

# NEW SOUTH WALES NEWSLETTER



ENGINEERS  
AUSTRALIA

**RTSA**

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

**JULY 2008**

**NEXT RTSA NEW SOUTH WALES CHAPTER MEETING**

**Wednesday 6th AUGUST**

**11.30 for 12.00 at CENTRAL STATION  
CONCOURSE MEETING ROOM  
(next to Lost Property, opposite platform 2)**



Left photo: Bob Grant: Right photo: Daniel Thomson

## **AK CARS AND MECHANISED TRACK PATROL (MTP)**

**Daniel Thomson, Manager Track Recording with RailCorp**

The AK cars, a three car set of former North Coast line sleeping cars converted for Track condition monitoring are a familiar sight across the National standard gauge network. Daniel will give us a presentation which will include an overview of the service that AK cars provide and will cover how the cars are currently jointly operated by both RailCorp and ARTC, and including a brief description of the data that the cars produce. His presentation will also cover operation of the little known MTP car, converted from a former self propelled track monitoring car, telling us how it is helping to improve the working environment for track patrol staff.

*As is the custom sandwiches and light liquid refreshments will be available from 11.30, prior to the formal meeting, allowing both time for 'refuelling' and to meet some of your fellow railway people.*

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### ANNUAL GENERAL MEETING

Our Chapter of RTSA will hold its annual general meeting on 6<sup>th</sup> August, starting at 11.30. The formalities will not take long, but the most important part is the election of the committee for the forthcoming year. While the traditional roles of Chapter Chair, Secretary and Treasurer need to be filled there are a number of other roles that need attention – Newsletter Editor, Event Secretary, NSW Webmaster, Young Engineer Representative as well as a number of committee persons. So there is a lot of scope for people from many and varied backgrounds to join the committee and contribute to the running of RTSA. Phil Robinson will be the Returning Officer on this occasion – contact him at [phil.robinson@bigpond.com](mailto:phil.robinson@bigpond.com) or on 02 9746 6159. A notice of the AGM and call for nominations has been sent separately to all members.

### WORDS FROM THE CHAIR [Andrew Honan]

Some numbers end up staying in your head. For example 'total freight task is forecast to almost double in the next 20 years' or 'the transport sector accounts for some 4.9 per cent of total economic activity in Australia'. One number that appeared consistently over the last 3 weeks, and will not doubt feature more prominently is 'that transport accounts for 14% of Australia's greenhouse gas emissions'. After stationary power (50% of GHG) and agriculture (16%) transport is the next largest emitter of GHG. The National Transport Commission states "Even if GHG emissions from the stationary energy sector could be reduced to zero by 2050, further cuts in other sectors are needed to meet the national target of a 60 percent reduction."

The reports from Garnaut Climate Change Review, the Commonwealth green paper on Carbon Pollution Reduction, the CSIRO's report on Future Fuels Forum and the NTC's report Freight Transport on a Carbon Constrained Economy provide pointers as the thinking of government action on freight and passenger transport. You may recall the press picking up the CSIRO headline figure on petrol prices (worst case scenario) of \$8.00 per litre by 2018, another figure that jolts the consciousness of many! These reports point to a market-based approach to carbon emissions, in which industries that produce carbon will be charged a price to do so. The CSIRO states that even at \$40/tonne or \$100/tonne CO<sub>2</sub>e, this will only raise petrol by \$0.10/L or \$0.25/L respectively. That in fact, Peak Oil and the pricing of supply and demand, has a much larger impact on fuel prices than emissions trading. Indeed the CSIRO has scenarios of petrol pricing of between \$2 to as high as \$8 per litre by 2018 due to peak oil.

Although carbon pricing in an emission trading scheme will start off low and ramp up, by itself this may not spawn new technologies and responses fast enough to meet carbon reduction targets of 60% (2000 levels) by 2050. The CSIRO also paints a picture in which new technology in alternative fuels will not become available in time and that passenger and freight transport will reduce by up to 40%. So called 'complementary policies' (code for government intervention) will be necessary so that our economy continues to grow (in a low carbon environment).

The CSIRO states "In designing new policies, the government will need to consider the risks attached to both market-based policies, on the one hand that emphasise decision making driven by market forces and industry development policies on the other that require the government to 'pick winners'".

