong during the 1970s and 1980s. The major points are outlined in the next section.

2.2.1 Port Kembla coal exports

In May 1979, no fewer than six lives were lost in two road accidents involving coal trucks. The public reaction was a massive petition signed by 40 000 people and presented to the NSW Parliament:

We, the residents of Illawarra and Southern Tablelands living on the road haulage routes used by heavy transport hereby request your consideration of our petition. I, the undersigned, am appalled by the continuing carnage on our roads and in particular Mt. Ousley, and join in demanding the local, State and Federal authorities take immediate action to ensure motorists' safety.

I further demand the relevant authorities make provisions for the complete abandonment of coal haulage by road.

The immediate NSW Government response was a 40-km per hour speed restriction on heavy trucks descending Mt. Ousley, and a thorough mechanical check of the entire coal truck fleet. The results as reported in 1980⁵ by a Commission of Inquiry showed that

⁵ McDonell, G (1980) *Report of the Commission of Enquiry into the New South Wales Road Freight Industry*, Volume IV, Government Printer, Sydney.

some 30 per cent of the coal trucks had major safety defects, mostly in the braking and steering systems. This led to the ongoing efforts of the NSW authorities in annual and random safety checks of the mechanical condition of heavy trucks operating in NSW.

However, in 1983, Illawarra coal trucks were reportedly involved in fatal crashes at rates, per 100 million vehicle kilometres, of up to three times higher than NSW averages for all articulated trucks. During the eight years from 1978 to 1985, trucks hauling coal to Port Kembla were reportedly involved in some 27 road fatalities. Further efforts by the NSW Government and the coal and trucking industry in the late 1980s, along with much road upgrading, led to an appreciable improvement in safety in coal trucking. However, the upgrading of main roads used by coal trucks and other vehicles came at a large cost, estimated to exceed \$250 million.

In 1983, the NSW Government commenced work on a Maldon – Port Kembla railway. However, after an outlay of some \$50 million on new track, half a bridge, and a start on a tunnel, the Greiner Government stopped the work in 1988.

Other external costs of coal trucking to Port Kembla include road congestion in urban areas, air pollution, vibration, and noise. The noise from coal trucks was found to exceed NSW Government roadside noise guidelines and was appreciably more than the noise from coal trains (Healthy Cities Illawarra/EPA, 1993)⁶. Subsequently, noise walls were installed extending for several kilometres along Mt Ousley and other roads used by coal trucks near residential areas in Wollongong City.

Along with Newcastle and Wollongong, many other cities and towns have had to deal with problems posed by haulage of bulk commodities by heavy trucks using public roads. The impacts were well summarised by a NSW Coal Development Strategies Industry Task Force in 1990⁷ *Road haulage has significant community costs including noise and dust pollution, increased energy usage, increased road maintenance, safety hazards, negative effects on tourism and complaints from local residents*.

Issues relating to heavy trucks, including road safety and road pricing, are important. We shall return to them in later sections of this submission.

⁶ Healthy Cities Illawarra (with Environment Protection Authority -1993) Traffic Noise Study

⁷ NSW Coal Development Strategies Industry Task Force (1990, page 59) Report issued by NSW Department of State Development

3. Current NSW M5 expansion proposals

Port Botany continues to generate much container traffic on road. Current NSW Government thinking appears to be to accommodate this traffic on road as opposed to taking really strong measures to try and get more of it onto rail, and to embark in a massive expansion of the M5 motorway at a cost of some \$4.5 billion.

In background material, it is noted the M5 corridor is the main "freight, commercial and passenger" road with two sections (a 22km toll road and a 10km freeway), and that the road is congested with high numbers of heavy vehicles (road trucks). In addition, significant benefits (\$6 billion of travel time savings over 30 years) are claimed for its expansion (<http://buildingsydneyhighways.com.au/m5-corridor> "The motorway part of the solution", and a three page "Fact Sheet" dated November 2009).

Transport options including more use of rail and/or rail expansion are listed, along with improving the existing road network (e.g. more grade separation), and a little bit about demand management. However, it is quite possible that a combination of all of the various (non new motorway) transport options could well be effective.

The costs of the preferred option involving freeway expansion are large - both in monetary terms and encouraging road vehicle use. A 21+ page "Overview" brochure gives estimate of the cost of the project at \$4.5 billion. This brochure has an introduction by the Minister for Transport who notes, inter alia, "*Tough decisions need to be made to deliver transport infrastructure projects that will provide the greatest NSW benefits.*"

It is perhaps appropriate that tough decisions be made respecting transport policy but of a different nature to the preferred proposal.

This could include placing the main proposal on hold until improved road pricing has been introduced and rail infrastructure has been upgraded. By improved road pricing is meant full "user pays" and "polluter pays." This should include congestion pricing in the Sydney CBD and near Sydney airport plus mean-distance pricing for heavier trucks. Both congestion pricing and distance based pricing were noted in the 2004 AusLink White Paper and by the Henry Tax Review. Progress to date on these fronts has been mainly limited to time of day tolls for the Sydney Harbour Crossing.

With regard to "*polluter pays*", cars meet some external costs through payment of federal excise at 38.143 cents per litre. However, trucks gain a rebate of 16.443 cents per litre of diesel (www.ato.gov.au) and as of 1 July 2009 pay only a modest 21.7 cents per litre road user charge. As such, there is no offset to external costs.

