

# **Submission re WestConnex M4 East**

**from Philip Laird, University of Wollongong, October 2015**

The M4 East motorway upgrade and extension forms part of the WestConnex scheme. The M4 East project includes widening and realignment of the M4 within Homebush, and two 5.5 km three-lane tunnels (one eastbound and one westbound) extending from west of Underwood Road at Homebush to Haberfield.

The submission shall offer comments similar to those made in a September 2014 submission to NSW Infrastructure to Rebuilding NSW and shall draw on research conducted at the University of Wollongong. However, it does not necessarily reflect the views the University.

## **1. General Comment**

New South Wales has a large infrastructure deficit and this will require significant funding to remedy. In particular, NSW has a current overall shortage of 'fit for purpose' rail infrastructure to serve a growing population. Whilst this in part is being addressed by construction of the North West Metro by 2019 to be followed by a Sydney Metro-City (with a harbour crossing) and Metro-South West to be operational by 2024, and a new light rail down George St and out to UNSW, many rail deficiencies remain.

The question of whether Sydney's car dependence should be further encouraged by construction of WestConnex (on top of the construction of North Connex) is considered as one that should be addressed before WestConnex in its various stages is built. So also should the various impacts of WestConnex on the neighbourhoods where road tunnels start and end.

The question of whether more appropriate road pricing and better public transport is a better option than more tollways and freeways for Sydney should also be addressed.

It is respectfully suggested that more attention is needed to true 'user pays' and 'polluter pays' pricing of roads. The issues re transport pricing were addressed in 2003 in an official report on Sustainable Transport. However, the recommendations on fares and road pricing in this report by Mr Tom Parry were rejected by the government of the day. The present government would do well to revisit the 2003 Parry report.

Instead, for political reasons, transport pricing is not being addressed, and the apparently easier option of selling or leasing of more public assets is being pursued and, building more roads.

Melbourne's proposed East West tollway was made an upfront issue in the late 2014 Victorian state election, and effectively rejected by the voters. An informed public

debate could well lead to a modification of the current WestConnex proposals.

In May 2015, a draft Infrastructure Audit was released by Infrastructure Australia. The 2015 draft Audit notes in part Australia's population is projected to grow from 22.3 million (m) in 2011 to 30.8m in 2031 - an increase of 36.5 per cent. (In July 2015, it was 23.8m). Most of this population growth (72.0 per cent) is projected to be in the four largest cities of Sydney, Melbourne, Brisbane and Perth - to a total of 18.6m people "This growth will impose additional demands on urban infrastructure already subject to high levels of demand."

The cost of road congestion in Australia's capital cities was estimated by BITRE to be \$9.4 billion in 2005 and to rise to \$20.4 billion by 2020. The 2015 Infrastructure Audit has estimated that the cost of delays on urban roads was \$13.7 billion in 2011 and expects "in the absence of any new transport network capacity, the cost of congestion on urban roads is projected to grow to \$53.3 billion in 2031."

By 2020, the cost of road congestion will rise to more than one per cent of GDP. As noted in the draft Audit, by 2031, Australia's population will reach nearly 31 million people. Sydney will also grow and this growth will require a new approach to land transport. This will require improved urban public transport, better transport pricing and less reliance on cars and trucks.

## **2. Caution using proceeds of any NSW privatisation proceeds for roads**

Road proposals should be sound enough to stand on their own merits, deriving all funds from road users, whilst leaving some funds from road users to cover significant external costs and to provide some funds for transport alternatives to roads.

In addition, it is desirable for any privatisation proceeds to be used in a way that reduces dependency on imported oil. This will NOT be done by building more roads. During 2011-12, cars, buses and trucks used nearly 32 billion litres of petrol, diesel, and LPG (Australian Bureau of Statistics, Canberra (2011) *Survey of Motor Vehicle Usage for 12 months ended 30 June 2012. Cat. No. 9208.0* at abs.gov.au).

By way of contrast, rail used 1.67 billion litres of diesel (or its equivalent in a year for a smaller passenger task but a larger freight task than road (Australasian Railway Association Australian Rail Industry Report 2013 at ara.net.au). This reflects the fact that rail is much more energy efficient than road transport to move people and freight.