These scenarios would appear to provide opportunities for rail. In particular modelling by CSIRO stating "... projected that a greater shift toward public transport and lighter vehicles, and increased use of rail and sea freight could reduce kilometres travelled by 30 per cent and greenhouse gas emissions by 17 per cent." Although these are opportunities, there is no consensus as to what degree rail will play an increased role in either freight or passenger transport. Alternative fuels, hybrid cars and electric rigid trucks, coastal shipping as

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well as public transport and rail freight are all talked about as responses to carbon constrained economy. How these develop will depend on the confidence levels of specific measures in providing the necessary transport outcomes in a carbon constrained economy.

What is clear however is that rail has some advantages that are well proven. Intermodal rail freight is one of the lowest energy (and carbon emission) intensive forms of transport. At 1/10<sup>th</sup> to 1/3<sup>rd</sup> of the CO<sub>2</sub>e per tonne/kilometre<sup>1</sup> of articulated trucks, rail can provide some early abatement measures, particularly if accompanied with further improvements in infrastructure and intermodal terminals.

The recent NSW State Government announcement of a metro rail can also play a significant role in an integrated framework for public transport and land use.

The RTSA symposium 'Metros - Future Rail for Sydney' on 12 November, will discuss some of the technologies of metros and how they integrate into the built environment. The morning session will be devoted to the attributes and characteristics of metros in an integrated transport and land use framework, whilst the afternoon session will showcase studies of metro developments around the world. The purpose of this conference is to highlight the economic and social benefits of metros for the community (including how they may integrate with the existing substantial rail and bus systems) as well as discuss and build awareness of technical aspects of metros systems.

The RTSA's role in this symposium is to facilitate discussion only. The RTSA does not prescribe a particular view of how metros should develop or to define a "metro". Every system in the world is different. The key issues relate to mobility and access to efficient and integrated public transport systems. We believe that by bringing overseas evidence and discussion of metros to Sydney, that we can collectively learn of new ways to provide transport in an efficient and environmentally sustainable way that is important for future generations. Please join us on the 12th November in this first of many discussions on metro rail, and a new future for sustainable transport.

### **LAST MEETING [Malcolm Cluett with assistance from Peter Jaehne]**

**Speaker: Mr Peter Jaehne: Manager Infrastructure Maintenance: Freightlink – Owners of the 2250km Tarcoola – Darwin railway and Operators of Adelaide –Darwin rail freight service.**

This railway is seen as part of the National Network, and also bisecting a developing and mineral-rich region of Australia.

In the period 1981 - 1884, the speaker did some preliminary work for Australian National on the route and the construction programme for the new railway beyond Alice Springs to Darwin. Further work on this project was cancelled by the incoming Hawke government in 1984. The speaker was surprised to see the project restarted, under a different ownership structure, about twenty years later. The construction programme was substantially accelerated, owing to advances in construction techniques during this time.

The speaker gave a historical perspective of the new railway. The earlier narrow gauge lines in central Australia were described. Cyclone Tracey ended the operations on the former North Australia railway which ran south of Darwin to Larrimah.

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The new 1420km extension from Alice Springs was completed in November 2003. The list of shareholders includes the Northern and Central Aboriginal Land Councils. The project is tied in with a major expansion of Darwin Port, and the associated Business Park.

At present the traffic levels on the new railway are somewhat mixed. Export container traffic by rail is less than anticipated (approximately fifty units per month passing through the port), but mineral traffic has exceeded expectations. There is investment in new infrastructure at the port for handling minerals, and also for additional crossing loops to handle the mineral trains at the Darwin end.

The financial return is sufficient for the railway's current operations, but not enough to service the construction debt. The current owners of the railway are looking to sell it to a new buyer, who will need to refinance the operations.

Freight operations commenced in January 2004. The design speed of the line is 115 km/h, the axle load limit is 23t and the crossing loops are 1800m long. A typical freight train weighs 4000t. Because the provision of crossing loops is rather sparse, the disruption due to a train missing its path can be up to eight hours. Compared with some other mineral railways, the line's construction is fairly lightweight (in terms of sleeper spacing, size, ballast depth, etc).

The older section of the railway between Tarcoola and Alice Springs retains some sections of old 80 pound/yard, but there are plans to replace these old rails.

The speaker showed some scenes of the new railway's bridges, some which are remarkably high to cope with wet-season flooding. One bridge from the original North Australia Railway (Ferguson River) was re-used. Another (across the Katherine River) was also built to suit future standard-gauge trains, but this structure was not re-used as the alignment of the new railway would not need to traverse the town (which has grown over the years). A new bridge was provided on a different alignment, and the new station at Katherine is located some distance out-of-town.

The McKinlay River has on several occasions been subject to local flooding, and a flood management study of the affected area has been commissioned. Any remedial work on this section is likely to be disruptive and expensive.