3.1 Freight movements to and from Port Botany

Appendix A includes notes on the under-recovery of road system costs for heavy trucks whilst Appendix B deals with external costs. Further research shows that health costs associated with air pollution from the operation of articulated trucks in Sydney – are 19.0 cents per vehicle kilometre (year 2000 term) (Laird 2005). This is about 25 cents per vehicle kilometre in 2009 terms (rba.gov.au indices - CPI (1.32)).

A further dimension is that the NSW Government has a target of getting 40 per cent of containers moved via Port Botany onto rail. Further details are given in a **Landside Improvement** section at: www.sydneyports.com.au which in part states (under Increasing the Role of Rail) *"A key element in port freight and logistics planning for metropolitan Sydney is maximising the use of rail. These volumes include export products from regional NSW, and port shuttle movements of exports and imports within metropolitan Sydney. With the NSW Government and Sydney Ports having the shared objective of achieving a 40 per cent mode share for containers transported into and out of Port Botany by rail. This offers industry an alternative system that has a higher level of efficiency, competitive usage costs and lower air and noise emissions."*

Under a subsection "Managing Road Transport Movements" it is noted *"Extensions to the motorway network have improved accessibility between Port Botany and key distribution and industrial areas across Sydney. However since this infrastructure is shared with commuter vehicles, heavy traffic volumes are inevitable during peak periods. An increase in the volume of freight will translate into an increase in the number of trucks using the road system. While the future number of port trucks on the road will continue to represent a low proportion (between 1 and 2 per cent) when compared to total traffic, it is important that this growth can be accommodated on existing infrastructure through better traffic and operational management."*

Data at this website shows container volumes (increasing from 1.37m TEU in 2005-06 to 1.54 m in 2008-09) and the percentage of containers moved by rail varying from 21 per cent in 2005-06 to some 22.9 per cent in 2008-09.

3.2 Options

In place of the stated preferred option of a major road upgrade, it is recommended that along with improved road pricing and rail infrastructure more attention be given to improving the existing road network and that this be funded by tolling. Tolling options

include a toll on the M5 East (varying as to the time of day), a toll for trucks to access the Port Botany area, and a toll for any vehicle to access the airport.

Tolling should be accompanied by **measures to improve rail freight and passenger services**. This would include measures additional to those currently underway by the ARTC to improve rail freight operations, and a marked improvement in the Airport Rail Link passenger services.

In respect of the airport, which is a major traffic generator, improved rail services is one way forward. This could be done on either of two fronts: lowering fares as recommended by the Independent Public Inquiry - Long Term Public Transport Plan in its interim report released in February 2010 by the Sydney Morning Herald⁸ and/or a real improvement to the train services. In the short term, this could include provision of luggage friendly trains confined to the airport line and the City Loop.

It is also recommended that before any project approval is given, or funding from the federal or state government is made available, a study should be done on the cost to the wider community for not imposing a toll on the M5 East when it was opened in 2001. This study would include not only the foregone revenue to the NSW government, but also quantify the additional traffic using the M5 East and its external costs. Attention is also needed to the amount of traffic the M5 East has induced to date.

In addition, a study is needed to provide clear estimates on how much traffic would be induced in the future on the M5 road corridor under the various scenarios.

It is also submitted that future studies need to assess future demand under various scenarios. These should include oil pricing at various levels (including the CSIRO \$8 per litre). In addition, the impact of port development at Newcastle and Port Kembla on Port Botany on the M5 road corridor should also be assessed.

3.3 A question of priorities

Finally, the large cost of \$4.5 billion for the preferred option raises questions as to priorities – not only between roads and alternatives to roads, but various road works needing attention. These include the Princes Highway and the Picton Road, which for many years have seen significant traffic growth with only limited upgrading.

⁸ via www.transportpublicinquiry.com.au

4. Port Kembla

Port Kembla, in part due to its escarpment constrained location, continues to demonstrate poor rail connections (where steep grades on the existing lines require coal trains bound for Port Kembla to be relatively small with many locomotives) and over-reliance on heavy trucks using public roads.

In 2005, the NSW Government granted approval for the expansion of Port Kembla inner harbour to accommodate car carriers, and this operation started in late 2008. During the assessment process, the NSW Government appeared to take the line that the existing road and rail infrastructure would be adequate. This view was questioned by a NSW Parliamentary State Development Committee (2005) examining NSW ports. The final report of the State Development Committee in relation to the Inquiry into Port Infrastructure in New South Wales released 17 June 2005 noted, inter alia, comments for and against completion of the Maldon Port Kembla railway. The NSW Committee made two related recommendations:

Recommendation 12. That following the anticipated transfer of general cargo stevedoring to Port Kembla in 2006, the NSW Government re-examine the freight task out of Port Kembla to ensure that the anticipated increase in freight traffic is supported by the necessary improvements in road and rail infrastructure.

Recommendation 13. That the NSW Government consider the feasibility of expanding rail infrastructure into Port Kembla, including consideration of the Maldon to Dombarton line, in conjunction with the AusLink program.

These recommendations were noted of the Infrastructure Action Agenda (2006, p40) of the Australian Logistics Council. They could have usefully appeared in the EA and should at least appear in the Submissions Report and the Director-General's report.