## **3. An International View**

A mid 2014 United States report has examined energy efficiency in 16 OECD countries on the four fronts of national efforts, buildings, industry and transport. The 2014 ACEEE International Energy Scorecard (via <http://www.aceee.org>) is based on points awarded for 31 key metrics using OECD, International Energy Agency and other independent data. On a combined policy and performance basis, Germany was ranked first, Australia tenth and Mexico last at 16th. Regretfully, (page 16) *"One country in which a clear backward trend exists is Australia."* The report notes that

this has occurred recently.

Moreover, in the transport sector, Australia was ranked last (16th) with just 7 points out of 25. Of the 8 key metrics, Australia scored zero points for each of three metrics: Fuel economy of passenger vehicles on both performance and the setting of future standards, and, for having no fuel efficiency standards for heavy trucks.

For each of four metrics including the use of public transit, and, investment in rail transit versus roads, Australia scored just one point each. Only in the metric "energy intensity of freight transport" did Australia get full marks. This score was assisted by the very high energy efficiency of the iron ore railways in the Pilbara region of WA. Such a low ranking for transport energy efficiency policy and performance should act as an incentive for Australia in general, and New South Wales in particular, to do better.

#### **4. Some Australian views**

In the late 1990s, both Engineers Australia and the Chartered Institute of Logistics and Transport gave considered warnings that cheap oil would not last forever, and more energy efficient transport was needed.

These warnings were followed in 2002 with one from the then Secretary of the Australian Treasury, Dr Ken Henry in a 2002 address to ([http://archive.treasury.gov.au/documents/440/PDF/Transport\\_Speech.pdf](http://archive.treasury.gov.au/documents/440/PDF/Transport_Speech.pdf)) about the **very challenging problems posed to future generations on the projected increases in urban traffic and interstate road freight.**

In 2004, oil prices were rising, yet there were government forecasts that oil could be expected to drop back to \$US20 a barrel. However, by mid 2008, oil prices had peaked at about \$146 per barrel. Following the global recession, oil prices have since receded and so petrol prices have been restrained at below \$100 a barrel. They are expected to increase over the next decade.

A further reason for reform is the sheer amount of money spent on road transport. In the early 1990s, research commissioned by the Australian Automobile Association found that the total cost of road vehicle operations, including the fuel they use, buying and maintaining the vehicles, road works, road crashes and external costs was about 11 per cent of GDP. In 2013-14 terms, this is some \$173 billion (<http://www.rba.gov.au/inflation/measures/cpi.html>). Due to fuel costs and road outlays increasing faster than inflation over the past 20 years, and growing road congestion, this estimate is conservative.

There are numerous hidden costs of road vehicle use, but not including road congestion, leading to a "road deficit" of about 1 per cent of GDP. Road congestion costs add a further 1 per cent or so of GDP. These costs simply cannot be reduced by building more roads.

## 5. Sydney Westconnex

It is submitted that a sound business case for any of this expensive proposal has not as yet been made, and inadequate consideration has been given to a combination of improved road pricing, including time of day congestion pricing, and improved public transport.

The 2013 National Infrastructure Plan of Infrastructure Australia, within priorities under the transforming our cities theme, gave "ready to proceed" to the Brisbane Cross River Rail project, and "Threshold" to Melbourne's Metro. As well, within priorities under the international gateways theme, the East West Link in Melbourne (18 km of roads with some tunnels costing \$6-8 bn but likely a lot more) rates "real potential" (third level) whilst West Connex favoured by the NSW Government and costing \$10-13 bn rates just "Early stage" (fourth and lowest level).

It is wishful thinking that road congestion in Sydney can be reduced by building more roads. The overseas experience is that a more balanced strategy, including rail, is needed to reduce road congestion. Here, as noted by Ross Gittins in the Sydney Morning Herald (SMH) for 14 August 2013: "The Coalition doesn't seem to have learnt what I thought everyone realised by now: building more expressways solves congestion only for long as it takes more people to switch to driving their cars."

## 6. A 2014 Australian report on roads

Informed comment on land transport policy was provided in a report ***Spend more, waste more** Australia's roads in 2014: moving beyond gambling*. The report, prepared for Infrastructure Australia was briefly placed on their website, and then withdrawn. It now may be found at the website (<http://www.ycat.org.au>) of the Yarra Campaign for Action on Transport.

The 2014 report notes Australia's three levels of government and the private sector are now spending over \$20 billion a year on road construction and maintenance; and, *"between 2008-09 and 2011-12, over \$4.5 billion more was spent on roads than was raised in almost all road taxes and charges"* (from Bureau of Infrastructure Transport and Regional Economics Infrastructure Statistics Yearbook (2013) p.41).

