

November 2017

# Railway DIGEST

**Signalling & Infrastructure:  
Woombye Stabling Sidings**

**Newcastle Interchange opens  
The Townsville to Mt Isa Railway  
The Richmond Vale bushfire  
Hornsby Maintenance Centre Track Renewal**

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



GLENCORE

XRN 022

**Editor** Bruce Belbin  
**Assistant Editor** Shane O'Neil  
**National Affairs** Lawrance Ryan  
**Editorial Assistant** Darren Tulk  
**International** Ken Date  
**General Manager** Ross Verdich  
**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 2017

## 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

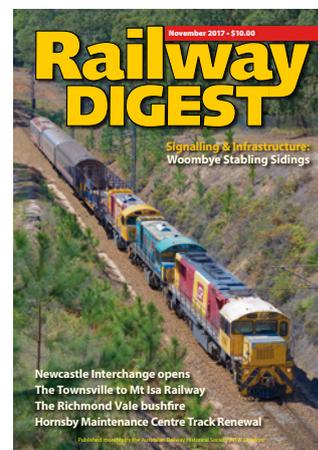
Peter Hower, John Hoyle, Philip Jeeves, Vaughn Moore, John Temple. ABC News, ACT Government, *The Adelaide Advertiser*, Adelaide Metro, Arc Infrastructure, Aurizon, Australasian Railway Association, Australian Rail Track Corporation, *The Border Mail*, *The Canberra Times*, *Condobolin Argus*, *The Courier Mail*, Federal Minister for Infrastructure and Transport - The Hon. Darren Chester, *Frankston Standard Leader*, G:Link – Gold Coast Light Rail, *The Hobart Mercury*, Level Crossing Removal Authority, METRONET, MMG Limited, *Narromine News*, *Newcastle Herald*, Port of Townsville, Public Transport Authority of Western Australia, Public Transport Users Association, Queensland Deputy Premier, Minister for Transport and Minister for Infrastructure Planning – The Honourable Jackie Trad, Queensland Transport and Main Roads, Queensland Rail, South Australian Minister for Transport and Infrastructure – Stephen Mullighan MP, Sydney Metro, *Sydney Morning Herald*, Transport for NSW, Western Australia Minister for Transport – Hon Rita Saffioti MLA. www.watoday.com.au

**Cover:** An unusual sight at Eudlo on Sunday 24 September, as Clyde/EMD unit 2158 headed south hauling Cairns-Kuranda locomotive 1774 (going to Mayne to use the wheel lathe) and sibling unit 1725 (returning from infrastructure work at Bundaberg), plus an LBL sitting car and MBSC Sleeper/staff coach (both returning from use on the *Inlander* at Townsville) bookended by a DDMP car wagon and an MPC power car (used as cover/buffer wagons for the passenger cars). Ray Miller

**Opposite:** On Thursday 15 June, the track maintenance crew take a break as UGR/GE locomotives XRN022, XRN021 and XRN013 head a coal train south at Curlewis, south of Gunnedah, NSW. Steve Munro

# November 2017

Volume 55, Number 11



## Features

### Newcastle Interchange opens

30

Nearly three years after the last passenger train left the old Newcastle station in controversial circumstances, just before midnight on Christmas Day 2014, the new 'Newcastle Interchange' station at Wickham opened for business, with the first passenger service departing around 2.00 am on Sunday 15 October. We take a look at the new 'Jewel in the Crown' of the *Revitalising Newcastle* program.

### The Townsville to Mt Isa Railway

32

Stretching 966 kilometres from Stuart, 10 kilometres south of Townsville on Queensland Rail's North Coast Line, to the inland mining city of Mount Isa, Queensland Rail's Townsville to Mount Isa Line has played a significant part in the development of North Queensland. John Hoyle reports on an interesting and historic railway that has seen its fortunes wax and wane, but now looks towards a promising future.

## Regulars

Rail Industry	4
Railway people	8
News	9
Signalling and Infrastructure	44
– General News	44
– Level Crossing News	49
Preservation and Tourist	50
– 4201 Returns!	50
– Fifty five years	51
– The Richmond Vale Bushfire	52
Readers Write	57
Book Review	58

**Back cover upper:** On Sunday 13 August, Invicta Mill's freshly-repainted Walkers B-B DH *Piralko* crosses the Houghton River bridge, just outside Giru, with a train of empty cane bins. Built in 1971 as NSW Railways 7318, *Piralko* was rebuilt to 610mm gauge for sugar mill service in 1995 by Bundaberg Foundry Engineers. James Chuang

**Back cover lower:** On Saturday 16 September, Clyde/EMD unit 4201 and Goodwin/Alco unit 4490 haul the NSW Rail Museum's *Southern Highlander* through the countryside at Robertson on its way to Sydney. This tour marked 4201's re-entry into service following a lengthy overhaul. Nathan Medcalf

## ROIs called for Parkes–Narromine Inland Rail upgrade

During September, the Australian Rail Track Corporation (ARTC) invited construction industry companies to submit a Registration of Interest (ROI) to build the 107-kilometre Parkes–Narromine section of the Melbourne to Brisbane Inland Rail route.

ROIs opened on Saturday 9 September, and a subsequent industry briefing session was held on Friday 15 September in Sydney. ARTC Programme Delivery Director for Inland Rail, Simon Thomas, encouraged interested parties to attend the briefing. “Construction on the Parkes to Narromine section of Inland Rail is expected to commence in 2018 and will involve construction of a new 5.3 kilometre section of track at Parkes and an upgrade of the existing 107 kilometre rail corridor between Parkes and Narromine that is operated by ARTC as part of our interstate rail network,” Mr Thomas said.

The work includes upgrading of the existing track and track formation, replacement of culverts and bridges, construction of new passing loops at Goonumbla, Peak Hill and Timjelly, rationalisation of level crossings, and curve easing in preparation for the operation of double-stacked 1,800 metre trains.

Mr Thomas said as Inland Rail progresses there will be significant opportunities for local regions and industry to benefit, including local businesses.

“We will be following a rigorous process to appoint the right construction partners and suppliers for each of the thirteen Inland Rail sections,” he said.

In April, the Federal Government announced that it would provide \$1.3 million to replace two timber bridges with concrete culverts on the Parkes–Narromine line. The bridges are located at Tomingley West, north of Peak Hill, and Narwonah, south of Narromine (see June 2017 RD, page 4).

Public exhibition for the Environmental Impact Statement (EIS) into work on the Parkes–Narromine section closed on 18 August 2017, with 14 submissions received.

“With the EIS for the Parkes to Narromine section currently being considered by the NSW Government, ARTC is getting construction ready,” Mr Thomas said.

ROI submissions closed on 22 September.

## John Holland & Laing O’Rourke joint venture awarded Sydney Metro Sydenham upgrade

On Thursday 21 September, it was announced that a joint venture partnership between John Holland and Laing O’Rourke had been awarded the contract to upgrade Sydenham Station, for Sydney Metro – currently Australia’s biggest transport project.

The \$240m Sydenham Metro Upgrade contract involves upgrading Sydenham Station to be integrated into the new Metro, including signalling works, utility relocations and train control systems installation.

John Holland Chief Executive Officer, Joe Barr, said John Holland looked forward to continuing its partnership with the NSW Government to deliver their vision of a transformational Metro system for the community. “The Sydenham upgrade project will help support economic and social development in Sydney, and improve the ease

with which people move around in their day-to-day lives. We have already been chosen to work with the Government on the new harbour rail crossing for Sydney Metro City & Southwest,” Mr Barr said.

Laing O’Rourke Australia Hub Managing Director Cathal O’Rourke said the company has a long and proud history of delivering major rail infrastructure projects in NSW and across Australia. “We are currently engaged on a number of projects across the Sydney Trains network, all of which are delivering an improved experience for commuters,” Mr O’Rourke said. “This city-shaping project is a critical part of the transformation of the overall Sydney Metro project, and the key meeting point of the new Sydney Metro and existing Sydney Trains networks.”

Work is scheduled to begin at Sydenham in 2018.



An artist's impression of the upgraded Sydenham station, with Sydney Metro EMU set on the left and a Sydney Trains EMU set to the right.

## Arc and Bis host Young Women Future Workforce

Arc Infrastructure and resources logistics company Bis Industries have partnered to showcase careers in operations to young women.

Held on Thursday 28 September, the *Young Women Future Workforce* open day event showcased the roles available to women in transport infrastructure and the resources industry. The career style event aimed to expose the future workforce to career opportunities in operational business while addressing both an industry, and state-wide gender equity issue.

Together, Arc Infrastructure and Bis employ more than 780 people across a wide range of roles and professions in Western Australia, with Bis employing a total work force of 1450 across Australia and Indonesia.

Arc Infrastructure's General Manager Safety, People and Corporate Affairs Megan McCracken said the company has made bold and deliberate changes over the last five years, increasing the proportion of women in its workforce from 9 per cent in 2008 to 24 per cent this year.

"We have only just begun our journey, and know we have a lot of work ahead of us to represent men and women equally in our workforce. The transport industry is modern and innovative, and Young Women Future Workforce provides a platform for us to build long term relationships with future job seekers and showcase everything our industry has to offer," Ms McCracken said.

Bis Industries Chief Executive Officer Brad Rogers said the company shared the commitment to diversity in the workplace.

"It is a reality that people are still pigeon holed, or make career decisions, based on what are perceived to be gender appropriate jobs," Mr Rogers said. "We need to change that thinking. Introducing young women to the opportunities on offer in sectors such as resource logistics is a positive step in that direction."

Gender equality is a real issue in WA and Australia. In the rail industry alone, women make up only 17 per cent of the workforce. In 2016, the mining industry saw only 13.7 per cent of its workforce made up of women.

Ms McCracken said as a leading transport infrastructure company in WA, Arc Infrastructure recognises the benefits of a diverse and inclusive workplace.

"Having a diverse workforce makes sense – we want our workforce to be made up of the best people, and we will be vigilant to ensure we continue to foster and develop a workforce that is fair and safe for everyone."

During the day, almost 30 young women participated in practical exercises, met with employees across a variety of operational roles and participated in a panel discussion to inspire the next generation of women entering the workforce.

"It was great to see the enthusiasm and interest from the young girls and women who came along to the event and I hope it helped broaden their thinking on potential careers," Mr Rogers said.



A group of happy participants at the *Young Women Future Workforce* open day event. Arc Infrastructure

## Ace Infrastructure and Keystone Civil win tender for upgrading Victorian regional transport facilities

The Victorian Government announced on Friday 22 September that Ace Infrastructure and Keystone Civil were successful in winning a competitive tender for the delivery of state-wide upgrades through the \$22.5 million Road and Rail Minor Works Program.

Over 900 formal car parking spaces, new and upgraded bus shelters, passenger information displays, bike hoops and Parkiteer cages will be delivered to stations in Barwon South West, Gippsland, the Grampians, Hume and the Loddon Mallee regions.

The Road and Rail Minor Works Program funds upgrades to public transport infrastructure that makes a difference in improving comfort and safety to people travelling in regional Victoria.

All Road and Rail Minor Works Program upgrades are due to be completed by late 2018.

For more information, visit the Road and Rail Minor Works Program webpage: [www.victrack.com.au/projects/key-projects/road-and-rail-minor-works-program](http://www.victrack.com.au/projects/key-projects/road-and-rail-minor-works-program)



In a scene that will soon be consigned to history, as Aurizon exits the intermodal business, Melbourne–Perth intermodal service 6MP1 crosses Heaslip Road at Rocky River (just south of Crystal Brook, South Australia) travelling at around 80 km/h, on Saturday 16 September. Malcolm Holdsworth

## Boost for rail freight productivity as Melbourne – Adelaide Loops project nears completion

Longer freight trains will soon be able to run between Adelaide and Melbourne thanks to a multi-million-dollar rail network upgrade set to increase capacity by up to 20 per cent.

In a Friday 22 September media release, Federal Minister for Infrastructure and Transport Darren Chester said the Melbourne–Adelaide Loops project would allow the accommodation of 1,800-metre trains, improving productivity on the busy line. “The upgrade will create a 20 per cent increase in productivity for rail operators and remove the need to send additional train services back to Melbourne with empty wagons,” he said.

“By investing \$15 million in the project, we have created a situation where the maximum length of trains operating from Adelaide to Melbourne can be increased by up to 300 metres. The longer, more efficient trains means less congestion for motorists and improved road safety, as well as cutting transport costs.

“The initial scope of the project was to deliver five extensions to crossing loops, which provide opportunities for trains heading in

opposite directions to pass each other on single line sections of track, but thanks to clever project management, an extra passing loop at Dimboola in regional Western Victoria was also upgraded within the original project budget.”

Mr Chester said Victorian crossing loops at Pyrenees, Murtoa, Pimpinio, Diapur and Dimboola, and South Australia’s Mile End loop, had all been extended to 1,800 metres. “An 1,800-metre train carries the equivalent of more than 85 B-Doubles worth of freight that would typically travel by road through South Australia,” he said. “Moving more freight by rail is crucial to meet the expected doubling of freight demand over the 20 years to 2030 while reducing urban congestion.”

The Melbourne–Adelaide Loops project was delivered by the Australian Rail Track Corporation (ARTC). Additional track upgrades currently underway in Adelaide as part of the jointly-funded Australian and South Australian Government Torrens Junction Rail Project will provide a clear path for 1,800-metre trains all the way from Perth to Melbourne by late 2017.

## Rail Delegation takes National Rail Industry Plan to Parliament

On Tuesday 12 September representatives from the Australian rail industry met with Federal Minister for Infrastructure and Transport Darren Chester, Minister for Industry, Innovation and Science, Senator Arthur Sinodinos and the Minister for Urban Infrastructure, Paul Fletcher, to discuss the need for a *National Rail Industry Plan for the Benefit of Australia*.

“Today is a significant day for the rail industry as we build momentum for a National Rail Industry Plan and meeting with Commonwealth Ministers is our first step,” said Danny Broad, Chief Executive Officer, Australasian Railway Association (ARA).

“The rail industry makes a significant contribution to the Australian economy. Investment in rail by Australian Governments will be in the order of \$100 billion through to 2030. We are meeting with Commonwealth Ministers today to say – we need a Plan to coordinate this effort and we need your support.”

Mr Chester said engagement with stakeholders, including business and industry groups, was essential for securing a strong national transport system that meets the needs of our freight and passenger rail task in the future. “Rail plays a significant role in the productivity of our nation, and I am always keen to hear the views of industry on how we

can ensure rail continues to meet the needs of both commuters and industry,” Mr Chester said. “Today’s meeting explored a range of issues associated with growing the industry, including discussion about a national rail industry plan.”

The ARA believes that the emphasis of any National Rail Industry Plan needs to contain five areas of focus, including:

1. Recognising the importance of rail for Australia’s infrastructure development, urban planning and freight movements,
2. Harmonising standards, minimising regulations and maximising economies of scale,
3. Growing the capabilities of individuals and companies,
4. Maximising opportunities for rail companies; and
5. Fostering innovation, research and development.

The ARA’s next step is to meet with State and Territory Governments, as well as Opposition representatives to discuss the Plan, seeking their support. “To get this right we really need a combined effort by Commonwealth, State and Territory Government, as well as industry support”, Mr Broad concluded.

The *National Rail Industry Plan for the Benefit of Australia* is available on the ARA website.

## Downer EDI in line for \$70M in Queensland projects

The Queensland Government has confirmed a \$70 million pipeline of projects for Downer EDI’s Maryborough workshop. Visiting the Maryborough facility on Monday 11 September Premier Anastacia Palaszczuk said this was a huge boost to the local workforce.

“It’s great to be in Maryborough to announce that Downer EDI had been awarded almost \$8 million in rail maintenance projects which are expected to commence this year,” Ms Palaszczuk said. “They have also been selected as the preferred tenderer for an additional \$62 million in upcoming rollingstock overhauls. “We have already seen Downer hire 20 new local workers and this announcement means a secure pipeline of projects that will give Downer EDI the confidence to generate more jobs locally and boost the Wide Bay economy.”

Deputy Premier and Minister for Transport Jackie Trad said that the announcement demonstrated the Palaszczuk Government’s commitment to local jobs. “We recently introduced our Buy Queensland policy, which highlights the importance of government contracts going to local

businesses and supporting local communities,” Ms Trad said. “Through these projects, 15 locomotives will be overhauled to ensure continued reliability of the *Inlander*, *Westlander*, *Spirit of the Outback* and Kuranda Scenic Railway services, which connect communities right across Queensland.”

Michael Miller, CEO Downer Rail, said “The award of this work is testament to the quality workmanship produced by the Downer team in Maryborough and the great trust established with Queensland Rail to delivery fantastic outcomes.”

“By the end of this year, Downer will commence significant maintenance work on the Citytrain fleet, including a ten-year overhaul of 32 air conditioning units and servicing of 33 transformers, right here in Maryborough.” (These projects have a value of \$6.8 million and \$990,000 respectively.)

Downer has also been selected as preferred tenderer for bogie maintenance, L Series carriage overhauls and the overhaul of Queensland Rail’s aging fleet of fifteen 1720 class diesel-electric locomotives.

## Aurizon and Honeycombs Property Group secure redevelopment of former Townsville South Yard

Rail company Aurizon and Honeycombs Property Group have partnered to secure the redevelopment of one of Townsville's largest strategic land holdings adjoining the proposed new North Queensland Stadium.

Honeycombs Property Group secured the 19.3 hectare parcel of land, which is adjacent to the new North Queensland Stadium in Townsville's CBD, in a deal that was negotiated directly between Aurizon and Honeycombs based on a long standing relationship between the two companies.

Aurizon said that it was delighted to work with Honeycombs Property Group to redevelop the valuable inner city land previously occupied by Townsville South Yard.

After the Port of Townsville, the site is the largest land holding within or adjoining Townsville's Priority Development Area (PDA). It is one of the last large mixed-use development sites strategically placed to benefit from the focus and opportunities being derived from the PDA.

In 2014 Aurizon committed to moving its principal regional facilities from Townsville South Yard to a new \$40 million intermodal facility located in the south-east suburb of Stuart (approximately 10 kilometres from the Townsville CBD). The Stuart Intermodal Facility project includes a freight distribution centre, a modern container terminal, three sidings specifically designed for intermodal operations and a road link and intersection at Stuart Bypass Road. The facility was delivered ahead of schedule at the end of 2016. In August Aurizon announced its decision to exit its intermodal business through a combination of closures and sales (see October 2017 *RD*, page 6). At this time the fate of the Stuart Intermodal Facility is unknown.

"Aurizon has long been committed to ensuring that the former rail site supports the future development of the Townsville Stadium and contributes to economic development in the surrounding community,"

said Aurizon Managing Director & CEO, Andrew Harding. "The initiative also reflects Aurizon's commitment to assist with regional renewal in key operational areas for the Company where Aurizon employees live and work.

"Following our relocation and investment in a consolidated rail and freight facility at Stuart, we have worked hard to ensure that an experienced, local development partner can rejuvenate the site for the benefit of Townsville's community."

Aurizon's engagement with Honeycombs follows the successful redevelopment partnerships on other former rail yard sites including the Townsville North Yard and disused rail land at Mackay.

Peter Honeycombe, Managing Director of Honeycombs Property Group said that a long term development strategy for this site will maximise its contribution to the CBD. "The location of the site, in conjunction with the new North Queensland Stadium and the PDA, will ultimately be of significant benefit to the end users, particularly those working and living within Townsville's city centre."

"It is an exciting time to be developing in Townsville. Our vision for South Yard includes a diverse mix of residential, retail, commercial and entertainment - we've already had interest from national businesses," Mr Honeycombe said.

Along with the development of their master-planned Central precinct on the North Yards site – a parcel of land located directly across Ross Creek to the north from the new stadium – it was recently announced that Honeycombs are also developing, with Sealink, the new \$50 million Ferry Terminal on Ross Creek.

"Having the South Yards site in our portfolio, along with Central, will now enable us to compliment the activity from the Stadium and the PDA from both the north and south sides," Mr Honeycombe said.



On Saturday 26 August, Aurizon's Goninan/GE 2805 and a rake of empty VASO sugar wagons pass the empty Townsville South Yard on their way from the Port of Townsville to one of Wilmar's Burdekin region sugar mills. Aurizon and Honeycombs Property Group have partnered to secure the redevelopment of the 19.3 hectare site, once a hive of rail activity. The Aurizon sugar train will also pass into history at the end of 2017 with Pacific National taking over the contract for the 2018 sugar season. John Hoyle

## Aurizon starts intermodal wind-down, some staff to move to Rockhampton

In an email to its customers in late September Aurizon indicated that it would commence a phased winding down of its interstate intermodal services during October following the announcement that it intends to exit the intermodal business (see last month's *RD*, page six).

As a first step in the transition, Aurizon planned to reduce services between Melbourne-Adelaide-Perth from five per week to four per week and between Melbourne-Sydney-Brisbane from six per week to five per week during October.

The Melbourne-Adelaide-Perth service designated 5MP1 was scheduled to cease operating from 12 October with the last service departing Melbourne on 5 October. The return service designated 1PM1 was to cease operating from 8 October with the last service departing Perth on 1 October. The Melbourne-Sydney-Brisbane service designated 6MB7 was to cease from 13 October with the last service departing Melbourne on 6 October. The return service (2BM7) was to cease from 9 October with the last service scheduled to depart from Acacia Ridge (Brisbane) on 2 October. The final interstate intermodal services are planned to cease in late December this year.

Services in Queensland (narrow gauge) will continue to operate until the sale of these operations to a consortium of Pacific National and Linfox is completed in 2018, subject to regulatory approval.

In other Aurizon news the company announced on 28 September that it would move up to 200 staff roles from Brisbane and other metropolitan centres to Rockhampton over the 'next few years'. The multi-story office building in Murray Street, Rockhampton (opposite the station and formerly Queensland Rail's Central Queensland headquarters) will receive a \$6.4 million refurbishment to provide contemporary work places and extra capacity. Aurizon CEO and Managing Director, Andrew Harding, said bringing more of the company's leadership and support services closer to frontline operations would enhance the company's connection and relationship with its customers.

Aurizon's focus on relocating jobs to Rockhampton follows criticism of the decision to close Rockhampton workshops (see July 2017 *RD*, page 16). Mr Harding said that decision had been a very difficult one but he defended the move saying, "The closure of our workshops was necessary due to increased competition changing requirements for the way we maintain our rollingstock of locomotives and wagons. It was designed for a different operating footprint in a different time and does not fit with our current coal rail operations." Aurizon says it continues to have a large presence in the Rockhampton region with more than 650 employees across its various businesses and a total of 2,000 employees across Central Queensland.

## Keolis Downer will continue to operate Yarra Trams

On Tuesday 12 September, Keolis Downer, was awarded the contract to continue operating Yarra Trams, the largest tram network in the world, on behalf of the Victorian Government in Melbourne. The new franchise will commence on 30 November 2017 and expire in 2024.

Keolis Downer has stated that its focus will be on improving passenger satisfaction by delivering safer, more reliable and passenger-friendly services for Melburnians, and that passenger assistance will be improved thanks to better digital information, accessibility enhancements and more frontline employees providing passenger assistance across the network.

With the Victorian Government's investment in a tram refurbishment program over the next five years, Keolis Downer plans to maximise the value of the State's assets through maintenance and renewal projects.

Melbourne's tram network, operated by Keolis Downer since 2009, includes 24 routes as well as the City Circle tram, popular with tourists. It counts 250km of double track, over 1,700 tram stops with around 410 trams operating during peak times.

During this time, Keolis Downer has significantly increased the number of women working for the network (up 67%), as part of its ongoing commitment to workplace diversity and inclusion.

# Railway people

## Megan McCracken appointed as NAWO Chair

Arc Infrastructure's General Manager People, Safety and Corporate Affairs, Megan McCracken has been announced as the new Chair of the National Association of Women in Operations (NAWO), Australia's peak body championing women in operations.

As a mentor to women and men at all career stages, Megan has been instrumental in building the Western Australian chapter of NAWO through her role as a board member, which commenced in 2012.

Megan said that during her 25 years of operational experience she has been fortunate to see the positive impacts that embracing gender diversity can have on both business outcomes and on outcomes for individuals - women and men. "In operational businesses, more than anywhere else, we have the opportunity to challenge gender stereotypes and be leaders in changing community attitudes towards what 'acceptable' roles for women and men look like and to unlock true potential.

"NAWO has become an important tool for developing Australia's pipeline of operational women. As they say, 'you can't be what you can't see', and NAWO's ever growing calendar of events ensures that the 'heroes' within our midst are given the exposure they have earned and a platform to share their journeys and inspire others," Ms McCracken said.

NAWO's founder and inaugural Chair Angela Tatlis said she was delighted that the new Chair was appointed from within the association. "Megan has played an important role on the NAWO Board and as the lead for NAWO's WA Chapter for several years now - she is a dynamic woman who can climb mountains," Ms Tatlis said.

Megan joined Arc Infrastructure in 2012 and brings 25 years of operational experience to her role, spanning the resources, automotive, energy and rail industries across Perth, Melbourne and Sydney.

A key achievement at Arc Infrastructure under Megan's tenure has been the reduction of the gender pay gap from 22.6 per cent to less than 1 per cent.

This achievement was recognised recently by two peak industry bodies, with Arc Infrastructure receiving Engineers Australia's *Most Ambitious Company in Gender Diversity* award and the Australian Rail Industry's Workforce Diversity award (see September 2017 *RD*, page 26).

Megan McCracken



## Transport Canberra looks for new electronic ticketing system

Canberra's MyWay card may soon be redundant as the Australian Capital Territory moves to a replacement ticketing system for ACTION buses that will integrate with the light rail network when it commences operation in early 2019.

A call for expressions of interest on Friday 15 September showed the ACT government wants to move from stored value cards to an account-based ticketing system, a change foreshadowed by ACT transport minister Meegan Fitzharris in July.

The current MyWay contract expires next year and the government set aside \$7.9 million in the June 2017 budget to develop a new ticketing system that would work across the light rail and bus systems.

Documents obtained by the *Canberra Times* show the territory government requires a system that will allow both open and closed loop payments, payments via debit and credit cards, and via smartphones. They are hoping for a product that can lead to a single interface as the technology "matures", where passengers can create and manage an

account, buy a ticket, plan their trip and provide notifications and alerts. The system will also have to;

- allow real time and continuous monitoring and be flexible to allow fares to be changed when needed,
- be easy to use for customers and minimise boarding and alighting times by providing a speedy transaction,
- ensure a passenger has a validated card, device or token when they board the bus or light rail carriage,
- have tight security and anti-fraud processes, such as a fraud engine to scan all transactions and discover anomalies.

It is understood that the ticketing system would have a tenure of 10 years, although some parts may have a shorter term. It would also need to be extendable, with the potential to be used for park and ride facilities, taxis, bike shares and library services. However it would also need to be cost-effective, and "evolutionary rather than revolutionary".

There more than 490,000 active MyWay cards in Canberra in the past year with more than 18.3 million journeys taken on ACTION buses in the year to July.

Requests for proposals for the new ticketing system will be circulated in December, with the contract awarded in May 2018.

As the late afternoon shadows lengthen at Canberra (Kingston) station, a passenger boards the 3-car *Xplorer* set making up SP36, the last NSW Trainlink departure to Sydney on Sunday 10 September. Scott Martin



## ACT light rail on schedule, as first tracks are laid in Franklin

The first tracks have been laid in Franklin as the ACT government remains confident the first stage of the light rail project is on schedule to be operating by late 2018.

Chief Minister Andrew Barr and transport minister Meegan Fitzharris were on-site at Flemington Road where the first tracks were being laid. Mr Barr said the milestone in the Territory's largest ever infrastructure project was a message to the sceptics who said it would never occur.

"We're keen to demonstrate there is considerable progress being made on the construction side," he said.

"It's not just a transport project for Canberra, it's a city shaping project and you're seeing ... a new city take shape, one that will be more sustainable, one that will meet our ongoing population growth."

"We are the fastest growing state or territory in the nation at the moment. So we do need to not only invest in new transport infrastructure

to meet that growing population but we also need to align our city's development along those transport corridors."

She said the major milestone in the \$939 million project – which will see a light rail line take shape from Gungahlin to the city centre – came a few months before the arrival of the first trams.

While some Mitchell traders have hit out at the light rail project and the lack of consultation, Ms Fitzharris said the project went through the most extensive community consultation process of any infrastructure project in the country. She said she had been talking with Mitchell businesses about the future potential of a light rail stop in Mitchell. "It would be a priority next stop," she said.

The ACT government expects to consider the business case for Stage Two of the project, which would include a line to Woden (see July 2017 *RD*, page 9) in late 2017.

## Reliable mobile services on Central Coast trains a step closer

The Federal Government is investing \$12 million to deliver reliable mobile phone services for thousands of commuters along the NSW Central Coast rail line. (The Central Coast and Newcastle line is a section of the NSW Main North Railway connecting the state's two largest cities, Sydney and Newcastle.)

Expressions of Interest have been called to upgrade the mobile telecommunications infrastructure along the 60 kilometre stretch of line between Wyong (101 kilometres north of Central station) and Hornsby (located 33.9 kilometres north of Central at the junction of the Main Northern and North Shore line).

"Mobile drop outs and blackspots are incredibly frustrating for commuters along the Central Coast Line, and the Turnbull Government is delivering on its election commitment to fix the problem." Minister for Communications and Arts, Senator the Hon. Mitch Fifield said.

The total funding commitment of \$16 million for the project includes \$4 million from the NSW Government.

The package will deliver improved mobile coverage as well as provide Wi-Fi at stations for up to 30,000 Central Coast commuters who travel on Sydney Trains and NSW Trainlink services each day.

Expression of Interest will be open until November and a formal tender process will commence by the end of 2017.

The NSW Government will be announcing a further Expression of Interest to install Wi-Fi at stations along the Central Coast rail line.

## Truck fails to stop at Condobolin level crossing

A Dubbo truck driver was lucky to escape serious injury after Pacific National's 6SP5 Sydney – Perth freight service collided with his semi-trailer at a railway crossing on the eastern outskirts of Condobolin on Friday 1 September.

At about 3.15pm a semi-trailer was travelling along Maitland Street, Condobolin before making a turn on to Jones Lane. Police allege the driver of the truck, a 49-year-old Dubbo man, proceeded through a level crossing stop sign and on to the railway line. As the truck was crossing the line, the Broken Hill-bound train collided with the trailer section of the vehicle.

Police Inspector Dave Cooper of the Lachlan Local Area Command said the truck driver and train crew were "extremely lucky" they did not sustain serious injuries. "It was a blessing really that the train collided with the trailer and not the prime mover," he said. "It took the train some 800 metres to stop. Drivers need to be aware of railway crossing safety and heed traffic rules. This could have been a very different situation and driver and train crew were extremely lucky the outcome was not much worse."

An extensive clean-up was undertaken at the scene. Lead locomotive NR119, which suffered damage to the driver's side of the cab, was detached and stowed in Condobolin yard.

The truck driver was breath tested at the scene. It is believed that alcohol was not a factor in the accident. Police and the Australian Rail Track Corporation (ARTC) will continue their investigations into the incident.



Although it plays host to the daily *Xplorer* DMU service to and from Sydney, the present-day terminus of the former 'Main North', Armidale, is starved of any locomotive-hauled trains. So it is a pleasant change for the locals when the track testing train (AK cars) or the rare ballast train pays a visit. One of the latter was working out of Armidale during late September and early October, loading ballast in the yard and laying it in the section between Armidale and Tamworth, with the crushed rock being trucked into Armidale yard. On Saturday 7 October, the train being loaded was headed by the eclectic combination of ex-SAR locos 864, 852 and 872, and NSWGR veteran 4477. It was subsequently worked out on Tuesday 10 October as train No.5M20 dropping ballast through to Kootingal. It continued to operate over the Main North down to Kootingal continuously until Monday 16 October, after which the set relocated to the southwest of the state. It had been a long time since a 44 class visited Armidale! Departing from Armidale station on Saturday 7 October, the Sydney-bound *Xplorer* DMU passes the ageing Goodwin/Alco quartet stabled in the yard. Paul Ashley



**Above:** Five 48s meet up on the Boree Creek line, as 48208 and 48203 on AK Track Recording Train SK81 pass 48216, 48213 and 48164 on GrainCorp Grain Train No.3335 at Lockhart, on Tuesday 29 August. Ewan McLean

**Below:** Aurizon UGR/GE units 5028 and 5036 on an empty coal train head north over the well-known Mooki River bridge at Breeza on their way to pick up another load of Gunnedah coal, on Friday 25 August. Larry Zanker





**Above:** On Thursday 5 October, the crew of the *Endeavour* Railcar set working SN38 Moss Vale to Campbelltown service reported that the train was unable to stop at Bowral platform under normal braking due to a coolant leak from car LE2858, the lead car, causing serious wheel skid. At Mittagong, SN38 was shunted onto the Braemar branch line to clear the main line, and is seen stabled there at 09.22. Chris Jones

**Below:** Running over a day late, CSR/MTU 3170kW unit CSR005 enters Maitland station on Thursday 14 September with a reduced load on 3MB9, SCT Melbourne–Brisbane freight, after an epic journey from Melbourne. Having left there on Tuesday evening hauled by CSR003 and CSR005, 3MB9 failed on the Cullerin ranges and had to be pushed into Goulburn by NR9, NR95 and NR121 on 1PS6 (Perth–Sydney intermodal freight). Fifteen wagons were removed from 3MB9 and the train left Goulburn at 18.00 with 45 wagons. At Leightonfield, CSR003 and another 15 wagons were removed. Early on Wednesday morning CSR005 failed on Hawkmount due to a lack of fuel. CEY003 CEY005 and CEY002 on a Vales Point coal train were uncoupled from their train after unloading, and ran light engines to push 3MB9 into the Eraring coal loop. The CEYs returned to their train at Vales Point, and CSR005 continued north later in the morning after refueling. Stephen Miller





**Above:** Goninan/GE unit NR55 leads a push-pull aggregate train through Burradoo, in the Southern Highlands, on Tuesday morning 3 October. The trailing locomotive that day was classmate NR73. David McCafferty

**Left:** It's 9.00am on public holiday Monday 2 October and the driver of CSR/MTU unit QBX002 is urging his locomotive ever faster as it hits the start of the grade between Harefield and Junee with Train No.3314, the Up intermodal shuttle service. Malcolm Holdsworth



## Around Sydney

### Progressive upgrades for south-west Sydney stations

South-west Sydney rail passengers will be able to start using upgraded stations from 2020, four years ahead of schedule, as the 122-year-old 13.5 kilometre T3 Bankstown Line is rebuilt to Sydney Metro standards.