During 2008-09 the NSW Department of Planning processed a Major Projects application by the Port Kembla Coal Terminal (PKCT) to lift a long standing curfew on road deliveries by coal trucks to the PKCT and to lift already high levels of road haulage of coal of some 5.1 million tonne per annum (mtpa) of coal to the PKCT to a maximum of 10 mtpa. The curfew went back to State Environmental Planning Policy 7 (SEPP 7) that was made in 1982 that reflected a 1979 consent of Wollongong City Council but lifted a 1979 consent condition made with the agreement of the NSW Government that imposed a limit of 2 mtpa of road haulage of coal to Port Kembla.

The application resulted in the NSW Department of Planning receiving 122 written objections. To quote from their Director-Generals Report (2009, p12), *"The main grounds for objection included:*

- *noise, road safety and driver behaviour, dust and air pollution, impact on infrastructure and greenhouse gas emissions due to an increase in heavy traffic movements;*
- *choice of road transport in preference to provision of a rail link, in particular the completion of the Maldon-Dombarton rail line to transport coal more efficiently from the Western Coalfield; ...*
- *limited community consultation during the environmental assessment process."*

On top of the car carriers and approvals for extra road haulage of coal, the Port Kembla Port Corporation is currently seeking approval from the NSW Department of Planning (2010)⁹ for development of the Outer Harbour of Port Kembla comprising in part:

- 42 hectares of land reclamation and associated dredging;
- shipping berths and freight terminals (container, dry bulk and multi-purpose);
- storage and truck loading facilities; and
- road and rail infrastructure (where the Director-Generals requirements include "interaction and integration with existing and planned transport infrastructure (eg Maldon to Dombarton rail link and services").

4.1 Comment on current Port Kembla Expansion plans

In April 2010, an Environmental Assessment was placed on public exhibition by the Department of Planning. This Assessment notes in part (Appendix I, p19.4 of the limitations of rail capacity on the existing main line to Sydney, and suggests rerouting freight trains with new cargo going into and out of Port Kembla via the Moss Vale Unanderra line. However, the Moss Vale Unanderra line has severe speed-weight restrictions.

As noted above, the proposed expansion comes on top of expansion of the Inner Harbour with car carriers starting in 2008 and approval for more coal trucks on public roads in 2009. Given the limitations of the present rail and road network linking Port Kembla to Sydney and other parts of New South Wales, there is a marked potential for

⁹ 2010, <http://majorprojects.planning.nsw.gov.au/page/project-sectors/transport->

significant adverse traffic impacts. As outlined below, these impacts are understated in the Environmental Assessment.

Of crucial importance is the question of whether the Maldon Dombarton rail link will be completed. It is submitted that until the New South Wales Government, that made a start in 1983 on this link, makes a commitment to provide some funds towards the completion of the link, the present Port Kembla application should be not be approved.

4.1.1 Comment re Appendix I Traffic and Transport

This Appendix in the EA contains some 39 pages plus five (sub) appendices, it looks at traffic issues associated with the proposed three stage development, out to the year 2036. In summary, *“road freight traffic to the Outer Harbour is likely to grow over time reaching 205 trucks per day to 2036. This equals to 64 trucks per peak hour.”*

The commissioned report, whilst conceding some local road improvements may be necessary, finds *“no significant impact”* on the road system. This may not be the case.

One table on page 33 notes that in the first two years, 17 full construction trucks (loaded or both way?) will be needed on average each hour on weekdays.

A brief mention is made on page 4 and 5 of Appendix I about the Mt Ousley, Picton and Appin Roads. No reference is given at all to widely reported issues of road safety on these roads. In addition, no reference is given to the official 2007 Sydney - Wollongong Corridor Strategy. More on the Picton Road and this strategy follows below.

4.1.2 Getting containers and other freight onto rail

As noted above, the NSW Government has a target of getting 40 per cent of containers moved via Port Botany onto rail, however, and the percentage of containers moved by rail varying from 21 per cent in 2005-06 to some 22.9 per cent in 2008-09.

If only 20 per cent of 1.2m TEU of containers pa are moved to and from Port Kembla by rail, then that means 960,000 TEU pa of containers by road. Given the current practice at Port Botany, such a mode share could usefully be modelled for the EA re Port Kembla expansion.

4.1.3 Sydney Wollongong existing rail constraints

Page 19.4 of Appendix I of the Environmental Assessment (EA) notes the limitations of rail capacity on the existing main line to Sydney, and suggests rerouting freight trains from Sydney via Moss Vale. This was also noted at the Port Kembla Port

Corporation (PKPC) Community Forum held 20 April 2010 at Port Kembla, were consultants for the applicant (PKPC) stated that from the point of view of RailCorp there were no further train paths available for freight trains on the existing Sydney-Wollongong railway, and it was proposed to use the Moss Vale Unanderra line for new cargo going into and out of Port Kembla.

However, the Moss Vale Unanderra line has severe speed-weight restrictions that make it difficult for any rail operator to provide cost effective rail freight services.

These include:

1. the difficult nature of the Robertson-Unanderra track with its steep grades that requires a maximum speed of 40km/h for most sections of this track,
2. the short length crossing loops limiting train tonnage and size, and,
3. for freight moving between Port Kembla and Western Sydney (or any part of Sydney) excessive extra distance when compared with the existing line.

