

## From the Executive Chair

2011 is certainly proving to be an eventful year so far, not least in terms of the number and scale of natural disasters which have occurred in our part of the globe. Our sympathies and thoughts are with those RTSA members and their families who may have been affected by the floods in Queensland and Victoria, Cyclone Yasi and the recent Christchurch Earthquake, as well as those who have been putting in long hours to restore damaged infrastructure and services.

In mid-March the RTSA Executive Committee meeting held in Brisbane provided an opportunity for the Executive to review progress on the key initiatives adopted following last year's survey of the views of our members and other rail industry people.

Good progress has been made on developing options for a more distinctive logo for the RTSA, with the Executive selecting a preferred option for discussion with our parent bodies, Engineers Australia and IPENZ in New Zealand, and rollout planning.

The process to revamp and expand the functions of our website has not been as straightforward as originally expected but I am pleased to report that we will shortly engage a website development company to begin work on this important task.

Providing technical leadership for the rail industry was a strong message from the survey and one of the Executive's responses to this has been to establish a Submissions and Inquiries Sub-Committee chaired by Martin Baggott, immediate Past Chairman of the RTSA. The role of this sub-committee will be to develop the RTSA's responses to call for submissions to or the findings of government inquiries relating to issues affecting our industry. Our aim will be to provide objective, evidence based comment to complement and possibly counter submissions made by other parties from different perspectives.

Our first two responses, covering the role of Government in Rail Freight Investment and the influence of transport on the sustainable functioning of cities, can be downloaded from the RTSA website.

The Submissions and Inquiries Sub-Committee cannot undertake this important task by its self however, so all members will be advised by email of forthcoming submissions and will be invited to contribute to the submission. In addition, if you become aware of an inquiry or call for submissions, which you think the RTSA should

respond to please email [submissions@rtsa.com.au](mailto:submissions@rtsa.com.au) or contact your local Chapter Chair. I would encourage you all to take the time to make comments on issues which you have knowledge on as this will both make our submissions stronger and help raise our profile.

Another means of showing leadership is through our events and I was pleased to be able to co-host a seminar on high speed rail in Melbourne on 8 March, jointly organised by the RTSA and the Engineers Australia National Committee on Transport Engineering. The seminar was attended by around 100 people and heard 4 presentations covering the strategic, economic, technical and implementation planning issues that need addressing for any high speed rail project in Australia to be successful. Thanks go to the speakers, Dr Anthony Ockwell, Peter Thornton, Douglas Williamson and Clive Mottram for an informative seminar. I look forward to participating in future seminars on the key issues facing our industry.

Finally the Executive has reviewed the means by which we are communicating with you, our members. In recent months, we have increased our use of social media and you can now keep up with the RTSA activities through LinkedIn, Facebook, Twitter and YouTube.

We have also considered whether or not the *Rail Horizons* magazine should continue to be distributed in both paper and electronic form, and have concluded that moving to all electronic distribution will enable the RTSA to cost effectively provide expanded and more up to date content than can be achieved with a hard copy magazine. For example, hyperlinks to the latest video recordings of chapter presentations, which the New South Wales and Victorian Chapters have been pioneering, will be easier to provide through an electronic version of *Rail Horizons*.

However we recognise that this move may not suit all members, so as from the next issue in June it will be distributed electronically to all members, unless you specifically request for a paper copy to be mailed to you. All members will be contacted in the next month to confirm their preferred method of receiving *Rail Horizons*.

Please as always, feel free to contact me, regarding any issue that I have raised above or about any other matter that you would like to bring to my attention.

**Simon Wood**  
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# Rail Horizons

Contents - April 2011



ENGINEERS  
AUSTRALIA

**RTSA**

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Max Michell, Philip Laird, Andrew Hunt,  
Australasian Railway Association

## Point of View

Max Michell

It is very easy to become so accustomed to the things around us that we tend to overlook them. Some years ago we lived in an old stone church that had a magnificent view down a valley from the conservatory at the back. It was a regular event for us to be reawakened to this wonderful view by visitors who were seeing it for the first time. The same applies to our everyday travels where the sameness often anaesthetises our senses such that we hardly see the world outside passing us by.

Every so often I change from my through train heading south into Sydney to one of the peak hour Central Coast trains that run via the North Shore line (it is a convenient way of getting to the central Sydney area). Apart from the novelty of the 'leafy North Shore' (real estate agent speak) there is the wonderful surprise view of the Harbour Bridge as it comes out from behind the North Sydney hi-rise forest.

Although the bridge is now an iconic but everyday part of Sydney it was not always the case. Prior to its opening in 1932 there were several decades of political intrigue and skulduggery before the imaginative concept developed by J.J.C. Bradfield took hold. In fact the vision of Bradfield and his persistence in the face of adversity was a model of its kind which unfortunately is all too rare in this hedonistic 'live for the day' city.

In more recent times the mad progression of half thought out projects, mostly of dubious value, has been more the norm than anything that even looks vaguely visionary.

Vision is a rare and often illusory thing. What is vision to one person may seem to be just a mad idea to another, and conversely madcap ideas can sometimes look like vision. I guess the test has to be if the proposal is likely to result in a significant and beneficial change to the established order, where patience, persistence, political guile and ongoing persuasiveness are required to overcome entrenched conservative and naysayer views to get the required outcome.

Billy Wentworth was seen by media commentators (known as reporters in those days) as something of an eccentric and a bit of a misfit within a party primarily made up of suited conservatives. Yet it was the same Billy Wentworth who, reportedly against the wishes of his leader Robert Menzies, conceived and got into legislation the Standardisation Bill that basically created the core network of the much later ARTC.

Visionary? I would suggest it was, if only because it provided the breakthrough solution to a 100 year old problem.

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Another lower key visionary project was the implementation of the Melbourne zonal multi-modal fare system in the early 1980's.

The coincidence of a somewhat maverick conservative Transport Minister, an unusual appointment to Head of Department and cooperative GM's of Victorian Railways and the Melbourne and Metropolitan Tramways Board gave rise to a fare system that everyone said could not be done. There is little doubt that this radical move has contributed to the extraordinary growth in public transport passenger numbers in Victoria in recent years.

Visionary? I would suggest that the far reaching positive impacts were not foreseen even by the believers who set the scheme up.

Electrification and associated extension and upgrading the Adelaide suburban network is visionary - it is a system changing decision which will significantly reverse the fortunes of what is currently Australia's lowest patronage network.

