# AUSTRALIAN



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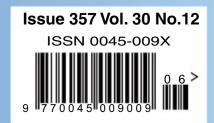
# MAGAZINE

# Alex Malijevac's Carlingford





- **Scratch building Maryborough station**
- Putting the O in Casterton
- Build a Workman's Van in 3D
- Reviews
   Mailbag
   AMRM News







# Victorian Railways D3 Class Locomotive



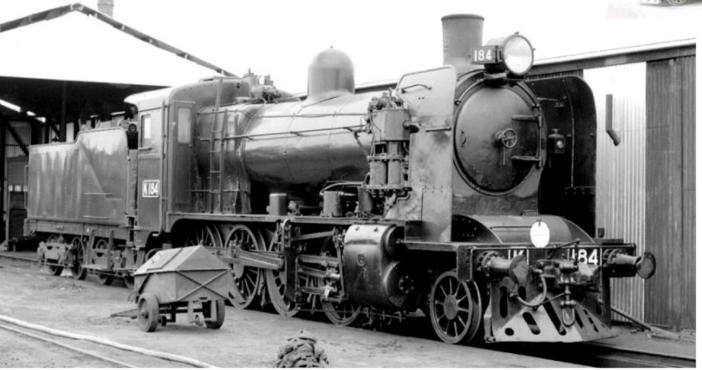
Featuring a diecast metal boiler, metal footplate, metal chassis and metal connecting rods. All wheel electrical pickup and a switchable keep alive capacitor for fault free DCC operation. Working headlight with red/white marker lights for realistic lighting control. Genuine Kadee scale head whisker coupler is fitted to the tender and a scale sized swivelling knuckle and three link coupler is fitted to the front buffer beam.

Available in either DC control @ \$660.00 per model or DCC + Sound @ \$799.00 per model. See <a href="https://www.phoenixreproductions.com.au">www.phoenixreproductions.com.au</a> for the full range of running numbers.

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# Victorian Railways K Class Locomotive



After a thorough evaluation by our engineering team, the VR K class model is being upgraded to the same standards as our D3 model. Fortunately, the D3 and K class share the same tender type, so the engineering changes are limited to the engine unit only. We expect running samples early 2022 and pending production availability, we anticipate delivery in Qtr3 2022.

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**Eureka Models pre-order customers:** 

Please contact Eureka Models before 31.12.2021 to confirm K class running number selection. These need to be finalised with the factory by January 2022. numbers.

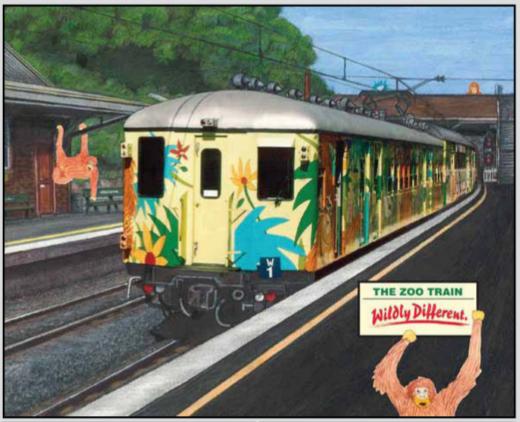
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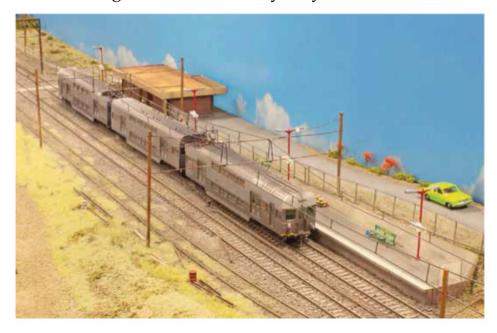
# MODEL RAILWAY

# MAGAZINE

Issue 357 Vol. 30 No.12

# 18 Carlingford

Alex Malijevac describes his HO scale layout of Carlingford in suburban Sydney.



# 44 CAD Solid Modelling of the Early Days NSWGR Workman's Van

Lee Styger outlines the fundamentals of CAD Solid Modelling as he builds a NSWGR Workmans Van in 7mm scale.

# **52** Putting the O into Casterton

Scott Whitaker shares his experiences in building of an epic O scale layout based around Casterton in Victoria.

# 57 Installing Backscenes

Les Fordham shares techniques for installing propriety backscenes.

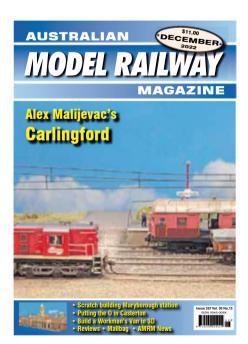
# 30 Scratch building Maryborough station in HO scale

Roger Lloyd describes the construction of the ornate station at Maryborough Victoria in HO scale.



# 38 Modelling the Railways of South Australia Convention 2022

Gavin Thrum presents a gallery of models displayed at the 2022 Modelling the Railways of South Australia Convention.



### ON THE COVER:

Diesel-electric locomotive 4805 shunts the siding alongside a Y set waiting to depart on Alex Malijevac's 'Carlingford' layout.

Photo: The AMRM Team

# **OTHER FEATURES**

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# **AMRM Crew**

### **Our younger modellers**

Every now and again you hear conversations about how our hobby is for the older set, and to some point that might be true. No doubt there are lots of modellers that only start building a layout when they retire. It's a great hobby for a retiree, it's a bit like todays 'men's shed' but with more useful techniques to learn with satisfying outcomes. When you retire you get more time to yourself and you can indulge and dedicate time to personal pursuits in the comfort of your own home.

You can relive the times and places of your youth and recreate them in miniature (with rose coloured glasses), perfect! However, there are lots of modellers that start this hobby in their teens or when they are young adults and continue to be part of this hobby as they grow (yes, I was one of those teen modellers).

Starting in this hobby today is very different compared to when I started, and it is interesting to observe the metamorphosis of today's younger modeller.

- They are more concerned with the overall picture. Thanks partially to r-t-r models, they distil what really inspires them and can build outstanding layouts (see Alex Malijevac's *Carlingford* this issue).
- They are more thoughtful and analytical. They know that there are lessons to be learnt and practice them before committing to the next project.
- They set achievable goals, this not only gives quick satisfaction of a task or project completed but allows them to set lots of small goals (something I wish I had done when I first started in the hobby!).
- They have adapted well to having less hobby space and time.
- Advancement of techniques seems to be high on their agenda.
- Their favourite era is not necessarily the here and now (ultra-modern); their demographic has big era spread right down to the 1950s etc.
- They are more tech savvy having grown up with computers and tablets etc.
- They are happy to model in Isolation, but not all the time. Clubs can also be more of a social thing, a place to run their trains, catch up with modelling friends etc.
- Their overall hobby spending power is usually less, but not always. They will invest big if the payoff is big (big bang for their buck).

### What can we do to facilitate the younger modeller?

- Access to good tried and true modelling techniques.
- Access to good prototype data, operations and era consists, good historical data.
   Unfortunately, Social media platforms have played it part in disseminating disinformation on the above two dot points as anyone with a camera professes to be an expert.
- Clubs can play the part of the tradesman, and the apprentice (young modeller) who wants to learn. All good tradesmen can easily turn an apprentice into another a good tradesman.
- Give them space to make mistakes, encourage them to experiment. There is nothing worse than a perceived fear of failure.
- Realise we are all modellers because we are partial to a bit of escapism. We model to escape to our own little world that we created, where we are the boss, and we can just unwind. It's not a chore and try not to make observations as to why their world is wrong etc.
- Ensure that there is a source of encouragement and inspiration.
- Let them do their thing!

In short, the younger modellers of today are going to be tomorrow's hobby 'tradesmen'. It looks to me we are in some pretty safe hands.

### Give us feedback at: amrmfeedback@tpg.com.au

The entire AMRM Team wishes all our readers a Merry Christmas and we will see you all in 2023.

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The Annual Membership Fee for SCMRA is \$66.00 from March to February and the Joining Fee is \$20.00, which includes the membership data pack. Applications must be received by the first of the odd month to meet our mailing list deadlines. For applications received between the 2nd September and the 2nd January the Half Annual Fee is \$33.00 plus the (\$20.00) Joining Fee (does not include October issue of AMRM). All fees are GST Inclusive. Membership entitles you to participate in the activities of the Association, to receive AMRM and our regular newssheet *Booster*. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals.

For further details write to the Secretary or contact the divisional representative.

Meetings are usually organised on the second Saturday of

each month in New South Wales. For further details and location please contact the divisional representative. Membership services include magazine binders and photocopies of articles from out of print issues of AMRM at discount prices.