On Wednesday 13 September NSW Premier Gladys Berejiklian and Minister for Transport and Infrastructure Andrew Constance revealed concept designs for major station upgrades. “Work starts from next year to make big improvements to the stations, including making them fully accessible, with all stations to have level access between the platform and trains,” Ms Berejiklian said.

“Where a station upgrade like a new lift or new station entry can be opened early, we’ll deliver that as quickly as possible with these upgrades being opened progressively from 2020. You won’t need to wait until South West Metro trains start running in 2024.”

The NSW Government today also confirmed the Bankstown line upgrade will include:

- New entrances at upgraded Stations.
- New public plazas to create open space.
- Heritage station buildings to be incorporated into modern designs.
- Train services more than tripled at stations like Dulwich Hill, Hurlstone Park, Canterbury and Wiley Park.
- A brand new concourse connecting Metro to Light Rail at Dulwich Hill.
- The first stages on a new active transport corridor to be delivered as part of the project.

“The Bankstown Line was built in the late 19th century for steam trains, now this growing area of Sydney will have a modern 21st century metro with fast, safe and reliable trains, with plenty of room to grow in the future,” Mr Constance said. “Customers will have a new fully air-conditioned metro train every four minutes in the peak, delivering a new quality of railway service never before seen in Australia.”

The community can have its say on the Marrickville to Bankstown upgrade with the Environmental Impact Statement open for feedback until 8 November 2017.

As part of the upgrade, South West Sydney commuters will see a major boost to train services. On the Bankstown Line there are currently

up to eight trains an hour in the peak at major stations along the line – other stations have as few as four an hour in the peak and sometimes just two an hour at nights and weekends. When Sydney South West Metro services commence operating in 2024, there will be 15 trains an hour at all stations during the peak, with room for future increases to this number.

To complete upgrades, Sydney Metro will take advantage of the four annual scheduled maintenance closures of the Bankstown Line to do major work. Additional periodic closures will be scheduled around quieter travel times like nights, weekends and school holidays to minimise impacts. At all other times the Bankstown Line will remain open with normal Sydney Trains services.

As outlined earlier this year, to convert the Sydenham to Bankstown line to metro services, a closure of between three to six months will be required to do work that can only be done once Sydney Trains has stopped operating on the line. This closure will be just before metro services begin in 2024.

### First Sydney Metro train arrives

The first train for Sydney’s \$8.3 billion Metro Northwest metro line has arrived from India and will be tested over the coming months as the start of services loom in 2019.

The laying of the first stretch of track on the ‘Skytrain’, the 4.5-kilometre elevated section between Rouse Hill and Kellyville in the city’s north west, is also underway.

Assembled in Sri City near Chennai in south-east India, the six carriages of the first driverless metro train to be shipped arrived at the Sydney Metro Trains Facility at Rouse Hill on Tuesday 26 September for final fitout.

The fleet built by French manufacturer Alstom for the Sydney Metro Northwest will eventually comprise 22 six-car trains.

NSW Transport Minister Andrew Constance said people living in Sydney’s north west would get a train every four minutes in the peak in each direction once the line opens in 2019.

“After that, services will extend into the CBD by 2024 – which will have an ultimate capacity of a metro train every two minutes in each direction under the city,” he said.

**The first of an order for 22 Alstom Metropolis EMU sets for Sydney Metro is seen inside the maintenance facility at Rouse Hill on Tuesday 26 September. The first car has just been unwrapped, while the others await their turn. Transport for NSW**





## Hornsby Maintenance Centre track renewal

Hornsby car sheds, now known as Hornsby Maintenance Centre (HMC), were opened in 1928. It is currently home to many of the A, H, K and T sets that operate on Sydney Trains Sector 3 (encompassing the Northern, North Shore, and Western lines).

Roads 4 to 7, which accommodate 16 cars each, have deteriorated over the years, indeed Road 5 has been out of use for a long period of time. Replacement of these four roads and the associated drainage system is currently ongoing. Seven Road has been temporarily retained so spoil trains can be positioned as required and loaded with dirt and broken concrete by contractor's excavators. These trains of ten or so wagons (NDBF and NDMX classification) are hauled by Pacific National 81 class locomotives to Chullora, where the spoil is dumped.

An empty train arrives at the sheds with a locomotive either end,

coming in 'over the top' off the Down Main past B Frame. The train runs up into 14 or 15 Road where the leading 81 detaches and later returns light engine. The crew walks to the rear loco and under instructions from the shunter proceed down to the Outwards Road with the empty wagons in tow. This road is temporarily truncated with a wooden buffer stop as the track into Hornsby yard is currently removed for ongoing yard reconfiguration. The empties are then propelled back up into Seven Road for loading; the 81 class is shut down until again required for the reverse procedure. Train loads of road base are handled in the same manner. Excavators remove the clean material from the wagons to fill in the excavation, which is nearly two metres in depth. Road rollers, both man-operated and remote control, compact the fill to form a firm base for laying the new rails.

*Ross Mainwaring*

## Parramatta Light Rail to go to Sydney Olympic Park

In an announcement on Wednesday 18 October, Premier Gladys Berejiklian confirmed that planning for Stage 2 was underway and is expected to be completed throughout 2018. "I am pleased to announce Parramatta Light Rail Stage 2 is another step closer to connecting Greater Parramatta to the booming sport, entertainment and employment hub at Sydney Olympic Park," Ms Berejiklian said. "Our preferred nine kilometre route will connect with Stage 1 of the project north of the Parramatta River through the suburbs of Ermington, Melrose Park, Wentworth Point and on to Sydney Olympic Park.

"The exciting plan supports new communities and the creation of public places between Camellia and Ermington and future development planned for Melrose Park," Ms Berejiklian said.

Minister for Transport and Infrastructure Andrew Constance said the NSW Government has started work on a business case for the preferred route north of Parramatta River, which is considered the best option.

"We are going to finalise a business case for this project by the end of 2018 and are working with communities to ensure we can maximise the potential for this option," Mr Constance said.

"We know it will provide a direct, frequent and reliable public transport connection for these areas and connects the new Western Sydney University campus at Sydney Olympic Park with its three campuses serviced by Stage 1."

A Final Business Case for Stage 2 is expected to be completed in 2018, with an investment decision and details on the timing of construction to follow. The Environmental Impact Statement for Stage 1 of the project is on exhibition until 23 October and expressions of interest have been sought to design and construct, supply, operate and maintain the network.

Construction on Stage 1 will start in 2018, pending planning approval, and it will begin operating in 2023.

## QR extends 'Hook and Pull' Aurizon contract by two years

Aurizon has maintained a contract to provide 'hook and pull' services for Queensland Rail (QR) since the privatisation of QR freight services in June 2010. Since that time QR has brought the majority of its long-distance passenger and infrastructure trains back in-house through the use of its own locomotive fleet and crews. However, Aurizon continues to provide some services, including locomotives and crews for the Townsville – Mount Isa *Inlander* (see page 39, this issue), infrastructure train services for the Mount Isa line, Rockhampton to Cairns section of the North Coast Line and partial services in the Central West and Toowoomba regions.

In addition, services are provided to QR on an ad hoc basis through the provision of traincrew, locomotives and breakdown crews to perform derailment recovery and rescue of Traveltrains (long distance), Citytrains and New Generation Rollingstock, plus haulage of infrastructure trains services, heritage and charter services and train crew to provide route tuition as required.

The 'Hook and Pull' contract with Aurizon was scheduled to expire on 31 December this year, but QR has indicated that it is unable to complete the transition of all services under this contract to an in-house arrangement primarily due to a lack of locomotive availability and a lead time of around 18 months to recruit train crews, provide route competency and establish depots to support train operations. QR has also indicated that Aurizon will not commit to a short term extension of the contract. QR has therefore proposed a two-year extension of the existing contract with Aurizon prior to commencing a feasibility study for transitioning remaining services in-house. QR says the two-year

extension will allow sufficient time for the study to be carried out, and, subject to the study outcome, a well-planned transition for insourcing the services.

## Gold Coast rail duplication completed

The duplication of the remaining section of single track on Queensland Rail's Gold Coast railway, the 8.2 kilometre Coomera to Helensvale section, was commissioned on Tuesday, 3 October following a track closedown over the long weekend (30 September – 2 October). The \$163 million project, delivered by Golding Contractors in association with Queensland Rail, included the 860-metre bridge across the Coomera River, Hope Island Road and Saltwater Creek, 180 new overhead masts, 50,000 metres of cabling, and the laying of 18,000 metres of rail, 13,000 sleepers and 30,000 tonnes of ballast. Queensland Rail crews and contractors delivered a collective 450,000 hours of work since the start of construction in March last year. The additional track is located on the western side of the original line and bi-directional signalling is provided on the section.

Transport Minister Jackie Trad said that in addition to the duplication, \$10 million worth of train station refresh works were also underway along the Gold Coast line at Ormeau, Coomera, Helensvale, Nerang and Robina stations in preparation for the Commonwealth Games which commence in April next year. Ms Trad said a lift upgrade at Helensvale was also set to open to the public in the second week of October while the first stage of the Helensvale bus interchange upgrade was underway. The interchange will link bus customers to the railway and Stage 2 of the Gold Coast Light Rail line when it opens early next year. Trams have commenced test running along stage two of the light rail line, from Gold Coast University Hospital to Helensvale station.



Clyde/EMD units 2371 and 2338 on Train No.6EG3 at Woondum on Tuesday 12 September. A rare grain movement on the near North Coast – albeit an empty one. This set, on transfer from Willowburn to Emerald, is seen passing northbound through the dry countryside at Woondum. Ray Miller



In contrast to other North Queensland sugar mills that use Queensland Rail's network or road transport, Wilmar's Victoria and Macknade sugar mills, near Ingham, export their raw sugar through the port of Lucinda using a line from their 610 mm gauge system that links the two mills. In this Sunday, 27 August view 1968-vintage EM Baldwin 0-6-0DH unit No.14 hauls a load of bogie wagons loaded with sugar near Gentle Annie Creek, not far from Lucinda. John Hoyle

## Preferred route for last section of Queensland Inland Rail corridor announced

On Thursday 21 September Federal Minister for Infrastructure and Transport Darren Chester announced the preferred corridor for the Yelarbon and Gowrie section of the Inland Rail project, which takes the line north from the NSW border to the Darling Downs city of Toowoomba.

Mr Chester said the decision, which would run via Pittsworth, Brookstead and the Wellcamp-Charlton industrial precinct, was not taken lightly.

"This decision was based on rigorous technical analysis and consultation with community and industry representatives," Mr Chester said. "In addition, Mr Bruce Wilson AM, Chair of the Yelarbon to Gowrie Project Reference Group, provided me with his independent views.

"I appreciate that many in the community have been seeking certainty about the alignment. All options present challenges but it is my view, based on the available information, that the corridor via Wellcamp and Charlton is the right decision."

The Government has chosen the Yelarbon and Gowrie route because:

- it uses existing rail corridors as much as possible,
- it travels past Wellcamp Airport, which did not exist in 2010 when the original route was considered; and
- it is a significantly more economically viable option than the alternative routes.

Toowoomba's Wagner family, who built and own the international Wellcamp Airport, have promised to invest millions of dollars in creating a road-rail-air transport hub geared towards food and agricultural produce if the rail corridor was shifted closer.

"While cost is not the overriding factor in decision-making for the preferred alignment, the Wellcamp-Charlton option has the lowest incremental cost compared with Base Case," Mr Chester said.

In announcing the decision Mr Chester acknowledged there will be impacts to those living and working on or near the preferred route but promised that the Government will work with the communities on the preferred route to minimise the impacts and maximise the benefits.

"The final design will be subject to an extensive State government planning and approvals process, which will work through questions about technical and environmental aspects," Mr Chester continued.

He also recognised that people have concerns about the impacts of the rail line on the floodplain of the Condamine River but is confident that by using the best engineering minds in Australia these effects will be minimised.

However, floodplain grain-growers Brett Kelly and Jason Mundt told the ABC the decision could be "catastrophic" for farmers. They said flooding in 2010 inundated their farms, devastated crops, and dislodged a section of the Millmerran railway line. As a result, the line remains closed, the farmers added.

"It makes no sense to build the line across an extensive floodplain when there are better options upstream where there is less water," Mr Kelly said. Mr Kelly and Mr Mundt said they had been told by ARTC the inland rail would be built on an embankment two metres higher than the existing line. "If you consider building another line two metres higher, you're virtually building a dam wall, but without the same reinforcement," Mr Kelly said.

Mr Mundt said the higher embankment could see water back up for tens of kilometres in a big flood.

Landholders at Millmerran, whose farms are now likely to be dissected, are also furious, saying the chosen rail corridor will cut through prime agricultural land.

"To ensure the views of the community continue be heard, a Border to Gowrie Community Consultative Committee will be established to provide feedback from landholders, businesses and residents," Mr Chester said. "I have asked the ARTC to work directly with affected landholders to refine the design of the railway.

For more information on the community consultation process, and to learn more about the project, visit [inlandrail.com.au/](http://inlandrail.com.au/)

## Containers arrive in Townsville for Dugald River Mine traffic

Swire Shipping container vessel *Mia Schulte* arrived at the Port of Townsville on Friday 8 September carrying 500 half-height containers that will be used to export the first loads of zinc concentrate from MMG's Dugald River Mine early next year.

Dugald River Mine is based on one of the world's best undeveloped zinc, lead and silver deposits, and will be in the top ten of global zinc operations when production begins in 2018. The mine, located in north-western Queensland – approximately 65 kilometres north-west of Cloncurry and 85 kilometres north-east of Mount Isa – is on track to start producing ahead of schedule as it aims to capitalise on a tightening market for the base metal (see page 43, this issue).

MMG has invested in 1,750 half-height containers valued at around \$11 million to export their product from the Dugald River Mine through the Townsville Port.

MMG's General Manager Dugald River Project Delivery Mr Pierre Malan said that the timing of the mine's opening was a result of the project progressing ahead of original schedule, just in time to coincide with an expected surge in zinc prices globally.

"MMG approved this project in 2015 in anticipation that zinc prices would increase due to decreasing global supply on the back of key mine closures; and recent increases in the zinc price to a 10-year high have validated this decision," said Mr Malan. "Today we welcomed the first 500 half-height containers that will be used to export Dugald River concentrates; an overall \$11 million investment into this transport equipment."

Concentrate will be loaded into these specially designed half-height containers at the mine before being road hauled to Cloncurry then railed to Townsville Port, before being emptied into a ship using a rotainer attached to a crane.

"Northern Stevedoring Services, Wagners Transport, Aurizon and Toll Logistics have been engaged to transport the product and related cargo on behalf of MMG."

Port of Townsville Limited General Manager Business Development Claudia Brumme-Smith said that the arrival of the *Mia Schulte* was an exciting milestone for MMG. "MMG's high grade operation will produce upwards of 250,000 tonnes of exports from the Port of Townsville," said

Ms Brumme-Smith. "Not only is this great for the port, but also the local businesses involved in transporting these shipments and flow-on economic benefits to the regional economy in terms of jobs."

Swire Shipping Commercial Sales Manager for North and Central Queensland Natalie Adamsson said that Swire was pleased to be part of the Dugald River Project. "Swire Shipping congratulates MMG on reaching another significant milestone today," said Ms Adamsson. "We are thrilled to be part of the exciting Dugald River project with the delivery of these 500 half-height containers to support the transportation of the concentrates."

MMG has several mines operating globally in Congo, Laos, Peru, and at Rosebery in Tasmania.

## New trams arrive for Gold Coast Light Rail Stage Two

Two new Bombardier FLEXITY 2 trams arrived at the Port of Brisbane on Thursday 21 September following a six-week, 14,000-plus nautical mile sea journey from the manufacturing plant in Bautzen Germany.

Queensland Deputy Premier and Minister for Transport Jackie Trad said these were the first of four additional trams and will take the G:link fleet to 18 in anticipation of the opening of Stage Two of the Gold Coast Light Rail in 2018.

"These brand new trams, which are the same as those used on Stage 1, will now be tested on-track to ensure the trams are safe and reliable before opening for passenger services," Ms Trad said. "It will also give our drivers the chance to familiarise themselves with the new 7.3-kilometre extension over the coming months."

The new trams were road freighted from Brisbane to the Gold Coast and positioned on the tracks on Monday 25 September. The final two trams in the order were on line at the Gold Coast by Thursday 12 October.

"These FLEXITY 2 trams are the only trams in the world to have surfboard racks, something so unique and synonymous with the wonderful vibe on the Gold Coast, and the cabin front was specially designed to include a wave motif as part of the driver cabin windows" Ms Trad said. "I look forward to seeing the first passengers on board once all tram testing and commissioning is complete. We are firmly on track to deliver Stage 2 ahead of the 2018 Commonwealth Games."

At Yandina on Sunday 10 September, Goninan/GE unit 2832, assisted by Clyde/EMD unit 2194, on YC47 is seen passing stabled sibling units 2831 and 2816 on Y375. Possibly the last time two Aurizon Intermodal services will pass at Yandina. Ray Miller





**Left:** Aurizon is currently contracted by the Queensland Government to haul cattle to meatworks in Queensland using the company's wagons carrying Queensland Government funded cattle containers supplied by the SCF Group. In this Friday, 1 September view an Aurizon PCZY wagon supports a QGCU cattle container at Richmond on the Townsville to Mount Isa line. The cattle container fleet has been withdrawn from service following problems with the latches that secure the vertical doors (seen at the top right end of the container) and the spring-loaded horizontal doors which fold down to form a ramp to load and unload cattle (seen at the lower right end). A program to repair and rectify the latches and any other issues is currently being carried out so that the containers can be returned to service for the 2018 cattle transport season.

John Hoyle

## Cattle containers withdrawn for door latch inspection and repairs

In late September all 321 QGCU cattle containers owned by Queensland Transport and supplied by SCF Group for transporting cattle under the Queensland Government's Livestock Transport Services Contract (LTSC) were withdrawn from service for inspection and repairs. This move follows reports by cattle agents and Aurizon, who operate the cattle trains under contract to the Government, that doors and ramps on the containers were opening during transit as a result of ramp latches not being secured properly. In a number of cases the open doors have struck roadside infrastructure. As a result all cattle transport by rail was temporarily suspended while repairs and modifications were undertaken. The withdrawal of the cattle containers coincided with the 2017 livestock season drawing to a close and allowed Aurizon to arrange road transport for any remaining livestock transport under the LTSC.

A Transport and Main Roads spokesperson told *Railway Digest* that the review of the container fleet will determine whether any cattle containers require repairs and/or defect rectification. The spokesperson said Aurizon would continue to accept livestock transport orders with a view to returning to normal rail services in the New Year for the start of the 2018 livestock season and customer costs would not increase as a result of any change to road transport.

Aurizon had issued a safety alert on 26 July drawing attention to problems with latches that hold closed both vertical (top opening doors) and horizontal ramps (that open down on to loading platforms) not being properly secured. The cattle containers were placed in service in March 2017.

## Jackie Trad axes rail executives' bonuses

Transport Minister Jackie Trad confirmed on Saturday 8 October that Queensland Rail's executives would miss out on generous performance bonuses, as the transport body battles to recover from a crippling driver shortage. It comes a year after the inception of the 'rail fail', which led to the sudden cancellation of hundreds of services and forced the introduction of a heavily scaled-back rail timetable.

The decision to freeze bonuses follows criticism last year of a \$77,000 performance payment awarded to QR's former chief operating officer Kevin Wright at the height of the rail dramas. Mr Wright resigned just two months later after another rail meltdown on Christmas Day.

Ms Trad, whose portfolio includes transport, yesterday said she and the QR board had ruled out any bonuses being awarded for the performance of executives in the 2016-17 financial year. The bonuses would ordinarily hit executives' bank accounts sometime this month.

"I knew that there was work to do to get Queensland Rail back on track so the board and I directed QR not to award executive bonuses this year," Ms Trad said. "As we have been doing all year, we are getting on with the job of fixing the trains and delivering reliable, convenient services that Queenslanders can rely on," she said.

## Tilt Train Update

Updating the photo caption on page 14 (September 2017 *RD*) the second electric tilt train set, *City Of Rockhampton*, returned to service from its mid-life refurbishment on 4 September, not 28 August as was originally planned by Queensland Rail (QR). Its return resulted in the withdrawal of the two locomotive-hauled tilt train replacement sets which had been supplementing each of the two electric tilt trains while they were overhauled at Downer Rail's Maryborough plant. The replacement trains, colloquially known as 'Tiltlanders', had been operating since 15 March 2015 (see May 2015 *RD*, page 16). Originally it was hoped to complete the overhaul of both tilt train sets by mid-2016 but the dismantling of each set revealed that the scope of works required extending the timeline.

Coinciding with the return to service of the second electric tilt train QR introduced a new timetable which provides for a tilt train service from Brisbane at 11.00 am to Rockhampton (arriving 6.45 pm) daily except Wednesdays. The southbound service will depart Rockhampton at 7.10 am daily, arriving Brisbane at 2.50 pm. The Bundaberg service will depart Brisbane at 4.55 pm on Monday, Wednesday, Thursday and Friday, arriving Bundaberg at 9.25 pm. In a reintroduction from the previous all-electric tilt train timetable, the Bundaberg service will continue to Rockhampton on Tuesday and Sunday, arriving at 12.30 am. The southbound Bundaberg service departs at 5.15 am on Monday, Tuesday, Thursday, Friday and Saturday, arriving Brisbane at 9.55 am.

The tilt train overhaul included the train's mechanical systems and electrical and safety systems to meet the latest in industry standards and support the remaining life of the trains. The trains' interiors were also refurbished, including new seat covers and foam support and new soft furnishings including carpet, curtains and floor coverings. The electric tilt trains travel approximately 350,000km annually to connect between Brisbane, Bundaberg and Rockhampton and the two sets have travelled more than five million kilometres since their introduction in 1998.

In other tilt train news QR has called tenders for the overhaul of the MTU engines in the eight diesel tilt train DTDL power cars. QR has a pool of 18 engines, of which 16 are required to be available for service at all times (each power car has two MTU 16-396 engines). QR aims to source one or two competent contractors to perform periodic engine overhauls. The contractor will be required to be able to access Original Equipment Manufacturer (OEM) parts and access to technical data from MTU Germany. The tender document indicates that the exchange of engines and a portion of overhauls are performed by QR staff at Mayne (Bowen Hills) and, as such, the proximity of a contractor to Mayne for warranty and support services is preferred. The contract will be for an initial three-year term commencing in early 2018, with two extension options of 24 months each. Tenders were scheduled to close on 12 October 2017.

## Three level crossings removed as Torrens Rail Junction works ramp up

The Outer Harbor rail line crossing at Park Terrace in Bowden (located approximately two kilometres north-east of Adelaide station) will be one of three level crossings permanently closed as major excavation work for the replacement rail underpass begins as part of the Torrens Rail Junction project.

The significant milestone marks commencement of the last phase of works on the project, which also grade separates the junction of the suburban Outer Harbor, Grange and Gawler lines from the interstate freight rail network.

Currently the Park Terrace boom gates delay road traffic for more than two hours a day on the important Inner Adelaide ring route. Separating the passenger and freight rail lines will also significantly reduce delays at other level crossings in the inner northern suburb of Ovingham and at Torrens Road, as freight trains will no longer need to be held at these locations awaiting the passage of suburban services.

Level crossings at Gibson and East streets in Bowden (located south and north of Bowden station respectively) will also be removed, with the Gibson Street crossing grade separated and the East Street crossing closed.

The works require the temporary closure of the Outer Harbor, Grange and Gawler rail lines. Services on the Outer Harbor and Grange lines ceased on Sunday 24 September and will not resume until Monday 3 December while the Gawler line was closed between Adelaide and Mawson Lakes from Sunday 1 October to Sunday 15 October. Substitute bus services operated on each occasion.

During the closure major works will also be undertaken on the Outer Harbor Greenway, including the shared use path over South Road.

The extended closure will also allow for other works to be undertaken on the Outer Harbor and Grange lines including an upgrade to the Croydon station (located 4.2 kilometres from Adelaide station), which will enable a long-standing train speed restriction to be lifted.

Other works will include:

- Level crossing upgrades,
- Improvements at other stations,
- Re-railing and general track maintenance; and
- Vegetation works.

South Australian Transport and Infrastructure Minister Stephen Mullighan said that the level crossings removals are a major milestone for Torrens Rail Junction Project.

“While it is disappointing that we need to disrupt train services to do these works, when they are complete they will have a big impact in reducing delays for both road traffic and rail services,” Mr Mullighan said. “Once these works are complete, Outer Harbor and Grange trains will no longer need to slow down at these level crossings and the requirement for trains to give way to one another will also be removed, improving the travel times for all services.”

Once completed later in the year, the Outer Harbor Greenway will also be a major milestone for this cycling and walking route, removing the need for cyclists and pedestrians to cross South Road and Park Terrace, making it much safer for all who use it. (The Outer Harbor Greenway provides a safe, direct, continuous and attractive 20 kilometre link from the city to Port Adelaide and the Lefevre Peninsula. The route generally follows local streets fronting the Outer Harbor railway line.)



Late in the afternoon of Saturday 30 September, two ducks look up from the paddock below as Genesee & Wyoming Australia locomotives GWA005, GWU009 and GWA007, with crew car attached, rumble over the lengthy steel bridge at Murray Bridge, South Australia, working train Number 21845 loaded grain from Wolsley. David Peters



**Above:** 1204, 1603, 902 and 905 rumble across Cemetery Hill Road, Cockaleechee, with 62 wagons of Rudall grain bound for Port Lincoln, Thursday 17 August. Chris Walters

**Below:** 4000 Class 'A-City' three-car set 4006 approaches Mile End station with a Seaford-bound service on Tuesday morning 15 August. Chris Walters



## New ticket validation gates at Salisbury Railway Station

New ticket gates at Salisbury railway station came into operation on Monday 11 September.

The gates are part of a \$2.1 million package to reduce fare evasion across the South Australian public transport network (see June 2017 *RD*, page 18).

Salisbury station and bus interchange is located in the northern Adelaide suburb of Salisbury. It is situated on the Gawler Central line – 20.2 kilometres from Adelaide station.

The ticket validation gates are similar to those in operation at the Adelaide Railway Station, where passengers need to swipe their *metroCARD* or validate their *Metroticket* to gain access to and from the platform.

New *MetroCard* ticketing systems have also been installed on the platform along with enhanced passenger information systems and measures to improve safety at the station, which is one of Adelaide Metro's busiest.

Improvements include new closed circuit TV cameras, improved lighting, new fencing and a new footpath to improve accessibility between the station entrance and the northern footpath. Sliding gates have been installed next to the ticket validation gates to provide an alternative access point for people with prams, wheelchairs and other mobility devices, or for use in an emergency.

Security and safety patrols will be increased at adjacent railway stations to guard against passengers who may try to avoid the ticket gates by disembarking just before or after the Salisbury interchange.

## Emerson level crossing collision halts Seaford line services

A woman's luxury Mercedes Benz was tossed at least 25 metres when hit by a train near Emerson station in the inner southern Adelaide suburb of Black Forest on Wednesday 6 September. (Emerson is located 7.1 kilometres from Adelaide on the Seaford and Tonsley lines.)

The car had become stuck under boom gates and the driver panicked as the train approached. She continued forward through the rail crossing and was subsequently hit by the Seaford-bound train.

Shocked passengers told *The Adelaide Advertiser* the express train travelling out of the city sounded its horn multiple times before applying its brakes and crashing into the car. Passengers said they were stunned as the train carriages shook fiercely during the impact.

Paramedics, Metropolitan Fire Service crews and Police attended the crash at the intersection of South and Cross roads, just after 3.30pm.

The woman driver was taken to Flinders Medical Centre with serious abdominal injuries. She was later reported to be in a stable condition. No one else was in the vehicle. Two dogs inside the car escaped unharmed. No one aboard the train was injured.

Buses were organised to replace trains on the Seaford line. The intersection reopened to traffic and rail services resumed about 7.30pm, after the site was examined.

**Below: Empty GWA grain service 1451S to Bowmans has just departed Dry Creek North yard with GWA005 and GWU007 powering up as they pass a PTS/Adelaide Metro 3100 railcar set on the 07:53 service to Gawler, on Monday 11 September. Domenic Quartuccio**





The wattles are out and there's even a hint of sunshine as Clyde/EMD DQ units 2011 and 2006 storm up to Rekuna with a ballast train on Wednesday 27 September. Ballast was laid in the section from Danby to Colebrook. Steve Bromley

## Push for tourist tram on disused Hobart rail line

Hobart's original city trams would roll back to life under a proposal for a heritage tram service that would run along a picturesque stretch of the city's waterfront.

The plan, which is before Hobart City Council, would see century-old city trams take tourists along the disused rail line from the Regatta Grounds to Cornelian Bay. The proposed tourism attraction would also see the development of a heritage tramway museum, with memorabilia for visitors and space for a volunteer workforce to carry out tram restoration.

Proponents say Hobart's original trams would be a tourism drawcard, especially for those disembarking from cruise ships or heading to any future development at Macquarie Point. The trams would run along a 2.8km section of track, with a potential stop at the Royal Tasmanian Botanical Gardens.

The Hobart Tram Restoration and Museum Society is behind the plan and has presented a business case to Hobart City Council's Infrastructure Committee.

Society vice-president John Kelly, the owner of North Hobart's State Cinema, said the trams would be a unique experience. He said the business case was solid because the initial capital cost would be modest as many of the main ingredients were ready to go. He said the tracks had been assessed as fit for the purpose, and three original trams were already fully restored and waiting to return to service.

Society president Richard Roffe said the society did not want to lock away the trams to tinker with them, but share them with the wider public.

"This is an opportunity for our city, the trams would be for general use," he said.

The society's business case says Hobart City Council owns "three beautifully restored trams, which need only a little extra work to make them fully operational. It has so far invested about a million dollars in these trams, but they are currently locked away in a secure facility for all but one or two days of the year."

Report author Ross Harris said the business case showed the service could be a financially sustainable operation based on a ticket price of about \$10 an adult, with at least 10,800 adult passengers a year.

Mr Harris said the society had paid for a professional inspection of the relevant section of track, which had confirmed the line was in good condition and the correct gauge for the trams. The line would be leased from TasRail.

At Hobart City Council's Infrastructure Committee meeting on Wednesday 20 September, it was recommended the business plan be expertly reviewed and advice provided on the potential capital cost associated with the proposal.

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

## North-East rail line records its best V/Line performance for 2017

The North-East line, to the NSW border at Albury, has shaken the title of the most unreliable regional rail service in Victoria according to August performance data.

Reliability in August was the best for 2017 at 98.8 per cent, beating two other services and the average for all. It's only the second time in the past 12 months the service has avoided coming in as least reliable.

V/Line chief executive James Pinder said punctuality also improved by 5.6 per cent, with 110 of the 143 Albury trains arriving on time. "Reliability also improved to 2.6 percentage points higher than the previous month," he said. "This is the highest reliability figure since December last year and exceeds the 96 per cent target for the third consecutive month."

Mr Pinder said vandalism to track infrastructure was the main reason for delays to Albury line services in August.

Bill Traill of the Border Rail Action Group (BRAG) said the latest performance data had to be taken with a grain of salt, pointing out as recently as May, reliability was just 67.7 per cent. "There can be no sustained improvement in reliability of service until the aged and fragile rolling stock is replaced; nor is there any commitment by the Victorian government to take such action on the North East corridor," he said.

"Real commitment can only be judged by putting money on the table - that clearly hasn't happened on our corridor.

"We will continue to put pressure on the state government, hoping they will abandon their mantra 'When the track is finished, we'll supply the rolling stock' - that's not a commitment, it's a vague promise."

Mr Traill said BRAG had celebrated achievements, working within a group formed with the relevant North East councils. "We have had a visit from three high-level officials within the ARTC," he said. "It's a big breakthrough and recognition the ARTC is prepared to establish contact with BRAG, among others, on the matter of track upgrades."

## PTUA supports call for better services for Ballarat

The Public Transport Users Association (PTUA) has welcomed Committee for Ballarat's new #59minuteballarat campaign, which calls for full duplication of the rail line to Ballarat, electrification of the line to Melton, and faster, more frequent and more reliable services.

PTUA Ballarat Branch Convener Ben Lever said the region needs a long-term bipartisan plan to deliver the infrastructure and services it needs. "The Ballarat line has always been held back by the long single-track sections. Trains need to wait in crossing loops for trains coming the other way, which adds to journey time and limits how frequently trains can run. It also means that when one train is late getting to the crossing loop, other trains need to wait for it - meaning delays spread from one train to another."

"We've seen some fantastic investment recently, with part of the line to be duplicated over the next two years - but there's still a long way to go. With Ballarat's population expected to grow to 160,000 by 2040, and the western suburbs of Melbourne already growing rapidly, we need the full duplication of the line to Ballarat, and electrification of the line to Melton, as soon as humanly possible."

"The good news is, we know this is a sound investment for governments to make - from the Regional Fast Rail project to Regional Rail Link, when governments have invested in a better service, people have flocked to it. If governments continue to invest in better public transport, the public will use it".

The Committee for Ballarat proposal calls for an express train between Ballarat and Melbourne in under an hour, as well as more frequent and more reliable trains.

"The full duplication of the line is going to allow for some dramatic improvements to service on the Ballarat line - not just a faster journey

once you're on the train, but more trains, more often. Not only would running trains more frequently reduce overcrowding and give people more choice in when to travel, it would cut door-to-door journey time - less time waiting on the platform means more time at home with your family."

