

March 2019

# Railway DIGEST

**Rolling stock:**

**Vlocity 3.0: The short/medium distance version**



**THE OVERLAND**

**The NSW TrainLink Challenge  
Light Rail comes to Newcastle  
Weemelah line replacement rail to Junee-Griffith**

Published monthly by the Australian Railway Historical Society (NSW Division)







**Editor** Bruce Belbin  
**Assistant Editor** Shane O'Neil  
**National Affairs** Lawrance Ryan  
**Editorial Assistant** Darren Tulk  
**International** Ken Date  
**General Manager** Paul Scells  
**Subscriptions:** Ph: 02 9699 4595 Fax: 02 9699 1714  
**Editorial Office:** Ph: 02 8394 9016 Fax: 02 9699 1714  
**ARHS Bookshop:** Ph: 02 9699 4595 Fax: 02 9699 1714  
**Mail:** 67 Renwick Street, Redfern NSW 2016  
**Publisher:** Australian Railway Historical Society NSW Division, ACN 000 538 803  
**Print Post** 100009942  
**Publication No.**  
**Newsagent** Gordon and Gotch Ltd  
**Distribution**  
**Mailing & Distribution** Ligare Pty Limited and Australia Post  
**Printing** Ligare Pty Limited  
**Website** www.railwaydigest.com.au  
**Facebook** www.facebook.com/railwaydigest

## Contributor Guidelines

Articles and illustrations remain the copyright of the author and publisher. Please do not submit photos or articles that have been previously published or submitted to other publications. Article contributions are welcome; views expressed in this magazine are not necessarily those of the editorial staff or publisher. We welcome photographs of current Australian railway subjects in the form of digital files. Please include a detailed description including train details, time, date, place and photographer's name at the time of submission. Items that are not returned may be held within the ARHSnsw Railway Resource Centre. **Please limit email sizes to 15MB and Readers Write letter submissions to 500 words.**

Publication deadlines: *Railway Digest* is published on the last Wednesday of each month prior to the cover date. The deadline for advertisements and contributions is the 1st of the month prior to the cover date.

Copyright © Australian Railway Historical Society New South Wales Division 2019

## Contact email addresses

**Editorial** editor@railwaydigest.com.au  
**Photographic contributions** photos@railwaydigest.com.au  
**Articles/submissions** articles@railwaydigest.com.au  
**Subscription enquiries/change of address** mail@arhsnsw.com.au

## Contributors

Ken Date, Dominik Giemza, Peter Hower, John Hoyle, Philip Jeeves, Michael James, David McCafferty, Vaughn Moore, Raymond Pacey, Tim Sutherland, David Whiteford.

ACT Minster for Transport – Meegan Fitzharris MLA, *The Age*, Aurizon, Australian Transport Safety Bureau, *The Ballarat Courier*, Bombardier Transportation, *The Canberra Times*, *Central Western Daily*, *Kalgoorlie Miner*, Level Crossing Removal Authority, Linfox, MACH Energy Australia, Nine News Melbourne, *Newcastle Herald*, Parkes Shire Council, Public Transport Authority of Western Australia, Queensland Minister for Transport and Main Roads – The Honourable Mark Bailey, Queensland Rail, *The Standard – Warrnambool*, South Australian Premier – Hon. Steven Marshall, South East Queensland Council of Mayors, *Sydney Morning Herald*, Tourism and Transport Forum, Transport for NSW, Victorian Minister for Public Transport – The Hon. Melissa Horne, *The West Australian*, Western Australia Minister for Transport – Hon Rita Saffioti MLA.

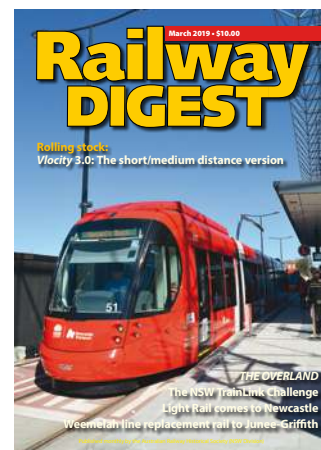
www.traileromag.com.au

**Cover:** 'Town Crier' Stephen Clarke rings his bell in celebration as *Urbos 100* tram 2151 leaves the Newcastle Interchange with a load of 'VIPs' on the first passenger-carrying run of the Newcastle Light Rail, at 10.30am on the Grand Opening Day, Sunday 17 February. (See 'Light Rail comes to Newcastle', page 35). Bruce Belbin

**Opposite:** On Monday 4 February at 4.26pm, having picked up and set down passengers, mainly school children, *Sprinter* DMUs 7013 and 7006, that left Seymour at 4.16pm, depart Broadford enroute to Southern Cross, Melbourne. Soon signal number 7,

# March 2019

Volume 57, Number 3



## Features

### Weemelah line replacement rail goes to Junee—Griffith line 32

John Hoyle reports that, in an unusual move, pre-used rail that had been deposited along the John Holland Country Regional Network (CRN) Camurra to Weemelah line, in north west NSW, has been moved to the Junee – Griffith line, which is being upgraded under the NSW Government's Fixing Country Rail program.

### Light Rail comes to Newcastle 35

Born in controversy, built in hope, the 2.7km, six-stop, Newcastle Light Rail commenced regular operation on Monday 18 February, following a successful Grand Opening Day the day before, with free rides for the public. Bruce Belbin was there for the opening day, though the queue was so long, he never did get a ride!

### THE OVERLAND: Almost over or overdue for an overhaul? 38

After suffering another near-death experience, the *Overland* will continue at least until the end of 2019, ensuring 93 years of service under that name and 132 years of direct service between Melbourne and Adelaide. Ken Date and Dominik Giemza pose the question; Is the *Overland* Australia's most threatened, enjoyable, under-appreciated, misplaced, anachronistic, oldest and/or misunderstood train?

### The NSW TrainLink Challenge 44

Inspired by Jonathan Green's Challenge of the V/Line network in Victoria (see *RD* January 2018 Page 30), David McCafferty decided to create his own version based on the NSW TrainLink network. He had to reach the Opal limits of Dungog, Scone, Bathurst, Goulburn and Bomaderry. Following a couple of days' intensive planning, David and his best mate, Jeremiah, set off to face the challenge.

## Regulars

Platform 2019	4
Rail industry	5
Railway people	7
News	8
Rolling stock	48
– Vlocity 3.00: The short/medium distance version	48
– Rolling Stock Contracts and Deliveries	52
Preservation and Tourist	54
Readers Write	56

and Broadford's other semaphores, will be replaced with modern electric light signals. Steve Munro

**Back cover upper:** Loaded Cristal Mining train 5100S from Broken Hill, operated by Bowmans Rail and worked by CFCLA MotivePower/Cummins units CM3302 and CM3308, drops downgrade through Huddleston in South Australia on Thursday 10 January. David Peters  
**Back cover lower:** EDI/EMD units SCT013 and SCT001 haul 2AP9 Adelaide-Perth SCT service near Toodyay on Wednesday 9 January. Phil Melling

## Some thoughts on Australian urban development and rail transport Les Shepherd

Our major east coast cities; Melbourne, Sydney and Brisbane; are beset by a litany of common problems. They manifest themselves in overcrowded public transport; roads clogged with traffic; motorways resembling carparks; and commercial activities concentrated in precincts of limited size. State governments are spending substantial amounts in an attempt to relieve those pressures. Are these measures appropriate to the problems and will they work? This narrative will attempt to explore this question; particularly in relation to Sydney but where I am able to, I will relate the points to actions in Melbourne and Brisbane.

In all three cities we have a concentration of employment in each of the CBDs with some overflow to nearby suburbs. In Sydney these include North Sydney, St Leonards/Crows Nest, Chatswood and Macquarie Park/North Ryde. In Melbourne this overflow stretches along St Kilda Rd in particular, as well as Southbank and Docklands. The workers in these precincts pretty much all live many kilometres away in a myriad of dormitory suburbs epitomised by low density housing. Many, if not most, of the recently developed housing areas have minimal, if any public transport. There is a clear dividing line between the residential precincts and the employment precincts. Long travel distances are a necessity.

This situation is the exact opposite from the situation in Manhattan 100 or so years ago. There was a heavy concentration of people living in lower Manhattan in unsanitary and unhealthy tenement buildings and working in equally overcrowded sweatshops that had insufficient ventilation and were breeding grounds for disease. The solution was to develop housing in what were open lands in neighbouring counties and provide relatively cheap transport to get them to and from employment – this became the New York subway network. In order to be successful, land use planning and the construction of the subways needed to occur together. This was achieved through what is known as the ‘Dual Contracts’ to develop the subway lines. The history is worth reading.

It has recently been announced that a London Overground line is to be extended several kilometres from Barking to Thames Riverside. This initiative is in conjunction with a 20,000 houses housing development and will provide transport to the rest of the city. The extension will connect with several existing lines. There is a similar-sized development under way at Branxton in the lower Hunter Valley (Huntlee). An infrequent bus service with no Sunday services is currently provided.

In our cities we have dispersed our citizens to live in a healthy atmosphere in the myriad dormitory suburbs but have not provided the transport to get them to and from their places of employment. In each of our cities over recent years public transport has been developed on an ad hoc basis and poorly thought through if at all.

While the New York problems were to get the population out to the healthy areas of suburbia, our problem is to get the jobs out of the CBD's and decentralise them to where the employees are living.

Initially this need not be a major logistical problem. Each day the trains, trams and buses converge on the CBD's with their bulging loads of passengers and then run empty back to the suburbs to await a reverse situation each afternoon. By moving jobs to suburbia, each morning transport will be well loaded in both directions, and again in the afternoons. For over 150 years there has been an example of this in Sydney.

The area south of the city, from Redfern to Botany Bay, has long been a commercial/industrial area with a lot of jobs. One of the first tram routes, in 1882, was along Botany Road. The flow of peak hour loading was out of the city in the mornings and inbound of an afternoon. The activities in the area have become less industrial and more low impact commercial. Several of the suburbs have seen large scale development of intensive housing. Particularly on the underground Airport train

line, the peak hour flows are outbound of a morning to Green Square and Mascot and inbound of an afternoon. The residential development ensures a continuous demand for transport outside of the peak hours. This situation needs to be replicated all over our metropolises. To succeed, land use planning must be conducted in close conjunction with transport planning.

All state governments are undertaking expensive transport infrastructure expenditure. In all cases they are designed to bring more people into the already overcrowded CBD's.

### **Brisbane:**

The proposed Cross River Rail Link underground line from Dutton Park under the river and through the CBD will provide considerable relief to the increasing traffic to/from the Gold Coast, but the most pressing need is for track reconstruction to remove the myriad of sharp curves on so many of the railway lines.

### **Melbourne:**

The removal of level crossings and subsequent track relocations is work that is 50 years overdue. The east-west metro line is welcome. However, nothing appears to be being done to relieve many of the tram routes from road congestion. Congestion on Sydney Road, Brunswick; Smith Street, Carlton; Balaclava Road, Balaclava; not to mention Chapel Street, Prahran, amongst others, have all reached chronic proportions.

### **Sydney:**

Nowhere is more being done to build urban rail transport. There seems to be no clear definition of what a “metro” line is. Politicians who use it have one idea in mind while each resident who hears it has their own. What is clear is that “metro” lines, like tramways, are best suited to carrying passengers on short journeys.

The line to Rouse Hill (Sydney Metro Northwest) is a trunk line to carry workers to the city CBD and several smaller precincts along the way. Passenger dissatisfaction with its “metro” concept is certain.

During planning for the CBD and South East Light Rail project, it was determined that passenger loading would almost fill the capacity from day one, even running coupled 5-car sets. There is little capacity for increasing patronage to be accommodated. This line too is a trunk line to the city CBD. It has always been very clear that it will not fulfil the future transport needs of the south-eastern suburbs. The political, financial, legal issues that beset this project are not over. There will be more to come when the first tram services begin.

There was always an intention for the Chatswood-Epping rail line to be extended to Parramatta incorporating most of the Carlingford branch. This is no longer possible. The cancellation of this extension has set back the commercial development of Parramatta by at least 10 years. The line was necessary to provide an efficient transport link from Parramatta directly to the Macquarie Park/North Ryde and Chatswood commercial centres. The proposed inner west metro from the city to Parramatta will also not provide this link. The result will be a continuing stranglehold slowing the commercial development of Parramatta.

Politicians are forever calling for increased population in regional cities and towns. Natural increases have occurred in cities like Bendigo, Ballarat and Wagga Wagga amongst others. In these and other regional cities residents have been drawn to them by employment opportunities. To successfully increase regional populations three things are needed to attract employers and employees.

- Firstly, provision of communications services; telephone and high-speed internet.
- Secondly, the presence of community services; medical, education, sporting, arts, support services and many others.
- Thirdly, adequate transport services to neighbouring regional cities and to the capital city. This is the facility that is currently most lacking.



Distances in Australia are large. It is usually said that air transport is the most appropriate. It is. It is also very expensive. Probably many residents in the regions cannot afford the higher fares that apply on regional services. Long distance road and rail services are sparse and much slower than what is required.

In Victoria the RFT projects have been most successful and serve to underline the above point. In Queensland the fast electric services to Maryborough, Bundaberg and Rockhampton also prove the point. Queensland needs more of these trains. In NSW the XPT/XPL fleets are 40 and 35 years old. They have never been able to operate at peak efficiency due to the inadequacies of the track. Their mooted replacement will suffer the same problems.

The NSW government has again raised the prospect of High Speed trains. Critics usually say that we do not have the population to support such services. This is demonstrably false. The current combined population of Sydney, Melbourne and Canberra is 11 million: 45 per cent of the national population. This is more than enough to support a high speed line, particularly when it is considered that the Sydney-Melbourne air corridor is the second busiest in the world. Any high speed line would need to be custom built and about 95 per cent separate from any existing lines. Construction of the line and rolling stock is very, very expensive. Overseas, the *Eurostar* service through the channel tunnel uses 20-car trains running up to 300km/h. The system is designed for 450km/h running. It took 10 years before the system showed a profit. We should not expect any HST lines we build to be any different. After 25 years operation the original Eurostar trains are being replaced with new 18 car sets of higher passenger capacity. We should not expect any trainsets of this type to last 40 years.

The NSW government's announced desire is to build high speed lines from Sydney in all directions and they intend to appoint people

to determine the routes. Well, good luck with that. Sydney has a permanent problem with its topography. The Cumberland Plain is landlocked by high and rugged escarpments in all directions. This has presented transport problems since 1788. To cross the Blue Mountains there needs to be a reasonably straight route climbing from 27 metres at Penrith/Richmond to 1044 metres at Mt Victoria then falling to 920 metres at Lithgow. Would a 60 kilometre tunnel from Penrith to Lithgow on a rising gradient be practical? Getting a line to Newcastle, with or without serving Gosford/Wyong, presents an equal challenge.

The largest regional city in Australia is Newcastle. The core metropolis comprises the local government areas of Newcastle and Lake Macquarie. The combined population is 400,000, with public transport provided almost entirely by bus. Over a 40-year period since 1970 the Newcastle CBD has diminished to the point where it effectively no longer exists. With one or two exceptions, the community and commercial facilities have left the CBD and moved to suburban centres and malls. They are rapidly being replaced with medium/high density up-market apartments. Most journeys in the metropolis are short distances, perfect for a compact network of several interconnecting metro style lines. Because of housing density and historical underground mining, they would mostly need to be on overhead concrete structures. The kind of links would provide connections between Swansea/Belmont/Charlestown to John Hunter hospital and Wallsend; links from Toronto to Cardiff & Wallsend. A line would be needed to the Mater Hospital at Waratah and to the University and Warabrook. The opportunity would present to build a line from the new cruise terminal at Carrington to Mayfield and Wallsend. There are several additional and alternative line possibilities. All lines would need to interconnect with convenient interchange between lines.

There is much for our governments to do in terms of transport and passenger logistics. The question is, are they up to the task?

## Rail industry

### NSW contactless payments pass one million trips

On Wednesday 16 January, Transport for NSW announced that more than one million public transport journeys across NSW had been paid for by customers tapping on and off with a credit or debit card rather than using Sydney's public transport-specific Opal card.

NSW Minister for Transport and Infrastructure Andrew Constance said there had been significant uptake in contactless payments since the trial extended to heavy rail with commuters embracing the option of using their plastic or payment-enabled mobile smart devices on train, ferry and light rail services across the Opal network.

"Fares purchased through contactless payments have grown strongly since the trial expanded to our city and regional train services in November," Mr Constance said.

"Over the Christmas and New Year period contactless payments jumped by about 20 per cent a week. This convenient option is proving to be a real hit with tourists and visitors, with uptake at the

two airport stations twice that of other parts of the rail network".

The one millionth contactless fare was paid by a passenger travelling between Sydney Airport Domestic and International stations on Monday 14 January – 49 days after the expanded trial began.

Margy Osmond, CEO of the Tourism and Transport Forum – the peak industry group for the Australian tourism, transport and aviation sectors – said contactless payments is an absolute winner from a tourism point of view. "The modern traveller expects great public transport which is easy to use and convenient. Contactless is a fantastic option for foreign and domestic visitors to Sydney and encourages them to use our great public transport network and stay off the roads," she said.

Minister Constance reaffirmed that the introduction of contactless payments would not replace the Opal card.

### UGL secures \$277M extension with Sydney Trains

UGL, as part of a joint venture, has secured an extension to its contract with Sydney Trains for the delivery of maintenance and logistics services for a section of Sydney's metropolitan passenger rail fleet.

The joint venture, UGL Unipart, is a 70:30 joint venture between UGL and UK-headquartered Unipart Rail that delivers whole-of-life asset solutions to support highly reliable passenger car fleets. It draws

on UGL's asset management and maintenance capability and intimate knowledge of Sydney's metropolitan passenger rail fleet.

The two-year extension will be effective from July 2019 and provide heavy maintenance and supply chain services to more than 1,050 passenger rail vehicles. It will generate revenue of approximately \$277 million to UGL.



## Linfox takes over Aurizon Queensland Intermodal business

Logistics and transport company, Linfox, took over Aurizon's Queensland intermodal business on 1 February with the departure of the first train from Brisbane's Acacia Ridge terminal at 1.55 am. The train was loaded with consumer goods, industrial products and produce. Linfox had previously reached an agreement with Aurizon Holdings Limited to purchase the company's Queensland Intermodal business (QIB).

The transfer significantly increases the size of Linfox's intermodal rail capability and includes:

- Linfox having access to all necessary QIB freight depots in Queensland including access to the Acacia Ridge Terminal;
- Trucks, trailers, rail wagons for intermodal containers and heavy lift assets;
- Transfer of existing customer contracts to Linfox; and
- Transfer of approximately 190 existing Aurizon employees into the Linfox team. (Another 120 are expected to be shifted to Aurizon's bulk business.)

Under a separate 10-year commercial contract, Aurizon's Bulk business will also provide rail line haul services and some terminal services to Linfox using Aurizon locomotives and crews. "This significant acquisition will strengthen the Linfox network and increase competition in the Queensland logistics market. It will also bring certainty to Aurizon staff, regional communities and customers that would have been impacted if the Aurizon

QIB business had closed," said Linfox Executive Chairman, Peter Fox.

Linfox says the transaction will increase the scale and scope of Linfox's services throughout Queensland and provide greater Queensland-based pick-up, delivery and warehousing capability. The company says it will also significantly enhance the broader Australia-wide Linfox intermodal network and strategically position it for the future growth of inland rail.

The takeover includes the weekly Rockhampton – Longreach – Winton rail freight service subsidised by the Queensland Government as well as Aurizon's Brisbane – Cairns corridor services. With containerised agricultural commodities largely transported by road transport to ports the acquisition is anticipated to have an impact across the region from North Queensland to the Darling Downs.

Linfox had only taken over operation of Aurizon's Queensland intermodal services for a few days when the extreme flooding in the Townsville- Mackay region cut the North Coast Line. The company set up an 'event control room' at the Acacia Ridge (Brisbane) rail terminal to ensure as much freight as possible could be delivered to North Queensland while the line was cut north of Mackay. Around 100 trucks were used to deliver goods to stores, a barge was used at Mackay to move trucks and a road train was operated from Adelaide to deliver groceries to Mount Isa as both the rail and road links to Townsville were cut. (See news item, page 19)

## Standard gauge locomotives offered for sale

Slattery Auctions, acting on behalf of the liquidator of Australian Rolling Stock Leasing Pty Ltd, has advertised the sale of two standard gauge locomotives – L277 and 1872. Expressions of interest closed on 1 March 2019. The locomotives are thought to be stored at Dynon, Melbourne.

L277 was Comalco's R1.001 and operated on the isolated Weipa bauxite railway in Queensland. It was a model GT26C built by Clyde Engineering in 1972. In 2012 it was issued to traffic as L277 by Australian LocoLease and leased to El Zorro based in Victoria. The L class was the main WAGR / Westrail standard gauge diesel locomotive class (L 251 – 275). 1001's Weipa stablemate R1.002 moved from Weipa to WA in 1994 and became Westrail's L276 (sometimes LW276) but although L277 continued the class numbering system it never operated in WA. The auction record gives 277's final mileage as 43,966km – though it is unknown how this figure was calculated.

Locomotive 1872 began operations as Westrail's N1872. Built by Commonwealth Engineering at the Bassendean (W.A.) plant N1872 was the first of the eventual 11 Alco-powered units to be completed and commenced trials in June 1977. Construction delays, union issues, and locomotive faults caused considerable delay in the class entering revenue service and N1872 was not officially on the Westrail books until May 1979.

The locomotive was one of four of the class converted to NA in 1982 by having the vacuum brake system removed and other modifications, confining the units to airbrake trains in the Metropolitan and South West districts only. Although Westrail issued details of the new NA class 1871 – 1874 in June 1982 it wasn't until June 1983 that 1872 was officially issued to traffic as an NA.

A need for more standard gauge locomotives saw 1872 (and sister 1873) gauge converted, using bogies from Mount Newman Alco M636s, and reclassified to an NB class in 1994. However, their new operational life was relatively brief with the class being advertised for sale in November 1997.

NB1872 and 1873 were sold to Austrac Ready Power in February 1998 and then to Patrick Stevedoring in 2004 for operations in South

Australia. Australian LocoLease purchased them in September 2011 and like L277 they were leased to El Zorro. No final mileage is given for 1872.



**Top:** LR277 stabled at Benalla on 9 April 2012, while on lease to El Zorro. Ewan McLean

**Above:** During their time at Austrac, 1872 and 1873 arrive at Port Kembla with a load of logs from Juneee, on 17 December 1998.

Chris Cameron



## Funding delivers service infrastructure for Parkes National Logistics Hub

State Parliamentary Secretary for Western NSW, The Hon. Rick Colless MLC visited Parkes on Thursday 24 January to announce \$8,485,000 million in funding to deliver crucial service infrastructure extensions to the Parkes National Logistics Hub (PNLH). The funding comes from the NSW government's Growing Local Economies Fund (GLEF).

The GLEF is part of the NSW Government's \$1.3 billion Regional Growth Fund, designed to support long-term economic growth and create jobs in regional New South Wales. The project will see Parkes Shire Council carry out various upgrades to access roads, water, power, gas and communications infrastructure, all of which are vital to facilitate and support future developments and investment within the PNLH precinct that includes the existing Linfox and SCT intermodal terminals and the under-construction Pacific National terminal.

Parkes Shire Councillor Alan Ward thanked the NSW Government for its significant investment in the Parkes National Logistics Hub.

"The Hub has been a long-term vision of Council and we are now one step closer to establishing Parkes as the State's first inland port," Cr Ward said. "Parkes is uniquely positioned at the intersection of the East West rail line, the North South Newell Highway and the new \$10 billion Melbourne to Brisbane Inland Rail, which provides immense opportunities for logistics, manufacturing, warehousing and distribution".

Upgrades include extending existing services along Brolgan Road by a further three kilometres to Coopers Lane, road train access, buried fibre optic, powerline upgrades and gas connection to four sites within the Hub precinct.

Pacific National CEO Dean Dalla Valle said that when the company's logistics terminal is completed later this year, it will support 100 skilled jobs and allow 1,800-metre freight trains to haul double-stacked containers between Parkes and Perth. He said that once the Melbourne to Brisbane Inland Rail project is complete, regional enterprises can use Parkes as the launching pad to transport goods and commodities to and from the ports of Botany, Brisbane, Melbourne and Perth.

SCT Group CEO, Glenn Smith said the improvements will achieve continuous source of power and improved technology connections and speed to SCT's intermodal Hub which encompasses 330 hectares

In July 2018, Deputy Premier and Minister for Regional NSW John Barilaro announced that the first allocation of the Snowy Hydro Legacy Fund would be spent on scoping studies and planning works to establish regional New South Wales' first special activation precinct in Parkes, including an inland port.

For more information about the Parkes National Logistics Hub, visit: [www.parkeshub.com.au](http://www.parkeshub.com.au)

## Railway people

### Bombardier appoints Wendy McMillan Head of Australia and South East Asia operations

On Tuesday 29 January Bombardier Transportation announced the appointment of Wendy McMillan as Head of Australia and South East Asia and Managing Director Bombardier Transportation Australia, effective from 1 February. Based in Melbourne, Ms. McMillan will be responsible for the end-to-end mandate of business development and sales through to project execution and services delivery for the new Australia and South East Asia sub-region.