These rail constraints will invariably lead freight consignors to choose road freight. This situation is exacerbated by demonstrably under-recovery of road system costs and a failure of government to reduce external costs of trucking by internalisation of all road crash costs involving articulated trucks, and application of the polluter pays principal for environmental costs. More information on this topic follows in Appendices A and B.

4.1.4 The Picton Road

The EA mentions the Picton Road. One does not expect the EA to have noted the Autumn 2010 front page articles in the Illawarra Mercury, but attention needs to be drawn to the articles of 28 April 2010 and 5 May 2010, the latter noting that this is the most dangerous road in Australia.

However, the assessment process should be taken to task for not noting earlier and repeatedly expressed expressions of community concern up to March 2010 about the state of the Picton Road, and the number of fatalities from road crashes on this road. The Illawarra Mercury and other local media has frequently drawn attention to the fact that since the year 2000, no fewer than 21 lives have been lost in road crashes on the Picton Road. Although the dangerous nature of this road has been noted for years by the Illawarra Mercury and other local media, quite simply, by design or accident, is downplayed in the EA. Media coverage includes that of **Data reveals Picton Rd fatalities cost \$50m** 20 Feb, 2010 Illawarra Mercury

Fatal crashes on Picton Rd have cost the economy at least \$50 million over the past decade, new national data has revealed.

A report released this month by the Federal Government's Bureau of Infrastructure, Transport and Regional Economics (BITRE), puts a \$2.67 million price tag on the cost of a road death, taking into account factors such as workplace and household losses, insurance and medical bills, road delays and legal costs.

With the death count on Picton Rd between Mt Ousley Rd and the Hume Hwy standing at 19 over the past decade, the economic cost of fatalities has hit \$50.73 million.

Figures obtained by the Mercury also reveal that Picton Rd has been the scene of 308 crashes over the past decade, 127 of them resulting in injuries.

Other articles in Summer 2009-10 include:

04 Feb 10: Gwynneville woman loses fight for life after Picton Rd crash

03 Feb 10: Picton Rd toll hits 23 as January crash victim dies

06 Jan 10: One dead, one injured in Picton Road crash

14 Dec 09: It's not safe: calls to lower Picton Rd speed limit

08 Dec 09: The human face of Picton Rd's worst tragedy

07 Dec 09: Picton Rd crash: family had fled Afghanistan

06 Dec 09: Five killed in Picton Road crash

4.2 The Sydney Wollongong Corridor Strategy

The 2007 draft Sydney Wollongong Corridor Strategy (DOTARS 2007) released by the federal government as part of the former AusLink programme identifies many issues relating to present and projected demands in moving people and freight between Sydney and Wollongong.

The strategy notes that the demands on the existing road and rail network will be compounded by the further development of Port Kembla and an expected growth in the number of people commuting between Wollongong and Sydney as well as between Wollongong and Campbelltown/Western Sydney. The projected "*rapid growth in corridor freight*" will also pose additional challenges.

The draft strategy identifies (DOTARS 2007, p13) the Mount Ousley Road is already at capacity in the morning peak (AADT 34 500 in 2003 including about 5500 heavy vehicles), there is congestion at times between Heathcote and Jannali, and the rail line through Sydney cannot be used by freight trains for at least seven hours per day.

The draft strategy pays particular attention to various road upgrading options. In regards to rail, it notes (DOTARS 2007, p13) that *"Commuter journeys along the Illawarra rail line are already operating at close to peak capacity. When population growth is taken into account, the Illawarra rail line will reach critical levels before 2016 during the morning peak (between 7.30 am and 9.00 am at Central). More services may need to be provided during the off-peak periods in the longer term as well. This would necessitate either lengthening of existing South Coast trains or the provision of additional services, which will lessen the availability of freight paths in non-peak times."*

The final strategy (2007, p6) notes that the Illawarra rail line faces an effective restriction on freight train operations during peak periods (600 to 900 and 1500 to 1900hrs) and that *"...it is often difficult to find paths for freight trains as there are only two rail tracks south of Hurstville."* with particular congestion problems between Hurstville and Sutherland. The final strategy also notes (p11), with conditions, that the Maldon - Dombarton line may be able to play a future role and could *"...remove bulk freight from the Illawarra rail line and some other parts of the Sydney passenger rail network, opening up rail paths for freight between Port Kembla and Sydney."*

4.3 Cumulative impacts

Added to the cumulative impacts of road haulage of coal, carriers is now the road haulage of bulk freight to Port Kembla is the movement of some grain from near Cowra. To quote in part from the Cowra Community News for 4 April 2009 *"NSW, Noonbinna villagers rail against GrainCorp's contract road warriors"*

HEAVY road trucks rushing to join queues to out-load grain from the Noonbinna wheat silos are causing headaches and sleepless nights to residents of the village – and concerns for the safety of their children.

Grain was formerly out-loaded into rolling stock for shipment by rail via Young and Harden to the export terminal at Port Kembla, but villagers say agribusiness group, GrainCorp, is replacing rail with contract road transport because it is significantly cheaper.

Villagers say they understand farmers' need to quickly get their grain to the silo during harvest, ...But out-loading grain post-harvest by road to Port Kembla, over intermittent four- to eight-day periods as wheat orders are required, is altogether another matter. They say they are copping an unfair double-whammee. ...

Decisions such as this, and also the closure in September 2009 of the Harden to Cowra railway also put more trucks on the roads leading to Port Kembla.