The State government maintains that Melton can't be added to the electrified Metro network until the Metro Tunnel opens in 2026 - even if this is the case, detailed planning needs to start now, so that the two projects can be built alongside each other and open on the same day. "Adding Melton to the Metro network will not only provide Melbourne's west with a much better service, it will allow Ballarat trains to run express from Melton to Sunshine, reducing crowding and resulting in faster journeys."

The plan also calls for better connectivity to Ballarat's regional neighbours, like Ararat and Maryborough. "Ballarat isn't just a commuter town for people who work in Melbourne - it's also a significant destination in its own right. People come to Ballarat for education, healthcare, shopping and tourism - so we need a frequent, reliable public transport system that can get people here."

## PTAC extended by a further two years

The Victorian Government announced that the Public Transport Access Committee (PTAC) has been extended by a further two years.

On Wednesday 13 September Minister for Public Transport Jacinta Allan announced the 11 member committee will continue to provide valuable advice on major transport infrastructure projects including the removal of dangerous and congested level crossings, and the Metro Tunnel.

The PTAC provides independent advice to the Minister for Public Transport and Public Transport Victoria with the aim of creating a public transport system that is inclusive and accessible to all Victorians. The 11 current members of the Committee represent a cross section of relevant sectors, covering people with a direct experience of living with a disability, through to community advocates, social workers and community transport coordinators.

The new franchise agreements with Metro Trains and Yarra Trams deliver stronger contracts that put greater focus on the needs of passengers with accessibility needs. PTAC will be involved in the annual review of each operator's Accessibility Implementation Plan.

The Committee has provided independent input to help design transport infrastructure and ensure passengers with accessibility needs get the access they need. PTAC will continue to play a key role in the design of the next generation of High Capacity Metro Trains to make sure all Victorians can get on board.

PTAC has also worked closely with PTV and transport operators to build a stronger awareness of accessibility needs and special circumstances among Authorised Officers, to ensure they can continue to look out for those who need assistance on the network.

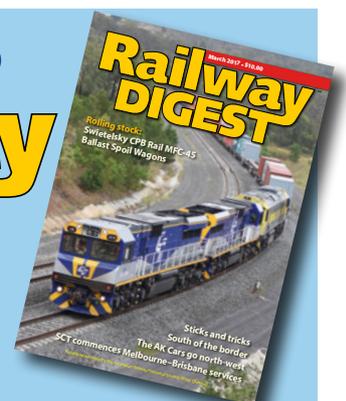
By combining the expertise and knowledge of all 11 committee members in the disability and accessibility sector, PTAC is a key figure in ensuring the successful delivery of the Victorian State Disability Plan 2017-2020.

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, or fill in and post  
the application form on page 59.

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





**Above:** At 09:50 on Tuesday 26 September, VLocity sets 1163 and 1101, as train No. 8746, 09:24 ex-South Geelong, are seen on the 'Flyover' just south of Manor enroute to Southern Cross Station, Melbourne. Steve Munro

**Below:** Clyde/EMD locomotive N473 races through Glenrowan with the Up 12:45pm Albury to Melbourne V/Line service on Thursday 31 August. Dennis Forbes



## Around Melbourne

### Metro Trains and Yarra Trams win new Melbourne public transport contracts

Metro Trains and Yarra Trams will continue to operate Melbourne's public transport after the Victorian Government awarded the pair new contracts worth \$7 billion. The widely expected seven-year deal to grant the contracts comes despite recent major problems on the train network (see October 2017 *RD*, page 24) and a push for public transport to be returned to public hands.

Under the new deal, Metro Trains - a joint venture between Hong Kong's MTR Corporation (60 per cent), John Holland Group (20 per cent) and UGL Rail (20 per cent) - will be banned from the controversial practice of station skipping, a policy used to meet punctuality standards by not stopping when delayed.

The Government is also imposing tougher performance targets and penalties. Trains will now need to be on time 92 per cent of the time per month, up from 88 per cent. Trams will need to be on time 82 per cent of the time, up from 77 per cent.

Metro Trains will face fines of up to \$700,000 if half the network shuts down, on top of performance penalties.

Daily inspections of stations, trains and major tram stops will be introduced, and restrictions on advertising - including a ban on wrap-around tram ads - will be put in place.

Yarra Trams - a joint venture between French transport group Keolis and Downer Rail - will also be banned from changing its services to meet punctuality standards.

There will also be a major investment boost to maintenance and recruitment, including a drive to create 700 new jobs.

The Government said 150 new train drivers, 270 support staff for passengers and 90 maintenance workers would be recruited, with a push for people from disadvantaged backgrounds to be employed.

Victorian Public Transport Minister Jacinta Allan said the deal was created with passengers in mind. "We are cracking down on those things that really frustrate passengers, whether it is the bypassing of the City Loop, station skipping, short running," she said. "[These are] much tougher penalties than what exists currently and we have to remember

too that these tougher penalties are being judged against tougher performance requirements, so we have lifted the bar on both counts."

Failure to meet maintenance of the network could incur \$10 million in fines. The Victorian Government recently revealed Metro Trains had been fined the maximum penalty of \$1.2 million over a computer glitch that forced a temporary shutdown of the network in July (see September 2017 *RD*, page 23).

Under the previous contract, the operators had an exclusive right to negotiate with the Victorian Government for a new deal before other businesses could bid.

Shadow treasurer Michael O'Brien said commuters would end up paying for the 30 per cent pay rise for the operators, adding that the Government should have run an open tender process.

"It's very hard to understand why there wasn't an open tender," he said. "If Daniel Andrews thought that there could have been a better deal, or in fact if Daniel Andrews had thought can the state run it better, then everyone should have been put to the test."

The Greens' Samantha Dunn also said the deal should have been open for competitive tender. "This will deliver seven more years of late, unreliable and overcrowded trains and trams," Ms Dunn said.

The exclusivity agreement is not in the new contract.

The contract's seven years term include a major period of disruption on the network, with the construction of the Metro tunnel, signal upgrades and Mernda rail extension all planned. Metro will receive a more lucrative performance bonus of \$1.25 million per month.

The Rail, Tram and Bus Union (RTBU) has been leading a campaign for more than a year for trains and trams to return to public hands, arguing profits are going overseas rather than being reinvested in network service improvements.

RTBU secretary Luba Grigorovitch said the contract must be released so the public could scrutinise it. "The devil is always in the detail," Ms Grigorovitch said. She said a boost to maintenance must be met with adequate staffing levels. "Without testing the market, without looking at other options and without sufficient transparency, there remains room for improvement and many questions to be answered."

The new franchise term commences on 30 November 2017 and will run until 2024.

Proudly displaying its 'Made in Melbourne for Melbourne' stickers, Bombardier E Class tram 6003 travels along Flinders Street, past the iconic railway station named for the street it serves. Keolis Downer





A V/Line Sprinter DMU set, consisting of cars 7022, 7007, 7004 and 7016 operating Train No.8157 Down Southern Cross to Bacchus Marsh passenger, passes Middle Footscray station on Tuesday afternoon 1 August. John Scott

## Hughesdale station design finalised

The finalised design for Hughesdale station, which will be rebuilt in conjunction with the grade separation removal of the adjacent Poath Road level crossing, was released on Monday 25 September. (Hughesdale is located on the Pakenham and Cranbourne lines approximately 15.5 kilometres from Southern Cross station.)

The station will be rebuilt as an elevated structure on the west side of Poath Road to create convenient access to shops and connections to public transport.

The final design takes into account feedback from the community. Key changes made to the preliminary design include a reduction in the height of the station canopy, improved layout of the station precinct at ground level and improved lighting and security features.

It will be equipped with the following facilities:

- safer access for passengers changing from bus to train via dedicated bus stops next to the station,
- CCTV cameras, lighting and Protective Services Officer (PSO) facilities,
- escalators, stairs and lifts for improved accessibility and pedestrian flow,
- large sections of covered platform and a waiting room,
- commuter toilets, including accessible and ambulant toilets, and baby change facilities for passenger use during station operation hours,
- new public information displays and hearing loops in waiting areas and on platforms,
- a new Parkiteer (secure bicycle parking cage) and bicycle hoops located close to shared use paths and the station entrance; and
- taxi bays, commuter parking including disability permit parking and dedicated drop-off zones.

For more information, visit the Hughesdale Station Design Fact Sheet on the Level Crossing Removal Authority website: [www.levelcrossings.vic.gov.au/home](http://www.levelcrossings.vic.gov.au/home).

# great rail experiences tasmania

## ANNUAL TOUR 2018

Includes **STEAMFEST** in Sheffield





### SAT. 10th - SAT. 17th MARCH

### BOOKINGS NOW OPEN !

Queries or expressions of interest contact  
[admin@greatrailexperiencetasmania.com.au](mailto:admin@greatrailexperiencetasmania.com.au)  
 More information or to book online  
[www.tours.greatrailexperiencetasmania.com.au](http://www.tours.greatrailexperiencetasmania.com.au)

## \$32 million WA Rail Future Fund investment for *Australind*

The *Australind* rail service, which operates between Perth and Bunbury on the WA South Western line, has received a \$32 million funding injection from the Western Australian Government's Rail Future Fund. (Bunbury is located 167 kilometres south of Perth station.)

The funding will see the 30-year old fleet of APD/ADQ class railcars that work the *Australind* service, replaced by modern rollingstock. The new railcars will provide a comfortable, modern passenger environment with features such as an on-board buffet, upgraded seating, Wi-Fi and USB charging points. The new trains will likely be procured as part of the METRONET railcar acquisition program, which will deliver 102 railcars for Stage One projects.

"The existing *Australind* train was introduced into service in 1987 and was expected to have a life expectancy of 30 years," said WA Transport Minister Rita Saffioti. "Procuring the new *Australind* rolling stock as part of the METRONET railcar acquisition program will create efficiencies from a production and delivery timeframe point of view."

The Rail Future Fund support will also provide upgrades for the South Western line stations at Yarloop (124 kilometres from Perth), Cookernup (128 Kilometres) and North Dandalup (70 kilometres) to make them compliant with modern Disability Discrimination Act standards.

The Public Transport Authority is already working with Arc Infrastructure (formerly Brookfield Rail) on the Yarloop upgrade. Transwa will also carry out a service review of existing *Australind* run times for the service to see if journey times can be improved. "By improving the rail connection between the South-West and Perth, we hope to also enhance tourism opportunities", Minister Saffioti commented. "An upgraded service will make it easier for people who may not wish to hire a car and drive long distances on unfamiliar roads to access Bunbury and the South-West."

## Survey reveals WA public transport users happy with service

Transperth and Transwa passengers are happier than ever with their services with the latest edition of independently conducted surveys showing high satisfaction levels among regular bus, train and ferry users, and regional road coach and train passengers.

Now in its 28th year, the Transperth passenger satisfaction monitor (PSM) is the longest-running and most comprehensive survey of public transport users in the country. It conducts more than 4,000 face-to-face interviews with bus, train and ferry passengers across all rail lines and bus contract areas.

This year's results show 89 per cent of bus passengers are satisfied with their services – an all-time high. Train passengers also recorded an all-time high satisfaction level of 94 per cent. The Transperth ferry recorded a 99 per cent satisfaction rating.

Western Australian Transport Minister Rita Saffioti said, "As Minister, I am pleased to see the hard work of staff at Transperth, Transwa and the Public Transport Authority is paying off with continued improvement in passenger satisfaction levels. "The last few years have seen a decline in public transport patronage partly due to the downturn in the economy – these scores are evidence the standard of service continues to improve year on year."

The results of the PSM are supported by research from national consumer research company, Canstar Blue, which last year declared Transperth the winner of its *City Trains – Most Satisfied Customers* award for the fifth successive survey.

The 1,200 passengers surveyed on Transwa – WA's regional public transport provider – road coach and train services also recorded high satisfaction ratings, with nine in 10 happy with their service. Transwa's PSM has been running for 14 years.



BHP Billiton SD70Ace locomotive 4465 leads a loaded train through a cutting at 217 km on the original Mt Newman line on the afternoon of Friday 16 June. Peter Clark



East Perth station on Wednesday 4 October showing the temporary platform extension at the Down end and the new overhead walkway where lifts are being installed. Much of the original platform, and a temporary extension at the Up end, was removed from 22 - 25 September, along with the footbridge. Temporary ramps for access to the platforms now link into the overhead walkway. Down signal 153, which was moved due to the platform extension, is visible. (See report on page 49.) David Whiteford

Road coach users recorded a 94 per cent satisfaction rating, while regional train passenger satisfaction averaged 93 per cent.

Meanwhile, \$500,000 has been allocated in the 2017-18 State Budget for a public awareness campaign aimed at enticing more patrons to use public transport. Under the previous government, public transport patronage steadily declined, with four million fewer boardings in 2015-16 compared with 2012-13. This campaign will aim to bring commuters back to public transport as the WA Government embarks on its METRONET expansion program. "I would urge anyone who hasn't tried public transport lately to hop on board, and see first-hand why the services are more highly rated than ever", Minister Saffioti said.

The full Transperth PSM survey is available online at [www.transperth.wa.gov.au](http://www.transperth.wa.gov.au)

## WA State Budget promises more than \$4 billion to solve transport congestion

The Western Australian Government will inject more than \$4 billion into road infrastructure and the Perth Metronet project in an attempt to solve the state's public transport and congestion woes.

METRONET is the WA Government's long term plan to connect Perth suburbs with world class public transport, reduce road congestion, create local jobs and meet Perth's future planning needs.

In its Thursday 7 September budget, the first delivered since taking power in March, the McGowan Labor Government announced Metronet would see a boost of \$1.34 billion over the next four years while spending almost double that amount improving Perth's road network.

The WA government is allocating funding for 20 key road projects across the state, including the Armadale/North Lake Road bridge over the Kwinana Freeway, a traffic interchange at Wanneroo Road and Joondalup Drive and the widening of the Kwinana Freeway northbound between Russel Road and Roe Highway. "A number of congested roads

had been ignored for too long - we're getting on with the job and giving these areas the attention they deserve," Mr McGowan said.

Premier McGowan also indicated he was keen to start building Metronet straight away, which - together with the road projects - would create thousands of local jobs in the process. "Metronet will be built by Western Australians, for Western Australians," he said.

The State Budget includes support for the following METRONET projects:

- The Forrestfield-Airport Link, as the first METRONET project, is estimated to have \$406.5 million expended in 2017-18, with completion expected in late 2020;
- The \$535.8 million Thornlie-Cockburn Link (with \$423 million over four years);
- The \$520.2 million Yanchep Rail Extension on the Joondalup line (with \$440.8 million over four years);
- \$22.1 million allocated for detailed planning and design work of the Morley-Ellenbrook Line (a 21 kilometre branch from the Midland line at Bayswater) and Byford Rail Extension on the Armadale line;
- \$70 million to remove the Denny Avenue level crossing in Kelmscott (25.9 kilometres from Perth on the Armadale line) and begin planning for the future removal of level crossings at Caledonian Avenue in Maylands (4.5 kilometres from Perth on the Midland line), Oats Street in Victoria Park (6.2 kilometres from Perth on the Armadale line) and Wharf Street in Queens Park (11.4 kilometres from Perth on the Armadale line);
- \$28.2 million towards the Midland Station Project, involving the relocation of the existing Midland Station to Cale Street and an extension of the line to Bellevue;
- Planning for the new Karnup Station on the Mandurah Line, as part of \$101.3 million committed towards new stations and existing station upgrades; and
- A new multi-storey car park at Mandurah Station, with \$16.1 million allocated, subject to a matching funding contribution from the Federal Government.



## Newcastle Interchange opens

Nearly three years after the last passenger train left the old Newcastle station, in controversial circumstances, just before midnight on Christmas Day 2014, the new 'Newcastle Interchange' station at Wickham opened for business, with the first passenger service departing around 2.00 am on Sunday 15 October.

Revitalising Newcastle program director Michael Cassel declared the \$200 million Newcastle Interchange had been "well and truly worth it", despite controversies over the price tag and bitter debate over the truncation of the rail line. "You only have to stand here today and talk to a few people around to know it has been well and truly worth it," he said. "This is the first major milestone for that \$650 million. If we can get the outcome for the rest of the corridor to this standard, we'll be quite happy."

Mr Cassel said the opening of the interchange was a "glorious day" and symbolic of Newcastle's westward march. "This part of the city was chosen as the CBD moves further west," he said. "We're right now in the centre of where the CBD will be in the future, as the east becomes more of a residential village."

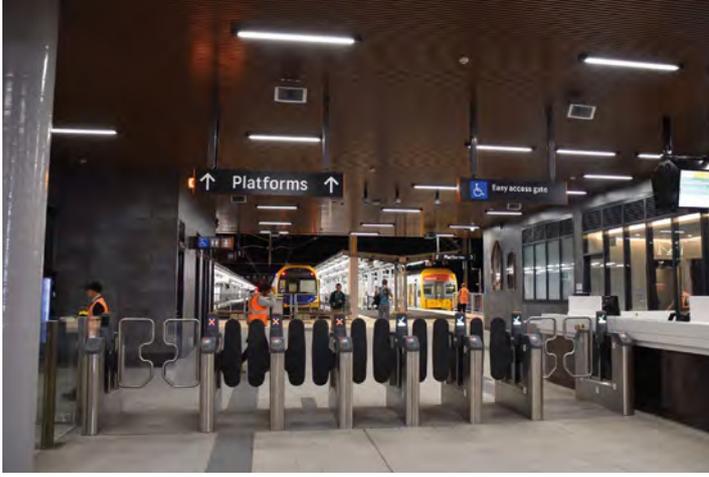
Jo Minter, of Woodbury, told the *Newcastle Herald* the station's opening had made a "big difference" to her morning commute. "It will be a quicker trip," she said, with services previously terminating at Hamilton station. "The facilities look good, and you can see what they're trying to do with the light rail. At the moment, it looks like somebody cares about Newcastle."

The 'official' opening took place the following day, Monday 16 October, attended by NSW Transport Minister Andrew Constance, who said "We are going to see, I think, improved services once we bed-down the transport network. The light rail is progressing now, in terms of its construction, we've got the new inter city trains around the corner."

**Above:** Viewed from Stewart Avenue, in the early hours of Sunday 15 October, the new Newcastle Interchange Station makes an impressive sight. Timothy Pout

**Right:** The entry to the new station on the first day of operation – Sunday 15 October – seen from the concourse. Those hoping to spot a light rail vehicle will have to be satisfied with the 'mock-up' in the light rail platform (on the far left) for the time being. Robert Rouse





**Above left:** A view through the ticket barriers to the platforms, with an H Set and a V Set visible in Platforms 2 and 3 respectively. Timothy Pout

**Above right:** Hunter Railcar sets J2 and J3 waiting to depart from Platforms 1 and 3 with their respective Hunter Valley services. Timothy Pout

**Left:** Oscar set H20 has just arrived on platform 2, having operated the first official Sydney Central to Newcastle Interchange service. Timothy Pout

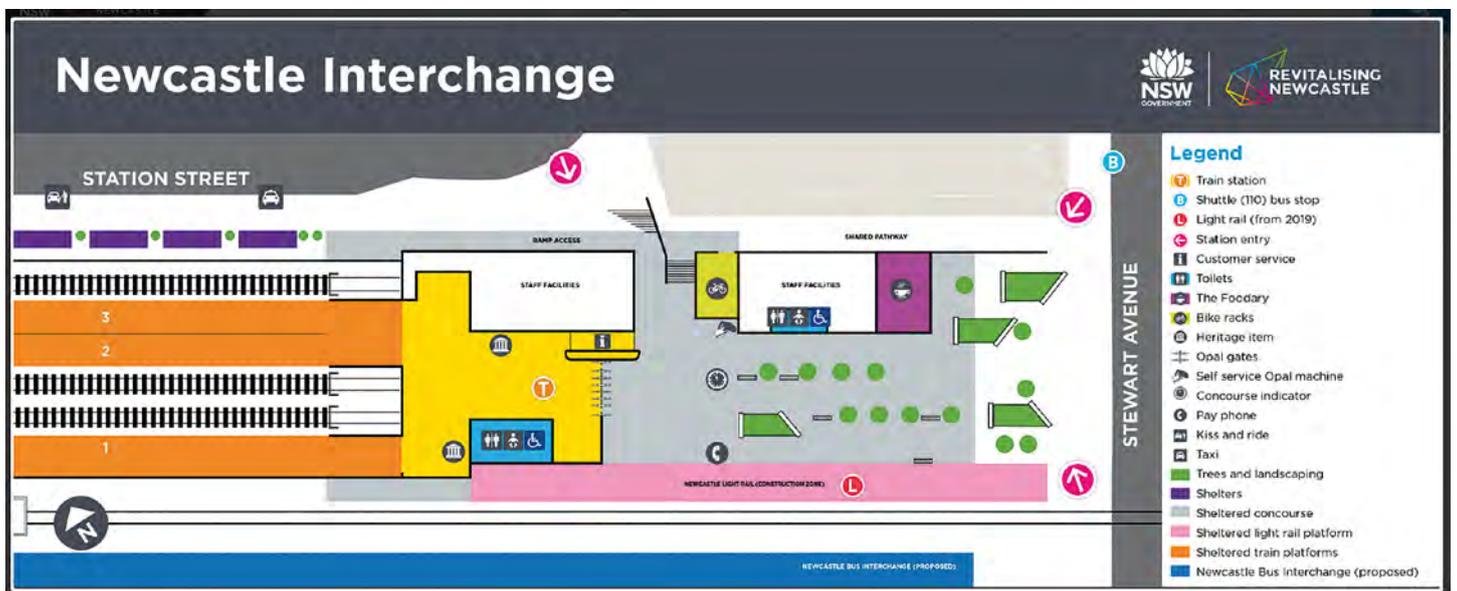
**Below:** The three platforms, looking west, with a Hunter railcar set on the right, which has just arrived with a service from Dungog, on Sunday morning 15 October. Robert Rouse

**Bottom:** The layout of the Newcastle Interchange station. Courtesy Transport for NSW

“In terms of negativity, that’s a thing of the past – let’s get on with it.” He said it was time for the city to look towards the arrival of light rail – between the interchange and Pacific Park – in 2019.

Labor lord mayor Nuatali Nelmes said Newcastle City Council was “pushing hard” for a commitment from the government to extend the light rail network. “It’s a really exciting time to be a Novocastrian and, although we don’t have all the pieces of the puzzle together for the transport network that we do need, we are still working very hard at council to make sure we get an integrated transport master plan by the end of this year,” she said.

Rail, Tram and Bus Union secretary Alex Claassens called the interchange the “re-opening of Wickham station”. “The minister is here in Newcastle making a song and dance about wasting millions of dollars on a project that has inconvenienced commuters and caused pain for local businesses and workers,” he said.



# The Townsville to Mt Isa

Text and images by John Hoyle



Aurizon has a contract with Incitec Pivot Limited to supply sulphuric acid to the company's Phosphate Hill fertiliser plant from Sun Metals zinc refinery at Partington (Townsville). Aurizon also hauls sulphuric acid from Glencore's Mount Isa mine to Phosphate Hill. In this Friday, 1 September view a 'long-haul' sulphuric acid train (No. 9T76) comprising Coninan/GE unit 2825 and Downer EDI/EMD locomotives 4034 and 4047 leading 52 OSZY wagons leased by Incitec Pivot from US-based wagon leasing company, GATX, is approaching Richmond on its way to Phosphate Hill.

# Railway





## Historical background

Stretching 966 kilometres from Stuart, 10 kilometres south of Townsville on Queensland Rail's North Coast Line, to the inland mining city of Mount Isa, Queensland Rail's (QR) Townsville to Mount Isa Line has played a significant part in the development of North Queensland. Gold discoveries at Cape River, Ravenswood and Charters Towers provided the impetus for railway construction west from the then new port of Townsville. The 133 kilometre Townsville to Charters Towers section, which included a tortuous and steep ascent of the Haughton (Mingela) Range and the large bridge across the Burdekin River at Macrossan, was opened for business on 4 November 1882, using the road bridge across the Burdekin River at Macrossan until the rail bridge was completed in January 1899. The line was an immediate success and it is interesting to note that the level of traffic necessitated a new alignment up the Haughton Range, which allowed double the load to be hauled, just five years after the original line was opened.

In 1881 the Queensland Parliament approved an extension to Hughenden to serve extensive grazing country. This 245-kilometre section, which included the ascent of the Burra Range (actually part of the Great Dividing Range), was completed in sections by different contractors and officially opened on 9 October 1887. The next extension was not westwards but south west to Winton which is 272 rail kilometres closer to Townsville than Rockhampton. The line to Winton was opened in July 1899. The line to Mount Isa is generally referred to as the Great Northern Railway although technically the 'GNR' was originally the line to Winton. In addition to large numbers of sheep and cattle, mining activity in the Cloncurry area acted as the catalyst to extend the line west from Hughenden across the black soil plains to the 'Curry'. The Hughenden to Richmond section was officially opened in June 1904, Richmond to Julia Creek in February 1908 and the section to Cloncurry was officially opened in December 1908. Mining activity prompted the next extension to what is today's Mount Isa line, this time south west, reaching Duchess on 21 October 1912.

The discovery of huge silver, lead, zinc and copper deposits at Mount Isa prompted the construction of the 87-kilometre extension north west from Duchess to Mount Isa. It was opened on 27 May 1929 and soon the weekly mail train, the forerunner of today's *Inlander*, was

**Above: Cattle trains, operated by Aurizon and operating under contract to the Queensland Government, continue to be part of the Mount Isa line traffic mix with loading conducted at Hughenden, Richmond, Julia Creek and Cloncurry. On Tuesday, 5 September an empty cattle train is arriving at Gemoka loop, between Richmond and Julia Creek, with plenty of motive power in the form of Goninan/GE units 2817 and 2848 plus Clyde/EMD 2481D hauling 33 flat wagons carrying Queensland Government-funded QGCU containers.**

travelling from Townsville to Mount Isa in 30 hours. The extension proved to be the last main line opened in Queensland's initial railway construction phase. Just three years later, as the Depression dampened economic activity and roads and motor vehicles improved, construction of the traditional 'general traffic' regional railway in Queensland ceased with the opening of the Thangool – Lawgi branch in September 1932.

The Mount Isa line spawned a number of branch lines primarily intended to serve mining activity, but also in some cases playing a role in livestock transport. Tracks reached places like Ravenswood, Mount Cuthbert, Dobbyn, Selwyn and Dajarra. All have now closed but a new branch line prompted by mining activity of a different type, this time for phosphate used for the manufacture of fertiliser, was constructed from a new junction called Flynn, eleven kilometres north of Duchess, to serve a rock phosphate mine located at Phosphate Hill, around 50 kilometres east of the former branch line terminus of Dajarra. The 66-kilometre line was opened for business on 12 April, 1976. Output from this mine was railed to Townsville for export but the traffic proved to be shortlived. However, a fertiliser manufacturing plant (currently operated by global company Incitec Pivot Limited) was subsequently built at Phosphate Hill and this plays a major role in providing business for the Mount Isa line.

Undoubtedly, the most significant event in the history of the Townsville – Mount Isa line was the upgrading of the entire line between 1961 and 1965 to cater for a projected lifting in daily ore production at Mount Isa from 4,000 tonnes in 1954 to 14,000 tonnes by 1965. After much negotiation, the Commonwealth Government agreed to provide a \$40 million loan with the Queensland Government funding the remaining \$20 million. Supervised by US consultants Ford, Bacon and Davis, Hornibrook and Thies were the major contractors.

The entire line west of Hughenden was virtually reconstructed with the formation lifted in flood-prone areas and 82 pounds/yard (41 kilograms/metre) rail installed. Timber bridges were replaced with pre-stressed concrete structures west of Richmond. All crossing loops were lengthened and equipped with trailable facing points to allow trains to cross ‘street tramway style’ without crew having to stop the train and set and reset the points. A major work was the construction of a new steel truss bridge over the Burdekin River at Macrossan and deviations were carried out on the Haughton (the third alignment up this range) and Burra Ranges and other locations which reduced the ruling grade to 1 in 90 between Townsville and Hughenden while west of Hughenden the ruling grade was eased to 1 in 125. At Hughenden, the existing line had travelled through the town in a semi-circle so a town bypass and yard was provided as part of the scheme. However, the former alignment and station were retained for passenger and local freight traffic. On the North Coast Line, the 10-kilometre section from Stuart south to Nome was duplicated to cater for coal traffic destined for Mount Isa from Collinsville.

The project was not confined to fixed infrastructure with ten 1250 Class English Electric locomotives and 400 WHO open wagons, which were designed to carry coal westbound from Collinsville to power the Mount Isa mine and east with ore from the mine, were ordered. Queensland railway historian John Kerr commented, “The transformation was impressive, giving QR its first substantial railway.” However, he also noted that inadequate allowance was made for floodways on the plains between Richmond and Cloncurry and over the years extensive washaways have occurred on this section. As recently as 27 December 2015 an Aurizon sulphuric acid train hauled by 2814 derailed when it encountered a washaway near Quarells, 20 kilometres east of Julia Creek (see February 2016 *RD*, page 15).

## Today’s railway

Today’s Mount Isa Line comprises not only the 41 kg/m rail laid as part of the 1960s upgrade project but also 47, 50 and 60 kg/m rail used in more recent years on a mix of steel and concrete sleepers. There is currently a program to replace all remaining steel sleepers with concrete ones and lighter rail is gradually being replaced with 60 kg/m rail. After the Mount Isa upgrade scheme finished, a program continued to replace all remaining timber bridges with concrete structures. The maximum axle load is 20 tonnes and the maximum permitted speed for all trains is 80 km/h between Stuart and Hughenden but it is only 60km/h between Hughenden and Cloncurry. The latter section is built across the black soil Flinders Plains and is susceptible to flooding in summer months as mentioned above. In addition, the black soil is relatively unstable as it swells in the wet season and contracts during the drier, cooler months and the lower speed limit is designed to compensate for those fluctuations. Between Cloncurry and Mount Isa a maximum speed of 60 km/h applies while 80 km/h is the limit between Flynn and Phosphate Hill.

There are 44 crossing loops between Stuart and Mount Isa, the shortest loop, 1009 metres, is at Marathon (this is the maximum permitted train length on the line) and the longest (at Sellheim) 1,240 metres. The crossing loops are set for right-hand running through the spring-loaded trailable facing points at each loop and a speed limit of 25 km/h applies while traversing loops. Reflecting its location in the Great Dividing (Burra) Range, the crossing loop at Burra, 270 kilometres from Stuart, is the highest point on the line at 555 metres, contrasting with 18 metres at Stuart. Highlighting the tropical climate through which the Mount Isa line passes, 23 automatic weather monitoring stations are located along the line and the same number of dragging equipment detectors are provided along the track.



The most impressive piece of infrastructure on the Townsville – Mount Isa line is the six-span steel truss Burdekin River bridge at Macrossan, 22 kilometres east of Charters Towers. In this Tuesday, 29 August view Pacific National’s (PN) No. 9M22 Partington to Mount Isa train is crossing the ‘new’ bridge, built as part of the Mount Isa line upgrade project and opened in May 1964. PN uses distributed power on their Mount Isa trains and in this case EDI Downer/EMD unit 8317 is the mid-train locomotive. The old bridge, the main spans of which are still intact, was opened in January 1899, having replaced a temporary arrangement where the nearby road bridge was altered to take rail transport until the new bridge opened. The new bridge was built to accommodate a 26.8 tonne axle load.

Hot box/wheel detectors and overload and imbalanced load detectors are used at three locations while there is one wheel impact load detector – at Toonpan, 18 kilometres from Stuart.

There is a ballast siding at Barabon, between Hughenden and Richmond which is supplied by road from a nearby quarry. It is equipped with two dead-end sidings and linked to the main line by a triangular junction or 'fork' in QR parlance. The Flynn to Phosphate Hill line uses 47 kg/m rail laid on concrete sleepers and there are two intermediate crossing loops on the branch. Balloon loops are provided at Yurbi, 17 kilometres east of Cloncurry, for loading mineral output from the Cannington mine, at the Phosphate Hill fertiliser plant and at Mount Isa.

The Mount Isa system uses remote control signalling (Centralised Traffic Control) between Stuart and Antill Plains (the first loop travelling west) and QR's 'home-grown' radio-based Train Orders system, Direct Traffic Control (DTC), is employed on the rest of the trackage. The entire Mount Isa line and the Phosphate Hill branch is controlled from the Townsville Control Centre located in the former station building in Flinders Street, Townsville. Colour light signals are rare on the line, usually located at level crossings where the signals are interlocked with adjacent flashing lights for road traffic. However, an interesting arrangement applies at the triangular junction for the Phosphate Hill branch at Flynn where the three sets of points are power operated and colour light signals provided at each set – all controlled by Townsville – but within a DTC area so the usual Block Limit Boards associated

with DTC are located adjacent to the colour light signals. Contrary to conventional arrangements elsewhere, but in accordance with QR practice on 'inland' lines, Up trains travel westwards and Down trains move towards Townsville.

An interesting feature on the Mount Isa line is the provision of Automatic Train Protection (ATP) at each crossing loop. ATP is activated three kilometres prior to entering a loop and deactivated upon departure. Track-mounted transponders are provided at each loop and the locomotive on-board system registers entry in to each loop's ATP territory. The transponders provide speed board data when interrogated by the reader under each locomotive. The ATP is arranged to monitor the locomotive's speed and the train's DTC authority to stop or continue through the loop in relation to the DTC Block Limit Boards. If a driver does not take action to control a train within the issued authority the system will force the train to stop before the limit of authority is reached. In the event that transponders are removed through track maintenance or other issues the DTC system will use GPS as a back-up to provide warnings to drivers but only the ATP will make a brake application if there is no action by the driver. The GPS warns drivers when they are approaching (one kilometre) their limit of authority with or without the ATP activated. The train controller will receive a prompt if a DTC authority is exceeded.