After noting the need for reform in road pricing, including mass distance location for the heavier trucks, the report considers that the big annual outlay of roads, which is set to grow even larger at the expense of federal funding of urban rail, is a ***"road spend [that] can only be described as hideously inefficient."***

## 7. Alternative projects

It is suggested that other transport projects within New South Wales should have a higher priority than West Connex. These other projects should include completion of the Maldon Dombarton rail line, a Parramatta - Epping rail link, speeding up Sydney

Newcastle, Sydney Wollongong and Sydney Canberra trains (as noted by in the 2012 State Infrastructure Strategy of NSW by Infrastructure NSW), along with the projected start on a second Sydney Harbour Rail Crossing as part of Sydney Metro-City

With regards to rail, reference is made to the 2010 Engineers Australia Infrastructure Report Card:

"Rail has been given a D+ rating. Rail infrastructure includes metropolitan passenger networks, freight and regional passenger services, grain lines, the interstate networks and private railways. The low rating has been given on the basis that urban rail networks cannot cope with demand. There is a need for a high speed rail network along the eastern coast of Australia to ease airport congestion and to reverse the trend of declining regional rail utilisation, which is resulting in more road traffic. The interstate network and Pilbara railways in particular are in a good condition.

"Improving the efficiency and productivity of existing rail networks is a challenge in many jurisdictions. For instance, increasing train length, load capacity, operating speed and turnaround time will require considerable improvements in rolling stock, below-rail infrastructure, and port-rail connections and intermodal hubs. The investment to achieve improvements will require substantial investment over at least a decade."

The result for rail was a set back from a C- in 2005 to D + in 2010. Sydney comes in for particular mention, including its population predicted to increase by 550,000 people by 2021 and that transit times need reducing to the neighbouring centres of Wollongong, the Blue Mountains and Newcastle are. In several cases, these times are slower than in the past.

Examples are cited, including from a 2009 paper *On the Right Track: Why NSW Needs Business Class Rail*, by Buckingham and Hartwich from The Centre for Independent Studies.

The 2010 EA Infrastructure Report considers that it is "essential to increase rail freight to accommodate the greater freight task..." and to this end, it is necessary to improve the interstate and regional freight lines, plus develop multi-use intermodal terminals. Improved separation of freight and passenger trains is "particularly needed in Sydney and Brisbane". The relative low pricing of road freight is noted and ensuring 'user pays' is an issue (p19) *"that will need to be addressed sooner rather than later."*

Attention is also drawn to a 2012 report *Can we afford to get our cities back on the rails?* of the Grattan Institute. The paper looks back to the 19th Century, and towards the end, after reviewing a number of potentially valuable projects, and possible measures of part funding them, concludes:

None of these measures are politically easy but there is evidence that voters have a big appetite for change in urban transport. In a 2011 survey for the National Transport Commission close to half the population agreed they would - like to be

able to drive less - and more than four in five agreed that the government should develop more public transport services to give people a realistic alternative to driving. With political leadership and a clearer linking of costs and benefits, new urban rail lines might yet have a place in our future transport mix.

Perhaps the most obvious lesson of history is that urban passenger rail is a long-lived asset that can benefit a city more than a century after it is built. As J.J.C Bradfield wrote about the Sydney Harbour Bridge: —Future generations will judge our generation by our works.

## **8. Completion of the Maldon Dombarton rail line**

During 2013, the issue of the adequacy of the existing South Coast railway came up when Boral, as operators of a quarry at Dunmore, in Shellharbour, applied to put an extra 500,000 tonnes of quarry products on main roads to Sydney. Despite current NSW Government planning statements supporting more bulk freight being moved by rail, the NSW Department of Planning in February 2014 gave approval to Boral to increase road haulage of quarry products from its Dunmore quarry. The relevant Director General's report claimed that *"Boral is unable to increase the amount of product supplied by rail to its other rail terminal at St Peters beyond that terminal's capacity to receive 1 Mtpa, as it is unable to gain access to additional rail paths or utilise longer trains; ..."*

In April 2014, NSW Ports Consortium, which leased the Port Botany along with Port Kembla for 99 years from the NSW government in 2013 for \$5.1 billion, announced it was seeking NSW Government approval to handle 16 million tonnes of bulk cargo a year through Port Kembla. This was up from a previously approved 4.25 million tonnes at its multipurpose cargo wharf. Incredibly, the claim was made that "All additional bulk cargo volumes (16 million tonnes per annum) would be transported by rail. "

The relevant Environmental Assessment (EA) sought to justify this on the basis that a revised analysis has provided sufficient confidence that adequate capacity can be provided on the regional rail network for this number of train movements through any one, or a combination, of the following:

- \* progressive upgrades to the Moss Vale to Unanderra line
- \* completion of the Maldon-Dombarton Rail Link, and,
- \* upgrade of rolling stock to include the introduction of AC traction locos and ECP braking.