Wendy McMillan brings almost 30 years of executive experience to Bombardier gained in the government, rail, infrastructure and consulting sectors. She joins Bombardier from the Victoria State Government where she was Chief Executive Officer of the Rolling Stock Development Division with responsibility for trains and trams, including developing strategic business cases and delivery of capital projects, asset management and industry development. Prior to that she has held various senior roles in

business, including for Queensland Rail, Everything Infrastructure Group (EIG), John Holland Group and the Port of Brisbane Corporation.

In addition to her role as Head of Australia and South East Asia, Ms. McMillan is also appointed as Managing Director Bombardier Transportation Australia. Paul Brown, who has held this position on an interim basis since August 2018, will return to his role as Project Director for the Queensland New Generation Rollingstock project, however, he will continue to play a vital role in shaping the region for the future jointly with Wendy and the rest of the team.

Wendy McMillan



### Peter Clark awarded Australia Day Medallion

Best known to RD readers as a regular contributor, co-editor of our Rolling Stock News & Contracts pages, and author of several railway books, Peter Clark has another life – as an officer in the Royal Australian Navy. Based in Canberra, Peter works on highly technical projects covering everything from the trajectory of torpedoes to the electrical wiring of frigates.

On Australia Day this year, the Navy awarded Peter the prestigious Australia Day Medallion. The citation on the certificate reads:

*In appreciation of your outstanding contribution to Defence over almost fifty years of naval and Civilian service. Of particular note is your service in the recent years in Navy Head Quarters in the area of Logistic Capability Assurance.*

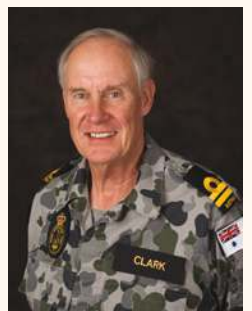
*Your diligence in undertaking progressive assurance of Support systems including ILS artefacts has ensured Navy's requirements were met for*

*the introduction into service of many new capabilities. This included conducting complex Project documentation reviews relating to the design of the Support System, as agreed in the ILS certification basis.*

*Your dedication and passion for Navy is evident and your unique skills in the area of capability development has been essential during one of the busiest periods of Naval shipbuilding in Australia's history. Your commitment, and the quality and appropriateness of your efforts have been outstanding.*

*You can be justly proud of your achievements.*

Peter Clark  
(Photo by Wendy Clark)





### ACT public transport ticket vending machines up and running

Canberra commuters can now purchase tickets or top up their MyWay card at ticket vending machine as the city prepares for the introduction of light rail and a more integrated public transport system.

(MyWay is a tap on, tap off smartcard ticketing system currently used to pay for bus travel in the Australian Capital Territory. The system will be expanded to the Capital Metro light rail network from the commencement of services.)

The new ticket vending machines are stationed in major bus

interchanges in Tuggeranong, Woden, Gungahlin and the City. A further machine at Belconnen is expected to be on-line soon. The machines will also be available at all light rail stops, when operational.

The new ticket vending machines are touchscreen-based and user-friendly with instructions available in four languages; English, Arabic, Chinese and Italian. They can be used by commuters to check the balance on their MyWay card, top up their MyWay card instantly, or purchase a single or daily adult or concession ticket.



Ghan-liveried NR75, assisted by AN6 and NR57, leads 4BM4 Brisbane to Melbourne intermodal freight past the imposing silos at Cunnigar, between Yass and Cootamundra, on Thursday 3 January. Dominik Giemza





Kiama is the end of the South Coast Line electrification and passengers for stations further south change to two-car *Endeavour* DMUs. On Wednesday, 23 January *Endeavour* cars 2809 and 2859 arrive with the 1.16 pm service from Bomaderry. Passengers for stations further north will change to the OSCAR EMU waiting on the left. The railcar shuttle operates every one to two hours seven days a week. John Hoyle

## MACH Energy Mt Pleasant mine coal railings commence

In late December, Aurizon delivered the first coal from MACH Energy's new Mount Pleasant mine to AGL's Antient facility. The mine is 13 kilometres from Muswellbrook on the Muswellbrook – Ulan – Gulgong line and is adjacent to the existing Bengalla mine.

MACH Energy Australia is a private Australian company that was established to acquire the world class Mount Pleasant thermal coal project from Rio Tinto in 2015. In 2018, MACH Energy formed the Mount Pleasant Joint Venture with Japan Coal Development Australia Pty Ltd (JCDA) acquiring five percent. JCDA, the wholly-owned Australian subsidiary of Japanese Coal Development (JCD) secures stable supplies of high quality thermal coal for high quality low emission thermal coal plants.

Construction of the Mount Pleasant facility commenced in late November 2016. The scope of work included construction of a new coal preparation plant, rail loop, mine infrastructure area, water management and supporting facilities. Mount Pleasant hosts resources of 1.1 billion tonnes of coal and 667 million tonnes of recoverable reserves. The operation is fully consented up to the targeted production rate of 10.5 million tonnes of coal per annum.

The operation of trains from the Mount Pleasant mine is the start of a new long-term contract that will see Aurizon transport up to eight million tonnes of coal per annum for MACH Energy.

## Contracts signed for regional rail fleet

On Thursday 14 February it was announced that the NSW Government had signed a contract with Momentum Trains for the \$2.8 billion project to design, build, finance and maintain the new regional rail fleet, along with a new purpose-built maintenance facility in Dubbo.

Momentum Trains is a consortium led by Spanish company Construcciones y Auxiliar de Ferrocarriles (CAF) and also includes UGL, CPB Contractors and equity financing partners Pacific Partners, CAF Investment Projects and DIF.

CAF will deliver 117 railcars to form 10 regional intercity trains, 9 short regional trains, and 10 long regional trains. CPB Contractors will design, construct and commission the fleet's maintenance facility in Dubbo. UGL will maintain both the fleet and the facility for 15 years.

The trains will be DEMUs (with underfloor diesel engine/generator sets driving electric traction motors) and will be built in Spain, with final 'fit out and commissioning' to take place in Dubbo (a condition of the contract). The new trains will feature reversible seating, window blinds, charging points for electronic devices and airline-style overhead luggage storage. They will replace the existing XPT, *Xplorer* and *Endeavour* trains.

NSW TrainLink will operate the new regional fleet, with the first trains to be progressively introduced from 2023.





**Above:** Goninan/GE units NR89 and NR34 approach Broken Hill with 4YN2 Whyalla to Newcastle steel train on Saturday 12 January. Simon Li  
**Below:** On Thursday 17 January, Pacific National T455 trip train to the Greta Train Facility, hauled by WH003, WH001 and WH002, waits for clearance at signals at Farley, while 8146 and 8180 as D542N light engines pass on their run from Werris Creek to Morandoo. Bruce Gehrig







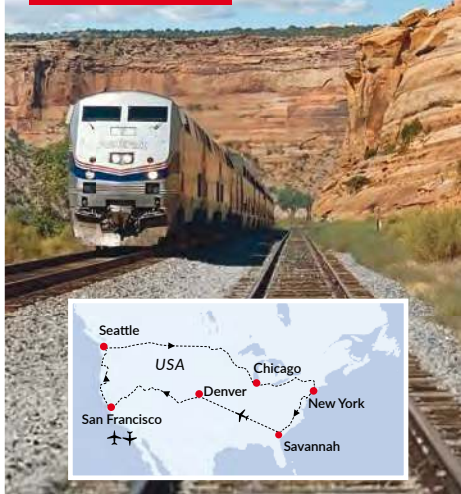
The jacarandas are in bloom at Ourimbah, on the NSW Central Coast, as a NSW TrainLink 8-Car V Set led by V46 powers away, bound for the Newcastle Interchange at Wickham on Monday 3 December 2018. Rob Cook

## GREAT RAILWAY JOURNEYS OF

# ★ USA ★

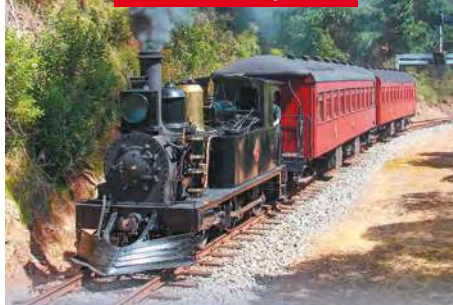
Including the Coast Starlight, Empire Builder, Lake Shore Limited, Palmetto and California Zephyr

Oct 7 to 27, 2019

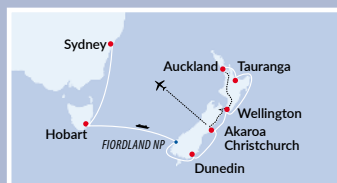


## Rail Journeys of NEW ZEALAND CRUISE

7 - 23 February, 2020



This wonderful cruise combines the spectacular beauty of New Zealand with the thrill of travelling by rail.



## George Negus INDIA

Onboard the Maharajas Express

26 Mar to 7 Apr, 2020

with optional post tour to Bhutan



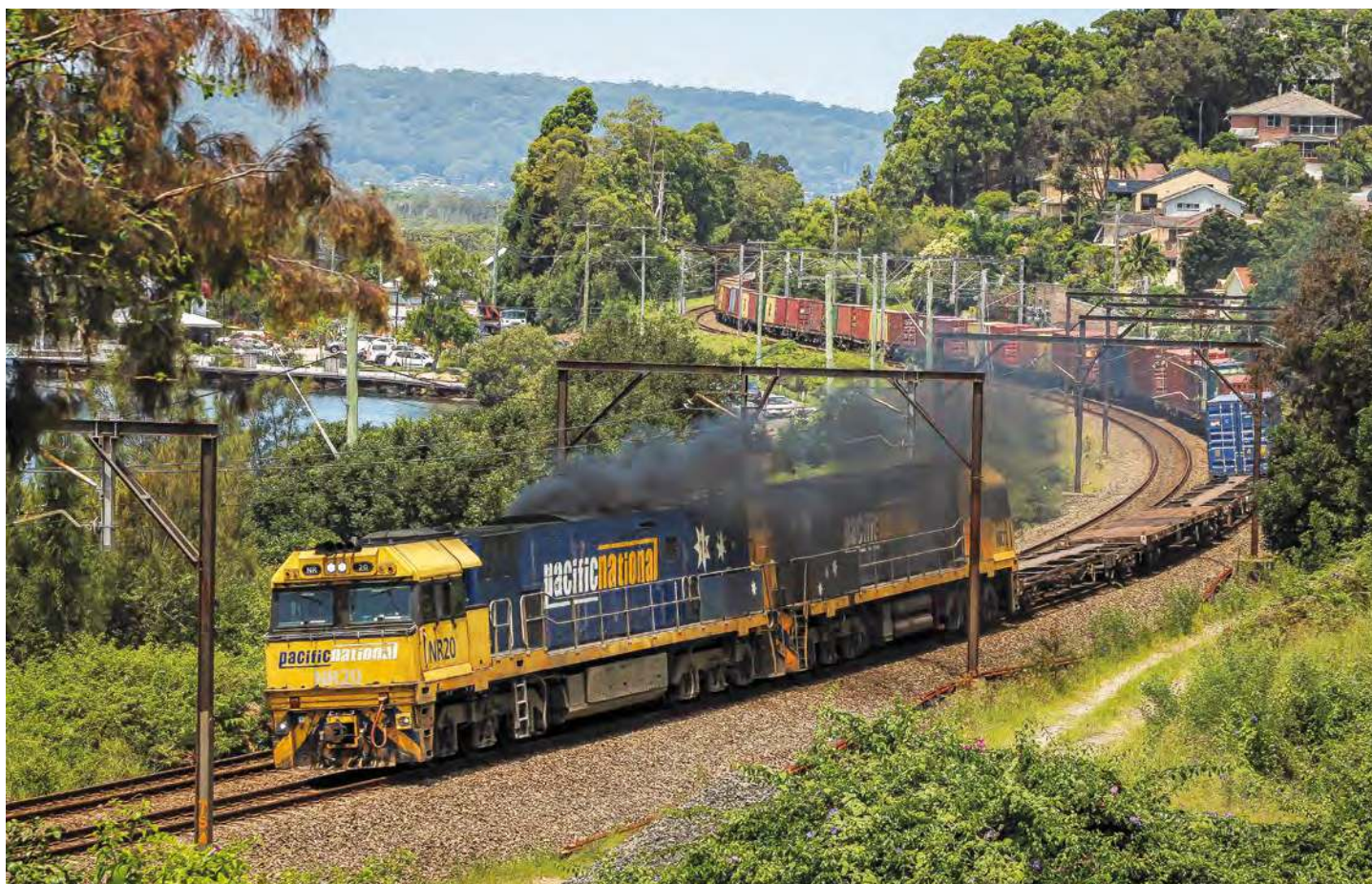
TRAVELRITE  
INTERNATIONAL

1800 630 343

www.travelrite.com.au

ATAS No. A10538 ABN 64 005 817 078





**Above:** A smoky NR20 and NR72 lead Pacific National Train 1435 around Brisbane Water through Koolewong, between Woy Woy and Gosford, on Tuesday 22 Saturday. Vernon Fernandez

**Below:** QBX006, 1103 and RL310 bring Qube No.3112 Up Junee to Sydney freight around the sweeping curve near Gunning on the main south, on Friday 28 December 2018. John Scott





## Around Sydney

### Record growth in Sydney Trains driver and guard graduates

Sydney Trains experienced its biggest growth in train crewing last year with a record 360 new drivers and guards now working on the network.

NSW Minister for Transport and Infrastructure Andrew Constance and Sydney Trains Chief Executive Howard Collins met the latest graduates at Sydney Trains Petersham Training centre on Tuesday 22 January. During the visit they were keen to point out that there has been a 64 per cent increase in new recruits in the past 12 months, with 125 new train drivers and 235 new guards graduating.

Mr Constance said, "We're experiencing unprecedented growth in train use. This will increase by 21 per cent by 2021, so the more drivers and guards we recruit today, the better we will be to cope with this growth".

Mr Collins said more women were joining the driving and guard ranks. The number of female drivers who completed training school last year accounted for 18 per cent of total driver graduates compared to 9 per cent in 2017. New female guard graduates increased from 24 per cent to 28. "Sydney Trains currently has 96 female drivers and 210 female guards working across the rail network, Mr Collins said. "In an industry that has been historically dominated by men, female drivers and guards are breaking down these barriers and showing they have the skills and experience to succeed in this field".

2018 also saw 341 new trainee drivers and guards recruited, who will graduate progressively over the next 12 months.

### More Waratahs on the way

The NSW Government has ordered a further 17 Waratah Series 2 trains (B sets) in response to growing demand across the Sydney Trains network. This is in addition to the 24 currently being delivered, which will bring the total of Waratah Series 2 trains to 41.

Minister for Transport and Infrastructure Andrew Constance said "This investment in new trains is needed because we have seen rapid growth across the rail system" "There has been a 30 per cent increase in patronage over the last five years, with the number of trips a year increasing from 300 million to more than 413 million last year."

The contract is valued at approximately \$900 million, including ongoing maintenance of the trains. Hitachi/CRRC Changchun RSW is the contractor in association with Downer Rail, and the additional order forms part of the Sydney Growth Trains contract.

As with the current B set order, the body shells will be manufactured in China, with final assembly and fitting out taking place at Downer's Cardiff Workshops. The first of the new trains is expected to enter service in 2020.

This additional order will almost certainly see the end of the ageing S sets – Australia's last non-air-conditioned suburban trains in regular revenue service. The only other non-air-conditioned trains in regular service on Australia's mainline network are the Kuranda trains and the *Gulflander* service, both in north Queensland.



A new tram maintenance facility is being constructed adjacent to the Lilyfield light rail station to service the CBD and South east light rail project. The new facility is located on part of the former Rozelle rail goods yard and it will be able to provide heavy maintenance on up to six trams at one time from the fleet of 60 Alstom *Citadis* XO5 trams which will be based at Randwick. A substation adjacent to the facility was opened last August. This Saturday, 26 January 2019 view shows the maintenance facility with the Sydney CBD and Harbour Bridge forming the backdrop. John Hoyle



## Work begins on Sydney Metro tunnel from Chatswood to the Harbour

Sydney Metro's third tunnel boring machine (TBM) started tunneling in mid-January, marking the next stage in delivering the new 31 kilometre metro twin tunnels below the centre of Sydney and deep under Sydney Harbour.

TBM *Wendy* has started digging the 6.2 kilometres of tunnel from Chatswood to the northern edge of Sydney Harbour at Blues Point.

On Tuesday 15 January NSW Premier Gladys Berejiklian said it is another major metro milestone. "Yesterday we saw a metro train complete its first full journey on the entire length of the Metro Northwest railway line, and now we're starting work on another key stage of the project," Ms Berejiklian said.

*Wendy* joins TBMs *Nancy* and *Mum Shirl*, the mega borers that launched last year and are now tunnelling from Marrickville towards the CBD. With two more machines due to start work this year, the borers will build 31 kilometres of Sydney Metro tunnels between Marrickville and Chatswood, including the first rail tunnels under Sydney Harbour.

The borers are 150 metre-long underground tunnelling factories, designed to dig and line the tunnels as they go. They are specially adapted for Sydney's geology to cut through hard sandstone. *Wendy* is one of five TBMs that will excavate 5.9 million tonnes of rock – enough to fill about 940 Olympic swimming pools.

So far, TBMs *Nancy* and *Mum Shirl* have excavated 1.3 kilometres of tunnel and 114,000 tonnes of crushed rock from Marrickville on the 8.1 kilometre journey to Barangaroo.

*Wendy* and another TBM will tunnel towards the new Sydney Metro stations being constructed at Crows Nest and North Sydney before being retrieved at a temporary construction site at Blues Point.

A fifth machine will deliver the twin tunnels under Sydney Harbour.

The TBM has been named after Wendy Schreiber, a volunteer at Bear Cottage – the only children's hospice in NSW and long standing charity partner for the Sydney Metro tunnelling contractor John Holland CPB Ghella.

Sydney Metro opens in the city's north west in the second quarter of this year – with 13 metro stations, 4,000 commuter car parking spaces and 36 kilometres of metro rail.

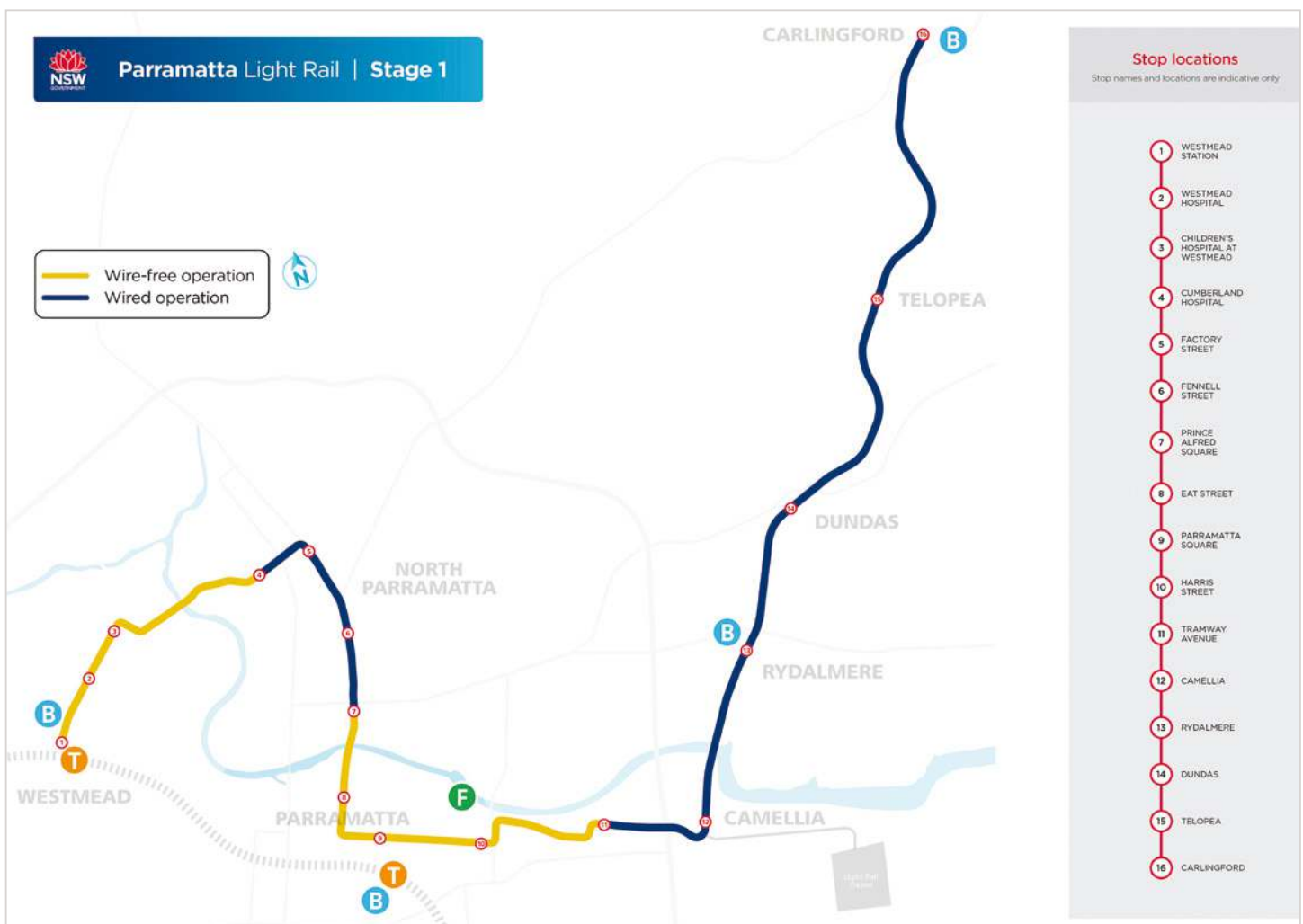
## Parramatta Light Rail announcement

Parramatta Light Rail Stage 1, connecting Westmead to Carlingford via the Parramatta CBD and Camellia, will utilise a combination of overhead wires and approximately four kilometres of wire-free operation.

On 7 February, it was announced that the wire-free sections will be between the Westmead Station and Cumberland Hospital light rail stops, and between the Prince Alfred Square and Tramway Avenue stops (see map below).

The light rail vehicles will be equipped with roof-mounted batteries that are charged via the overhead wires, and at the Westmead Station stop by ground level conductor rails.

It is predicted that by 2026, around 28,000 people will use the Parramatta Light Rail every day. Services will be provided on a "turn up and go" basis, operating seven days a week from early morning to late at night.







**Above:** On the evening of Thursday 3 January, V19 stands at Emu Plains in charge of a late running W576, 8.26pm Mt Victoria-Central service, Note that the overhead wiring over the Up track has been replaced by standard catenary. Neville Pollard

**Below:** Clyde/EMD locomotives C507 and C509 lead fellow Clyde/EMD unit 4904 through Rooty Hill Station, in Western Sydney, on Saturday 19 January, on run 8146 from Kelso to Port Botany. David McCafferty

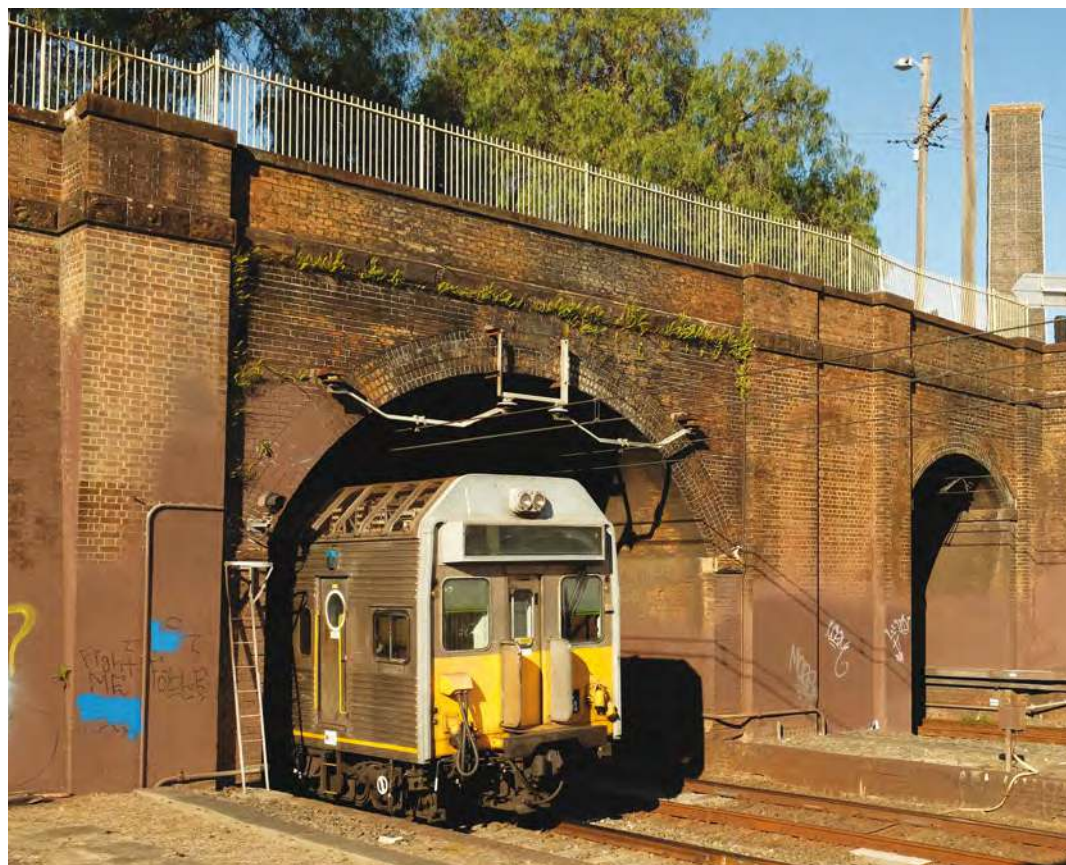






Sydney's Central station to Dulwich Hill 12.8 kilometre light rail line continues to record significant patronage growth with 9.4 million trips being recorded in 2016/17. Transdev operates the service using 12 CAF Urbos 3 trams. The Dulwich Hill line crosses the under-construction CBD and South East light rail line at the intersection of George and Hay Streets in the city. In this Friday, 25 January view trams 2118 and 2120 pass at this intersection. The South East light rail tracks are in the foreground while the connecting curves between the two light rail lines are on the right. John Hoyle

A K set emerges from the King Street bridge at St Peters on Tuesday 28 August 2018. With the entry into service of more B sets, K set rosters have become B set rosters and K sets have taken over many former S set rosters on the T3 sector. Dominik Giemza





## Mayors announce forty-seven projects to address congestion challenges in SEQ

In a first for the region, a comprehensive road map of 47 projects has been released with the aim of avoiding traffic gridlock and addressing the transport and congestion challenges facing South East Queensland (SEQ) in the decades to come. Released on Thursday 24 January by the Council of Mayors (SEQ), the SEQ People Mass Movement Study explores the impact SEQ's population growth will have on the region's future transport demand, ultimately outlining a prioritised list of projects needed in SEQ to adequately meet this growing demand.

