

RTSA SA CHAPTER NEWSLETTER

May 2011 Edition



NEXT MEETING: Adelaide Rail Revitalisation and investigation and design.

Next meeting –Thursday 2nd June 2011

Mark Drechsler – Parsons Brinckerhoff

Adelaide Rail Revitalisation and investigation and design

In 2008 the State Government announced the biggest single investment ever in the State's public transport system (\$2 billion) to achieve the State Government's Strategic Plan objective of increasing public transport to 10% by 2018. The Rail Revitalisation Program forms the centrepiece of this investment to provide reliable track infrastructure prior to electrification. DTEI commissioned PB to undertake comprehensive geotechnical and contamination investigations to provide essential information towards delivering a sustainable track formation. This presentation by Mark outlines the results from the comprehensive testing program over the Adelaide metro rail network, identifying the main causes of track instability and providing track formation design parameters. Mark will then present how this information was used to design the track formation options for the current upgrade works being conducted by DTEI and Tracksure on the Noarlunga and Gawler lines.



Mark Drechsler is an Engineering Geologist with over 27 year's experience in mining and civil infrastructure projects throughout Australia and overseas. His diverse experience is demonstrated by his range of previously published papers on 'green' concrete, landslides, blasting, road and rail pavements. Mark spent 8 years within the quarrying industry and uses that practical knowledge for road and rail construction projects. As a Technical Executive within PB, his role is to provide clients with a high level of technical expertise and innovation which is demonstrated by this presentation on the work he has been undertaking for the Rail Revitalisation project over the last 2 years.

TECHNICAL PRESENTATION

VENUE:

Fedoras Restaurant,
Hilton Hotel,
Hilton (corner South Road
and Donald Bradman
Drive)

DATE:

Thursday 2nd June 2011

TIME:

5.30pm

Light Refreshments will
be provided.



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Thursday 7th July 2011

Peter Jaehne, FreightLink
'Flood Damage to Tarcoola to Alice Springs Line'

Thursday 4th August 2011

Randall Barry and Simon Mitchell.
PTS
PTS Railcar Fleet

Thursday 1st September 2011

George Erdos, ATSB
Near miss at Cootamundra

Publisher

This newsletter is a publication of the South Australian Chapter of the Railway Technical Society of Australasia. Opinions expressed within are not necessarily those of the Chapter, Society or Editor.

Contributions

Contributions, including news, opinions, or letters to the Editor, are always welcome. Send material by e-mail to saeditor@rtsa.com.au

Continuing Professional Development

Engineers Australia members are reminded that attendance at RTSA technical meetings contributes towards CPD requirements. Each RTSA technical meeting generally has a value of 1 CPD point.

RTSA Website

The RTSA website www.rtsa.com.au has details of RTSA activities, including future meetings and reports from past meetings, for all Chapters. Membership information for potential new members and an application form may be found at www.rtsa.com.au.

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Newsletter Dispatch

Despatch of the newsletter is now being undertaken by the Engineers Australia SA Division.



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Editorial

I am pleased to see that my “chatter” column of last month has prompted a response from one of our readers (the response can be found in the letters section of this newsletter).

Whilst the Chair and I do not necessarily share all the views and sentiments of the correspondent, his comments have been included in their entirety to ensure that an open forum is provided to all.

In the March edition of this newsletter we received a request for carbon emissions data from Mark Deacon of Sydney Ports; this was followed up on by one of our members who referenced a particular article. I managed to provide the article to Mark who was delighted by our response.

The PowerPoint slides from the excellent presentation jointly delivered by Karen Dowling and Heather Montgomerie from the ATSB and NRSR respectively last month are provided at the end of this newsletter for those who may have missed it.

It is my intention that any future presentations of this nature will be made available on the RTSA website under the SA chapter ‘tab’.

I am advised that this will have to wait until the website has been updated and site access is secured by member log in – watch this space.

The news articles in this months edition have been sourced from <http://www.rail.co>
The complete articles can be found there.

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News - Heavy Rail Australia

New South Wales – Sydney

Downer EDI delivers first Waratah train



A four car pre-production test train was built to test the train sub-systems and compatibility with the Sydney suburban network. Photo credit: Gareth Edwards.

It has been that Downer EDI has delivered its first Waratah train set to RailCorp for completion. It has been extensively reported in the media that the project has faced many setbacks including 'delays, cost blowouts and the departure of three chief executives.'

An inspection of the train will be completed over 6 weeks to judge whether it is ready to be put into passenger service on Sydney's metropolitan rail network.