However, upgraded rolling stock will not provide more train paths and the Moss Vale Unanderra line has severe speed-weight restrictions. This includes the difficult nature of the Unanderra - Summit Tank track with its steep grades that requires a maximum speed of 40km/h. The Moss Vale Unanderra line also has short length crossing loops limiting train tonnage and size, and, for freight moving between Port Kembla and Sydney, excessive extra distance when compared with the existing line. These are

factors that will invariably lead freight consignors to put more loads on roads.

The constraints on the existing roads and railways and the ongoing expansion of Port Kembla mean that the case for completing the 35 km Maldon - Dombarton link is now stronger than it was in 1988 when worked on it was suspended.

Further factors include:

- a. The ongoing demand more for electric passenger train services from Sydney to Wollongong, leaving less paths for freight trains on the Illawarra Line.
- b. Increased rail congestion in Sydney, coupled with the extra costs of railing coal via inner Sydney (with increased curfews on coal train movements each working day), and the steep Como bank needing 4 diesel electric locos for a 45 wagon train. Rail congestion is an ongoing issue in parts of Sydney.
- c. The Maldon Dombarton link for some coal traffic would get coal trains out of Sydney's Inner West and Illawarra lines.

The 2013 NSW Freight and Ports Strategy supports the separation of freight and passenger train services.

- d. Port Botany is the main container port for New South Wales and is now handling more than two million Twenty Foot Equivalent Units (TEUs) per annum. Most of these containers are moved by truck and issues of road and rail congestion remain. Accommodating the growth of containers arriving at or leaving NSW could well be better served by developing shipping port container capacity at either Newcastle or Port Kembla.

- e. The Australian government in 2010 made a commitment to develop a large Intermodal terminal at Moorebank to handle container traffic from interstate rail freight and Port Botany. Completion of the Maldon Dombarton link would support the operations of the new terminal at Moorebank.

- f. Failure to complete the Maldon Dombarton link will require over time significant additional capacity and other upgrades on the existing Sydney - Wollongong Railway.

- g. A long proposed 36 km Menangle - Aylmerton rail deviation (Wentworth Route) could share a kilometre of track of Maldon Dombarton (see page 45 of the 2007 House of Representatives Standing Committee on Transport and Regional Services report *The Great Freight Task: Is Australia's transport network up to the challenge?*).

In summary, completion of Maldon Dombarton is now overdue, and is necessary to allow Port Kembla to expand. Completion of the rail link will bring benefits, not only to Wollongong but also Sydney and other parts of New South Wales.

Expressions of interest for the private sector to complete this line closed earlier in 2015. It is likely that some government funding will be required to facilitate this. The question is that would government money be better spent on this project rather than going to a very expensive WestConnex.

## **9. Parramatta-Epping rail link**

In 1998, an official NSW Government statement *Action for Transport 2010* listed a number of rail projects for completion, including the 28 km Parramatta Rail Link by

2006 at an estimated cost of \$1.4 billion. Instead, the 12.5 km Epping to Chatswood section opened on 23 February 2009, at a cost of about \$2.3 billion. A Parramatta-Epping rail link could well deliver more long term benefits than that of West Connex.

## 10. Regional considerations

Regional NSW deserves a much better deal than it is presently getting, and should not in any way be called on to help finance West Connex (including from the proceeds of the long term leases of Port Kembla and Newcastle).

We start with the largest regional cities of New South Wales. "As Newcastle and Wollongong grow in size and importance to the NSW economy, they need faster and more efficient links to Sydney" (Transport for NSW 2012, Draft Transport Master Plan as noted by the 2012 State Infrastructure Strategy of NSW) Infrastructure NSW.

This report "assesses how faster rail journeys from the Illawarra and Central Coast to Sydney would help enable this integration and support these regions." ... also, this 2012 report on page 107, notes "An incremental program to accelerate the intercity routes is proposed, with a target of one hour journey times to Sydney from both Gosford and Wollongong, and a two hour journey time from Newcastle. The focus of the program will be operational improvements supported by targeted capital works to reduce journey times."