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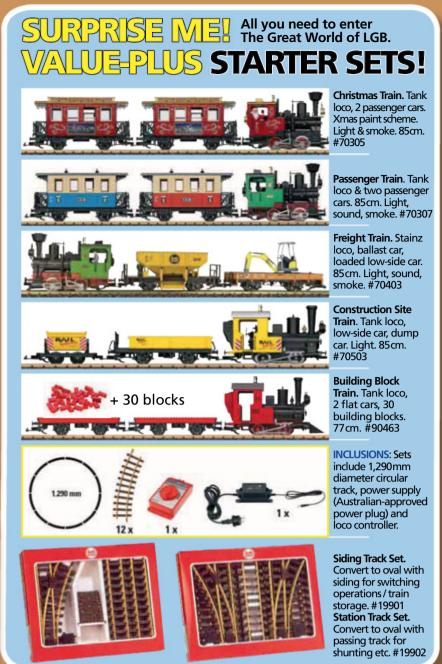
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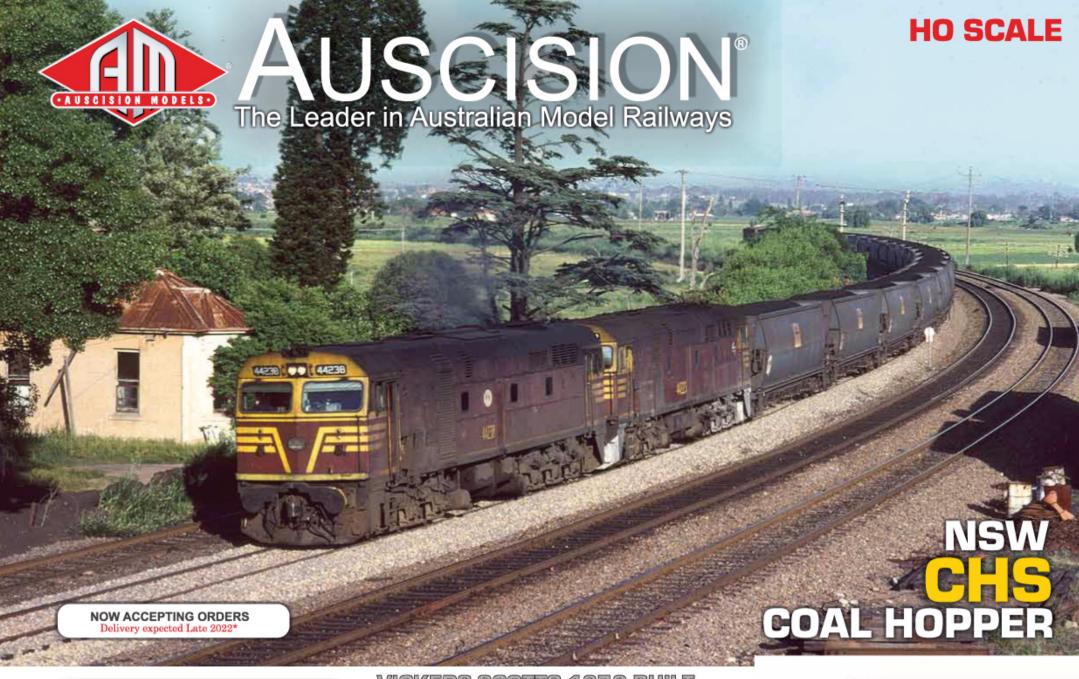
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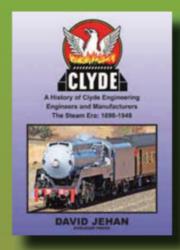
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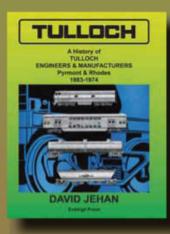
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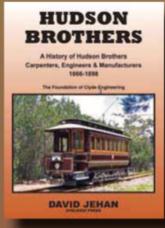
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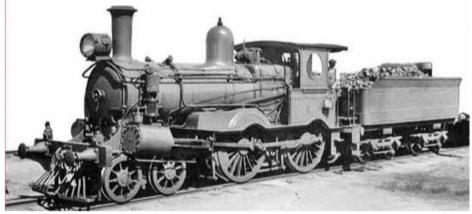
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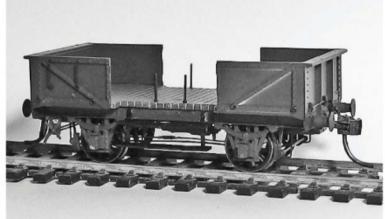


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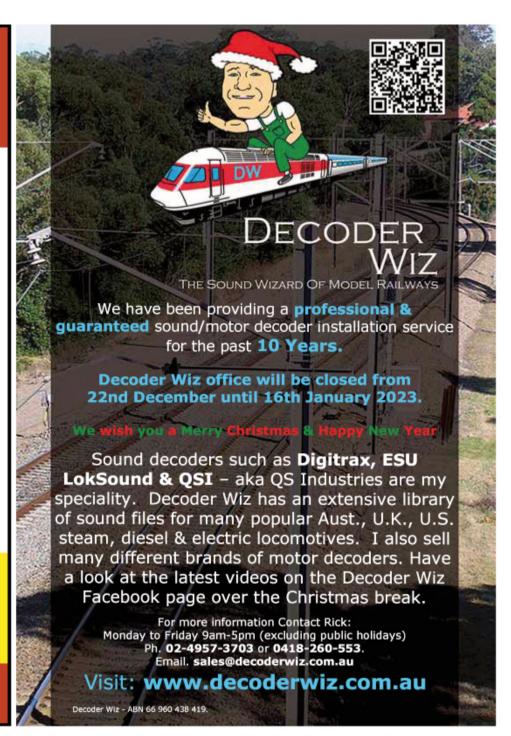


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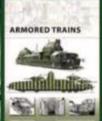


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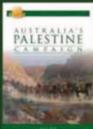


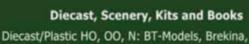












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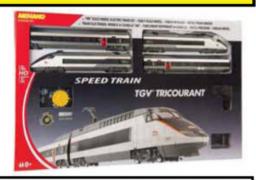
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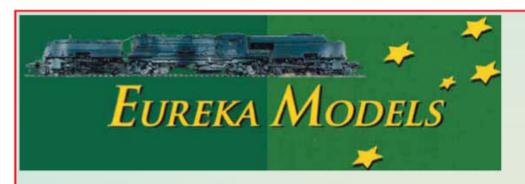
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# CARLINGFORD

# Alex Malijevac's Carlingford is a small point to point layout set in the late 80s-early 90s capturing the diversity of rolling stock present during this era in Sydney. Photos by the AMRM Team

My passion for all things trains and railway related first came about at a very young age, with my parents having been heavily involved mainly in the repairing and restoration of heritage trains, I was almost always in a setting surrounded by them. As I grew older and my knowledge expanded, so too did that passion. Frequenting passenger services across the Sydney Trains Network on everything

from S sets, V sets, M sets and B sets only furthered my fascination with trains, railway lines and stations that encompassed my hometown.

The Carlingford Line stood out to me the most for many reasons, most of which I can't quite pinpoint, although if I were to be brief, the simplicity of it all must have been what spiked my interest. During my childhood, I played soccer. The location of games would vary but, I found myself attending several of them within the vicinity of the Carlingford Railway Station quite often. Occasionally on the way home my dad and I would stop by and check it out. With the both of us being avid fans of trains in general, it was always something we enjoyed doing and eventually became a standard practice. The station itself to the average commuter was nothing more than a means of transport, but the more time I spent

would service it, the more I came to admire it.

After graduating in the latter half of 2019, I found myself with a bit of time on my hands and, by the time the new year came around, I had concluded that I wanted to replicate the station that I was most fond of traveling to and from in my youth! Having gained a bit of experience in model railway making as a teen by participating in the building of an N scale model project with the Historic Electric Traction community, I took a liking to the





Scale: HO Scale Period: 1985–1993

Layout Type: Station to fiddle yard

**Layout Size**: 6.7m x 1.5m **Rail height above floor**: 1m

Baseboards: Open Frame Modules, MDF sub

trackbed

Track: PECO code 100

Control: DC Inertia Control/Automatic shuttle

running

**Buildings and Structures**: All scratch-built

**Scenery**: Layered foam covered in tissue paper. Textured with real dirt and Woodland Scenics ground turf and a variety of ground covers.

**Locomotives**: r-t-r, brass and some kit built **Rolling Stock**: Modified r-t-r and kit built

Builder: Alex Malijevac

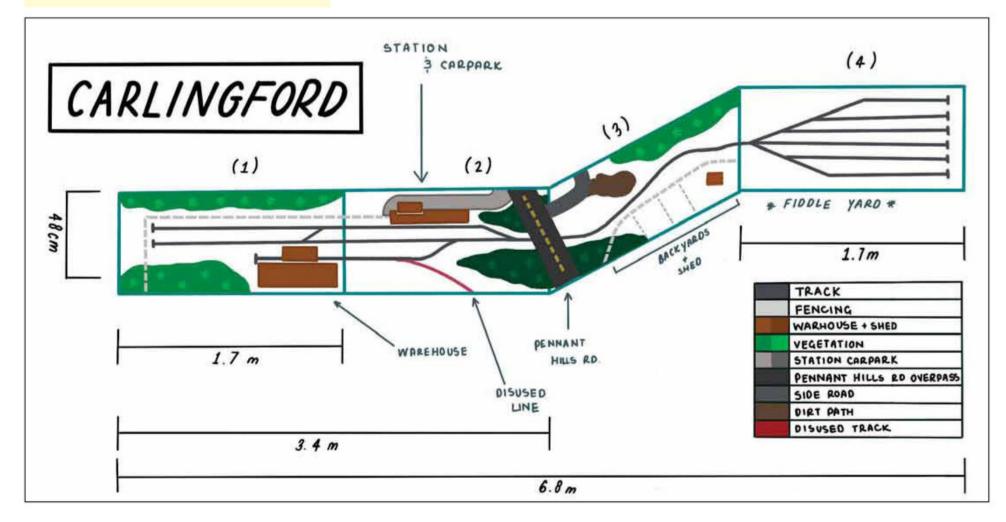
Set F2 pulling into Carlingford alongside some stored wagons waiting for shunting.

down thanks to COVID-19, the time on my hands had doubled. Initially I only intended to build a small photographic model of Carlingford station itself but, given the free time I found myself with, I thought I'd experiment with extending the setting to the end of the T6 line. Eventually this led to constructing the line all the way to just before Telopea station.

There wasn't really any method or plan I followed when starting the layout, I kind of just found myself making things work as I went. I already had most of the stuff I needed lying around from previous layout projects. Using some off-cuts of pine and Medium Density Fibreboard (MDF) as a baseboard, I began building

upward using various materials like foam, hot glue, and paint until the piece started to look more and more like what I was envisioning. The use of foam and whatnot allowed me to shape the setting with ease. Painting acted as a first step in creating depth and texture for the eventual inclusion of the elements that encompassed the area. Soon after toying around with the shapes and colours, I began piecing the track plan together using PECO code 100 flex track.

