

NEWSLETTER No 3/2003



Railway Technical Society of Australasia
SA Chapter
Engineering House, Bagot Street
NORTH ADELAIDE SA 5006

APRIL 2003

NEXT MEETING

**On Thursday 1st MAY 2003 at the IEAust
premises, Bagot St, North Adelaide.**

Starting at 17:30

At our October meeting last year Charles Duncan, in his presentation on the Darwin Railway, referred to 1980 – 1997 as 'another period of dormancy', which has fired up Des Smith, former CCE of Australian National, to reveal to us why this period was NOT one of dormancy. For the early part of this period Des was involved in identification of the Alice Springs – Darwin rail route and then intermittently as various proposals and consultants came and went until around 1999 when, as he so charmingly puts it, he became a full time civilian.

Back then there was no GPS, so survey work was a combination of compass, speedo, tacho, some very ordinary maps coupled with inspired guess work. His tales of traversing the uninhabited middle of Australia laying out a line for a future railway (fortunately with steel pegs as he will tell us) in between the various political convolutions and bureaucratic overtones is both an instructive and amusing story. The fact that the railway now heading for completion largely follows the route laid out by Des and his helpers is quite some commendation, and may well in fact prove to be one of the last great infrastructure projects that has been 'designed' using manual technology.

Politics, engineering, bushcraft, and inspired guesswork – this has the lot. Come along on Thursday 1st May (only about a week away!) and hear for yourself

FUTURE MEETINGS

The 5th June meeting is to be a joint meeting with PWI which they will host. Stay tuned for the topic for this night. Following that we have meetings planned for 3rd July, 7th August, 4th September (joint with PWI hosted by RTSA) and 2nd October. A number of topics are in the pipeline, including

historical exposés, current projects, Pacific National, and new technology so keep the first Thursday night each month free. Each meeting will be preceded by a newsletter or a flyer to let you know what is actually planned for that evening.

LAST MEETING

Dr Fred Affleck spoke to a crowd of 32 members and friends on the dual subject of Future Directions in the Rail Industry, and ARA Developments.

Fred started by making the point that rail is finally starting to be policy driven rather than project driven. Freight logistics are becoming increasingly important and cannot be ignored – interstate freight is expected to double in the next 15 years. Road have achieved most of the big productivity gains open to them with likely development being in new trucks and new drivers (as with rail the average age of drivers is increasing). Government concern is how to provide capacity for planned growth? Which is where transport planning (e.g. Auslink) are coming from.

Fred identified a number of key issues for rail in the future –

- Increasing productivity – shareholders want better results.
- Rail Safety – already safest mode but needs to be better.
- Harmonisation of standards and practices
- Reform of co-regulation – NTC, ATSB etc.
- Access regulation – too cumbersome and state-centric at present, but backed by strong ideology.
- Integration – repair damage of vertical separation.
- Rail – port access, particularly in Sydney, Melbourne and Fremantle.
- Competition and concentration – likely there will be some departures from the current list of rail players. The rail industry has changed beyond recognition in the last 10 years and is now part of the mainstream economy (one aspect of privatisation).

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Fred also spoke of the ARA and its current re-focusing. ARA will move to Canberra, which does not have a lien on policy but all the major initiatives come from there. A new CEO is to be appointed (Bryan Nye – see later item in this N-letter) and the organisation repositioned to respond more to inter-modalising. It is intended to move on from (public) lobbying to participation in the reform process; ‘be there when it happens’.

There was much more than this, but in the interests of getting this N-letter out in time for the next meeting the above will have to do. Which all goes to show that there is no substitute for coming along on the night.

NEW ARA CHIEF EXECUTIVE

A short note (media release?) arrived this very day (Wed 23/4) advising that Bryan Nye, formerly of the Australian Institute of Petroleum, will be taking over from Fred Affleck (temporary CEO) as head of the Australasian Rail Association. No date is mentioned although it is known that Fred Affleck has an appointment in Perth from May.

THE EDITORS PLATFORM

The announcement early in April that the Mobil refinery at Stanvac, south of Adelaide, will close in the near future has brought the predictable rash of political mouth foaming and associated events. It is not that Mobil’s situation in Adelaide was misunderstood or anything like that – in the ten years I have been here there have been consistent suggestions that the refinery is small / outdated / wrongly located and so on and could not survive for ever.

At the March RTSA meeting Roy Arnold, CEO of TransAdelaide commented that he saw a future for freight on the TA routes in Adelaide, particularly as Adelaide was a north-south city with two major industrial nodes that are about 40 km apart. With little chance that passenger business will build to the point where rail infrastructure is fully utilised it would make sense to make use of the facility to

handle freight and at the same time offset some of the costs of ownership and maintenance.

Which brings me to the point that the pollies and their bureaucratic poo-bahs can hardly cry over the Mobil closure when their own shallowness and self interests ensured that the survival opportunity for Mobil was cast aside as a matter of expediency only a year or so ago.