A RailCorp spokesman stated that, "a decision will then be made whether RailCorp can accept the train or whether more work needs to be done to meet performance and safety requirements."

A four car pre-production test train was built to test the train sub-systems and compatibility with the Sydney suburban network last year.

The trains initially experienced poor reliability due to insufficient testing. The test train was expected to perform trial runs from mid 2009 but the first production eight car set began network testing in August 2010.

The first Waratah trains were scheduled to be introduced in late 2010, but a series of delays pushed back the introduction of the trains, which are now anticipated 'to be progressively delivered to RailCorp for practical completion between July and October this year.'

'Train set seven is then due to enter passenger service following the achievement of reliability performance targets by train sets one to six.'

Extracted from:

<http://www.rail.co>

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News - Heavy Rail Australia

Victoria

\$403m to upgrade Victoria's rail network



Public Transport Minister Terry Mulder said the Budget provided for the immediate purchase of seven extra X'Trapolis trains which would be running on the network in 2014.

New trains and a massive increase in basic maintenance are the focus of a \$403 million Victorian Coalition Government boost for public transport to help to improve the daily commute for Victorians.

Terry Mulder said the 2011-12 Victorian Budget delivered on the Coalition Government's commitment to invest in new trains, improve level crossings, build and upgrade stations and increase key maintenance works.

"This Government is acting to get the basics of our public transport network right, starting with new trains and better maintenance,"

"We need to fix the problems that are obvious to people who use the trains every day – a lack of basic maintenance and overcrowding that ruins the journey to and from work. Too often commuters are stranded by basic faults with wiring or signalling, with cancellations leading to increased overcrowding on the next train. "Better maintenance and more trains are the obvious solutions to get our network back on track and that is exactly what this Budget delivers," Mr Mulder said.

The minister said the Budget provided for the immediate purchase of seven extra X'Trapolis trains which would be running on the network in 2014, while design and planning would commence for the manufacture of a further 33 high-capacity trains.

"This investment will deliver an enormous increase in the capacity and performance of the metropolitan train network,"

An additional \$100 million had been allocated to the 'Maintaining our Rail Network Fund', bringing maintenance funding to \$900 million.

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News - Light Rail United Kingdom

Birmingham, England

Passengers say Midland Metro is on the right track



Work is currently ongoing to extend the Metro, which will see trams run along the streets of Birmingham city centre.

Passengers using the Midland Metro have given the service their thumbs up – a survey from transport authority Centro has revealed.

The tram line, which connects Birmingham to Wolverhampton via key locations in the Black Country, scored at least 80% in the four categories related to passenger service in the annual customer satisfaction survey.

The news comes as a boost with 88% of the 546 people interviewed happy with the speed and frequency of the Metro and 87% satisfied that services runs on time. A further 81% said they were pleased with the ease of connections from the Metro to other bus and train services.

Centro chairman Councillor Angus Adams said: “The Metro is an important part of the public transport network in the West Midlands and we are delighted that passengers are pleased with the service they are receiving.

“Many people use trams as part of their daily commute, to get to events or to visit family and we are pleased that passengers see it as a mode of transport they can rely on.”

Work is currently ongoing to extend the Metro, which will see trams run along the streets of Birmingham city centre and connect the city’s three major rail stations, New Street, Moor Street and Snow Hill.

Earlier this year a major milestone was reached as work on the Great Charles Street Bridge, which will bring Metro services off the existing approach to Snow Hill station and over a £9million viaduct, was completed.

The survey also revealed that 86% of passengers feel safe while travelling on board the Metro, while 89% were satisfied with the ease of using then service. However almost a third of users said they wanted to improve the comfort while waiting for a tram.

Councillor Adams said: “These surveys give us an opportunity to connect with passengers and see how we can improve the service we provide for them.

“The feedback we have received not only allows us to see where we are going right but also gives us the chance to identify areas for improvement.”

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News - Light Rail Algeria

Algiers, Algeria Alstom's Citadis tramway begins service in the city



Algeria's first tramway is notable for its accessibility, large capacity, and comfort.

On 8 May 2011, Algeria's Transport Minister and the President of the Algiers Metro Authority (EMA) marked the start of the new tramway service in Algiers. Algiers is the first city in Algeria to have a modern tram network.

Exploited by the Urban and Suburban Bus Transportation for Algiers (ETUSA), Alstom's Citadis tramway runs on the line's initial segment, which the Mediterrail consortium delivered to the EMA in December 2010.