The system was designed by QR through integrating the Invensys (Westinghouse Signals) continuous ATP system used on QR's North



Pacific National (PN) is the contractor for haulage of mineral output from Glencore's Mount Isa mine to Townsville. The company's two trains used for the service employ distributed power, Electronically Controlled Pneumatic braking and a crew car, allowing 'two on, two off' crewing over the journey. In this Tuesday, 29 August view PN's No. 9M22 to Mount Isa, headed by Downer EDI/EMD units 8318 and 8320, plus crew car RZNY 2 (with 8317 located mid-train out of view), traverses the well-known 'red cutting', nine kilometres west of Pentland. This location was used for Queensland Railways official photos in the 1960s in association with the Mount Isa line upgrading project.





**Aurizon has a contract with South 32 to haul output from the company's silver/lead/zinc mine located at Cannington, 166 kilometres south of Cloncurry, to the Port of Townsville. The minerals are road hauled from the mine to a loading point called Yurbi, 17 kilometres east of Cloncurry, where trains are loaded for the run to the Port of Townsville. In this Wednesday, 30 August view a "Cannington" train (No. 9257) comprising two EDI Downer/EMD 4000 Class units, 4048 and 4035 and 60 GSZY wagons, is about to arrive at the port. There is a proposal to replace the "Jetty" line as this is known with a new railway to the east of Townsville to improve train operations and eliminate level crossing conflict.**

The huge Mount Isa mine, operated by international resources company, Glencore, currently has a take or pay contract with Pacific National (PN) to ship its output to Townsville. PN's trains depart from the company's terminal and maintenance centre at Partington, which is located on the North Coast Line, immediately south of Stuart. PN's trains are of interest in that they use distributed power with normally two Downer EDI/EMD 83 Class 2,260kW (3,030 hp) GT42CU-AC locomotives at the front and another mid-train. Electronically controlled pneumatic (ECP) braking is used and an RZNY crew car, a former South African Railways sitting car, accompanies each train with crews working, as mentioned earlier, on a 'two on, two off' basis for the trip to and from Mount Isa. The PN trains, which can gross up to 7,280 tonnes (the heaviest on the line), carry a mix of minerals including concentrates carried in Ecofab-covered ROAF gondola wagons and copper anodes conveyed in RNDY flat wagons from Glencore's copper smelter at Mount Isa to the company's copper refinery at Partington, served by a siding off the North Coast Line. The PN train also carries lead ignots from the lead smelter at Mount Isa to Partington for road delivery to the Port of Townsville. In addition, containerised cement is carried to Mount Isa providing welcome business in the westbound direction. Generally, around four PN services, operated by two train sets, are scheduled in each direction each week. When the PN trains arrive at Partington the ROAF wagons are detached and taken to the "Jetty" as the Port of Townsville is known in railway circles.

Earlier mention was made of the important contribution made by Incitec Pivot's fertiliser plant at Phosphate Hill to the Mount Isa Line. In fact, the plant is the largest single traffic generator on the GNR, consuming 1.25 million tonnes of sulphuric acid and producing 1 million tonnes of fertiliser each year. The acid is used to manufacture fertiliser and this is railed from both Glencore's Mount Isa mine (where Incitec Pivot has a plant) and from the Sun Metals refinery at Partington. The sulphuric acid is a by-product of the smelting process and its emissions. Sulphur dioxide is collected and cleaned, converted in to sulphur trioxide then to liquid sulphuric acid. Aurizon currently has the contract to rail sulphuric acid from Mount Isa and Townsville to Phosphate Hill.

'Short-haul' acid trains, normally comprising 26 distinctive OSZY tank wagons owned by US-based wagon leasing company, GATX, and hauled by either a single Goninan/GE 2800 Class 2,830 kW (3,190 hp) CM 30-8 locomotive or occasionally a Downer EDI/EMD 4000 Class 2,260 kW (3,030 hp) GT42CU-AC unit, shuttle between Mount Isa and Phosphate Hill. There are approximately three services in each direction in each 24-hour period. Incitec Pivot leases the OSZY wagons from GATX and UGL has the contract to maintain them.

The sulphuric acid from the Sun Metals plant is also moved in OSZY tank wagons, generally in either 52 or 26 wagon trains. The impressive 52 wagon trains, which gross over 4,000 tonnes, are usually powered by a mix of 2800 Class and 4000 Class units while the 'short' version is generally powered by a single 2800 Class unit. There are normally around four Sun Metals acid trains in each direction each week. Fertiliser produced at Phosphate Hill is railed to Townsville's 'Jetty' for export by Aurizon in 4,720 tonne trains generally made up of two 4000 Class locomotives and 57 VFMQ hopper wagons equipped with Ecofab roofs. Approximately one fertiliser train operates in each direction each day.

Apart from the acid and fertiliser services, Aurizon's other resources-related service on the Mount Isa line is the haulage of silver and lead mined at South 32's (a company spun off from BHP) Cannington mine which is located 166 kilometres south of Cloncurry. The mine's output is road-hauled in large road trains north to McKinlay and then north-west along the Landsborough Highway to a loading point called Yurbi, 17 kilometres east of Cloncurry. South 32 says the mine is one of the world's biggest producers of silver and lead at present. The 4,800 tonne 'Cannington' trains normally comprise two 4000 Class locomotives hauling 60 GSZY wagons covered with Ecofab roofs which run to the Port of Townsville for unloading and export approximately three times each week.

Aurizon had operated a multi-customer intermodal service between Townsville and Mount Isa but following the loss of the Glencore Mount Isa contract to Pacific National, Aurizon decided to abandon this service from 31 January this year. Some fuel continued to be moved by Aurizon (see photo, page 17, July 2017 RD) but it is understood that has now ceased.

Coal haulage from the Collinsville mine to Mount Isa for power generation was once a valuable haul for QR, especially as it was in the reverse direction to the mineral traffic and, as mentioned earlier, the wagons were designed to back haul minerals to Townsville to reduce costs. However, the conversion of the Mount Isa power station at Mica Creek to gas in 2000 put an end to that business but coal and coke haulage by rail to the Mount Isa lead smelter continued until September 2016 when the Bowen coke works was closed by Glencore. The company says it will now import coke, mainly from Asia, while the coal is transported by road.

Cattle transport, associated with the GNR since its earliest days, still survives albeit now subsidised by the Queensland Government and operated by Aurizon under the Livestock Transport Services Contract (LTSC) with Queensland Transport. Cattle are currently loaded at Hughenden, Richmond, Julia Creek and Cloncurry for transport to meatworks, normally to JBS Australia's Rockhampton and Dinmore (Ipswich) facilities. Cattle trains currently comprise Aurizon's PCUY, PCZY, PJCY and the newer AAQY flat wagons each carrying a Queensland Government-funded QGCU cattle container and generally hauled by 2800 Class units with the assistance of Clyde/EMD 'low nose' units, although the 'Clyde's' presence on the GNR has greatly diminished in recent times. The current LTSC with Aurizon is set to expire at the end of this year.

The only other regular train on the line is the twice-weekly overnight Townsville – Mount Isa *Inlander* passenger service. Illustrating the 'fragmented' nature of today's railway, the train's cars and passenger attendants are provided by QR but Aurizon provides the motive power

(normally a toilet-equipped Clyde/EMD 'low nose' 2300D Class unit) under a 'hook and pull' contract. The cars are serviced under contract at UGL's Bohle plant (where the 2800 Class locomotives were built) on the northern outskirts of Townsville – a reflection of the absence of any QR passenger car maintenance facilities in Townsville now. As previously reported in this magazine there are now no sleeping or buffet cars provided on the service, although passengers are provided with basic breakfast/lunch/dinner packs and self-service tea and coffee free of charge. Snacks and drinks are sold in a lounge area that occupies half of the LSCL staff car. Patronage is now minimal, often in single figures and barely outnumbering the three passenger attendants. Occasionally a school student charter, numbering up to 120 students, boosts numbers. The train is heavily reliant on government support and its future is dependent upon the political attitude towards provision of such services in regional areas and whether Governments are dependent upon regional independent members for political survival.

Apart from the private motor car, which dominates passenger transport on the GNR corridor, the *Inlander's* 'competition' comprises an overnight Greyhound coach running between Townsville and Mount Isa twice a week while Bus Queensland provides a mix of day and overnight services thrice weekly between the two cities and also provides a weekday return service between Charters Towers and Townsville. QantasLink operates several days a week between Townsville, Cloncurry and Mount Isa and Regional Express provides a thrice-weekly return air service between Townsville, Hughenden, Julia Creek and Mount Isa.



On Saturday, 26 August, Queensland Rail's twice-weekly *Inlander* overnight passenger service from Townsville to Mount Isa (No. 3M34) has just left Charters Towers with Aurizon's Clyde/EMD unit 2301D hauling power/luggage van QPB 1995, lounge/staff car LSCL 1908 and sitting cars LAL 1877 and LBL 1931. On this day there were just six passengers on board from Townsville – a typical loading for this train, which relies very heavily on state government support.

## The rationalised railway

The 'skeletal' *Inlander* is a reflection of the rationalisation of facilities along the Mount Isa Line in recent years as rail has largely vacated the general freight scene, and as QR and the two current rail operating companies using the line strive to reduce costs in the face of increased road competition along the corridor and, in the case of the operating companies, endeavour to provide a return for shareholders. Locomotive depots at Hughenden and Cloncurry, occupying relatively modern buildings associated with the 1960s rail upgrade, are now empty, goods sheds are disused and the modern intermodal yard at Mount Isa is deserted following Aurizon's withdrawal from intermodal operations. Locomotives can be refuelled at facilities on the main line at Hughenden (on the bypass) and Cloncurry (just west of the yard) without the need to detach from their trains. Illustrating this rationalisation, Charters Towers is no longer a train crew depot as previously mentioned and the town's railway station is now deserted. Hughenden, Cloncurry and Mount Isa station buildings provide offices for Aurizon train crew (Stuart is the other depot for Mount Isa line Aurizon train crew). There are no facilities for passenger ticket sales at any station on the line. As mentioned earlier Pacific National's services use crew cars so Townsville (Partington) crews operate the entire service.

As in other parts of Australia this reduction in railway staff, although necessary in a competitive environment and inevitable with the adoption of new technology and work practices, has had a negative impact on towns along the Mount Isa line and nowhere can this be better illustrated than at Hughenden. This was very much a 'railway'

town with a heavy reliance on railway employment in the steam era. It featured a large locomotive depot, marshalling yard and train control office. Its importance lay in not only being the junction for the Winton line but also because it marked the western end of the heavily-graded sections of the line, so trains were remarshalled at Hughenden to increase or reduce loads. In the early diesel era it marked the end of '90 tonne' locomotive working from Townsville, with only '60 tonne' units allowed west of the town.

The 1960s upgrading project brought changes to Hughenden with the previously mentioned rail bypass and operation of '90 tonne' locomotives through to Mount Isa which, combined with the line's regrading, allowed significantly increased train sizes and reduced the need for marshalling and crewing requirements. Later the elimination of train guards further reduced train staffing numbers and road transport gradually eroded general freight business. The installation of steel, and later, concrete sleepers plus mechanised track maintenance, reduced the staff requirements at the town's track maintenance depot (other track depots on the line are at Charters Towers, Richmond, Julia Creek, Cloncurry and Mount Isa, around 100 personnel are now required to maintain the entire line). The line to Winton has closed and the junction points have been lifted, further reducing Hughenden's importance. Today, Hughenden has just 13 train drivers based in the town and the impact in railway employment downsizing is dramatically illustrated by the town's population, which has effectively halved from 2,329 in 1961 (just before the Mount Isa line upgrade project started) to just 1,136 at the 2016 Census.



QR's twice-weekly *Inlander* arrives at Mount Isa station on Sunday, 3 September after its overnight journey from Townsville. On this occasion the train, hauled by Clyde/EMD 2301D, had been built up from four to seven cars for a school student group of around 120 travelling to Townsville that afternoon. The station building, part of which is used as an Aurizon train crew office, was built as part of the Mount Isa rail upgrade in the 1960s. Glencore's huge mine and associated plant forms the backdrop to the station yard, which now sees little activity as a result of changing rail operations, including the loss of non-mineral business.



In addition to its contract to haul sulphuric acid from Sun Metal's Townsville refinery to Incitec Pivot's Phosphate Hill fertiliser plant, Aurizon also operates 'short-haul' acid trains between Glencore's Mount Isa mine and Phosphate Hill, a distance of 164 kilometres. The tailings from the Phosphate Hill plant form a backdrop to one such train that has just departed Phosphate Hill on Saturday, 2 September with Goninan/GE unit 2811 hauling 26 empty OSZY tank wagons back to Mount Isa where Incitec Pivot has a sulphuric acid plant within Glencore's mine area.

### Competition and the future

Any traveller on the Flinders Highway (Townsville to Cloncurry) and the Barkly Highway (Cloncurry to Mount Isa) will immediately notice the large number of road trains operating on those roads. Many are carrying minerals, cement, fuel and cattle – commodities that were once largely the preserve of rail on the Townsville – Mount Isa corridor. As mentioned earlier QR says that around 5 million tonnes of freight a year is currently carried on the line but in 2012/13 6.65 million tonnes were moved. Much of this decline can be attributed to road transport competition. Illustrating this shift to road, Red River Resources is reopening a zinc/lead/copper mine at Thalanga, 190 kilometres west of Townsville. This mine was once served by rail but the loading siding has been removed and the mine's current output will be road hauled to Townsville. With the abovementioned closure of Aurizon's intermodal service further freight moved to road transport causing community disquiet. Speaking to the *Townsville Bulletin* in August this year Richmond Shire Mayor, John Wharton, said the Queensland Government needed to 'step up' and get the Townsville to Mount Isa line running at peak efficiency. Cr Wharton said mining companies were sending 'enormous volumes' of ore and other freight by truck and paying no access fees but trains on the line had to pay access fees. The Mayor said he was very supportive of the trucking industry, but he said even trucking companies were questioning the number of trucks on the road carrying mining-related freight that should be on trains.

QR Chief Executive Nick Easy responded saying the Government had invested \$58 million over the last financial year in improving the performance and safety of the line. Mr Easy said QR was building on this investment by undertaking a major \$25 million project to replace 51 kilometres of steel sleepers with concrete sleepers between Julia Creek and Mount Isa, which was expected to be completed by October. Cloncurry Mayor, Greg Campbell, told the *Townsville Bulletin* the State Government needed to invest in capital upgrades on the GNR and the amount of freight using rail should be increased. Cr Campbell said the proposed Eastern Access Rail Corridor leading to Townsville Port needed to be built to improve train operating efficiency and reduce costs.

However, from the rail customer perspective, complaints from miners about freight rates have been a familiar theme in the line's history. In 1932 Mount Isa Mines (MIM) appealed to the Government to reduce freight rates and when the massive 1960s upgrading project was being planned, MIM again complained about high freight rates and said it would prefer to build its own railway to a port in the Gulf of Carpentaria. Indicating that using a Gulf-located port for mining activity is a viable option for some mines, the Century zinc and lead mine, located 250 kilometres north-west of Mount Isa, used a 304 kilometre slurry pipeline to link the mine to a port at Karumba. This mine closed in 2015. Ironically, it was originally proposed to connect Cloncurry with Normanton by rail and to export minerals via the Gulf. In December 2016 Glencore commented that in the past five years the company's below track costs for rail transport had 'increased significantly' against a backdrop of prolonged low commodity prices. This year, in response to the abovementioned calls for better utilisation of the GNR, a Glencore spokesperson said rail transport had not always been as cost effective as road although those remarks were made at the time Aurizon had lost the Mount Isa mineral contract.

Although it is just a proposal at this stage, another possible threat to the GNR is the Northern Territory (NT) Government's promotion of a 600 kilometre standard-gauge railway from Tennant Creek on the Adelaide – Darwin line to Mount Isa via Camooweal. In December 2015 the NT and Queensland Governments agreed to develop a 'joint investment framework' to determine how to best invest in the 'Townsville to Darwin' corridor and the NT Government allocated one million dollars to initiate a feasibility study into constructing the railway. The study by Port Jackson Partners was expected to take two years to complete. Avenir Limited's Wonarah phosphate deposit, around 200 kilometres east of Tennant Creek, has been touted as a catalyst to construct a railway to Mount Isa. However, Avenir has not yet proceeded with any mining activity. The total distance from Mount Isa to Darwin via the proposed railway would be around 1,500 kilometres, compared with just under 1,000 kilometres by rail from Mount Isa to Townsville.



**Above:** Aurizon is contracted to transport fertiliser from Incitec Pivot Limited's Phosphate Hill plant to the Port of Townsville. In this view on Thursday, 31 August at Oorindi, Downer EDI/EMD 4000 Class locomotives 4049 and 4046 and 57 empty VFMQ wagons (Train No.9T76) are crossing an empty sulphuric acid train (9Y93) travelling from Phosphate Hill to Sun Metals' Townsville zinc refinery and comprising Goninan/GE 2834 and 26 OSZY tank wagons. Located in the 131 kilometre Julia Creek – Cloncurry section, Oorindi once boasted a refreshment room when such facilities were provided for travellers on the Mount Isa line

**Below:** Aurizon has a contract with Incitec Pivot Limited to supply sulphuric acid to the company's Phosphate Hill fertiliser plant from Sun Metals zinc refinery at Partington (Townsville). Aurizon also hauls sulphuric acid from Glencore's Mount Isa mine to Phosphate Hill. In this Monday, 28 August scene a 'long-haul' sulphuric acid train (No. 9T90), comprising Goninan/GE unit 2833 and Downer EDI/EMD locomotive 4039 leading 52 OSZY wagons leased by Incitec Pivot from US-based wagon leasing company, GATX, is at Torrens Creek on its way to Phosphate Hill.



While the Mount Isa Line has seen many challenges and loss of business to road competition, new mining developments in the North-West Mineral Province hold promise of new opportunities. Many of these will only proceed if mineral prices are at the right level and, illustrating this, one new mine is coming on stream as world zinc prices rise. MMG Limited is developing a zinc mine at Dugald River, 65 kilometres north west of Cloncurry, which is expected to produce around 170,000 tonnes of zinc concentrate a year. The concentrate, loaded in to half-height containers (1,750 have been purchased), will be transported via the Burke Development Road to the disused container siding at the eastern end of Cloncurry yard. Aurizon has won the contract to haul the zinc concentrate to Townsville in 5,600 tonne trains and the company is currently recruiting locomotive drivers to join its existing 40 train crew based at the 'Curry. Mine production is expected to begin late this year. The containers will be emptied in to ships for export.

A potential new rail customer is international company Agripower which operates an amorphous silica fertiliser plant at Charters Towers using raw material trucked from its mine near Greenvale, 300 kilometres north of Charters Towers. The company announced a \$35 million expansion in June 2017 to produce 500,000 tonnes of containerised fertiliser for export through Townsville. Agripower has been negotiating with QR to build a spur line to the plant and Aurizon has been signed up as the rail haulage operator. Agripower has plans to produce up to 5 million tonnes of product each year. The current production of 30,000 tonnes is presently road hauled to Townsville but the company says that when production exceeds 200,000 tonnes a year it will move to rail.

Another proposal that may benefit the Mount Isa line is a planned intermodal terminal located 10 kilometres east of Cloncurry. The terminal's proponent, Grand Central Industries, has lodged a development application with the Cloncurry Shire Council and the council is currently inviting community feedback on the proposal. Mayor Greg Campbell said the facility would consist of a rail loop where trucks could deliver mining output like concentrates and pick up mining supplies such as diesel fuel. Cr Campbell said he was a strong advocate for transporting heavy, non-time-critical freight from Cloncurry to Townsville by rail. A Grand Central Industries spokesperson told the *North Queensland Register* the loading facility had substantial government and industry support.

In 2012 QR produced an Infrastructure Master Plan for the Mount Isa Line, which commented that the development potential for the railway was 'enormous'. The Plan highlighted that sizeable deposits of phosphate rock, copper, lead, zinc and sulphur were located in the North - West Mineral Province and that there were 'exciting opportunities' emerging in connection with the Northern Galilee Basin's substantial coal deposits, located south of Hughenden. The Master Plan provided three growth scenarios for the line. The first was a base case of 8 million tonnes a year (as mentioned earlier current haulage is around 5 million tonnes a year). This would involve a small

amount of 'user funded' capacity enhancements, including two new crossing loops and four new holding roads.

A medium growth scenario of 20 million tonnes a year was dependent upon an initial 10 million tonnes per annum of Northern Galilee Basin coal being hauled. This traffic level would require crossing loop extensions to 1,500 metres and QR says that at this point the previously mentioned Townsville Eastern Access Rail Corridor would be required to redirect Mount Isa Line services to a dedicated railway to the Port, reducing the need to break up trains at Stuart and Partington and relieving impacts on the numerous level crossings within the city. The proposed alignment for this line leaves the North Coast Line via a triangular junction at Cluden, just north of Stuart, and proceeds around the east of the city roughly parallel to the Townsville Port Access Road, funded by State and Federal Governments and opened in 2012.

The final scenario envisaged 50 million tonnes or more a year on the line of which 30 million tonnes might be coal from the Hughenden area and additional outputs of 5 million tonnes from Cloncurry and 3 million tonnes from/to Phosphate Hill. This would require full duplication between Hughenden and Stuart, introduction of new train control technologies and possibly construction of a dedicated coal railway from Charters Towers to Kaili (north of Bowen) to access the Abbot Point coal terminal.

However, the Master Plan contains the critical and prophetic phrase, "Whilst it is difficult to forecast the success of potential mining ventures,.....". Five years on from the Master Plan's preparation just one new mining customer, the previously mentioned MMG, is about to start using rail. Road transport competition has eroded potential rail freight to the point that almost all general freight business, and even some mineral traffic, has been lost to road. The export coal market remains important for rail in Queensland but the world-wide move towards renewable energy generation and some community opposition to large-scale new coal mining developments (for example, Adani's proposal in the Southern Galilee Basin) has left a question mark over whether the Mount Isa Line will ever serve coal mines south of Hughenden. In a touch of irony, Hughenden is now a focal point for solar and wind farm developments.

Other issues such as government policy settings like mass-distance road pricing (long sought by the rail industry, and the Townsville – Mount Isa corridor dramatically illustrates the absence of such a policy) and rail operators preparedness to take on non-mineral business will play an important part in the line's future. However, despite these uncertainties, the North-West Mineral Province contains significant potential for new developments, which should ensure that the Townsville to Mount Isa railway continues to play an important role in North Queensland's future economic development.

*Special thanks are due to Queensland Rail, Luke Horniblow, Raymond Pacey, Arthur Shale and railway staff along the Mount Isa Line for their generous assistance in preparing this article. Acknowledgement is also made for the use of information from John Kerr's Triumph of Narrow Gauge.*

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

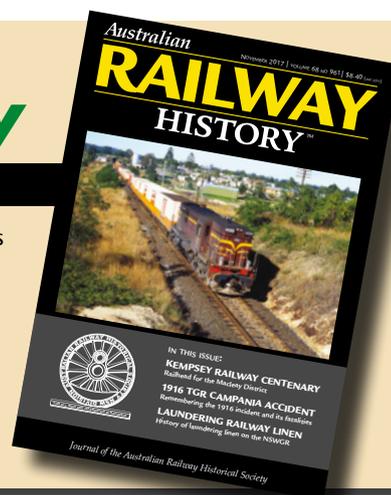
## Australian Railway History

November 2017 issue out now! Just \$8.40

Our feature article by Rod Milne covers the opening of the North Coast Line to Kempsey on 28 November 1917 with the centenary of this event to be celebrated on 27 November this year. The account gives a brief overview of how the railway shaped the industry and commerce of the Macleay district and gives Rod's account of the diesel era between the 1960s and 1980s

when Alco-powered diesel-electric locomotives dominated freight traffic at Kempsey.

Short articles on the 1916 Tasmanian Campania Accident, Railway Laundry services in NSW and Reflections of the NSWGR TF Class Locomotives, together with an Explorer item on 1939 QR Bundamba Accident and a book review round off the issue.



# Signalling & Infrastructure

Compiled by  
David Campbell,  
Graham Vincent and  
David Whiteford



No, it is not a mistake! Gauge conversion works (from broad gauge 1600mm to standard gauge 1435mm) are underway north of Dunolly through Victoria's north-west regions. Preliminary works in recent years have included installing a third rail through various level crossings when these have been rebuilt to avoid a need to dig up the roadways a second time. The gauge conversion gang has been doing the bulk of the works, leaving the fiddly bits to smaller gangs. In this view, taken at the Sunraysia Highway level crossing at St Arnaud on 25/08/2017, we see that one rail has been moved across to its final position, with a small section still to be completed through the pedestrian crossing. David Campbell

## New South Wales

**Signal Box boundaries.** The Homebush, Strathfield and North Strathfield NX panels, also the Ashfield and the spare ATRICS Panels located at Strathfield Signal Box were decommissioned from 07/07/2017. A new "Strathfield" ATRICS Panel was provided at Homebush Control Centre, incorporating the Homebush, Ashfield, Strathfield and Strathfield North areas; this new panel has four areas of control, which are controlled by a single user.

**Hamilton – Newcastle** Commencing 18/09/2017, the existing Hamilton Shunting Yard was closed, with the Shunters Building and the Local Control Panel de-commissioned. The Railway was extended approximately 1 km from Hamilton station to Newcastle Interchange station, where three dead-end platforms are provided, terminating at 165.746km. The Down Branch line (which incorporates part of the original Up Main line, which later became part of the Down siding at Hamilton) extends from platform 2 at Hamilton to platform 2 at Newcastle Interchange. The Up Branch line (which incorporates part of the original Down Main line, later becoming the Up Siding) runs between platform 1 at Newcastle interchange and platform 1 at Hamilton. A "Transit Road" is provided beside the Down Branch line from platform 3 at Newcastle Interchange and terminates in the Hamilton Stabling Yard (4 tracks). Five crossovers are provided between the Maitland Road bridge at 165.025km and the Up end of the platforms, allowing Down trains on the Down Branch line or the Transit Road to access any platform at Newcastle Interchange, while Up trains departing any platform can access the Transit Road or the Up Branch line. Platforms 1 and 3 at Newcastle Interchange are 214m long, while platform 2 is 272m long. The Hamilton Stabling Yard tracks are numbered as No. 1 Down Siding (adjacent to the Down

Branch line), which along with No. 2 Down Siding is 374m long between the Down Shunt signal and the Up end buffer stops. No. 3 and No. 4 Down Sidings are each 265m long. Crossovers 25 and 26, and derails 27 and 28 in the old Yard were removed. All points and signals in this precinct are controlled from the Broadmeadow Signalling Complex. Down trains departing Hamilton on the Down Branch line encounter signal HN23 (164.755km), NE9 Repeater (164.855km), NE9 (165.070km), then trailing crossover 484B (from Up Branch), trailing crossover 485B (from Transit Road), facing crossover 486A (to Transit Road/platform 3), trailing crossover 487B (from Up Branch) and facing crossover 488A (to platform 1/Up Branch). Up trains from platform 2 at Newcastle Interchange may encounter Up Shunt signal NE26 (165.530km, used when trains are passing through 488 crossover to/from platform 1), then Up Home signal NE20 (and NE20 Co-Acting signal) at 165.470km, and may then pass through crossover 487 onto the Up Branch line towards signal NE10. Alternately they may pass through crossover 484 onto the Up branch line towards NE10, or via crossover 485 into the Transit Road towards signal NE8. Up trains departing platform 3 at Newcastle Interchange are signalled by NE18 onto the Transit Road towards NE8 signal, or pass via crossovers 486 and 484 onto the Up Branch line towards NE10 signal. Up trains departing platform 1 at Newcastle Interchange are signalled by signal NE22 (165.515km) onto the Up Branch line towards NE10, located at 165.122km, or via crossovers 488 and 485 onto the Transit Road towards NE8. From NE10 signal, Up trains continue past HN24 signal (164.982km) into platform 1 at Hamilton, towards HN20 signal. Up trains running along the Transit Road encounter signal NE8 at 165.095km, then via

trailing catch points 483 towards No. 1 Down Siding, or via 482 points into No. 2 Down Siding, or via 481 points into No. 3 Down Siding, or via 480 points into No. 4 Down Siding. New Guards' Indicators were provided on each platform at Newcastle Interchange. Two Indicators are provided on platform 1 applicable to signal NE22; three Indicators are provided on platform 2 applicable to signal NE20, and two Indicators are provided on platform 3 applicable to signal NE18. Down trains departing the Down Sidings at Hamilton pass signals NE1 or NE3 (from 4 and 3 Down sidings at 164.849km), or NE5 or NE7 (from 3 or 4 Down Siding, at 164.940km), then travel towards NE13 signal (165.155km), then pass directly into platform 3, or via crossover 485 into platform 2, or via crossovers 485 and 488 into platform 1. Signals HN5, HN12 and HN19 at Hamilton received aspect changes, and signals NH102.34, HN7 and HN9 were removed. Signals IJ24 (at Islington Junction) and WJ13 (at Woodville Junction) also received aspect changes. **Ardglen** (Muswellbrook – Werris Creek line). 54B points (Loop Line to Quarry Sidings) were removed from 15/08/2017. **Ashfield** Crossover points 504 (Down Suburban to Up Suburban), which had been booked out of use since 14/11/2015, were removed from 07/10/2017. **Berry** (Illawarra). Annunciator bells were provided from 27/08/2017. The bells are designed to sound when a train is approaching. **Blacktown** New crossover points 352 were installed between the Down Suburban line (facing turnout, at 34.178km) and the Down Main line (trailing turnout, at 34.308km) from 02/09/2017. The points will be locked and secured pending future commissioning. **Bomaderry** (Illawarra). Annunciator bells were provided from 27/08/2017. The bells are

designed to sound when a train is approaching. Indicators are also provided identifying whether a train is an Up or a Down movement.

**Cooks River** (Enfield – Port Botany line). Track alterations were introduced from 15/07/2017.

The Up Botany line was slewed to a new alignment between 14.550km and 14.730km (vicinity of Princes Highway bridge). The existing arrangements of the Run Around Road and the access into the Cooks River Yards was changed; under the old arrangements the lead into Cooks River Yards from the Up Botany line occurred at 784B points at 14.899km, with a second turnout from the Up Botany line to access the Run Around Road (785B points, at 14.635km). Both of these turnouts were removed, with new points 784 (14.737km) providing access from the Up Botany line into the Run Around Road. New points 785 (14.698km) direct trains into the Cooks River Yard, or continuing on the Run Around Road. 784A catch points (at 14.644km, from the Cooks River Yard) were renamed as 781. Down signal CR727G (exiting Cooks River Yard) was mounted onto an elevated post, Down signal CR723G and Up signal CR726G (both Up Botany line) were relocated 12M and 82M respectively in a Down direction. Access into the Boral Cement Sidings from the Run Around Road, which was formerly controlled by Lever “X”, was altered. Lever “X” was removed, and a new 2-lever Frame designated “F” was provided, the release being provided from NCCS Junee.

**Cryon** (Narrabri West – Walgett line). Approval was given from 20/08/2017 to undertake main line loading operations at 686.800km (Down end of station). The loading is undertaken using mobile grain handling equipment.

**Cunninggar** (Main South). Frame A and No. 2A

points (trailing points, Up line at 380.564km), which had been booked out of use since 29/03/2017, were reinstated for use from 02/09/2017. The original yard arrangements comprised a single siding towards the silos; the new arrangement provides two additional sidings. Siding 1 was re-laid in approximately the original location with 380m length; additional sidings numbered 2 and 3 were provided. The former catch points 2B were replaced by a turnout numbered 2B (380.740km) leading from Siding 1 into Siding 3, this leads in an Up direction beside the Up Main line, with 380m length. A new Siding 2 was provided, this siding is 460m long, and runs parallel to the existing Siding 1, but on the opposite side of the silos.

**Hornsby** (North). Commencing 12/08/2017, Up Shunt signal HY130 (Up Car Sidings, at 34.892km), and the associated Route Indicator were upgraded to LED type.

Commencing 26/08/2017, the Hornsby Yard area was booked out of use and will be progressively removed over the following four months. Entry to the Hornsby Car Sidings is now only available via 572 points (Up Main line). Catch points 531 (Up Loop) and crossovers 532 (No. 1 Up Siding to Up Main), 533 (Inwards Car Shed road to Up Main), and 534 (Outwards Car Shed road to Up Main) were booked out of use and will be removed; train movements between the Main Lines and the Up Loop, No. 1 Up Siding, the Inwards Car Shed Road, and the Outwards Car Shed Road are now not possible. Crossover 564 (Up Main to Up Loop) and the points operated from Frame B (6B crossover between Hornsby Car Siding and Outwards Car Shed Road, also 7B points between Hornsby Car Siding and Inwards Car Shed Road) were booked out of

use, locked and secured. The signals operated from Frame B (2, 3 and 4) were also booked out of use. Various Routes were booked out of use for signals HY53 (Down Main), HY55 (Up Main), HY57 (Down Shore), HY59 (Up Shore), and HY106 (Up Main). Signals HY105 REPEATER and HY76 (Up Loop), HY78 (No. 1 Up Siding), HY80 (Inwards Car Shed Road) and HY82 (Outwards Car Shed Road) were booked out of use and removed. Local shunting movements from the Car Sidings along the Outwards Car Shed Road remain available in an Up direction to approximately 34.680km, where a temporary buffer stop was provided.

Crossover points 529 (facing crossover between Down Main and Up Main lines on Down side of platforms) were booked out of use, with 529B points (Up Main) removed from 26/08/2017. Existing points 530 (Up Main) were removed, and new trailing points 530A installed in the Up Main line at 34.113km; these points will be locked and secured pending future commissioning.

Commencing 28/10/2017, points 529A (Down Main at 34.065km) were removed. New facing crossover points 529 (between Down and Up Main lines) were installed at 34.042km at the same time; these points will remain locked and secured pending future commissioning. Signals HY53 (Down Main) and HY70 (Turnback 1) were upgraded to LED type.

**Kelso** (Lithgow – Bathurst line). Following the removal of the Lee Street temporary level crossing (refer RD August 2017, page 44), the arrangement of two levers jointly operating the main line – siding points (levers B1 and B2, used in conjunction with protection arrangements at the temporary level crossing) was replaced on 02/09/2017 with a conventional single lever B, which is electrically released.