The Darwin Terminus has 1800m of hard-stand to accommodate forklift movement.

### **Mineral Traffic**

The Oxiana Prominent Hill mine is planning to ship out "kibbles" (covered boxes) of copper/gold concentrate utilising scheduled freight services. A shed capable of accommodating 30,000 tonnes of concentrate has been built at the port. Planning at the port allows for another four such sheds for future bulk or mineral products. Oxiana's planned tonnage throughput is approx 250,000 t/annum.

Construction of new trackwork to the Oxiana shed has been delayed by the need to relocate several fuel, acid and other commodity pipelines, which must be crossed by the new spur.

Territory Iron (from Frances Creek) currently rail 1.5mtpa to the port, and an expansion is planned. Currently the trains are loaded by Front End Loader on a loop, which is offset a few metres further from the running track than the standard loop spacing.

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Manganese ore is shipped from the Bootu Creek mine. Increases in tonnage are also planned.

The new shiploader at Darwin handles the above mineral products.

Negotiations are well advanced with another new mine which should soon be shipping an iron-ore (with gold and copper) product, over a very long haul (from south of Coober Pedy). This will involve a 60km road haul to a new siding. New crossing loops will be needed along the length of the railway when these trains commence operation.

There are also large deposits of low-grade coal in the North of South Australia, and also phosphate rock in the eastern NT which are likely to be developed over the next 5years. The value of these commodities is increasing. (phosphate being used as a feedstock for fertiliser, much sought after in the production of bio-fuels.)

### General Freight

The railway obtained 80% of the general freight market within eight months of commencement. Each train has a crew of four, operating on relay working eight hour stints. Each train has a crew car.

A slide showing the main shippers on the railway demonstrated that the main four customers are:

- Toll
- Linfox-FCL
- Northern Territory Freight Services
- Northline
- plus some others.

The Northline company was an early customer on the railway, but withdrew completely from rail when there was an unexpected price rise. They then bought a fleet of road trucks which they have now sold and have come back to using rail freight on the haul from Adelaide.

Another customer is the Australian Defence Forces, which ship large amount of military hardware for exercises in the Territory. They have purchased some flat wagons for this purpose, and lease others as required.

The Abrams Tanks are 65 tonnes in mass, and are wider than the usual loading gauge. There is a Defence Force crew carriage in its own livery!

Another major source of traffic is incoming fuel from both Darwin and Adelaide, to Alice Springs. The Granites Gold Mine is also a major user of fuel.

The number of trains per week has increased from 10 in 2005 to 34 at present.

### Problems with the new railway

In the early operation of the railway, severe hunting of the freight wagons was observed. This is evident as a 3 – 4 Hz transverse oscillation. It resulted in damage to the goods being conveyed. It also resulted in abrasion to the wagons and shipping containers at the contact points, and to the bogie hardware.

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The problem is worsened with increasing speed. The trains were slowed down somewhat and an investigation (with rolling stock supplier EDI) took place. The focus of the investigation was on the wheel/rail profile. (The rails in the Tarcoola – Alice Springs section have been in-situ since 1980, and the rails North of Alice Springs were new.)

A test train was operated at different speeds on varying track types. It was found that rail grinding, and a choice of a different wheel profile, almost eliminated the problem. This was proved by the transverse acceleration plots from the test train (consisting of five-pack wagons and a crew coach). It was decided to grind the rails South of Alice Springs, and to lightly grind the rails with a single pass on the new section North of Alice Springs. The intention was to provide more of a radius to the top profile of the rails, rather than the flat-top profile of both the worn rails and the new rails. In addition, the wheel profile for the wagons was altered.

Some other problems are caused by culverts having difficulty in clearing the wet-season flow rates from the rivers, and suffering outlet scouring as a result.

Accelerated corrosion of corrugated culvert pipes due to acid-sulphate soil are under investigation.

With hindsight, some of the borrow-pits for fill were located too close to the culverts in the new railway.

In one localised area, where the vegetation has been denuded by cattle-grazing, sand drift is a problem. (This was also a problem in the Condoblin – Broken Hill section, and parts of the Mallee in northern Victoria where 'sand chutes' were still in existence into the 1970's.)

On the other hand, there has been rapid growth of lineside vegetation in the areas with sufficient rainfall, having an adverse effect on visibility. Vegetation maintenance will be an increasing task in future at the Darwin end of the line.