4.4 Understatement of traffic impacts

These are of two forms – specific to the proposal and a general approach (tolerated to date by the NSW government) that overlooks the significant external costs of road freight operations (and external costs of rail freight).

With respect to the proposal, the Mt Ousley road is congested in peak hours and on 5 May 2010, the Illawarra Mercury rated the Picton Road as the most dangerous road in Australia. The Illawarra Mercury and other local media for years have reported not only on accidents on this road, but the need to improve it.

The proposal, if approved, would inevitably result in more heavy trucks using this road. However, the EA just does not get the point that the Picton Road is a dangerous one.

The Appin Road is also a dangerous road. Again, if the proposal is approved, there will be more heavy trucks using this road.

A further understatement of traffic impacts is the insufficient attention given to the cumulative impacts of car carriers, the potential for extra coal trucks, and the increase over recent years in the numbers of people commuting between Sydney (Western and other parts) and Wollongong (in both directions).

It is suggested that additional modelling is required of the likely impact on traffic if the proposal goes ahead on two different scenarios as per the 2009 approval for PKCT.

- A. Road haulage of export coal rises to 7.5 mtpa
- B. Road haulage of export coal later rises to 10 mtpa

Understatement of traffic impacts also arises from the dubious practice of counting a heavy truck as one vehicle (eg page 18.4 that the proposal will lead to an increase in only one per cent of the number of trucks in peak hour).

Standard methodology of assessing road system costs and impacts includes not only vehicle numbers, but three other standard and important indicators: Passenger Car Equivalents (including 3 for a semitrailer and 4 for a B-Double), Average Gross Mass Vehicle kilometres, and, Equivalent Standard Axle kilometres (which take into account the wear and tear on the roads caused by heavy trucks and other vehicles). These parameters are outlined in official reports such as those of the National Transport Commission, yet only vehicle numbers and vehicle kilometres appear to be used in the PKPC Environmental Assessment.

Thus, the impacts of truck numbers go far beyond just the numbers of trucks. The use of plain truck numbers (or even vehicle kilometres) in the Environmental Assessment understates the real impact on the road system, other road users.

4.5 The Maldon Dombarton rail link

The EA could give more information about the Maldon Dombarton rail link, including some of the findings from the 2009 prefeasibility study. This rail link is now the subject of a further study. The summary of a paper *The Maldon Port Kembla Railway and the Wentworth deviation* of this writer at the November 2009 AusRail Plus conference in Adelaide follows.

In 1983, work commenced on a Maldon - Port Kembla Railway. This was in two sections being a new 35 km link from Maldon (on the Main South line) to Dombarton (located on the Unanderra Moss Vale line) and upgrading the existing 15 km line from Dombarton to Port Kembla. Significant construction work was undertaken during the 1980s on both sections, and studies were undertaken during the 1990s on completing the Maldon to Dombarton section.

Following the release in 2007 of an AusLink Sydney - Wollongong corridor strategy and a House of Representatives Standing Committee report on rail freight noting capacity constraints on the existing Sydney Wollongong railway, the Australian Government commissioned in 2008 a pre-feasibility study. This study was released in July 2009 with a commitment to proceed to a full feasibility study.

With expansion of Port Kembla and increased demand for passenger train services on the existing South Coast railway, the paper concludes that completion of the Maldon - Dombarton link could now be regarded as a "not if, but when" investment.

The paper also notes the future option of connecting a Maldon Dombarton link to a proposed 39 km rail deviation from Menangle to Aylmerton (the Wentworth route) on the Main South line.

The EA appears not to have mentioned the promised Waterfall -Thirroul route with a long tunnel or even partial realignment of this winding track. The Waterfall - Thirroul route was quoted in a consultants report for the NSW Government (2003) as costing about \$1.4billion \pm 30 per cent. In addition, triplication or quadruplication (has appeal but is more costly) of the Hurstville - Sutherland line. This section of track will see more trains following duplication of Cronulla - Sutherland and improving Loftus - Sutherland - Oatley signalling noted in the Premier's media statement of 23 April 2010 FASTER, MORE FREQUENT TRAINS: CRONULLA LINE DUPLICATION as costing \$436million.

The completion of the Maldon Dombarton rail link would be a much less expensive option than improving rail capacity on the existing line.

On 30 May 2008, a joint \$500 million Federal - Victorian North West Rail Revitalization project was announced with \$170 million from the Victorian government to improve rail and passenger services between Melbourne and Sydney. It is submitted that expansion of Port Kembla should be conditional on the Maldon Dombarton rail link proceeding. This could be expedited with some financial support from the NSW Government.

5. **Other issues affecting export of produce from NSW**

The situation for **Rail Infrastructure for wheat movements** is well summarised by the Australian Wheat Board 2005 submission to the inquiry by the House of Representatives Standing Committee into Transport etc into the efficiency of freight networks serving portsw.

"Rail infrastructure for the grain regional network across Australia is comprised of three gauge types and stretches some 18,000 kilometres....The regional branch line network in all states has received minimal re-investment and as such is characterised by lower speed and weight restrictions, an increase in derailments and a gradual loss of traffic.

"As a comparative guide North American rail networks carry up to 100 tonnes of wheat in a wagon. In contrast, the average Australian net wagon load is 55 tonnes and can be as low as 35 net tonnes.