On the morning of Monday 25 September, Hunter Railcar Set 2703/2753 takes a break in one of the new storage sidings at Hamilton. Robert Rouse

The EDI Siding was re-named as the Private Siding, and the points from the Private Siding were re-connected to the Multi-User Siding from 05/10/2017, although the points remain locked and secured at this stage.

**Murrurundi** (Muswellbrook – Werris Creek line). The Down Siding, Frame D (Main line to Down Siding), and the No. 1 Up Siding were removed from 15/08/2017. The Stock Siding was upgraded and commissioned with its final length (400m).

**Old Junee** (Junee – Griffith line). The old-style Annett Keys interlocked with Frames B, D and H were replaced with Fortress Keys on 15/08/2017.

**The Rock ABA** (Boree Creek line). Signage applicable to this location was relocated in a Down direction on 21/08/2017. The “Shunt Limit” sign (for Down moves) was moved from 553.922km to 554.415km. The “The Rock ABA” Yard Limit sign (for Up moves) was moved from 554.432km to 555.500km. The “Location” sign (for Up moves) was relocated from 556.425km to 557.500km.

**Wahroonga – Waitara** (North Shore line). Signals SH14.46 (Up Main), SH14.69 and SH14.93 (Down Main) were upgraded to LED type from 28/10/2017. Aspect changes were made to signals SH14.46 and SH14.69. Signals SH14.46 and SH14.93 were relocated 75m in an Up direction.

**Wollongong** (Illawarra). Up Shunt signal WG442 (No. 1 Down Siding) was relocated 26m in a Down direction from 29/07/2017.

**Wongarbon** (Orange – Dubbo line). Points A and B (Up and Down end access into the Wheat Siding) were booked out of use on 14/08/2017.

**Yennora** (Granville–Liverpool). The local driver push button release operation of these sidings,

controlled by the Granville signal box, was removed from 19/08/2017. This Location is now fully controlled from the Sydenham Control Centre, using the Sefton ATRICS Panel, which controls signals YA1, YA3, YA4, YA5, YA6 and YA8, also crossovers 51 and 52. Rail movements into and out of the Yard will now be controlled by the local shunter in conjunction with the Signaller. Automatic signals YA1 and YA3 (Down Main) and YA8 (Up Main) were converted to Controlled signals. Aspect changes were made to existing signals YA3 (Down Main) and YA6 (Up Main). New Down Shunt signal YA5 was provided on the Up Main line at 26.706km. Existing Up Home signal YA4 was upgraded to LED type and relocated to 26.921km (Down side of the cycle path crossing).

## Queensland

### Woombye (North Coast Line)

From Sunday, 27 August an electric train stabling yard was commissioned at Woombye. The yard comprises four roads, designated No. 1 to No. 4. Each road is 162 metres in length and each can hold one 6-car electric train, including a six-car NGR (700 series) train. Buffer stops with attached red stop light are installed at the terminal ends of the four new roads. An electric security train gate is installed at the entrance to the yard and its operation is integrated with the signalling system. Toilet decanting facilities are provided within all the stabling roads. The stabling roads are fully track circuited to provide visibility of rail traffic to the Network Control Officer. A new Down 25 km/h speed board and a new Up 8 km/h speed board apply to the Yard Entry/Exit Road and 8 km/h speed boards apply to the stabling roads.

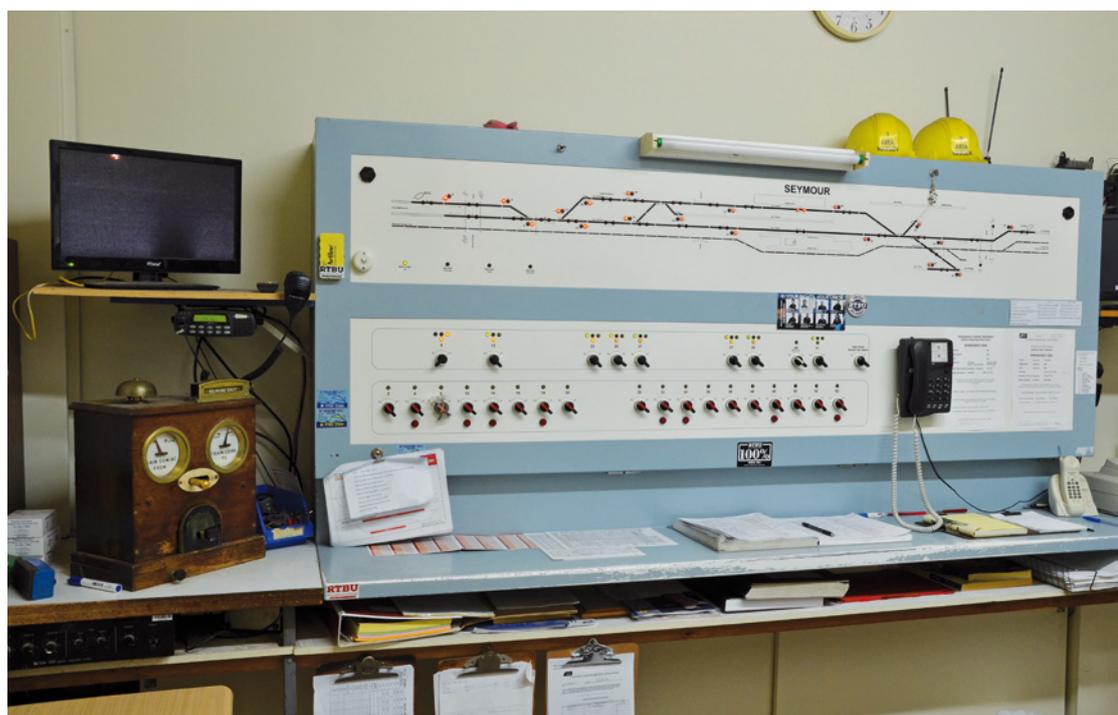
Up trains access the new yard from the Woombye Loop line via newly commissioned No. 9 points (see below), with no direct access available between the platform and the new yard.

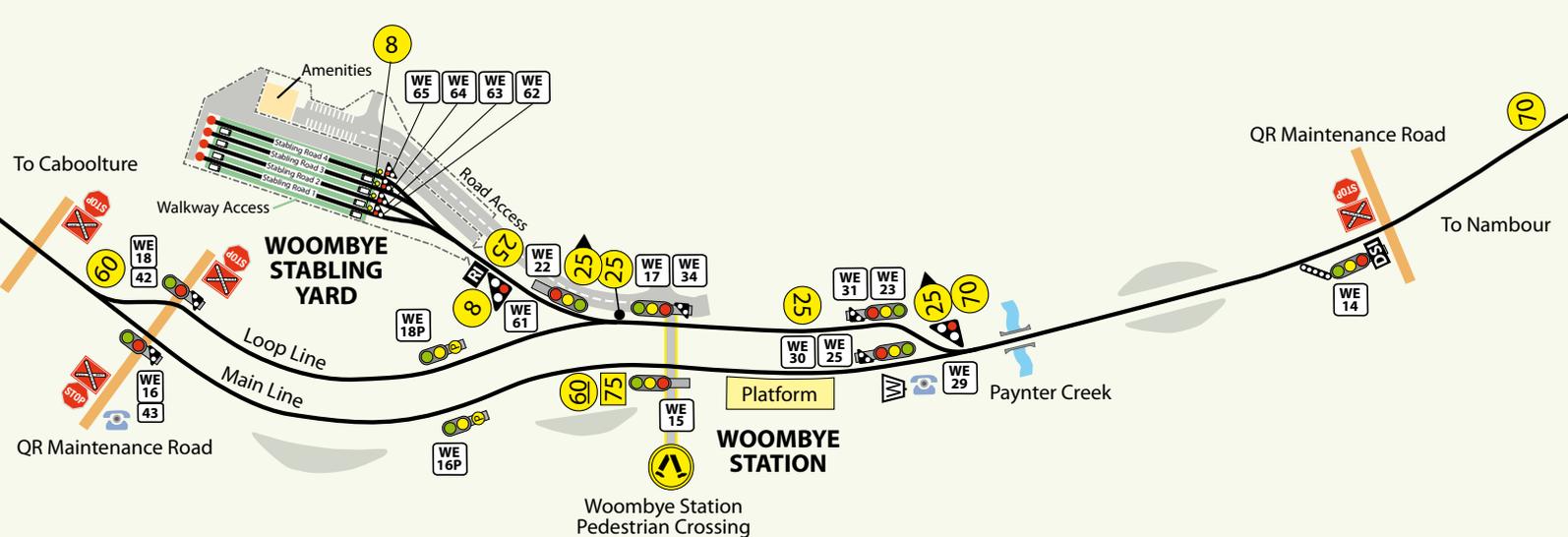
The existing relay interlocking at Woombye was decommissioned and replaced with a new MicroLok II interlocking system covering the same geographical area as the previous relay interlocking and including the new stabling yard. New signals installed and modified existing signals are as follows:

Woombye Stabling Yard: Down Direction – A new Down direction three aspect (G/Y/R) Signal WE22 with mast-mounted keyswitch to enable the signal to be fixed at stop installed, is located at 0.064km within the Stabling Yard Entry/Exit Road. A new Down direction Position Light Signal WE62 is located at 0.314km and will be applicable to the new No. 1 Electric Stabling Siding within the Woombye Stabling Yard. A new Down direction Position Light Signal WE63 is located at 0.314km and will be applicable to the new No. 2 Electric Stabling Siding within the Woombye Stabling Yard. A new Down direction Position Light Signal WE64 is located at 0.314km and will be applicable to the new No.3 Electric Stabling Siding within the Woombye Stabling Yard. A new Down direction Position Light Signal WE65 is located at 0.314km and will be applicable to the new No. 4 Electric Stabling Siding within the Woombye Stabling Yard.

Main Line: Up Direction - Existing three aspect (G/Y/R) with 45 degree right-hand Junction Indicator Signal WE14 located at the 101.217km now has a Dynamic Speed Indicator installed. The indications displayed by this signal, as a result of the addition of the Dynamic Speed Indicator, will not alter. A new Up direction

The signal panel at Seymour can be seen in this photo taken in April, 2017. Signals are operated by the bottom row of switches (with the red stripe), and points by the black switches on the upper row. The black switch with the white stripe is a “pilot lever”, used in conjunction with ARTC Network Control South (Junee) when moves into the Loco Depot area are required to cross the standard gauge tracks. Up Starting signal 6 (the third lever from the left) is “sleeved” by placing a box above the switch to remind the signaller that a train is running towards Kilmore East and Melbourne. The line to Kilmore East from Dysart (a short section of single track across the Goulburn River toward the left of the diagram and which is controlled by Seymour), is operated under the Rules for Double Line Block Telegraph, the Block Instrument is the timber box with brass bits to the left of the panel. The television above is used to view the rear of arriving trains so permission can be sent for a following train to depart, in this case from Kilmore East. The train Register Book is opened beneath the main panel, this is used to record all train movements. This line is the last in Australia using Block Instruments, a system originating in the UK, and dating back to the 1880s. David Campbell





three aspect (G/Y/R) Signal WE15, applicable to the Main Line, is located at 100.605km (southern end of station platform) and will have a mast-mounted keyswitch installed to enable the signal to be fixed at stop. A new Up direction two aspect (G/Y) repeater Signal WE16P is located at the 100.300km and is applicable to the Main Line. Existing Up direction three aspect (G/Y/R) Signal WE16 located at the 100.085km now has a mast-mounted keyswitch installed to enable the signal to be fixed at stop. This keyswitch applies to the main signal route to PS13 (not shunt signal WE43). Loop Line: Up Direction - A new Up direction three aspect (G/Y/R) Signal WE17 with attached shunt signal WE34 and mast mounted keyswitch is located at 100.605km and is applicable to the Loop Line. The route from WE17 applies to next signal WE18. The shunt routes available from WE34 apply to next signal WE18/WE42 (Loop Line) or to WE61 (Stabling Yard Entry/Exit Road). The attached keyswitch applies to both WE17 and WE34. New Up direction two aspect (G/Y) repeater Signal WE18P is located at 100.300km and is applicable to the Loop Line. Existing Up direction three aspect (G/Y/R) Signal WE18 located at the 100.085km now has a mast-mounted keyswitch installed to enable the signal to be fixed at stop. This keyswitch applies to the main signal route to PS13 (not shunt signal WE42). Woombye Stabling Yard: Up Direction - A new Up direction Position Light Signal WE61 with attached four-way route indicator is now located at 0.205km within the Stabling Yard Entry/Exit Road. The routes available in the four-way route indicator will apply to No.1 Electric Stabling Siding to No.4 Electric Stabling Siding inclusive. Existing gantry-mounted repeater signal WE16P located at the 100.490km and applicable to the Main Line has been decommissioned and removed. Existing gantry mounted repeater signal WE18P located at the 100.490km and applicable to the Loop Line has been decommissioned and removed. New points, all equipped with RBM Westinghouse M23 Mk2 operating equipment with throw over handles, were installed as follows: Woombye's loop – the existing uncommissioned points located at the 100.575 on the Loop Line were commissioned. This 1:12 right-hand turnout is designated as No.9 points. In Woombye

Stabling Yard three new 1:8 turnouts have become operational – turnout No.45 on the Woombye Stabling Yard Entry/Exit road at 0.214km, turnout No.46 on the No.2 Electric Stabling Siding at 0.244km and turnout No.47 on the No.4 Electric Stabling Siding at 0.247km.

## Victoria

**Ararat – Maryborough** This line was booked out of use with the issue of an Absolute Occupation on 07/08/2017. The works cover repairs and upgrade of this track, which has been disused since around 2005 (this track had been converted to standard gauge (1435mm) in 1995).

**Dunolly – Yelta** This line was booked out of use with the issue of an Absolute Occupation on 07/08/2017. The works cover the conversion of the line from Victorian gauge (1600mm) to Standard gauge (1435mm). Points 29 at Dunolly (towards Yelta or Korong Vale) were secured to lay for the Korong Vale line.

**Ouyen – Panitya line** Commencing 22/07/2017, the Train Staff and Ticket sections “Ouyen – Cowangie”, and “Cowangie – Panitya” were abolished. A new Train Staff and Ticket section “Ouyen – Murrayville” was provided (Train Staff ticket boxes are not provided). Cowangie was abolished as a Train Staff Station. The railway between 581.500km (Down side of Murrayville), through Panitya to the South Australian Border at 601.389km remains unavailable for use due to track condition (trains have not used this section of track for several years).

This line was later booked out of use with the issue of an Absolute Occupation on 07/08/2017. The works cover the conversion of the line from Victorian gauge (1600mm) to standard gauge (1435mm) between Ouyen and Murrayville only.

**Highett – Southland – Cheltenham** (Caulfield – Frankston line). Signalling alterations associated with this new station were commissioned from 16/09/2017. The new station (located between Highett and Cheltenham, at 21.440km, between the Bay Road underline bridge and the Heather Grove pedestrian crossing) is yet to be opened; this is anticipated to occur on 26/11/2017. Down Automatic signal 2 (approaching Cheltenham) was relocated 285m in a Down direction to

21.525km. Existing Down Automatic signal F627 was upgraded to LED type. New Down Automatic signal F643 was provided at 21.119km. Up Automatic signals F662 and F642 were abolished. Existing Up Automatic signal F622 was upgraded to LED type. New Up Automatic signals F670 (21.975km), F648 (21.290km) and F634 (20.877km) were provided. All new signals are LED type.

**Bendigo** No. 2 Freight Road, which had been booked out of use since 14/06/2017, was booked back into use on 28/06/2017. No. 3 Freight Road was then booked out of use pending sleeper renewals.

Commencing 30/07/2017, the sidings into the old Vehicle Maintenance Shed were abolished. Existing stabling sidings 7, 8 and 9 were re-numbered as 9, 10 and 11 respectively. New sidings 7 and 8 were provided (these being slightly to the east of the former sidings leading into the Vehicle Maintenance Shed), located between existing stabling siding 6 and re-numbered stabling siding 9. The points formerly leading to stabling sidings 7/8/9 (old numbering) now access new stabling siding 7 only. A new turnout was provided from the independent track leading towards new siding 8 and re-numbered sidings 9/10/11; this new turnout is on the Up side of the original points. All points are operated by hand levers (WSa type).

**Beulah** (Murtoa – Hopetoun line). The station yard, which had been booked out of use since 17/05/2017, was booked back into service on 11/08/2017. The main line points were made available for use.

**Broadford** (Craigieburn – Seymour line). The incandescent lamps provided for semaphore signals were upgraded to LED type from 19/08/2017. Signals affected comprise Down Home signal Post 7, Down Starting signal Post 16, Up Home signals Post 17 and 18 (effectively acting as a co-acting signal), and Up Distant signal Post 19. The semaphore arms remain in use.

**Caulfield** (junction between the Dandenong and Frankston lines). The Works Siding, which had been out of use for some time, was abolished on 19/08/2017.

**Chiltern** (Seymour – Albury line). New crossover points 3 (facing Down trains on East line, or Up trains on West line) were commissioned from 19/08/2017. The crossover and associated signalling are actually located closer to

Barnawartha than Chiltern. However, the interlocking (“CLI”) is separate to that provided at the Barnawartha SCT precinct (“BAW”), hence it is recorded here as Chiltern. Points 3U are located at 277.496km, and 3D are located at 277.656km. These points are rated and signalled for 80km/h diverging moves. New Down Home signal CHI 12 was provided on the West line at 277.181km, parallel to new Down Home signal CHI 2 (East line). New Down Automatic signal ES2731 was provided on the East line (parallel to existing West line Down Automatic signal EES2731) at 273.133km. New Up Automatic signal ES2820 was provided on the East line at 283.438km, parallel to existing Up Home signal BAW 10 (West line). New Up Home signals CHI 4 (East line) and CHI 14 (West line) were provided at 277.971km. Existing Up Home signals BAW 10 (West line) and BAW 12 (SCT Siding) received aspect changes.

**Croydon** (Ringwood – Lilydale line). Up Automatic signals H942, H966, H966 co-acting, and H1016 were upgraded to LED type on 12/08/2017.

**Dandenong** (junction between Cranbourne and Bairnsdale lines). A new track is under construction on the Down side of this location, designed to allow Down Cranbourne line trains departing platform 3 to travel via the Main (Bairnsdale) line, thence access the Cranbourne line via a new Down Cranbourne line lead (existing arrangements require Cranbourne line trains to operate via the Up Main line, or via the single line from Dandenong). The works will provide additional flexibility with train running on this long single line section, and reduce the conflicting movements at the Up end of Dandenong station. As part of this work, a new facing crossover was installed between the Down Main line (32.612km) and the Up Main line (32.725km), a new turnout was installed on the Up Main line at 32.741km (trailing Up trains), and a new turnout was installed at 34.574km (Cranbourne line, facing Up trains). The points are locked and secured pending future commissioning.

**Dimboola Loop** (Ararat – South Australian border line). The crossing loop was extended by approximately 300m at the Down end from 19/08/2017. Existing Down Home signals 365/30 (Main) and 365/32 (Loop), also Up Home signal 365/26 (approaching Loop) were relocated 300m in a Down direction. The newly installed Down end main line points (which retained the number 27) were installed as a 40 km/h turnout, therefore the “65” indicator applicable to signal 365/32 was removed.

**Dunolly** (junction between Yelta and Korong Vale lines). Commencing 07/08/2017, the junction points at the Down end of the location were temporarily secured to lay for the Korong Vale line. The yard was extensively altered, with 3, 4 and 5 roads abolished (these served the silos and the goods shed), with the tracks to be removed later. Roads 1 and 2 will remain in use at this stage as a trailable points crossing loop. The Annett Locks attached to points A, E, F and G (accessing 3/4/5 roads), also points H

(standard gauge track, Down end) were removed. The non trailable point machines on points D and J (standard gauge siding) were removed.

**Highett** (Caulfield – Frankston line). Down Automatic signal F627 and Up Automatic signal F622 were renewed in situ and upgraded to LED type from 04/08/2017.

**Lilydale** No. 27 points (main line to 3 or 4 tracks), which had been booked out of use on 02/06/2017, were returned to service on 11/07/2017.

**Manangatang** Commencing 07/08/2017, the Annett lock on the Up end main line points, and the Master Key lock on the Down end main line points were abolished. The Up 2-position Automatic signal at the Up end of the yard was altered to normally display a Stop aspect; this can be operated by train crews to display a proceed aspect when train movements are required, thus minimising unnecessary operation of the adjacent Mallee Highway level crossing. The section of line at the Down end between 457.275km and 460.300km (formerly booked out of use on 02/06/2011) was booked back into service (the remainder of the disused railway to Robinvale remains unavailable for use). This work is associated with works to gauge convert the Dunolly – Yelta line, allowing customers to use rail vehicles here instead of from the Mildura area.

**Maryborough** (junction between Ararat, Ballarat and Yelta lines). Roads 3 – 9, also the Shed road, were abolished on 08/08/2017.

Points 9 (up end access into yard) and 5 (Down end) were locked and secured.

No. 2, 3 and 4 roads in the Maryborough Loco precinct were booked back into service for short-term stabling purposes only on 16/08/2017 (these tracks had been booked out of use since 10/07/2015). It is understood that these tracks will be used in conjunction with gauge standardisation works in this district.

**Murchison East** (Seymour – Tocumwal line). No. 3 and No. 4 Roads (were booked out of use on 25/08/2017 due to track condition. The points leading to these tracks were locked and secured.

**Murrumbeena** (Caulfield – Dandenong line). The passenger station was re-opened on 02/10/2017 (this station had been temporarily closed from 17/06/2017 to enable level crossing removal works, although trains had continued express through the station).

**North Dynon** Track alterations at the Up end of the yard were brought into service on 17/07/2017. The work eliminates much of the complex dual gauge arrangements and simplifies the yard. The broad-gauge connection between 7 and 9 tracks was removed. Broad and standard-gauge trains in 7 track now access 5 track directly, with a turnout for standard-gauge trains into 6 track connecting with this lead instead of from the lead into 9 track as before.

**Tocumwal** The “End Train Order Working” sign facing Down trains, and the “Commence Train Order Working” sign facing Up trains, were relocated on 22/09/2017 from 250.313km (Up side of Bridge Street level crossing) to 250.552km (between Bridge Street level crossing and Murray River bridge).

**Wallan** (Craigieburn – Seymour line). Up Home signal Post 6 was upgraded to an LED type signal from 19/08/2017.

## South Australia

**Leigh Creek Line** (Port Augusta Power Station – Leigh Creek) Not-with-standing the advice in the August edition, the Flinders Power lease of this currently unused line was handed back to the SA government on 31 July 2017. Access to the line is now prohibited without prior consultation with ARTC and the DPTI.



A mechanical treadle switch surviving in traffic on Adelaide’s Port line between Bowden and Croydon may well end the reign of these devices, when current works lowering the adjacent station, and the associated upgrading of signalling systems, are complete. Graham Vincent

**Torrens Junction rebuild** (Adelaide Metropolitan Network) Port Line traffic was suspended on 26 September while the dive below Park Terrace level crossing is built and the new lowered Bowden station is established. A relic of past times may come to the end of its working life when this trackwork is complete. Until this suspension of traffic, there remained an in-service ‘treddle switch’ supplementing the very short track circuits between 3 closely-spaced level crossings. On the standard-gauge line two new permissive signals 391 & 412 were installed on 29 September (temporarily ‘bagged’) to replace the home signals (21 & 22) that previously protected the grade crossing. A new left-hand ladder of progressive crossovers is partially complete with access to/from rebuilt northern stabling sidings in the Adelaide Yard, to both the Up & Down tracks of the Port and Gawler lines. It is expected that this will replace the right-hand ladder (with several double slips) from the now redundant Gaol loop/siding.

**Trans Australia Line** During September, turnouts to sidings on the passing loops were progressively upgraded at Kultanaby, Wirrappa, Wirraminna, Kingoonya, Pimba and Tarcoola

## Western Australia

**East Perth** (Midland line). In conjunction with work to extend the suburban platforms to 150m length, signal 153 (Down Midland Main line) was relocated further in the Down direction from 18/08/2017. The suburban platforms were then extended temporarily at the Down end, while much of the permanent platform and temporary Up end extension have been removed for reconstruction of the permanent 150m length platform. During a four day closure of the Midland suburban railway from 22 to 25 September inclusive points were installed in both the Up and Down main lines on the Down side of the station. These will be part of a future double crossover between the two lines.

**Whitfords** (Joondalup line). Signalling works at the Up end of the station were commissioned in conjunction with Phoenix Control System updates on 11/09/2017. The alterations allow for Up trains to terminate and return in a Down direction, using either the Down or Up Main lines. New Down Absolute signal 521 was installed on the Up Main line, facing Down trains, at 19.205km. Existing Up Absolute signal U189 (Up Main) was converted to a Controlled Absolute signal numbered as 522, and relocated to 19.045km. New Fixed Red signal 520 was installed facing Up trains on the Down Main line at 18.915km. Aspect changes were made to existing Up Controlled Absolute signal 524 (Up Main, Up end of platform), allowing Up trains to proceed onto the Down Main line towards Fixed Red signal 520. Existing Down Absolute signal D180 (Down Main) was converted in situ to a Controlled Absolute signal and re-numbered as 525.

For details refer to [www.sa-trackandsignal.net](http://www.sa-trackandsignal.net)

# Level crossing news

## New South Wales

**Denman** (Muswellbrook – Ulan line). Kenilworth Street level crossing at 313.452km. Following level crossing upgrade works, the distance shown for this level crossing was altered from 313.452km to 313.460km. The level of protection remains unchanged (flashing lights, boom barriers and audible warnings).

**Yennora** Cycle Way Crossing at 26.900km (Wool Siding track). “Don’t Walk” (red man) pedestrian lights and audible warning devices were provided from 19/08/2017 (previously passive).

**Yennora** Military Road level crossing at approximately 27.300km (Wool Siding track). Flashing lights and boom barriers, also “Don’t Walk” (red man) pedestrian lights and audible warning devices were provided from 19/08/2017 (previously passive). These devices are controlled by shunters’ switches.

## Victoria

**Benalla** (Seymour – Albury line). Cemetery Road level crossing at 191.908km. The existing flashing lights were upgraded with the provision of boom barriers on 20/08/2017.

**Benalla** (Seymour – Albury line). Faithful Street level crossing at 193.320km. Motorised pedestrian gates, with electro-magnetic latched emergency exit gates, were provided on 23/07/2017.

**Bowser** (Seymour – Albury line). Boralma – Rutherglen Road level crossing at 247.303km (also known as Summers Road). The existing flashing lights were upgraded with the provision of boom barriers on 14/08/2017.

**Burrumbeet** (Ballarat – Ararat line). Modesty Lane level crossing at 146.469km. Hand Operated Gates were provided on 25/09/2017. The Gates are provided on both sides of the running lines, and are normally secured against road traffic and locked using chains and padlocks. The keys to the padlocks are held by the land owner, local Service Provider representatives, and certain V/Line employees.

**Cheltenham** (Caulfield – Frankston line). Heather Grove pedestrian crossing at 21.840km. Motorised pedestrian gates, with magnetically latched emergency exit gates, were provided from 16/09/2017 (previously passive).

**Cudgee** (Geelong – Warrnambool line). Hallowells Road level

crossing at 249.386km. Flashing lights and boom barriers were provided on 23/08/2017 (previously passive).

**Euroa** (Seymour – Albury line). Angle Road level crossing at 146.350km. Flashing lights and boom barriers were provided on 31/07/2017 (previously passive).

**Glenrowan** (Seymour – Albury line). Old Hume Highway level crossing at 214.913km. The existing flashing lights were upgraded with the provision of boom barriers on 07/08/2017.

**Longwood** (Seymour – Albury line). Oxenburys Road level crossing at 135.328km. Flashing lights and boom barriers were commissioned on 21/09/2017 (previously passive).

**Monea** (Seymour – Albury line). Williams Road level crossing at 122.078km. Flashing lights and boom barriers were commissioned on 21/09/2017 (previously passive).

**Panmure** (Geelong – Warrnambool line). Station Street level crossing at 242.747km. Flashing lights and boom barriers were provided on 24/08/2017 (previously passive).

**Sherwood Park** (Geelong – Warrnambool line). Rowans Lane level crossing at 260.321km. Flashing lights and boom barriers were provided on 22/08/2017 (previously passive).

**Stratford** (Traralgon – Bairnsdale line). Sandhill Road level crossing at 223.961km. This passively-protected level crossing was closed to all road traffic on 15/08/2017. The level crossing signage was removed, and barriers provided against road traffic.

**Wangaratta** (Seymour – Albury line). Gravel Pit Road level crossing at 229.073km. The existing flashing lights were upgraded with the provision of boom barriers from 11/09/2017.

**Westona** (Altona Junction – Altona – Laverton line). Maidstone Street level crossing at 18.653km. Commencing 31/07/2017, the existing pedestrian mini-booms were replaced with motorised pedestrian gates. The pedestrian enclosures were updated, with two additional pedestrian gates installed in the “island” between the Up and Down tracks. The flashing light assemblies were upgraded to LED type. Magnetically latched emergency exit gates were commissioned on 18/08/2017.

**Winchelsea** (Geelong – Warrnambool line). Robertson Road level crossing at 120.362km. Flashing lights and boom barriers were provided on 25/08/2017 (previously passive).

**Winton** (Seymour – Albury line). Gould Road level crossing at 210.958km. Flashing lights and boom barriers were commissioned on 07/08/2017 (previously passive).



# 4201 Returns!

Text and image by Wayne Eade

**A**fter a break of several years, 4201 made its official return to operational service on Saturday 16 September. Its debut involved a ceremony at Central station to mark the occasion. Afterwards, the restored locomotive hauled a NSW Rail Museum tour billed as ‘The Highlander’ from Sydney to Moss Vale before returning to Sydney via Robertson and the South Coast line.

While it was the ALCo-powered 40 Class that introduced mainline diesel electric locomotion to the railways of NSW, they were utilitarian, austere locomotives purchased off-the-shelf from Canada. By way of contrast, the F7-inspired, General Motors-powered 42 Class heralded the move to significant local involvement in the design and manufacture of diesel locomotives that were purpose-built for Australian conditions.

And they simply oozed glamour. Clean, aerodynamic lines and a full cab at one end only, their design was clearly indicative of a single-minded purpose; a headlong rush to the future.

As the oldest locomotive on the books in 1980, 4201 was the subject of a total overhaul by the State Rail Authority at its Chullora Workshops when a flagship for the railways’ then imminent 125th Anniversary was needed. The decision by NSW Rail Museum to restore 4201 to service as it had been 37 years previously, complete with side hoarding proclaiming “125 YEARS OF RAIL SERVICE 1855-1980” has made many a Generation X baby who saw it fresh all those years ago very happy campers.

Seeing 4201 once more gleaming at Central station just a few weeks short of the first time it had appeared there in green and yellow was a sight to behold. Perhaps the only fail detected in the restoration related to the demands of the brief. If the plan had been to return 4201 to the way it had appeared in 1980, the finish wasn’t quite right. The big GM actually looks better than it did back in the day!

In company with the physically more diminutive 4490, back to back as the diesel gods intended, 4201 eased the nine cars forming 6L61 through

**Above: On Saturday 16 September, 4201 and 4490 wait in the Up refuge at Moss Vale with 6L62, ready to depart for Robertson.**

Sydney yard, past Redfern and then down the Illawarra Dive for its run south via East Hills. The outward bound journey was reasonably casual, the result of several signal checks. The almost 62 year-old finally came to life on the climb out of Picton. There is something visceral about the lusty chant made by a 42 with the throttle open. The curved climb to Picton tunnel gave those on board an opportunity to revel in the sight and especially the sound of what is the progenitor of classic streamlined NSW diesel locomotion hard at work.

Several patrons disembarked at Bowral so as to take in the tulips. They would later be bussed to Robertson for collection. The stalwarts stayed aboard and after a leisurely lunch break in a cold and windy Moss Vale, the whole caravan set off for Robertson and eventually Sydney. The second best thing to the sound of a 42 in full flight is the sound of one descending a steep grade with the dynamic brakes wailing. The observation deck of GMS1, tucked in behind the engines on the return, provided a sensory assault that will long stay in the memory.

After a stop at Wollongong, it appeared the ‘gloves were off’ as 4201 was really opened up. The twisting run through the Illawarra and southern Sydney suburbs was energetic to say the least, and the unmistakable and resonant beat from up front made it clear to all; 4201 was back!

It must be said that projects like these do not just happen. 4201’s relaunch would not have been possible without the UGL Unipart staff; Matt Byrnes, Dean Colbran, Michell Francis and Peter Roses (spray painters); Robert Miller (boilermaker); Grant Martin (fitter/welder); John Stewart (welding inspector), as well as the many other supporters; Mark Baikie; Barry Birch; Mark Bowman; Peter Cameron from DCL Engineering; Ian Gregory; Dave Ireland; Kyle Ireland; Roy Lamatina; Jim Martin; Peter Martin; Lee Murray, and; Mike Webber, signwriter for M & J Signs.

At the end of 1979, the future of 4201 looked bleak, but like the fiery Phoenix motif on every Clyde builder’s plate, it arose. Now, thanks to Jeff Snedden and the team mentioned above, it has arisen again, and the NSW Rail Museum has a very fine addition to its operational fleet.

# Fifty-five years

Text and image by Darren Tulk

**O**n 28 September 2017, the Brisbane Tramway Museum opened for a special evening. The well patronised night was timed to commemorate the disastrous event of 1962 that contributed to the closure of Brisbane's tram network in 1969.

On 28 September 1962, the Paddington Tramway depot was overtaken by fire. The large, timber-framed and stumped depot was attended by several fire units, but decades of oil and grease soaked into the structure meant the fire could not be extinguished. The building was completely destroyed, along with 65 of the city's trams, about one fifth of the fleet.

The last new stretch of tram line had opened just the year before. But under the Labor administration of Clem Jones, Council transport policy directed new investment towards buses and road construction. Transport historians claim that insurance moneys received after the Paddington fire were directed towards buying new buses.