This stretch of the line, 7.2 km in length, links Bab Ezzouar to Bordj El Kiffan districts in the eastern suburbs of Algiers and serves 13 stations, from "Bananiers – H Moukhtar Zerhouni – Lycée" to "Bordj El Kiffan – Colline Mohous".

With the completion of two additional sections currently under construction (Hussein Dey– Bab Ezzouar and Bordj El Kiffan–Dergana), the line will extend 23 kilometres and includes 38 stations along with eight transfer hubs.

The Algiers tramway trainsets were specially designed to meet the EMA's operating needs and feature both the proven equipment standard on all Citadis trams, representing years of accumulated Citadis expertise, and a number of customised elements, including the design of the driver's cabin, the livery, and the interior fittings.

Each tramset is 40 metres in length and can accommodate from 300 to 400 passengers during peak travel times.

The air conditioning and large tinted glass windows, plus the seating and wide aisles, passenger information displays in French and Arabic, and quiet engine operation are all designed to ensure pleasant travel conditions.

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Meet the team

As there have recently been a number of changes to the Committee of this chapter it seems like a good opportunity to acquaint / re-acquaint our members with their committee.

This month's new committee member's 'pen portrait' is'

Simon Mitchell **Committee Member**



Simon is a new member of RTSA this year and is the youngest member of the committee. He was born and raised in Adelaide.

He graduated in 2009 with a Bachelor of Aerospace Engineering (Hons) and a Bachelor of Mathematical and Computer Sciences from the University of South Australia.

In his spare time he enjoys hiking and being outdoors; he particularly enjoys skiing which takes him to varied and interesting parts of the world.

He loves to watch the SANFL and is a passionate Sturt supporter.

He finds rail a unique and interesting career, full of great technology, engineering and people. He is very much looking forward to serving the industry in the future.

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COMING EVENTS

Advance Notification of next year's RTSA Awards

Please note that nominations for the 2012 Railway Engineering Student Thesis Award and the Wheel-Rail Interface Award are now being taken.

For both awards the closing date is Friday 24th November 2011.

Both awards attract prizes of:

\$4000;

Plaque and;

One year free membership of the RTSA.

Full details can be found in the March newsletter.

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LETTERS TO THE EDITOR

NEW TRAINS FOR A NEW AGE (Comments from the Editor) makes the mistake of blaming passenger ignorance for the poor public image of the Flexitys, but in reality the passengers are right and the initial order of Flexitys was a bad decision. New trams should have improved the service, but what the passengers actually got was far worse.

Despite a major track upgrade, the trams are still no faster than when the Hs ruled the line, and the seats are uncomfortable because TransAdelaide insisted that the seats must have virtually no padding.

But worst of all, when the line was extended they failed to improve the operating frequency, and they used single Flexitys to replace pairs of Hs, so the seating capacity was substantially reduced.

Passengers were told Europeans often had to put up with standing all the way, and therefore South Australians deserved no better.

But at least the Flexitys had air conditioning... except that at first it didn't work. The headline "A streetcar named perspire" was spot on – as was the passenger perception that they weren't suited to the network. Then the Citadis trams arrived, with more seats and better air conditioning. Even if they are slightly less reliable at the moment, they're much better suited to passenger needs.

I was delighted when I first heard DTEI were taking over responsibility for the railway infrastructure, because I thought they'd bring some much needed competence. But after seeing what they've done, my opinion has now reversed: they couldn't organise a "booze-up" in a brewery without closing it for six months!

DTEI seems to be of the opinion that any improvement they make, no matter how small, is sufficient to justify inflicting major inconvenience on passengers. A good example is Hallett Cove station where they raised the platform and installed a roof. Admittedly it's a nice roof, but not worth seven days' closure, let alone the seven months they actually took – and access to the station is worse than before the upgrade. Then they started similar work at Hallett Cove Beach station, and despite room for temporary platforms being available at the northern end of the station, they diverted all passengers to Hallett Cove station and ran a shuttle bus service that didn't connect with all of the trains. Then as if that wasn't enough, they decided to close most of the line for upgrading, with the replacement service schedules so protracted that journey times are literally doubled.

But the biggest deficiency is in future planning. Already we've lost the opportunity to put a railway station at the heart of the Seaford Meadows development. Now we've got a much bigger opportunity right in the core of the City, and it is being completely ignored!