The precedent in Perth points to electrification of what is really a small rail system as being the cornerstone of survival, and that would certainly apply in Adelaide. The associated benefits in terms of city development and improvement are less apparent but just as real.

Visionary? I would suggest so since it reverses the stagnation in the existing set up and allows up for sustainability in the longer term.

Visionary has to be beyond what is relatively normal.

The ARTC North South upgrade for instance is not visionary. It is a good result in that it recovers decades of neglect and indifference by the states but it does not represent a quantum change in the network or its operations.

The Sydney Clearways projects are in the same league - in most cases they simply are gestures toward resolving shortcomings that have been obvious for years but don't really make any significant changes to the system. In some respects they are partial solutions, such as at Berowra where the new platform should have included realignment of the track to make the relief road the main line. Not Visionary!

Where is the vision these days as far as rail is concerned? What is proposed or in progress that could truly be classified as visionary? The answer, as always, is not much. Perhaps the two standouts are a High Speed Railway (HSR) on the east coast and a premium Inland Route, both of which are the subject of recent or ongoing high cost but inconclusive consultants' reports. These two projects are big ticket items, but both have the potential to be totally game changing.

Taking the HSR first - the existing railway between Brisbane and Melbourne via Sydney is on an archaic

alignment that will never be able to compete with the airlines and at present can't even compete with cars and buses for transit times. The highly utilised XPT trains, with their 160 km/h potential, should be able to cover Brisbane to Melbourne in 16 hours on a half reasonable alignment.

In fact they can hardly complete the run between Brisbane and Sydney in that time on the existing meandering coastal route, and are not a whole lot faster on the Sydney to Melbourne sector. One or two trains a day, even if they were relatively fast, are hardly likely to attract attention in a market that has aircraft flying three or four flights per hour.

An HSR would in fact be air competitive with a transit time on either sector of around 3 - 3.5 hours. It would be a dedicated passenger railway with high frequency with quality facilities and services on-board and at the terminals. It would bring the major regional centres of Newcastle and Canberra onto the mainstream network, along with a significant number of larger regional cities and towns along the route.

Depending on the extent of any HSR network, it could also link airports at Brisbane, Gold Coast, Newcastle, Sydney, Canberra and Melbourne providing a huge benefit from the postponement for a very long time of the need for a second Sydney airport (a mega-billion project).

As has been demonstrated by HS1 in England, and also on the Direttissima in Italy, high-speed local services can be operated on the same network between long distance trains to great effect. HSR can change the demographics of the east coast by reducing the effective distance between centres served by the line to something like 25% of what currently exists.

The existing 'heritage' railway would then become primarily a freight route, and with suitable alignment tweaking to suit freight should be able to perform a whole lot better than is currently achieved.

The premium Inland Route (PIR) is another game changer, which would bring Melbourne and Brisbane freight far closer by rail (taking as little as 18-19 hours where existing trains take 30-34 hours). Not only would the times be reduced to under 20 hours but operating costs would be reduced - a function of a far better and flatter alignment and associated doubling of utilisation of locomotives and rolling stock.

There is little doubt that the PIR would attract a major increase in market share for freight traffic between Victoria and Queensland, in contrast to the existing route which is trending toward eventual extinction. (This despite the poorly supported assertions in the recent Inland Route report which suggests that the existing coastal route would improve to something like 50% of the freight market over the coming decade or so.)

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The associated benefits for a PIR include development of regional locations along the proposed route, where a lot of mainstream agricultural activity is located, the freeing up of rail capacity into Sydney to reduce conflict between passenger and freight trains and allowing a focus on improving freight services to and from Sydney (as opposed to freight running through Sydney).

There could even be some quite unexpected side benefits such as courier trains delivering priority freight between Melbourne and Brisbane in as little as 14 hours and thus being partially competitive with air freight for overnight delivery. This latter is a good example of collateral benefits that can arise from truly visionary projects.

The tendency to heavy handed planning and evaluation in the current age has stifled a lot of the scope for visionaries to get their wares on the table. Despite this there are those of us who can still work from within these constraints to get some vision into what has become a very pedestrian business.

Vision can take many forms, but in the rail game it is those people who can see past the fiddling and tweaking that is now so popular and propose ideas and projects that would in the end produce significant change to the benefit of a wide range of society.

We, as an industry, should be more prepared to support visionaries and less inclined to either try and knock them down or just damn them with faint praise. They are gold and we should treat them as such.

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## Fast rail: Dreams & reality

by Philip Laird

The term High-Speed Rail (HSR) is generally considered to apply to passenger trains that operate at speeds of at least 250km/h, such as the Shinkansen in Japan and the TGV in France.

HSR was extensively investigated in Australia during the 1980s after the CSIRO proposed a Sydney-Canberra-Melbourne Very Fast Train or VFT. This led to no fewer than nine reports before the project stalled due to a lack of government support and other factors in the early 1990s.

During the late 1990s, at the invitation of government, a Sydney-Canberra SpeedRail proposal was closely examined by the private sector. Again, it stalled.

In 1999, Ross Gittins of the *Sydney Morning Herald* noted (*The high cost of paying less tax, August 25*): "Our politicians dream about very fast trains, Alice Springs to Darwin, even Melbourne to Darwin - all fully funded by the private sector, of course - while spending on straightening out the Sydney to Melbourne rail line has been put off for 50 years, even though it would pay big

dividends in reduced pollution, greenhouse gas emissions, road congestion and accidents."

In 2001, a major report released by the Federal Government was restricted to trains capable of 250km/h or more. This carefully excluded considerations of what could be called 'the Queensland option' of straightening and strengthening existing tracks on their north coast line for faster freight and passenger trains.

In 1998, following the rebuilding of some 160km of substandard track to modern engineering standards, Queensland had introduced a tilt train operating at speeds up to 160km/h.

In 2006, Victoria introduced its Regional Fast Rail network using new trains on four lines with upgraded track at speeds of up to 160km/h.

Meanwhile, slow Sydney-Canberra and Sydney-Melbourne train services continue with older equipment (including XPTs that have been in service for 25 years now) that operate over 'steam age' track alignments.

In September 2010, two reports on HSR were released: a supportive one from Infrastructure Partnerships Australia, and a report from within the Australian Government that questioned the economics of HSR for a large country with a relatively small population.

In February the Australian Government released the terms of reference for a \$20 million two-phase HSR study, following on from its pre-election commitment and support agreement with the Greens (*see page 11*).