"The regional branch line network has undergone minimal rationalisation over the years and this is primarily been limited to forced rail line closures due to the high cost of maintenance. There has been no significant public investment in the eastern states to upgrade and maintain the regional network to allow it to take advantage of larger, heavier or more efficient trains. ... "

Many other submissions to the 2005-2007 House of Representatives Inquiry support these views. For example, the Railway Technical Society of Australasia (RTSA) notes, inter alia, "In part due to rail privitisation, problems of grain movement and maintaining branch lines as 'fit for purpose' is a particular issue for Victoria, New South Wales, South Australia and Western Australia. The impacts of grain movement in regional and rural Australia have wider economic and social impacts that require national

consideration. Closing branch lines with the consequent increase in B-Doubles and other heavy trucks on regional roads is likely to impose high external costs."

The poor state of rail infrastructure supporting NSW grain exports was demonstrated on a Study Tour on Railway Engineering held 22-25 March, 2006. This study tour was organised by the Railway Technical Society of Australasia (RTSA).

The tour found that the AWB silos (as seen at West Wyalong and Stockingbingal) and ABA silo (at The Rock) are new (5 to 10 years old) modern facilities designed for quick loading of trains (at 800 tonnes or more per hour) and road only receipt. However, the effectiveness of silos at West Wyalong and The Rock were constrained by their branch lines being restricted to 19 TAL. In the case of the ABA silo at The Rock, this was despite the main line capable of handling 25 TAL being no more than two kilometres away.

It is odd that at the time of installation about 1999 neither ABA (with its joint partner Sumitoto), or the Rail Access Corporation, or Freight Corp sought to make a small marginal investment to lay heavier rail etc for two kilometres. It is also puzzling why this situation has persisted for so long, where now between them, ABA, the NSW Government and/or ARTC, and Pacific National have declined to make the investment. It appears that construction of a triangle and loop on **heavier rail** to give direct access to Melbourne Port (where most of the wheat from this silo goes) would be a good investment.

In the case of West Wyalong, a longer section of branch line with 19 TAL is used (via Temora and then to Stockingbingal). It was noted that at West Wyalong, some 53 kg/m rail (as opposed to old 30 kg/m rail) was in use, and the ballast appeared in good condition.

At Boree Creek, a local committee had been active in attempting to persuade the NSW Government to not only retain their branch line (57 km from The Rock) but also upgrade it from 19 to 23 TAL. To this end, they had retained consultants (Rail Asset Management) to estimate the scope of work and cost to upgrade (\$11m \pm 30%) and had made a detailed submission to the NSW Grain Infrastructure Advisory Committee (GIAC). The Boree Creek Committee has made ongoing representations to government at all levels. This included correcting apparent errors in the GIAC report of under-estimating tonnages and the cost of road upgrades in event of closure of the line. The Committee also considered that GIAC had overestimated the cost to upgrade their branch line.

The issue of limited weight for wagon loadings also affect the Patrick Intermodal operations at Griffith. Their trains currently go via Leeton to Junee and Melbourne, but their line to Junee is restricted to 19 TAL. In their case, a modest increase 21 TAL, would

give good benefits. The necessary investment in rail track would be very small when compared to the private investment of over \$150m by Casella Estate Wines to build a large new state of the art grape receival, wine making and bottling plant (12 million bottles a year of [Yellow-tail] wines most for export to the United States.

6. Issues affecting export of produce from Victoria and South Australia

These now mainly relate to residual gauge standardisation issues.

7. Interstate container movements

Between Australia's three largest cities, these are constrained by decades of under-investment on the North South rail corridor. In this regard, the report of the Review of the National Transport Commission (released December 2009) noted, inter alia, and quoting *"As a result of lack of investment in rail infrastructure, the average speed of trains on the Melbourne-Sydney-Brisbane line remains slow. ... The resulting increase in travel times reduces the ability of rail to compete with road."*

In the Neville Committee's view, it is necessary *"...to raise Australia's rail transport to world's best practice"* and *"... that it is time that Australia made a national commitment to sharply raising the standard of the rail network to provide a fast, modern, flexible and efficient system."*

Towards this *"... the greatest need for Australia is the reconstruction and realignment of the main freight networks."* Plus the challenge given by Mr Vince O'Rourke, former QR head, to *"move beyond the steam age era and build modern railways to cope with the 21 st Century demands."*

This should include working towards the United States-Canadian Class I railroad standards that allows freight trains with 30 tonne axle loads (TAL) to travel up to 100 km per hour. Not just 23 TAL at up to 80 km/h (or 21 TAL at 115 km/h) that prevails over much of the ARTC network.

Straightening and strengthening mainline interstate track (for Fast Freight Trains with heavier axle loads) and/or improving clearances (overhead and sometimes width) with either substandard alignment or other deficiencies will cost. However, the level of cost per kilometre will not be nearly as high as building dual carriageways (now over \$25m per kilometre where many rail deviations will be built for less than \$10m per km - indeed some were built during the 1990s for \$1.3m per km).

To date, the ARTC has concentrated on asset renewal and maintaining track on the existing alignment. This reflects that fact that as a corporation, ARTC is required to make prudent investments rather than road authority type investments.