It is well known that rail's market share is much higher near stations. Other state capitals have taken advantage of this with multiple stations serving their CBDs, but ours has only a single station right on its edge. If we really want people to use our public transport system, we have to bring the railway where the passengers want to go. Electrification provides an opportunity to do so, but this opportunity could very soon be lost. Back a few decades ago when the MATS Plan's

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railway tunnel alignment was fouled by building foundations, it didn't matter because there were

Plenty of alternative alignments available. But now there are a lot more buildings being constructed with deep foundations, we're running out of options.

Two of the best possible underground station locations are beneath Gawler Place and Central Market, but the route between them is under threat from two planned skyscrapers at 10 Flinders Street and 51 Pirie Street. This isn't necessarily a bad thing – it could be regarded as a great opportunity, as incorporating railway tunnels into the sub basements of those buildings could significantly reduce the cost of constructing that section of line. But if the opportunity is wasted, the tunnel would have to be on a more expensive alignment – either longer, much deeper, or requiring more building demolition.

Unfortunately, nobody seems to want to acknowledge the opportunity even exists, let alone do anything about it.

So before we ask ourselves if we're happy to be unsung heroes, stop to consider whether we've

actually done anything heroic. Hard work alone isn't enough – if it gets mediocre results then there's nothing worth singing about. Did those involved in purchasing the 4000 class railcar really do any better than anyone else in their position would have done? Time will tell, but the lack of end doors looks like a bad sign.

Aiden Stanger

(EDITOR NOTE)

Whilst the Chair and I do not necessarily share all the views and sentiments of the correspondent, his comments have been included in their entirety to ensure that an open forum is provided to all.

If you have a comment or observation you would like to raise or even a relevant anecdote, the SA Editor would be pleased to hear from you at saeditor@rtsa.com.au



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Chatter from the Chair

Despite a gloomy Federal Budget for future projects, plenty is happening on current and imminent infrastructure projects.

The 4000-class railcar procurement is signed and sealed, with delivery of the first sets only about 18 months away. One new Flexity has just been delivered – an extension of the original order – and another is on the way, en route from Bremen on the MV Tampa; fingers crossed nothing else goes overboard! Conversion of the 3000-class to all-electric is the next cab off the rank.

The first (southern) stage of the Noarlunga Line track upgrade has light at the end of its tunnel – and speaking of light, DDA standards have certainly made the recently-practically-completed Hallett Cove Beach railway station a virtual navigation beacon. It's also an impressive structure.

Planning for the Convention Centre extension is well underway and promises challenges with piling to be conducted across Adelaide Yard between the Morphett Street Bridge and the current end of platforms.

Electrification planning continues, with Liang O'Rourke now on board and about to deliver their reference design. Challenges with associated clearances also continue.

Drive around and you'll also see a sudden influx of minor roadworks. The imminent end of financial year is, I'm sure, completely unrelated to this...

Major roadworks are ploughing ahead too, with the preparatory works for the South Road Superway making its presence felt north of Regency Road.

Interesting aside, this. Imagine road traffic on the scale of South Road threading itself through a myriad of detours, temporary works and speed restrictions: inconvenient, but readily done, and readily adjusted as the working front moves on through the simple relocation of witches hats, water-filled barriers and signage. Compare this with the barrel railways look down for almost any closure.

The difference in technology is only part of this vast contrast, I feel. Railworks managers have to contend with steel-on-steel vehicles passing with a frequency dictated by signalling, ie down to three minutes, per direction. These trains are controlled by signals and driven by highly trained personnel under strict management. Roadworks managers have to contend with rubber-on-bitumen vehicles passing literally at bumper-to-bumper intervals, comparatively under very liberal control and driven by less-trained people under little management.

In many ways the level of risk in managing traffic would therefore seem to be less for rail, not more, as it sometimes seems perceived to be. A mode of transport with expectations of being intrinsically-safe can come at a high price; can we, or the mode, sustain this?