### 10.1 Faster trains to Newcastle

Faster trains between Sydney and Newcastle were promised in 1998 in the official NSW *Action for Transport* Statement to be delivered in two stages, the first stage by c2007.

The worst aligned sections of track linking Hornsby and Newcastle are now overdue for realignment. This section is now the most congested section of double track in Australia, albeit more from frequent passenger trains rather than from commercial freight activity.

One simple strategy would be to revert to the alignment in place in the late 19th century. As noted by Singleton (1966, *The Short North Railway: Sydney to Newcastle*. ARHS Bulletin Vol 13, p13-23) as part of a policy of a ruling grade of 1 in 75 for up trains, a number of deviations were built. They included

- \* Morisset to Dora Creek easing a 1 in 50 grade, with a new 1m 50c (one mile, 50 chains) deviation replacing a 1m 30c section. "*Here, the insertion of a 20 chain and a 16 chain curve did nothing to improve the speeds of fast trains.*"

- \* Dora Creek to Awaba easing a 1 in 40 grade, with a 2 m 62 c deviation replacing a 2m 27c section. Where "*its series of sharp curves spoiled any chance of fast running on this section of track.*"

- \* Awaba to Fassifern easing a 1 in 40 grade, with a 2 m 20 c deviation replacing a 1 m 17c section placed into use 1 February 1903 ".an extra mile of permanent way.

Other ways of speeding up Newcastle Sydney trains include higher speed turnouts at



various locations, easing of tight radius curves, and the use of new higher powered trains. To achieve the two hours transit time, work will be needed on several fronts.

### **10.2 Wollongong to Central Station in one hour by train ?**

Faster trains between Sydney and Wollongong were promised in 1998 in the official NSW *Action for Transport* Statement to be delivered by 2010. This envisaged a new Waterfall-Thirroul Route to reduce train transit times by 15 minutes.

The length of the existing Wollongong - Central track is about 83km. As noted by Oakes CJ, 2003, *Sydney's forgotten Illawarra Railways*, ARHS (NSW), the present track is the result of two deviations; "Helensburgh" (in sections, completed 1915), and Stanwell Park (completed 1920).

The two deviations were built as double track at easy ruling grades to replace single track on steep 1 in 40 ruling gradients. However, the cost included an additional 5km of distance, and many tight radius curves.

Wollongong station is some 83km from Central. From Thirroul to Central, the distance is about 70km. The fastest trains take about 10 minutes from Wollongong to Thirroul and 78 minutes from Thirroul to Central. The aim would be to reduce this transit time from Thirroul to Central to 49 minutes which is the current fastest time for 72km Perth to Mandurah train service introduced in 2007. This would require:

- a. Deviations at Stanwell Park (new viaduct) and Helensburgh to shorten the distance and reduce curvature; or, a new Waterfall-Thirroul Route as promised in the 1998 NSW Government Action for Transport Statement to reduce train transit times by 15 minutes. This was estimated in 2003 (in a consultants report to the NSW Government) to cost about \$1.4 billion  $\pm$  30 per cent. Two partial realignments of this winding track near Helensburgh were noted at a cost of \$779 million (best travel time savings) and \$600 million (best value).
- b. Capacity augmentation between Hurstville and Mortdale (or even Sutherland) from double to triple track.
- c. New purpose built electric trains (preferably 25,000v AC) for operation at 160km/h or even 130 km/h (as per interurban trains in Qld, Vic and WA) with power to ascend steeper grades without undue loss of speed.
- d. High speed turn outs (points) at Waterfall.
- e. Fewer freight trains. This would require completion of the Maldon Dombarton rail link.

The current average speed of about 55 km per hour for the fastest Wollongong - Central trains is too slow. Perth Mandurah and Geelong Melbourne trains average 85 km per hour.

### **10.3 Sydney to Canberra**

A Sydney Canberra Higher Speed Train could be developed on an incremental basis.

Stage 1 could be for a new, improved alignment between Goulburn and Yass with a spur line from Yass to North Canberra.

Stage 2 could be for track upgrades from Mittagong to Goulburn and for a Wentworth route between Menangle and Mittagong that could tie in with the Maldon Dombarton line.

Stage 3 Could be further upgrades to Campbelltown to Sydney, which has recently been upgraded.