Hopefully, this time around, the Government will be prepared to look at the costs and benefits of the Queensland and Victorian options for upgrading the existing NSW track for higher speed passenger trains.

The track upgrades to allow trains operating at, say, 200km/h, will have to go much further than the recent work by the Australian Rail Track Corporation to upgrade existing lines for not so fast freight trains.

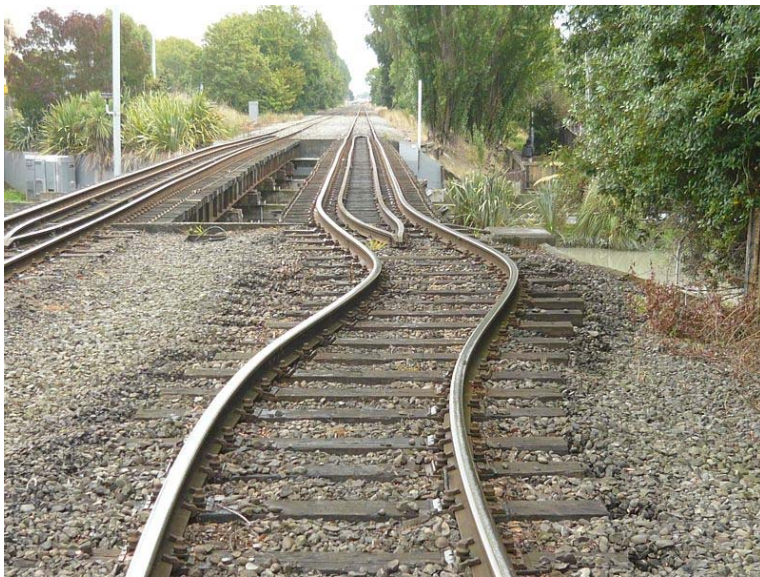
The cost of major track upgrade would need precise quantification, but it would be less than the cost of converting two-lane roads to a dual carriageway.

This would replace many kilometres of 'steam-age' alignment and allow for faster freight and passenger trains. Other benefits include improved reliability of train operations and appreciable savings in fuel use, plus a curb on the growth in truck numbers (currently, more than 3000 a day on the Hume Hwy).

The big question now is whether the new round of rail studies will result in the track linking Australia's two largest cities of Sydney and Melbourne being lifted out of the steam age.

*An earlier version of this article appeared in the Illawarra Mercury on 3 November 2010*

## Rail meets Christchurch quake challenges



The second major earthquake to hit the city of Christchurch in six months had the potential to severely disrupt rail services on New Zealand's South Island.

However, rail operator and track owner, Kiwi Rail, was able to bounce back surprisingly quickly from the 6.3 Richter Scale earthquake that devastated a large part of the city and nearby suburbs on February 22.

The Main South railway line running south from Christchurch was back in action within 24 hours of the

earthquake whilst the Main North Line between Christchurch Picton reopened two days later, clearing the way to move freight into and out of the stricken city.

Kiwi Rail Chief Executive, Jim Quinn said that early indications were that Kiwi Rail staff were all physically safe although damage to homes and property was heavier than in the September 2010 quake.

“Our hearts go out to our Christchurch staff that have had to come to terms with two extremely big quakes and scores of minor ones over the last six months. It's a relief to hear that our staff are safe, but this relief is tempered by the realisation that some will have lost relatives and friends and many will have suffered home and property damage.”

“The line north of Christchurch (Main North Line) has suffered less damage than we thought. We made early plans for road bridging from Rangiora as we did last year, but hopefully that won't be necessary.”

The line between Middleton marshalling yard and the Port of Lyttelton (which also suffered severe damage) was closed by bridge damage at Heathcote and the derailment of seven loaded wagons on a port-bound coal train on the city side of the Lyttelton tunnel.

Kiwi Rail container freight services to the Port of Lyttelton resumed on 2 March with all services initially running under a temporary 25 km/h speed restriction. Damage to port infrastructure and the need for Kiwi Rail to ensure the

### IMPORTANT NOTICE

## Distribution of *Rail Horizons*

The RTSA Executive recently reviewed the means by which the Society communicates with its membership.

As part of the review it has been decided that commencing with the June 2011 issue, all members will in future receive *Rail Horizons* via electronic distribution in PDF format, unless requested otherwise.

This change will enable the RTSA to cost effectively provide expanded and more up-to-date content than can currently be achieved with a hard copy magazine.

The RTSA recognises that this may inconvenience those members who do not have regular access to the Internet and therefore a limited number of print copies will continue to be made available for those members that request it, although these may not include all the content of the electronic version.

If you are unable to receive *Rail Horizons* in electronic format then please contact the RTSA Secretariat (within Engineer's Australia) to note your preference to continue receiving a printed copy of *Rail Horizons*.

**Contact : David McCarthy on 02 6270 6530 or via e-mail**

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railway line on the port side of the Lyttelton tunnel was safe from falling rocks and debris had resulted in a suspension of services for nine days.

At this time there were still three loaded and two empty coal trains stabled on the Midland Line following damage to the coal loading terminal at the port, but on 15 March, the Port lifted its emergency status coinciding with the arrival of the first coal ship for loading.

In the immediate aftermath of the quake, Interislander ferries, operated by Kiwi Rail, were busy moving people and equipment south to help relief work. In the first week 382 relief personnel, 179 vehicles and 150 lane metres of Christchurch-bound rail freight crossed Cook Strait. The traffic included 14 fire engines plus trucks and trailers carrying supplies including bottled water, methanol and refrigerated units.

The ferry *Aratere's* appointment with a Singapore shipyard has been delayed until after Easter. Originally scheduled to leave on 14 March for an extension designed to increase capacity by approximately 30 per cent as well as the fitting of a new bow section, its presence was required to ensure that capacity is available to carry people and freight across Cook Strait at this time.

Following the quake Tranz Scenic passenger services linking Christchurch with Greymouth (TranzAlpine) and Picton (TranzCoastal) were suspended and replaced with road coaches. Initially it was planned to recommence the South Island tourist services on 1 March, but the date was pushed back to release drivers and rail infrastructure support services to the important task of keeping supplies to Christchurch moving via Kiwi Rail freight services.

The iconic TranzAlpine began running again on 7 March from the Christchurch passenger railway station in Troup Drive, which was not seriously damaged. As of 28 March, The TranzCoastal service was continuing with coach replacements with Tranz Scenic reviewing the timing for resumption of train operations.