With the Paddington depot gone, tram services to inner city lines were cut and buses substituted on the Rainworth, Toowong, Kalinga and Bulimba Ferry lines. Despite protests that continued for several years afterwards, the Council resisted the reinstatement of trams. Despite these closures, the public were openly reassured in 1964 that a network-wide closure would not happen.

Meanwhile, ongoing studies compared patronage and running costs of buses on the recently-replaced tram routes. Much debate ensued over the terms of reference used, a consistent feature of public debates. Tram proponents claimed little consideration had been

given to other bus costs such as extra road maintenance, the increases estimated by the Department of Work at around £50,000 annually.

Whilst the tram network was popular and well liked, overall patronage had dropped by half in the two decades from its peak in the war, and throughout the 1960s the tram network was gradually cut back. The rise of the private car had increased traffic congestion at a time when stopping trams were increasingly seen as a hindrance, with motor car registrations having tripled in 20 years. Much of the usage drop was out of peak hours, with off-peak public transport usage having dropped by one third.

Well known consultant Wilbur Smith released the Brisbane Transportation Study in 1965, a document accepted by Brisbane City Council as a blueprint for transport development. The removal of trams was seen as a gateway towards enabling higher speeds on major arterial roads. After years of debate, in 1968 Brisbane's longest serving Lord Mayor Clem Jones announced the final closure of the network, which occurred the following year on 13 April 1969.

In June 1980, trams ran for the first time at a new Ferny Grove site. The Brisbane Tramway museum continues to run at the site 37 years later, operating by all-volunteer labour. The site is also home to the Ferny Grove Men's Shed, with most of the members involved in maintaining and operating the museum.

Fifty five years after the great fire that heralded decline and eventual closure, the evening gathering was well attended with hundreds of happy people roaming the grounds and riding the museum's trams. Routinely running with all seats taken, Brisbane's elegant surviving trams rolled smoothly around the museum layout, delighting all present and a poignant reminder of what could have been.



In the gathering dusk, drop centre combination car 341, built in 1936, rests at the lower terminus as passengers await departure.

# The Richmond Vale Bushfire

Wednesday 13 September proved to be devastating day for the volunteers of Richmond Vale Railway Museum. On the previous day, a bushfire allegedly triggered by the torching of a stolen vehicle on a nearby fire trail had been held at the outskirts of the museum by a determined effort on the part of the NSW Rural Fire Service, with the assistance of some museum volunteers in clearing tracks through the bush. That night, a backburn was authorised in an attempt to deny fuel to the fire.

Wednesday morning dawned warm and windy. As the hours advanced the temperature rose, humidity dropped and winds accelerated. About mid-morning the fire suddenly flared and jumped containment lines, impacting on the museum site. Many RFS and Fire and Rescue NSW units were deployed to the site. As the fire progressed, a Section 44 emergency was declared, which permitted the deployment of resources from outside the region, including the C130 Large Air Tanker, to battle the flames.

Museum board members and other volunteers who were on site assisted in the extinguishment of spot fires and the provision of access. The carriage shed came under ember attack, and was able to be saved by provision of a key to allow access for fire crews.

However, in the face of the fast-moving firefront, much of the museum's rollingstock collection was unable to be saved. The unrestored wooden rollingstock, including many non-air hoppers, stored towards the rear of the site was decimated by the flames. The restored demonstration non-air coal train was severely damaged, with ten of its sixteen vehicles burned to some greater or lesser extent. Two former interurban trailers, including TF6001, were completely gutted and a third partially damaged.

Damage to the perway was also considerable, with 2.5 kilometres of track rendered unserviceable, due to fire damage to sleepers. The wooden pilings of the Number 1 Bridge along with sleepers were also charred. Both the Pelaw Main line and the Mulbring Road branch were affected, as well as the carriage shed and platform roads.

After passing through the site, the fire jumped Leggetts Drive, and eventually went on to cover an area of 800 hectares, with the blacking out of hot spots continuing into Thursday and Friday. On Thursday morning, officers of Cessnock City Council, landlords of the site, conducted an inspection of the site with RFS and FRNSW officers. It was determined that asbestos fragments, remaining from the demolition of former colliery buildings were hazardous, and the site was closed forthwith.

At a meeting between the RVRM Board and Cessnock Council held on the afternoon of 4 October, a briefing was given on the state of the museum site. Areas of the site to the east of the main line are lightly contaminated and relatively easy to rehabilitate. The area to the west of the line was seriously affected by the bushfire and has major contamination issues from asbestos-containing materials of various kinds. Council and the Board have agreed on a strategy for reopening the site. Depending upon the availability of contractors and materials, it is hoped that RVRM will be back in operation for Santa Specials on November 19, and the reunion of former employees, to commemorate 50 years since the cessation of coal production, on November 24. Watch the website, Facebook page and general media for confirmation.

Pending the resumption, the Board has adopted a three-pronged fundraising strategy to assist in the recovery, under the overarching title of *The Rebuilding Richi Appeal*.

An online fundraising campaign has been launched, and can be found at [www.gofundraise.com.au/beneficiary/rebuildingrichi](http://www.gofundraise.com.au/beneficiary/rebuildingrichi)

*Graham Smith & Graham Black*

**From the top:** Despite the determined efforts of the RFS volunteers, the unrestored wooden rollingstock stored toward the rear of the site was decimated by the flames. Graham Black • Damage suffered by a restored AA Co. Hebburn Colliery hooper wagon. Behind it is badly-burnt U Set interurban car TF6001. Graham Black • The demonstration non-air train suffered differing amounts of damage to adjacent hopper wagons. The total loss of the bodywork of the recently-restored East Greta Coalmining Co. 4-wheel brake van was particularly tragic. Graham Black • The damaged structure of Number 1 Bridge. Peter Meddows





**Above:** At Greta, on Sunday 3 September, SSR's No.5444N Up grain train, powered by BRM002, C505, 44204, 4908, 4904 and C510, passes LVR's 5917, 4716 and 4204 on *The Picnic Train* – a spectacular sight to witness. Matthew Proctor

**Below:** The last steam-hauled broad-gauge train to visit Wycheproof, before the line is converted to standard gauge, departs down the main street (the Calder Highway) on Saturday 7 October behind A2 986, with T356 and N472 at the rear. Graham Crichton





**Above:** On South Australia's Pichi Richi Railway, former Commonwealth Railways 4-8-0 NM25, built by Thompson Engineering in 1925, climbs past the Pichi Richi Station sign, between Woolshed Flat and Quorn, with the *Afghan Express* on Saturday 19 August. Chris Walters  
**Below:** On Victoria's Puffing Billy Railway, former Victorian Railways 2-6-2T 12A (built by VR in 1912) and Beyer-Garratt 2-6-0+0-6-2 G42 (built by Beyer, Peacock & Co. in 1926) haul the 10.30am Down Emerald Lake passenger service at Selby on Sunday 6 August. John Scott





**Above:** A visit to the Queensland Pioneer Steam Railway, at Swanbank, on Saturday 19 August found QR Heritage AC16 Class Baldwin 2-8-2 221A deputising for the Society's PB15 4-6-0 No.448, which was out of action. Here, at 8.40am, 221A arrives at Racecourse with a Box Flat to Racecourse Market passenger service. John Scott

**Below:** The Busselton Visitor Centre in the former railway station, with the extended jetty railway running to the platform. The adjoining structure to the left of the Centre is the *Ballaarat* Room, an exhibition room featuring Western Australia's first steam locomotive, which entered service in 1871 on the West Australian Timber Company railway to the north east of Busselton. David Whiteford





**Above:** Former Sydney Tramways, and Parramatta Tramway, Baldwin steam tram motor 103A takes water while operating at the Valley Heights Locomotive Depot Heritage Museum, in the NSW Blue Mountains, on Sunday 9 July. Scott Mitchell

**Below:** South Australia's Victor Harbor Tramway, which began carrying passengers in 1894, is currently Australia's only horse-drawn tramway. On Tuesday 3 October, the tram sets off for a leisurely run across the 630-metre causeway to Granite Island. Steve McNicol



# 2017 Transport Heritage Grants

NSW Parliamentary Secretary for Transport, Mr Mark Coure MP and THNSW Director, Howard Collins OBE joined representatives from various NSW transport museums and tourist railway groups at the Sydney Tramway Museum at Loftus on Saturday 14 October, for the official announcement of the recipients of the 2017 Transport Heritage Grants.

This year, the following organisations were awarded a Transport Heritage Grant:

## Restoration and conservation category

**Illawarra Light Railway Museum:** Perry steam locomotive (Tully No.6) – \$9,300

**Oberon Tarana Heritage Railway:** Restoration and repair to roof of one end platform carriage – \$6,900

**Richmond Vale Preservation Co-op:** Purchase and installation of backhead injector to locomotive *Kathleen* – \$9,655

**Sydney Tramway Museum:** Restoration of heritage Sydney railway tramway signal box – \$13,500

**Sydney Tramway Museum:** Restoration of Sydney trolleybus #19 to display condition – \$9,285

**Sydney Bus Museum:** Restoration of White bus (part 2) – \$4,254  
**The Rail Motor Society:** HPC 402 Bogie maintenance and wheel change out – \$20,416

**Lachlan Valley Society Co-op:** Locomotive 5917 driving wheel and tyre replacement – \$50,000

**Zig Zag Railway:** Restoration and painting of 1890 Zig Zag signal box – \$9,600

**Zig Zag Railway:** Replacement of rainwater tank on 1890 signal box – \$1,255

**Zig Zag Railway:** Preservation of Coerwull Railway Footbridge – \$11,330

## Education category

**Shoalhaven Historical Society:** *Going South: The Kiama to Bomaderry Railway* – \$8,850

## Victoria's Murray Basin standard-gauge conversion.

The people of Portland – Hamilton, Nhill-Horsham, Donald-Mildura have a right to public rail transport, according to the Prime Minister when announcing the latest round of funding, but still nothing for these people.

The only feasible way I can see for this problem to be solved is for the line Maryborough – Ballarat – Geelong to be standard gauge only.

Stage one of the public transport service would be a VLOCITY service on standard gauge running between Maryborough-Ballarat and vice-versa giving commuters a fast and efficient service between the two centres.

Stage two would be the continuation of this service through to Geelong giving residents of Maryborough – Ballarat a direct connection to Geelong, the largest regional city outside of Melbourne for both Leisure and Employment.

Stage three would be to duplicate the line from Ballarat Station to Wendouree with a standard gauge line and have the section from Wendouree to Ararat converted to standard gauge. This would enable trains from Horsham and Hamilton to travel direct to Ballarat and Geelong. With this, Ballarat would become a large interchange station for the people North, West and South West, enabling them a direct link to Geelong without having to change trains. Those people travelling

to Melbourne would change at Ballarat and catch the fast and frequent service to Melbourne on the broad gauge. It needs to be remembered that not everyone wants to go to Melbourne.

Stage four would be a service from Ballarat to Mildura. It's ironic that the first locomotive to be painted in the new PTV colours (Violet Crumble) is named the *City of Mildura* (is this an omen?). This would give all Victorians a good public transport system.

The Jewel in the crown for Ballarat would be to return the *Overland* service from Adelaide through Ballarat on its way to Melbourne via Geelong. The tourism potential for Ballarat from Adelaide along with the new Hotel complex to be built in the station precinct this would be an outstanding opportunity to promote Ballarat.

Ballarat could also become a service centre for the standard gauge rolling stock operating from there, creating further employment. From Geelong to Mildura and all lines west would be standard gauge with exception of the Warrnambool line.

This is the only way I can see of giving all Victorians a good and efficient public transport system.

Brian Culley  
Dunolly, Vic

## Cairns to Forsyth

The Cairns to Forsyth June 93 article in the October 2017 edition brought on waves of nostalgia for a Queensland visit

I made from the UK in 1999.

With the benefit of a Queensland Rail Sunshine Railpass I travelled on all the QR long-distance trains, plus the *Savannahlander* and the *Gullfander*, the latter two lines still firmly in the hands of QR and their staff, and finally the Tilt Train back to Brisbane.

Our enthusiastic crew much preferred the *Savannahlander* to operating the 10,000-tonne coal trains elsewhere in the State and had well-thought out interesting stops along the way.

Our itinerary was much as described in the October article and the well-trained wildlife still flew TOWARDS the approaching train for a feed-up!

What I did find surprising was the cost of the Forsyth return of \$130 back in 1993.

My month long Sunshine Railpass for 'all of the above' cost me just \$300 in 1999 and I was getting \$3 to the £1.

Frank Faulkner  
Northampton, UK

## Pichi Richi Railway

Congratulations on the feature articles in the October RD. The information in Chris Walters' article on the railways at the head of Spencer Gulf was a good read, and his photograph of the *Afghan Express* mirrored in the waters of Lake Knockout was of particular interest as I was aboard the train that day. At this location just east of Port Augusta the train is going very slowly due to a severe speed restriction across the causeway.

Whilst the loco had no problems on the relatively flat country, the journey to Quorn was slower than scheduled due to the need to pause to raise steam several times, despite the fact that the consist was one car fewer than normal. Thanks to a dedicated team on the footplate, the delay was only an hour, and served to increase the appetite of the participants who headed for lunch in the several cafés and pubs in Quorn.

Whilst the Pichi Richi Railway is not easily accessible to most Australians, a trip on one of its regular passenger trains is recommended if you are ever in the vicinity, or can break a journey from the east or south-east to the west or north of the country. On the day Chris Walters saw the *Afghan Express* it was well patronised, with a sizeable contingent of families from the surrounding area (particularly Whyalla) and including a group of fans from Melbourne who combined the trip with attending an AFL match in Adelaide the following day. One boy will always remember his day on the steam train, as during the stop at Woolshed Flat, one of the superb team of on-train staff took him to collect a few spikes from replaced sleepers, at least one of the spikes dating back to the origins of the construction of the line in the late 19th century as the Port Augusta & Government Gums Railway.

Derek Scrafton  
Wattle Park, SA

### Sydney–Melbourne XPT

Responding to a letter in the September *Railway Digest*; Car A (Melbourne end) of the XPT sets is a nine-compartment sleeping coach, which reverts to a compartmented sitting car for daylight services – so, 18 sleeping or 27 sitting.

An evening meal is offered to XPT passengers once the city's pick-up points have been completely cleared. A P.A. announcement advises of usually five choices and prices. A buffet staffer then walks through taking orders and a further announcement advises that they are ready to be picked up from the buffet and paid for. Inevitably there are two or three left behind because there has been a change of mind by the orderer. These are then re-offered, and by this time

the XPT is approaching Moss Vale or Euroa.

As the XPT departs Sydney Station at 20:40 and Melbourne at 20:00 I believe that these can be normally seen to be rather late hours for dinner. Further, a light breakfast is available at about 05:30 hrs. Also, XPT's are strongly patronised by concession holders, including myself. When I used to travel regularly to Melbourne in the *Aurora*, it was very pleasant to be sitting in the *Murray* dining car as it rolled through Melbourne's northern suburbs with, in front of me, a six-item breakfast of juice, fruit, cereal, bacon & eggs, coffee and toast. But I never had anyone to talk to, except of course the dedicated staff. So, it is possible that Australians don't

regard trains as a place to eat?

To compare the XPT's to AMTRAK or Brisbane to Cairns or the *Indian Pacific* or *The Ghan* is akin to comparing cherries to grapefruit, whilst I suspect that the passengers in these last three are not entirely Aussies. The Melbourne to Adelaide *Overland* has resolved a few problems by becoming a Day Train, waiting patiently in Platform 2 as the XPT terminates in Platform 1 of Melbourne's Spencer Street station. (I don't like the new name!)

John Speechley  
Cootamundra, NSW

### Albury–Wagga commuter service

I have been reading with great interest the recent stream of

letters about the need for a passenger service between Albury and Wagga Wagga. A new fleet of railcars, or purchase of second British railcars or reuse of the wornout XPT trains have all been proposed. However the most important aspect has been ignored. What is the demand for this service?

Are there hundreds driving their cars each day? Is there a bus service already? How many people use the XPT services? My suspicion is that there would not be enough passengers to fill a small bus each day.

It is nice to think back to the old days of regional railway services but customers have moved on, and so should we.

John Bevan  
via email

## Book review: TRACKING BACK

By Ed Tonks. 128 pages, A4 landscape format, hard cover, 165 photos. Published by Newey Printing Company and Ed Tonks, with design and layout by Peta Coulin. Available for \$50 plus p&p (members discount applies) at the ARHSNSW Bookshop, 67 Renwick Street, Redfern NSW 2016. [www.arhsnsw.com.au/bookshop.htm](http://www.arhsnsw.com.au/bookshop.htm)

Whilst it can be argued that New South Wales has had a very healthy railway publishing scene in recent years, the great majority of works have been steam-centric with little in the way of diesel era publications. Ed Tonks' new book *Tracking Back* goes some way to redressing this imbalance.

Ed Tonks has previously authored works on a variety of Newcastle subjects ranging from the area's historic pubs to histories of the mines and railways of the former Adamstown to Belmont railway. *Tracking Back* represents the author's first attempt at a full colour pictorial work. Subtitled *Rail Scenes of Newcastle and Lake Macquarie 1970s -1980s* the book is presented in a 128-page hardcover landscape format.

The breath of this book is impressive to say the least

and many of the images show scenes that will never be repeated. Steam is covered with a selection of images on the former J&A Brown system including both the Kitson Tanks and the SMR 10 class which replaced them. Also included are images of diesel haulage of the SMR 10 class on the government tracks during locomotive transfers, along with steam tours using former NSWGR engines, in the 1980s.

However, the focus of this book is very much diesel and electric power of the New South Wales Government owned system. However, the use of diesel traction on the private railways of the region is not overlooked, with images showing not only BHP diesel locomotives but also those used by Comsteel Waratah and Cockle Creek's Sulphide Corporation. The area's role in railway manufacturing is not overlooked also, with images of Hammersley Iron locomotives being trucked for loading onto ships, as well as the movement of Sydney Suburban Carriages from Goninan's works.

The selection of images to depict government railway operations is impressive with almost all images bring previously unpublished and depict the wide variety of rail operations that once took place in the Newcastle region. Images range from everyday operations to the

now gone movement of special loads for powerhouse construction. Images of now closed lines and facilities ranging from the Wangi Wangi Branch to the Wickham Branch and the Steggles siding at Beresfield are a key strength of the book. Even images of places still served by rail traffic show how much the region's rail infrastructure has changed in the last three decades.

Ed Tonks has also succeeded in capturing images which show once common aspects of rail operations which have now fallen by the wayside. Standout images include the once ubiquitous luggage trolleys and tractor unit on Broadmeadow Station and the shot of 4854 at Broadmeadow with the relief driver walking toward the locomotive in full green uniform and with open Gladstone bag being powerful symbols of the railway scene now forever lost.

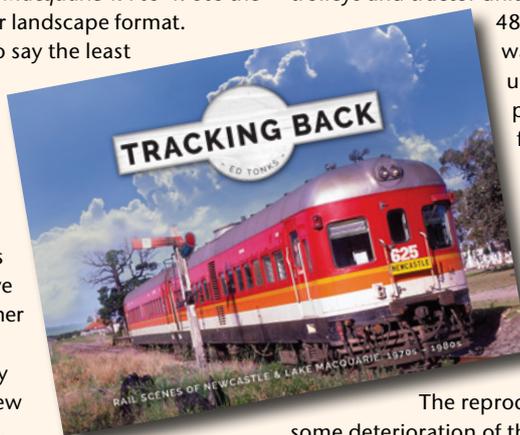
Almost every class of diesel and electric locomotive in use on the Government system is depicted in the pages of the book. Unusual workings are also covered, such as 4201's trial on the *Newcastle Flyer* following its 1980 overhaul, as well as a 73 class hauling a tour train in 1979 on a then single-track Kooragang Island branch.

The reproduction of the images is exceptional, despite some deterioration of the originals. The layout of the book is quite well done, though an image of *Pendennis Castle* on the Newcastle dockside is spoilt by poor text placement. However, minor issues such as this do little to detract from the overall quality of the book.

The book is an invaluable resource for the modeller as well as the historian for it shows not only locomotives but train compositions and now long-gone infrastructure.

Ed Tonks has indicated his intention to produce a follow-up volume on the 1990s. I suspect that should this volume reach fruition it will join this volume as an invaluable record of the recent rail history of the Newcastle region, and I for one will eagerly await the next volume in this series.

Ben Barnes





# ARHSnsw Railway Bookshop

67 Renwick Street REDFERN NSW 2016

Monday to Friday 10am to 5pm

Saturday 9am to 4pm

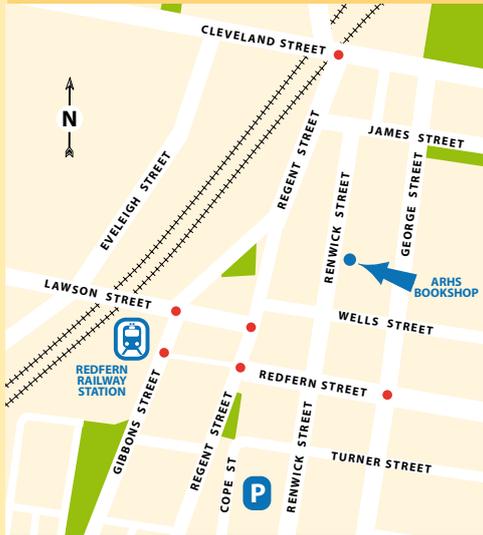
Shopping Cart: [www.arhsnsw.com.au](http://www.arhsnsw.com.au)

Fast mail order service (use the order form)

Phone 029699 4595 or fax 029699 1714

MasterCard or Visa Accepted Only

ARHSnsw Members receive 10% discount for items marked \* after RRP.



## LATEST AUSTRALIAN BOOK NEWS

- AMUSEMENT RAILWAYS OF AUSTRALIA.** Longworth.244p \$65\*
- BALMAIN PENINSULA TRANSPORT HISTORY.** MacAuslan.102p...\$30\*
- BYWAYS OF STEAM 31.** LithgowValley rail/industry/LithgowLoco 216p\$50\*
- AUSTRALIAN TRAINS.** Trainspotting thru the years (Topmill).120p...\$45\*
- DEMONDRILLE THEN AND NOW.** John Reid. 28p...\$10\*
- ENGAGING THE GIANTS** Tas Southern Sawmills&Tramways (LLRSA)240p...\$60\*
- FORGOTTEN RAILWAYS OF THE NORTHERN RIVERS.** Kirkland 254p...\$35\*
- IRON ROADS IN THE OUTBACK.** CR History. Anchen. 208p...\$70\*
- LOCOMOTIVE ENGINEMEN OF TASMANIA.** Anchen.184p col/bw\$50\*
- NO BAR TO TIME.** Hotels in Newcastle area. Revised.E.Tonks. 155p...\$40\*
- PUFFING BILLY Spirit of the Dandenongs.** 3rdEd.Anchen.108p...\$30\*
- RAIL CENTRE COLAC.** 1877-2014. Houghton. 262p...\$63\*
- RAILS ACROSS AUSTRALIA.** D Cable. (Pen&Sword) 258p...\$75\*
- RAILWAY HOTELS OF AUSTRALIA Vol 3-QLD.**Whitaker.276p...\$70\*
- REMEMBER WHEN II.** NSW 1960-66.D.Rogers.(ARHSnsw) 277p...\$70\*
- RUNNING OUT OF STEAM** David Burke 1 S4p b&w/col SC...\$30\*
- THE RAILWAY HERITAGE OF GOULBURN.** S Sharp.(GLRPS)96p...\$47\*
- The MAIN LINE.** Ipswich/Granchester/Toowoomba Line.96p...\$40\*
- N SHADY ACRES.** Lesley Muir. Syd early transport scandals.300p...\$50\*
- N SHALE & SHAYS.** Mark Langdon. (Eveleigh Press). 300p...\$78\*
- N SINGLE DECKERS FROM NEWCASTLE.**V2Howarth/Ryan186p \$65\*
- SYDNEY'S FORGOTTEN SIDINGS.** John Oakes. A4 336p...\$95\*
- N THE PRIVATE BUS INDUSTRY IN NSW.** Birchmeier. 213p...\$50\*
- R THE SOUTH-EASTERN LINES.** David Keenan. 120p...\$30\*
- THE WAGGA TO TUMBARUMBA RAILWAY.**Why it was built?28p...\$11\*
- TASMANIA RAILWAY PRESERVATION.** R Sweet. 36p...\$17\*
- TO THE FERTILE PLAINS BEYOND.** CCSingleton.(ARHSnsw) 277p...\$48\*
- TRACING TRACKS THROUGH NEWCASTLE.**Longworth.(ARHSnsw) \$60\*
- N TRACKING BACK.** Rail scenes in Newcastle area. E.Tonks. 128p...\$50\*
- VANTAGE POINT TED PAYNE.** Queensland Photos.160 p...\$75\*

## LATEST AUSTRALIAN DVDS & CDs

- 49 DOWN 50 UP CLASS.** The last steam service. 35'...\$30
- 42101 BACK ON THE TRACK** (Trainspotter) 45' DVD...\$32
- DISAPPEARING STEAM.** NSW railways 1959to mid60s 68'...\$40
- N DRIVERS VIEW TO KANDOS.** Railmotor 402. 55'...\$20
- JUST SOUTH AUSTRALIAN TRAINS -2.** (HD) DVD. 70'...\$30
- JUST WESTERN AUSTRALIAN TRAINS 2012.** (HD). 60'...\$29
- N JUST VICTORIAN TRAINS AUS.** DVD/BluRay. 70'...\$30/\$40
- QUBE FREIGHT TRAINS.** NSW/Vic 2012/15 (Railtrax)50' \$40
- RAILFANNING THE SOUTH LINE.** Southern Tas (RailMedia) 60'...\$30
- RAILWAY REMINISCENCE VOLUME 1-2-3.**NSW 1969-75 165'...\$39
- RIDING WITH THE DRIVER.**G42,Abt,R711, (Channels) 52'...\$35
- SENSATIONAL STREAMLINERS.**Clyde/EMDs (AC Video) 62' \$40
- N STEAM ACTION 4.** AC Videos. SMR18,3237,3016,6029.60'...\$35
- STEAM OUT OF CENTRAL.** 1960s service steam 67'...\$40
- TASMANIA'S RAIL FREIGHT NETWORK Vol.1.** (RailMedia) 71' \$30
- THE WESTERN LINE.** Pr1 Pennrith/Bathurst(Trainspotter)DVD\$45BR \$30
- TASMANIAN RLWYS "THE CHANGING RAIL SCENE"** 58' DVD...\$50

NOTE: TRACKSIDE DVDS ARE LISTED ON LAST PAGE

NOTE: BEVAN WALL DVDS ARE LISTED ON LAST PAGE

## KEY TO SYMBOLS

N New in store

Sp Special

hc hard cover

p page/pages

Rr Back in stock/re-released

sc soft cover

b&w black and white

' mins (eg 60'=60 MINSs)

## ARHSnsw PUBLICATIONS & DISTRIBUTION

- 46 CLASS REMEMBERED.** All locos & liveries. Colour.64p...\$25\*
- A CENTURY OF CENTRAL.** McKillop, Ellsmore & Oakes. 160p...\$49\*
- A GUIDE TO AUSTRALASIAN LOCOMOTIVE.**Walters/Baker/Peardon. \$30\*
- Sp A RAILWAYMAN'S JOURNEY.** Denny Ellis' NSW Career 448p...\$10\*
- AUSTRALIAN RAILWAY HERITAGE GUIDE 2010** ARHSnsw 320p...\$35\*
- BOILERS, BEAUFORTS & BOGIES.** Chullora history. Longworth. \$49\*
- BONDI TO THE OPERA HOUSE.**Budd/Wilson. Sydney's trams.ARHS...\$29\*
- BRIDGES DOWN UNDER.** Don Fraser. 2nd Edition...\$38\*
- Sp COAL, RAILWAYS & MINES OF J & A Brown.** BRAndrews...\$50\*
- Sp COAL, RAILWAYS & MINES OF NEWCASTLE.** BRAndrews 2Vol sets\$200\*
- Sp FROM GREASE TO GOLD BRAID.** Ken Ames. NSWGR 76p...\$10\*
- JUGGERNAUT!** David Burke. Sydney's steam trams...\$15\*
- Sp MERCY TRAINS.** J Harvey. Wartime ambulance trains.280p...\$25\*
- Sp NEW IDEAS FOR AUSTRALIA'S TRAINS:1929 TO 1973...**\$5\*
- Sp NO FEAR OF CHANGE OR LEARNING TO LIVE WITH CHANGE.**\$10\*
- SOUTHERN AURORA.** Chris Banger. 2nd Edit (ARHSnsw).224p...\$88\*
- SYDNEY'S CENTRAL.** 2012 Edition 64p...\$20\*
- SYDNEY'S FORGOTTEN CITY RAILWAYS.** John Oakes 64p...\$20\*
- SYDNEY'S FORGOTTEN GOODS RAILWAYS.** J Oakes 112p\$25\*
- SYDNEY'S FORGOTTEN ILLAWARRA RLWYS.**J Oakes 88p...\$20\*
- SYDNEY'S FORGOTTEN INDUSTRIAL RLWYS.**J Oakes 208p...\$30\*
- SYDNEY'S FORGOTTEN MILITARY RAILWAYS.**J Oakes112p\$25\*
- SYDNEY'S FORGOTTEN PARK & RURAL RLWYS.**J Oakes 128p \$25\*
- SYDNEY'S FORGOTTEN QUARRY RAILWAYS.** John Oakes. 80p. \$22\*
- THE DAYLIGHT.** Intercapital daylight Melb/Syd.(ARHSnsw).352p...\$115\*
- THE GOONDAH TO BURRINJUCK.**3rd Edit. 260p col/b&w HC...\$30\*
- THE SHALE RAILWAYS OF NSW.** 2015 edition. 256p...\$62\*
- TRIKING THE LENGTH.**NSWTrikes.Jim Longworth ARHSnsw 240p...\$59\*
- WOLGAN VALLEY RAILWAY - ITS CONSTRUCTION.** 32p...\$13\*

## OTHER PUBLISHERS

- 80 YEARS & MORE OF MOUNTAIN RAILWAY.** Unanderra/MVale...\$20\*
- A HISTORY OF SA RAILWAYS Vol.1.**Early Years.(ARHSVic)320p\$70\*
- A RAILWAY TO CUDGEWA.** Nick Anchen. 122p col/bw...\$50\*
- AN AUSTRALIAN LOCOMOTIVE GUIDE.** 2nd Edition.Clark.368p...\$35\*
- AUSTRALIAN RAILWAY DISASTERS.** Reprint...\$43\*
- BEHIND THE TIN FENCE.** Ipswich Rly Workshops History...\$25\*
- BUILT BY BALDWIN.**(LLRSA) Wilson 160p sc b/w...\$44\*
- BUILT BY BUNDEBERG FOUNDRY.** ANGRMS.80p sc col...\$25\*
- CHASING THE SUNSHINE** David Burke 154p b&w/col SC...\$38\*
- COMENG Vol. 1.** 1921-55 History. John Dunn. 318p.hc col...\$59\*
- COMENG Vol. 3.** 1966-77 History. John Dunn. 336p hc col...\$70\*
- COMENG Vol. 4.** 1977-85 History. John Dunn. 288p hc col...\$65\*
- COMENG Vol. 5.** 1985-90+ABB, Adtranz&Bombardier. 312p col...\$65\*
- DISTANT THUNDER.**NRM.Outback rly action 64p SC\$35\*hc...\$42\*
- ENGINEMEN OF THE VICTORIAN RLYS Vol 2** Anchen hc...\$50\*
- EXPLORING QLD'S RAILWAYS.**West/Toowoomba.Webber160p\$38\*
- GLEN DAVIS A Shale Oil Ghost Town.** Knappam.270p hc b/w...\$59\*
- GREAT RAIL JOURNEYS OF AUSTRALIA.** Avery. 220p HC \$30\*
- HELL NEVER STOP THAT TRAIN IN TIME.**Brakes.Moffat.427p...\$99\*
- JOADJA CREEK.** A Shale Oil Ghost Town. Knappam.176p b/w col \$38\*
- LIFE ON AUSTRALIAN LOCOMOTIVES.** Barnett. Vic Steam 1960s.35\* \$35\*
- LIFE ON THE VICTORIAN RLYS.** Railwaymen's roles. Anchen.170p...\$50\*
- MECHANICAL WEIGHING MACHINES No.2** (ARHSVic) 328p sc \$49\*
- MY RAILWAY DAYS.** John Dare Images from 1970 to 2007 160p \$75\*
- NEWCASTLE SLIDE SHOW.** Greg & Silvia Ray.Colour images...\$49\*
- ONE AMERICAN TOO MANY.** Brisbane Trams. David Burke.126p \$30\*
- PANSY.** Richmond to Kurraroing Railway. 34p sc bw...\$15\*
- PENNY-A-SECTION, TUPPENCE-A-CASE.** Irwin.97p sc bw...\$29\*
- PENINSULA PIONEER REVISTED.** Peter Kittle. 382p col...\$95\*
- POWER TO THE RAILS.** Vic. Diesel & Electrics J Scott 224p hc col...\$75\*
- PROCEED TO HAWKER.** Evans (Railmac)152p SC b&w/col...\$30\*
- PROCEED TO QUORN.** Evans (Railmac)176p SC b&w/col...\$40\*
- PROCEED TO WILMINGTON.** (Railmac) 172p.HC...\$40\*
- RAILMOTORS,RAILCARS,EMUS,TILTTRAINS QLD.**(ARHSQ) \$35\*
- RAILS ACROSS AUSTRALIA.** D Cable. (Pen&Sword) 258p...\$75\*
- RAILS AROUND BROKEN HILL.** (Railmac) 36p col/bw...\$13\*
- RAILWAY ELECTRIFICATION IN AUSTRALIA & NZ.**160p...\$20\*
- RAILWAY HOTELS OF AUSTRALIA Vol 2-NSW.**Whitaker.296p...\$77\*
- RAILWAY PORTRAITS.** B&RWheatley. 112p.V1\$55; V2/3...ea\$59\*
- RAILWAYS OF TASMANIA'S WILD WEST.** Anchen.160p...\$50\*
- RAILWAYS OF THE OVENS & KING.** Beechworth etc N Anchen \$60\*
- RICHES BENEATH THE FLAT.**CaptainsFlat.Mainwaring 104p...\$30\*
- SALUTE TO THE HUDSWELLS.** (ANGRMS) 140p. SC...\$35\*
- SAMPHIRE & STONE** Dry Creek to Stockdale NRM 184p sc b/w \$52\*
- Sp SHORT NORTH: The Railways of NSW In Steam.** Preston.80p...\$15\*
- SIMSVILLE & THE JARRAH MILL.**Myall River NSW.McNeil (LLRSA)96p...\$29\*
- SINGLE DECKERS FROM NEWCASTLE.**V1Howarth/Ryan178p\$65\*
- SMELTERS HAVEN TO ARTIST'S REST.** LakeMacquariehotels.Tonks \$40\*
- TALL TIMBER & TRAMLINES.** Queensland. Kerr (LLRSA)104p. \$30\*
- THE APRICOT MAIL.** Rogan's Hill Railway.Irwin. 96p. b/w...\$29\*
- THE END OF AN ERA.**Single-deck suburbsans.Ryan.80p\$45\*
- THE INNISFAIL TRAMWAY.** (LLRSA). 2ndedit...hc\$38\* sc\$30\*
- THE LANDERS.** QR AC Cars. (ARHSQ) 152p col sc...\$40\*
- THE LEEDS FORGE CARS.** Suburban Cars. (Bow River) 152p col...\$49\*
- The McIVOR TIMBER & FIREWOOD COMPANY.**(LLRSA)Stamford\$30\*
- THE MAPLETON TRAMWAY.** John Knowles 92p b/w SC...\$28\*
- THE RIGHT WAY, THE WRONG WAY & THE RAILWAY.** N Anchen \$35\*
- THE RAILWAYS AT WORK Vol 3** Mackey Official NSWGR Photos. \$35\*
- THE RLWYS OF CABOOLTURE, WOODFORD & KILCOY** Webber 116\*
- YOUNGY THEN & NOW 25 EARS ON.** WallSEND/Edgeworth Hst41p \$44\*

