

# SYDNEY NEWSLETTER



ENGINEERS  
AUSTRALIA

**RTSA**

Railway Technical Society of Australasia  
Sydney Chapter  
Mail: PO Box 6238, Kingston, ACT, 2604

FEBRUARY 2007

THE NEXT SYDNEY CHAPTER MEETING WILL BE ON

**Thursday 1<sup>st</sup> March**

17.30 nibbles and networking for an 18.00 presentation to be held at our regular venue –

GROUND FLOOR AUDITORIUM, INST. OF ENGINEERS,

**8 THOMAS St, CHATSWOOD (WEST SIDE OF CHATSWOOD STATION)**

Malcolm Cluett, our branch Secretary, will talk on

## **Current Advances in Steam Technology**

This topic is a bit off the usual track. Malcolm will be giving us an update on the decline and demise of steam power on rail, and the quiet but continuing development work that may, just possibly, produce some interesting results somewhere in the future.

Steam Locomotives were the predominant means of traction for the railway industry for over a century, but were phased out very rapidly after WW2. This presentation will outline the reasons for their decline, how the design of steam locomotives could be improved, and the development work which has continued even though, it must be said, there is little to show in terms of successful prototypes. Some proposed designs have performance levels that rival other forms of traction.

One advantage of steam traction is the ability to use low-grade solid fuels, and in particular renewable fuels. This makes the presentation very topical at present.

*Complimentary nibbles (finger picking good!) and networking from 17.30 prior to the presentation starting at 18.00. Meetings generally finish between 19.00 and 19.30, allowing attendees to get home at a sociable hour. Trains both ways through Chatswood are still running at frequent intervals at that time of night making the journey home that bit easier.*

Why not come along to an RTSA meeting (where you will be most welcome) and broaden your horizons in the industry that employs you and/or that you are keen to support. Even better consider joining RTSA (you do not have to be an engineer to be a member) and enjoy the full range of services provided by the association. Contact is at the mail address (above) or at [www.rtsa.com.au](http://www.rtsa.com.au) or by ringing Bill Laidlaw on 0409 602 833

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## FUTURE MEETINGS

The following meetings are planned for the remainder of 2007. We will always despatch a newsletter, or in extreme situations a flyer prior to every meeting. In most cases the next couple of months are firm.

**Thur 12<sup>th</sup> APRIL (following Easter) at a city location:** a joint meeting with IRSE, on the topic of Assessing Risk at Level Crossings.

**Thur 3<sup>rd</sup> MAY at Chatswood:** tba

**Thur 7<sup>th</sup> JUNE at Chatswood:** tba

**Thur 5<sup>th</sup> JULY at Chatswood:** AGM and tba

**Thur 23<sup>rd</sup> AUGUST at city location:** joint RTSA / PWI / IRSE meeting, with a speaker arranged by PWI.

**Thur 6<sup>th</sup> SEPTEMBER at Chatswood:** tba

**Thur 4<sup>th</sup> OCTOBER at Chatswood:** tba

**Thur 8<sup>th</sup> NOVEMBER (a week later than normal) on the Taiwan North – South High Speed Railway.**

## COMING EVENTS

**AusRAIL Plus 2007** will be back at the usual Darling Harbour location in Sydney from 4<sup>th</sup> to 6<sup>th</sup> December 2007.

**CORE 2008** will be held in Perth between 7<sup>th</sup> and 10<sup>th</sup> September 2008. Themes will be around high volume bulk freight and the integration of rail as part of the export supply chain, and rail in an urban environment and the issues of integrated planning of land use and transport as the core of successful public transport (Eastern States take particular note)

Potential delegates, exhibitors and sponsors can register their interest by going to [www.CORE2008.org](http://www.CORE2008.org)

## THE OBSERVATION POST

This has indeed been an interesting month (or more correctly ¾ of a month); the Wagga Regional Rail Seminar, several interesting days out peering at the local rail scene (even if some outings were really work

related) then just this week the great day out when Sydney became the city of Queens.