Council of Mayors (SEQ) Chair and Brisbane Lord Mayor Cr Graham Quirk said the clear message from the study was that our "business as usual" approach will not keep pace with the anticipated population growth in SEQ.

"Our research shows that even if every committed and planned project in this region is delivered, the majority of SEQ's major road corridors will be over capacity by 2031. By 2041, the region will be in gridlock," he said. "The SEQ People Mass Movement Study highlights our region's dependence on private vehicle use, now and in the future. Without access to efficient and reliable public transport options, many commuters have no choice but to use the car as their primary mode of transport". "A significant shift in thinking is required in SEQ from all levels government to ensure we don't end up with traffic like Sydney and Melbourne. Fortunately, our region still has time to address these issues, but we need to act now".

The SEQ People Mass Movement Study takes an in depth look at the projects needed to effectively manage SEQ's growing population and provides a prioritised road map of project delivery to guide decision makers across all levels of government.

The road map pinpoints 47 critical projects across SEQ, determines when these projects are required to meet demand and the estimated cost of project delivery. The estimated cost to deliver all 47 projects between 2019 - 2041 is around \$2.7 billion per annum, an achievable figure based on the average historic transport infrastructure spend in SEQ of \$2 billion - \$3 billion per annum.

However, Cr Quirk said an average of \$3.5 billion per annum was required in the years to 2031 to achieve a strong level of regional connectivity through faster rail between Brisbane and the Sunshine Coast, Gold Coast and Ipswich.

Forty-seven major projects are prioritised in the SEQ People Mass Movement Study for delivery over the next 23 years. This includes the introduction of a faster rail network running from the Sunshine Coast to the Gold Coast via Brisbane, and to Ipswich and then Toowoomba.

An SEQ faster rail network will slash commute times from the Sunshine Coast to 45 minutes, from the Gold Coast to 35 minutes and from Ipswich to just 20 minutes. This will take immense pressure off the

Bruce and Pacific Highways and support the fast-growing communities of Ipswich, Logan and Moreton Bay.

As the population continues to grow, this plan is an important step towards protecting the quality of life locals currently enjoy in SEQ as well as ensuring the safe and efficient movement of residents, tourists and freight throughout the region.

"The decision for the Federal and State governments isn't whether they can afford to deliver these projects, it's whether they can afford not to," said Cr Quirk.

The SEQ People Mass Movement Study was commissioned by the Council of Mayors (SEQ) and delivered by Lagardere Sports / EKS with SMEC. Funding was provided by the Commonwealth Government and SEQ member councils - Brisbane, Ipswich, Lockyer Valley, Logan, Moreton Bay, Redland, Scenic Rim, Somerset, Sunshine Coast and Toowoomba.

It is anticipated that the findings of the SEQ People Mass Movement Study will inform ongoing discussions with the Federal and State governments and provide a strong foundation for the Council of Mayors' (SEQ) current investigations into an SEQ City Deal and 2032 SEQ Olympic Games.

Some of the big ticket items in the Council of Mayors' (SEQ) road map of 47 priority projects for South East Queensland:

- Brisbane Metro (a bus project being delivered by the Brisbane City Council)
- Cross River Rail
- Faster Rail - Southern Corridor
- Faster Rail - Northern Corridor
- Faster Rail - Western Corridor
- Sunshine Coast Light Rail
- Centenary Motorway Bypass – Sumners Road Interchange to Legacy Way at Toowong and linking to North-South Link at Everton Park
- North-South Link (Inner Western Bypass) - Tunnel corridor linking from Toowong (Centenary Motorway and Legacy Way) to the North West Transport Corridor at Everton Park
- North West Transport Corridor – Urban passenger rail and 4-lane urban motorway from Bald Hills to Stafford Road and Alderley Station
- East-West Link – Toowong (Legacy Way) to South East Freeway Tunnel
- Pacific, Ipswich, Centenary and Mt Lindesay Motorway and Bruce Highway Upgrade Projects.

The complete list of 47 priority projects can be viewed at: [www.seqmayors.qld.gov.au/map](http://www.seqmayors.qld.gov.au/map)



### The Queensland Coast

BY RAIL, ROAD, AIR AND SEA

**1 - 12 Aug 2019 • with Mike Condon**

- Brisbane • Gympie • Hervey Bay • Bundaberg • Rockhampton • Whitsundays • Townsville • Cairns •
- Take a variety of daylight trains up the Queensland coast
- Whale watching , Magnetic Island and the Whitsundays
- Steam train extravaganza on the Mary Valley Railway
- Explore historic cities, towns and villages
- Behind-the-scenes look at the sugar, rum and rail industries
- Hinkler, Mt Morgan, Military, Rail and Reef Museum visits



**Scott McGregor's**  
**RAILWAY ADVENTURES**

SEE YOUR WORLD  
BY TRAIN

Fully escorted, small groups, unique programs

FOR MORE INFORMATION  
ON THESE AND ALL OUR TOURS

**RAILWAYADVENTURES.COM**  
**1300 800 977**  
[info@railwayadventures.com](mailto:info@railwayadventures.com)  
TRAVEL ACCREDITED LIC #A14416



### ICONS OF ENGLAND

TRAINS, BOATS AND PLANES

**6 - 23 Sep 2019 • with Alan Coltman**

- London • Portsmouth • Bath • Bristol • North Wales •
- Liverpool • York • Cambridge •
- Welsh Highland, Great Central, North Yorkshire Railways
- Boat tours in Portsmouth, Bristol, Liverpool and Foxton
- Fleet Air Arm Museum and renowned DUXFORD AIRSHOW
- The Isle of Wight, Greenwich and Stonehenge
- Great cities of Bath, Bristol, York, Liverpool, London





On Thursday 10 January, QR Clyde/EMD units 1746 and 1723 approach Narangba station, north of Brisbane, hauling retired ICE sets 157 and 153. Following storage at Mayne yard, the two ICE sets were moved to Ipswich Workshops, as noted below.  
Anton Giebels

## QR EMU withdrawals under way and ICE sets' demise commences as NGR deliveries take over

Once the backbone of the Brisbane suburban electric train fleet from the inception of electrification in 1979, the official demise of the Walkers-built Electric Multiple Unit (EMU) trains for Queensland Rail commenced with the transfer of EMU 06 to Ipswich Workshops in July 2018 (see photo, page 22, October 2018 *RD*). Six months later, in January 2019, the official withdrawal of the InterCity Express (ICE) sets began with the transfer of ICE sets 153/157 to Ipswich Workshops. These trains originally operated Brisbane – Rockhampton services until the entry into service of the two electric tilt trains in November 1998 and they have also operated many Brisbane - Nambour/Gympie North services.

On 30 January, 2019, the following units in the table below were stored, pending transfer to Ipswich Workshops for disposal - representing 35 per cent (30 three – car sets) of the EMU Fleet and 25 per cent of the ICE Fleet. At that date there were 42 six-car 700 Series (New Generation Rollingstock – NGR) sets accepted, almost as many as the total EMU fleet ever constructed (as distinct from the later Suburban Multiple Units and Interurban Multiple Units), that is, 44 x 6-car equivalent or three-car sets 01 to 88). The withdrawals include all 20 single-ended six-motor sets

(Nos. 60 -79). Despite the withdrawals, members of the original EMU fleet are still operational across the QR's south east Queensland network at night and on weekends. Banyo Yard is currently being utilised as a temporary stabling facility for EMU and ICE sets. As reported in a separate item this issue (page 20) the modification of the NGR sets to comply with disabled access requirements has commenced with 'class leader' set No. 701 arriving at the Downer Rail (formerly Walkers) plant at Maryborough on 29 January.

### Elimbah Yard

EMU 73/60 (1 road), 13/12 (2), 68/65 (3), Empty (4), 09/03 (5), 08/02 (6), 66/74 (7), 63/77 (8)

### Woombye Yard

EMU 78/61 (1 road), 71/69 (2), 84 (3), 75/76 (4)

### Beenleigh Yard

EMU 07/70 (5 road)

### Ipswich Workshops

EMU 06, 16, 62, 64, 67, 72, 79 and ICE 153, 157

Some of the older Brisbane electric rollingstock is seen at Graceville station on Thursday 7 February as IMU 122 heads towards Ipswich and EMU set 14 heads, as the second unit in a six car train, to Redcliffe. Some of the older EMU units are now 40 years old – like Set 14 – and are being written off as new NGR units are delivered. Almost 50 NGR units are now in service, out of a total order for 75 units. Mike Martin





## Rain and severe flooding disrupt North Queensland rail services

Torrential rain and flash flooding from ex-tropical cyclone Penny caused track damage to the Queensland North Coast line, south of Townsville on Thursday 10 January. The southbound *Spirit of Queensland* service (QTT206) departed Cairns 8.35am on 10 January but was terminated at Townsville. Passengers transferred to road coaches for the remainder of the journey to Brisbane's Roma Street station. The northbound *Spirit of Queensland* service (QTT105) terminated at Rockhampton station at 12.01am on Saturday 12 January. Passengers were transferred to road coaches, arriving at Townsville at 11.35am. It is understood that Queensland Rail resumed normal services on Sunday 13 January.

More heavy rainfall in the Townsville region at the end of January resulted in further disruptions to *Spirit of Queensland* services. On Wednesday 30 January northbound QTT106 was terminated at Rockhampton with no alternative arrangements for travelling to destinations further north. Southbound QTT260 on Thursday 31 January was also cancelled with no alternate arrangements available. In early February further very heavy rain created serious flooding in Townsville leading to the suspension of rail services through the city. The *Spirit of Queensland* Brisbane – Cairns tilt train service was again truncated to operate between Brisbane and Rockhampton. As this issue went to press disruptions to *Spirit of Queensland* services were expected to last until at least 12 February.

Delays were also experienced on *Inlander* services between Townsville and Mount Isa from Wednesday 30th January. Due to the worsening conditions and the cutting of the adjacent highway by flood water at Julia Creek, The eastbound *Inlander* that was scheduled to depart Mt Isa on Thursday 31 January 2019 was cancelled with no alternate arrangements. The very heavy rain stretching from Townsville to Mount Isa in early February caused further cancellations of the *Inlander*.

Aurizon and Pacific National freight services were similarly affected with services stabled at various locations while tracks through the city were closed. The North Coast Line between Ayr and Townsville was reopened on Saturday, 9 February with a train loaded with export meat departing south at 2.05 pm while a north-bound train loaded with groceries arrived at 5.30 pm. However the track between Townsville and Ingham was still closed at that time. The Stuart (Townsville) to Cloncurry section of the Mount Isa Line was also still closed as of mid-February.

One significant flood casualty was a Mount Isa to Townsville Pacific National mineral train that had been stowed at Nelia crossing loop, 48 kilometres east of Julia Creek, because of flooding since 31 January. It had several wagons and its mid-train 83 class locomotive, 8317, dislodged from the track at floodwaters rose over the track. The train was stowed at Nelia because higher ground at the location had previously provided safe stowage but the record flooding rose to inundate the train. Fortunately the two 83 class locomotives leading the train and the RZNY crew van had been detached and moved

to Julia Creek prior to the flood waters cutting the track. As this issue went to press it was expected to be mid-February before rail personnel could commence any repairs and salvage work on the train. Queensland Rail CEO Nick Easy said there was some concern over spillage of lead and zinc concentrate from some of the 80 wagons. He said the Townsville – Mount Isa line and the Phosphate Hill branch would be closed until it was safe for crews to access damage and commence repairs. The line has suffered significant inundation in the area around Nelia.



**Pacific National operates two trains between Townsville and Mount Isa conveying minerals from Glencore's Mount Isa mine. Following severe flooding in North Queensland one of the trains was stowed at Nelia crossing loop, 48 kilometres east of Julia Creek, in the expectation that it would be high enough to avoid inundation. However, the record flooding stranded the train and tipped over mid-train locomotive, 8317, and about half of the 80 wagons. The two PN trains use distributed power. The two 83 class leading the train and crew van had been detached from the train and taken back to Julia Creek prior to the flooding. Queensland Rail**



## First NGR set travels to Maryborough for disabled persons' access modifications

As foreshadowed in last month's *RD* (pages 18/19) the 75 six-car New Generation Rollingstock (NGR) EMU fleet being manufactured by Bombardier is to have issues with disabled persons' access to toilets and between cars rectified in a \$335 million contract to be carried out by Downer Rail's Maryborough plant. The decision to undertake the rectification work follows the release on 10 December last year of the Forde Inquiry into disability access design problems with the trains. Appropriately NGR set 701, the 'class leader', was the first train to be transferred to Maryborough. Aurizon has won the contract to haul the trains from the NGR service centre at Wulkuraka, west of Ipswich, to Maryborough.

Set 701 departed Wulkuraka in the late evening of Monday, 28 January with Clyde/EMD units 2390 and 2391 proving the motive power. The 'nose cones' in front of the drivers' cabs had been removed for the journey. Travelling as train No. 7M01 and limited to 60 km/h maximum speed the train arrived at Maryborough West on the morning of Tuesday, 29 January. The two Aurizon locomotives were exchanged for Downer Rail's works shunter, ex-Queensland Rail (QR) Walkers diesel-hydraulic unit DH 73, the last of the class built. All DH units were manufactured at the Maryborough plant when it was owned by Walkers. The locomotive has been overhauled by the staff at the Maryborough plant.

After a cautious journey from Maryborough West to Maryborough and along the wharf branch to the plant the train was stored in the sidings adjacent to Kent Street, below the actual plant. The train is to be split in two and three cars at a time will be taken up the 'zig-zag' beside Kent Street and shunted in to the works. State Opposition Leader Debbie Frecklington commented that the NGR trains could be transferred from Wulkuraka to Maryborough West under their own power and suggested each transfer was costing around \$70,000. However, it is understood QR's current driver shortage has, at this stage, prevented this from happening.

The following day (Wednesday, 30 January) Queensland Transport Minister Mark Bailey visited the Downer plant to officially launch the

rectification program. He said the first train would be back in service by around the end of this year and the entire fleet should be modified by early 2024. He said the NGR modifications will include:

- installing larger toilet modules (10 per cent larger than the previous design) in the middle carriages across the entire fleet to allow passengers who use mobility devices to access the toilet from both accessible carriages
- installing a second toilet in all 75 sets
- doubling the numbers of priority seating from 24 to 48 seats per six car train
- revised seating layouts that make access easier for passengers using a mobility device, and further functionality improvements to internal fittings and carriage features

Mr Bailey said that in addition to the NGR project Downer Rail has recently been awarded an \$80 million contract to overhaul the ten 100 series three-car Interurban Multiple Unit (IMU) trains and the twelve three-car 200 series Suburban Multiple Unit (SMU) trains operated by QR. In the past overhaul work of this type was carried out at Redbank Workshops but that facility was transferred from Queensland Rail to Aurizon and subsequently to Progress Rail where locomotive overhauls are now carried out. Downer Rail's Maryborough plant is currently manufacturing an additional 30 B series three-car EMU sets for the Public Transport Authority in Perth.

Downer CEO Michael Miller said \$10 million will be spent in modifications at the plant to enable several trains to be modified simultaneously. Mr Miller said the initial planning and design works for this infrastructure upgrade were underway with construction works due to begin in April this year.

In other NGR news the trains commenced operating on the Shorncliffe – Cleveland service from Monday, 4 February. The use of NGR trains on this corridor now means the only services the new trains are not used on are Ferny Grove – Beenleigh and Brisbane to Nambour/Gympie North.



Under the watchful eye of Downer Rail staff, diesel hydraulic DH 73 hauls New Generation Rollingstock (NGR) set No. 701 (the 'class leader' of the 75 train order from Bombardier) slowly around the sharp curve on the Maryborough wharf branch to Downer Rail's Kent Street yard on Tuesday, 29 January 2019 to herald the start of the disabled access modification program for the NGR fleet. A local Channel 9 camera operator on the left records the historic scene. He is standing adjacent to the start of the steeply-graded track beside Kent Street, which leads up to the head shunt which in turn provides access to Downer's plant. Appropriately DH 73 was built at what was then Walkers plant (now owned by Downer Rail) just a few hundred metres from this photo location. It was the final locomotive in a batch of 73 built for Queensland Rail and has been overhauled by Downer staff at Maryborough. John Hoyle





**Above:** The QR track evaluation vehicle passes through Roma Street on Wednesday 6 February. John Scott

**Below:** On Tuesday 5 February, Clyde/EMD units 2360 *Bronco* and 2333D *Eagle* slow down through Corinda station as they approach the junction to Tennyson with a loaded coal train bound for the port of Brisbane. Will Heinemann







**Above:** Glenelg-bound Bombardier *Flexity Classic* tram 113 crosses on to the 'Up' line immediately after departing the stop at the Adelaide Entertainment Centre, on Saturday 12 May 2018. Lawrance Ryan

**Below:** *The Overland*, with NR6 at the head, emerges from Sleeps Hill tunnel in the Adelaide foothills as, on the adjacent broad-gauge track, a city-bound railcar set 3003/3029 passes, on Saturday 22 December 2018. David Peters







4005 and 4021 sit side-by-side at Adelaide Showground Station in the morning peak at 7.20am on Tuesday 22 January, the first bound for Tonsley and the latter to the city. Built by the Bombardier Corporation at Dandenong, Victoria and called 'A-City' sets, the car body design is closely related to the V/Line Vlocity DMUs. There are 22 three car 'A-City' sets, delivered between 2014 and 2015 for the suburban 25kV AC broad-gauge system to Seaford and Tonsley. They feature a continual walk-through interior with no internal doors separating cars and have a total capacity of 222. Effie Kelly

## Full Board of Infrastructure SA appointed

South Australian Premier Steven Marshall announced the appointment of the full board of Infrastructure SA (ISA) on Thursday 17 January with Ms Carolyn Hewson AO, Ms Amanda Price McGregor, and Mr Robert Rust joining inaugural chair Mr Tony Shepherd AO, and three chief executives from the South Australian public service.

There was very strong interest in the Infrastructure SA board positions with the Government receiving expressions of interest from more than 100 candidates.

"Infrastructure SA is an independent body that will utilise private and public sector expertise to develop a 20-year state infrastructure strategy and 5-year infrastructure plans", Premier Marshall said.

Infrastructure SA board appointees are:

- Ms Carolyn Hewson AO – Over 35 years' experience in the financial sector; currently a non-executive director of BHP; significant corporate board experience.
- Ms Amanda Price-McGregor – Managing Principal Consultant and owner of Green Light Planning Solutions; more than 20 years' experience in infrastructure planning, strategy development, project execution and development approvals in public and private sectors.
- Mr Robert Rust – 40 years' experience working on major projects for both the public and private sectors, including economic and social infrastructure public private partnerships across road, rail, energy, health, and stadia sectors.

These final board appointments are in addition to the previous ex-officio appointments of the Chief Executives of the Department of the Premier and Cabinet, Department of Treasury and Finance, and Department of Planning, Transport and Infrastructure. ISA held its first meeting on Tuesday 5 February.

## City South Tram Line Replacement Project to get underway

The existing City South tram stop will be upgraded to meet requirements under the Disability Discrimination Act 1992 (DDA) as the current platforms do not have signage, ramps, Tactile Ground Surface Indicators or enough space for wheelchair access.

The project also includes the replacement of the tram tracks between South Terrace and Victoria Square (at the intersection of Gouger Street and Angas Street), to create a dedicated tram corridor.

The total project cost has been revised to \$17.5 million, primarily due to a change in the project scope.

Minister for Transport, Infrastructure and Local Government Stephan Knoll said "The existing tram tracks on King William Street between South Terrace and Victoria Square were constructed in the early 1980s and are reaching the end of their useful life.

"Therefore, these are necessary and important works that must occur and importantly also gives an opportunity to make the City South tram stop DDA compliant.

"This project will also reduce delays to current tram operations and improve the safety along King William Street for both road and tram users".

To read *Railway Digest* on your PC, Mac, Mobile, Tablet and more, visit  
[www.pocketmags.com](http://www.pocketmags.com)





On Friday 11 January Progress Rail/Caterpillar units TR16, TR02 and TR03, with Clyde/EMD units 2054 and 2051 dead attached, are seen approaching Williams Road, Rekuna (between Tea Tree and Campania) with No.636 Brighton to Burnie intermodal freight. The two 2050 Class units had come south to Brighton the same day on No.33 Burnie to Boyer paper train, then operated 464 the 'Boyer Shunt' before returning north that evening as part of the load on 636. Bruce Tilley

For the nostalgia of rail, don't miss . . .

## ***Australian Railway History***

March 2019 issue out now! Just \$8.40

THIS MONTH INCLUDES:

**CIRCUS TRAINS OF  
AUSTRALIA**

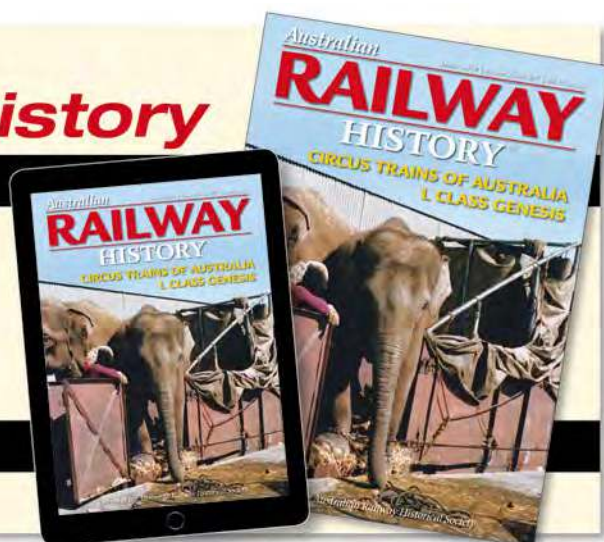
**L CLASS GENESIS**

**125TH ANNIVERSARY  
LISMORE TO  
MULLUMBIMBY, NSW**

Available in Print & Digital

 @AusRailHistory

 #ausrailhistory





## V/Line trainee driver numbers hit record levels

More than 100 trainee drivers have been employed as part of a significant recruitment drive to bolster regional rail services on the V/Line network.

On Monday 7 January Victorian Minister for Public Transport Melissa Horne welcomed the latest batch of 10 new driver trainees. The latest additions bring the total number of V/Line driver trainees to 108 – a record for the regional rail operator since its inception in 1983. This will bring the total number of qualified drivers to about 415 by December this year.

Ms Horne said the Victorian regional rail network is undergoing an unprecedented transformation through record investment in the Regional Rail Revival, new VLocity trains and more services.

To deliver these services, V/Line is bolstering its driver numbers through hiring new trainees and increasing Driver Trainers, along with investing in new training facilities.

Ensuring drivers are able to safely operate on the V/Line network takes considerable time and effort from the trainees and training department. Trainees are required to undertake a combination of aptitude tests, interviews and psychometric assessments before starting. They then move into the classroom and learn the basics of operating regional trains using two simulators located at V/Line's driver training facility in Docklands, Melbourne.

Driver training is delivered to meet the requirements of a Certificate IV in Train Driving, with up to 77 weeks of supervised instruction required to ensure route familiarity and confirm specific skills needed to operate passenger services at up to 160km/h. Once qualified, drivers earn around \$75,000 per year.

About 19.5 million passenger journeys were recorded on the V/Line rail network in 2017/18 – 1.5 million more than in the previous 12 months. Passenger journeys across the V/Line train and coach network have increased 6.3 million or 47.7 per cent in the five years from June 2013 to June 2018.

It is expected the new trainees will help fill staffing gaps in the network, including on the Ballarat line, where services were cancelled during 2018 due to a lack of drivers.

Ballarat's Public Transport Users Association convener Ben Lever welcomed the announcement of 108 new trainees, but said increasing reliability across a number of areas was important.

"This is just one piece of the reliability puzzle, so there's still work to do on the infrastructure and rollingstock, but it is a great step in the right direction," he said. "There have been issues in the past where trains have been cancelled because there weren't enough drivers available, so it's great to see a strong pipeline of new recruits coming through the training program".