The number of people actually involved in maintenance of the new railway is very small considering its length – only 21 persons to maintain 2400km of track. Much of the work is contracted out, however. In addition, the railway does not have its own tamping machine, but hires one as required.

The practice is to tamp sections of track in the dry season and monitor sections where the alignment has suffered in the wet season, with speed restrictions.

Questions from the floor – Is it true that the railway passes through an area subject to sinkholes?

The Newcastle Waters – Katherine area is affected by geological settlement ("sink holes") because of groundwater percolating through underground layers of limestone. This area was carefully surveyed and avoided during the set-out of the line. Boreholes, magnetic-anomaly surveys and observation of surface features were all used to avoid areas which might be subject to settlement.

Question– possible construction of branchlines: Answer – where the traffic warrants it, branchlines to new mines will be built.

Question - Shipping of motor cars one-way: Answer – Freightlink is a wholesaler. If someone wants to ship a car on the railway, they should contact the freight forwarding companies mentioned above. (The Ghan passenger service also carries cars.)

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### LETTERS TO THE EDITOR

Engineers are apparently not prolific letter writers, but we still got a couple this month!

#### **Letter # 1: Geoff Smith writes -**

In the June Newsletter a letter from Colin Butcher and to a lesser extent, the article by Alex Stoney stimulated me to get on my favourite hobby horse.

Everybody connected with road and rail safety should have the word "accident" excised from their computer. The words "crash" or "collision" or even incident should automatically be inserted instead. The word "accident" has connotations of unavoidable. How many level crossing collisions have you seen or read about that were unavoidable?

Next time, when writing about a road or level crossing crash, think before you automatically use the word "accident". 99.9% of the time it will not be appropriate.

#### **Letter # 2: Chris Venn-Brown writes -**

As predicted by myself and a few others, privatisation of the railways, and the disaggregation of vertically integrated rail systems into train operators and track owners has further widened the technological gap between wheel and rail. Rolling stock and track engineers recognise the immutable truth – that the wheel/rail interface is an integrated system, just like a hand and a glove, Jack and Jill, or the wings and fuselage of an aeroplane. Those who attempt to deal with one part of the system without addressing the other, do so at their own peril.

In the old days, the Chief Civil Engineers were able to provide wonderful track that was maintained in perfect condition, as long as no one was silly enough to run trains over it. Meanwhile, the Chief Mechanical Engineers blamed all rolling stock riding quality and maintenance problems on track conditions.

More recently, for a while, there was some enlightenment, the CCEs and the CMEs thought about talking to each other (and sometimes actually did), and there started to be a general recognition that for best results, the rolling stock had to be suited to the track, and vice versa. Not that this was achieved most of the time (except in special cases like the heavy haul iron ore traffic).

Then along came privatisation. Now, outside Queensland, the track and the rolling stock are owned by different people. The track owners have no (obvious) incentive to consider the characteristics of the rolling stock that might operate on their track, and, likewise, the operators do not care how much wear the track suffers under the influence of their rolling stock. Theoretically, the contract conditions agreed between the operator and a track owner could be used to address this situation, but it does not seem to happen, for the most part, at least.

A prime example of this was highlighted in July's technical presentation to the NSW Chapter by Peter Jaehne of Freight Link.

It seems that the Darwin to Alice Springs railway was built on behalf of the track owners at minimum cost, with savings being made in areas such as sleeper spacings and lengths, and (I believe it was said) rail quality. The operators who were to use this track purchased container flat wagons with basic three-piece bogies. It appears that no consideration was given to matching the wheel and rail profiles, or the bogie performance to track conditions.

The result was serious bogie hunting at normal operating speeds, leading to large amounts of seriously damaged payload, a loss of important railway clients, and, most significantly, damage to the reputation of rail transport. The problem was cured by an expensive rail grinding exercise, and a (probably equally expensive) change in wheel profile. The commercial consequences of this mistake were serious. While the clients have now returned rail transport on the Adelaide to Darwin route, there is no doubt that the railway's reputation and viability was significantly set back. The aftermath may still be lingering, and one wonders whether this occurrence was contributory to the recent decision by Freight Link's shareholders to place the company on the market.

For the industry's sake, let's hope that other track owners and operators learn from this episode!

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### GRANVILLE TO WESTMEAD – A Short Series By Tony Woodland

***For the third time in 20 years the Western Railway line and stations between Granville to Westmead (inclusive) have undergone radical changes.***

The first was the construction of the four tracks including the dive in Parramatta Park section in 1984-86 along with the refurbishment of the stations at Harris Park and Parramatta.