## TRAIN HOBBY BOOKS

- ALL-COLOUR, BIG A4 PICTURE 48-56 PAGE ALBUMS.
- N 30 YEARS COUNTRY PASSENGER TRAINS VICTORIA.**56p \$42
- COALS TO NEWCASTLE Part 1 - The Steam Era.**56p...\$42
- COALS TO NEWCASTLE Part 2 - The Diesel Era.**...\$42
- COALS TO THE ILLAWARRA.** 40 years of haulage...\$42
- SYDNEY TERMINAL.** The Steam Station...\$49
- NSW 30 CLASS 4-6-4 Tank**...\$42
- NSW 30T CLASS 4-6-0 Tender**...\$42
- NSW 35 CLASS 4-6-0 Tender**...\$42
- NSW 38 CLASS 4-6-2 EXPRESS LOCOMOTIVE** 56p...\$42
- NSW 38 CLASS 4-6-2 EXPRESS LOCOMOTIVE Part 2** 56p...\$42
- NSW 40 CLASS.** Canadian Diesel-Electric...\$42
- NSW 421 CLASS Clyde-Gm Diesel Electric**...\$42
- NSW 43 CLASS** Goninian Alco Diesel Electric...\$42
- NSW 44 or 80 CLASS.**...ea \$42
- NSW 48 CLASS MARK 1 & 2 Vol 1** NSW LOCO PROFILE \$42
- NSW 50 OR 53 CLASS 2-8-0 LOCOMOTIVE.**Each...ea \$42
- NSW 59 CLASS LOCOMOTIVE PROFILE.**...\$42
- QLD CANEFIELDS STEAM**...\$42
- VANTAGE POINT TED PAYNE.** NSW superb steam era photos.160 p\$75\*
- VANTAGE POINT TED PAYNE.** Victorian Photos.160 p...\$72
- VR C Class DIESELS Vol 2**...\$42
- VR T Class Bo-Bo DIESEL (First Series)**...\$42
- VR X CLASS DIESEL Vol 1**...\$42
- VR R Class 4-6-4**...\$42
- VR G CLASS GARRATTS V1, 2 or 3**...ea \$42
- UNDER THE WIRES PART 2** Interurbans...\$26p...\$42
- UNDER THE WIRES PART 3** 45 (7100) & 46 Class...\$42
- UNDER THE WIRES PART 4** 85 & 86 Class...\$42
- UNDER THE WIRES PART 6** E Class Electrics...\$42
- COUNTRY BRANCHLINES NSW PART 4** Boorowa, Crookwell, Yass...\$42
- COUNTRY BRANCHLINES NSW PART 5 Vol1** Blaney to Harden...\$42
- COUNTRY BRANCHLINES NSW PART 5 Vol2** Blaney to Harden...\$42
- COUNTRY RAILWAY STATIONS-NSW.** Parts 4 or 6...ea \$42
- COUNTRY BRANCHLINES VICTORIA Part 7**...\$42
- COUNTRY BRANCHLINES VIC P19** Echuca,Deniliquin,Balranald...\$42
- COUNTRY BRANCHLINES VIC P10** Patchewollock/Yapeet/Yanac...\$42\*
- MELBOURNE'S INDUSTRIAL & SUBURBAN SIDINGS**...\$42
- MELBOURNE'S SUBURBAN RAILWAY STATIONS**...\$42
- RAIL SCENE 9 TANGERINE ERA.** VR & V/line. 97p...\$49
- WESTERN AUSTRALIAN STEAM, South West Cnr** 56p...\$42

## EVELEIGH PRESS PUBLICATIONS

- 38 NSWGR'S C38 Class.** John B Thompson.Definitivebook.276p \$65\*
- 44-WORLD DOWN UNDER.** R Preston.184p.hc b&w/col...\$65\*
- A HISTORY OF THE SOUTH AUSTRALIAN RLWYS Vol 5.**240p \$70\*
- A HISTORY OF SA RAILWAYS Vol 6.**Locomotives. 340p hc...\$70\*
- ALCO DL541 - The NSW 45 & SAR 600 Classes.**176p...\$45\*
- BYWAYS OF STEAM 30.** Griffith/Barry/Tulloch tribute/RovingTo 171p\$40\*
- BYWAYS OF STEAM: 29.** Western Line/CaptainsFlat/All Byways index...\$45\*
- BYWAYS OF STEAM: 28.** Narrabri West/Moree Loco...\$45\*
- BYWAYS OF STEAM: 27.** Port Waratah, Richmond...\$45\*
- BYWAYS OF STEAM: 26** West WallSEND, Far West, Loco details \$40\*
- BYWAYS OF STEAM: 22.** 23, 24 or 25...each \$40\*
- BYWAYS OF STEAM: 21.** Camden Issue...\$38\*
- BYWAYS OF STEAM: 20.** Blayney, Short North, etc...\$40\*
- BYWAYS OF STEAM: 19.** Nyngan, Short Nth,Master Fitter,57\$38\*
- BYWAYS OF STEAM 18.** The Tweed Railway...\$40\*
- BYWAYS OF STEAM Encore.** (With index to vols 1 to 14)...\$35\*
- BYWAYS OF STEAM 16.**53Class \$38 17 BinnawayCooma...\$38\*
- BYWAYS OF STEAM 8 & 9ea**\$28 10,11,12,13,14&15ea\$35\*
- CENTRAL WEST EXPRESS.** (Eveleigh Press) 164p Col...\$22\*
- COACHING STOCK NSW RAILWAYS Vol 1.** Wood cars.260p \$99\*
- COACHING STOCK NSW RAILWAYS Vol 2.** F.Os,steel cars \$220\*
- COACHING STOCK NSW RAILWAYS Vol 3.** Electric cars \$110\*
- CONQUERING THE BLUE MOUNTAINS.** Mark Langdon...\$50\*
- DAY OF THE GOODS TRAIN.**Preston.Early to modern times\$60\*
- DIESEL SCENE 3:** 421CI\$30\*, DS4:400 CI \$33\*, DS5:Eveleigh \$40\*
- DIESEL SPECTRUM Vols 3, 5 & 7**...each \$17\*
- ESSAYS IN STEAM.** Ron Preston.Various steam stories.184pb/w\$16\*
- GERALD DEE.** Life & Times. JFowler.161p...\$60\*
- GREEN DIESELS OF THE NSWGR.** Preston 40&41 Class. 112p...\$30\*
- INDIAN PACIFIC GREAT AUSTRALIAN TRAINS.** Attenborough.\$20\*
- IRONWORKHORSES.** B Macdonald.(Eveleigh)176p.hc b&w/col...\$54\*
- NEWCASTLE EXPRESS.** P Attenborough. 96p sc Col...\$20\*
- PORTRAIT OF A CLASSIC.** 46 Class history. 192p col b/w \$70\*
- RAY LOVE'S DAYS OF STEAM.** 112p Col hc...\$50\*
- SOUTH AUSTRALIAN STEAM MEMORIES.**136p...\$65\*
- SOUTH MAITLAND RAILWAYS.** Attenborough. 128p hc...\$45\*
- SOUTHERN HIGHLANDS EXPRESS.** Attenborough. 64p Col \$22\*
- SPIRIT OF PROGRESS.** 64p A5 sc col b/w...\$20\*
- STANDARDS IN STEAM - 53 & 55 Class.** Ron Preston. sc. \$48\*
- SYDNEY SUBURBAN STEAM.** John Ward. 72p hc b/w...\$30\*
- TIME OF THE PASSENGER TRAIN.**Preston Vol 1, 2 or 3. ea\$60\*
- TULLOCH.** A History. (Eveleigh Press).296p...\$85\*

Prices are correct as at press time. Items sold and out of stock may vary in price.

**USA PUBLISHERS - GENERAL**

**N** EASTERN OREGON SHORTLINE RAILROADS. Moore. 176p ... \$40\*  
**G**UIDE TO NORTH AMERICAN STEAM LOCOS. (Trains) 335p. \$55\*  
**N**EW HAVEN COLOUR PICTORIAL Vol3 The East End...\$92\*  
**P**ENN CENT POWER. Yanosey.(MorningSun) Collector's edition248p \$115\*  
**P**ENNSY R/R DIESEL LOCO PICTORIAL V10 EMD. Withers80p \$30\*  
**R**AILS AROUND LAKE TAHOE Ferrell 256p hc b/w.....\$75\*  
**N** SMOKE OVER STEAMTOWN. Livesey (Schiffer) 120p ..... \$60\*  
**S**P PASSENGER CARS V4:DINING.SPH&TS.576p hc col/bw. \$200\*  
**S**P PASSENGER CARS V5:DOME&PARLOR.SPH&TS.576p. \$200\*  
**S**TEAM'S LAST SEASON. Grate Rail. 296p hc col/bw.....\$160\*  
**T**HE CONTEMPORARY DIESEL SPOTTERS GUIDE 2008. Withers \$40\*  
**T**HE LAKE SHORE ELECTRIC RAILWAY STORY. IndUni. 297p. \$135\*  
**T**HE MALBONE STREET WRECK. FordhamUniPress. 120p bw.....\$55\*  
**T**HE RAILWAY PHOTOGRAPHY OF JACK DELANO. 186p .....\$90\*  
**T**HE ROUTES NOT TAKEN. Raskin. 323p hc bw .....\$55\*  
**N** TWELVE TWENTY-FIVE Pere Marquette 2-8-4(MichUni) 212p ... \$88\*  
**W**HEAT LINES & SUPERFREIGHTS (McMillan) 240p hc col.....\$125\*

**MORNING SUN (USA)**

If your desired title is not listed, we will try to get it for you.

AC&Y and A&B BELT ...\$99\* METRO-NORTH .....\$105\*  
 AGLOMA CENTRAL .....\$99\* LEHIGH & NEW ENG .....\$99\*  
 APPALACHIAN Vol 3 .....\$99\* NORFOLK SOUTHERN V1. \$105\*  
**N**BETHLEHEM STEEL CO V1\$99\* NYC POWER V1#20-4940\$111\*  
**N**BETHLEHEM STEEL CO V2\$99\* NYC POWER V2 4000-9820 \$105\*  
**B**&O POWER V1.Steam/Cab\$100\* OHIO CENTRAL V1 STHS109\*  
**B**OSTON & MAINE V3 .....\$96\* PENN CENT POWER V1....\$105\*  
**B**UFFALO, ROCH, PITT V5\$99\* PENN CENT POWER V3.....\$99\*  
**C**AN PAC FACILITIES. V3\$105\* PENN CENT POWER V4 .....\$109\*  
**C**BQ FACILITIES. V2.....\$99\* PITTSBURG & SHAWMUT .....\$99\*  
**C**BQ FACILITIES. V3.....\$111\* PRAIRIE DEPOTS Vol 1.....\$95\*  
**C**&N.W POWER 63-95 V1. \$99\* PRR FACILITIES .....\$70\*  
**C**&N.W POWER 63-95 V3. \$99\* READING CO. POWER Vol 1\$105\*  
**C**&N.W POWER 63-95 V4. \$99\* READING CO. POWER Vol 2.....\$99\*  
**C**&O FACILITIES V1\$50\*V2\$80\* N S.OO-MILWAUKEE RD MERGERS100\*  
**C**&O Thru Pass Service\$105\* SOUTHERN RLY Vol 3.....\$79\*  
**C**ONRAIL ATLANTIC V1. \$99\* SOUTHERN RLY POWER V1. \$99\*  
**C**ONRAIL PMRV1(1000-3999)\$99\* SOUTHERN RLY POWER V2. \$111\*  
**C**R CENTRAL REGION V3\$99\* SP FACILITIES Vol 2 .....\$105\*  
**C**R CENTRAL REGION V4\$105\* SP POWER1Switchers,Slugs,ps. \$105\*  
**C**ONRAIL NORTH REGION\$105\* N SP POWER2Roadworkers,fs. \$100\*  
**C**ONRAIL WEST REGION V1\$99\* STEEL MILL RR V4 & V5. ea \$85\*  
**C**P GUIDE FREIGHT&PASSV2\$99\* STEEL MILL RR Vol 7.....\$105\*  
**C**RITTERS VOL 4 or 5 ea \$99\* STRASBURG RAILROAD.....\$99\*  
**C**SAO CR SHARED ASSET \$105\* The LONG ISLAND RR V4 \$85\*  
**C**SX POWER 4axleEMDs V1\$105\* N The LONG ISLAND RR V5\$100\*  
**D**ELAWARE & HUDSON.....\$95\* The NEW RIVER TRAIN. \$105\*  
**D**ERECO .....\$99\* TORONTO HAMILTON BUFFALO\$105\*  
**D**T & I POWER .....\$100\* WEST FLORIDA RAILS V1.....\$99\*  
**E**LGIN JOLIET & EASTN V3\$105\* WEST FLORIDA RAILS V2.....\$95\*  
**E**RIE-DL&W-EL TRACKSIDE. \$105\* WEST FLORIDA RAILS V3.....\$99\*  
**E**RIE LACK POWER V1 \$115\* WISCONSIN CENTRAL LTD\$105\*  
**E**RIE LACK POWER V2. \$95\* WM POWER Diesel Years...\$99\*  
**E**RIE LACKAWANNA V8. \$85\* TRACKSIDE EAST OF HUSON...\$75\*  
**E**RIE LACKAWANNA V9. \$99\* TRACKSIDE ERIE RR & Conn.....\$50\*  
**E**RIE WESTERN.....\$105\* TRACKSIDE ERIE TO CORN.....\$60\*  
**F**LORIDA EAST COAST. \$99\* TRACKSIDE HARRISBURG.....\$65\*  
**G**TW POWER Vol 1 ...\$105\* TRACKSIDE LEIGH RIVER...\$99\*  
**N**GTW POWER VOL 2.....\$99\* TRACKSIDE MOHAWK VALLEY. \$105\*  
**I**LLINOIS CENTRAL GULF V1\$100\* TRACKSIDE NEWPORT NEWS\$99\*  
**I**LLINOIS CENTRAL Thru Pass\$105\* TRACKSIDE PENNSY TOWNS...\$95\*  
**I**NDUSTRIAL RR Vol 1. \$85\* TRACKSIDE PRR EAST REGION \$105\*  
**I**NDUSTRIAL RR Vol 2...\$90\* TRACKSIDE PITTSBURGH.....\$85\*  
**J**ERSEY CENTRAL POW V1 \$99\* TRACKSIDE ROCHESTER 70/80. \$99\*  
**N**JERSEY CENTRAL POW V2 \$99\* TRACKSIDE SUSQUEHANNA...\$99\*  
**J**ERSEY CENTRAL LINES V4 \$95\* TRACKSIDE YOUNGSTOWN...\$50\*  
**J**ERSEY CENTRAL FAC V1\$95\* UNION RAILROAD.....\$75\*  
**L**AKE SUPERIOR & ISHPG V1\$99\* N UP POWER V2. 1965-2015. \$100\*  
**L**ONG ISLAND POWER 52-15\$105\*

**USA - HEIMBURGER HOUSE: Great Prices!**

AMERICA'S GREATEST CIRCUS TRAIN. 208p col hc.....\$110\*  
**Sp** AC GILBERT'S FAMOUS AMERICAN FLYER. 200p col hc \$59\*  
**Sp** AMERICA'S RAIL PICTORIAL. 152p col hc .....\$59\*  
**Sp** AMERICAN STREAMLINER POSTWAR YEARS. 200p col hc \$59\*  
**Sp** AMERICAN STREAMLINER PREWAR YEARS. 176p col hc...\$59\*  
**Sp** CHASING TRAINS. US Narrow Gauge. Richardson. 432p col hc ...\$89\*  
**Sp** CHICAGO & NORTHWESTERN-MILWAUKEE. 78p col hc...\$45\*  
**Sp** CLASSIC VINTAGE CRAWLERS & DOZERS. Vol1188p col hc\$69\*  
**Sp** DESERT RAILROADING. Steve Schmollinger. 172p col sc. \$59\*  
**Sp** THE LAST OF STEAM. Joe Collias. 268p b/w sc.....\$59\*  
**Sp** MASON STEAM LOCOMOTIVES. Wallace. 192p col sc....\$69\*  
**Sp** NARROW GAUGE COUNTRY. Mal Ferrell. 372p col hc.....\$85\*  
**Sp** NEVADA CENTRAL SAGEBRUSH NARROW. Ferrell. 204p col hc \$59\*  
**Sp** NEVADA COUNTY NARROW GAUGE. G Best. 224p col hc\$59\*  
**Sp** ROBERT W. RICHARDSON'S RIO GRANDE. V3208pcol hc \$79\*  
**Sp** THE SEARCH FOR STEAM. Joe Collias. 360p b/w sc.....\$59\*  
**Sp** TRAINS OF AMERICA. Don Heimburger. 204p col hc.....\$59\*  
**Sp** WEST SIDE PICTORIAL. Mal Ferrell. 312p col hc.....\$69\*

**CAPITAL TRANSPORT (UK)**

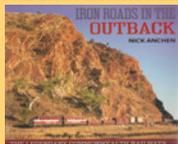
THE BAKERLOO LINE OR DISTRICT LINE. 80p sc col b/w. ea \$18\*  
 THE CENTRAL LINE OR CIRCLE LINE. 80p sc col b/w...each \$15\*  
 THE JUBILEE LINE. 80p sc col b/w.....\$18\*  
 THE METROPOLITAN LINE. 96p sc col/bw.....\$18\*  
 THE NORTHERN LINE. 80p sc col b/w.....\$18\*  
 THE PICCADILLY TUBE. Horne. 144p hc col b/w .....\$78\*

**UNITED KINGDOM & IRELAND**

ARMoured TRAINS. 1815-2016. Mallassari. 527p HC col.... \$150\*  
**B**ARRY: YARD HISTORY & LOCOMOTIVES. (OPC)256p col/bw. \$80\*  
**BR** COACHING STOCK 2014. PocketBkPlatform5. 110p sc col. \$16\*  
**BR** LOCOS & COACHING STOCK 2014. Platform5. hc bw/col. \$35\*  
**BR** LOCOMOTIVES 2014. PocketBook. Platform5. 95p sc col. \$16\*  
**B**RANCH LINES OF STRATHEARN. TouristsTatties&Trains. 296p. \$85\*  
**B**RAITN'S DECLINING SECONDARY RAILWAYS. Thru60s. 168p. \$75\*  
**B**RITISH RAIL CLASS 60 LOCOMOTIVES. Egleed. 192p....\$70\*  
**B**RITISH RAIL DIESELS. Early lives. Hymans. 160p .....\$80\*  
**B**RITISH RAIL CLASS 20 LOCOMOTIVES. Dunn. 208p.....\$55\*  
**B**RITISH RAIL SCENE 1970S & 1980S. Sparks. 96p.....\$50\*  
**B**RITISH STEAM LOCOMOTIVE BUILDERS. Lowe. 704p .....\$90\*  
**C**ASTLES THE FINAL YEARS 1954-1965. (Allan). 128p .....\$50\*  
**C**OMMUTERS. British commuting history. Pen&Sword. 150p.....\$40\*  
**D**IESEL & ELECTRIC LOCOMOTIVES FOR SCRAP(OPC)240p. 85\*  
**D**MU COMPENDIUM. Boocock. (Allan). 128p .....\$40\*  
**E**AST OF EASTBOURNE, WEST OF WATERLOO. 102p sc bw \$30\*  
**E**NGLISH ELECTRIC CLASS 40, 50 & 55. (Amberley). 128p \$50\*  
**F**ALSE STARTS, NEAR MISSES & DANGEROUS GOODS. 159p \$30\*  
**F**ROM CLERK TO CONTROLLER. (Pen&Sword) Fowkes. 248p. \$75\*  
**G**LASGOW SUBWAY ALBUM. (Watson). col sc.....\$39\*  
**G**RADIENTS OF THE BRITISH MAINLINE RLWYS. (Allan)95p.....\$40\*  
**G**RAT NORTHERN ATLANTICS. Baldwin (Pen/Sword). 128p. \$60\*  
**G**RESLEY'S CLASS P2 LOCOMOTIVES. (IanAllan). 128p.....\$55\*  
**N** GW MANOR CLASS LOCO PORTFOLIO (Pen&Sword) 111p.....\$75\*  
**N** GW MOGULS & PRAIRIES LOCO PORTFOLIO (Pen&Swd)248p. \$90\*  
**N** GW SAINT CLASS LOCOMOTIVES (Pen&Swd) 144p.....\$65\*  
**N** GW DOUBLE FRAMED 4-4-0 LOCOMOTIVES (Pen&Swd)256p. \$80\*  
**G**WR GOODS TRAIN WORKING VOL 1. (Creely) Atkins. 136p.....\$70\*  
**I**N THE TRACKS OF THE BOURNEMOUTH BELLE. (Creely). 128p. \$33\*  
**N** IRISH RAILWAYS IN THE 1950s & 1960s (Pen&Swd) 175p. \$65\*  
**L**MS HANDBOOK. Wragg. 1st Edition. 256p hc bw .....\$55\*  
**N** THE GREAT CENTRAL RAILWAY Heritageguide(PenSword)111p. \$53\*  
**L**MS HANDBOOK. Wragg. 2016 Edition. 256p sc bw.....\$50\*  
**N** THE LNER HANDBOOK. Wragg. 2017 Edition. 256p sc bw.....\$50\*  
**N** THE SEVERN VALLEY RAILWAY Heritageguide(PenSword)104p. \$53\*  
**N** THE TWILIGHT OF SOUTHERN STEAM Untoldstory(PenSwd)356p.....\$80\*  
**L**EWES&EAST GRINSTEAD RLWY TheBluebell(Allan) 112p. \$50\*  
**L**OCOMOTIVES WE HAVE LOST (OPC/IanAllan) 260p .....\$85\*  
**L**ONDON UNDERGROUND STEAM. (IanAllan) 80p hc col.....\$35\*  
**R**AILS TO GLYN CEIRIOG. Ceiriog Press. 308p hc bw/col....\$99\*  
**R**AILS THROUGH BARNSELY. (Pen&Sword) Whitehouse. 136p.....\$75\*  
**R**AILWAY BREAKDOWN CRANES V1 (NoddleBks) 256p.....\$80\*  
**R**AILWAY WORKSHOPS (Shire Books) 86p s/c col/bw.....\$15\*  
**R**AILWAYS OF AYSHIRE. G Thompson. 160p s/c col/bw.....\$50\*  
**R**AILWAYS OF BRITAIN-NORFOLK&SUFFOLK. (Allan)112p.....\$48\*  
**R**AILWAYS IN THE LANDSCAPE. (Pen&Sword) Biddle. 216p.....\$75\*  
**R**AILWAYS & INDUSTRY IN THE WESTERN VALLEY. 254p.....\$78\*  
**R**AILWAYS OF THE ISLE OF WIGHT. (Amberley)PAleen. 94p \$35\*  
**R**EGIONAL TRAMWAYS SCOTLAND. Pen&Sword. Waller. 144p. \$75\*  
**S**COTTISH STEAM - A CELEBRATION. Langston 240p.....\$60\*  
**S**HROPSHIRE RAILWAYS. (Crowood) Cryer 160p sc bw/col. \$55\*  
**S**OMERSET AND DORSET SWANSONG. (WildSwan) 97p.....\$45\*  
**N** SOUTHERN NOUVEAU & THE LINESIDE. (Irwell). 392p.....\$75\*  
**S**OUTHERN STEAM. Buckley Photos. (HistoryPress)Dickson. 96p. \$50\*  
**S**TEAM TODAY. BR Heritage Rail (HistoryPress) Swaine. 118p.....\$50\*  
**S**WINDON WORKS. The Legend. (HistoryPress)Matheson. 192p. \$35\*  
**T**HE ANATOMY METROPOLITAN RLY 4-4-0 TANK Manning \$40\*  
**N** THE GREAT BRITISH RLY STATION KINGS. (Irwell). 240p. \$75\*  
**T**HE GWR Vol 1. Paddington to Bristol. (Amberley). 128p.....\$43\*  
**T**HE GWR EXPOSED. Swindon in days of Collett/Hawksworth.....\$75\*  
**T**HE GWR HANDBOOK. 1923-47 (HistoryPress) Wragg. 248p.....\$50\*  
**N** THE LINES BEHIND THE FRONT. WWI Western Front Rlys (Aves).....\$79\*  
**T**HE LYNTON & BARNSTAPLE RLWY MEASURED & DRAWN \$150\*  
**N** THE OKEHAMPTON LINE. Exeter to Plymouth. Nicholas. (Irwell). 428p.....\$75\*  
**T**HE ROYAL ARSENAL RAILWAYS. Pen&Sword Smithers. 212p. \$90\*  
**T**HE SOUTHERN WAY. ISSUE 10. 100p sc bw.....\$15\*  
**T**HE STAFFORD & UTTOXETER RAILWAY. 240p HC bw.....\$85\*  
**N** THE TURBOMOTIVE STANIER ADVANCED PACIFIC. 206p.....\$70\*  
**T**WO CENTRIES OF RAILWAY SIGNALLING. 2nd Edition OPC 256p.....\$80\*  
**N** TRAIN DOCTOR. Diesel/electric troubleshooting. Pen&Sword. 214p. \$70\*  
**U**RIE & MAUNSELL 2-CYLINDER 4-6-0S. Pen&Sword. 264p. \$90\*  
**N** VISIONS OF BARRY. J Grayer Photos. (CreelyPub). 120p.....\$40\*  
**N** VANISHED RAILWAYS OF WEST LOTHIAN. (Lightmoor). 256p. \$80\*

**OAKWOOD PRESS (UK)**

AYRSHIRE'S FORGOTTEN RAILWAYS. 200p sc col/bw.....\$45\*  
 FIFTY YEARS OF NEWPORT 1900-49. 160p sc col/bw.....\$45\*  
 NTH NORTHUMBERLAND'S MINOR RLWYS Vol 3 160p.....\$26\*  
 NTH NORTHUMBERLAND MINOR RLYS Vol 4 136p b/w.....\$30\*  
**O**AKWOOD PRESS THE FIRST 80 YEARS Mullarky 120p sc col. \$24\*  
**S**TEAM DIESELS & ON-TRACK MACHINES. 240p sc bw. \$40\*  
**T**HE AXMINSTER & LYME REGIS RAILWAY. 144p sc col/bw. \$40\*  
**T**HE BRISTOL-RADSTOCK-FROME LINE 240p sc b/w.....\$35\*  
**T**HE DAVINGTON LIGHT RAILWAY. 48p sc b/w.....\$25\*  
**T**HE ELY & ST IVES RAILWAY. 176p sc b/w.....\$45\*  
**T**HE EAST FIFE CENTRAL RAILWAY. Lochty Line. 104p bw \$33\*  
**T**HE LEVEN & EAST OF FIFE RAILWAY. 320p sc col/bw.....\$53\*  
**T**HE LYNN & HUNSTANTON RAILWAY. 192p sc col/bw.....\$32\*



**New from Nick Ancher!**  
**A pictorial history of the Commonwealth Railways \$70\***  
**208 full colour pages**

**WORLD TRANSPORT BOOKS**

AUTOCARS, AUTOBUS, TROLLEYBUS de FRANCE. 1950/80. \$99\*  
**N** BENELUX RAIL 1970-1980. Belgium, Nederland, Lux. 302p. \$59\*  
**H**EATHROW AIRPORT. 1929 onwards. Ops Manual 188p...\$40\*  
**C**AMELS & CADILLACS. SAR 25 Class Condensers & 25NC 4-8-4s. \$90\*  
**C**OAL, STEEL & COMFORT. Loco141R568 & Swiss Classic Train \$42\*  
**N** CZECH & SLOVAK RAILWAYS 1st Edit. Platform 5. 256p....\$60\*  
**N** EUROPEAN RAIL TIMETABLE. Winter 2016/2017 edition. 648p...\$32\*  
**F**RENCH RAILWAYS 5th Edit. Platform 5. 222p.....\$43\*  
**H**IGH SPEED TRAINS. Peter Clark. 192p hc colour.....\$40\*  
**O**N TRACK. H Gittins - Railway pioneer Siam & Mandalay. 151p.....\$25\*  
**I**RISH RAILWAYS-LOCOS, MUs & TRAMS V7. Plat5. 95p....\$42\*  
**L**ITTLE TRAINS TO FARAWAY PLACES. J. Organ. 64p .....\$25\*  
**N** LOCOMOTIVES FROM LINZ 760mm Gauge. (Indiana). 209p. \$76\*  
**Rr** NARROW GAUGE RAILWAYS OF SOVIET UNION. 224p HC...\$99\*  
**N** RAILS ACROSS EUROPE. Northern & western. Cable. (P&S) 245p \$75\*  
**N** RAIL MAP EUROPE. 1st Edition revised. (EuroRailTimetable). \$16  
**R**O-RO HANDBOOK. Guide to roll-on/roll-off cargo ships. 151p.....\$60\*  
**S**EASONS OF STEAM. Steamscenes. 104p. All colour.....\$59\*  
**N** STEAM LOCOMOTIVES OF EAST AFRICAN RAILWAYS 216p. \$99\*  
**T**HE GREAT INDIAN RAILWAY ATLAS. Roychoudhury104pcol. \$45\*  
**N** THE IRON HORSE. Steam loco history & development 144p.....\$65\*  
**N** THE NG RAILWAYS OF BOSNIA-HERCEGOVINA. Chester 416p...\$90\*  
**N** THE RAILWAYS OF MONTENEGRO. K Chester 232p HC col/bw. \$90\*  
**T**HE RAILWAY ATLAS OF THAILAND, LAOS & CAMBODIA 212p \$75\*  
**T**HE RAILWAYS OF THAILAND. R. Ramaer. 212p sc col/bw.....\$80\*  
**T**HE RAILWAYS & TRAMWAYS OF VIETNAM. Dooling. 398p.....\$85\*  
**N** THE STEAM KYALAMI. Sth African steam P Hobben. 252p...\$99\*

**NEW ZEALAND BOOKS**

A WEST COAST ENGINEMAN. (NZ) Tibbles 252p sc.....\$70\*  
**NZ** RAILWAYS' 4-6-0 LOCOMOTIVES. Sean Millar. 42p.....\$19\*  
**NZ** RAILWAYS STAND ALONE MECH SIGNAL BOXES. 271p. \$79\*  
**NZ** RAILWAYMEN AT WAR 1914-18. (KiwiRail) 64p.....\$22\*  
**R**AILS TO ROXBURGH NZ. Otago provincial Rly. Conran. 256p. \$75\*  
**R**AILWAY ELECTRIFICATION IN AUSTRALIA & NZ. 160p...\$20\*  
**S**IGNALLING & INTERLOCKING AT FRANKTON Junc. 1897/1987. 132p. \$25\*

**GENERAL INTEREST BOOKS**

CITY OF ADELAIDE. RailmacMiniProfile#10. Historic clipper ship. \$8\*  
**H**AWKESBURY RIVER BOATS AND PEOPLE. 138p.....\$20\*  
**Sp** INTO THE GOLDEN WEST. Bob McKillop. 286p.....\$44\*  
**M**ORRIS 25 ON THE RAILS RailmacMiniProfile#5 SA Inspection Cars.....\$8\*  
**U**NION JACK. Jack O'Leary & the RTBU. 214p.....\$25\*  
**S**HIPS FROM THE DEPTHS. Deepwater Archaeology. 182p \$68\*  
**N** THE 'BIG FOUR' OF THE WHITE STAR FLEET. 112p.....\$35\*  
**N** THE HOLIDAY TRAIN SHOW. New York Botanical Garden 144p. \$65\*  
**N** THE RELIANT ROBIN. Britain's most bizarre car. 112p.....\$40\*  
**S**WIFT TO DESTROY. History 77 Squadron RAAF. 113p.....\$25\*  
**V**OYAGE TO THE END OF THE WORLD. David Burke. 200p...\$25\*