Next, I began scratch-building with a variety of materials such as styrene balsa and brass, creating the specific details like the station building, platform, signage and signals.

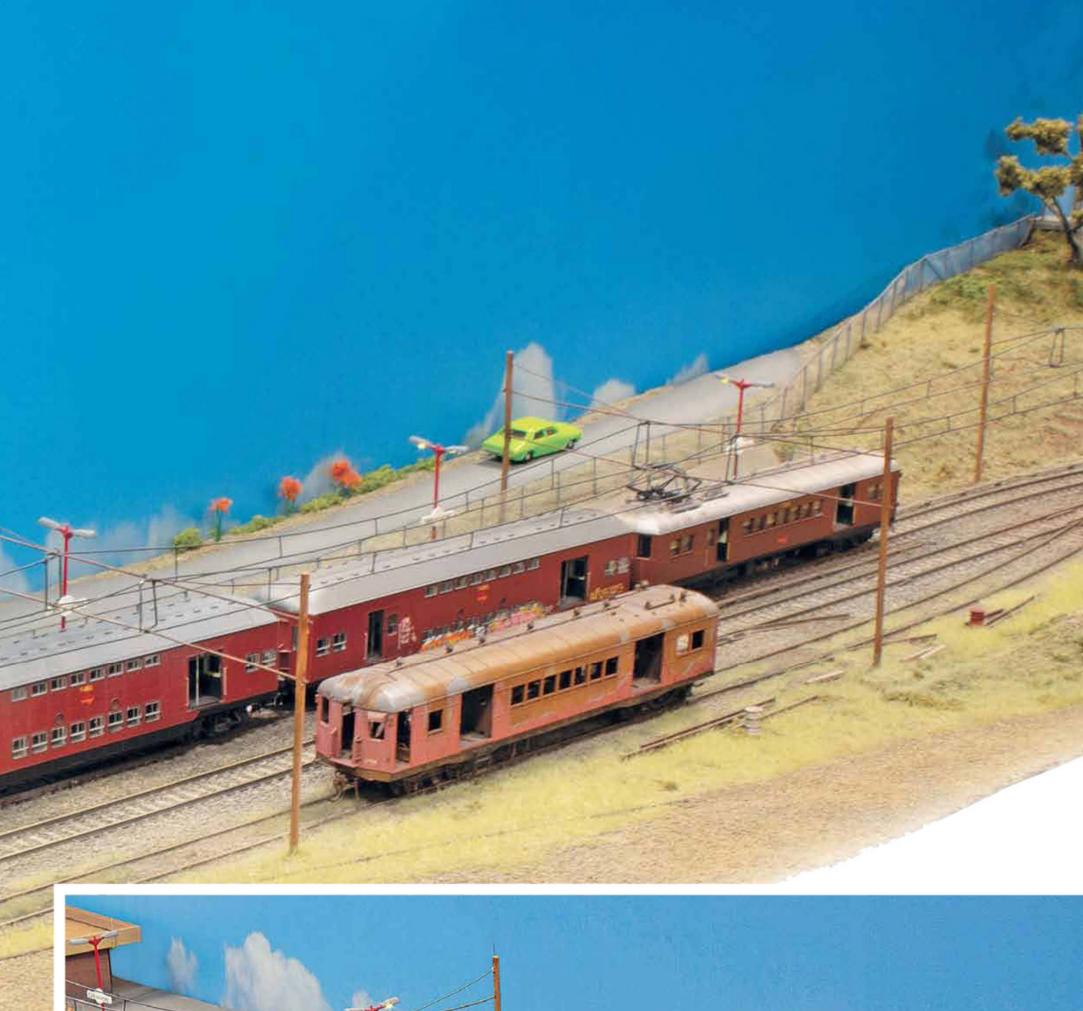




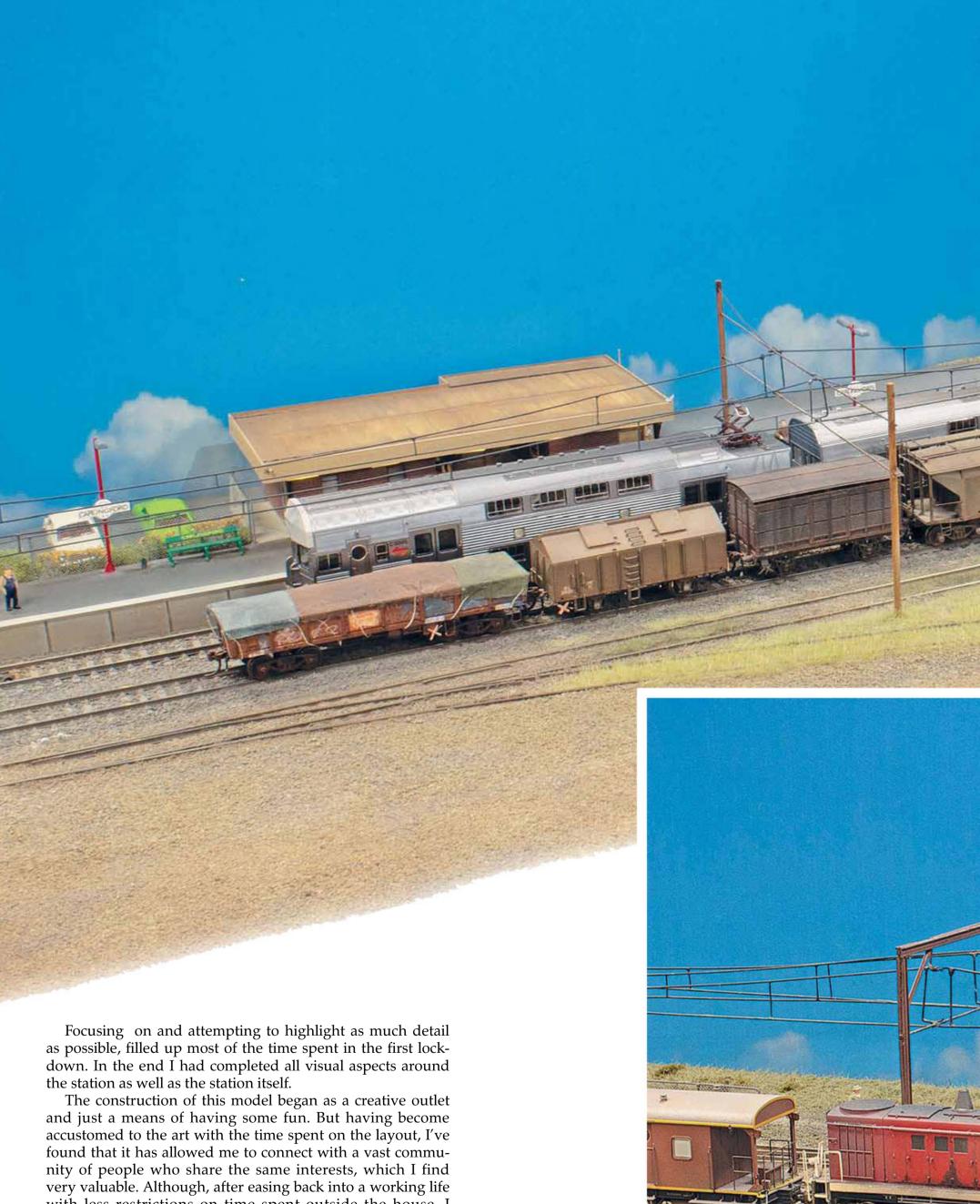
A three car L set preparing to depart Carlingford.











nity of people who share the same interests, which I find very valuable. Although, after easing back into a working life with less restrictions on time spent outside the house, I haven't quite been able to experiment and do more with the layout like I was able to before. Despite this, I still hold plans to extend the project in a modular sense, perhaps all the way to Telopea and possibly even further (towards and including

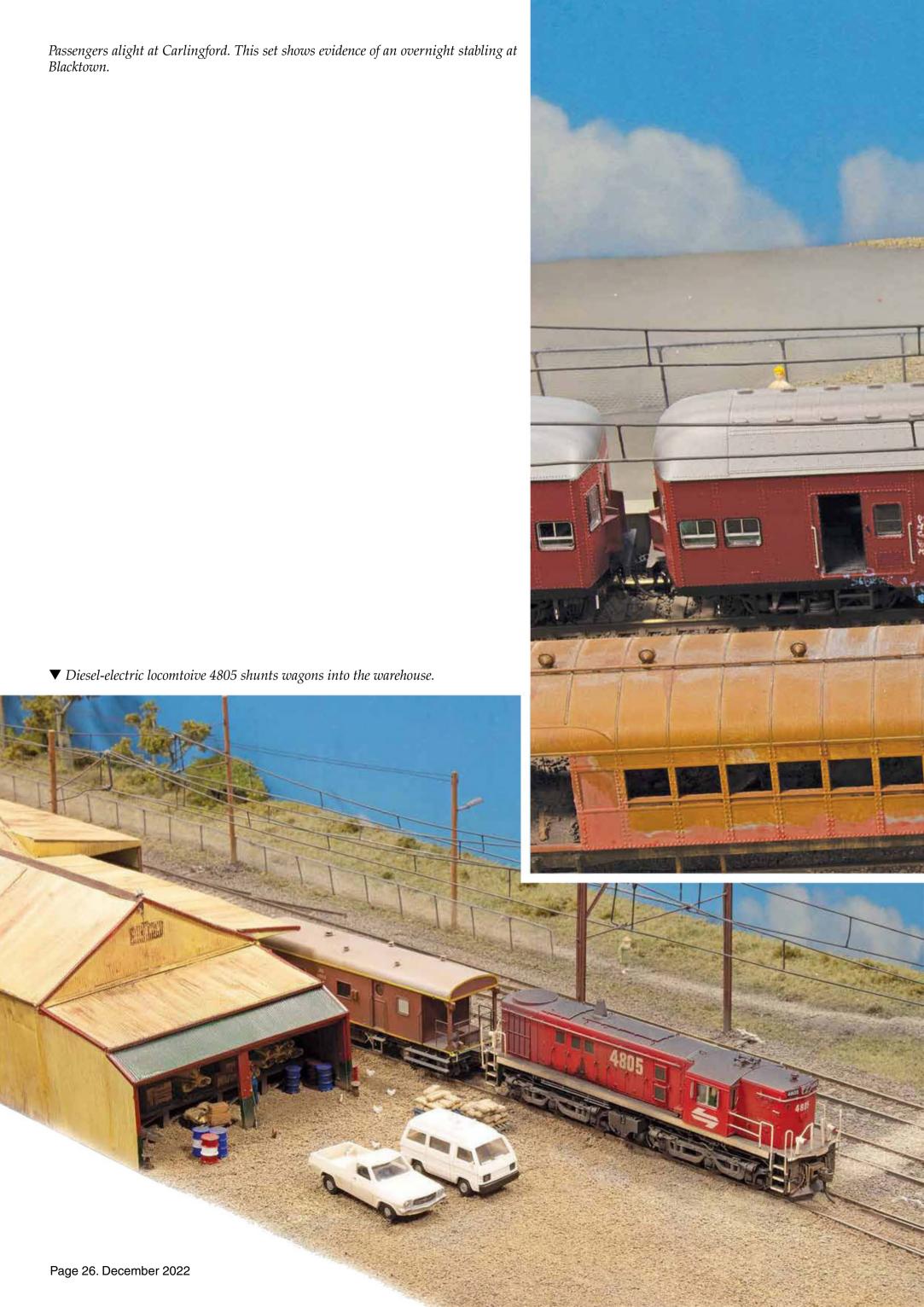
Clyde station). Again, hoping to present my passion to others