All stages would require planning, legislation and environmental impact assessment. Where possible, new construction should be to Higher Speed Rail standards of 160 to 240 km/hr standards. An indicative cost is \$3.5 billion (2014 Michell M Martin S and Laird *Building a railway for the 21<sup>st</sup> century: bringing high speed rail a step closer*, Conference on Railway Excellence, Adelaide Proceedings p 612 -621).

A Sydney Canberra Higher Speed Train (a Fairly Fast Train or Medium Speed Rail) operating by 2020 at speeds up to 200 km/h on deviations and taking less than two and a half hours is quite feasible. This could be followed by more new HSR track and faster trains to get down to the former Speedrail target of 84 minutes, and later down to the 2013 Phase 2 HSR time of 64 minutes (which had an estimated cost of \$23 billion).

#### **10.4 Sydney to Brisbane**

There is considerable scope for improvement here, on top of the work done by the ARTC in recent years. A case study of a major deviation between Hexham and Stroud Road was noted in a 2007 Federal Parliamentary Committee report (The Great Freight Task: Is Australia's transport network up to the challenge? page 116). Here, the construction of 67 km of new track would replace a substandard 91 km section to halve transit times and reduce fuel use by 40 per cent. A Hexham to Fassifern link (see Infrastructure NSW 2012 report) would also give good benefits.

#### **10.5 An inland railway**

The commitment to an Inland Railway between Melbourne and Brisbane via Parkes is a positive step forward that has bipartisan support at a federal level, and in September 2015 an Implementation Group report was released by the government along with a detailed business case prepared by the ARTC. The estimated cost is about \$10 billion (without a new connection to the Port of Brisbane) "but not building it will cost us more," according to Minister Truss. However, it is now up to Government to accept the recommendations to proceed to completion by 2025, or if expedited, by 2023.

It is important however that new construction be built to Canadian and US Class I Railroad standards rather than existing Australian standards. Both the East-West and North-South rail corridors in Australia have long standing restrictions on axle weights. The current standard in Class I railways in Canada and the United States is for wagons with 286 000 lb (gross weight) which corresponds to axle loads of 31.8 tonnes. This requires track with good formation and heavy rails etc. In short, the mainline track of Canadian and US Class I Railroads allows for "FAST AND HEAVY" freight trains moving at 100 km/h with 25 tonne or more axle loads. However, the Australian standard over much of the ARTC network (excluding the Hunter Valley coal lines in NSW) is restricted to 23 tonne axle load (TAL) limit for wagons moving no faster than 80 km per hour, or a 21 TAL limit for wagons moving no faster than 115 km per hour. Some financial support from the New South Wales government would be helpful to

advance an inland railway, and could well deliver more benefits than WestConnex.

### **10.6 Other rail in regional New South Wales**

Grain line condition NSW after some deterioration is now being recently addressed.

The title of an article in *The Land*, 11 August 2011 says a lot of the state of these lines in 2011: *"Call this a rail system? - 'Third world' branch lines driving freight onto roads."*

As of 2009, more oil has been put onto road tankers, and NSW has subsequently had to deal with some road tanker safety issues. In 2009, the Cowra lines were closed, they now could usefully be reopened. In 2014 the NSW Government invited private sector proponents to submit tenders on how they would restore, operate and maintain the Cowra Lines on a commercially sustainable basis with an expectation that "that the successful bidder will fully fund restoration and recurrent capital works

The tender process was completed in April 2015. However, no tender was selected. As noted by TfNSW and RailExpress, an estimated investment of more than \$30 million would be required to restore the infrastructure, with further ongoing maintenance costs estimated at more than \$2 million each year. Again, the question has to be asked, is money better spent on more Sydney roads such as WestConnex rather than on rehabilitating rail in regional NSW.

There is also a case to reinstate the Casino to Byron Bay line, or at least from Casino to the University city of Lismore.

## **11. Conclusions**

In the longer term, Westconnex will do little to ease road congestion in Sydney. Failure to address transport pricing and improve rail do so will leave New South Wales with increasing road congestion, and dependence on oil. Oil vulnerability needs reducing, and not increasing.

There is clearly a need to upgrade rail infrastructure within New South Wales. There is also a need to address road and rail pricing, as recommended in 2003 by the Parry report.

A more balanced approach is needed between new road construction and developing a fit for purpose rail system for NSW. Regional NSW deserves a much better deal than it is presently getting,

Associate Professor Philip Laird, Ph D, FCILT, Comp IE Aust  
Faculty of Engineering and Information Sciences  
University of Wollongong NSW 2522

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