The long-awaited triangular junction at Ararat (see January *RD*, page 25, February *RD*, page 43) and part of the Murray Basin gauge standardisation project, is finally in place. This view, on Thursday 7 February, is from Ararat's Alfred Street level crossing, one of very few in Australia to feature both standard and broad-gauge lines between the two boom gates. On the left is the well-established standard gauge line that carries freight and *Overland* passengers between Melbourne and Adelaide. The points were inserted in late January 2019, while the diamond crossing of the broad gauge Ararat - Ballarat - Melbourne line was inserted in early December 2018. The new link track runs off to the right, meeting the Ararat - Maryborough line after only about 400 metres, with a new set of points. The link appears completed, but the rails are temporarily blocked off, as can be seen just to the right of the centre of the photograph. The employees in hi-vis vests appear to be inspecting for damage from the deluge of rain the day before, which temporarily flooded the Ararat railway station! Richard Keys





SCT freight No. 5PM9 from Forrestfield, WA to Laverton, Victoria passes Manor Loop on Sunday 13 January behind CSR011, SCT005, CSR008, CSR006 and SCT002. Dead attached Aurizon UGL/GE units ACB4405 and ACB4401 were enroute to be transferred to NSW the next day on 2MB9 Melbourne–Brisbane intermodal. Mark Roberts

## Train driver injured by rock throwing attack

A veteran train driver with 46 years' experience has been injured after being struck by a rock thrown at a moving freight train on the Stony Point line at about 9pm on Wednesday 30 January.

Pacific National driver Greg Kerwin was taken to hospital after rocks were hurled through the window of a 'Down' Long Island steel train as it passed the Bungower Road level crossing, located midway between Somerville and Tyabb stations, en route to the BHP facility at Hastings.

Mr Kerwin told Nine News he was travelling at about 65km/h when he caught a glimpse of a young man holding a rock in his hand near the level crossing at Tyabb station.

"The next second I got whacked and I felt this warm sensation," Mr Kerwin said. "I put my hand up and I was just covered in blood".

The rock flew through the driver's window before hitting Mr Kerwin's face leaving grazes and a deep cut on the top of his head.

The train continued to Tyabb station (located approximately 60 kilometres from Southern Cross station) where Mr Kerwin was treated by paramedics. He was taken to Frankston Hospital where doctors attended to a head wound and carried out further tests. Mr Kerwin was subsequently released from hospital.

Police are investigating the incident.

Despite the traumatic ordeal, Mr Kerwin said he would be back at work "next week".

Rail, Tram and Bus Union Victorian secretary Luba Grigorovitch said she had been informed by authorities the suspects in the incident at Tyabb were believed to be "young people".

Ms Grigorovitch said the unprovoked attack was unacceptable. "No one goes to work to be in harm's way. It's completely unacceptable," she said on 3AW radio.



Veteran Clyde/EMD Streamliners S312 and S317 approach Pretty John Road level crossing, south of Murchison East, with SSR Tocumwal grain train 9394 on Tuesday 8 January. Ewan McLean



## Around Melbourne

### Excavation kick starts major Parkville station construction

Workers have begun excavating around 80 Olympic-sized swimming pools worth of rock and soil as they build the new underground Parkville Station, as part of the \$11 billion Melbourne Metro Tunnel Project.

Acting Victorian Premier James Merlino joined Minister for Transport Infrastructure Jacinta Allan at the Metro Tunnel's Parkville worksite on Monday 14 January, where crews are digging the 270-metre long and 30-metre-wide station box 30 metres below Grattan Street, between Leicester Street and Royal Parade.

Excavators will initially dig around three metres deep, while a temporary deck made of concrete and steel is simultaneously built at surface level to reduce noise and dust impacts.

Digging will continue once the deck is completed by March, with trucks heading underground via a ramp to remove rock and soil from beneath the deck. Once the excavation reaches around 15 metres it will be too deep for trucks to enter, so gantry cranes will be used to lower buckets through holes in the deck to collect rock and soil. The cranes will then lower excavated material into trucks inside two acoustic enclosures at surface level, before the trucks exit the site.

The first of three massive gantry cranes have already been installed over the site. The 20-metre high cranes will help remove up to 35 tonnes of rock and soil at a time from beneath the deck and lower construction equipment and materials into the excavated space. All three cranes will be installed by the end of February.

Excavation will continue until the end of this year, with around 200,000 cubic metres of rock and soil to be removed from the site. Once complete, station construction and fit-out will continue underground.

The Parkville work site was a hive of activity last year, with crews undertaking a range of works, including closing a section of Grattan Street, relocating underground services, establishing site facilities,

building covered pedestrian walkways and demolishing the former City Ford buildings to create a holding area for trucks waiting to access the site. More than 550 piles have been installed at Parkville, including 330 around the perimeter of the new station box. The piles form the underground support structure that has allowed excavation to safely start.

Construction is well underway on all five Metro Tunnel Stations – the new North Melbourne (near Arden Street), Parkville, State Library, Town Hall and Anzac.

The Metro Tunnel Project is a year ahead of schedule, with the first train set to run through the tunnel in 2025.

### Victorian commuters become mobile myki testers

Thousands of Victorians are helping to test the next generation of public transport ticketing, with the next phase of the Mobile myki trial currently underway.

(myki is a reloadable credit card-sized contactless smart card ticketing system used for electronic payment of fares on most public transport services in Melbourne and regional Victoria. myki is one of the world's largest smart ticketing systems, with more than 17 million active cards and 700 million transactions each year.)

On Sunday 27 January Victorian Minister for Public Transport Melissa Horne announced that following a successful first phase trial - with a limited, industry-based test group of users - the government was seeking up to 4000 passengers to test the new technology.

Mobile myki allows passengers to buy a myki, to top up payments, and to touch on and off public transport using their Android smartphone.

Passengers using Mobile myki in the first phase of the trial were able to top up in a matter of seconds, without having to queue for a ticket machine. Almost 90 per cent of users were satisfied with Mobile Myki and rated the speed of topping up as either good or very good.



A W8 class tram travels along Spencer Street with a City Circle service on Saturday 13 October 2018. Dominik Giemza



## Geotechnical investigations underway to shape Airport Link

Soil testing to help inform the detailed Business Case for Melbourne Airport Rail Link has begun as preliminary planning works ramp up.

Geotechnical investigations are used to establish ground conditions and soil quality, and involve drilling boreholes up to 25 centimetres in diameter and 45 metres deep to collect soil and rock samples.

From January Rail Projects Victoria, who will oversee delivery of the Melbourne Airport Rail Link (MARL), began assessing ground conditions across several locations to enable detailed planning. These investigations are being conducted at six sites around the M80 Ring Road in Tullamarine and near the Maribyrnong River to guide further planning of the preferred Sunshine route. Each investigation takes around two weeks to complete. The works will inform the design of the new rail line and how it will be built, with a further phase of testing to occur later this year.

The investigations are a crucial element of the full Business Case process, which is assessing design options for the long-awaited rail link to Melbourne Airport. Expert technical advisors started initial environmental investigations in late 2018, with ecological surveys to identify any protected flora and fauna.

Construction of Melbourne Airport Rail Link is scheduled to start in 2022, subject to required approvals. Construction is expected to take up to nine years. The Victorian government has committed up to \$5 billion to build the project, which will run from the Melbourne CBD to Melbourne Airport via Sunshine and form the north-western section of the Suburban Rail Loop. The Commonwealth has also committed funding to make the Link a reality. The total cost of the project will be determined in the full Business Case and is estimated in the range of \$8-\$13 billion.

## Major station and level crossing works at Reservoir

Major works began in late-January to remove the Reservoir level crossing and build a new Reservoir station. (Reservoir is located approximately 15 kilometres from Southern Cross station on the Mernda line.)

The level crossing is set to be replaced by an innovative rail bridge incorporating a premium station and landscaped public plaza. Community feedback has been incorporated into the precinct designs.

The new station will include above ground platforms with access via lifts and stairs. The station forecourt will be accessible from either side of the station plaza and have waiting areas, better lighting and station facilities, vastly improving travel for the 4000 people who use the station every day.

The station precinct will better connect the east and west of Reservoir – an added benefit of the elevated rail design.

The rail bridge design also means work can occur while keeping Reservoir station open and trains running for the majority of the construction period.

Once the construction site compound has been established, rail overhead power lines and utilities will be relocated, enabling bridge piling and foundation work to commence.

On average, 36,000 vehicles travel through the busy Reservoir level crossing each day where High Street, Cheddar Road and Spring Street intersect, and six boom gates can be down for 24 minutes during the two-hour morning peak. In the past decade there were three recorded collisions and one fatality plus 26 near miss incidents.

While works continue, the Reservoir Station carpark and bus interchange will be closed. Temporary bus stops will be on Broadway, High Street, Spring Street and Cheddar Road. Alternative parking will be available at nearby stations and neighbouring streets.



UGL/GE locomotives NR73 and NR98 rest in the yard outside the UGL maintenance facility at Spotswood on Monday 31 December 2018.  
Dominik Giemza





**Bombardier E Class tram E6067, working a Route 96 service to East Brunswick, passes Melbourne's celebrated Princess Theatre, in Spring Street, on Saturday 2 February. James Chuang**

The Level Crossing Removal Project has established a Community Reference Group (CRG) in Reservoir to share information with the community about construction impacts, and answer questions on construction activities.

The CRG comprises stakeholders and community members who represent the views and interests of residents, traders and community groups. The CRG is an information sharing forum that meets every six to eight weeks. Following meetings members are asked to share information with their respective community networks.

The Reservoir level crossing removal and new station construction is scheduled for completion in 2020.

## Major excavation begins at Anzac station

Large-scale excavation is now underway across all five Melbourne Metro Tunnel station sites, with around five million tonnes of rock and soil set to be removed from beneath Melbourne to build the project.

On Thursday 31 January Victorian Premier Daniel Andrews and Minister for Transport Infrastructure Jacinta Allan visited the future Anzac Station site on St Kilda Road, where excavation on the 300-metre-long, 30-metre wide, and 22-metre-deep station box has ramped up.

(Anzac station will be built directly under St Kilda Road, adjacent to Melbourne's Shrine of Remembrance. Entrances on either side of St Kilda Road will provide an underground pedestrian walkway. There will be direct connection from the station to the Domain Interchange tram stop.)

A range of works have been carried out over the past 18 months to enable traffic to continue to flow around the construction site throughout the works. An acoustic shed will be built over the northern section of the Anzac Station site in mid-2019 to contain dust and noise as workers remove around 400,000 tonnes of rock and soil to build the new station.

Around 2.5 million tonnes of rock and soil will be excavated to construct the five Metro Tunnel stations, while the same amount will be removed during works to dig the twin nine-kilometre tunnels. Suitable topsoil and excavated material will be re-used wherever possible in collaboration with community groups, local government and industry. This includes rehabilitating old quarries, improving public open space and supporting other suitable construction projects.

More than 120 engineering cadets have gained a career head start working on the Metro Tunnel project, with many completing training at the project's one-stop shop for jobs and training – MetroHub – next to the Anzac construction site. The cadets have already worked more than 135,000 hours on the project.

Almost 100 extra tertiary students studying a range of disciplines have worked on the project as part of industry-based learning opportunities. More than 50 tertiary students were also involved in the state's biggest archaeology digs as part of the project, completing more than 70,000 hours across two dig sites and in artefact processing labs.

The Melbourne Metro Tunnel project includes the construction of twin 9-kilometre rail tunnels between South Kensington station (north west of the Melbourne City Centre) and South Yarra (in the south east) with five new underground stations. The tunnel will connect the Pakenham and Cranbourne lines with the Sunbury line, allowing train travelling on these lines to bypass Flinders Street station and the City Loop while still stopping in the Melbourne central business district.



## Kalgoorlie IP stopover to stay

The transcontinental *Indian Pacific* rail service will continue to stop at Kalgoorlie Railway Station if the proposed Super Pit rail realignment and intermodal hub concept goes ahead.

The \$70 million project proposes to remove the existing rail line east of the Super Pit and build a new east-west track looping south of Kalgoorlie-Boulder from an intermodal hub to be built in West Kalgoorlie. The existing track to Kalgoorlie Railway Station would remain, as would the line heading north.

City of Kalgoorlie-Boulder chief executive John Walker told the *Kalgoorlie Miner* newspaper of Monday 21 January that the *Indian Pacific* would continue to stop in the town on Sunday nights during its eastward journey to Sydney from Perth. Mr Walker confirmed the service would use the new track when it was built.

The *Indian Pacific's* Sunday evening stopover includes an excursion to the Hannans North Tourist Mine, with a representative of the tourism attraction in November saying it had received about 7500 visitors from the train in 2017. Mr Walker said the *Indian Pacific's* stopover remained extremely important for the city.

The Sunday night stopover was secured following community protests, after operator Great Southern Rail in 2014 had proposed shifting it to Rawlinna on the Nullarbor (approximately 400 kilometres to the east). The *Kalgoorlie Miner* reported in June, 2015 Great Southern Rail had rescinded its proposal to move the stopover after Kalgoorlie-Boulder community leaders banded together to 'sell' the destination.

Australian Rail Track Corporation chairman Warren Truss visited the city in mid-January to discuss the rail realignment and intermodal hub proposal with City of Kalgoorlie-Boulder staff and local transport

operators. Former deputy Prime Minister Mr Truss said the business case would be crucial to selling the plan to private investors and government authorities.

The City of Kalgoorlie-Boulder has previously indicated the business case could be completed in the first quarter of this year.

## Transperth encourages motorists to take a break from driving

A \$1.25 million campaign aimed at attracting more people to the public transport network was unveiled on Wednesday 30 January, encouraging motorists to take a break from driving and try the bus or train instead. (Transperth provides the Perth metropolitan region with bus, train and ferry public transport services. It operates as part of the Western Australian State Government's Public Transport Authority.)

The campaign aims to attract new and lapsed users to the award-winning Transperth network.

Though Transperth services are consistently well-rated by existing passengers (about nine in 10 regular users say they are either very satisfied or satisfied with their journeys), patronage has fallen on the network. Recent data shows the decline in public transport use that began in 2013 has now been reversed, with 2018 experiencing a 0.74 per cent increase in overall patronage. However, the figures are still lower than the WA Government would like.

Transperth's own research has shown there are many myths about public transport that are dispelled once people use the service.

More than 2,200 people were surveyed by Transperth on their public transport use, and about 70 per cent said limited or expensive parking was their main motivator for using public transport.



While traffic controllers halt traffic on Kent Street in Maryborough, Queensland, on Friday 11 January, Walkers B-B DH locomotive DH73 shunts Transperth B Series EMU 124 out into the shunting neck. (See photo on page 20 showing another section of the track beside Kent Street) For over 15 years, the Transperth B Series have carried out this exact movement on their delivery run of more than 5,000km to Perth, WA. This is the third last unit for the third (and final) contract making a total of 78 three-car units. Michael James





P2508/ P2517/ P2506 are passing the Geraldton suburb of Beachlands near journey's end on the last iron ore train from Mount Gibson at Perenjori, running as 6721 with just 60 hopper wagons (instead of 90) on 1 February 2019. With this last train it was just over 15 years since the first Mount Gibson iron ore train ran on 19 January 2004. Phil Melling

In addition to the advertising campaign, the WA government is working to make public transport even easier by developing a new Transperth app and upgrading the SmartRider system to potentially enable debit card and smartphone tag-on capabilities from 2021.

To view the new campaign, which went to air from February 3, visit: <https://www.transperth.wa.gov.au/using-transperth>

## Defibrillators rolled out across Transperth network

The Public Transport Authority of Western Australia (PTA) has installed 18 defibrillators at metropolitan stations, as part of a network-wide trial in partnership with St John WA. (The ambulance service in WA is provided by St John on behalf of the government)

The defibrillators are available 24 hours a day to the public and can be the difference between life and death in the event of a sudden cardiac arrest. A further ten defibrillators have been installed in PTA transit officers' mobile patrol vehicles, at a total investment of \$50,000.

PTA spokesman David Hynes said the trial would better equip transit officers, members of the public and first responders in the event of a cardiac arrest. "There are more than a million passenger boardings on the train network every week, so our staff are well-trained on how to deal with a medical emergency," he said. "Investing in these life-saving devices at our train stations and in our mobile patrol vehicles will enable our staff, other emergency responders and the public to deal with medical emergencies quickly and effectively."

St John Clinical Services Director Dr Paul Bailey said cardiac arrest was a leading cause of death in WA and having access to a defibrillator would ensure people can get immediate help prior to an ambulance arriving. Dr Bailey said the best thing about these devices is they can be operated by someone without any training – the machine provides simple instructions to the user.

The railway station defibrillators are placed in locked boxes and can be accessed by calling triple zero and receiving an access pin. The locations of the units appear on the St John First Responder app, which displays nearby defibrillators.

The results of the PTA's three-month-trial will be assessed to determine if a wider rollout is appropriate.

In addition to the ten mobile devices, defibrillators are located at the following stations:

- **Midland line:** Bayswater, Bassendean, Maylands
- **Mandurah line:** Kwinana, Warnbro, Wellard, Aubin Grove, Bull Creek
- **Armadale line:** Gosnells, Kelmscott, Victoria Park, Oats Street, Burswood
- **Joondalup line:** Butler, Whitfords, Glendalough
- **Fremantle line:** Daglish

Another defibrillator is allocated for special events.

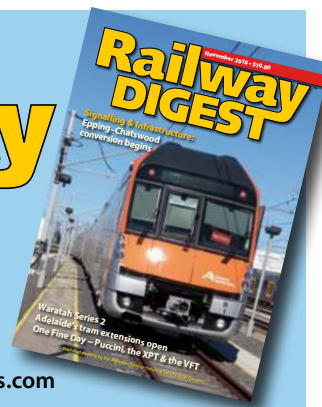
Subscribe to  
**Railway  
DIGEST**

and you'll never miss an issue of Australia's leading railway magazine.

Go to [www.railwaydigest.com.au](http://www.railwaydigest.com.au)

to subscribe online. For a digital

subscription, go to [www.pocketmags.com](http://www.pocketmags.com)







## Weemelah line replacement rail 'sacrificed' to upgrade Junee to Griffith track

Text and images by John Hoyle

In an unusual move, pre-used rail that had been deposited along the John Holland Country Regional Network (CRN) Camurra to Weemelah line, in north west NSW, has been moved to the Junee – Griffith line which is being upgraded under the NSW Government's Fixing Country Rail program. The used welded rail, mainly of 53 kg/metre (107 lb/yd) size, had been placed along the 83 kilometre Weemelah (formerly Mungindi) line over a number of years with a view to future upgrading of the track. The branch line predominantly comprises 30 kg/m (60 lb/yd) rail laid on a mixture of steel and timber sleepers, with an approximate one steel sleeper for every two timber sleepers although the pattern varies. According to John Holland CRN, approximately 25 kilometres of predominately 53 kg/m of stockpiled rail on the Weemelah line is being transported for use in the Junee to Griffith rerailing project under the Fixing Country Rail Program.

As reported in the December 2018 *RD* the Camurra – Weemelah line was booked 'out of service' from 25 October 2018 because of the poor condition of infrastructure, in particular timber bridges over Marshall's Pond Creek at Ashley, 12 kilometres north of Camurra and at Gil Gil Creek at Bengarang, 65 kilometres north of Camurra. The last revenue train to operate on the line was a Southern Shorthaul Railroad grain service in February last year. A John Holland CRN spokesperson told *Railway Digest* no rerailing or resleeper works are planned for the Weemelah line in the 2018/19 financial year.

The current severe drought in NSW saw little grain harvested in the area late last year resulting in no recent requirement to run grain trains on the Weemelah line. Even with a good grain harvest the line suffers from its proximity to the Queensland border which allows farmers to truck grain to terminals such as Goondiwindi (Graincorp) and Talwood (AWB Grainflow) where it is railed to Brisbane. Some Weemelah line grain is also trucked direct the Port of Brisbane or to Moree where Graincorp,

**Above:** Under the watchful eyes of a pilot on the front of the locomotive and one of the drivers, Southern Shorthaul Railroad's Goodwin Alco unit 48S28 and its train of 16 NDRF rail carrying wagons treads cautiously across the timber trestle bridge over Marshall's Ponds Creek at Ashley on the Camurra – Weemelah line on Wednesday, 16 January. Some temporary steel bridge supports can just be seen below the rear of the first wagon. The train was on its way to collect used rail originally destined for upgrading the Weemelah line and transport it across the state to the Junee – Griffith line which is being upgraded by the NSW Government as part of the Fixing Country Trains program.

Manildra Group, Louis Dreyfus Company and CHS Broadbent all have rail loading facilities, thereby offering farmers a choice of buyers.

Southern Shorthaul Railroad was contracted by John Holland Country Regional Network to perform the 'trans NSW' rail transport task with four train movements to be operated at the time of writing. The first train arrived in Moree on Tuesday, 15 January and comprised Clyde/EMD unit G513 *Mike Moy* and Goodwin/Alco locomotive 48S28 hauling two rakes, each comprising eight NDRF rail carrying wagons. The following day, Wednesday, 16 January, G 513 was detached as it was too heavy for the branch line and 48S28 departed Moree with its train (No. 5M41) for two loading sites located between the site of Moppin and the township of Garah. A John Holland CRN bridge inspector was on hand to check the Marshall's Pond Creek bridge at Ashley prior to the train's cautious passage over the structure. Some temporary steel supports have been placed under two spans to reduce the load on a set of timber piers. Some idea of the track conditions, coupled with heat-related speed restrictions, can be obtained by noting that the train took one hour 38 minutes to travel the 27 kilometres between Moree and Ashley.





Despite 40 degree-plus heat, loading was carried out on schedule at the two sites using two backhoes fitted with rail lifting equipment and two front-end loaders equipped to assist the backhoes lift the rail on to the wagons. After completion of loading at the second site (at the 716 kilometre post) the train proceeded to Garah where 48S28 ran around the wagons using the 964 metre grain siding before returning in the evening to Moree where G 513 was reattached for the run (No. 3M43) to the Junee- Griffith line via Werris Creek, Dubbo, Parkes and Cootamundra. The first load of rail was deposited at Widgegelli, 10 kilometres east of Griffith.

Further rail trains operated from the Weemelah line on Monday, 21 January (travelling via Werris Creek, Dubbo, Orange, Parkes and Cootamundra to the Junee – Griffith line), Monday, 28 January and Friday, 1 February (both travelling via Werris Creek, Dubbo, Parkes and Cootamundra). Following the passage of the fourth and last rail train on the Weemelah line on 1 February the stop block temporarily located just

north of Garah was relocated on 4 February to Camurra West, the interface between the ARTC controlled North Star line and the John Holland CRN controlled Weemelah line, effectively ‘closing’ the entire branch again.

One unconfirmed report claims that retrieving the used rail intended for upgrading the Weemelah line will reduce the cost of the Junee to Griffith upgrade by around \$400,000, despite the cost of transporting it more than 1,000 kilometres across NSW. The NSW Government says the total cost of the 174 kilometre Junee to Griffith upgrade will be \$60 million and it will involve replacing significant lengths of 40kg/m (80 lb/yd) with heavier rail to permit an increase in the axle load from 22 tonnes to 25 tonnes. John Holland CRN says the 25 tonne axle load aligns with the adjacent Main South Line and future Inland Rail capability and will enable more efficient loading of container and bulk freight trains. Main line locomotives will also benefit from improved track speeds, resulting in reduced operating costs and improved rail competitiveness with road between the Riverina and Melbourne, Port Kembla and Sydney.



Steel bracing has been added to support a pier on the Marshall's Pond Creek bridge at Ashley on the Camurra – Weemelah line, north of Moree, as seen in this Tuesday, 16 January view. The condition of this structure and a similar bridge over Gil Gil Creek at Bengerang are contributing factors to the current suspension of services on the 83 kilometre line in north west NSW.