in the future following the completion of the line.

► Locomotive 4805 passing a Y set preparing to depart Carlingford.













### IN THE LOOP

# Planning a Layout — Part 2

# **Trevor Hodges**

Following on from the previous instalment of 'In the Loop', as we approach a new layout plan, first we should have two short lists of what we're calling 'givens' and 'druthers': the givens being a list of things that will be included and druthers, a list of things you'd like to have if possible. If you look at my lists from the previous 'In the Loop', the givens centre on items that provide the broader context of the layout such as the scale, era and setting whereas the druthers list was dominated by specific models and scenes I'd like to include but could live without if they proved impractical. I could have a lot more if I worked in a smaller scale and having worked in HO scale for over ten years, I can attest to the truth of this. However, like everyone else I have preferences and one of these is quite fundamental to the type of modeller I am and the types of layouts I build: I'm a builder more than a operator, so I choose to work in a scale that I feel provides me with ample opportunity to construct a smaller number of highly detailed models, rather than giving me more scale real estate where I can place a larger number of less detailed structures and trains or ones purchased ready to run. Scale is a choice like any other and, once you've chosen the scale you're going to be working in, you design your layouts to reduce the restrictions and maximise the opportunities the scale provides.

At the end of the previous 'In the Loop', you may have noticed that the Queensland Railways (QR) 3'6" gauge and the New South Wales Government Railways (NSWGR) 4'8½" gauge interchange was at the bottom of that list. I would love to model a dual gauge interchange between the QR and NSWGR, but the possibility of doing so while working in 1:43.5 and also wanting wheat and coal loading facilities without a layout space the size of a football stadium was a very big challenge. It's very unlikely that I'll get the coal, wheat and QR/NSWGR inter-

change all on one layout. I suppose I could just make it up and plonk them all together on one layout, but I prefer to allow the prototype to inform my layouts, so doing this when it didn't happen in the real world is one compromise I'm not willing to make. I'm ok with bending reality but I'm not prepared to just make it up, which I consider breaking reality. You can draw your own lines you're not prepared to cross.

I need to place the other four druthers in priority order and the things that inform what order they'll be in says a lot about the type of modeller I am. While strict adherence to the prototype with a strong focus on realistic operations on the one hand and creating truly spectacular, eyecatching scenery without being too concerned about reproducing prototype traffic patterns aren't mutually exclusive. These aspects of the hobby are on a spectrum tending to right brain/ left brain preferences. While perfectly modelled locomotives, faultless running and superbly accurate track require a measure of creativity, in my experience modellers who can build superb scratch or kit-built locomotives tend to struggle when it comes to the creative chaos of building great scenery. Most of the great scenery modellers of my acquaintance have trouble telling one end of a soldering iron from the other and yes, I am deliberately exaggerating. So, the question is: where do you sit on this spectrum and how is this going to affect your decisions about what priority you give to each of your druthers?

If you look at the photo accompanying this article, what are the things you notice about it? It's not the location that's important. The photo was taken in 2016. After a good close, look at the photo, what are the things you noticed? If you concentrated on the steel girder design, the depth and strength of the abutments and piers and the engineering of how the rigid structure of the plate girders interact with the earth ramparts leading up to track level, then I'd suggest you lie on the 'prototype adherent' end of the spectrum. If you noticed the different colours in the brickwork, the grey over-painting of what was probably graffiti tags and the weathered sleepers and the rust patterns on the white posts of the small retaining wall in the top lefthand corner of the photo, then it's safe to assume you tend to favour textures, colours and making scenery over building locomotive kits. If you were trying to work out the make and model



The dual road overbridge at north-western end of the rail yard at Muswellbrook in 2016. *Photo Trevor Hodges.* 

of the cars on the road, perhaps you need to consider a new hobby! Most of us probably noticed a mix of these things, but the point I'm trying to make is that there's many ways to do this hobby and understanding your own modelling preferences will probably go a long way toward you choosing an appropriate prototype to model, which will lessen the possibility of you becoming disillusioned and gradually ceasing to work on it. If building models sends shivers of horror up your spine, then don't pick a prototype that will require you to build pretty much everything from scratch or kits!

As the modeller I was six years ago, with my current layout room empty and ready to have a layout built in it, I would place the list of druthers into the following order:

- An industrial scene or branch
- Wheat and coal loading facilities on the layout
- Provision for coal and wheat trains
- A turntable and roundhouse scene
- A QR/NSWGR rail interchange

The layout I would have built following the list of givens and druthers I've been discussing would have been a significant departure from my, at the time, sixteen years of building layouts based on the Morpeth line. This layout would be bigger; it would have had a far wider mix of locomotives and rolling stock; it would have had a main line setting; and perhaps it would have provided me the opportunity to build a model of a bridge like the road overpasses in the photo accompanying this column. If I had to specify what sort of modelling I'm interested in, I would suggest I sit right in the centre of the spectrum mentioned earlier in this column: I'm interested in running trains in a manner that is at least informed by prototype practice. However, my favourite aspects of this hobby are building models of trains and structures and placing them into a convincing scene.

The next step after undertaking this broad survey of what I want from my next layout is to come up with a location, or mix of locations, that satisfy my givens and druthers. Perhaps it's obvious by the inclusion of the photo in this column showing a piece of the rail infrastructure at Muswellbrook, that this was the location I based my planning on as I commenced putting my ideas onto paper. As I'm halfway through the very big task of dismantling my current layout and moving to a new home in Queensland, perhaps the QR/ NSWGR interchange yard might be higher on the druthers list the next time round. We'll have to wait and see.

# The World's Oldest Active Railway Modeller

Peter Amey of the Canberra Model Railway Club Inc celebrates a member Tom Drury's century milestone.

Tom Drury was born in Leeds in the West Riding of Yorkshire on 14 November 1922. He shares the birthday with King Charles III. Tom is an active member of the Canberra Model Railway Club Inc and at 100 years of age that would surely make him the oldest active railway modeller in the world.

Tom left school at the age of 14 to work in a Leeds steel foundry where he completed an apprenticeship in pattern making. He later qualified as a Development Engineer. His skills in the steel industry placed him in a reserved occupation and he was not permitted to enlist in the armed forces in World War II.

By 1972 Tom and his wife Gloria and their family of three children had emigrated to Australia and settled in Canberra. Shortly after arriving Tom set up a business manufacturing domestic kitchens for the rapidly growing suburbs of Canberra.

After his retirement in 1987 he had time to indulge in lawn bowls, wood working and radio-controlled model aircraft.

Tom also developed an interest in model railways and in 2013 joined the Canberra Model Railway Club Inc to obtain assistance with the electronics of modern model railways. He has been active in the club since he joined and his cheerful Yorkshire style greet-

ing of "Ow do" is a feature of a morning meeting at the club room.

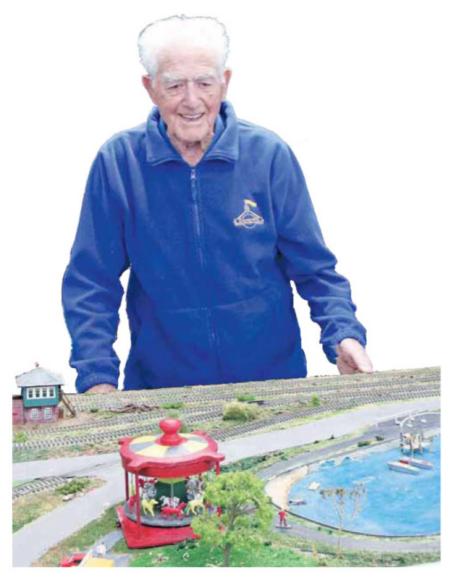
His engineering skills are still apparent. Tom has his own large model railway layout that he built and developed at home. The layout started in a section of their double car garage but has expanded to the size where there is barely room for one car. It is based on 1960's Yorkshire Dales – 'Heartbeat' country, complete with farms, small villages and railway stations. The latest development is a scenic railway that will follow a route around the perimeter of his layout, with all the necessary stations and structures.

Tom lives with his daughter June who has been heard to remark that "he says he is too old to work in the garden, but he's not too old to get under his railway to work on the electronics".