The Wagga Seminar deserves to be one of those landmark occasions that will be recorded in history as a defining moment. Here we are in 2007, looking at the long awaited upgrading of the national rail network (ironically one of the first projects completed is the bridge at Wagga) while at the same time the regional network in most parts of the country is falling into disrepair.

In some cases such as in Victoria the situation is an outcome of a seriously flawed privatisation, and as John Hearsch was to tell the seminar, probably that will be fatal for some of the remaining 'freight' network in that state. Even recovery for the rest is not yet secure, and in John's view that can only be achieved by a combination of recovery maintenance and standard gauging. In doing so the south eastern region (embracing NSW, Victoria and South Australia) would have a common gauge with inter-changeable resources working in a market large enough to sustain a viable business through seasonal fluctuations.

Other states did not get more than a passing mention at the seminar, apart from Western Australia where despite the relatively good standard of their grain lines it is proposed to yet again contract the rail network against rapidly increasing grain production. This may be a classic case of traditional short horizon economics at work, but at the same time a neat counter-foil to the keynote presentation.

Ed Zsombor, Director of Rail Projects at the Saskatchewan Highway and Transport Agency gave a presentation that was quite inspirational. Canada, as is the case here, has a relatively dense network of rural lines scattered through the agricultural part of the country (the 'less cold' bit in Canada's case). The major railroads – Canadian Pacific and Canadian National – were the owners of most of these lines but have progressively cast them aside as being a distraction from main line operations. The Canadians, unlike us, have a quite sensible and logical process to deal with this situation which basically takes as its starting point the desirability of retaining these secondary rail links if at all possible. The result has been a rapid and continuing growth of short lines that, in Ed's words, range from Ma and Pa operations through to ownership by Regional Railroads (we know about them – Rail America, Wisconsin Central, Genessee and Wyoming etc) and everything in between. A number are co-operatives, some are private equity, others are public,

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and there are examples of public track ownership with the above rail contracted out. These short lines actually originate something like 25% of all rail traffic in Canada. They survive by feeding traffic to inter-changes with line haul railroads and taking a contracted title from the overall rail rate for the traffic. In some ways this is very similar in a smarter way to the contract road carriers who cart containers in and out of South Dynon, Chullora and their kind, except that the short lines have a rather more symbiotic relationship with their large rail mates than the roadies do with the rail line haulers here.

Ed ran through some of the support that the Province (State) will provide to start up short lines, the regulatory issues and so on (see the RTSA web site at [www.rtsa.com.au](http://www.rtsa.com.au) for the overhead presentations from Ed and others at the Wagga Seminar). Even little asides about some of the operations were instructive – there is some 60 lb/yd rail in use (suitably sleepereed and ballasted) that carries 286,000 lb cars (wagons) which in our speak is 32.5 tonnes axle load. These move at low speed, but there have been no rail breaks or derailments so far.

The key lessons from Ed's inspirational presentation were that there has to be an attitude 'We cannot afford to waste useful assets; A removed railway has gone forever', there needs to be a vision, commitment and involvement (at all levels but particularly in the bureaucracies) and there has to be dedicated leaders and champions to set up and run a 'short line'. At the same time Ed indicated that the key to a successful short line is a viable business plan, and in fact this is a key issue for any Provincial support. At the same time Ed, in his role in Saskatchewan, believes in guidelines rather than legislation as the way to manage the Government interest in rail operations (having rail as a Federal responsibility helps in that the key legislation is Canada wide, with State responsibility being essentially subservient where it applies at all).

There are many differences between Canada and this country, not the least of which is our fragmented responsibility for rail, the application of 'open access' and horizontal segregation, the flawed and substantially immature privatisation process and the wholesale abandonment of regional traffics and opportunities by the a succession of rail owners over several decades. Never-the less there are some grand opportunities to save regional rail lines if we can work our way through the differences to develop an Australianised version of the 'We cannot afford to waste useful assets' attitude, coupled with something of John Hearsch's vision for a final rationalisation of the freight rail network and gauge

issue in the three southern states. As Ed says it takes vision, commitment and involvement and I feel sure that between us all (or even just those who feel strongly about this issue) we have those attributes. Can we harness them, turn around the here-to-for blinkered bureaucrats and get some real progress at the quiet end of the rail industry?