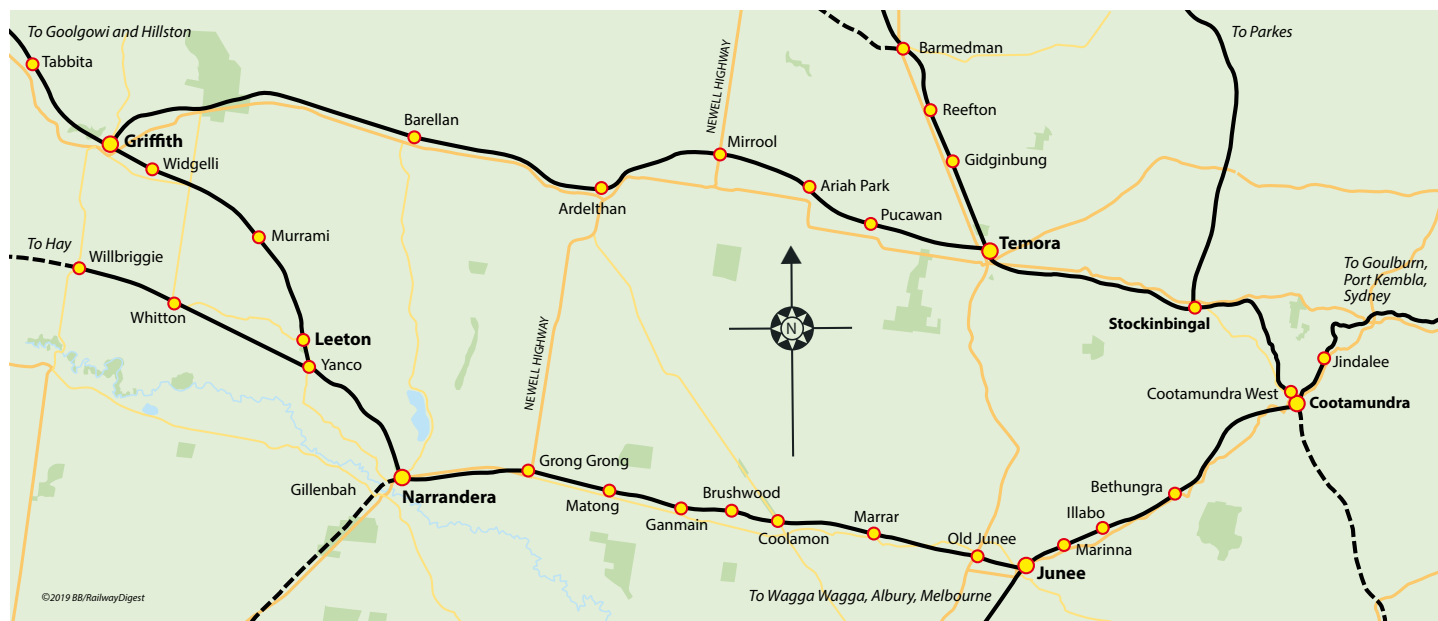
John Holland Country Regional Network rail transport train (No. 5M41), has arrived at the 716 kilometre post on the Camurra – Weemelah line and loading of used rail from the stack beside the line is under way on Wednesday, 16 January. Two backhoes and two front end loaders fitted with rail loading equipment were used for loading.



After completing loading of rail at two locations between the site of Moppin and Garah John Holland Country Regional Network rail transport train (No. 5M41), comprising Southern Shorthaul Railroad unit 48S28 and 16 NDRF wagons has arrived at Garah on the Camurra – Weemelah line on Wednesday, 16 January. The locomotive is about to run around its train and commence the journey to Moree and eventually the Junee – Griffith line where the rail will be used to upgrade that line.

The Junee –Griffith line hosts the five days-a-week Melbourne – Griffith Pacific National intermodal service (MC2/CM3) normally hauled by two NR class (22 tonne axle load) and a third lighter unit such as a G or 81 class. Grain trains also traverse the line, although they have been infrequent during 2018 because of drought conditions. The line also hosted a weekly Manildra Group flour train (operated by Pacific National) which transported flour from the company’s Narrandera mill to the Manildra starch and gluten plant at Bomaderry which the company says is the largest of its kind in the world. However, the opening of a flour mill at the Bomaderry plant has resulted in grain being railed direct from regional NSW to Bomaderry (the company’s Gunnedah mill has also been affected with grain trains no longer feeding in to the mill but operating direct to Bomaderry).

The relocation of used rail destined for upgrading the Weemelah line to the much more heavily trafficked Junee – Griffith line suggests that the Weemelah line may face an uncertain future. As mentioned above its proximity to Queensland and rail and road links to the Port of Brisbane has weakened its potential to attract grain haulage to the district’s traditional export destination of Newcastle. However, some industry insiders associated with the Melbourne – Brisbane Inland Railway project suggest the arrival of the railway in the Moree district might strengthen the case for upgrading the Weemelah line in that the option of railing grain from the line’s two loading points, Garah and Weemelah, direct to Brisbane will become available. It remains to be seen if that will be the case.







# Light Rail comes to Newcastle

Bruce Belbin

**B**orn in controversy, built in hope, the 2.7km, six-stop, Newcastle Light Rail commenced regular operation on Monday 18 February, following a successful Grand Opening Day the day before, with free rides for the public.

Regular services run from 5am to 1am, on a turn-up-and-go basis, and the line is operated by a fleet of six Construcciones y Auxilios Ferroviarios (CAF) *Urbos 100* trams, built in Spain. The trams consist of five modules and have an overall length of 33 metres. They feature on-board surfboard racks, and are equipped for wire-free operation, using the CAF 'Freedrive Onboard Energy Storage System'. A single pantograph, fitted to the centre module, draws current to charge the tram's supercapacitor and range-extender battery from overhead wiring in the depot area and from short sections of overhead in place at each tram stop.

Services are operated by Keolis Downer, under the Newcastle Transport banner.

The new line is the centrepiece of the NSW government's 'Revitalising Newcastle' program, which commenced in 2015, with more than \$650 million spent delivering the light rail system and the Newcastle Interchange.

The program's key objectives have been described as:

- bringing people back to the city centre
- connecting the city to its waterfront
- helping grow new jobs in the city centre
- creating great places linked to new transport
- creating economically sustainable public domain and community assets
- preserving and enhancing heritage and culture

**Above:** At Newcastle Interchange on the Grand Opening Day of the Newcastle Light Rail, Sunday 17 February, a crowd gathers around *Urbos 100* tram 2151, which has just returned from the first run of the day, carrying a load of 'VIPs', and is raising its pantograph to charge up for another run. Bruce Belbin

How much the new light rail can assist with all of this, only time will tell. Certainly, the revival of light rail here and overseas in recent years has generally led to successful outcomes, with some lines (such as Sydney Light Rail) gaining so much patronage that they become 'victims of their own success'.

On the other hand, in a recently released report, the NSW Auditor-General criticised the government over the lack of proper planning undertaken before announcing the project in 2013, stating that: "The program business case referred to several international examples to support this argument but did not make a convincing case that these examples were comparable to the proposed light rail in Newcastle".

The government and Newcastle City Council are convinced that the process is already well underway, with both speaking of a construction boom taking place in the CBD. On Friday 8 February, a Council spokesperson announced that they had approved around \$1.06 billion in development applications in 2018, up from \$746 million in 2016, \$924 million in 2016 and \$426 million in 2015.

Long before the first sod was turned on the light rail project, a major source of controversy was the truncation of the heavy rail line into Newcastle. The heavy rail line had long had its fans and its detractors, with many rejoicing in its proximity to the CBD, and others believing it effectively cut off the city from the foreshore.



The line dated back to 1858, when ironically, it was extended from the previous terminus, at Honeysuckle, to bring it closer to Newcastle proper. The grand station building, now heritage listed, that stands backing on to Scott Street today, was built under the direction of legendary NSW Railways Engineer in Chief, John Whitton, in 1878.

Over the years, there were a number of proposals to truncate, or downgrade, the line – including a move in 1889 to operate it purely as a branch line.

In November 1972, Minister for Transport Milton Morris announced the line would be cut back to Civic, but this did not proceed.

In 1990, CityRail proposed closing the line beyond Civic in response to a study on Newcastle's transport and development. Since 2003 there had been studies looking at closing the line and having Broadmeadow station become the major rail transport hub for the Newcastle region.

In 2005, there was a move encouraged by business and property development interests to close the line, with the proposal to redevelop the foreshore. This was widely criticised by locals. Originally the State Government had decided to close the line but later in 2006, after a huge public outcry, Premier Morris lemma announced that the line would stay open. However, in 2007 tenders were placed for a study into the line's future, including possible removal of the overhead wires and dieselisation of services.

In December 2012, the government announced its intention to close the line east of Wickham, closing Wickham, Civic and Newcastle stations. The line closed between Hamilton and Newcastle stations on 25 December 2014, the last passenger-carrying train being a late-running V Set that departed for Sydney at 23.35 (see February 2015 *RD*, page 6).

The heavy rail line was to be replaced by a light rail line, using either the heavy rail corridor, or a largely on-street route. Several newspapers in the Hunter region led a campaign to retain the heavy rail link, and while Newcastle City Council was initially supportive of the light rail project, following a mayoral by-election in November 2014, the council advocated retaining the heavy rail line instead. A local activist group, *Save Our Rail*, was formed and campaigned hard for the retention of the existing line, including by mounting legal challenges to the government's actions.

In May 2014, it was announced a light rail line would be built using a predominantly on-street route. About 500 m of the existing rail corridor east of Wickham station would be reused, including an area for a depot/workshop, before the light rail proceeded along Scott and Hunter Streets to terminate at Pacific Park in Newcastle East.

This drew mixed reactions and led to speculation that the railway corridor could be sold to property developers. It also contradicted the advice of Transport for NSW, which supported reusing the heavy rail corridor, advising the government that an on-street route could cost almost \$100 million more and deliver a slower service.

In April 2016, CPB Contractors, Downer Group, John Holland, Laing O'Rourke and McConnell Dowell were shortlisted to bid for the contract to build the infrastructure. Downer was awarded the contract in August. Construction of the light rail was completed by the end of September 2018.

The government has promised to produce a business case this year on extending the light rail line into the suburbs, with a favoured route said to be to John Hunter Hospital via Broadmeadow, though Hunter Stadium, Adamstown and Mayfield are also in the running. Mereweather, the terminus of the original tramline, is now said to be too difficult and expensive to contemplate. The government's deal with the Shooter's Party in October 2015, that led to the passing of the legislation required to remove the heavy rail line, stipulated that the government must move promptly to prepare plans for extending the light rail system.

With testing completed, and five of the six *Urbos 100* trams on hand, a free community open day, centred on the forecourt of the Newcastle Interchange, was arranged for the Grand Opening of the new light rail. On a warm, sunny Sunday 17 February, a large crowd began to gather from around 10am to watch the entertainers, but mainly to have a ride on the new trams. Though the rides were supposed to take place between 11am and 4pm, such were the numbers – by 10.30am a massive queue was snaking around the forecourt, then heading off into the distance down Stewart Avenue – that the runs began early and finished late. The very first tram (with VIP passengers on board) left just before 10.30am, while the first of the public runs departed at 10.45.

Early the next morning, the regular service began, though initially not to the intended 7.5-minute frequency, as the sixth tram has not yet been delivered, and two of the five trams on hand have yet to be commissioned into service.

Over the next few weeks and months it will be interesting to see if the overwhelming goodwill shown to the new light rail on opening day persists, to make it a successful, viable asset to the city of Newcastle.

Around the world, light rail systems have had an enviable record for 'revitalising' moribund communities. We can only hope that, before long, the Newcastle Light Rail will prove to be yet another example.



Having just left the Newcastle Interchange on Sunday morning 17 February with a load of happy (non-paying) passengers, Tram 2152 rolls across Stewart Avenue and into Beresford Street, passing the light rail depot building built on the site of the former Wickham station, on the left. With four cranes visible on the skyline, an application of the Joh Bjelke-Petersen 'Crane Index' would suggest that the 'revitalising' of Newcastle is well under way! Bruce Belbin





Around noon on opening day, Tram 2152 turns out of Hunter Street and into Worth Place, as it returns to Newcastle Interchange from a run to Newcastle Beach. Robert Rouse

On the opening day, a crowd has gathered around Tram 2154, which has just arrived at Newcastle Beach, the eastern terminus of the line, adjacent to Pacific Park in Scott Street. Peter Sansom







# THE OVERLAND

Almost over or overdue for an overhaul?

Ken Date and Dominik Giemza

After suffering another near-death experience, the *Overland* will continue at least until the end of 2019 ensuring 93 years of service under that name and 132 years of direct service between Melbourne and Adelaide. But it was almost over for the *Overland*, following an unexpected announcement from the South Australian government in late November 2018 that their share of the subsidy to Great Southern Rail (GSR) to operate the service would stop at the end of 2018. GSR promptly halted bookings past 31 December and another in a series of curtain calls for the *Overland* ensued. However, on 11 December and 20 days before the “final” service, the train’s survival for another 12 months was guaranteed when newly re-elected Victorian Premier, Daniel Andrews, accompanied by Transport Minister Melissa Horne, announced that the Victorian government would cover both its, and South Australia’s, share of the subsidy, to keep the train running.

And so, a rail service that is rarely in the news and which somehow survives on almost no promotion was suddenly topical again. Debate flared and raged about the *Overland*’s future just long enough to almost make the service relevant again and when the Victorian government stepped in with their funding package, it would have been with the knowledge that they had virtually nothing to lose. In dollar terms, the extra subsidy that Victorian taxpayers will fund is a trivial fraction of the amount state governments spend each year: \$330,000; about the same as a middle ranking public sector manager would cost (in salary and ‘on costs’).

But for this money, what are the taxpayers actually getting? Is the *Overland* Australia’s most threatened, enjoyable, under-appreciated, misplaced, anachronistic, oldest and/or misunderstood train? Is it almost over for this venerable service and the passenger rail link between these two capitals, or is the train merely overdue for an overhaul?

The service between Melbourne and Adelaide was, from inception, a joint enterprise between the South Australian and Victorian colonies (and later States). The through service, with jointly owned rolling stock, commenced on 19 January 1887 as the *Intercontinental Express* and later became the *Adelaide Limited*. The *Overland* name was adopted in 1936 and the first air-conditioned rolling stock was introduced in 1949. The

train outlasted the old SAR when Australian National took over South Australian operations and joint running of the train in 1975 with VR. The joint Commonwealth and Victorian enterprise continued under this arrangement until privatisation in 1997. But even post privatisation, funding was supplied jointly by the Commonwealth and Victoria until the last “crisis” back in 2016, when Commonwealth funding stopped, and South Australia had to again make a commitment. This arrangement ended in 2018 and the subsequent crisis was resolved by Victoria becoming the sole supporter of the service.

The *Overland* has been under GSR’s management for over 20 years, since the original sale of Australian National took place in November 1997 (GSR itself has been bought and sold more than once in the intervening period). In that time the company has tinkered with the train and its timetable in a seemingly futile attempt to turn it into a viable proposition (i.e. one that could run without a subsidy). The *Overland* had operated from 1936 as an overnight train, 7 days a week between the two state capitals. The current rolling stock was built as part of a renewal program in the 1950s, so many of the cars in use today are heading towards 70 years of service – a long innings even by the standards of Australian railways. Apart from some recycled Harris cars used in Victorian regional services (the oldest of which ‘only’ date from 1956) are there any other items of rolling stock of similar or even older vintage still in regular service?

GSR’s first move, in 1998, was to cancel two services per week, reducing the service to five overnight journeys. Then, in 2000, the train became both a day and an overnight service by accelerating the timetable and using one carriage set to run from Adelaide to Melbourne by day, returning to Adelaide the same night. Seven years later, following another refurbishment of the rolling stock, the *Overland* became a day service only, running three times per week in each direction. This May 2007 change also introduced the current blue and silver livery to rolling stock, which at the time received its last major overhaul. In 2013 the service was reduced to two trains each week (which remains the current schedule, see Timetable, page 39 opposite) while the motorail car-carrying wagon was removed in 2015. At around that time another funding crisis occurred when it seemed that





**Left (page 38):** NR72 hauls 3MA8 on 6 January 2015 around the famous Callington curve with a motorail wagon (in its final year of operation along this route) and regular power van PCO 4 Paite in tow. Dominik Giemza

**Above:** On 26 July 2013 the signage at Adelaide Parklands advertises the then current GSR products (the *Southern Spirit* cruise train now being defunct) and gives prominence to the *Overland* with special liveried BL33 in the picture. In fact, BL33 never did wear such a livery, although it was used on the *Overland* in 1997 in the early part of GSR's tenure, and at the time, it still wore National Rail's 'Stealink' livery. Dominik Giemza

neither Victoria nor South Australia would provide subsidies, although both states subsequently agreed to provide three more years of funding.

At various times in the last 20 years GSR did promote the train but its approach has not, in recent years, indicated that it is a 'core' asset. Indeed, what was surprising was the statement by GSR on 29 November 2018 that the \$330,000 annual South Australian funding cut was sufficient to make the service unviable, which would surely indicate little if no profit or cross-promotional potential for the service to GSR. Back in 2013, the entrance to Adelaide Parklands terminal at least boasted a billboard with BL33 in 'photoshopped' *Overland* livery. Now, the main way of finding out about the train is on the GSR website. Additional promotion was part of the deal for the resolution of the 2016 crisis, even though the motorail service succumbed in November 2015, thus reducing the capacity of the service to integrate with the *Ghan* and *Indian Pacific* motorail services (although the latter motorail was cut back from Sydney to Adelaide at the same time). In 2017 a lengthy AFL Grand Final special was run (Adelaide played in the Grand Final that year) but not much else seems to have happened.

The GSR website states that the train usually runs as a seven-car consist of 189 metres in length consisting of three Red sitters, two Red Premium sitters, a café car and combined power and baggage van. This 322-tonne load is no problem for the single NR class that is routinely assigned to haul it. GSR retains enough cars for a 14 car consist if required but the 31 December 2018 service boasted the usual 7 cars plus an extra luggage van (however, at times one sitting car is hauled empty out of operational convenience – see '31 December 2018 2AM8 consist', page 40). One of the most incongruous features of the service has been the availability of three of the GSR fleet of four private cars for hire (the 1914 vintage *Prince of Wales* Car being out-of-gauge for this route). The authors have sighted the sleeper-lounge *Sir John Forrest* on a service back on 29 December 2008 and these cars were still promoted in the travel press as late as 2012. Not much promotion has occurred since and all are out of service except for the *Chairman's Car* which is now available only as part of the Platinum Service on the *Indian Pacific*.

## Timetable

ARTC train number 2AM8	Every Monday	ARTC train number 3MA8	Every Tuesday
ARTC train number 6AM8	Every Friday	ARTC train number 7MA8	Every Saturday
Station	Time	Station	Time
Adelaide	0745 dep	Melbourne	0805 dep
Murray Bridge	0950 dep	North Shore Geelong	0915 dep
Bordertown	1149 dep	Ararat	1115 dep
Nhill	1317 dep (Eastern time)	Stawell	1140 dep
Dimboola	1350 dep (Loco crew change)	Horsham	1231 dep
Horsham	1417 dep	Dimboola	1300 dep (Loco crew change)
Stawell	1511 dep	Nhill	1327 dep
Ararat	1535 dep	Bordertown	1351 dep (Central time)
North Shore Geelong	1739 dep	Murray Bridge	1550 dep
Melbourne	1850 arr	Adelaide	1740 arr



*Sir John Forrest* seen at Belair on 30 December 2008 as it was returning from Melbourne on the *Overland*. GSR has four special service cars that were originally available for private hire but now, sadly, all apart from the *Chairman's Car*, are out of use. These cars include heritage Commonwealth Railway's 1914 built *Prince of Wales* sleeper-lounge (that could only be used in the *Ghan* due to its loading gauge), the *Chairman's Car* sleeper-lounge (being SSA260 the original *Indian Pacific* special car as used by Prime Ministers and Vice Regal representatives on special occasions like the 1980 opening of the Alice Springs-Tarcoola railway) and the *Governor's Lounge*, a converted sitting car that would be most useful on an *Overland* day trip. *Sir John Forrest* was rebuilt as a sleeper-lounge in 1997 from redundant 1957 built *Overland* Sleeping car *Yanni* later BMC 2. A similar conversion was undertaken to 1956 built sleeper *Tandeni*, later BMC 1, which in 1998 became *Sir Hans Heysen* a GSR private car that was on the first *Ghan* to Darwin in 1 February 2004. However this fifth private car was sold to CFCLA in 2007 becoming CDAY1, a private car now kept in Goulburn NSW for private use by CFCLA management. Dominik Giemza



As well as the train itself, GSR has also played around with stopping patterns and seemingly illogical stops have sometimes been a feature of the timetable. At one time, the train stopped at Nhill but not at Stawell, even though the latter town is nearly three times the size of Nhill. Today, there are only eight intermediate stops: Murray Bridge and Bordertown in South Australia and Nhill, Dimboola, Horsham, Stawell, Ararat and North Shore (Geelong). Murray Bridge and Horsham are by far the largest towns served by the *Overland* while the smallest town is Dimboola, which demands a stop as it the changeover point for loco crews (GSR's on-train staff work the entire journey). The former railway centre of Tailem Bend, which was an integral part of the network for the old SAR and then AN, is flashed through at 110 km/h; perhaps perfectly illustrating the dramatic change that has occurred to railways all over this country in the years since privatisation took hold.

The *Overland* manages to maintain a relatively high average speed (85 km/h) and, away from the slow grind through the Adelaide Hills and on to Murray Bridge as well as the Newport – Melbourne leg, most of the journey is run at over 100 km/h. The overnight service was once colloquially known as 'The Overdue' due to frequent late running, particularly when coming up against the parade of trains heading 'west' during peak days like Friday. Since moving to the daylight timetable the *Overland* is rarely late. The reason for this is that so few trains run during the daytime between Adelaide and Melbourne. Indeed, looking at the current timetable in the lengthy Adelaide – Dimboola section (as an example) there is no more than one cross in any direction. 2AM8 only

overtakes 6PM6 (Perth–Melbourne intermodal freight) at Dimboola with nothing in the opposite direction. Likewise, the return, 3MA8 faces no crosses but overtakes 3MX2 (Melbourne–Port Augusta intermodal freight) at Coonalpyn. Later in the week there are no overtakes but 6AM8 crosses 6MP1 at Tailem bend. The return 7MA8 crosses 6PM6 at Leeror.

The contract must be easy money for Pacific National, who supplies the motive power. The NR class locomotives that are routinely rostered make light work of the small train that the *Overland* has become. From its peak as a 14-16 car overnight train, the *Overland* now typically runs with four or five sitting cars, a club car and a power van. Annual total passenger numbers were quoted as being around 30,000 during the stoush over funding, which works out at about 145 passengers per trip.

A taxpayer with no particular interest in rail transport could be forgiven for asking why the *Overland* needs to continue to operate at public expense. One of the quoted reasons is that there is a cohort of people who either want to take the train (for its own sake) or can't/won't fly or drive. Yet in support of the withdrawal of funding the SA Transport Minister had stated that only 300 passengers per year were using the two regional stops in South Australia (an average of only 1-2 per trip). This surely indicates either a service that is ignored or one that does not meet the needs of lineside communities (be it frequency, convenience, cost or stopping pattern). Seemingly in response to critics, in her media release, Melissa Horne stated that "Communities from across Western Victoria have told us how important this route is for their travel and to the history of their town".

## 31 December 2018 2AM8 consist

Vehicle	Year in service	Notes
NR110	1998	Pacific National owned 'hook and pull' hire
BJ6	1960	Original <i>Overland</i> second class sitting car. Refurbished 2007. Locked out of use on this service.
BJ10	1968	Original <i>Overland</i> second class sitting car. Refurbished 2007.
BJ7	1966	Original <i>Overland</i> second class sitting car. Refurbished 2007.
RBJ3	1952	Second class <i>Overland</i> sitting car converted in 1986 to cafe car. Refurbished 2007.
BJ4	1952	Second class <i>Overland</i> sitting car converted to Premium three abreast sitting 2007.
BJ5	1960	Second class <i>Overland</i> sitting car converted to Premium three abreast sitting 2007.
HM957	1969	Commonwealth Railways <i>Indian Pacific</i> mail and baggage car – used as baggage car.
HGM3179	1975	Commonwealth Railways <i>Indian Pacific</i> power van used on this run, in place of PCO 4; the last regular 1970 built <i>Overland</i> combined baggage and power van and the only one of four retained by GSR.





**Above:** NR36 shunts the empty Overland cars at Southern Cross station on the morning of 13 October 2018 after being stabled overnight. The train will soon depart as 7MA8 back to its home base at Adelaide. Dominik Giemza

**Below:** NR30 roars through the deserted station of Tailm Bend with 7MA8 on a cold and blustery 27 July 2013. Although the former railway centre remains a sizeable town, the Overland does not stop here and the imposing station's only use is as a museum for lost local railway heritage. Dominik Giemza







However, catering to an aversion to flying or acknowledging a town's history does not constitute a sound business case. For the non-flyers, there are actually other alternatives besides the *Overland*. A daily bus service runs between Adelaide and Bendigo (where connections are made with V/Line services) while the towns in western Victoria that are served by the *Overland* also have daily buses that connect with trains at Ararat (which is now served by four trains each day to/from Melbourne) or Ballarat. There are also daily bus services running between Adelaide and Geelong (which connect with trains to Melbourne). Claims that western Victorians would be worse off without the *Overland* seem at least a little disingenuous when considering the number and range of alternative ground transport options.

As a twice per week service, the *Overland* fails to meet any reasonable standard of 'public transport' and, interestingly, GSR don't really run it as a public transport service. Instead, the same business model that GSR has successfully applied to its more glamorous trains (the *Indian Pacific* and the *Ghan*) is essentially also applied to the running of the *Overland*. GSR's aim is to provide a superior customer experience and, even with the *Overland*, they manage to do that very well, making the train unique as a State-subsidised 'tourist train' rather than just a public service. Two classes of service are offered: Red and Red Premium, the latter including meals and some drinks as well as 'to seat' service. The décor is pleasant, there is ample room to recline in either class and each carriage has a disabled friendly toilet. Fares are variable in a similar manner to airlines (currently listed as \$79 to \$159 Adelaide-Melbourne one way for Red Service and \$100 extra for Red Premium). GSR's on train staff are efficient and friendly in their dealings with passengers and they work hard to ensure a memorable experience is enjoyed by all. However, the 2007 rebuild of the rolling stock is showing its age with no wi-fi available and no power sockets at each seat (as is the standard for airlines and now even interstate buses). But, thanks to its role in ARTC train communications, the route has constant 4G network coverage for mobile phones and data (as long as one brings a battery storage device to make up for the lack of charging ability). At least the rolling stock is well maintained and rides relatively smoothly for vintage vehicles.