It is no secret that the grain authorities are not the best of friends at the moment. The AWB and ABB are reshaping themselves to become integrated grain handlers in anticipation of eventually losing their ‘single marketing desk’ role for wheat and barley respectively. AWB have been building country super-sites in SA, Victoria, NSW and Queensland and have been looking to get a deep sea port or two into the bargain. SA does not have a good deep sea port on the eastern side of Gulf St Vincent, and in fact has a slow and poorly placed export facility well up the Port River as the only half decent alternative. AWB saw an opportunity to kill two birds with the one stone – get a port and provide Adelaide with a deep water bulk port in one of the few locations that such a facility could be afforded. The site – inside the Mobil tenure making part use of Mobil’s own existing wharf. The scheme had broader objectives than just a grain terminal. To get grain to Stanvac it would be necessary to have standard gauge rail access (as well as broad gauge for as long as the Hamley Bridge network survives unchanged) and this became a key issue for the whole project. TA, as might be expected, were reasonably comfortable with the concept, particularly since they had already committed to eventual standard gauge with their gauge convertible concrete sleeper program. The standard gauge connection would have allowed a bio-diesel plant to be incorporated into the site (it would require 200,000 tonnes or so of grain to be viable) and a regional container depot that would have been able to consolidate containers to the Outer Harbor container port. Mereenie crude, which is railed from Alice Springs to Birkenhead then trucked to Stanvac, would have stayed on rail. Interstate bitumen and maybe lubricants could

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have been accessed by rail. The bulk deep water port could have handled any of the several mineral sands projects that surface from time to time. And so it goes. With an extension of planning the Mobil site would have become a southern regional transport hub.

The outcome was that the AWB/ABB Stanvac project was rejected in preference to a deeper than now Outer Harbor grain port – one that will be really hard put to handle fully laden Panamax ships, will never be able to deal with Cape size ships, and will be just as weather prone as the open sea facility at Stanvac. So how did the opportunity to retain the refinery, create an industry and transport hub, and accelerate the upgrading of TransAdelaide tracks come to be discarded?

For a start it highlighted how precious local members can become when their egos' get ahead of the reality. There is nothing quite like a politician who is expounding the views of his local electorate before he has even spoken to any of them. In fact the presumption that one person knows all, is not dis-similar to the process that we just went to war to get rid of! Then there are the head sherangs in some of the more influential bureaucracies who put their own self interests (for which read 'survival') ahead of the interests of the State. Make a presentation to them and at the end there is the pause, then 'well that is all very interesting but what we will be doing is'. A great shame that the recent economic summit was twitchy about removing permanent tenure in the public service when the quality (yes, yes I know – wrong word) of some of the tenurees is approximately of the same moral standing as looters.

The 'grain wars' will settle down over time, and in fact there are a number of alliances developing in that industry that will, just like rail, result in an unrecognisable industry structure within the next decade or so. But the opportunity to develop a cohesive industry and transport plan for Adelaide, based on nodes within a long narrow city with surrounding dormitory suburbs, has probably been lost forever. We can but hope that circumstances

will eventually prove Roy Arnold to be a visionary, and that sufficient other visionaries gather round to actually make something worthwhile for South Australia out of the demise of Mobil and the missed opportunities it represents.

FLIGHTS OF FANCY

In 2000/01 Adelaide Airport had nearly 4.5 million passengers through its doors. It hosted an average of 202 RPT aircraft movements per day with an average of 60 passengers in each.

Adelaide is the fifth busiest airport after Sydney (25.8 million pax), Melbourne (16.9 mill), Brisbane (12.5 mill) and Perth (5.1 mil).

When you look at long distance rail (which mainly survives on the east coast in the form of XPT's) the Melbourne – Sydney line has 2 trains each way per day. If they were able to fill every seat on every train they would carry around 600,000 passengers per year. The same air route handled 5,421,000 passengers in 2001/02 and in fact flew 7,170,000 seats in doing so. Each plane carried an average of over 150 passengers, which is probably more than the average XPT carries these days.

An XPT train can provide around 800 seats between Sydney and Melbourne daily. A single B-767 (the standard aircraft for the route) can provide around 2000 seats in a working day between 07.00 and 21.00, which may explain why air will be so hard to ever beat when it comes to travel of middle distances or further.

Australian air passenger numbers rose from 28.5 million in 1980/81 to 82.1 million in 2000/01.

Just a few thoughts as a kind of reality check!

RAISING THE DUST

In a Tiser article on 22nd March there was a proposal for a 250 km/h Eastern Plains Railway between Tailem Bend and Port Augusta via Sedan, Burra, Peterborough and Quorn. This grand scheme would have connections to Gawler

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via Truro and Myponie Point (Wallaroo) via Hamley Bridge and Balaclava. Quite apart from some comments that I could make (which would probably get me before the Beak even if they were true) there are some technical issues that are fairly up front. One would have to ask what a 250 km/h route between Quorn and Port Augusta would look like, remembering that speeds in that range require 5000 metre curves!! Equally the hills north of Sedan, in the Burra region, and west of Port Wakefield would present interesting location problems.