## RTSA 'Young Engineer' wins another award

RTSA Member and 2010 RTSA Young Engineer Award winner Daniel Headifen has gained a further accolade, being awarded the Chartered Institute of Logistics & Transport in New Zealand 2010 Young Achiever of the Year. The Award was made for his work as project manager on a key upgrade over part of the main trunk line between Wellington and Palmerston North.

The project saw the replacement of 1.7 kilometres of railway track and the lowering the floor by more than half a metre through four tunnels, on the section of track paralleling the Centennial Highway north of Wellington.

Upgrading this section of track has been considered by successive owners of the national rail network since 1950s and while some work was done in the 1960s to lower the tunnels to allow diesel trains through, the present project has been on a much larger scale.

Lowering the tunnels increased height from about 4.9m to 5.5m and the upgrades will allow for higher train speeds through the area, increasing from 40km/h to between 60 km/h and 70km/h, and will also permit freight trains to carry higher dimension loads on the Main Trunk line.



Daniel, a former light welterweight boxing champion, who won the New Zealand title in his 63.5kg division in 2001 and 2002, told *The Dominion Post* newspaper, "There is a similarity between boxing and this project - you have to be totally focused and dedicated. It is good to throw yourself into something totally and work hard to get results."

**Left: Daniel Headifen with his Chartered Institute of Logistics & Transport in New Zealand 2010 Young Achiever Award**

"I went into it knowing it was a bit daunting but used experience from past projects to overcome the hurdles. This is one of the hardest sites I have worked, and working in the tunnels was the most physically difficult part of the project," Daniel said.

Wearing overalls, face masks, goggles, ear muffs, hard hats and ankle-to-elbow protective high-visibility clothing, about 200 workers, 60 on each shift, worked seven days and six nights a week in the tunnels, relying on radio and sign language to communicate in the dark, cramped conditions.

Evening commuter trains were replaced with buses, but freight trains continued to run up to five times a night creating regular interruptions to the work. A total shutdown occurred over the Christmas and New Year break with freights diverted over the Wairarapa line.

Work on the tunnels was completed earlier this year involving the removal of approximately 2000 cubic metres of rock from the tunnels before new track could be installed and the tunnels lowered.

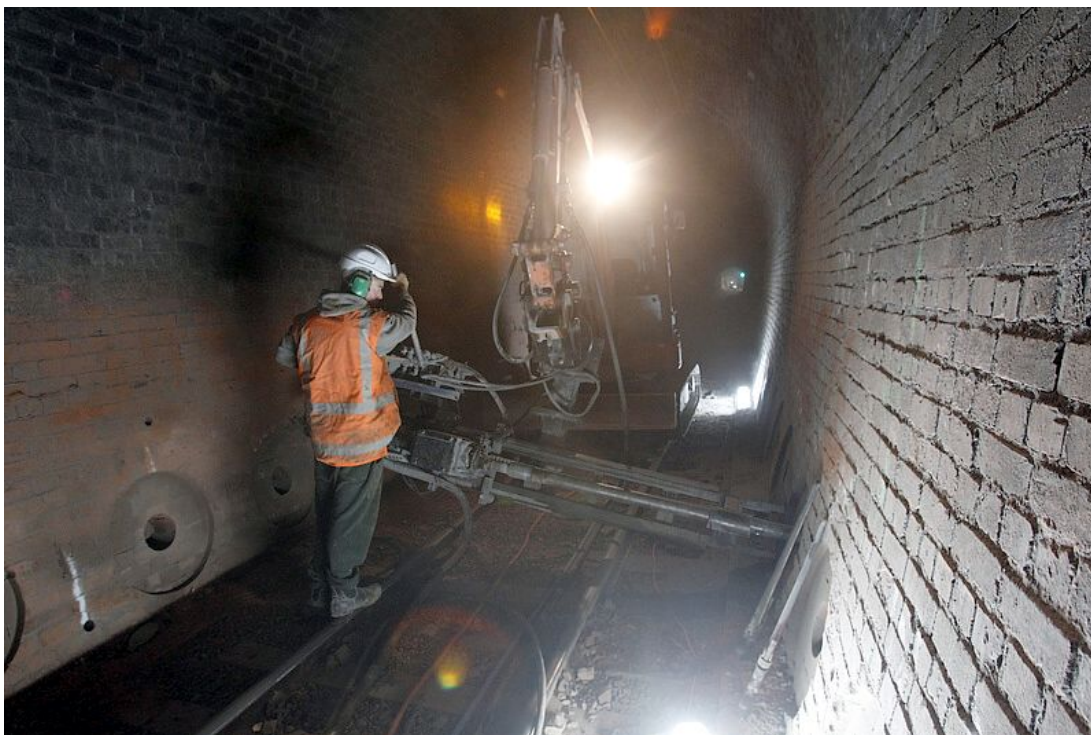
The final stage of the project involved helicopters delivering rock fall nets to cliffs in the area while abseilers fastened them to a couple of thousand anchors they had drilled previously into the unstable hillside.



The project is part of a \$550 million upgrade of the rail network in the Wellington region. KiwiRail Network is nearing completion of its \$320 million upgrade which has included laying new tracks, overhauling the electrical and signalling systems, building new stations and electrifying through to Waikanae.

The Greater Wellington regional council is spending \$230 million on 96 new electric railcars units built in Korea, the first of which have recently entered revenue service.

The upgrade of the Wellington electrified network, including double tracking and extension of electrification between Paraparaumu and Waikanae and costing \$86 million, was officially opened In February.



*Part of the content in this article originally appeared in The Dominion Post*

**Images on this page courtesy: Anthony Phelps**

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# NEWS

## All change at ARTC

After heading up the Adelaide-based, federally owned interstate track owner for almost thirteen years, David Marchant stepped down as Chief Executive Officer of Australian Rail Track Corporation (ARTC) at the end of February with former FreightLink CEO, John Fullerton appointed as his replacement.

David Marchant was responsible for charting a largely new direction for track access in Australia via what is generally seen as a globally unique model.

He was appointed as ARTC's inaugural CEO in June 1998, the fledgling organisation having grown out of a November 1997 Intergovernmental Agreement (IGA) between the states to create a 'one-stop-shop' for train operators to provide access to the interstate rail network and redress years of poor reliability and lack of investment.

A key player in the Australian rail industry and an outspoken advocate for rail transport, his political nous and executive skills have allowed the industry to bring the management of the interstate rail network under one umbrella much sooner than the key stakeholders ever expected, as well as securing historically high levels of government funding for improved infrastructure.