**TRAM BOOKS**

AUSTRALIAN TRAMS THROUGH THE AGES. M Kelly Pt1 160p sc. \$25\*  
**B**RISBANE TRAMWAYS THE LAST DECADE (Transit Press)60p.....\$21\*  
**D**ESTINATION CIRCULAR QUAY. Wilson/Budd. Melb trams. 76p.....\$60\*  
**D**ESTINATION WATERFRONT CITY. (revised 2017) 63p.....\$46\*  
**J**UGGERNAUT! David Burke. Sydney's steam trams.....\$15\*  
**S**TEAMING DOWN ARGENT STREET. Broken Hill 90p hcbw.....\$13\*  
**L**AUNCESTON MUNICIPAL TRANSPORT 1911-1955. 170p. \$55\*  
**M**ELBOURNE'S COLOURFUL TRAMS 1970s Clark (TH) 56p. \$39\*  
**M**ORE TRAM IMAGES with bonus DVD. Aust & NZ. Balmont. 140p.....\$60\*  
**N** NEWCASTLE TRAMS REMEMBERED. Pictorial by Noel Reed 64p...\$40\*  
**R**AILS IN THE ROAD. Britain & Ireland tram history. 269p.....\$90\*  
**T**HE EASTERN LINES. David Keenan. 82p. sc.....\$30\*  
**T**HE MANLY LINES. David Keenan. 72p. sc.....\$25\*  
**T**HE NORTH SYDNEY LINES. David Keenan. Reprint.....\$29\*  
**T**HE ROCKDALE & ENFIELD LINES. David Keenan.....\$20\*  
**T**HE SYDNEY TRAM. Clark. A pictorial review.....\$15\*  
**T**HE SOUTH-WESTERN LINES. David Keenan.....\$25\*  
**T**HE WESTERN LINES. David Keenan.....\$25\*  
**T**HE GOLDEN CITY AND ITS TRAMS. Bradley. 144p col/bw.....\$35\*  
**T**HE GOVERNMENT TRAM IN AUSTRALIA. (revised 2017)...\$39\*  
**T**RAM IMAGES. Australia & NZ. Balmont. (Transit) 120p sc col.....\$40\*  
**T**RAMWAYS OF NEWCASTLE. David Keenan. 138p hc.....\$55\*  
**T**RAMWAYS OF SYDNEY. David Keenan. 89p hc.....\$27\*  
**T**ROLLEYS WEST. RailmacMiniProfile#4 Adelaide trolleys in the West.....\$750\*  
**T**RACING TRAMS THROUGH SYDNEY. Jim Longworth. 72p. col/bw...\$50\*  
**S**UBWAYS & LIGHT RAIL IN THE USA 1-EAST COAST. 160p ..\$40\*

**TRAM DVDS**

AUSTRALIAN TRAM MUSEUMS P1- SA & VIC. DVD. Tramalan 86' \$34  
**B**LACKPOOL TRAMS V3 Body & paint shops. DVD. Tramalan.....\$20  
**B**LACKPOOL TRAMS V4 Rebuild of Car 736. DVD. Tramalan.....\$20  
**G**ERMAN TRAMS 1. DVD. Frankfurt Mainz Köln 67'.....\$34  
**J**UST TRAMS IN MELBOURNE 1972-2013. Greg Travers. DVD170' \$40  
**L**IGHT RAIL PART 1- Sydney Inner West. (Trackside) 104'.....\$36  
**L**IGHT RAIL PART 2- Gold Coast. (Trackside) 90'.....\$36  
**M**ELBOURNE'S TRAMS (Highball) 80' Blu-Ray.....\$38  
**S**HOOTING THROUGH SYDNEY TRAMS. DVD. 165'.....\$35  
**S**YDNEY TRAMS TODAY. Glenelg trams. DVD. (Railstuff).....\$30  
**T**RAMS AROUND THE WORLD Vol3. DVD. (Tramalan). 130'.....\$44  
**T**RANSPORT POTPOURRI. DVD. (Tramalan). 130'.....\$44

**AUDIO CDS**

DIESEL CENTRAL. Central Vic & NSW (Loco Records) 74'.....\$28  
**S**TEAM ON THE 5' 3" Victorian Steam 1960s.....\$25  
**N**IGHT SHIFT NSW Steam 1960s.....\$25  
**S**TEAM POWER. NSW & Vic Steam (Loco Records) 73'.....\$29  
**V**INTAGE DIESEL. GM Diesel Sounds (Loco Records) 73'.....\$28

COLLECTORS CORNER (RARE/PRE-READ BOOKS)

21 YEARS OF TOURS. ARHSnsw tour history to 1968. 102' ..\$25  
 36. John B Thompson. (1988). 168p. Excel cond. ....\$245  
 38. John B Thompson. 1992 edition. 277p. Excel cond. ....\$55  
 3801 A LEGEND IN STEAM. RG Preston. 104p. Excel cond. ....\$55  
 150 YEARS OF RAIL IN NSW. Souvenir Book. 64p .....\$55  
 150 YEARS OF THE PORT ADELAIDE RLYWY. (NRM) 80p. ....\$30  
 700. The 700 Series of SAR. John B Thompson. 42p. Fair cond. ....\$15  
 A CENTURY OF LOCOMOTIVES 1855-1955. (NSWGR). ....\$55  
 A CENTURY PLUS OF LOCOMOTIVES 1855-1955. (NSWGR)...\$75  
 A CENTURY OF SERVICE 1865-1965. (QR). ....\$35  
 A CENTURY OF NSW TRAMCARS V2 1903-1908. ....\$55  
 A COMPENDIUM OF NSW STEAM LOCOMOTIVES.(ARHS) ...\$75  
 A GUIDE TO THE RAILWAYS OF NSW. S Sharp. 185p. ....\$55  
 A HISTORY OF W.A.G.R. STEAM LOCOMOTIVES. Gunz.156p. \$65  
 ACROSS AUSTRALIA BY INDIAN PACIFIC.Patsy Adam-Smith.. \$20  
 ADAMSTOWN VIA FERNLEIGH. Ed Tonks.116p. Excel cond. ..\$75  
 ALL ABOARD.Trains of Australia Stamps. Patsy Adam-Smith. \$25  
 AMONG THEIR FAVORITES.1989. Jean Campbell.144p. ....\$20  
 AN ERA IN STEAM. NSW steam images. RG Preston.109p. ....\$45  
 AUSTRALIAN RAILWAY ROUTES 1854-2000.Quinlan/Newland80p. \$35  
 AUSTRALIAN STEAM LOCOMOTIVES.1855-1895.Turner.192p. ....\$65  
 AUSTRALIAN STEAM LOCOMOTIVES.1896-1958.Turner.192p. ....\$65  
 AWAY WITH STEAM. NSW steam images. Crow & McLean. ....\$55  
 BELLBRACKES, BULLOCKS & BUSHMAN.1987.McCarthy.104p. ....\$24  
 BHP TRAMWAYS CENTENARY HISTORY.1985.Griffiths. 88p. ....\$45  
 BOGIE FREIGHT WAGONS OF VICTORIA P3. 1979-99. 253p. ....\$55  
 BUSH TRAMWAYS & PRIVATE RLYWYS OF TAS. 1850-1960.174p. ....\$25  
 BYGONE AUSTRALIAN TRANSPORT. Wilson (ARHSVic) 64p. ....\$55  
 BYWAYS OF STEAM 2. Rare copy. Excellent condition. ....\$89  
 BYWAYS OF STEAM 5. Rare copy. Excellent condition. ....\$79  
 BYWAYS OF STEAM 6. Rare copy. Excellent condition. ....\$79  
 BYWAYS OF STEAM 7. Rare copy. Excellent condition. ....\$69  
 A COMPENDIUM OF NSW STEAM LOCOMOTIVES. 312p. ....\$65  
 CHANGING TRAINS. Sydney/Melb. Belbin/Burke.1982 144p. ....\$55  
 COACHING STOCK OF NSW RAILWAYS V1.(1999 print) 260p. ....\$99  
 COACHING STOCK OF NSW RAILWAYS V1.(2003 reprint) 260p. ....\$99  
 COACHING STOCK OF NSW RAILWAYS V2.(2003 print) 344p. ....\$99  
 COACHING STOCK OF NSW RAILWAYS V3.(2012 print) 344p. ....\$99  
 COLONIAL ENGINEER. Whittion history. RLee (ARHSnsw) 352p. ....\$75  
 COMENG V1.1951-1955 John Dun 316p. ....\$55  
 DESTINATION STH BRISBANE. Wilson (ARHSQld) 120p. ....\$55  
 DIESEL ELECTRIC LOCO 40 Class Manual. (NSWR Official). ....\$35  
 DIESEL & ELECTRIC LOCOS OF NSWGR V2. (NSWRMT) 224p. ....\$75  
 DIESEL & ELECTRIC LOCOS OF NSWGR V3. (NSWRMT) 256p. ....\$75  
 EARLY DIESEL & ELECTRIC LOCOS OF NSWGR.(NSWRMT)224p. ....\$75  
 ELECTRIFICATION OF SYDNEY & SUBURBAN RAILWAYS. 382p. ....\$45  
 EXPLORING QLD'S STH FROM BRISBANE (ARHSQ) 129p. ....\$45  
 FAMOUS LAST LINES. Holdsworth (1963). 128p. HC. ....\$45  
 FLASHLIGHTS ON STEAM. Whalley. 64p. HC. ....\$45  
 FLYER. (1970). Steam locomotion on Newcastle Exp.75p. ....\$25  
 FLYING SCOTSMAN ON TOUR in Australia. (1990). ....\$45  
 FROM CITY TO SUBURB...a fifty year journey. Travers. 228p. ....\$55  
 FULL STEAM ACROSS THE MOUNTAINS.Belbin/Burke.HC....\$25  
 GAZETTEER OF INDUSTRIAL STEAM LOCOS. Illawarra. ....\$15/25  
 GIANTS OF STEAM. Australia's Last. David Burke.255p. ....\$55  
 GOING PLACES. NSW transport history. 104p. ....\$55  
 GONE ON THE GHAN. Whitelock. 186p. ....\$25  
 GREAT STEAM TRAINS OF AUSTRALIA. David Burke.160p. ....\$15  
 GREAT RAIL NON-JOURNEYS OF AUSTRALIA.Taylor.233p. ....\$35  
 GREEN DIESELS. NSW 40 & 41 Classes Preston.184p. ....\$35  
 HISTORY OF THE GEELONG ELECTRIC TRAMWAYS.80p. ....\$30  
 HOBART TRAMWAYS. ICooper. Centenary Review. 65p. VGC. ....\$45  
 HOOKED ON TRAINS. The Keith Roberts Story. 120p. VGC. ....\$30  
 JEAN & GEOFF CAMPBELL PHOTOGRAPHER PROFILE. ....\$65  
 JOADJA CREEK. Shale oil town and its people. Knapman. ....\$38  
 KICKED OUT LIKE A DOG! Thomas Middelton bio. IADunn. 112p. ....\$50  
 KINGS OF THE IRON HORSE. Smith & Shea. David Burke.248p. ....\$25  
 LOCOMOTIVES IN THE TROPICS. Vol 2 (QR 1910-58) 176p. ....\$35  
 LOCOMOTIVES OF THE S.A.R. (1972) 60p. ....\$39  
 LONELY RAILS IN THE GULF COUNTRY. J.Knowles.62p. ....\$45  
 LOOK OUT FOR SUBURBAN TRAIN.(1998).44p. ....\$25  
 LOOK OUT FOR TRAIN. (ARHS Qld1971) 56p. ....\$25  
 MAITLAND TRAMWAY VENTURES.(65) Willson/McCarthy. ....\$45  
 MAKING THE RAILWAYS. David Burke. 261p. HV VG Cond. ....\$25  
 MAKING TRACKS. RJ Fitch. 76p. sc VG Cond. ....\$30  
 MELBOURNE'S MARVELOUS TRAMS. (1998) Budd/Wilson. ....\$25  
 MEN, STEEL AND RAILS. dJehan. (BHP) 118p. ....\$55  
 MERCY TRAINS. James Harvey. (ARHSnsw) 280pHC. ....\$25  
 MOTIVE POWER. Oberg. Modern Aust locos (1995) 140p. ....\$45  
 MOUNTAINS OF ASH. McCarthy. Warburton sawmills tramways.0 312p. ....\$75  
 NORTH OF THE HARBOUR. LA Clark. 168p Good cond. ....\$55  
 NORTH UNDER STEAM. R Driver. 124p Good cond. ....\$55  
 NORTHERN NARROW GAUGE. SAR Preborough Div. Babbage. \$40  
 NORTHUMBERLAND - Newstan 1887-1987. EdTonks.96p. ....\$35  
 N.S.W.G.R. IN STEAM. RG Preston. 150p. VGcond. ....\$55  
 ON SOUTHERN LINES. NSW steam images. RG Preston.80p. ....\$35  
 ONE RUSTY RAIL. SA SE ast Rlyws. Stewin. (ARHS SA).....\$40  
 P CLASS. M Morahan (NSWRMT) (2000 Ed). 224p. ....\$109  
 PATTERNS OF STEAM. Shane McCarthy. 350p. ....\$75  
 PENNY-A-SECTION TUPPENCE-A-CASE. CastleHill Tramway. 93p. ....\$25  
 POWELLTOWN. Stamford/Stuckey/Maynard. (LRRSA). 151p. ....\$45  
 POWELLTOWN TRAMWAY CENTENARY 1913 - 2013. 32p. ....\$25  
 PUFFING BILLY IN THE MODERN ERA. Anchen.96p. ....\$25  
 RACK RAILWAYS OF AUSTRALIA. D Jehan (1997 1stEd) 113p. ....\$45  
 RAILWAYS AT WAR. NSW Official. 71p. ....\$25  
 RAILWAYS IN THE PILBARA. (1980 edition).88p. ....\$49

RAILWAYS OF AUSTRALIA. Singleton&Burke (1963) 160p. ....\$55  
 RAIL SCENE VICTORIA.(1991) Train Hobby. 64p. ....\$65  
 RAIL SCENE VICTORIA.Vol 2 Broadgauge Steam in mid30s.81p. ....\$65  
 RAIL SCENE VICTORIA.Vol 5 Lindsay Crow Gippsland.105p. ....\$75  
 RAIL SCENE VICTORIA.Vol 6 Lindsay Crow Nth Central.210p. ....\$75  
 RAILS IN TRANSITION NSW STEAM TO DIESEL. 128p. ....\$45  
 RAILS THROUGH THE BUSH. WA. (1997ed) Gunzburg.156p. ....\$75  
 RAILS TO THE TABLELANDS. Cairns Railway Hist.72p. ....\$25  
 RAILS TO THE WESTERN PLAINS. Rail hist. in Dubbo.96p. ....\$25  
 RAILWAY FREIGHT WAGONS IN NSW 1982.Beckhaus.107p. ....\$55  
 REMEMBER WHEN. NSWR 1950s plus-66. Rogers.112pHC. ....\$75  
 REMEMBER WHEN II. NSWR 1960-66. D. Rogers.112pHC. ....\$85  
 ROAD THROUGH THE WIDERNESS.Trancontinental Rly.280p. ....\$55  
 SAFE SIGNALS. J Dargan. NSWR Signalling History. 225p. ....\$55  
 SKETCHES FROM BESIDE THE LINE. Ken Bowen.128p.HC. ....\$55  
 SEASONS OF STEAM. L Anderson. 114p. HC Good Con. ....\$55  
 SHAYS IN THE VALLEY. Wolgan Valley Rwly History. 164p. ....\$75  
 SHOOTING THROUGH. Sydney by Tram. 128p.HCGoodCon. ....\$25  
 SIGNIFICANT SITES. Public works in NSW. 192p.HCExCon. ....\$55  
 SOUTH AUSTRALIAN DIESEL PICTORIAL THE 80s. ....\$35  
 SOUTH COAST LIMITED. Kim Bird. Victor Harbour Line 81p. ....\$35  
 SOUTH MAITLAND RAILWAYS. Attenborough. 128p. ....\$45  
 SPRING, SPARK & STEAM. BMCdonald. (Everleigh) 144p. ....\$75  
 STANDARDS IN STEAM.THE 50 CLASS. Preston. sc Excel. ....\$149  
 STEAM AROUND PERTH. (ARHS 1986) 56p. ....\$49  
 STEAM DAYS ON THE NORTH COAST OF NSW.Butcher.80p. ....\$45  
 STEAM IN THE AUSTRALIA. Gilbertson. (ARHS).96p. ....\$25  
 STEAM LOCOMOTIVES & RAILCARS OF SA RLWYS. 176p. ....\$59  
 STEAM IN THE FIFTIES. Selems. (NSWRMT). 152p. ....\$75  
 STEAM IN THE SIXTIES. (NSWRMT). 152p. ....\$75  
 STEAM ON THE ILLAWARRA. (NSWRMT). 60p. ....\$15  
 STEAM UP. Final years of Wa steam. ....\$15  
 STEAMING DOWN ARGENT STREET. Broken Hill trams.90p. ....\$25  
 STEEL & RAILS IN NEWCASTLE. KMcDonald.116p HC VGC. ....\$55  
 SUBURBAN TICKETS OF THE VICTORIAN RAILWAYS.246p. ....\$55  
 SYDNEY'S ELECTRIC TRAINS.Beckhaus&Halgren(ARHSnsw).192p. \$125  
 SWANBY'S WOODEN ELECTRICS. Kerry (Transit Pubs).64p. ....\$49  
 SYDNEYSONG OF STEAM. (NSWRMT). 60p. ....\$15  
 THE 34 & 35 CLASS. M Morahan (NSWRMT) (2000 Ed). 224p. ....\$125  
 THE 59 CLASS. H Wright.NSWR 2-8-2s. 464p. ....\$99  
 THE 60 CLASS. Groves,Wright&Morahan.NSWR Garratts.226p. ....\$275  
 THE A7 ERA. VR S Class Diesel History. Birmingham. 180p. ....\$99  
 THE ABT RAILWAY ON TASMANIA'S WEST COAST. Rae.88Edit. ....\$25  
 THE ABT RAILWAY & RLYS OF LVELL REGION. Rae.94Edit. ....\$75  
 THE ABRICOT MAIL. Rogan's Hill Railway. Irwin.Rae. 96p. ....\$45  
 THE BANKSTOWN LINE. Sydenham to Belmore 1895 28p. ....\$25  
 THE BEAUDESERT SHIRE RAILWAY. (LRRSA) 70p. ....\$35  
 THE DORRIGO STEAM RAILWAY & MUSEUM. Kramer. 72p. ....\$55  
 THE ELECTRIC RAILWAYS OF NSW. Dorman/Henerson. 96p. ....\$75  
 THE ELECTRIC RAILWAYS OF VICTORIA. Dorman/Henerson104p. ....\$75  
 THE EVELEIGH RAILWAY WORKSHOPS.DMoore photos120p. ....\$65  
 THE FIFTIES DECADE OF CHANGE. Stormont photos.112p. ....\$75  
 THE GLENREAGH TO DORRIGO BRANCH RAILWAY. Paull. 72p. ....\$55  
 THE GOVERNMENT BUS.58 years in Sydney&Newcastle.Travers. 84p. ....\$25  
 THE GOLDEN CITY & ITS TRAMWAYS. Ballarat's trams 144p. \$30  
 THE GREAT EVELEIGH RAILWAY WORKSHOPS. Butcher. 245p. ....\$75  
 THE GREAT NORTHERN RAILWAY. Newcastle to Maitland 112p. ....\$55  
 THE GREATEST PUBLIC WORK. NSW 1848to1889.RLee 184p. ....\$65  
 THE INNISFAIT TRAMWAY. J Armstrong. (LRRSA) 128p. ....\$35  
 THE LAST DAYS OF STEAM. R&B Wheatley. (1971).....\$35  
 THE ML2 STORY. VR B Class Diesel History. Birmingham.100p. ....\$99  
 THE NEVER-NEVER LINE. North Aust Rlwy. J Harvey. 368p. ....\$99  
 THE PUFFING BILLY LINE 1955-1991. Photo collection.100p. ....\$25  
 THE PHOENIX FOUNDRY. Ballarat loco builder. (ARHSVic) 212p. ....\$55  
 THE RAILWAY AGE IN AUSTRALIA. R Bromby. 194p. ....\$55  
 THE RAILWAY CAME TO KU-RING-GAI.Local history.468p.HC. ....\$75  
 THE RAILWAYS OF NSW 1855-1955.(NSWGROfficial)304p. ....\$55  
 THE RAILWAYS OF NSW - In Steam Short North. Preston. ....\$15  
 THE RAILWAYS OF SMR COALFIELDS.(1969) Eardley.161p. ....\$85  
 THE RICHMOND VALE RAILWAY. (NSWRMT) Preston.112p. ....\$75  
 THE RAILWAYS OF VICTORIA 1854-2004. R Lee.304p. ....\$99  
 THE SHALE RAILWAYS OF NSW. Eardley/Stevens.(ARHS). 2000edit. ....\$99  
 THE SHALE RAILWAYS OF NSW. Eardley/Stevens.(ARHS).1974edit. ....\$99  
 THE SOUTH COAST RAILWAY. (Gold Coast Rlwy) Arundell.100p. ....\$55  
 THE STORY OF THE SYDENHAM TO BOTANY RAILWAY.Pollard. ....\$25  
 THE SYDNEY TROLLEY BUSES. MacCowan. 81p. ....\$45  
 THE TRAMWAYS OF AUSTRALIA. Brimson. 223p. ....\$55  
 THE TRAMWAYS OF NEW SOUTH WALES.McCowan. 152p. ....\$55  
 TENDER INTO TANK. RG Preston. (ARHS) 32p.2ndEd HC. ....\$155  
 TIME OF THE PASSENGER TRAIN. RG Preston Vol 1. ....\$50  
 TO CESSNOCK AND BEYOND. (ARHSnsw 1976). 64p. ....\$25  
 TRACKS IN TIME. Dennis O'Brien Collection.(NSWRMT) 128p. ....\$65  
 TRACKSIDE. (NSWRMT). 128p. ....\$45  
 TRAIN TIMES: PASS TRAINS OD AUST & NZ. 2003.Isaacs. ....\$11  
 TRAINS UNLIMITED IN THE 21st CENTURY. Tim Fischer. ....\$35

TRANSCONTINENTAL TRAIN ODYSSEY. Tim Fischer.217p. ....\$25  
 TRANSPORTING THE BLACK DIAMOND. (1968). 79p. ....\$55  
 UNITS IN FOCUS. Mead Cottterall Renton. (1980). ....\$55  
 VICTORIAN RAILWAYS TO '62. LJ Harrigan. 299p. ....\$99  
 WORKING OF ELECTRIC TRAINS 1943. NSW Official. ....\$35  
 WORKING OF ELECTRIC TRAINS 1965. NSW Official. ....\$25  
 WORKING OF ELECTRIC TRAINS 1974. NSW Official. ....\$25

COLLECTORS CORNER (RARE/PRE-READ WORLD BOOKS)

A CENTENNIAL REMEMBRANCE.AlcoHist.Steinbrenner.542p. ....\$355  
 CONFESSIONS OF A TRAIN-WATCHER. DPMorgan. Kalmbach. ....\$39  
 ELECTRIC LOCO PLAN & PHOTO BK. NJ International. ExCon. ....\$55  
 MOTIVE POWER OF THE UNION PACIFIC. Kravitz. 325p. Excel. ....\$175  
 NARROW GAUGE TO THE REDWOODS. Dickinson. 1168p. ....\$30  
 NORFOLK & WESTERN.1st Generation Diesels.Withers. 287p. ....\$55  
 HIGH SPEED TRAINS. Peter Clark (2011). 192p. VGC. ....\$75

RAILMAC MINI PROFILES

SAVING STEAM: RailmacMiniProfile#1. Early SAR Steam Preservation. ....\$7.50\*  
 STEAMING THRU THE PASS RailmacMiniProfile#8. Quom to Woodshed. ....\$7.50\*  
 STEAMING THRU THE PASS RailmacMiniProfile12. The Port to Woodshed. ....\$7.50\*  
 STEAMTOWN 1977-2005:RailmacMiniProfile#3 Steamtown history. ....\$7.50\*  
 STEAMTOWN RailmacMiniProfile #9 Heritage Rail Centre. ....\$7.50\*  
 STEAMTOWN RailmacMiniProfile#13 Locos & rolling stock. ....\$7.50\*  
 REBIRTH OF A RAILWAY:RailmacMiniProfile#2 Pichi Ritschi Railway. ....\$7.50\*  
 RICHMOND VALE:RailmacMiniProfile#11 Pictorial history. ....\$7.50\*  
 TROLLEYS EAST RailmacMiniProfile 6. Adelaide Trolleybuses in East. ....\$7.50\*  
 JUMBOS Early Years RailmacMiniProfile#14 STA2000 Cars \$7.50\*

ARHSnsw ARCHIVAL DVDS

CURVE AND GRADIENT DIAGRAMS 1894, 1907 & 1932. ....\$59\*  
 NSW 1894,1907&1932 CURVE & GRADIENT DGMS.(CD)\$59\*  
 NSW GENERAL APPENDICES Pre-1955. (CD) .....\$45\*  
 NSW LOCAL APPENDICES Pre-1955. (CD) .....\$45\*  
 NSW WEEKLY NOTICES 1889-1955(Each CD 5 years). ea\$45\*  
 NSW RAILWAY BUDGET Vol 1-26 1893-1917 in DVD. ....\$55\*  
 NSW RLWY & TRAMWAY MAGAZINE Vol 1-6 1917-23 on DVD. ....\$45\*  
 NSW TRACK & SIGNAL DIAGRAMS.(V4 Win or Mac) USB. ....\$79\*  
 THE STAFF NSW RLWY & TRAMWAY Pub Vol 1-7 1924-30 on DVD \$55\*  
 RAILWAY DIGEST 1963-1973 on DVD. (ARHSnsw).....\$25\*  
 RAILWAY DIGEST 1973-1982 on DVD. (ARHSnsw).....\$25\*  
 ARHS BULLETIN 1937-1950 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN 1950-1959 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN 1960-1969 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN 1970-1979 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN 1980-1989 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN 1990-1999 on DVD. (ARHSnsw) .....\$25\*  
 ARHS BULLETIN/ARH 2000-2009 on DVD. (ARHSnsw) .....\$25\*  
 RAILWAY TRANSPORTATION 1951-1974 (4 DVD set)ARHSnsw \$45\*  
 THE RAILWAY NEWS 1956-2006 on DVD. (NSWSRCA).....\$35\*

MAGAZINE BINDERS

Quality binders hold 12 issues of our own Australian magazines.  
 ARH/BULLETIN A4 binders, red with white lettering. \$18  
 RAILWAY DIGEST A4 binders, silver with red lettering \$18  
 and plain (unlettered) A4 binders in blue or green \$15

BUSES/TROLLEYBUSES/TRUCKS BOOKS/DVDS

BEDFORD BUSES AND COACHES. Furness. 224p HC col/bw. ....\$90\*  
 BLUE BUSES OF FOREST ROAD.John Birchmeier. 94p sc col/bw. ....\$35\*  
 GONE BUT NOT FORGOTTEN. Australia's touring coaches. 548p. ....\$99\*  
 GONE BUT NOT FORGOTTEN. Aust bus/coach all over advertising. 268p\$85\*  
 GONE BUT NOT FORGOTTEN. Australia's Long Distance Buses. 268p. ....\$80\*  
 JUST AUSTRALIAN BUSES. Travers. Syd buses,BHP Atlanteans74. ....\$40  
 JUST AUSTRALIAN BUSES 2. Chullora Workshops + Travers. 120'. ....\$40  
 JUST AUSTRALIAN BUSES 3. Greg Travers. NSW Mercedes 120'. ....\$40  
 JUST AUSTRALIAN BUSES 4. Travers. Olympics/Brisbane trolley. ....\$40  
 KEMBLA KEIRA & AROUND THE LAKE (Rutt's Buses) Birchmeier. ....\$42\*  
 RYLEWY. How horse buses transformed Sydney MacAuslan.128p. ....\$53\*  
 SAINTS OF PEAKHURST. J. John Birchmeier. 85p sc col/bw. ....\$39\*  
 THE TRUCKIE WHO LOVED TRAINS. TNT History. 294p. ....\$35\*  
 TASMANIA'S TROLLEY BUSES. Cooper. 208p col sc. ....\$69\*  
 TROLLEY BUSES IN HOBART. (and other cities) Greenwood.90. \$30  
 THE BIG RED BUS:RailmacMiniProfile#7 Bristol Lodekka ....\$7.50\*  
 THE GOVERNMENT BUS IN NSW. (2017 reprint).....\$50\*  
 THE LONDON BENDY BUS. Wharmby. Pen&Sword.112p. ....\$60\*  
 THE LONDON DMS. Wharmby. Pen&Sword.272p. ....\$90\*  
 WHISPERING DEATH Brisbane Trolleybus DVD.(WaterStreet).52'. ....\$39

MODELLING

AMRM Volumes 1 to 17 in stock. Each CD covers 12 issues. ....ea \$25  
 CREATING CAMEO LAYOUTS. Iain Rice (WildSwan) 120p. ....\$56\*  
 DATA SHEETS by G Edwards.NSW Locos/rolling stock/infrastructure ea \$6.60  
 GARDEN RAILWAY BASICS (Garden Railways/Kalmbach) 96p\$col. ....\$31\*  
 GORGEOUS GARDEN RAILWAYS (Kalmbach) 144p sc col S/H. ....\$40\*  
 MODELLING THE RAILWAYS OF SA CONVENTIONS 11 to 15 DVD \$28\*  
 MODELLING PORTS AND INLAND WATERWAYS. DWright 192p. ....\$55\*  
 NG&SL GAZETTE 50-YEAR COLLECTION (Benchmark)Twin DVD \$189\*  
 SCRATCHBUILDING MODEL RLWY TANK LOCOS.Tibury442\$60\*

PICTORIAL HISTORIES FROM KINGSCLEAR BOOKS

Big picture black & white archival heritage albums. \$25\* each:  
 •BALMAIN TO GLEBE&BLUE MOUNTAINS&CAMDEN & DISTRICT•  
 •CANADA BAY-CANTERBURY BANKSTOWN&CITY OF SYDNEY•  
 •CRONULLA&EASTERN SUBURBS&HOLYROD•  
 •HORNSBY SHIRE-HUNTERS HILL-MANLY-KINGS CROSS•  
 •NEWTOWN-LAVENDER BAY TO THE SPIT•  
 •LIVERPOOL & DISTRICT-PARRAMATTA & DISTRICT•  
 •PENRITH & ST MARYS&PITTSWATER&RANDWICK•  
 •SOUTHERN HIGHLANDS&ST GEORGE&SUTHERLAND SHIRE•  
 •The HILLS&WILLOUGHBY&WOLLONGONG•

2018 CALENDARS

N AMRM. Double sided Steam/Diesel/Electric. ....\$18  
 N PASSING TRAINS 2018. NZ Raifalan. ....\$24  
 N SHOOTING NSW. Director's Cut of Steam. M Holdsworth. ....\$20  
 N TRAINS 2018. Australian railway images.(Topmill). ....\$15  
 N TRAINS OF THE FERNLEIGH TRACK. Ed Tonks. ....\$15  
 N TRAMS 2018. Australian tram images.(Topmill). ....\$10  
 N STEAMSCENES. BNSF, UP, SP, Passing Trains, Seasons of Steam, Narrow Gauge, Canadian, World of Steam, ea. ....\$25  
 N STEAM TRAINS 2018. Australian steam locos.(Topmill)....\$10

AUSTRALIAN DVD TITLES

Table listing Australian DVD titles such as 'ALCO'S ON THE SMR', 'CABRIDE II THE AK Cars', 'CABRIDE WORKING THE BERNALMILERS', etc.

TRUCKSIDE DVDS (Australia)

Table listing Truckside DVD titles such as '46, 85 & 86 CLASS ELECTRICS', 'ALCO'S C/M 636 CENTRAL LOCOS', etc.

UK DVD TITLES

Table listing UK DVD titles such as '925 CHELTENHAM SCHOOLS CL', 'CARRY ON CLAGGING 7', 'BLUEBELL RLY into East Grinstead', etc.

VIDEO 125 - DRIVERS EYE VIEW

Table listing Video 125 - Drivers Eye View titles such as 'N ABERDEEN TO INVERNESS', 'N BELFAST TO LONDONDERRY', etc.

FFESTINIOG RAILWAY UK

Table listing Ffestiniog Railway UK titles such as 'A YEAR IN THE LIFE OF THE F&WHR 2013', etc.

OVP VIDEO - STEAM DRIVERS EYE VIEW

Table listing OVP Video - Steam Drivers Eye View titles such as 'MAINLINE DIARY 2015', 'BORDERS RAILWAY', etc.

NTH AMERICAN DVD TITLES

Table listing North American DVD titles such as '2010 MIDWESTERN REVIEW HD', 'A TRIBUTE TO ILLINOIS CENTRAL', etc.

EUROPEAN (TICKET TO RIDE)

Table listing European (Ticket to Ride) titles such as 'NDIVERSE BAHNLINIEN 1', 'BT116 SPRING 2013', etc.

BEVAN WALL DVDS/BLURAYS

Table listing Bevan Wall DVDS/Blurays titles such as 'DIESEL DIARY ARG IN NSW', 'DIESEL DIARY Vol 1, 2, 3 or 4', etc.

MINNESOTA TRAIN ACTION V1

Table listing Minnesota Train Action titles such as 'MINNESOTA TRAIN ACTION V1', 'MINNESOTA TRAIN ACTION V7', etc.

WORLD DVDS

Table listing World DVD titles such as 'AN AFFAIR WITH CONNIE', 'AUSTRIAN EXPLORER', etc.

NEW ZEALAND DVDS

Table listing New Zealand DVD titles such as 'ENGLISH ELECTRIC SWANSONG', 'NZ RAILSCENE 71, 72 & 73', etc.

Advertisement for New South Wales Track and Signal Diagrams, Version 4, featuring images of railway tracks and signal diagrams.