The second was the construction of the Y Link connecting the West Main lines with the Old South between Harris Park and Merrylands. This included a bridge over Parramatta Road and the up Old South being made into a Fly-over at Woodville Road and a short section of four tracks towards Merrylands station. At the same time Parramatta station received the Eastern Access under the station and lifts and escalators.

In conjunction with this Westmead station was rebuilt to assist with access to the Westmead Hospital Complex and to provide a seamless transfer from the Y Link Trains to others going to the city or vice versa. This occupied 1994-96 the Y-link being opened in November 1996.

The third is the recent 2006 refurbishment of the platforms, extensions to them, a new Transit Transfer Centre in Argyle Street for the bus services and the construction of an underpass for buses arriving at the northern side of the station to access the Transit Centre by way of a road joining Argyle Street and Hassall Street passing to the eastern ends of the Parramatta station platforms. Originally this work was to occur, albeit in another form as part of the Parramatta-Chatswood Rail Link (Then known as the PRL [Parramatta Rail Link]) which under current plans by the State Government will only extend from Chatswood to Epping. The name of the project was quietly changed from the Parramatta Rail Link to Epping to Chatswood Rail Link about 1<sup>st</sup> January 2004.

Granville has also seen major changes to its facilities whilst the platforms did not change radically in the same period. A new overhead walking bridge was constructed connecting the two island platforms at the Sydney end for the Olympic Games period in 2000 and only recently has been fully roofed. At the same time the Booking Office on the Western end has had the addition of lifts to the street and the platforms to make it a fully accessible station.

Many reminders of the past, albeit small, have disappeared with these works. Many reflect railways of yesteryear. These include the up and down sidings to the west of Granville including sidings on the down side serving Buchanan's stock feed and also the extension to the Down Relief line. On the Up side there were sidings variously known as the PDS or the Ready Mix sidings in the 1980's and then used for stabling of track machines.

At Parramatta there were short stub tracks known as "very short dead ends" which were used to run the 30 class loco in when the passengers changed from Suburban Electric trains to steam hauled trains between 1929 and 1956. The arriving 30 Class detached and ran forward, the 30 Class in the other dead end set back onto the train coupled up and was ready for departure. Then there was the dead end shunt and two sidings on the Down side, for setting out McQuorqadale's flour mill trucks, which were the remnants of dock platforms and the steam tram terminus of the early part of the century. Also there was the remainder of the goods yard on the Up side behind the existing 1940's building on platform 1, which became a bus terminal and will soon become vacant land again until required for future development.

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### Preparatory Work:

There was over the period 1977-84 small works done to assist with the final conclusion, the four tracks from Granville to Westmead.

Some were not so small such as the construction of new abutments and piers for A'Becketts Creek and Bridge St over-bridge at Harris Park and the replacement of a bridge over Domain Creek in Parramatta Park with a buried culvert and a four-track embankment in the same place. The steel two-track bridge was then used as an access for road vehicles to bring out the spoil from the Up Main "dive".

In 1983 the major work began, that of widening the embankment from Parramatta Station to the under-bridge at Pitt Street, and the starting of the excavation for the Dive for the up Main Line in the cutting at Parramatta Park.

As a prelude to the main work the Up Main line was slewed to run on the Up side of its current location (against the cutting and Parramatta Park). The old two track bridge crossing Domain Creek was replaced by an embankment and the creek passed under the by now four track embankment by culvert pipes. The old bridges were then re-erected to crossover the Down Main and provide a way out and in for the excavation vehicles involved in excavating for the "Dive". Only two tracks remained from the west into Parramatta Station and at the western end of these changed as each platform (Platforms 2, 3, and 4) were refurbished and a new underpass with room for ticket offices, barriers and staff was constructed. This caused the two existing access points to all platforms to be filled in. However a plaque was erected on the wall of the current access to and from Platform 4 noting the access way's history.

Using the Parramatta station during these periods was difficult but possibly not quite as a problem as with the current 2004-5 reconstruction. Access was still available from both Argyle and Darcy Streets using either a "bailey" bridge structure to cross tracks in No3 or 4 Platforms or the rebuilt underground access ways.

At one stage only Platforms 1 and 4 were in use then only 1 and 2 as the main work centred on the refurbishment of the buildings and access to Platforms 2 and 3. Except for some extension of the platform at the Country end Platform 4 escaped much of the work. It was however extended on the Sydney end by a temporary length of platform until the country end was finished along with the extended underpass for passengers.