Daniel Martucci – Chair, RTSA SA Chapter



Australian Government

Australian Transport Safety Bureau

Safe
Transport



Australian Government

Australian Transport Safety Bureau

National rail safety investigator: changes at the Australian Transport Safety Bureau

Presentation to the Railway Technical Society of Australasia (SA
Chapter)

Engineers Australia, 108 King William Street, Adelaide

5 May 2011

Karen Dowling
Policy Officer, Adelaide

Presentation overview

- Background
- Changes
- Delivery
- Challenges
- Questions and discussion



Background

- The Australian Transport Safety Bureau and its predecessors
- Safety investigations
- Rail
- South Australia



Australian Government

Australian Transport Safety Bureau

Background – national rail safety investigator

- Nov 2008 – Proposal for national rail safety regulator and investigator approved by Transport Ministers
- Nov 2009 – Ministers endorse establishment of national regulators for rail, heavy vehicles and maritime. Includes rail investigator
- Start date: 1 January 2013



Australian Government

Australian Transport Safety Bureau

What the national investigator will do

- Widen the knowledge base available to industry, government and the public through:
 - A greater number and range of investigations
 - Publication of research reports
 - A wider range of statistical publications
- Establish a national confidential reporting scheme



Australian Government

Australian Transport Safety Bureau

Change for the ATSB

- Current situation:
 - Focus on interstate mainline
 - Limited events reported to us
- Future:
 - Nation-wide focus
 - Will be aware of, and potentially investigating, a much wider range of events



Australian Government

Australian Transport Safety Bureau

What does this mean for rail companies in SA?

- ARTC or any company that uses the DIRN:
 - New types of events may be investigated
- Companies that operates on intrastate track:
 - Greater exposure to the ATSB



Australian Government

Australian Transport Safety Bureau

Work to bring about the changes

- Two phases:
 - Phase 1: Negotiate parameters of new arrangement with funding jurisdictions
 - Phase 2: Implementation
- Phase 1 almost complete
- Phase 2 getting underway



Delivery of national investigations

- Investigations conducted in accordance with national legislation
- Use resources from state investigation agencies in New South Wales and Victoria
- Employ more investigators in Western Australia and potentially Queensland and South Australia.



Australian Government

Australian Transport Safety Bureau

Challenges

- Explaining the different but complementary roles of a regulator and investigator
- Promoting the benefits of safety investigation to those who will be funding it regularly for the first time
- Change management



Australian Government

Australian Transport Safety Bureau

Questions?



<http://www.atsb.gov.au>



Australian Government
Australian Transport Safety Bureau



National Rail Safety Regulator Project

**Heather Montgomerie
Business Transition Coordinator**

Background



- Nov 2006 National Model Bill & Regulations approved by ATC
- Nov 2008 Regulatory Impact Statement on NRSR and NRSI approved by ATC
- Nov 2009 ATC endorse establishment of national regulators for rail, heavy vehicles and maritime
- Dec 2009 ATC agree that South Australia will be the host State for the NRSR and Project Office
- May 2010 Project Office commenced with appointment of Project Director, Julie Bullas

What the NRSR will do



- Reduce red tape
- Reduce cost and regulatory burden for Australian transport companies
- Reduce cost of exports and trade
- Improve safety

Governance of NRSR



- Body Corporate headed by a Chief Executive, and supported by two Assistant Commissioners
- Head office in South Australia
- National Managers for Policy, Regulatory Operations and Support Services will coordinate functions nationally
- Regional offices in all mainland State capitals and a presence in NT and TAS

What will be different to now?



- One national (applied) law
- One set of policies, processes and procedures for regulatory staff
- One set of guidelines for industry
- One national occurrence database
- One national confidential reporting system (managed by ATSB)

Work required to establish the NRSR



- Project Office has 24 sub-projects covering:
 - Policy & legislation
 - Operations
 - Systems and Data
 - Corporate Services
 - Financial arrangements
 - Structure and Human Resources
 - Culture change

Delivery of national functions



The National office will be responsible for:

- Overall operational policies and processes
- National planning and reporting
- Specialist advice
- National training, education, research and safety promotion
- Overall leadership and co-ordination of the regulatory functions

Regulatory functions



- Accreditations & variations
- Notifications (change advices)
- National audit program
- Targeted inspection program
- Decision Review
- Regulatory risk management / profiling
- Coordination of work programs
- Industry liaison
- Review & monitoring
- Monitor implementation of independent investigation outcomes
- Drug & alcohol testing

Key dates



- **18th July – 12 August 2011**
 - Public consultation for national legislation
- **November 2011**
 - Ministerial Council approval of legislation
- **Prior to 2013**
 - Development of national processes and procedures
 - Development of national IT systems
 - Development of National cost recovery regime
 - Training of all staff on policies, legislation, regulatory processes and procedures

Challenges for the Project



- Tight timeframes ... implementation by 2013
- Resistance to change
- Managing stakeholder expectations
- Changing political environments
- Maintaining current regulatory staff through times of change
- Attracting the right people to the NRSR's Office

Thank you



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