He has contributed an operating carousel and a moving skateboarder to the club's current exhibition layout. His active membership and positive attitude resulted in him being awarded a Life Membership of the club in 2018.

He takes a keen interest in any new technology such as 3D printing. The club recently purchased a 3D printer and Tom now has one on his Christmas list.

Happy 100th birthday for 14 November, Tom.



Tom Drury at the Canberra Model Railway Club surveying his handy work. Photo Peter Amey.

# Scratch building Maryborough station in HO scale

Roger Lloyd describes his building journey of this ornate station. Photos by the author, unless otherwise stated.

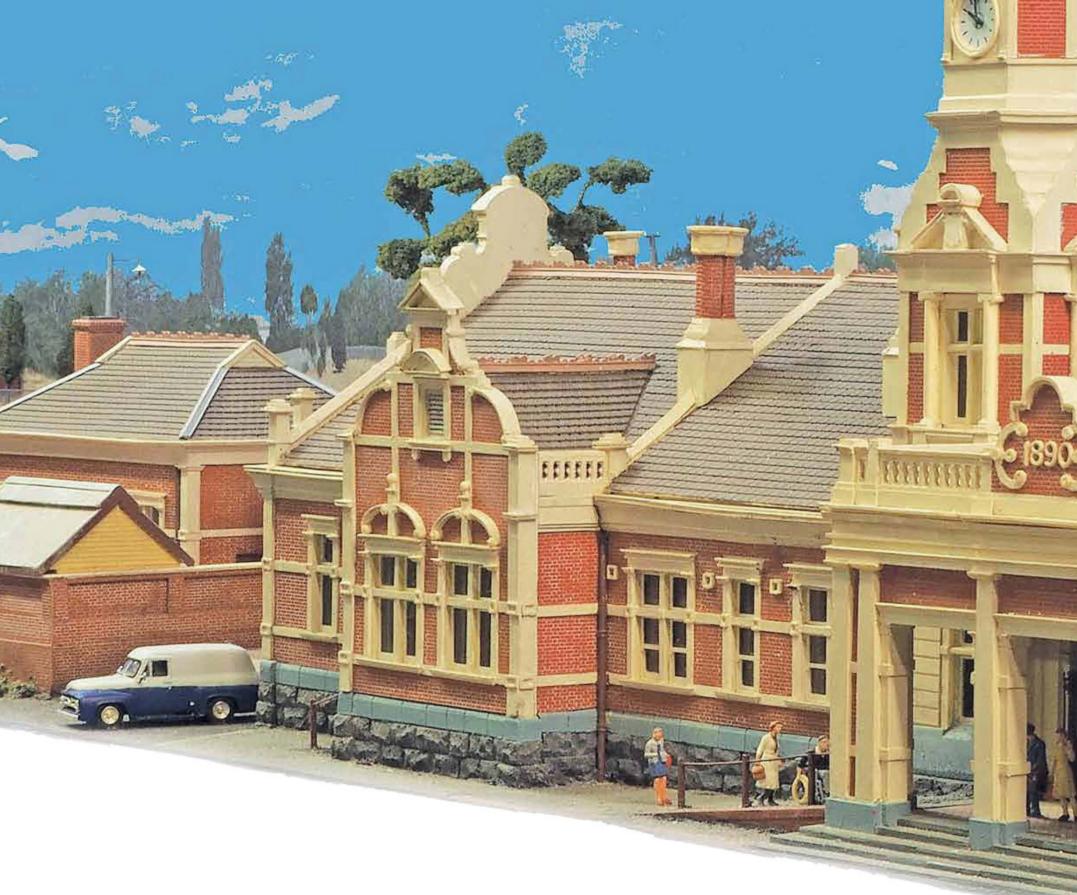
The model is based on the prototype in the 1950s to early 1960s.

# **The Station Building Model**

I do not intend to give a blow-by-blow description on how to construct Maryborough Station, as I am sure no one else would be silly enough to try it! Also, I cannot attempt to convey in the limited space available a description of a project that has taken five years. However, I can give some idea of the methods used as they may be useful for modellers.

### The main structure

I attended the 2005 'Modelling the Railways of New South Wales (NSW)' convention and James Percival and David Bennett gave a talk on 'Building Moss Vale Station'. James had previously worked as an architectural model maker and he outlined a method of construction using clear acrylic sheet. Perspex is a brand of acrylic. I followed their suggested method with some changes. Maryborough Station is a long building and I considered it necessary to have the building as stiff and strong as possible. We had some



A nice view of the street side of the station building. Photo John Dennis.

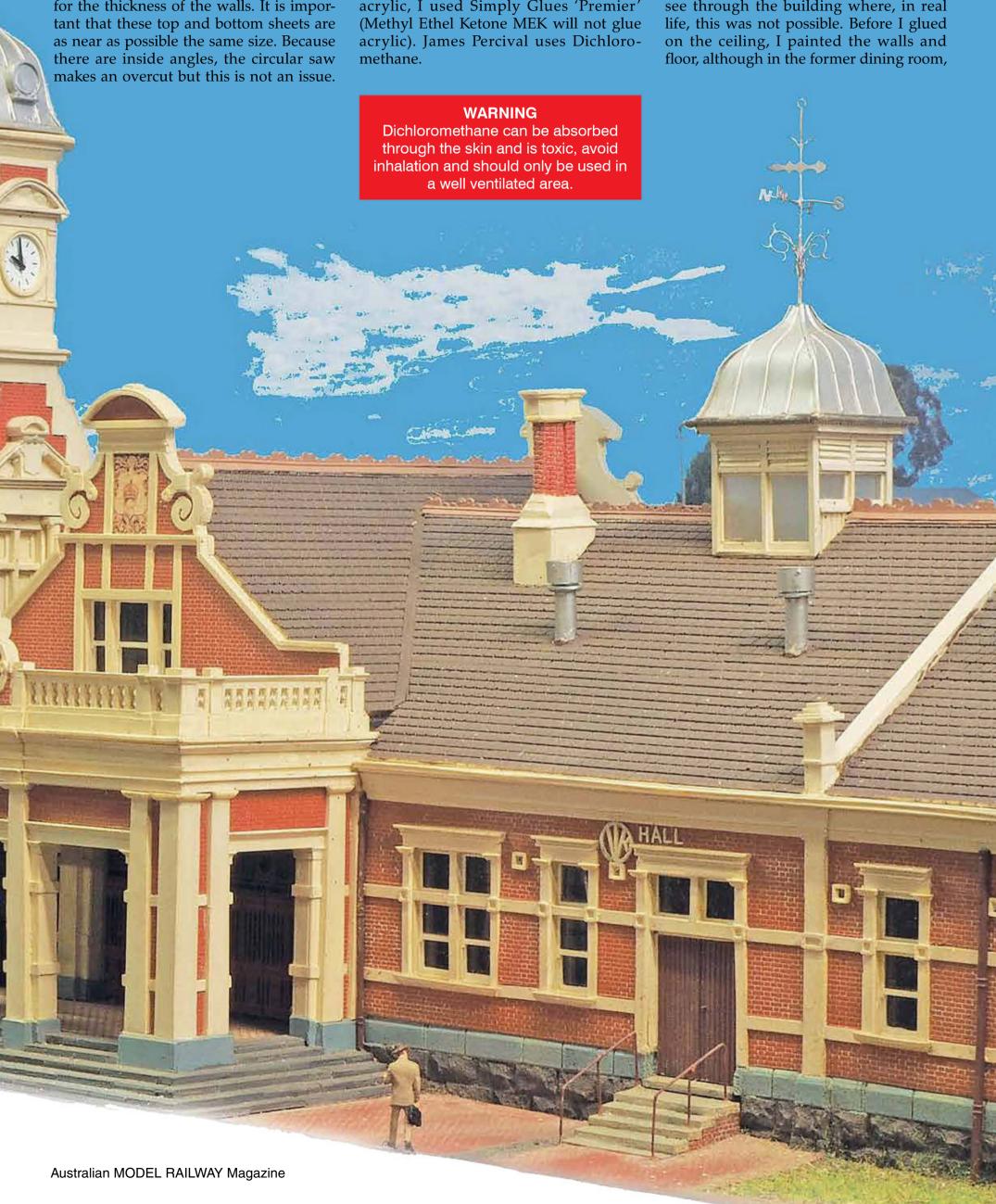
sheets of 3mm acrylic which came from large showcases, but were replaced because they were scratched. One of these was cut to size using a Triton work bench and this was used as the base. Refer to Diagram 1 on the next page.

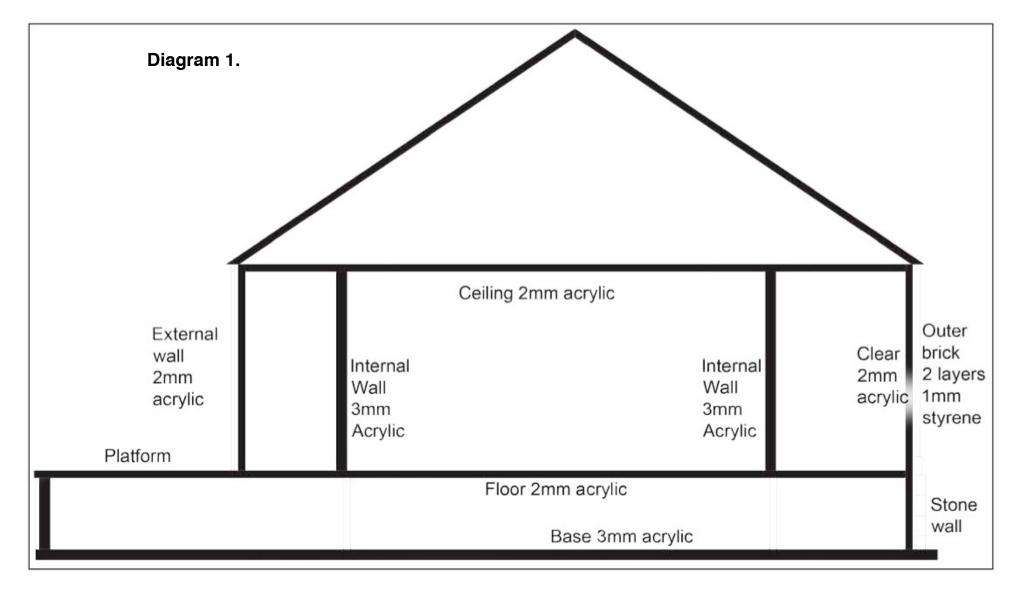
The next step is to form an acrylic box. Two sheets of 2mm acrylic were cut to the size of the floor plan, less an allowance for the thickness of the walls. It is importhere are inside angles, the circular saw makes an overcut but this is not an issue.