Why the delays? It would appear that the first tentative steps of the widening of the Cambridge Street Bridge and the early work in Parramatta Park was caused by a difference of opinion or at the least a misunderstanding of two items:-

- a. The type and location of the "dive" where the Up West Main would pass under the Up and Down Suburban lines and give an up and down working following the parallel working at Westmead.
- b. Based on where the location of the dive was, either between Harris Park and Parramatta, eliminating at least two platforms at Harris Park or in the portion of where the lies passed through Parramatta Park and this had opposition from the Local Authorities and the Friends of Parramatta Park, the new buildings and upgrade of the Parramatta Station.

A summary of the headlines in the local papers gives some idea of what was being considered.

14 July 1981 "Parramatta Advertiser"... "Chamber (of Commerce) unveils its station plans." "The Parramatta Chamber of Commerce has released its plans for a railway station capable of meeting the future needs of Parramatta....The general idea is similar to that of, and it is "designed to blend with the proposal of the

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Parramatta City Council, and is designed to blend with the proposed Church Street Mall, the plans show adequate bus transfer access underneath the station.”

In 1981 when the site of the “dive” was being questioned the Parramatta City Council sent the Mayor, Alderman Stan Dickson and a deputation to the site of earthworks in the Parramatta Park area. The report continues... “ The Mayor later told the Council that the engineer (of the State Rail Authority) on the site had shown him plans and explained that the excavation was necessary for a retaining wall. Ald. Dickson said it had been emphasized that the excavation was not intended as part of a “dive tunnel”- a controversial part of the Authority’s quadruplicating plans.”

By 1983 the local paper reported (Advertiser 16/11/1983) “Chamber bid on Railways”..... “Parramatta Chamber of Commerce is making a last ditch attempt to convince the State Rail Authority to bring Parramatta railway station into the 20<sup>th</sup> century.” By this time the State Rail Authority had made it plain that the “Dive” would be in Parramatta Park “to switch one line across” and had informed the Council and the Chamber that would defeat the idea to make Parramatta station more accessible (through having parallel running and interchange across the platform).

The other local paper, *Parramatta, Holroyd and Hills District MERCURY*, headlined it this way... “Parramatta stuck with ancient railway station” and then followed the story that “hopes for a modern well designed and convenient railway station at Parramatta are on the verge of being destroyed, members of the Parramatta Chamber of Commerce and Industry said this week.”

There followed the story that the State Rail Authority had allowed \$4m to be spent on the upgrade, they had costed the Chamber of Commerce’s plans of 1981 at “over \$30m” and a further \$50m for the flyover/Dive to be constructed at Harris Park. The SRA proposal included the provision of a footway connecting the two streets each side and the platforms and the closure of the underground access. President of the Chamber said “a city as big as Parramatta deserved better”.

Mr Mobbs, the President of the Chamber was “concerned by the lack of interest by the SRA and the lack of support by the local member (Mr Barry Wilde). Back in 1981 the Chamber and the Council had approached the Premier and the Minister for Transport, Mr Peter Cox and after announcing “that there would be no major rebuilding of Parramatta Railway Station he refused to meet a delegation from the Chamber.”

There was not much on the subject until reports in 1984 but in the meantime the SRA had gone back to the drawing board on some aspects and in Parramatta Park , work on the Dive proceeded. Then in the 13 March edition of the *Mercury* the announcement of a \$5.8m go ahead for the station was announced.

“Work on renovating Parramatta Railway Station will begin towards the end of this year (1984), the Minister for Transport, Mr Cox, announced last week”. The report reads and then is an added report with claims by the Chamber of Commerce and its president, that “Chamber was the catalyst...Mobbs”. Then follows a political explanation of the to and fro between Chamber of Commerce, the Parramatta City Council, the Local Member and the SRA as to how it happened.

What had changed? The new SRA plan showed street level entry from both Darcy and Argyle Streets and an enlarged underpass with ticket office and a disabled ramp to all platforms. This added \$1.8m to the original cost.

A copy of the newspaper at the time shows the design favoured by the Parramatta City Council and the Parramatta Chamber of Commerce in November 1983. A contrasting copy of a design as released by the State Rail Authority in February 1986 shows the final design which was completed later that year.

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During the time of construction of the Parramatta Station upgrade work was continuing on the changes to the tracks and other stations, none more so than Harris Park, which went from a two platform "country style" station to two island platforms with new access ways and overhead booking office and amenities.

Along with this the junctions at both Granville and Westmead were changed. The biggest work other than this was the construction of the "dive" in Parramatta Park area following the scrapping of the alternative plan for the Harris Park site.