**Top Left:** As Adelaide Parklands is the main servicing depot for GSR trains, provisioning and fuelling takes place here. The on-board GSR crews for the *Overland* are also based here and overnight in a hotel when in Melbourne (the Pacific National loco crews however change in Dimboola each way). In 31 December 2018 two members of the affable GSR crew load the cafeteria car RBJ3 from a vintage USA-built electric truck. Dominik Giemza

**Above left:** The interior of the dining area in RBJ3, seen on 31 December 2018. Customers can buy meals and beverages here although Red Premium customers have breakfast, lunch, afternoon tea and all non-alcoholic beverages included. Dominik Giemza

**Left:** The interior three abreast seating indicates that BJ4 is one of the Red Premium sitting cars (effectively the first class service on the *Overland*). On the morning of 31 December 2018, the GSR crew, clad in photogenic RM Williams uniforms, greet the passengers and advise of the treats available in the inclusive breakfast and lunch menus. Dominik Giemza





The concourse of the Adelaide Parklands station leaves the traveller in no doubt as to the signature train in the GSR portfolio. As the passengers for the 31 December 2018 2AM8 Melbourne bound *Overland* enjoy a coffee in the pleasant cafeteria the *Indian Pacific* eagle looks on, and the *Overland* emu is only seen on the carriages patiently waiting outside.  
Dominik Giemza

The obvious question that comes out of this latest threat to the *Overland* is Where to Next? With only two stations being served in South Australia it is not hard to see the intercapital service potentially being reduced to a western Victoria only service that is run by V/Line (and using much more modern equipment). The *Overland* cars, some of which are approaching their eighth decade in use, although still in reasonable condition, can't keep running forever and no rail operator, government or private, is going to spend the amount that would be required to obtain another set of heavy steel loco-hauled cars, especially for such an intermittent service.

There is pressure in Victoria to extend regional services as well as to expand existing services. The default solution in Victoria for nearly 20 years has been to simply keep building V/Locity sets but, for longer runs, those trains are not seen as ideal – although V/Locitys have recently replaced some loco-hauled trains to Bairnsdale. A modified or enhanced version of the V/Locity that is more suited to long distance running is an obvious option but, west of Ararat, the problem with the break of gauge remains. If a standard-gauge V/Locity (or similar) train eventually replaces the Albury loco-hauled services, would additional cars to service western Victoria be a viable option or perhaps a

redeployment of the standard gauge loco-hauled cars? There have been calls to run passenger trains to Horsham and even Hamilton but such services, if they are to happen, are still years away from being introduced. But the point made by the Public Transport Users Association in their press release welcoming the continuation of funding for the *Overland*, that western Victorian towns need a higher level of service than a twice-per-week 'tourist train', is a valid one.

GSR has said they will 'review' the *Overland* during 2019 and the Victorian government has obviously given themselves some breathing room to develop a plan for public transport in the west of the state. Knowing that government's proclivity to "do things" in the public transport sphere, a factor which has given it electoral success, it is likely that Western Victoria will see more trains with or without the *Overland* continuing in its present form. The *Overland* may well be faced with another funding 'crisis' at the end of this year, or maybe the subsidy will be extended again to keep the existing train on the tracks. One way or another, the *Overland* will live on borrowed time until a long-term solution is found. 2019 may or may not be the last year that a service that dates back over 100 years in various forms stays in operation. If you haven't done so, it is time to ride the *Overland* before it's all over.







# The NSW TrainLink Challenge

Text and Images by David McCafferty

**I**nspired by Jonathan Green's Challenge of the V/Line network in Victoria (see *RD* January 2018 Page 30), I decided to create my own version for the NSW TrainLink network. I had to reach the Opal limits of Dungog, Scone, Bathurst, Goulburn and Bomaderry. I discussed the challenge with my best mate, Jeremiah Cuachon, together we have completed many other challenges including spending 16 hours at the small but unique station of Wondabyne. Despite the madness of the challenge, Jeremiah agreed to it. I spent a couple of days working out a plan, which was edited multiple times. I finally found a plan that would work and sent it to Jeremiah to see what he would think.

There are multiple "request" stations on the NSW Intercity network, so we decided to rule out all request stations, mainly due to low frequencies of trains servicing those stations. We decided that Wednesday 19th of December through to Friday 21st of December were going to be the best dates to do the challenge. They were the only suitable dates until late January and seeming that we got held off from doing it in October, I wanted to complete it as soon as possible. The only issue was that there was late night trackwork all of that week between Newcastle Interchange and Morisset. However, our plan accommodated for that; we will tick off the stations on the way up, so getting the stations on the way down won't be necessary.

On Wednesday 19 December 2018, I get out of the house at 9:30am, I head to the shops to buy snacks and drinks. I end up with eight cans of energy drinks and eight 1.5L bottles of water. My backpack and the bags are extremely heavy from the tripod, camera, energy drinks and water. The quick five-minute walk from Woolworths to Revesby station becomes almost impossible as sweat pours down my face and into

my eyes from the physical strain. I top up my Opal card by \$30, which should be more than enough for the next few days. At Revesby I board the express to the city and I rest my shoulders, drink some water and read some November *Railway Digest* on the 30-minute trip to the City.

I make it out of the train and to platform 9 at Central station. I wander around for five minutes and Jeremiah turns up. We wait and then board the second carriage of our first train, the 11:45am service to Newcastle Interchange. It takes an hour to reach our first location outside of the Sydney Trains Suburban area, Cowan. Another two hours are spent onboard the uncomfortable Oscar to Newcastle Interchange with photos taken of every station sign along the way.

At Newcastle Interchange, our seven-minute wait becomes a three-minute run instead. We successfully board *Hunter* Railcar set J1. We stop all stations to Maitland. There, we have a brisk walk to Subway for a rather late lunch. With seven bottles of water, each weighing around 1.5kg, along with the camera equipment and other snacks it's quite painful. We make our order, get our food and pay and walk quite fast back to Maitland station. We arrive with six minutes to spare. Hunter Railcar set J2 arrives on time at Maitland for our Dungog service, and we make our way up the North Coast line to Dungog, arriving at 4:45pm.

The Ex-Brisbane XPT, NT32, sits in the humidity of Dungog as it awaits clearance to proceed. We decide to watch NT32 depart and we then hop back on into the inviting cool air conditioning of J2 as it prepares for departure. We ride the train down to Mindaribba where we stop at the platform to let a northbound SCT freight train pass. The friendly guard opens the door onto the platform and lets us take a look around. We watch the freight pass and hop back onto J2.



**Left (page 44):** On a wet Wednesday evening 19 December 2018, Hunter Railcar Set J4 sits in the single platform at Scone, having completed its almost two-hour journey from Newcastle Interchange. It is now ready to depart with the 8:51pm service back to Newcastle.

From Mindaribba it is on to Scone, and to avoid too long waits at Maitland we have decided to go to Beresfield where the wait is only five minutes. We board HMT 2754, a part of set J4, our home for the next four hours as we ride out to Scone and back to Hamilton. The journey to Scone was relatively pleasant, though an approaching thunderstorm soon took that away.

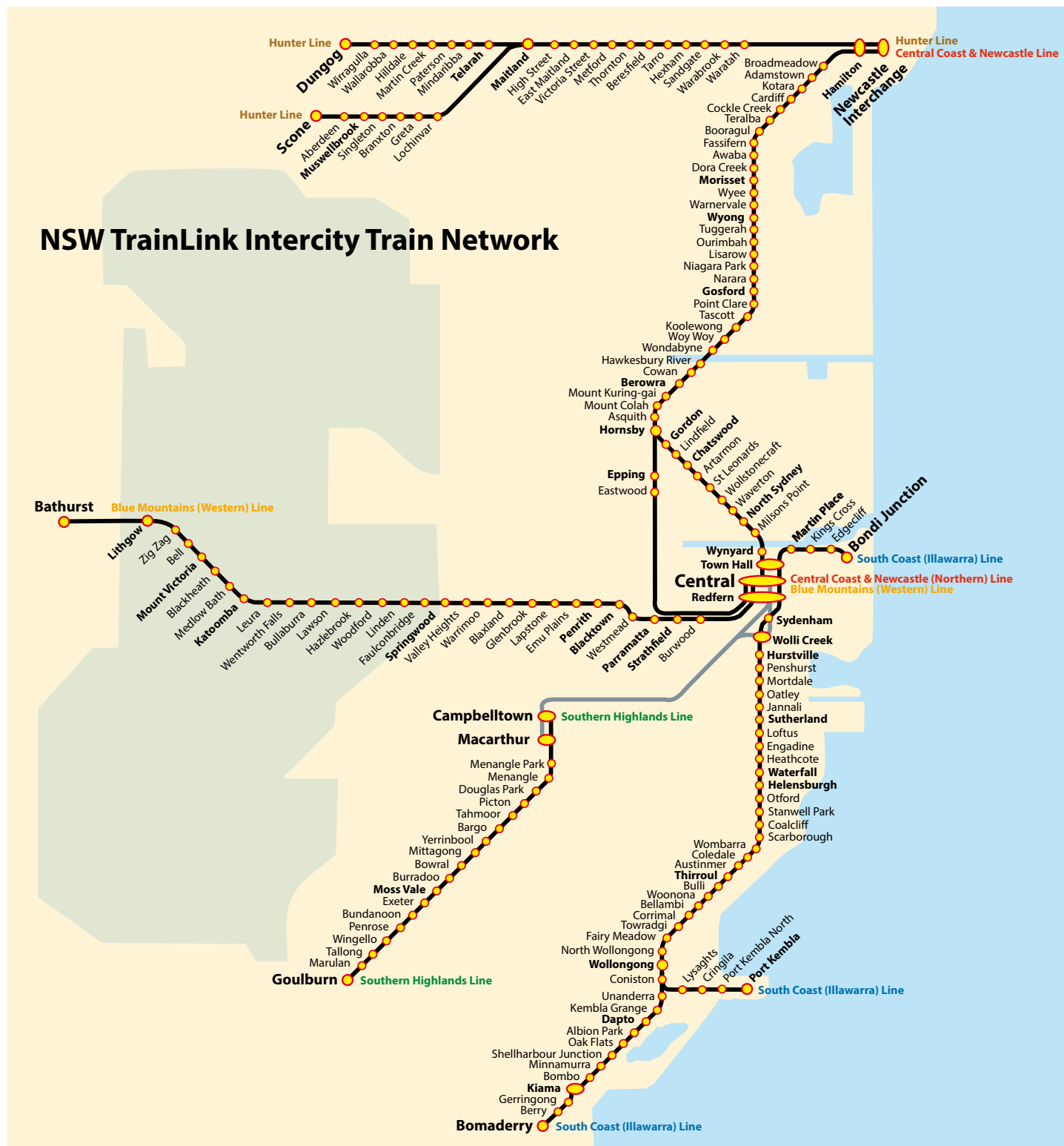
Upon arrival into Scone it is raining quite heavily, and I go with my wallet, Opal card and an umbrella down to Dominos to pick up the order I made the night before. \$20.85 later we have a filling meal. I make it

back to the station relatively quickly, take the photos regardless of the rain, and get back on board J4. I have the first of many energy drinks, with the pizza before the train departs.

At Hamilton we walk down to a nearby kebab shop and buy some kebabs, for later on when we'll be at Gosford at 2am. We walk back up the street to the 'trackwork replacement' bus stop and wait. A large coach turns up for the replacement service. I sit down and try to relax as we start driving down to Morisset.

An hour and 8 minutes later we arrive at Morisset station. From here we catch the train down to Gosford. We attempt to get some sleep on the train, but it is close to impossible with the uncomfortable seating. At Gosford we will have a two-hour wait for the next train to Central.

Although it is almost the middle of summer, in Gosford it's freezing! I realise that I've made a huge mistake wearing only shirts and shorts.





During that time at Gosford, a Morisset bound Oscar arrives and departs platform 3, a northbound Pacific National train passes platform 2, consisting of NR77, NR10 and NR100, V21 terminates and heads south into the yard, NR121 and NR24 lead a southbound Pacific National train through platform 1, H14 passes northbound through platform 1, PH2C002 and PHC001, pass through platform 2 northbound, H18 arrives into platform 1 for a Central service, we board and put down our stuff. It's 3am and at some point, I fall asleep, and Jeremiah wakes me up on the approach to Central.

It's 4:30am, we make our way from platform 9 to platform 4 to catch H27 on a Kiama service, we leave at 4:40am, arrival at Kiama is expected to be around 7am, another 2 hours and 20 minutes until we get there. Jeremiah attempts to get more sleep. 45 minutes later and it's 5:25am we have reached the boundary between Sydney Trains Suburban and NSW TrainLink Intercity, Waterfall. It appears to be a very misty morning outside, hopefully we don't miss a good sunrise.

Hours later, we are in Bomaderry having changed at Kiama from H27 to Endeavour set N9. We go down to Bomaderry, get off, take a couple of pictures and get back on and wait 20 minutes for the service to go back to Kiama. Upon arrival at Kiama at around 8:45am, we get on board the connecting Oscar set, H52, for the trip to Wollongong. Upon arrival at Wollongong, I notice that there will be an SSR train passing shortly after H52 leaves. 5 minutes later, RL304, RL306, 4910 and 44206 pass platform 1, northbound. Wollongong was supposed to be where we got breakfast, however a long toilet break stopped us going up the road. We go to Platform 2 and await the arrival of the 10:18am 4 car Tangara to Port Kembla, T100 pulls in on time to take us there.

I get out my camera and take some photos around Port Kembla. A few shots of T100 sitting in the platform, as well as 8102 shunting some steel coils around, 8005 and 48120 sitting around, as well as outside the station to capture LDP005 in its new livery with 8135 nearby as well as 48120 in the background. Hopping back onto T100 and continuing the journey to Thirroul and collecting the stations we missed on the way down. At Thirroul we wait 20 minutes for the express to Sutherland.

At Sutherland we do a quick shuffle onto the M92 bus to Padstow. From Padstow we wait for an East Hills-bound K set, to take us to Revesby. We exit Revesby to go to the Chinese restaurant across the street. We have a large lunch and get back to Revesby with tons of time to spare. Nevertheless, we catch the next express from platform 1 to Central to

prepare for the Goulburn bound *Endeavour*. We arrive at Central, after being awake for around 28 hours with little sleep between Gosford and Central, I am feeling extremely exhausted. I buy an iced double espresso from a vending machine and drink it. It helps a bit. The *Endeavour* pulls up – today it is N7 and N13. As we approach Picton we are caught in a storm, this one taking out the signals and leaving us stranded for 20 minutes. Luckily the repairs are swiftly completed but a 20-minute delay has cursed us. We call ahead to Dominos at Goulburn, for our dinner, and ask if it is possible to get the pizza delivered to the station, they say it will cost an extra \$4 – not an issue. We arrive at Goulburn 30 minutes late, and I wait outside the station for 10 minutes. Now either they didn't hear me right (it did sound quite busy) or they were running very late, because we left Goulburn without any pizza! I manage to get a small amount of sleep, but nowhere near enough.

Our final line to complete is the Blue Mountains, which will be the hardest to do, as the service leaves Central at 18 minutes past midnight. I am awoken by the arrival at Campbelltown, and manage to collect my stuff and wake up Jeremiah to do the same. We drag ourselves off the train, drowsy from the effects of sleeping, we make our way to platform 2, only to discover multiple cancellations, this must've been due to the earlier storm! Luckily an all-stations T8 Airport line train arrives on platform 3, and takes us all the way to Central.

Although I am doubting caffeine's effect on me, I open another energy drink. The stuff tastes completely different, I guess that's what happens when you leave unrefrigerated cans in a bag for two days. As we depart Riverwood, an obviously inebriated person gets on, asking us for alcohol, possibly mistaking the energy drinks for alcoholic beverages.

We arrive at Central and take a toilet break before boarding V41, the first and last V set that we will ride on for the entire challenge. I am so exhausted that every time I look down at my phone, whilst on the train, I feel like I am moving, then I look around and see that I am still sitting in the same spot and we haven't moved an inch. It has been over 36 hours since we started the challenge and we still have over 10 hours to go. After two and a half hours we reach the village of Mount Victoria. Usually this service would continue to Lithgow, but stormy conditions caused signal problems (as mentioned earlier this also affected us at Picton and Campbelltown), so for this reason we terminated here.

Thankfully, a bus was prearranged and ready to go as soon as everyone boarded. About 25 minutes later, I'm sitting on the cold Lithgow station

**Tangara set T100, is seen sitting at the terminus of the industrial part of the South Coast Line; Port Kembla. Multiple interstate freight trains arrive and depart from the Port Kembla area every day.**







**Left:** In the morning light of Kiama, Oscar set H27 has just terminated, it will head down into the yard and will wait the Bomaderry-bound Endeavour to arrive and depart before preparing for a Bondi Junction service.

**Below:** Running approximately 40 minutes late, Endeavour set N11 with the Bathurst Bullet service passes through Platform 1 at Lidcombe on its way to Central from Bathurst on Friday 21 December 2018, with David and Jeremiah on board. Fellow railfan, Simon Li just happened to be on Platform 2, with camera in hand, and recorded this image.

bench, waiting for the 3:42am service from Lithgow to Bathurst. We begin our one-hour trip to Bathurst after a minor delay due to a level crossing not wanting to play ball. I manage to drift off to sleep, so does Jeremiah, and we wake up about 15 minutes after the scheduled arrival, too late for a brekkie run to Maccas.

Shortly after departure, N11 stops for 'paperwork'— the same faulty level crossing — meaning that the train has to go over the road without any warning bells. 10 minutes later we are racing down into Lithgow. During the storm the previous night, part of a tree had fallen into the rail corridor near Zig Zag station and had become tangled in the overhead wiring. Our train being a diesel multiple unit, electricity isn't a big deal, however we crawl our way through Zig Zag and through the ten tunnels. Arrival at Mount Victoria is delayed by a total of 38 minutes.

As soon as we get down the mountains and arrive at the outskirts

of Emu Plains, we are stopped behind a Tangara. We crawl our way to Penrith and manage to overtake the Tangara at St Marys and attempt to make up our now 45-minute delay, to not much avail. We pass fellow railfan, Simon Li, at Lidcombe, but he doesn't notice us, solely concentrating on filming and photographing the 40 minute-late Up Bathurst Bullet service. As we approach Macdonaldtown station we begin to slow again, before crawling our way into Redfern and picking up a little speed as we approach platform 1 at Central station. We terminate with a 45-minute delay at 10:12am.

After an approximate combined total of 46 hours and 30 minutes on trains, with three meals skipped and no longer than two hours of continuous sleep, I am ready for a warm shower, a big meal and a long sleep.

Special thanks go to Jeremiah Cuachon for agreeing to participate fully in this insane challenge.







# Vlocity 3.0: the short/medium distance version

Text and images by Tim Sutherland

## Background

There has been much discussion recently about Melbourne's population growth, particularly after the city reached the five million mark in August last year. However, this growth has also been shared by major Victorian regional cities, especially Geelong, Ballarat and Bendigo. In fact, Victoria's second city, Geelong, grew faster than Melbourne in 2017 with a 2.71 per cent increase. Its current estimated population is around 195,000. Bendigo has reached around 110,000, Ballarat has crossed the 100,000 mark and Latrobe City is home to over 74,000 residents.

These cities are all within the 75 to 160 kilometre range from Melbourne – ideal for 'interurban' rail passenger services, especially when coupled to the generally favourable topography and track alignment which allows, by Australian standards, high average train speeds.

It is therefore not surprising that the demand for V/line passenger train services linking Melbourne to these regional cities has seen a significant increase in the last two decades. In 2017/18 V/line's rail passenger trips reached 19,513,458. A significant contributor to that total was from the lines serving the above-mentioned cities. Rail patronage on the Geelong

**Above:** At Southern Cross station, on Wednesday 9 January Vlocity VL77's DMD unit (driving unit with disabled access toilet) 1177 faces off with Clyde/EMD locomotive N 474. The updated Vlocity unit features a new driving cab with extra strength to protect the driver and passengers, and a 'baggage space' sign added to the doorway. **Right:** In this view of an intermediate car and driving unit at Southern Cross station, the pram, wheel chair and bike signs to assist passengers are clearly visible.





**Right:** Three *Vlocities* line up at Southern Cross station on Tuesday 15 January. On the right is the latest unit with the 'Federation square inspired' livery while the two units behind carry the original livery, inspired by lavender farms along the Traralgon line and canola flowers on the Geelong line.

**Below:** On Wednesday 9 January, VL 77 is seen on display for V/line staff, V/line drivers, PTV staff and TFFV staff training and familiarisation, on platform 3 of Southern Cross station.



line totalled 7.62 million, Ballarat reached 4.65 million, Bendigo's tally was 2.84 million, Traralgon (Latrobe Valley) services carried 1.80 million and 1.54 million were carried on Seymour trains. However, it is the rate of growth on the three key corridors that has been remarkable. Between 2013/14 and 2017/18 the Geelong line's patronage increased by 115.8 per cent, the Ballarat line jumped 46.7 per cent and Bendigo increased by 21.1 per cent.

This phenomenal growth has created growing pains for the Victorian Government and V/Line, but fortunately the choice of rolling stock to shoulder this increased patronage has successfully carried out

the 'heavy lifting'. Enter the Bombardier Transportation *VLocity* railcar, introduced in 2006, built at the company's Dandenong plant and now numbering over 200 cars. The *VLocity* comprises, by a long margin, the largest fleet of DMU vehicles ever used in Australia. Such is the reliability of these vehicles that they are still being delivered 13 years later. The continued patronage growth, especially after the Regional Rail Link was opened in June 2015, has prompted further orders. The latest units, VL76, 77, 78 and 79 will differ in some respects to the earlier sets, in order to meet the growing passenger demand. This is the third major change in the design of *VLocity* railcars.







Around 2015, in the face of increased passenger demand, government transport planners started looking at future development of the V/line fleet. A project called *Next Generation Regional Train* was commenced to investigate options for both 'long distance' and 'short distance' *Vlocity* sets. For 'long distance' services beyond the 'interurban' area to centres such as Bairnsdale, Swan Hill and Warrnambool design options included suitable seating and the incorporation of buffet facilities. The development of a standard gauge version of the *Vlocity* for use on the north-east corridor to Albury/Wodonga was also examined. For 'short distance' services to places such as Bacchus Marsh and Geelong design changes were also investigated. Extra *Vlocity* sets were funded in 2016/2017, 2017/18, and 18/19 state budgets and, at the time of writing, sets VL76 to VL79 were to be designated as short-medium distance vehicles while the design variations for sets VL80 to VL88 (now under construction) and beyond are yet to be announced.

One design change for Sets VL76 to 79 has come about through a campaign by the Rail, Tram and Bus Union for the DMUs to meet European collision resistance standards (see below). These sets will also feature more seats through a reduction by one in the number of toilets per three-car set. It is hoped these additional sets can replace less reliable locomotive-hauled trains and *Sprinter* DMUs. The faster acceleration and deceleration rate of these newer units will hopefully help attain performance closer to electric train sets. This is relevant in the sense that the Victorian Government is planning to eventually electrify to Melton and Geelong (and maybe to Wallan on the north-east line). Slightly modifying the newer *Vlocity* sets, instead of dramatically changing the overall design, will help fill the gap before the electrified network expands. It will also, in the short term, keep the production line open at Bombardier's Dandenong plant by avoiding the delays that are inevitably associated with delivering a radically different design.

**Above:** Another view of VL 77 on display for V/line staff, V/line drivers, PTV staff and TFV staff training and familiarisation, on platform 3 of Southern Cross station on Wednesday 9 January,  
**Right:** The interior and seats in this DM car look quite different to those in the earlier series *Vlocities*. On the left, just beside the left entrance door, is where the toilet would be situated in a DM car of an earlier series.





## The 'new' Vlocity (sets 76 to 79) passenger features

- The external appearance does not greatly differ from the earlier Vlocity units. However, the driving units (DMD – 1100 series cars and DM - 1200 series cars) have a 'luggage' sign on the door and the intermediate cars (TM – 1300 series cars) have 'baby pram, wheel chair and bike' signs on the door.
- Fourteen extra seats have been added per three-car set.
- As mentioned earlier this seat increase has been achieved through the new sets having one less toilet per three-car set with the driving unit (DM car, 1200 series cars) no longer having a toilet.
- There will be a reduction in luggage space, but this reduction is compensated by provision of more foldable longitudinal seats in intermediate (TM) cars.
- More emergency/call help buttons have been installed next to these seats. Previously one emergency/call help button was provided on each side of the car, now three are located on each side.
- The seating arrangement has been slightly modified by locating the individual seats slightly closer together, resulting in a wider corridor to accommodate more standing passengers. More handrails are installed throughout the train set.
- The seats themselves also slightly differ with a different handle position and the seat tables are now embedded into the seat. This modification should improve access to the seat. The new seats are similar to those in Vlocity's cousins, the Adtranz/Bombardier Turbostar DMUs in the UK.
- The driving units (DMD and DM cars) have an emergency ladder cabinet opposite the luggage space for use to evacuate passengers during emergencies.
- A locker is provided to house CCTV equipment and provide space for High Capacity Signalling (HCS) equipment.
- A particulate filter has been added to the exhaust muffler in order that emissions meet Euro II standard.
- There is now the option to lower traction engine output to 650 hp to achieve improved fuel economy.
- Widening of the inter-carriage gangways between the DMD (Driving unit) and TM (intermediate car) has been implemented to comply with disabled access.
- The disabled persons toilet door of DMD cars has been widened.
- Train crew steps (DM and DMD cars) have been reinstalled at the doors.
- New floor markings are used.
- Hearing loop technology has been installed.
- An AM/FM radio antenna is mounted on the cab roofs to improve mobile phone reception for passengers.