*It has to be said that the Wagga Seminar was an outstanding event as far as this delegate was concerned. A huge vote of appreciation must go to Andrew Honan, who drove the whole thing, and to Bill Laidlaw and John Watsford who contributed in no small measure to the organisation and running of the event. Thank you from all of us, including those who couldn't get there but may yet reap rewards from this event.*

*Go to the RTSA website and have a look at the presentations – well worth the effort*

## **ANOTHER GOOD RESULT**

The busiest suburban route in Melbourne is the line to Ringwood and beyond. During January a six week line shutdown was arranged so that 2 km of track between Box Hill and Blackburn could be lowered by up to 8 metres to pass under Middleborough Road (replacing a level crossing), the formation widened for a future third track and Laburnum station and underbridge totally rebuilt. Work went on round the clock with amazing results. Where there once was a shallow cutting a new deep cutting some half a km long appeared literally overnight. Laburnum station was located on reverse 400 metre curves on a 1 in 40 grade, but is now straight and level. A new and substantial overbridge appeared at Middleborough Rd where once there was an awkward level crossing. Buses were run between the two end stations, always in convoys of four at a time and into Box Hill on a specially created roadway built on the rail track so passengers transferred direct onto the platforms there. The project was supposed to go through to mid February, but it was actually completed and reopened for normal rail traffic two weeks early. Track shutdowns are a frustrating part of life but at least this one achieved a huge amount in a short time and came back into operation well before time. A good model for other railways which do this sort of thing. Below are a number of interesting pictures from the capable camera of Bob Wilson.

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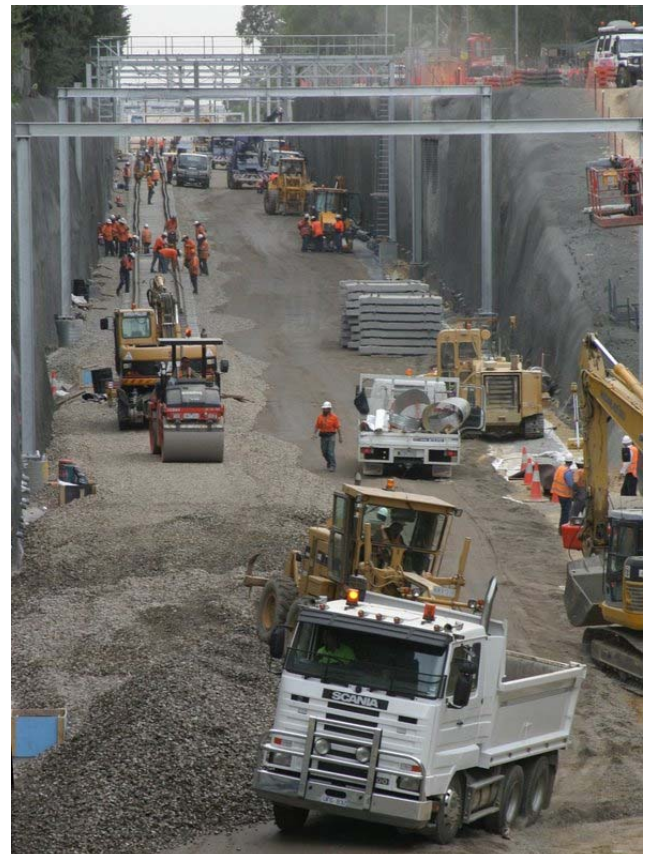
Old Laburnum station prior to the shut down showing the reverse curves and 1 in 40 grade. This station was the scene for more traction motor failures than any other place on the network back in the days of Tait and Swing door trains



New Laburnum station looking toward Box Hill showing the start of the cutting which replaced the 1 in 40 grade and allowed Middleborough Road (around the corner to the right) to go over the top. The future third track will go down the middle.