The major safe working change during this period was to the replacement of the Parramatta Signal Box with a two sided panel in the Granville Signal Box. Why two sided? To allow for it to be used by a second signaller or if only one on duty to be able to be accessed by the signaller without changing chairs. In practice this would rarely happen.

### *Official Reports on the work:*

In the State Rail Authority's Annual Reports for Years 1984/5, 1985/6, 1986/7 and 1987/8 and in the "State Wide News" the regular newsletter of the SRA dated August 1987 upgrade progress was reported.

#### *1984/5 Granville-Westmead Quadruplication :*

"All major outstanding structural and civil works were completed during 1984/5 including five new underbridges, Harris Park Station and major retaining walls. Also completed and commissioned were the two new tracks between Granville and Parramatta. These tracks, as with all the remaining tracks under construction, were constructed with concrete sleepers, giving a much more stable track with smoother riding characteristics. In February 1985, contractors completed the dive tunnel contract at Parramatta; track was then built and commissioned through the dive in June, 1985." The report then ends with "The works are on schedule and budget; a final project cost of \$46.3 million is anticipated."

#### *1985/6 Trackwork - Granville-Westmead Quadruplication:*

"Work continues on this large project the total cost of which is estimated at \$48 million. Highlights of this year included the completion of the two additional tracks between Parramatta and Westmead. The \$5 million reconstruction of Parramatta station commenced in July, 1985."

#### *1986/7 Additional Track and Passenger Facilities- Granville- Westmead Quadruplication:*

"Work on this project is entering the final stages- \$10 million has been spent in 1986/7 and planned completion is scheduled for July 1987. Highlight for the year was the official opening in July 1987 of the restored Parramatta station at a cost of \$6 million."

#### *1987/8 The Year at a glance July 1987*

"Australia's most historic railway station, Parramatta, officially reopened after a two year restoration. The restoration was part of the \$50 million Granville-Westmead track quadruplication."

In *StateWide* of August 1987 a report of the opening said:- Rail travellers in Sydney's west are now reaping the benefits of completion of the long awaited upgrading of Parramatta station and the quadruplication of tracks between Granville and Westmead.....Deputy Premier and Minister for Transport Ron Mulock officially opened the projects late last month." (to be continued)

# NEW SOUTH WALES NEWSLETTER



ENGINEERS  
AUSTRALIA

**RTSA**

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

## JULY 2008

### MEETINGS

Future meetings are listed in the table toward the back of this Newsletter. Meetings are normally on the 1<sup>st</sup> Wednesday of the month at 12.00 in the large meeting room off the main concourse of Sydney Central (Steam) Station. The venue can be found in the North West corner of the main concourse opposite platform 2, next to the Lost Property Office.

**EMINENT SPEAKER MEETING:** A special meeting will be held on Monday 1<sup>st</sup> September to hear the CORE eminent speaker, Andrew McCusker presenting on the topic of the Hong Kong MTR. The location will be the Ionic Room at the Masonic Centre at the corner of Goulburn and Castlereagh Sts at 16.30 for 17.00. Entry is from the Goulburn St frontage.

**CHANGED MEETING DATE:** Our October meeting has been advanced a week to fit the presenter's availability – the meeting will now be held on **Wed September 24<sup>th</sup>** at our usual Central Station meeting place. The speaker will be Kevin Taylor from the RISSB talking on the topic of Railway Standards development, and is part of a National program arranged by RTSA on this important issue. A separate flyer has already been sent out to members about this meeting

### AN APPEAL

There are a multitude of activities and developments happening within our industry, again highlighted by both the editorial and last meeting report this month. Issues ranging from the high level (policy and the like) through major construction and acquisition to relatively minor matters that often go completely unrecognised and unreported are all part of our industry and in most cases are only known in detail by relatively few of us.

We are always on the lookout for interesting and varied topics for meetings later in the year and beyond. Basil has done a great job in getting an interesting and varied program up over the last 12 months, but he would welcome any, all or more bright ideas from members. So if you have a pet topic, or are overcome with curiosity about something of interest in the rail domain, then contact Basil at [basil.hancock@railcorp.nsw.gov.au](mailto:basil.hancock@railcorp.nsw.gov.au) and let him know your thoughts.