In an interview for the National Railway Museum's *Catch Point* magazine, David Marchant said that he felt his most significant achievement during his tenure was negotiating a 60-year lease over the New South Wales interstate and Hunter Valley networks.

"By any strategic reasoning the New South Wales Lease was the key to unlocking the door to the establishment of a truly national interstate network. It was the biggest obstacle, and opportunity, and took three years to achieve - surprisingly long given that it provided the NSW Government with savings of \$295 million a year."

"The Lease was especially critical in order to achieve our improvement programme for the North South corridor."

It is interesting to reflect that ARTC's first Commonwealth funding injection back in 1999 was a modest \$250 million spread over several years. It is testament to David Marchant's lobbying skills and ability to put forward a strong business case for rail that the most recent Federal budget allocation to the network was \$1 billion, most to be spent within the current financial year.

"Our shareholders have been extremely supportive of ARTC regardless of ideology. We have been very fortunate in the funding we have received through various productivity and stimulus packages in recent years."

"I have been privileged to have worked with some really skilled, dedicated staff along the way - a very vibrant workforce with a good mix of youth and experience. The average age of the ARTC workforce is 41.3 months compared with the industry average of around 55 years."

"There have been lost opportunities for rail. The constant changes in ownership amongst train operators have been a major distraction preventing the industry capitalising on its strengths, while the prices paid for these businesses have meant that debt levels have remained high, constraining investment."

"However, I would expect the recent privatisation of QR National to strengthen competition on the interstate network, especially when combined with a number

**Outgoing ARTC CEO David Marchant was a strong supporter of the RTSA and this has been highlighted by his organisation's major sponsorship of all RTSA CORE events during his time in charge of the national track owner.**

of 27 hour paths that ARTC plans to offer train operators between Melbourne and Brisbane later this year.

“As a nation we do not do enough academic research into freight transport and related long term planning. This is really sad because our country is totally reliant on transport, both for import/export and domestically - yet there is no ongoing impartial, vigorous, intellectual research.”

### **New ARTC CEO, John Fullerton**

Taking over the reins at ARTC, new CEO, John Fullerton has outlined his views on the future direction of rail freight as part of the national transport and logistics framework.

“The simple truth is that there is still uncertainty in the market place as to rail’s capability to deliver as a transport solution and this must change,” he said.

“An important priority for me is to convince customers to switch to rail as there are potentially significant cost benefits available for them. Rail is now cheaper, more fuel efficient and more environmentally friendly than long haul road transport. On average rail is around 20% cheaper door-to-door on long haul routes.”

Mr Fullerton highlighted that part of the solution is the move toward the effective pricing of transport infrastructure.

“The Henry Tax Review called for road pricing reform and heavy vehicle charges on long haul routes where road and rail compete. This would help rail take some of the heavy lifting from the trucking industry in meeting the growing demand and the need for more efficient logistics solutions.”



Prior to joining ARTC John Fullerton held the position of Chief Executive Officer for Asia Pacific Transport Pty Ltd and FreightLink Pty Ltd for the past six years.

Previously John was Divisional General Manager of Operation Services at Pacific National and has also held several senior roles with (the former) National Rail Corporation including Chief Operating Officer.

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## **Darwin line sale finalised**

AT the beginning of December 2010, Genesee & Wyoming Inc. (GWI) completed the acquisition of the assets and business of FreightLink Pty Ltd and Asia Pacific Transport Pty Ltd for A\$332 million (approx US\$319 million). In addition, GWI will incur transaction-related expenses of approximately A\$24 million (US\$23 million) in the fourth quarter of 2010, principally related to the payment of Australian stamp duty.

FreightLink had been voluntary in receivership since November 2008 following a failed sale process that had started earlier that year aimed at reducing the company’s debt incurred as a result of building the new line between Alice Springs and Darwin. As well as FreightLink’s ‘above rail’ freight business, the purchase also includes the 44-years remaining on the ‘below-rail’ infrastructure, the rail line located on land leased by the AustralAsia Railway Corporation under a concession agreement that terminates in 2054.

Bert Easthope, Managing Director of Genesee & Wyoming Australia (GWA), said, "The completion of the FreightLink acquisition heralds a new era for rail in South Australia and the Northern Territory. GWA looks forward to delivering quality service to customers in the Adelaide to Darwin corridor. The railway is a strategic asset in the development of the mining industry and we welcome the opportunity to support and invest in the future growth of our customers."

With the acquisition of the 2,200-km Tarcoola to Darwin railway, GWA becomes the largest of the nine GWI operating regions around the world. While there are unlikely to be too many visible changes as a result of the purchase, it is believed that the FreightLink name will disappear following its amalgamation with GWA’s existing operations in South Australia.

Subsequently, GWA has announced the purchase of seven new GT46ACe locomotives from Downer EDI Rail.

Jack Hellman, CEO of GWA’s New York Stock Exchange-listed parent company, said, "As we enter 2011 we expect our Australian business to benefit from additional shipments of iron ore and grain as well as the full year contribution of the FreightLink acquisition."

“To improve the efficiency of our operations between Adelaide and Darwin, we recently signed an agreement to acquire seven, high horsepower locomotives that we will

take delivery of starting in the fourth quarter of 2011. The new locomotives are expected to increase the efficiency of our existing operations through lease and fuel savings, allow us to better serve our existing customers and provide additional capacity to support new freight customers."

GWA currently leases a number of VL and EL class locomotives from CFCL Australia to supplement its own motive power on the former FreightLink intermodal and ore services in the Northern Territory.

With new iron ore contracts likely in the near future and a significant number of locos in its existing fleet being over forty years old, there is an obvious need for new motive power.

The GT46ACe ac traction locomotives will be built by Downer EDI in Newcastle and are similar in design to those in currently use with SCT Logistics. They will be the first new locomotives purchased by GWA since it acquired the Australian National business back in 1997.

Meanwhile, *Railway Digest* has reported that GWA will be the recipients of two GenSet locomotives later this year, to be trialled on the Whyalla narrow gauge iron ore operations. The locomotives will be manufactured in the US by National Railway Equipment Company and brought to Australia by Downer EDI Rail.

The six-axle GenSet locos feature three Cummins engines which are only switched in as determined by the throttle settings. The report says that the Australian version has been designed to develop 2400hp with an axle load of 16.6 tonnes. The lighter axle load would suggest the new design will be targeted as a potential replacement for Australia's aging fleet of branchline units.