Deviations have been deferred although the ARTC 2008-2024 ' Interstate and Hunter Valley Rail Infrastructure Strategy" notes (p32) that "Deviations offer significant benefits in terms of reduced transit time and reduced distance." The Strategy provides for a total of 8 deviations on the North South corridor to be completed in 2014. However, there were no funds allocated to mainline deviations in the 2010 Federal budget although some funds were provided for curve easing on the North Coast Line.

On the Main South line, five deviations with 196 km of new track would replace 256 km of 'steam-age' alignment. Benefits for each freight train with three 4000 HP locomotives include a time saving of 105 minutes and a fuel saving of about 2000 litres of diesel.

There is also scope for an inland Melbourne Parkes Brisbane route.

8. Conclusions

An effective National Ports Strategy also requires an effective land transport strategy. This will require improved rail infrastructure and road pricing reform for heavy trucks.

As noted above, for a major port to operate efficiently and effectively without adverse environmental impact, it requires good rail connections to their hinterlands.

Attention to reducing social and environmental impact of port operations is needed. An effective way to minimize externalities is actually to ensure that the relevant costs of social and environmental impacts are met by those causing the impacts as opposed to the wider community having to pick up the costs.

Rail freight productivity measures need addressing, in a manner to complement that of the discussion papers section 7.6.3 on Truck efficiency.

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APPENDIX A Re road pricing for heavy trucks

i. From the website of the National Transport Commission (NTC) accessed 13 October 2008.

The NTC was directed by the Australian Transport Council (ATC) to update heavy vehicle charges after the Productivity Commission's *Road & Rail Freight Infrastructure Pricing Inquiry* (2007) concluded: "*Substantial increases in road investment in the past couple of years make it likely that heavy vehicle charges would have to rise to maintain cost recovery.*"

In April 2007, the Council of Australia Governments' (COAG) endorsed the charges review as the first 'building block' of broader road pricing reform.

Why are large increases proposed for B-doubles? Bigger trucks are currently cross-subsidised by smaller trucks. COAG's pricing principles require those cross-subsidies to be removed.

B-doubles have benefited significantly from higher road spending; particularly improved access around ports, urban arterials, grain silos, sale yards etc. The number of B-doubles has increased by 267% to 9,564 vehicles since 2000.

Governments have little incentive to further extend the B-double (and other high productivity vehicles) network if they don't pay their way. The Business Council of Australia's Infrastructure Roadmap for Reform (September 2007) recently concluded: "We need to ensure that high productivity (that is, larger and longer travelling) trucks are charged appropriately. Not only will this help road/rail neutrality, it will facilitate having B Doubles and B Triples on our roads." - (BCA 2007)

Is the NTC calculation accurate? "The Productivity Commission independently audited and endorsed NTC's charges methodology noting that it is "conservative" by international standards (i.e. resulting in lower charges)."

ii. As noted by the 2006 Productivity Commission Road/rail freight infrastructure pricing report (on page 125), the recent annual subsidy paid for the operation of a 9 axle B - Doubles hauling the 75 th Percentile distance (227 500 km) is \$23,000. This was under National Transport Commission (NTC) charges and methodology, based on revenue of \$34,200 and an allocated cost of \$57,200.

iii. There appears to be three notable broad groups of estimates for road system costs attributable to heavy trucks¹⁰:

- **Conservative or NTC** - as per the National Road Transport Commission (NRTC) first and second determinations and the NTC third determination.

¹⁰ *Road pricing in Australia – too much or too little*, P Laird, Australian Road Summit, February 2007

- **Intermediate** - including the former Inter-State Commission findings¹¹ during the 1980s, the 1990-91 Over-Arching Group (OAG) recommendations and NSW permit fees for heavier semitrailers and all B Doubles in use to 30 June 1996.
- **High, or "user pays"** - including the Bureau of Transport and Communications Economics (BTCE) 1988 report¹² noted in the draft report of the Productivity Commission, McDonell's methodology (NSW) (see for example¹³), and ongoing New Zealand Road User Charges.

When announcing the NRTC first generation charges in 1992, the chairman, the late Gordon Amadee, conceded they would not be "user pays" as this would not be tenable¹⁴. The costs to the NSW Government of implementing the then new NRTC charges (as of 1 July 1996) was over \$60 million per year and NSW annual permit and registration fees of \$12,650 a year in 1989 for an 8 axle B-Double were slashed to \$5500. With Consumer Price Indexation, the 1989 NSW B-Double fee would in 2007 be about \$20,775. This is more than two and a half times more than July 2008 NTC charge for an 8 axle B Double of \$8041.

Subsidies are one reason why the number of large B-Doubles has grown so rapidly in recent years, as noted in the draft report of the Productivity Commission - up from about 700 in 1997 to more than 6000 now. The difference between road system costs attributable to articulated trucks under the 2005 NTC model and using Macdonell's Methodology is approximately \$1.5 billion per year.

iv.. New Zealand has had in successful use, since 1978, a system of mass-distance pricing for heavy trucks. These charges for the heavier articulated trucks hauling long distances are appreciably higher levels than the combined annual registration charges and fuel road user charges that apply in Australia. These were recently increased in July 2008, and for a 9 axle B-Double operating at 62.5 tonnes Gross Vehicle Mass with 22.5 tonnes on the prime mover and 20 tonnes on each of triaxle trailers would amount to \$NZ942 per 1000 km (taking the prime mover at the average of charges of \$452.03 for 22 tonnes and 523.33 for 23 tonnes plus \$227.19 for each trailer to 20 tonnes).