One of these floor plan sheets became the floor, the other the ceiling. For the walls, I cut two strips of 2mm acrylic to two widths. One was the height from the base to the floor (less 2mm), the other the height from floor to ceiling. The sub floor strips were cut to size and glued to the base so that they were completely inside the outer edge of the structure. To glue acrylic, I used Simply Glues 'Premier' (Methyl Ethel Ketone MEK will not glue acrylic). James Percival uses Dichloromethane.

I don't know what the active ingredient of 'Premier' is. After I ran out of 'Premier' I purchased acrylic cement from the supplier of the 2mm acrylic sheets. Beware – this cement is fast evaporating!

The floor to ceiling spacers were cut to size and, as far as possible, they were placed where the real internal walls would be. I wanted to avoid being able to see through the building where, in real





I laid timber – probably a waste of time as I doubt if anyone will see it! I laid the ceiling in position and, using tape, marked the position of the walls. I took the ceiling off, turned it upside down and laid tape on the underside to match the tape already on the opposite face. I then painted the ceiling white (except the dining room). Once dry, the ceiling was glued in place using copious amounts of 'Premier'. Use squares to ensure floor and ceiling are exactly in line.

For the external walls, further strips of 2mm acrylic were cut to the total height from base to ceiling. These were cut to length and one wall was made at a time. I made the walls off site as I much prefer to work having the surface horizontal rather than vertical. The downside is that it makes the corners much trickier. The acrylic should be kept as scratch free as possible where windows are to be placed as the acrylic forms the glazing.

The windows and doors were laser cut by John de la Lande of Brunel Models. I used CorelDraw to create the plans. Allowance had to be made for the width of the cut i.e., 0.2mm so the outside of a window is 0.2mm larger on the outside dimension while the pane is drawn 0.2mm smaller. The windows were made of three pieces (some from four). First is the wooden window frame (sash) from 0.5mm styrene. The walls of the prototype building are quite thick –  $1\frac{1}{2}$  bricks. Thus, the windows are set well back requiring openings about 2mm. Jambs were cut from 2mm white acrylic (John says that in thicknesses such as 2mm, it is easier to cut acrylic rather than styrene as styrene tends to melt). The top layer of the window is the outside trim of 1mm styrene. The sash and jamb were pre painted and glued together.

The windows and doors are glued in place first and the styrene built up around them. The walls consist of two layers of 1mm styrene and one layer of Slaters brick card. First, I laid 1mm styrene along the tops and bottoms of the windows and doors and, using a calliper, cut styrene to size to fit between the windows. The second layer was cut vertically i.e., from base to bottom of window and from top of window to ceiling. The gaps between the windows were cut in one piece.

Next, the trim was glued over the window jambs and sills. The decorative horizontal strips were glued in place. These were scale 8" x 4" Evergreen styrene. Laser cut wall ventilators were also glued in place. Then Slaters brick card was cut to size and glued in place. The Slaters card is in Flemish Bond, the correct style for Maryborough. I bought five sheets, which were sprayed a deeper reddish brown colour. Using actual bathroom white grout, I applied it the same as you would in full size tiling. Spread it on and, using a damp cloth, wipe away the excess. Repeat this several times as it dries. Eventually, you are left with realistic looking mortar lines. It would be almost impossible to do this once in place, so a little forethought is essential!

Finally, the finer window detail was added – sill and extra trim. The square trim was laser cut.

The wall can now be glued in place, again using copious quantities of 'Premier' glue. This glue evaporates very quickly, hence the need to use a larger than normal brush. One word of warning – I found that if you delayed gluing the walls to the box, they tended to warp. Thus, the sooner it is fixed in place, the

better. Otherwise, store it on a flat surface with weights to stop warping.

The above method could also be used for a timber building but, because timber walls are much thinner, either a single thickness of say 1mm styrene could be used or two thicknesses of 0.5mm.

### The verandah

From the plans, I used CorelDraw to prepare the masters of the main support ribs and Kieran Ryan of Picton NSW had them etched in brass for me, (I believe by Phil Badger). I also purchased several lengths of 1mm square brass to run longitudinally along the tops of the ribs to give added strength and to provide support for the corrugated iron roof. I cut out a long length of 1mm styrene to size and then glued paper corrugated iron to the styrene. The corrugated iron was made by a Victorian supplier (their name escapes me!). I had first cut the iron into the correct size pieces and then glued them to the styrene. However, the combination of styrene and paper corrugated iron warped badly so I abandoned that idea. I then first glued 1mm styrene to the brass structure and then glued Slaters corrugated iron (also made from styrene) to the styrene base. The Slaters is a little over scale but, on such a large structure, it is not so noticeable.

The clerestory is made from 1.5mm acrylic I bought from Simply Glues. It is a little softer than the other acrylics and easy to cut. The ribs were pre painted scale 2" x 2" Evergreen styrene and glued to the acrylic with 'Premier' glue.

The verandah trim was laser cut from 0.5mm styrene by Brunel Models. It had to be a little overscale, but it certainly looks like a good representation of the prototype cast iron work. The station

name boards were also cut by Brunel. The original material consisted of two thin layers of acrylic – one black, one white. From the white face, the black background was laser cut out leaving the white letters showing – very effective!

### The stone walls

One of the legacies left by our member Graeme Nitz when he migrated to the USA was a stone wall tunnel mouth with wing walls. The stones could represent either sandstone or bluestone.

We needed a retaining wall at the Club so I cut up the tunnel mouth and made a section of wall about 150 x 90mm. From this, a silicon mould was made and many plaster wall sections were cast. For Maryborough, instead of plaster I made a section of wall using 'Procast' medium set polyurethane resin, obtained from Barnes (now in Swan

Street Richmond, Vic). This was cut into courses of stone and then cut into individual blocks and a master wall section made up. Styrene was used to add the plain faced top course and styrene strip was glued between each stone to represent the mortar lines. Using Barnes 'Pinkysil', a new mould was made and a quantity of wall sections cast. These sections were designed so that they could interlock to create longer wall sections.

# The Prototype

Maryborough at the time the station was built in 1890 was the junction of four lines. The first line into Maryborough was the line from Castlemaine on 7. July 1874. This was followed by the line from Maryborough to Dunolly on 6October1874. This line did not reach Mildura until 1903. On 2 February 1875, the line from Ballarat was completed with the opening of the Clunes-Maryborough section. The line to Avoca was opened on 21 October 1876. This line was extended to Ararat by 18 November 1890.

The Maryborough-Ararat line has had a chequered career. The last railmotor from Maryborough to Avoca ran on 4 May 1957. The section Avoca-Ararat was closed temporarily from 9 July 1959 to 30 October 1966. The last regular goods train ran on 25 November 1978. In 1995 the line from Ararat was converted to standard gauge which continues from Maryborough to Dunolly as a dual gauge line. This provides a standard gauge connection for wheat traffic from Dunolly to Portland via Ararat. This line saw very little use.

The final day of DRC service to Castlemaine was on 9 July 1977 but the line remained open for goods traffic. The line to Castlemaine is now closed but the tracks are in place [Editor note: this line is in the process of being dismantled].

The original station building was opened in 1874. At the time of its opening, the local member was Duncan Gillies. Although he changed his seat to Rodney and later, Eastern Suburbs, he continued to hold land interests in Maryborough. Between 1886 and 1890 Gillies was the Premier, Treasurer, Minister of Railways and, for most of the period, Minister of Mines, and thus in charge of the colony's financial policy during the boom years of the 1880s. Alfred Outtrim was elected member for Maryborough in 1885 and held the seat for many years. The first station was said to be inadequate for a town such as Maryborough so Outtrim made representations to Gillies for a better station.

It must be seen in the context of the times. Victoria had sustained a long boom period from the 1850's gold rush until 1890. NSW had completed its grand station at Albury in 1883. Inter colonial rivalry would have dictated that Victoria, then more prosperous than NSW, should do something better. My own theory is that the plans were a concept only and once Gillies had given the approval, architectural plans were drawn specific to the location. It has features that would not normally appear in a terminal station. For example, I don't believe a station designed for the city would include a residence for the caterer.

Naturally, we all know that politicians are always honest and the fact that Gillies had interests in Maryborough had nothing to do with his approval of such a grand edifice!

The building was constructed in 1890 and finished in 1891 although without clocks in the tower. It is very typical of late grand Victorian era buildings. On a recent visit to Bundaberg and Charters Towers in Queensland, much of which were constructed in the same era, I was struck by how many of the buildings had similar features to Maryborough Station. Examples are balustrades, spherical finials, triangular and semi circular pediments and grooved columns. There are also buildings in South Melbourne with these features. So, the station is very much a building of its times. The irony is that if it was attempted just a year later, it would never have happened because Victoria came into the grip of a severe depression in the early 1890s. Other states were also affected but not as bad as Victoria. The bigger the boom, the bigger the bust!

As for Mark Twain (Samuel Clemens) and his oft quoted statement that "Maryborough was a railway station with a town attached", this quote is not in his book on his travels to Australia in 1897 but it may have been a verbal throw away line.