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## Freight and passenger rail numbers up

Over the past two years, freight rail movements increased a record 18% to 853.5 million tonnes per annum and passenger trips grew to 769.9 million annual journeys, or more than 6% according to the 2010 Rail Industry Report released by the Australasian Railway Association (ARA).

From 2007/08 to 2009/10, rail freight moved an additional 130 million tonnes, equal to an average increase of more than 356,000 tonnes per day, rail passenger journeys increased by 43.5 million passenger journeys, an average of more than 120,000 passengers daily.

ARA CEO, Bryan Nye says the significant growth in passenger and freight volumes reinforces the need for greater rail infrastructure investment in Australia.

"Every one million tonnes of rail freight growth requires one new train set, more tracks, more engineers and more technicians.

"It is the same on the passenger network. While every jurisdiction is purchasing new rolling stock, these will only meet today's increase in capacity. Much more will be needed in future especially if we are going to replace the 30 year old locomotives on the tracks today."

The ARA Industry Report provides vital data for policy makers on passenger and freight rail movements in Australia.

"The passenger patronage and rail freight tonnage growth is a clear reminder to policy makers that future planning and investment in rail infrastructure is essential if we are to cope with the continued demand for rail."

Traditionally there has been a significant issue with attaining transport data in Australia. The lack of data has severely undermined transport policy and planning.

"The rail industry has taken it upon itself to organise and collate fundamental data for the transport policy and planning process, providing a reliable source of rail data in Australia."

"The rail industry is seeking an equally robust set of publicly available road data figures to ensure future transport planning is based on quality information and sound analysis. We do not know what is being transported on our roads or where goods are going. "

"Multi-billion dollar road investment decisions are based on gut instinct. This is irresponsible. "

"Government and road transport agencies need to provide adequate road data so that educated investment decisions can be made for Australia," concluded Mr Nye.

The 2010 Rail Industry Report is the seventh annual report of its kind commissioned by the ARA and can be found at:

[www.ara.net.au/UserFiles/file/Publications/ARA-Industry-Report-2010.pdf](http://www.ara.net.au/UserFiles/file/Publications/ARA-Industry-Report-2010.pdf)



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# High-speed rail feasibility study

The \$20 million feasibility study commissioned by the Australian Government to determine the economic benefits and financial viability of a high speed rail (HSR) network along Australia's east coast has started following the appointment of consultants to complete the first stage of the work.

A consortia led by AECOM Australia will identify possible route and station options, a process which will provide the basis for determining indicative transit times and construction costs.

This first stage is expected to be completed by the middle of this year.

The study's second stage will determine an optimum route alignment, identify patronage levels, develop robust cost estimates and investigate financing options.

The feasibility study seeks to build on the previous work undertaken and once completed, will provide the basis for an informed public debate about whether HSR technology is an appropriate response to Australia's future transport needs.

Given the high level of interest in the study a formal reference group is to be established to make sure the views of organisations such as the Australasian Railway Association and the CRC for Rail Innovation, as well as state and territory authorities are taken into account.

The AECOM Australia consortia comprise KPMG, Sinclair Knight Merz and Grimshaw Architects.

The study will focus on identifying possible routes, corridor preservation and station options, including city-centre, city-periphery and airport stations. This will provide a basis for route development, indicative transit times and high-level construction costs.

As part of the core network element at the centre of the east coast corridor, the Newcastle–Sydney 'spine' will be a central aspect of this work. Options for links northwards to Brisbane and southwards to Canberra and Melbourne will also be considered.

Specifically the study will:

- Identify undeveloped land corridors and/or existing corridors that could be considered for a high speed railway, and preservation strategies;
- Identify the main design decisions and requirements to build and operate a viable high speed rail network on the east coast of Australia;

- Present route and station options, including indicative construction costs and interaction with other transport modes;
- Provide costs estimates of undertaking the next stages of work, such as detailed route alignment identification and corridor resumptions;
- Identify potential financing and business operating models for the construction and operation of a high speed railway;
- Provide advice and options on relevant construction, engineering, financial and environmental considerations.

The study will be managed by the Department of Infrastructure and Transport. It will draw on expertise from the public and private sectors, as well as international experience, growth forecasts and other contemporary data. Stakeholders will be consulted and contribute views through a formal reference group, which will include representatives from relevant Commonwealth, state and territory agencies and other key stakeholder groups.

The initial phase will provide a basis for consultation and inform the specific direction of a second phase, including consideration of the specific corridors, routes and associated issues to be targeted for more detailed examination.

Further work from July 2011 will include:

- Identification of preliminary geotechnical issues;
- Development of comprehensive robust cost estimates for preferred options;
- Detailed patronage and revenue forecasts;
- Consideration of preferred options in relation to other modes (for example, airport capacity implications resulting from diversion of air traffic to train).

This final work and report will take approximately 12 months to complete and inform the Australian Government and state and territory governments' consideration of next steps for high speed rail in Australia.



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## Society and Chapter News

# RTSA Railway Engineering Awards

### 2011 AWARDS

Having received an unprecedented number of nominations for the 2011 Railway Engineering Student Thesis Award and also nominations for the Wheel-Rail Interface Award, the following successful recipients have been identified;

**Mr Ross McGovern** has been awarded the **RTSA Railway Engineering Student Thesis Award** for his thesis entitled *Development of Longitudinal Train Dynamics Simulation Package* which was prepared at the University of Newcastle.

**Runners Up** in this category were; **Mr Adrian Lai** whose thesis entitled *The Design and Development of an Operator Enable Device for the Rail Network* was prepared at the University of New South Wales and **Mr Ishara Howpe Liyanage** from Curtin University of Technology for his thesis *Structural Analysis and Validation of No.2 End Headstock for the Perth Suburban A Series Railcar*.

The **RTSA 2011 Wheel-Rail Interface Award** has been made to **Mr Mark Dobrovits** for his thesis *A Study into the occurrence of Subsurface Rolling Contact Fatigue Cracks in the Wheels of RailCorp's Outer Suburban Car Fleet* which he prepared at the University of Wollongong.

Arrangements have been put in hand to make the presentation at the recipients' respective universities.

Five nominations have been received for the Individual Award and eight for the Young Railway Engineer Award. Review of these nominations presently is being undertaken by members of the Awards Sub-Committee.

For further details of these specific awards and others that are offered by the RTSA please refer to the website [www.rtsa.com.au](http://www.rtsa.com.au)

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## National land freight strategy

Infrastructure Australia has recently released its National Land Freight Strategy Discussion Paper with the intention identifying a tightly defined national land freight network, including sea ports and airports to assist on addressing thematic issues such as best use of infrastructure; integration of freight and land use planning; capacity for growth, and responsiveness of infrastructure to demand.