### COMING EVENTS

**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.

Apart from plenary sessions on both conferencing days and a panel discussion prior to closure on the second day, there will be four parallel technical streams running with such technically delicious topics as

Freight Logistics  
Wheel - Rail  
New Railways – Freight  
Perth Urban Rail  
Iron Ore  
Track Structure

New Railways – Metro  
Asset Management  
Rail Grinding  
Operations and Management  
Planning Management  
Locomotive Developments

Urban Transit  
Freight Rolling Stock  
Other Rail Infrastructure  
Safety and Security  
Passenger Rolling Stock  
Back to the Future

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Registration is available via the web site or from the brochure which all members should have received (at least once!) by now. The web site with all up to date information, and web based registration, is at [www.core2008.org](http://www.core2008.org).

**METROS – FUTURE RAIL FOR SYDNEY** is the title for a one day symposium being organised by the RTSA NSW Chapter for **Wednesday November 12<sup>th</sup>** at the **Old Customs House (Circular Quay)**.

The word **Metro** has had a lot of airplay in Sydney recently, and many in the public domain may not quite know what a Metro is or does in terms of mobility and development for the city and its people. Is a Metro just another linear railway, is it a form of railway that provides enhanced and otherwise unachievable mobility for a majority of citizens, is it all about interchanges and inter-connections, is it some technological whiz-bang, or is it a railway at all? The RTSA Symposium in November will hear from people who have been involved in metros and transport planning and hear of these integration and technology issues. It is an opportunity for the general public to become aware of these issues and even perhaps influence the future direction of city mobility!

The basic plan is for a full day symposium which will have a number of themed sessions –

What is a Metro and Attributes of a Metro: speakers from France and locally  
Sydney - Better Urban Outcomes and Reinventing Sydney: Sue Holliday and Garry Glazebrook.  
Case Studies – the Metro experience from Hong Kong, Singapore, Barcelona and Perth.  
Interactive Panel Sessions, and a *What Would a Metro Network do for Sydney* wrap up

Notification will be sent to all members in the near future. The next newsletter will have important information about members priority registration, while a brochure will be released a little later which will invite registration from anyone who is interested (member or otherwise)

**We have a number of sponsors but are looking for more** – both to facilitate attendance of overseas speakers and to enhance the symposium as a whole while keeping the delegate cost at an affordable level. If you are in the corporate world, and have some interest in the prospect of a Metro network being built in Sydney, then you might **consider becoming a sponsor of this event**. Sponsors will have their logo and suitable acknowledgement on all Symposium material from the time they sign up – we have started work on the brochure with a release date anticipated in July. So obviously the early sponsors will get early exposure, as well as an assured place at the Symposium. Even if you are a bit doubtful at this stage it would be a good move to get in touch with Andrew Honan at [ahonan@pacific.net.au](mailto:ahonan@pacific.net.au) or on 0407 921 152.

More details will be provided as the day gets closer. Mark **12<sup>th</sup> November** in your diaries now.

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### COMING NSW MEETINGS: (black indicates confirmed, red indicates tentative)

DATE	SPEAKER	TOPIC	LOCATION	TIME
Wednesday 6 August 2008	Daniel Thomson RailCorp	AK Test Cars and Mechanised Track Patrol	Central Station Concourse Meeting Room	AGM @ 11.30 Topic @ 12.00
Monday 1 September 2008	Andrew McCusker MTR Corporation Ltd, Hong Kong	Hong Kong Mass Transit Railway	Ionic Room, Masonic Centre, Goulburn St (corner Castlereagh St)	16.30 for 17.00
7-10 September 2008	Various	CORE - Conference on Railway Engineering 2008	PERTH	[THREE DAY CONFERENCE]
Wednesday 24 September 2008 (NOTE DATE)	Kevin Taylor Rail Industry Safety & Standards Board	Railway Standards Development	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 5 November 2008	Graham Haywood United Group	PN 92 class locos and ARG derivatives	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 12 November 2008	See separate section in this newsletter	Symposium – Metros - Future Rail for Sydney	Old Customs House, Circular Quay	ALL DAY
Wednesday 3 December 2008	TBA	Christmas Heritage Topic	Central Station Concourse Meeting Room	11.30 for 12.00

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## JULY 2008

### KEY RTSA SYDNEY CHAPTER COMMITTEE CONTACTS

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Tomas Magyla	Committee	Chris Venn-Brown	Committee
Arnold Aranjó	Committee	Trevor Moore	Committee
Andrew Mackay	Committee	Malcolm Cluett	Committee
Bob McCotter	Committee	Eddie Hawes	Committee
John Watsford	Committee	Candice Ng	Invited Young Engineer

### 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, letters 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 our NSW 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 Bill Laidlaw (Secretary) or Andrew Honan (Chair) 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 EMAIL

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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