### The floor tiles

I measured up the patterns of the prototype floor tiles in the portico, lobby and the entrance to the caterer's apartment. I was challenged "What are you doing?" by the lessee so I had some quick explaining to do. I also took note of which colours were on specific tiles in the patterns. Some photographs were taken to help with the colours. Using CorelDraw, I prepared a small section of each pattern to scale and then copied and pasted it until I had the correct overall size. Around the edges are rows of tiles forming a border. These were done as separate layers in CorelDraw. When complete, the pattern was printed onto gloss photographic paper. It was sprayed with Testors Dullcote to remove the gloss and to provide protection from silver fish. It was then cut to size and glued down with Polyvinyl Acetate (PVA).

### The slate roof

Another legacy from Graeme Nitz were many bits and pieces from various kits. Among these were some small sections of slate roofs in styrene. As the longest single section of slate tiles in the model would be quite large, a master 335 x 100mm was made. Cutting a zig zag where separate sections of the original styrene tiles had to be joined was quite laborious. From the master, a mould was made using Barnes 'ProCast'. Quite a few roof sections were cast. I found it easier to cut while the polyurethane was still 'green', say within 24 hours of being cast.

However, where sanding was required, e.g. at ridges, it was best to leave it longer to harden.

# The cast iron lobby gates

I had a plan of the gates to the lobby and these were copied into my CAD program and a slightly simplified version was drawn to scale. These were also etched by Kieran Ryan. They were made so that they could fold (open position) and one gate is folded and the other two are closed. They are very effective!

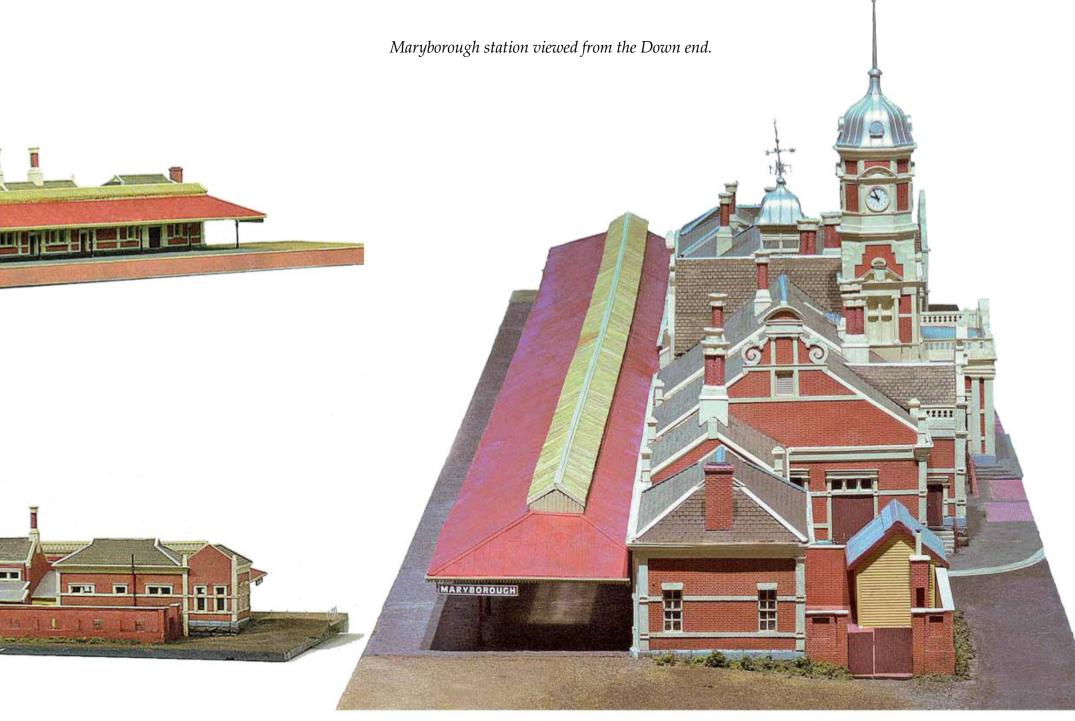
### The cupola

I have frequently been asked how I made the cupola. I copied the elevation plan into Photoshop and calculated how much wider the diagonal dimension was compared with the straight. From memory, it was about 5%. I then widened the drawing by this percentage, leaving the height the same. I then took off about 1mm for the skin. This gave the shape for the ribs, eight in all. The 1mm styrene ribs were glued to the cupola base and 0.25mm styrene glued to the ribs. I had previously cut holes in the base to facilitate gluing. Another layer of 0.5mm styrene was glued over the first layer. The outside ribs were made from Evergreen half round strips. The cupola just sits in place without gluing as otherwise it could be broken if struck by a careless arm!

### The chimneys

These caused me a great deal of grief. The station was built with decorative chimney tops, but these were removed some time after World War II – but I am unsure of exactly when? I assume they were removed as they had deteriorated in condition. They have been restored in the 2007/8 restoration project. Luckily, I found a photo taken in the late 1950's which showed the chimneys complete with the decorative tops. However, two of the original chimneys at the Up end shown on the plans are missing. They were there in one early photograph, but I found one photo in Keith Buckland's book 'Maryborough – Steam's Last Stronghold' which showed them (not too clearly) in place in the late 1950's – so they appear on the model.

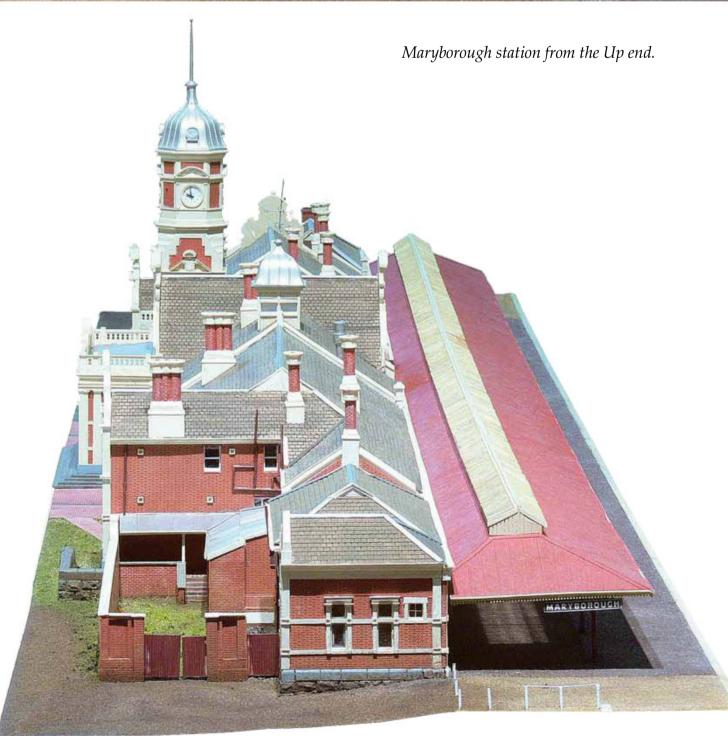
I found it very difficult to make the brickwork for the chimneys. They are octagonal and only one brick wide on each face. I made several prototypes but discarded them. It is very hard to make a properly squared up long thin octagonal object. Finally, I found in my scrap collection three small pieces of styrene brickwork 1.5mm thick. These were cut into eight narrow strips and chamfered on both edges. Using Evergreen styrene, I made up a support for this brickwork in the shape of a cross. I glued a brick strip on each face of the cross and then glued the remaining strips in between. The decorative tops and base were made from styrene. Thus, I had one single chimney which had taken me many hours to get to that stage. This was used as a master to create a 'Pinkysil' mould. ProCast was used to cast the six single chimneys. Two

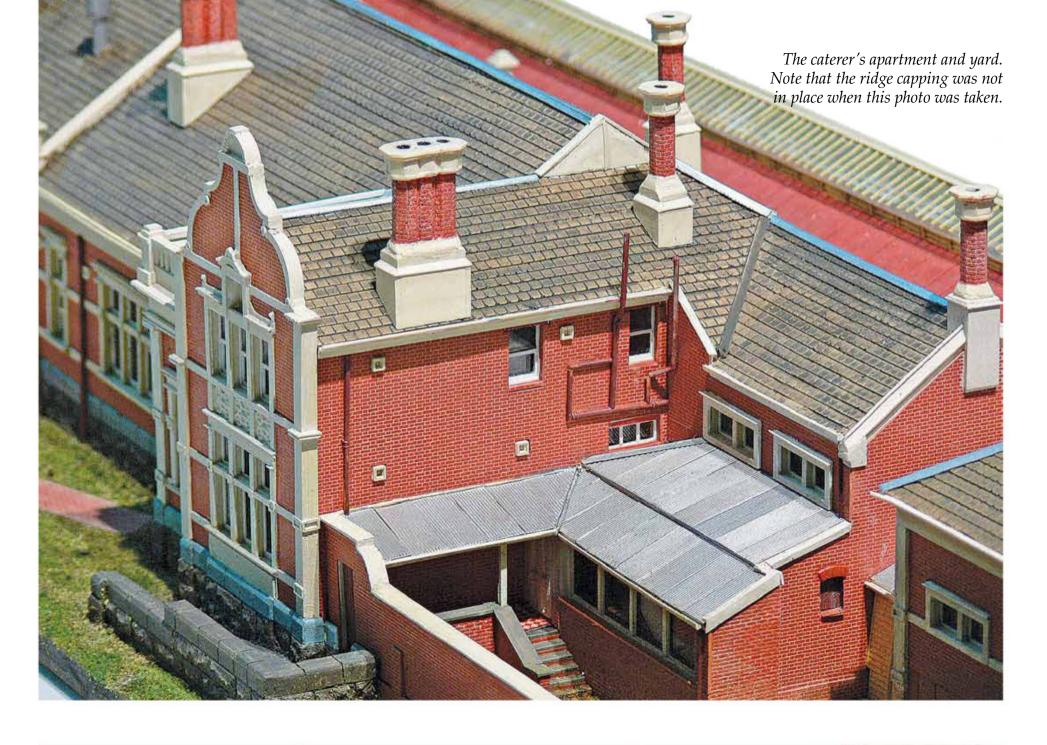


single chimneys were shaved and joined together to form a double. Again, this became the master for the four double chimneys. A double and a single were joined to form a master for the two triples.