RTSA Members are encouraged to provide comment for the purpose of the compilation of a RTSA submission by our Submissions sub-committee.

Comments should be with the RTSA **by 18th April 2011** and should be sent to the submissions e-mail address which is [submissions@rtsa.com.au](mailto:submissions@rtsa.com.au).

Comments should be focussed on the technical merits or otherwise of the recommendations of the report which can be found at [www.infrastructureaustralia.gov.au](http://www.infrastructureaustralia.gov.au) under **National land freight strategy**.

Queries regarding submissions can be made direct to: [submissions@rtsa.com.au](mailto:submissions@rtsa.com.au)



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# Chapter Reports

## Queensland

### Chairman's Comments

The Christmas period was a bit eventful. It started with a derailment blocking the North Coast Line and the Goonyella System. Then we had a spot of rain. With the floods, cyclones, and earthquakes one has to wonder what else 2011 has in store for all of us.

Despite the extraordinary inundation, the track through the Toowoomba range is the only part of the QR network that is yet to open to traffic and the Toowoomba range rail crossing was due to open by the end of March. The recent events in Fukushima may add a few years of life to Queensland's steaming coal businesses.

Despite the events of the last few months, QRNational's share price remains strong. And a strong share price is what everybody wants, even if they are not sure exactly what QRNational represents. There appears to be much confusion in the public and the industry about how QR was split and what the resulting entities are.

Quite simply; Queensland Rail is the government owned bit, QRNational is the privately owned bit. QRNational has all the above rail freight and the below rail infrastructure of the four central Queensland coal systems. Queensland Rail owns the above rail passenger services and all of the below rail infrastructure except the four central Queensland coal systems.

To find out more, come to one of the RTSA's fascinating technical presentations. They are held every month and you may meet someone who can tell you exactly who owns what in Queensland, and Australia.

### Recent Meetings

In the last quarter the Queensland Chapter hosted two technical meetings.

#### 10 December 2010

Christmas Drinks and Technical Meeting - Robin Walpole gave a fascinating presentation on his experiences working on railways in Mozambique and Ethiopia.

#### 1 March 2011

Mike Raiss and Arthur Stamatoudis gave presentations on Brisbane's Cross River Rail and the antipodean London Crossrail project. While of differing scales the projects have many similarities.

#### 23 March 2010

Toowoomba Range Flood Recovery - David Stewart of Queensland Rail provided a presentation on the flood damage and the repair works underway on the Main Line on the Toowoomba Range.

## Upcoming Events

### 27 April 2011

Blackwater Power Supply Improvements.

### 25 May 2011

Northern Missing Link (Goonyella Abbott Point Expansion Project)

### May 2011 - to be confirmed

Inspections of the Yeerongpilly rail Welding Facility and the new Asset Monitoring Vehicle. This inspection was postponed last October due to heavy rain.

### 22 June 2011

Wayside-in Motion Measurement of Wheels and Bogies.

### 27 July 2011

RTSA Queensland Chapter Annual General Meeting, Dinner, and Trivia Extravaganza.

### 1 - 7 August 2011

Engineers Week: The RTSA plans to host a rail themed activity during Engineers Week.

### 24 August 2011

Gold Coast Light Rail.

The chapter is also working to host a screening of the recent blockbuster movie 'Unstoppable' with a follow up question and answer session.

The Queensland Committee looks forward to seeing you at the technical meetings in 2011.

*Alex Howie*

*Queensland Chapter Chair*

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## South Australia

### Recent Meetings

Since the December edition of *Rail Horizons*, the South Australian Chapter has embraced its many new Committee Members and has been involved with two technical presentations.

#### 3 February 2011

A joint meeting hosted by the PWI with ARTC's Ben Leske portraying recent East/West Productivity Projects, with excellent concrete-resleepering results.

#### 3 March 2010

A presentation by Scott Elaurant and Daniel Martucci discussing a 'fair go' for public transport accessibility, proposing that maximising patronage ought to be PT's primary role and that this can be more efficiently achieved using a democratic approach to design.

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## Upcoming Events

### 7 April 2011

Tim Ryan, ARTC - topic to be confirmed.

### 5 May 2011

Julie Bullas & Karen Dowling, NRSR - Progress on National rail safety regulation and investigation.

### 2 June 2011

Speaker to be confirmed - Adelaide's Rail Revitalisation.

### 7 July 2011

Peter Jaehne & Duncan McLeod - flood damage to Tarcoola to Alice Springs line.

We are keenly anticipating additional presentations on both High Speed Rail and Maglev.

Full details of Chapter activities (including venues, meeting times, programmes), and summaries of meeting presentations, are contained in the monthly Chapter newsletter, edited by Russell Fuller, and published on the RTSA website.

*Daniel Martucci, SA Chapter Chair*

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## Victoria & Tasmania

### Recent Meetings

#### 16 February 2011

David George, CEO of the Cooperative Research Centre (CRC) outlined the current activities of the Rail CRC for Innovation and those that are planned for the near future. Attended by more than 35 members and guests the presentation gave everyone an insight into what is happening on the research front and how it will benefit us in our work activities and how we can help the CRC.

#### 3 March 2011

Approximately 60 persons attended the presentation by Dr Mark Raiss, Head of Metros for URS/Scott Wilson, on the London Crossrail project. Dr Raiss drew parallels with current needs in Australian cities, and a topic that is generating a lot of interest in our own City. There was considerable interest from the wider community as evidenced by the attendance and question time. The Chapter appreciate the catering provided by Scott Wilson.

### Upcoming Events

#### 20 April 2011

AECOM - Indonesian Railways in the clouds

#### 20 May 2011

The May event is the Annual Dinner meeting and this year we have decided to move to the Windsor Hotel. After Dinner speaker will be Cr Jackie Fristacky, Chair of the Metropolitan Transport Forum (MTF). This promises to

be an event that looks at the other side of transport to the more technical approach that we are used and Cr Fristacky will identify some of transport issues in the Community that we as Engineers could have solutions to.

Please check the web site and flyers for the booking and payment arrangements for the Dinner event.