## Driving environment modifications

- A stronger cab crash structure to protect both driver, crew and passengers. The cab crash resistance is now capable of withstanding 15 tonnes impact above the cab floor at 110km/h, in line with European standard EN15227. Some changes have been made to the driver's position and the electrical cabinet in association with the reinforced cab.
- Uncouple button added to test light function.
- Cab heater improvements.
- Intermediate carriages (TM cars) are provided with sanding equipment to improve wheel/rail traction.
- Auxiliary generator and traction engine isolation switches have been added inside the circuit breaker cabinet.

**Top right:** Another interior view of a DM car. On the right is where the toilet was located in earlier series— now a drinking fountain. Also, note the corridor is now wider, making it easier for passengers to pass, and capable of accommodating more standees.

**Above right:** The much larger space on the corridor walkway and the slightly bigger seat back hand grips help accommodate more standees. Note also the folding table within the seat back.

**Right:** An expanded flip-down seating area in the DMD car caters for more bike and wheel chair traffic (and can be useful for storing large luggage). Additional call buttons have also been provided.

Aside from the cab safety improvements, Vlocity (and other train) crew and passenger safety should improve with the removal of the two level crossings in Deer Park (Mt Derrimut Road and Robinson's Road) and Fitzgerald Road at Ardeer on the Ballarat line. V/Line is also investigating the provision of additional stabling, refuelling and washing facilities for the growing Vlocity fleet in order to relieve congestion at Southern Cross station.

The Vlocity fleet has entered its 13th year of service delivering frequent and fast services to regional Victoria. Its 'Made in Victoria' branding on the windows (local content in the Vlocity DMUs is around level around 69%) is a reminder that it is also helping keep some rolling stock manufacturing and maintenance skills in Australia.

*The author would like to thank John Hoyle for research of this article.*





Gauge mm	Qty	Class	Description	Builder - Location	Oct 18	Nov 18	Dec 18	Total
<b>LOCOMOTIVES</b>								
<b>Aurizon</b>								
1435	3	6040	C44ACi 3246kW Locomotives 6043-6045	UGL Rail Broadmeadow	-	3	-	3
1067	2	2700	GTL38-3 1500 kW Rebuilt from 2170 or 2300	Progress Rail Qld	-	-	-	-
<b>Sydney Metro (Transport for NSW)</b>								
1435	1		FWB Four Wheel Battery Shunting Locomotive	CRRC Zhuzhou PRC	-	1	-	1
<b>Watco</b>								
1067	8		GTL22C-3 1680 kW Diesel Locomotives (Queensland Grain Traffic)	NRE Mt Vernon Illinois	-	-	-	-
<b>INTERURBAN PASSENGER CARS</b>								
<b>Rail Connect (NSW TrainLink)</b>								
1435	222	OD	Double Deck Interurban EMU Driving Tlr Cars	Hyundai Rotem ROK - UGL Rail	-	-	-	-
1435	111	ON	Double Deck Interurban EMU Intermediate Motor Cars	Hyundai Rotem ROK - UGL Rail	-	-	-	-
1435	111	ONL	Double Deck Interurban EMU Intermediate Motor Cars (PWD tlt)	Hyundai Rotem ROK - UGL Rail	-	-	-	-
1435	34	ONL	Double Deck Interurban EMU Intermediate Motor Cars (tlt)	Hyundai Rotem ROK - UGL Rail	-	-	-	-
1435	34	OT	Double Deck Interurban EMU Trailer Cars	Hyundai Rotem ROK - UGL Rail	-	-	-	-
<b>V/Line</b>								
1600	4	DM(D)	V'locity DMU (a/c) # 1176-1179	Bombardier Transportation Vic	-	3	-	3
1600	4	TM	V'locity DMU (a/c) # 1376-1379	Bombardier Transportation Vic	-	3	-	3
1600	4	DM	V'locity DMU (a/c) # 1276-1279	Bombardier Transportation Vic	-	3	-	3
1600	9	DM(D)	V'locity DMU (a/c) # 1180-1188	Bombardier Transportation Vic	-	-	-	-
1600	9	TM	V'locity DMU (a/c) # 1380-1388	Bombardier Transportation Vic	-	-	-	-
1600	9	DM	V'locity DMU (a/c) # 1280-1288	Bombardier Transportation Vic	-	-	-	-
<b>SUBURBAN PASSENGER CARS</b>								
<b>QueenslandRail</b>								
1067	75	DMA	MU Driving Motor Car #3701-3775	Bombardier Savli, India	-	5	4	49
1067	75	DMB	MU Driving Motor Car #8701-8775	Bombardier Savli, India	-	5	4	49
1067	75	MA	MU Intermediate Motor Car #5701-5775	Bombardier Savli, India	-	5	4	49
1067	75	MB	MU Intermediate Motor Car with toilet #6701-6775	Bombardier Savli, India	-	5	4	49
1067	75	TA	MU Trailer Car (Pantograph) #4701-4775	Bombardier Savli, India	-	5	4	49
1067	75	TB	MU Trailer Car (Pantograph) #7701-7775	Bombardier Savli, India	-	5	4	49
<b>KDR Yarra Trams (PTV)</b>								
1435	30	E2	Flexity Swift Trams # 6051-6080	Bombardier Transportation Vic	1	1	1	22
1435	10	E2	Flexity Swift Trams # 6081-6090	Bombardier Transportation Vic	-	-	-	-
1435	3	W8	Rebuilt W6 Trams # 856, 928, 961	Bendigo Tramway Workshop	-	-	-	-
1435	3	W8	Rebuilt W6 Trams #	Bendigo Tramway Workshop	-	-	-	-
<b>Metro Trains Melbourne (PTV)</b>								
1600	36	M	EMU X'trapolis Driving Motor (a/c) #253-288	Alstom Ltd ( Poland - Ballarat Vic)	4	4	4	36
1600	18	T	EMU X'trapolis Trailer (a/c) #1427-1444	Alstom Ltd ( Poland - Ballarat Vic)	2	2	2	18
1600	20	M	EMU X'trapolis Driving Motor (a/c) #967-986	Alstom Ltd ( Poland - Ballarat Vic)	-	-	-	-
1600	10	T	EMU X'trapolis Trailer (a/c) #1684-1693	Alstom Ltd ( Poland - Ballarat Vic)	-	-	-	-
<b>Evolution Rail (PTV)</b>								
1600	130	D	HCMT EMU Driving Trailer 9001-9065, 9901-9965	CRRC Changchun RSW PRC - Downer Rail	-	2	-	2
1600	65	M	HCMT EMU Motor 9201-9265	CRRC Changchun RSW PRC - Downer Rail	-	1	-	1
1600	130	M	HCMT EMU Motor 9101-9165, 9801-9865	CRRC Changchun RSW PRC - Downer Rail	-	2	-	2
1600	65	M	HCMT EMU Motor 9701-9765	CRRC Changchun RSW PRC - Downer Rail	-	1	-	1
1600	65	T	HCMT EMU Trailer 9301-9365	CRRC Changchun RSW PRC - Downer Rail	-	1	-	1
<b>PTA Transperth</b>								
1067	10	BEA	EMU Driving motor cars (a/c) # 4117-4126	Downer- Rail Division -Bombardier JV Qld	1	2	1	8
1067	10	BEB	EMU Driving motor car (a/c) # 5117-5126	Downer- Rail Division -Bombardier JV Qld	1	2	1	8
1067	10	BET	EMU Trailer car (a/c) # 6117-6126	Downer- Rail Division -Bombardier JV Qld	1	2	1	8
<b>Sydney Trains (Transport for NSW)</b>								
1435	96	N	EMU Motor (a/c) #1601-1624,1701-1724; 1801-1824,1901-1924	Hitachi-CRRC CNR Changchun RSW PRC	8	8	8	72
1435	48	T	EMU trailer (a/c) #1301-1324, 1401-1424	Hitachi-CRRC CNR Changchun RSW PRC	4	4	4	36
1435	48	D	EMU Driving Trailer (a/c) #1101-1124; 1201-1224	Hitachi-CRRC CNR Changchun RSW PRC	4	4	4	36
1435	96	N	EMU Motor (a/c) #1625-1641,1725-1741; 1825-1841,1925-1941	Hitachi-CRRC CNR Changchun RSW PRC	-	-	-	-
1435	48	T	EMU trailer (a/c) #1325-1341, 1425-1441	Hitachi-CRRC CNR Changchun RSW PRC	-	-	-	-
1435	48	D	EMU Driving Trailer (a/c) #1125-1141; 1225-1241	Hitachi-CRRC CNR Changchun RSW PRC	-	-	-	-
<b>Sydney Metro (Transport for NSW)</b>								
1435	44	DTC	Terminal trailers for driverless Metropolis EMU #0101~2201, 0102~2202	Alstom Sri City Andhra Pradesh, India	-	18	-	36
1435	44	MPC	Inter pantograph motor Cars for Metropolis EMU 0103~2203, 0104~2204	Alstom Sri City Andhra Pradesh, Indian	-	18	-	36
1435	44	MC	Intermediate motor Cars for Metropolis EMU #0105~2205, 0106~2206	Alstom Sri City Andhra Pradesh, Indian	-	18	-	36
<b>South East Light Rail (Transport for NSW)</b>								
1435	60		Citadis X05 Trams #001-060	Alstom	-	12	-	18
<b>Newcastle Light Rail (Transport for NSW)</b>								
1435	6		Urbos 100 Trams #2151-2156	Construcciones y Auxilar Ferrocarriles, Spain	-	2	1	4
<b>Parramatta Light Rail (Transport for NSW)</b>								
1435	13		Urbos 100 Trams	Construcciones y Auxilar Ferrocarriles, Spain	-	-	-	-



Gauge mm	Qty	Class	Description	Builder - Location	Oct 18	Nov 18	Dec 18	Total
<b>FREIGHT WAGONS</b>								
<b>Aurizon</b>								
1435	190	QHCH	Coal Hopper Wagon # 57219-57505	CRRC CSR PRC	-	-	190	190
<b>DTMR Qld</b>								
1067	34		2 TEU Container Waggons. Purchased ex Aurizon (17 PJZY, 17 PCUY)		-	-	-	-
<b>Linfox</b>								
1067	373		3 TEU Container Waggons (76 BAZY,86 BCZY,25 BCZYP, 186 BEZY)	Purchased ex Aurizon	-	-	-	-
1067	134		2 TEU Container Waggons (82 PRZY, 52 PCZY)	Purchased ex Aurizon	-	-	-	-
<b>Watco</b>								
1067	128		Two-unit Grain Hopper Wagons (Queensland Grain Traffic)	UGL/BFCY PRC	-	-	-	-
<b>ROLLING STOCK MAINTENANCE</b>								
<b>Downer-Rail Division--Bombardier</b>								
1067	18	-	Five-year contract for TransWA EMU Bogies and Wheelset Maintenance	GEMCO Rail WA		Ongoing		
<b>John Holland</b>								
1435	10		Rail Guidance System for 10 Trucks	HMA Techniplan Qld	-	No Advice	-	-
<b>PTA Transperth</b>								
1435		-	Three-year contract for DMU <i>Prospector</i> Bogies overhaul	GEMCO Rail WA		Ongoing		
<b>QueenslandRail</b>								
1067	20	-	Overhaul Motor Bogies on IMU 120 Sets	Downer- Rail Division Qld	-	-	-	8
1067	10	-	Overhaul Trailer Bogies on IMU 120 Sets	Downer- Rail Division Qld	-	-	-	4
1067	52	-	Overhaul Motor Bogies on SMU 200 Sets	Downer- Rail Division Qld	4	4	4	32
1067	26	-	Overhaul Trailer Bogies on IMU 200 Sets	Downer- Rail Division Qld	2	2	2	16
1067	33	160-260	Overhaul Transformer	Downer - Rail Division Qld	2	3	3	25
1067	32	160-260	Overhaul Heating,ventilation,airconditioning	Downer - Rail Division Qld	3	3	3	26
1067	72	-	Overhaul Motor Bogies on 160/260 Sets	Downer - Rail Division Qld	8	4	8	44
1067	36	-	Overhaul Trailer Bogies on 160/260 Sets	Downer - Rail Division Qld	4	2	4	22
1067	6	1720	Locomotive Overhaul and upgrade	Downer - Rail Division Qld	-	-	-	-
1067	10	2400	Locomotive Overhaul and upgrade	Downer - Rail Division Qld	-	-	-	-
1067	2	SMU	Repair 3 Car Set SMU 202, 210	Downer - Rail Division Qld	1	-	-	1
1067	21	-	Overhaul L Series 'Lander Cars	Downer - Rail Division Qld	-	-	-	-
1067		IMU	Overhaul and new traction package 10 100 series 3 car sets	Downer - Rail Division Qld	-	-	-	-
1067		SMU	Overhaul and new traction package 12 200 series 3 car sets	Downer - Rail Division Qld	-	-	-	-
<b>TRACK MAINTENANCE EQUIPMENT</b>								
<b>Aurizon Infrastructure Services Group</b>								
1435	1	SLM	Track Layer #4	Aurizon Workshops Redbank Qld		No Advice		
1067	2	MMA	Refurbish Ballast Tamper Mk III # 49	QR Workshops Maryborough Qld		No Advice		
1067	1	MMY	Ballast Cleaner RM 902 #520	Plasser Australia NSW		No Advice		
1067	1	MMY	Ballast Cleaner Unit FRM 902	Plasser Australia NSW		No Advice		
1067	1	MMY	Ballast Cleaner Hopper Wagon ( MFS 40)	Plasser Australia NSW		No Advice		
<b>ENSCO Inc.</b>								
1435	1		Track Geometry Vehicle	HARSCO Rail Brendale Qld		No Advice		
<b>KDR Yarra Tram</b>								
1435	2		ACM 105SP Hi-rail Overhead Wiring vehicle	Aust Crane & Machine Vic		No Advice		
<b>Laing O'Rourke</b>								
1435	1		REG012X - Plasser Theurer SSP303 Ballast Regulator	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		TAMP009 - Plasser Cat Line Tamper 09-32	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		REG010X - Kershaw 0925 Ballast Regulator	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		TAMP030 - TrussType Switch & Prod Turnout Tamper	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		REG006X - Kershaw KBR-875 Ballast Regulator	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		TAMP031 - TrussType Switch & Prod Turnout Tamper	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
1435	1		REG007X - Kershaw KBR-875 Ballast Regulator	Select Plant Hire (Laing O'Rourke) - Maitland		No Advice		
<b>Queensland Rail</b>								
1067	2		Refurbish TR-10 Sleeper Insertor/Extractor	HARSCO Rail Brendale Qld		No Advice		
1067	2	MMA	09-16/32 CAT Tamper #MMA 081, 082	Plasser Australia NSW		No Advice		
1067	4	MMB	SSP 302 Ballast Regulator #MMB 064-067	Plasser Australia NSW		No Advice		
1067	2	MMA	Unimat 08-457 4S Switch Tamper #MMA 083, 084	Plasser Australia NSW		No Advice		
1067	2	MMB	PBR 500 Ballast Regulator #MMB 068-069	Plasser Australia NSW		No Advice		
1067	2	MMA	08-12 Split Head Tamper #MMA 085, 086	Plasser Australia NSW		No Advice		
<b>PTA Transperth</b>								
1067	1		Track Recording Car	Mermecc Italy	-	-	-	-
<b>Sydney Metro (Transport for NSW)</b>								
1435	1		Overhead Wiring wagon	CRRC Yangtzeco PRC	-	1	-	1
1435	1		Crane Wagon	CRRC Yangtzeco PRC	-	1	-	1
1435	2		Flat Wagons	CRRC Yangtzeco PRC	-	2	-	2
<b>Sydney Trains</b>								
1435		-	One-year contract for supply of Tamping tools	Engenco WA		Ongoing		
1435	4	-	Hirail Overhead Wiring vehicles	France		No Advice		
1435	2	NDZF	Track Carrier Wagon # 40051-40052	Bluebird Rail Operations SA		No Advice		
<b>To be confirmed</b>								
1435	1		RGH20C Rail Grinder	HARSCO Rail Brendale Qld		1		1

E &amp; O E





**Above:** Having crossed XRN028, XRN003 and XRN021 hauling UL121 empty coal train to Ulan, the Lachlan Valley Railway's CPH12, CPH25 and CPH24 accelerate across the Bylong River bridge and away from Coggan. The train is 8R02, and it is in the second day of its three-day trek from Lithgow to Coffs Harbour via Orange, Dubbo, Gulgong and Maitland, on Saturday 29 December. Wayne Eade

**Below:** On Saturday 9 February, 707 Operations ran a special train to Warrnambool. Seen here about to arrive at Warrnambool station, the train was powered by Clyde/EMD H Class locomotives H5 and H3, wearing Freight Australia livery. Lindsay Bamford







**Above:** Built in 1946, *Skipper* was one of 19 2ft (610mm) gauge 0-6-2T and 0-4-2T locomotives built by Perry Engineering at Mile End, near Adelaide, between 1934 and 1952 for various Queensland sugar mills. *Skipper* was originally owned by Millaquin Mill in Bundaberg, and was later transferred to nearby Qunaba Mill where it remained in loyal service until its withdrawal in 1980. In 1981 *Skipper* returned home to South Australia and was displayed at the ARHS Mile End Railway Museum until 1986 when it was transferred to the Port Dock Station Museum (now the National Railway Museum) at Port Adelaide, and is seen there on Friday 11 January. It has become a most popular exhibit, especially with children. A museum volunteer said: “*Skipper* always brings so much joy to the children...” Effie Kelly

**Below:** Ex-QR PB 15 4-6-0 No.448, recently returned to Queensland Pioneer Steam Railway operations, is seen doing the second run from Bundamba to Swanbank on Sunday morning 10 February. It appears the fireman is leaning out of the cab to ensure the flashing lights at the nearby level crossing – about 100m in front of the engine – are fully operational. Mike Martin





## Book Launch: *Steam Australia, Locomotives that Galvanised the Nation* by Tim Fischer

This function was held in the National Library in Canberra on the evening of 31 January. The National Library published the book and most of the illustrations were sourced from the John Buckland Collection held by the library.

The function started with the traditional book signing in the library foyer. The formal part of the evening was held in the auditorium below, where Library staff involved in the book production gave some idea of the work involved. Tim Fischer then gave an illustrated talk on some of the themes in the book, including the problems of Break of Gauge and surprisingly, the operation of the Giffard injector, as an example of important technology of the steam era.

NSW Rail Heritage had loaned the headboard from the first standard gauge *Spirit of Progress* (which appears on the book's cover). The opportunity was taken for photographs of those involved in the book next to this item, still in reasonable condition. There was an opportunity for discussion as drinks and snacks were served in the foyer, following the talk.

The book was reviewed in the February issue of *Australian Railway History* magazine.

Peter Clark



Tim Fischer and National Library staff involved in the production of the book pose with the headboard carried by the first standard-gauge *Spirit of Progress*. Peter Clark

## Victor Harbor horse-drawn tram operations temporarily suspended

Horse-drawn tram operations on the Granite Island Causeway at Victor Harbor were temporarily suspended in January due to safety precautions.

On Tuesday 22 January the South Australian Department of Planning, Transport and Infrastructure (DPTI) received preliminary findings of a condition assessment report of the causeway that identified deterioration of a small number of support piles.

SA Minister for Transport, Infrastructure and Local Government Stephan Knoll said the decision was made to suspend horse-drawn tram operations as soon as the report was received. "The safety of causeway users is the State Government's first priority and the expert advice suggests that vehicle access including the horse-drawn tram be suspended pending further information," said Minister Knoll.

While the affected piles are not adjacent to each other, the report said that the potential consequence of a failure had not yet been determined. Further independent engineering assessments will be undertaken as a priority with works to start as soon as possible. Pedestrian access will be permitted, apart from limited stoppages during assessment and repair works.

The SA government said that it will work with the City of Victor Harbor as well as affected businesses and local residents to ensure safety and minimise the impact of the vehicle suspension. A long-term solution will also be investigated.

Repairs to the suspect support piles were expected to be completed in February, allowing horse-drawn tram operations to recommence.

### New England Rail Trail

In reference to Railway Digest December 2018, Page 48, the New England Rail Trail plan: in 1986 I enjoyed a rail excursion from Brisbane to Armidale via Wallangarra and return. Therefore, I support The Save the Great Northern Rail Line Group, who support the re-introduction of rail services of rail services.

Looking at the overall project, if the Great Northern Rail (GNR) Line was to be re-opened in the future, then the narrow-gauge line from Wallangarra to Toowoomba would need to be dual gauged for this line to be viable. If the GNR was linked into the Inland Rail at Toowoomba thus reducing trucks off the

New England Highway and linking the New England Hwy and linking the New England tablelands region to Brisbane by an efficient rail network.

In addition, I would encourage any needed rail lines in the Darling Downs region that connect into the Inland standard gauge network to be gauge converted as the Murray Basin lines in Victoria have been, this leading to a more efficient standard gauge network for Australia.

Robert Duncombe  
Reesville, Qld

### The Geraldton iron ores

The article "Geraldton Iron Ores" in the February *Railway Digest* reminded me of a trip

I made in May 1966 to stay with a cousin who was living in Morawa at the time. Morawa was the closest town to the Western Mining Company (WMC) iron ore mine which began operating in 1966 and is referred to in the article. I was 15 at the time.

I travelled to Morawa (and back) on the overnight train *The Mullewa*, which was one of several regional mixed express freight and passenger trains that the WAGR operated at that time; the others being *The Westland* (which linked with "The Trans" at Kalgoorlie), *The Kalgoorlie*, which was for local travel between Perth and Kalgoorlie, *The Midlander* to Geraldton (originally operated by the private Midland Railway

Company) and the *Albany Progress*.

From memory, all of these overnight trains stopped operating as the result of a WAGR review of their operations; new coaches would have been needed had they continued. *The Kalgoorlie* of course was replaced by the standard-gauge *Prospector* in 1971.

I travelled in a 2nd Class 4-berth compartment, I don't recall sharing that with anyone on the trip to Morawa but I had to on the return trip – I recall being a bit apprehensive (after all I was only 15!).

The WMC block train was the second such mineral train operated by the WAGR (the first being bauxite trains from Jarrahdale to Kwinana for Alcoa).



A short spur line linked the mine in the Koolanooka Hills to the mainline at a junction called Westmine a few kilometres north of Morawa. I cycled out to Westmine a couple of times to see the WMC train.

A highlight of my time at Morawa was a trip with my cousin's father to the WMC mine; we were allowed to drive up to the working mine benches, all we were told was to keep out of the way of the haul-trucks!

I found a piece of jasper in the ground at one of the mine benches, my Uncle turned that into a nice pendant!

Phil Cross  
Darwin, NT

### Pilbara High Speed Rail

I was interested to note in the December 2018 *RD* that Rio Tinto is operating 34 autonomous trains on its network and that these were covering 290,000 km daily. A quick check with the calculator reveals that each of the 34 trains is thus averaging around 8,500km daily. If each train operates 20 hours every day, this gives an average speed of 426km/h. It seems that Australia already has a working High-Speed Railway, operating in the Pilbara.

Ian Crellin  
Flynn, ACT

### Singapore mass rapid transit

In the November 2018 issue of *Railway Digest*, a reader posed the question of mentioning foreign railways. I like reading the brief, but informative, quarterly two pages covering overseas railways, but I don't believe readers would want several pages per issue about them.

I spent a week over Christmas in Singapore, as part of a family visit. On my last two days there, I purchased a 'Singapore Tourist Pass' (the inevitable plastic 'swipe' card) at the Raffles Place Metro Station, used by two of the five Metro lines. The pass also covers travel on Buses and light rail lines. Prices are \$1.00 for one day, \$1.60 for two days and \$2.00 for three days. (At the time, one Singapore dollar equalled 1.03 Australian dollars, so approximately the same value.)

The trains are designed for 'peak hour' travel. Each car has four doors a side, for fast loading and unloading, and seats are longitudinal and made of plastic, but are very comfortable. To accommodate more standees, there are no seats between the two middle doors.

Different colours are used, and the location of 'your' train is shown electronically on the several maps of the line in each car. Singapore's four official languages; Mandarin Chinese, Tamil, English and Malay feature on signage. Malay, like English, uses Roman lettering.

MB Nicholson  
Liverpool, NSW

### Faster trains to Canberra

In response to the article written by Peter Clark, "Faster Trains to Canberra" (*RD* December 2018), although I agree that a faster route is required through the Southern Highlands, I hope that there are no plans to use the original alignment south of Balmoral as the map on page 39 suggests, because the line between Balmoral and Hill Top comprises a hefty 1 in 30 grade. A more suitable proposition may be to reactivate the Loopline between Picton and Balmoral where a new deviation would be constructed from Balmoral to Hill Top before resuming to follow the Loopline from Hill Top to Mittagong. This corridor is five kilometres shorter than the present main line via Bargo and the ruling grade of 1 in 40 does not exceed the ruling grade from Goulburn to Cootamundra. Another benefit of this concept would be that the three remaining tunnels between Picton and Mittagong could be eliminated, which would have to be modified if the route was to be electrified. Furthermore, a view of the original alignment between Moss Vale and Exeter suggests that the alignment was relatively straight until the deviation via the large horseshoe curve at Werai opened in the early 1900s. This deviation was constructed to ease the grade for steam trains. However, one of the benefits of dieselisation is that locomotives can be

coupled together to operate as multiple units and only the first locomotive requires an engine crew. Therefore, if a freight train already requires three locomotives to haul the service from Sydney to Melbourne due to the lengthy 1 in 40 grades south of Goulburn, then the presence of additional 1 in 40 grades north of Goulburn should not adversely affect the operation of the train.