The cutting past Box hill cemetery looking toward Box Hill on Mon 8<sup>th</sup> Jan. The original track level was near the surface at this point (perhaps 2 metres deep). Spoil was removed so quickly that it was stacked on Box Hill High School oval for later removal, rather than tie up the actual work by carting it away as it was dug out.



The same cutting as at left just nine days later (We 17/1). The cutting is now around 8 metres deep, three tracks wide and has most of the overhead and signalling structures in place. Track is also rapidly approaching on the left, and a few days later several captive trains from the Blackburn Railway were able to be transferred back to cover for failed Siemens trains on the Box Hill Railway (main system).

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## NEWSLETTER FORMAT

You will notice that the front page of the newsletter has the 'Next Meeting' notice done in poster style. Where the opportunity arises consider printing off this front cover and placing on your work or other suitable notice board – more attendees at meetings means better informed people engaged in the industry.

## MEMBERSHIP – JOIN UP A NEW MEMBER

While this newsletter is primarily intended for members it is distributed more widely than that. Readers who are not members of RTSA should seriously consider joining the organisation. Details of membership and how to join will be found in the RTSA website at [www.rtsa.com.au](http://www.rtsa.com.au)

Although RTSA is a technical group under the auspices of Engineers Australia it is open to everyone who has a real interest in railways. It is the only technical group which covers all disciplines (civil, mechanical, electrical, signalling, communications etc.) and as such is one of the most rewarding rail technical networking groups in the country. The annual cost is very reasonable, and the rewards are considerable.

RTSA offers a number of regular activities for its members, including meetings, visits and technical tours. The every other year Conference on Railway Engineering (CORE) is a highlight. A number of awards are made annually to encourage recognition of meritorious activity in support of the rail industry. A particular RTSA attribute is that it engages in considerable well reasoned and structured lobbying in support of the rail industry with regular submissions and presentations to policy study groups and enquiries. Membership, in support of this activity alone, is very worthwhile. Consider joining RTSA now if you are not yet a member, or if you are a member see if you can introduce a friend as a new member. Remember [www.rtsa.com.au](http://www.rtsa.com.au)



A view from the up end of Laburnum station after resumption of services looking into the cutting toward Middleborough Road bridge (visible above the approaching Comeng train).



The bus road into Box Hill station. Note the 'wrong road' working. The only difficulty with the buses was the lack of co-operation by the VicRoads crowd who failed to manage traffic light operation properly to keep the buses flowing smoothly.

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## NOTICEBOARD

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Arnold Aranjo	Committee	Trevor Moore	Committee
Andrew Mackay	Committee	Chris Venn-Brown	Committee
Andrew Honan	Committee	John Watsford	Committee

### CONTRIBUTIONS TO THE SYDNEY NEWSLETTER

Part of the function of RTSA is to keep members in touch with what is going on in the industry and with each other and to that end we are only too happy to publish items of interest. Articles or editorial comment for Newsletter are very welcome. We have several hundred members locally some of whom have stories, events or developments of interest that could make an interesting item for Sydney Newsletter.

Contact details are –

The Editor, Max Michell, e-mail to [samrom@bigpond.com](mailto:samrom@bigpond.com), phone 02 9331 5662 or post to P.O.Box 279, Potts Point, NSW, 1335.

For all other matters relating to RTSA Sydney Chapter contact Malcolm Cluett (Secretary) or Bill Laidlaw (Chairman) as above.

### CPD CREDITS

Engineers Aust members who attend RTSA meetings and events will qualify for CPD credits as per the Engineers Australia criteria. Members are responsible for recording their own CPD for audit.

### NOTICE TO MEMBERS RECEIVING RTSA NEWSLETTER BY MAIL

If you should receive this Newsletter by post but would prefer to get it by e-mail (quicker and more reliable) then please let the Canberra know (address in the page header). E-mail saves time for you and costs for RTSA, which in the end can only mean better service to our members

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