*Russell Trevaskis*

*Victoria & Tasmania Chapter Chair*

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## New South Wales

### Recent Meetings

#### 1 December 2010

Craig Mackey (NSWRMTM) and Chris Hoskin (Halcrow) gave a presentation at our final 2010 function on the topic of restoring to life the 3801 locomotive. It is arguably the most recognisable locomotive in the country, and currently going through a major rebuild that will allow it to continue in heritage service well into the 21st Century. One of the most important aspects of 3801's rebirth is the construction, in Germany, of a new boiler – which of course brings all sorts of conflicts into play. Imperial designs in a metric era, contemporary boiler standards and construction techniques compared to the original build and so on - it is not an easy or simple matter to keep heritage machinery operational in the "new" world. Craig and Chris gave us an insight into the issues and solutions that have had to be developed as part of this fascinating project.

#### 2 February 2011

The NSW Chapter kicked-off its 2010 program with the February meeting at Central Station where 90 members and guests were present to learn about the "Opportunities for enhancing the future transport of Sydney". Like other Australian capital cities and competing global cities such as Singapore, Shanghai and Hong Kong, Sydney faces challenges in accommodating growth whilst enhancing sustainability. Gary Glazebrook, Transport Policy Manager for City of Sydney, presented an analysis of the transport challenge facing both Sydney City and the wider Sydney region, and presented some opportunities for enhancing and integrating the city's rail networks to help address this challenge.

#### 2 March 2011

Dr Mark Raiss of URS/Scott Wilson introduced the London Crossrail scheme, Europe's single largest infrastructure project with a current budget of £14.5bn. Mark explained the history of Crossrail's development, described what it entails, the service it will provide and the funding mechanisms to achieve those ends. He then described the procurement and development of design including both design management and value management issues. He also discussed the procurement of the construction, covering issues such as the handling of

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excavated material. Mark presented his view on Paddington and Farrington stations, two of the major design packages which URS/Scott Wilson has been undertaking. Many of the topics Mark discussed were directly relevant to North West Rail Link.

## Upcoming Events

### 6 April 2011

Adelaide Rail Revival - Stephen Townsend, DTEI (SA)

### 4 May 2011

Making Rail Transport the Preferred Option of Travel - Nick Shorter, Interfleet Technology

### 26 May 2011

Joint meeting PWI/IRSE/RTSA, Masonic Centre Sydney

### August 2011

AGM and Annual Dinner Meeting

### October 2011

Hunter Valley Study Tour

## Membership

The Chapter welcomes all new members in NSW and ACT who have joined recently. As usual, I encourage all new members of the NSW/ACT Chapter to become involved in our activities and also maybe join the committee and give suggestions as to how meetings can become more relevant and attractive to the majority of the members.

*Katharina Gerstmann, NSW Chapter Chair*

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## Western Australia

The WA Chapter activities have recommenced after the Xmas/New Year break.

## Recent Meeting

One function has been so far this year.

### 10 February 2011

Australasian Tunnelling Society and the EA Transport Panel co-hosted a presentation **Planning for a Rail Link to the Perth Airport**. Peter Arul, Eric Hudson-Smith and Peter Martinovich all of PTA provided a very interesting presentation. Perth airport currently handles in excess of 9 million passengers per year with an expectation of continued strong growth to about 13 million passengers annually by 2015 and 20 million by about 2030. The talk focused on the planning objectives and business case for the railway, the technical and engineering aspects of the preferred option, and on the unique challenges of tunnelling beneath airport infrastructure.

The program for the remainder of the year is currently being finalised and presentation details will be circulated to members in the usual manner.

## WA Chapter Annual Dinner

The Chapter is again planning for an Annual Dinner this year. It will be held on the evening of **Thursday 9th June 2011** at the Astral Ballrooms at the Burswood Entertainment Complex in Perth.

Last year's Dinner attracted almost 200 guests and it is anticipated that this year's dinner will again be one of the highlights of the rail industry social calendar for the year. We believe that it will offer an ideal opportunity for industry participants and their partners to network and socialise whilst enjoying an evening of fine food and wine.

## Meet the Railway People Expo

This year the Chapter is adding a Meet the Railway People Expo to its calendar of events. **Saturday 7th May 2011** has been selected as the date for the Expo. The Expo provides an excellent opportunity for students to meet and discuss career prospects with rail industry professionals.

Anyone who is interested in participating can contact Bruce Keay at [www.bkeay@jdsi.com.au](mailto:www.bkeay@jdsi.com.au) for details.

*John Goodall*

*WA Chapter Chair*

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View from the 'Centennial Highway' rail worksite, Wellington, New Zealand - see story Page 6.

Photo: Anthony Phelps

# Railway Technical Society of Australasia Victoria Chapter 2011 Dinner Meeting

All members of the rail industry community and their partners are warmly invited to attend the 2011 RTSA Dinner Meeting, the premium rail industry event held annually in Melbourne.

Partners will be especially welcome and our guest speaker will make a presentation that will be of interest to all.

## Special Guest Speaker

**Ms Jackie Fristacky – Chair of the Metropolitan Transport Forum**

As Chair of the Metropolitan Transport Forum (an advocacy group of 19 Melbourne Councils) and Council's representative on the Road Safe – Inner Melbourne Community Road Safety Council, Ms Fristacky is passionate about government and industry efforts to achieve long-term solutions to traffic congestion and road safety.

"Improving the passenger transport system so that it is well-connected, accessible and reliable, is the most effective means of dealing with congestion in cities," Ms Fristacky has said.

Ms Fristacky is also a great exponent for the construction of a rail line to Doncaster and believes the failure to provide a rail corridor to the eastern suburbs represents "one of the biggest mistakes by the State Government"

**Dress:**

Jacket & Tie

**Parking:**

Secure Parking is located directly behind the hotel and can be accessed via both Little Collins & Bourke Streets.

**Accommodation:**

For those requiring accommodation rates for the Windsor Hotel can be found at

[www.thehotelwindsor.com.au](http://www.thehotelwindsor.com.au)

**Registration:**

For those that have internet access please register online through the link provided.

For those without internet access please telephone Rhiannon Hegarty - Conference & Events Coordinator – (02) 6270 6563.

**2011 Annual Dinner Meeting****Venue:**

Bourke Room, Windsor Hotel,  
111 Spring Street, Melbourne.

**Date:**

Friday 20 May 2011

**Time:**

7:00pm Pre-dinner drinks

7:30pm Dinner

**Cost:**

3 course with alcoholic drinks \$120

3 course with non-alcoholic drinks \$110

**[REGISTER ONLINE HERE](#)**

or visit the Events page at [www.rtsa.com.au](http://www.rtsa.com.au)