Recently I was studying my Grade and Curve Diagram book when I realised that the distance from Sydney to Moss Vale via Wollongong is only five kilometres longer than the Main Southern Line via Campbelltown. Subsequently, it occurred to me that it may be theoretically possible to operate Sydney-Canberra services via Wollongong. After some initial investigation, I realised that it may not be as absurd as it appears. If the proposed Waterfall-Thirroul Tunnel was constructed, the distance between Sydney and Moss Vale via Wollongong would be considerably shorter than the main line via Campbelltown. Although the Unanderra-Moss Vale Line passes through some rather inhospitable terrain, a glance on Google Maps suggests that it may not be too difficult to duplicate and realign this route. Although the cross-country line comprises a lengthy 1 in 30 grade from Unanderra to Summit Tank, this is not a barrier to the performance of high-performance trains, because dedicated high-speed railways are permitted to be constructed with grades as heavy as 1 in 25.

Stephen Miller  
Rutherford, NSW

### Trackwork

In reference to my letter in the December 2018 issue, regarding trackwork; there were 389 speed restrictions throughout the state railway network. In one month since, the speed restrictions have jumped to 492 – and increase of 26%.

The travelling public must wonder what the rail authorities are doing, when all the trackwork and speed restrictions jump by 26%.

It appears that the rail system is run under poor management, as shown by the New Year's Eve meltdown, with nil rail services on a number of metropolitan lines for long periods of time.

Rail authorities used the storm as a scapegoat for all the delays. The rail management must accept the majority of the blame, for insufficient train crews, crews not qualified for certain types of suburban traction and crews that are only qualified for certain sections of the metropolitan rail system.

Then, on 19 and 20 January, more trackwork. Then, the Australia Day long weekend arrives and guess what; more trackwork to inconvenience the travelling public once more, particularly those returning home after going away.

The rail authorities say the scheduling of trackwork can be planned up to two years in advance, so how come so much of it is carried out on long weekends, public holidays and two weekends in a row?

The travelling public must wonder what is in store for them throughout 2019!

Barry Seghers  
Old Bar, NSW

### Mystery railmotor

I recall many years ago, standing on a platform *SOMEWHERE*, beside a single CPH Railmotor. I noticed that the wheels on one axle were smaller than the others. At the time I was unaware that the engine only drives one axle. When I later became aware of this fact, I concluded that this particular Railmotor was used on fairly steep grades.

I have spoken to various people about it since, including The Railmotor Society, but no one seemed to know of the existence of such a vehicle. I know what I saw – even if, for the life of me, I can't remember *WHERE*! The only possible locations I can think of would be Mittagong (with Railmotors operating on the Loop Line), or Moss Vale (with Railmotors operating to and from Wollongong). Can someone enlighten me?

Ray Hayes.  
Melrose Park, NSW



## Railway Digest

The 2019 year, in accordance with the theme of most articles in *RD* for 2018, suggests that rail systems in Australia are due for the benefit of many and varied exciting 'upgrades' that have been completed and/or should accrue to below and above rail operations.

The general media does not appear to adequately report the benefit nor the operational cost savings that they bring to the government's or operators' systems ('commercial in confidence' perhaps?).

Much of the *RD*-reported programs include; re-railing, platform extension, rail crossings, re-ballasting and similar long-delayed capital investment (requiring media or a politician's participation or lack of their interest!).

The Queensland Government let a contract some time ago for the enlargement of tunnels through the ranges up to Toowoomba to allow for clearance of intermodal type freight cars, what has happened?

Future readership mentioned by some contributors suggests that *Digest* items of interest are not fully covered to support the excellent print reproduction of locomotives and their burden.

Items of wider audience may include:

- Why is re-ballasting required and where? (Most issues of *RD* show a work set.)
- Wheel rim braking V Disc (my company developed high phosphorous wheel rim brake pads in the past including heat sink blocks for composites)
- Construction progress (photos) on capital works (it's our money).
- Rail section and weight per metre, what is the criterion.
- Rail section life, replacement criterion, what exactly is wrong on the newly laid concrete sleepers, Ararat to Maryborough?
- How is the track reconstruction, Parkes to Narromine, being carried out in some detail?
- Overseas Rail accidents, cause and recovery
- Turnouts, Trailing Points, rail stressing etc and lots more for the general reader

- Economics of the size of rail sidings and tractor shunting v loops and their length
- Here in Brisbane. the public and press image is that the standard gauge rail does not extend to the port of Brisbane, as it actually does (see 'One Rusty Rail at Lindum' *RD* October 2018) and the construction of which was detrimental to my business plan at the time.
- Maximum rail track gradients and where
- Ballast rock grades and sources
- Experience with rail clip / fixing systems and future standards
- Ballast tamping and rail levelling
- Gauge variation/ alignment including those occurring with concrete sleepers
- Mechanisation of track upgrades
- Track plans for current projects e.g. Ballarat and environs
- More inclusive reporting of heritage projects and development, including 2ft gauge, etc.

These are just few of my ideas as a new subscriber to *RD*.

Allan Williams RPEQ  
via email

## Privatisation of the Railways

An interesting news item in the January 2019 edition of *Railway Digest* has the private rail operators bemoaning the decline in skilled staff and the lack of people entering the rail industry as a career.

There is a considerable similarity and comparison between the road transport industry and the rail industry that they share the perception that they are industries that lack appeal as a career.

In many instances the lack of appeal as a career has been engineered and promoted by the road transport industry and the rail industry through the lack of integrity and ruthlessness that plague the respective industries in their management and cultural systems and how they have treated their staff and word has got out in the

broader community to avoid employment in the road transport and rail industries.

Privatisation of the rail industry has also been a backward political step that has been chaotic and the rivalry and unrelenting competition between the rail operators as well as collusion between rail operators, has also been detrimental to their industry and on top of this we can add mass retrenchments that have signified a lack of confidence in the managements of the rail companies.

The lack of trustworthiness in the private rail industry abound as a result of inadequate, inefficient and behaviours that have given the appearance of corrupt management practices and these have accumulated to bring about a poor public impression of the private rail industry, which has resulted in negative perceptions and elevated the decline of interest in the rail industry as a career.

Privatisation of the railways has been major factor in the loss of expertise, experience and skill and knowledge.

Where previously Government-owned rail industries would regularly initiate recruitment and training, apprenticeships and have a promotional and career pathway system for all levels of management and technical and engineering skill, this was politically obliterated by privatisation. So now we are left with the monuments to state-owned facilities that are scattered across the country lying idle or converted into business parks or have been demolished to be replaced by a shopping mall.

Government rail industries thrived on developing expertise, experience, skill and knowledge and the community gained enormous benefit from this accumulation and wealth of knowledge and employment that fed into local economies.

How can a mining executive understand the intricacies of the rail industry and apply their management system and culture that they have previously been successful with to a rail company? The lack of a clear supportive and

promotional career pathway would reduce the necessity of external appointments to senior management positions and bring about a progressive and fundamental investment in the personnel of a rail company.

When private rail operators institute this change and progressively develop and improve the conditions and career pathways for their staff, they may just regain some integrity and interest again attracting potential employees to their companies. A considerable impediment to these changes is corporate ego that proliferates and undermines confidence in rail managements and the preparedness for management to listen to people at the coal face who have the expertise, skill, experience and the knowledge.

A major lack of care for the community and a disastrous public relations exercise for *Great Southern Rail* was to announce the intended withdrawal of the *Overland* service between Adelaide and Melbourne, if it was not funded by government subsidy and virtually in the same breath announce the Adelaide to Brisbane Rail Cruise.

This action by a private rail operator certainly shows an abject lack of care for the needs of the local communities along the Adelaide to Melbourne Rail Corridor dependent on the *Overland* for remaining connected to their respective states and enabling them to commute.

The emphasis and priority that *Great Southern Rail* showed for pursuing the wealthy American, European and Chinese tourists at the expense of Australian community needs, has been a social and public relations disaster for the company and the actions of the *Great Southern Rail* is an example of why the rail industry is not considered as a career, because of the corporate negative image that the private rail industry projects.

Scott Ramsay  
Public Relations Manager  
Rail Revival Alliance  
Victoria



# Everything you ever wanted to know!

If the subject is Australian Railways, then the place to find out more is the ARHS<sub>nsw</sub> Railway Resource Centre. Located at 67 Renwick Street, Redfern NSW, not far from CityRail's Redfern Railway Station, the centre is open for research every Tuesday between 12.00 midday and 4.00pm, and every Saturday between 10.00am and 3.00pm (public holidays excepted).

The Railway Resource Centre holds a large collection of:

- Photographs and transparencies
- Drawings
- Diagrams
- Historic records
- Books
- Magazines

The wide range of items in the collection relate not only to the railways of New South Wales, but to all other states and territories of both Australia and New Zealand.



The Railway Resource Centre can help you with your research in most areas of railway history, especially:

- Locomotives
- Rolling stock
- Buildings
- Track and signalling
- Timetables
- Line histories

The ARHS<sub>nsw</sub> Railway Resource Centre's main research facility—The *Mal Park Reading Room*, features an intranet index database of research material and personal service by trained volunteers. Photocopying facilities are available, and image duplication or scanning can be arranged. For railway modellers or amateur historians — the Railway Resource Centre has something for everyone.



**email: [resources@arhsnsw.com.au](mailto:resources@arhsnsw.com.au)**

*NB: Research requests should be sent via email and are not taken over the phone*

## Railway Resource Centre

67 Renwick Street, Redfern, NSW 2016 — phone (02) 9699 2736

Visit our website at: [www.arhsnsw.com.au](http://www.arhsnsw.com.au)

*Please note: ARHS<sub>nsw</sub> is a non-profit organisation and Railway Resource Centre research services will attract a moderate fee to cover costs.*

## Shop online at [www.arhsnsw.com.au](http://www.arhsnsw.com.au)

## ARHS BOOKSHOP MAIL ORDER

To: ARHS<sub>nsw</sub> Sales, 67 Renwick Street, REDFERN, NSW 2016  
Have you a mail order enquiry? If so please call 02 9699 4595

Title:	\$
Title:	\$
Title:	\$
Title:	\$
Title:	\$

### MAIL ORDER - HANDLING CHARGES

NSW ~ \$12.00 for first item plus \$1.00 for each additional item.  
VIC ~ \$14.00 for first item plus \$1.00 for each additional item.  
QLD/S.A/TAS- \$14 for first item plus \$2.00 for each additional item.  
W.A/ N.T - \$14 for first item plus \$4.00 for each additional item.  
Overseas consignments ~ \$5 handling fee plus actual postage cost by Airmail.  
**PLEASE NOTE: Items are sent at consignee's risk.**  
*Insurance is available at \$5 plus \$2.00 per \$100 value.*

### ARHS<sub>nsw</sub> MEMBER'S DISCOUNT

Holders of current ARHS<sub>nsw</sub> Division membership cards are entitled to 10% discount on all items carrying \* after the price. If claiming your ARHS<sub>nsw</sub> Member's Discount, on your above purchases, please write your Member number in the box at right:

**TOTAL :**

postage & handling \$
ARHS <sub>nsw</sub> Member Number

### PAYMENT DETAILS.

#### DELIVERY DETAILS:

Name			
Postal Address			
Town/Suburb	State	Postcode	Phone No: Area Code ( ) Ph No:

#### PAYMENT METHOD

<input type="checkbox"/>	My cheque/postal order for the above amount, payable to ARHS <sub>nsw</sub> is enclosed	Expiry date
<input type="checkbox"/>	Please debit the above amount from my MasterCard or VISA account number	
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

#### SIGNATURE:

Please sign here if ordering by Credit Card
---



Australian Railway Historical Society NSW Division

# THE RAILWAY BOOKSHOP



**67 Renwick Street REDFERN NSW 2016**  
**Monday to Friday 10am to 5pm**  
**Saturday 9am to 4pm**

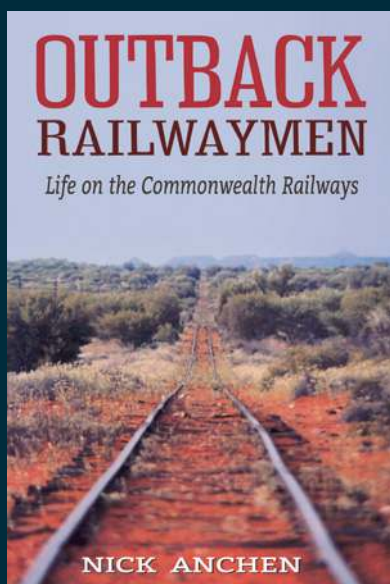
**Fast mail order service (use the order form)**  
**Phone 02 9699 4595 or fax 02 9699 1714**  
**MasterCard / Visa / PayPal Accepted**  
**ARHSnsw Members receive 10% discount**  
**on new books and ARHSnsw Publications**

**VISIT OUR WEBSITE**

**[www.arhsnsw.com.au](http://www.arhsnsw.com.au)**



## COMING SOON



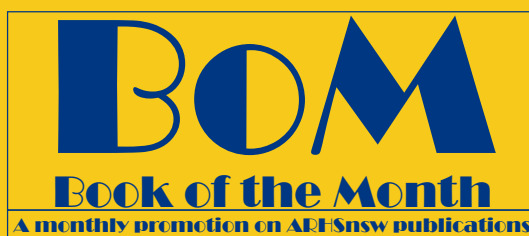
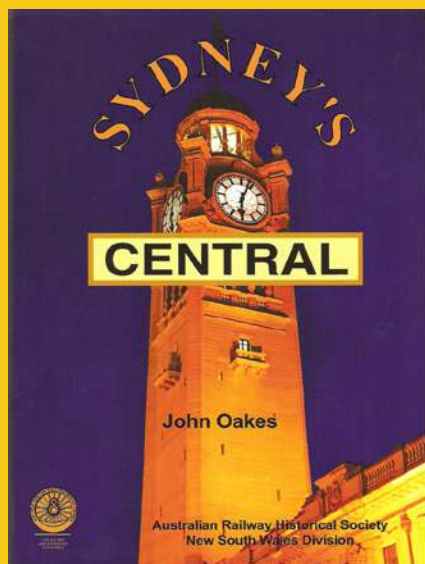
### OUTBACK RAILWAYMEN – LIFE ON THE COMMONWEALTH RAILWAYS

Central Australia Railway - North Australia Railway  
Trans-Australian Railway

'Outback Railwaymen – Life on the Commonwealth Railways' explores the life and times of three extraordinary railways, through the recollections and humorous stories of a selection of retired railwaymen and women. These were the hardy souls who kept the trains running through some of the harshest and most forbidding landscapes on Earth – the railways in the great 'Back of Beyond.' They endured appalling climatic conditions, with scorching summer temperatures, howling dust storms and raging floodwaters, plus the ever-present danger of accidents and derailments, along with the overwhelming isolation and loneliness that is the Australian Outback. Soft cover. 248 pages.

**RRP \$35 (+postage)**





## Sydney's Central

by John Oakes

A History of Sydney's Central Railway Station.

Learn about the three different locations and various names of Central Railway Station from 1855 to the present one in particular. The station we now commonly call Central holds more than 110 years of Australian history. 2nd edition revised with 64 pages well illustrated with diagrams and maps.



Promotion available online : <http://www.arhsnsw.com.au/>

At the ARHSnsw Bookshop

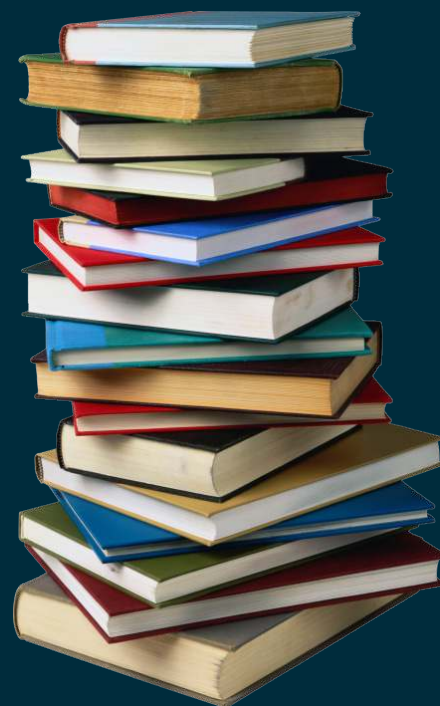
Via mail order call (02) 9699 4595

Postage extra and ARHS NSW Member's discount applies on this promotion

Promotion valid from March 1-31, 2019.

## ARHSnsw PUBLICATIONS

<b>A CENTURY OF CENTRAL.</b> McKillop, Ellsmore & Oakes. 160p	\$39*
<b>A GUIDE TO AUSTRALASIAN LOCOMOTION.</b> Walters/Baker/Peardon.	\$25*
<b>A RAILWAYMAN'S JOURNEY.</b> Denny Ellis' NSWGR Career 448p	\$10*
<b>AUSTRALIAN RAILWAY HERITAGE GUIDE 2010</b> ARHSnsw 320p	\$25*
<b>BOILERS, BEAUFORTS &amp; BOGIES.</b> Chullora history. Longworth.	\$39*
<b>BONDITOTHE OPERA HOUSE.</b> Budd/Wilson. Sydney's trams. ARHS	\$19*
<b>BRIDGES DOWN UNDER.</b> Don Fraser. 2nd Edition	\$29*
<b>BY MUSCLE OF MAN &amp; HORSE.</b> B.Phippen OAM	\$88
<b>COAL, RAILWAYS &amp; MINES of J &amp; A Brown.</b> BRAndrews	\$45*
<b>COAL, RAILWAYS &amp; MINES of NEWCASTLE.</b> BRAndrews 2Vol set	\$150*
<b>FROM GREASE TO GOLD BRAID.</b> Ken Ames. NSWGR 76p	\$10*
<b>JUGGERNAUT!</b> David Burke. Sydney's steam trams	\$12*
<b>NEW IDEAS FOR AUSTRALIA'S TRAINS:1929 to 1973</b>	\$5*
<b>NO FEAR OF CHANGE or LEARNING TO LIVE WITH CHANGE</b>	\$10*
<b>SOUTHERN AURORA.</b> Chris Banger. 2nd Edit (ARHSnsw).224p	\$68*
<b>SYDNEY'S FORGOTTEN CITY RAILWAYS.</b> John Oakes 64p.	\$18*
<b>SYDNEY'S FORGOTTEN INDUSTRIAL RLWYS.</b> J Oakes 208p.	\$25*
<b>SYDNEY'S FORGOTTEN MILITARY RAILWAYS.</b> J Oakes 112p	\$22*
<b>SYDNEY'S FORGOTTEN PARK &amp; RURAL RLWYS.</b> J Oakes 128p	\$22*
<b>SYDNEY'S FORGOTTEN QUARRY RAILWAYS.</b> John Oakes. 80p.	\$18*
<b>THE DAYLIGHT.</b> Intercapital daylight Melb/Syd.(ARHSnsw).352p	\$95*
<b>THE GOONDAH TO BURRINJUCK.</b> 3rd Edit. 260p col/b&w HC	\$25*
<b>THE HAWKESBURY RIVER RAILWAY BRIDGES.</b> B.Phippen OAM	\$88
<b>THE SHALE RAILWAYS OF NSW.</b> 2015 edition. 256p	\$45
<b>TRIKING THE LENGTH:NSW Trikes.</b> Jim Longworth ARHSnsw 240p	\$39*
<b>WOLGAN VALLEY RAILWAY - ITS CONSTRUCTION.</b> 32p	\$10

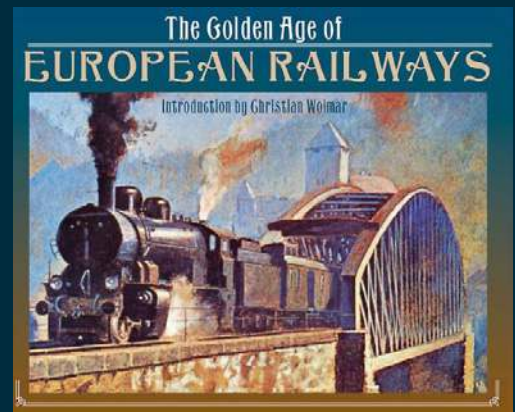




# Treasures from the bookshop

## The Golden Age of European Railways

Luxuriously produced in landscape hardback and glowing with colour, this heavyweight and rather special guided tour takes in history, landscapes, stunning trains and service in an era of luxury travel. More than 300 contemporary illustrations, route maps, schedules, and technical appendices sweep us through Great Britain on the GWR, the Leeds to Carlisle, London's railway termini up to the West Highland Railway. We then travel through Ireland, Benelux, France, Italy, the Balkans and Greece, Iberia including the Andalusian railways, Central Europe from Berlin, the Brenner Pass and the classic European sleeping car routes, through Switzerland, Poland, Russia and the Trans-Siberian Railway, to Scandinavia. Appendices cover classic European locomotives, carriage design, railway museums and sights to see. Hand drawn maps cover railway networks from the early 1780s, the illustrations are from French magazines, depicting the luxurious interiors of carriages and level of service, photochromes, tinted photographs of railway buildings, famous paintings of the Mallard, Rocket, and railway openings. A whole section is devoted to a railway map of the British Isles at a scale of 28 miles to the inch, reproduced in sections to a large scale for us to enjoy today. The excellent text is by Brian Solomon, and the photos showing old and new make this 256 page volume as luxurious as the golden era it celebrates.



## Great Train Show

**Long Weekend**

**8, 9, 10 June 2019**

Sat & Sun 9am- 5pm; Mon 9am - 4pm

## Rosehill Gardens Grand Pavilion

HUGE variety of model railway displays and trade stands  
Second Hand Stall call Mike 0408 817 554

Abundant FREE parking next to the entry

**Grand Avenue, Rosehill, Sydney  
or from Rosehill Railway Station**

**Admission** - Adults \$15 Seniors \$11  
Children \$8 Family \$40

Prepaid ticket bookings - see website

**[www.eppingmodelrailway.org.au](http://www.eppingmodelrailway.org.au)**



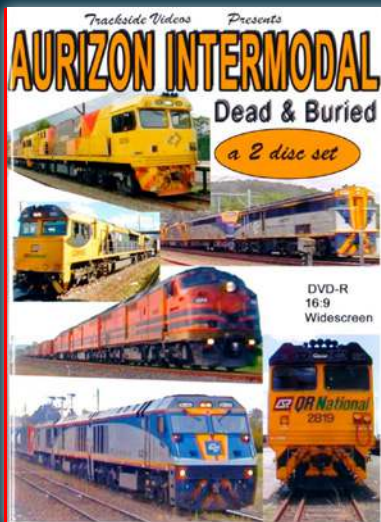
Celebrating the history of  
London's iconic St Pancras  
Station and its surrounding  
area in 150 fascinating facts

192 pages, 60 Illustrations

**\$25**



# VIDEO CORNER



**NEW!**

## Aurizon Intermodal - Dead & Buried

This DVD covers Aurizon's and its forebear's intermodal operations right up to cessation of operations. Locomotives seen in action include CLF, CLP, DC, EL, G, LDP, S, LZ, X, 22, 44, 82, 421, 422, 423, 2800, 3200, 6000 and 6020 classes.

**154 min. \$36**



### Mainline 2018 vol. 2

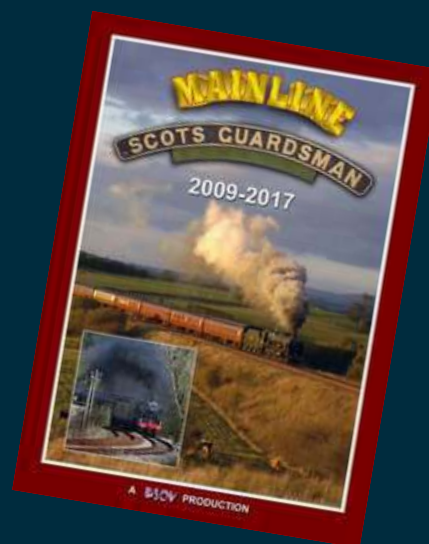
**140 min. \$50**

**(BluRay/DVD)**



### The Green Duchess 2012-2017

**125 min. \$25**

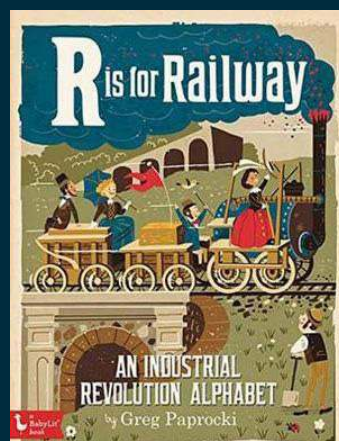


### Scots Guardsman 2009-2017

**120 min. \$25**

## R is for Railway: An Industrial Revolution Alphabet

Twenty-six Industrial Revolution concepts paired with Greg Paprocki's adorable illustrations: From "F is for factory" to "P is for printing," teach your little one about the inventions and changes brought about in the late eighteenth and early nineteenth centuries. Babies will love this board book's engaging art, and parents will enjoy its slice of history with this primer's Industrial Revolution theme.



**32 pages. \$15**