From the above 2006 Productivity Commission report, a 9 axle B - Double hauling the 75 th Percentile distance of 227 500 km) in a year would pay \$34,200 and have, under the NTC's 'conservative' methodology, an allocated cost of \$57,200. Yet, the same B-Double in New Zealand would pay \$NZ214,305 in road user charges. Even allowing for currency conversion, GST, the New Zealand charges being current, and the NTC ones being c2005, there is a large difference. The ratio between New Zealand and Australian road user charges for a heavy 9 axle B-Double hauling long annual distances is at least four to one. For heavily laden semitrailers hauling long annual distances, the ratio between the New Zealand user pays charges and the recent NTC charges are about three to one.

¹¹ Inter-State Commission (1986) Cost recovery arrangements for interstate transport, to (1990) Road use charges and vehicle registration: a national scheme Canberra

¹² BTCE (1988) *Review of road cost recovery*, Canberra

¹³ Laird PG *Freight transport cost recovery in Australia*, Australasian Transport Research Forum, Gold Coast

¹⁴ Sydney Morning Herald April 13, 1992 "Recession puts truck plan off road."

APPENDIX B Land Freight External Costs

Executive Summary of an Australasian Transport Research Forum Paper *Revised Land Freight External Costs in Australia* Sydney September 2005 Philip Laird, University of Wollongong

This paper outlines some estimates of external costs of land freight transport published in Australia since 1990. The earlier reports include those of the former Inter-State Commission, the National Transport Planning Taskforce, the Victorian Environment Protection Authority and the Bureau of Transport and Regional Economics with its 1999 report *Competitive Neutrality between road and rail*.

With the increasing land freight task and projections for future growth, estimates of external land transport costs have been of increasing interest to government. Recent examples include Queensland Transport, the Victorian Department of Infrastructure, the NSW Department of Transport study of grain transport options, the Australian Transport Council's 2004 *National Guidelines for Transport System Management*, and, the 2003 Austroads report *Valuing Environmental and Other Externalities*. A New Zealand Ministry of Transport *Surface Transport Cost and Charges* study released in 2005 is also of note.

The paper gives particular attention to six external costs of road and rail freight operations in both metro and non-urban areas identified for the Australian Rail Track Corporation's 2001 Track Audit. These external costs are accidents, air pollution, noise pollution, greenhouse gas emissions, congestion, and incremental road damage. The results of two studies conducted for Queensland Transport in 2001 and 2004 that provided updated estimates for each of the Track Audit externalities are discussed. The revised estimates of unit costs include:

1. Australia wide accident costs of 0.6 cents per net tonne kilometre (ntkm) for road freight moved by articulated trucks and 0.03 cents per ntkm for rail freight.
2. An average cost of air pollution in capital cities of 0.65 cents per ntkm for freight moved by articulated trucks and 0.22 cents per ntkm for rail freight moved by diesel electric locomotives. These estimates are based on PM10 emissions as discussed in two BTRE reports *Health Impacts of transport emissions in Australia: Economic costs* (2005) and *Urban pollutant emissions from motor vehicles: Australian trends to 2020* (2003).
3. Noise in capital cities - 0.22 cents per ntkm for road, 0.12 cents per ntkm for rail.
4. A greenhouse gas cost (based on \$25 per tonne of carbon dioxide) of 0.18 cents per ntkm for road freight moved by articulated trucks and 0.06 cents per ntkm for rail freight.
5. Road congestion (metro only) 0.10 cents per ntkm for road. -
6. Pending the third determination of road user charges for heavy vehicles of the National Transport Commission, under-recovery of road system costs from articulated trucks at 1.0 cents per ntkm.

Table 1 Recommended revised Australian land freight externality costs

Externality Measure	Road (c/ntk)	Rail (c/ntk)
Accident Costs	0.60	0.03
Air pollution		
- Metro	0.65	0.22
- Rural	0.13	0.04
Noise pollution		
- Metro	0.22	0.12
- Rural	0.07	0.04
Greenhouse gases	0.18	0.06
Congestion (Metro only)	0.10	-
Increased road maintenance	1.00	
TOTALS		
Metro	2.75	0.43
Rural	1.98	0.17

Reference: As per text. Note that road maintenance costs for roads of light construction are higher, also that any rail track subsidies may need to be taken into account.

It may be noted that, excluding unrecovered road system costs, the metro articulated truck road external cost of about 1.75 cents per net tonne km is less than half the approximate value cited in the above Austroads report of some 4 cents per net tonne km.

Lower unit costs are given for air pollution and noise for road and rail haulage in non-urban areas.

Even if the users of land freight transport are not required to meet their full external costs, such costs should be fully accounted for when major infrastructure investment decisions are being made. Based on the information in this report, the values in Table 1 are recommended.

It is also of note that road vehicle operators using petrol pay an appropriate de facto externalities charge through fuel excise without rebates, and the assigned average health costs from car use (1.3 cents per km) in the state capital cities equates to about 12 cents per litre of petrol used.

However, following introduction of the New Tax System in 2000, the operators of heavy vehicles were granted conditional rebates for the use of diesel, which have since been further extended to effectively require no payment of external costs (cf about 20 cents per litre prior to 2000).