Can you just imagine PN departing Melbourne with their typical 3000 tonne train for Perth (the proposed route is no use to anything wanting to travel via Adelaide) The train would have two NR locos to Taillem Bend, where a further 12 NR locos (at the very least) would have to be attached for the 250 km/h sprint to Port Augusta, from where the original two could continue to Perth. For all that extra power there would be a saving of around 1 ½ hours, most of which would be frittered away with all the loco attaching and detaching.

The quoted cost for the line (400 km plus of extraordinarily high standard railway plus branches) is \$400 million, but I rather think that \$1000 million would simply open the gates for this project.

The sad thing about this is that it exemplifies how the daft gets preference over the sensible and practical, and how lazy journalism degrades us all. It behoves us all to respond to such nonsense with suitable worded replies, and with suitable alternative and realistic suggestions about rail improvement. It is only by getting our own bright (and sane) ideas out into the wider world that they will take root among the public, journalists and politicians.

The dust stirred up by this proposal is fragmented cow cake.

CORE 2004

Hardly had the words dried last month than there was a rush of abstracts to the Technical Review Committee sufficient to ensure a good broad based coverage of the many topics listed for the conference. The Tech Review Committee is now enmeshed in sorting through the abstracts and will making offers for complete papers in the not too distant future.

Planning continues for the conference (a thankless and often mundane chore that is impossible to appreciate unless you have been there or into something similar) and it is slowly coming together.

Sometimes Newsletter gets just a bit too excited. Last month we advised that GSPE would be making its only 2004 run to Darwin just a few days before the conference. Well only a few days later GSPE folded and ceased business, so unless someone else wants to risk their family fortune to re-start the elite train there will be no five star train experience. In actual fact the Ghan, regular weekly train to Darwin, is a definite starter and while being more affordable is also a splendid travel experience which will fit into the CORE 2004 program quite well.

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NEW TECHNOLOGY 1

In the interests of broadening your horizons, we bring you two new technology stories this month. It is suggested a good red, or a tot of whisky, would be a good accompaniment for the next page or so.

Scientists at NASA built a gun specifically to launch dead chickens at the windshields of airliners, military jets and the space shuttle, all travelling at maximum velocity. The idea is to simulate the frequent incidents of collisions with airborne fowl to test the strength of the windshields.

British engineers heard about the gun and were eager to test it on the windshields of their new high speed trains. Arrangements were made, and a gun was sent to the British engineers. When the gun was fired, the engineers stood shocked as the chicken hurled out of the barrel, crashed into the shatterproof shield, smashed it to smithereens, blasted through the control console, snapped the engineers backrest in two and embedded itself in the back wall of the cabin, like an arrow shot from a bow. The horrified Brits sent NASA the disastrous results of the experiment along with the designs of the windshield and begged the US scientists for suggestions.

NASA responded with a perfunctory 3-word memo: "Thaw the chicken"

NEW TECHNOLOGY 2

Report have come from America of a new shunt loco that has three times the productivity of older shunt locos. CSX have been trialling this at a secret location, such as Savannah, but our spy has managed to capture some photos which are reproduced below.

However in the interest of historical accuracy it must be pointed out that we (i.e. Oz) have already run trails of similar technology, with mixed results.

This technology was trialled at Kooragang Island and managed to solve the coupler problem.

When you get a mid-train wagon straddling two tracks, each end still connected, the train is occupying both tracks, which causes confusion in the signalling system ... so, you instruct the loco driver to investigate ... of course, this is in the wee dark hours ... and when the loco disconnects and then comes back down the second track, if everybody plays their part properly (including an observer performing his observation duties from behind a drawn blind), you can then get a loco to crash into the middle of its own train!!

It is understood the cost of the repairs was the issue that put this breakthrough on hold.!



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Articles or editorial comment for Newsletter is always welcome.

Send copy to the Editor, Max Michell at samrom@bigpond.com or fax to 08 8390 3772

CONTINUING PROFESSIONAL DEVELOPMENT

Those of you who are members of I of E (i.e. are professional engineers) should be aware that attendance at RTSA meetings can be counted toward your CPD requirements. The most convenient way to record this will be in your professional diary or similar form. A short paper covering CPD in some detail is available from Malcolm Menadue or Max Michell.

NEWSLETTER DESPATCH

The majority of SA RTSA Chapter members receive their newsletter by e-mail. Every so often the e-mail will bounce (in effect the electronic equivalent of 'address unknown'). In these cases the member will automatically revert to hard copy mailing until a new e-mail address is advised. The main issue here is to let Malcolm Menadue know IN ADVANCE of any e-mail address change so that you don't fall on hard (copy) times. Please also advise if you would rather receive via e-mail instead of hardcopy post.

In all cases let Malcolm Menadue know at mmenadue@ozemail.com.au