In the next issue of the AMRM

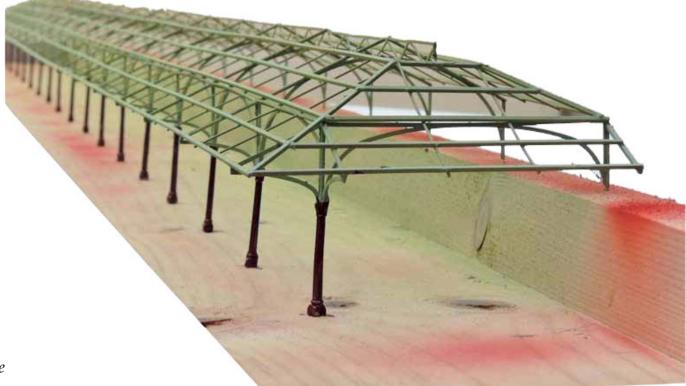
In the next issue of the AMRM Roger will describe the construction of the layout 'Maryborough'.



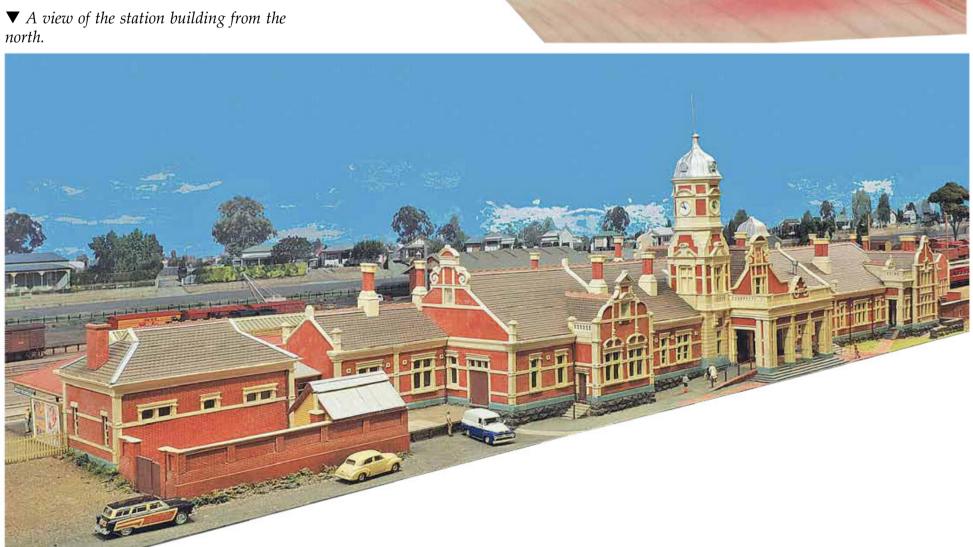








► Veranda in construction.





A trio of South Australian Railways (SAR) 830 class diesel-electric locomotives in 7mm O Scale, caught your eye immediately you entered the model display area with their Mustard Pot livery. These are a variant of the O-Aust New South Wales Government Railways 48 class diesel locomotive kit. The kit was a joint venture between O-Aust Kits and Bergs Hobbies. The kit was constructed with some modifications to convert them to the 830 class design by Bret Warburton and Brian Thomas.

## **Modelling the Railways of South Australia Convention 2022**

Gavin Thrum presents a gallery of models displayed at the 2022 Modelling the Railways of South Australia Convention. Photos by the author unless otherwise stated.

RAILWAYS



AUSTRALIAN

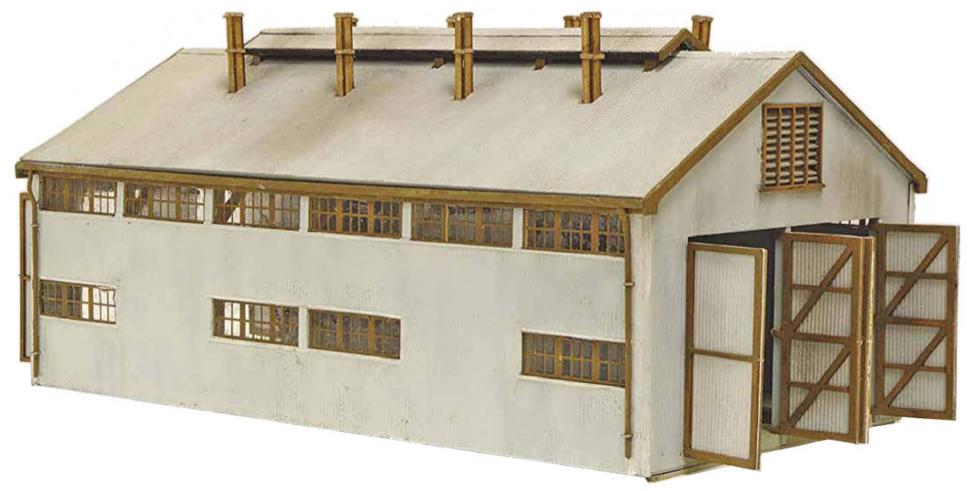
A tank car with the distinctive C-O-R (Commonwealth Oil Refineries) paint scheme in O scale. The model is a Veteran Models VM13 - Bogie Tank Wagon, modified to reflect the SAR modifications of TC8498 from the TWF374 model kit. Decals were custom home made to suit, the model was built by Chris Semczek.



The SAR Weighbridge Test Wagon in HO scale by David Goedecke. The SAR used this wagon for calibrating weighbridge equipment for weighing bulk commodities at various station locations. The model was scratch built with the main part of the body 3D printed, fitted to a modified Steam Era Models chassis. David made his own decals using *Inkscape drawing program.* 

A broad gauge SAR ballast plough in HO scale by Denis Kahl. The SAR had these small versions of ballast plough converted from Y Class open wagons. These were usually seen coupled with Z Class ballast hoppers where track repairs had taken place. There were larger big brother versions converted from bogie open wagons as well. Denis built this model from a Rocky River Models kit with some brass wire and styrene strip to enhance the finished model.

NATIONAL An Australian National Railways NT class diesel-electric locomotive in Sn3.5 1:64 scale, built by Maddie Collins. 3D CAD drawings were drawn up and sent to Shapeways for 3D printing the body. The mechanism also had 3D printed/scratchbuilt parts used to produce the model. The thirteen NT Class locomotives were designed by the Sulzer Brothers (London) Ltd. and built by Tulloch Ltd. in NSW. They all entered service between 1965 and 1968 on the Commonwealth Railways in SA but from 1968 to 1971 were transferred to the North Australian Railway.



A HO scale model of the Waikerie two road loco running shed, built by Ian McGregor. This is a Lineside SA kit by Don Bishop. The kit uses laser cut plywood and corrugated card and features the unusual arrangement of double height windows on the side walls. Waikerie station was at the end of the branch line via Karoonda and Tailem Bend in South Australia.

Occasionally there are dioramas placed on display among the display models, and this one built in HO scale by Alan Tessari was certainly full of interest. It's a scene one would have seen in the late 1950s to the 1960s of the railway crossing at Glenalta Station on the Main South Line in the Adelaide Hills. The baseboard was made from high density foamboard and Sculptamold was used to form the landscape, with soil from the garden and tile grout to form pathways. The track was ballasted with fine buff coloured ballast. The step-down platforms, stop indicator, fencing and Stobie poles were scratch built, with the wig-wags modified from a kit. The Stobie poles have Rix Products crossbars and insulators with E-Z-Line strung between them. The Road Ragers Australian vehicles were Dullcoted before adding to the scene. Various hand-made trees also feature. The 600C Class steam locomotive is a Stuart Gamble craftsman kit built on a Broadway Limited Heavy Pacific chassis. The loco was then weathered by Shane McCormack.







■ A HOn3½ model of SAR Sheep Ramp Wagon No.2476 scratchbuilt by Phil Knife. These were used for transferring sheep from the upper or lower level end loading doors of SAR sheep vans where there were no livestock facilities available. The ramps on this model are moveable.

▼ A Broad Gauge Models HO scale white metal and brass SAR 700 Class kit of No.709 by Scott Ferguson. Weathering obviously played a big part of the look of this model, depicting its last days in service. 709 was the only locomotive to be fitted with a footplate mounted after-cooler to remove oil from the compressed air lines, when the two single air compressors were replaced by a single cross compound compressor, as seen on this model.





There was a number of building structures placed on display by BAM Models Adelaide. These are printed card kits of typical South Australian buildings, one of which was the Criterion Hotel situated in Quorn SA. Construction consists of Quill Board and 400gsm Straw Board with embedded positive and negative relief panels.



This model is a kit developed by Phil Badger to fit a Kato Japanese National Railways D51 mechanism. ▶ A 1:24 scale model of the SAR locomotive No.107, also known as 'Sandfly,' built by Peter Lucas. Body and chassis parts were 3D printed with wheels sourced from Slaters Plastikard Ltd. in the UK, electric motor from Jaycar Electronics, eight AAA batteries from Battery World to operate the Radio Control unit from Remote Control Systems (Casino NSW) and a sound unit from MyLocoSound (available in SA).

▼ A 1:24 Scale narrow gauge model of an Australian National NJ Class built by Maddie Collins. With a combination of 3D printed and scratchbuilt parts, Maddie designed the model with 3D CAD drawings, and the components were then FDM printed on an UP Mini 3D printer.









Dan Carmody presented a piece on the transportation of Beaufighter wings and wing boxes during World War II. Dan built this SAR AC well wagon with wing transportation boxes installed, using 3D printed parts and styrene. Photo AMRM Team.

# WHATIS AVAXHOME?

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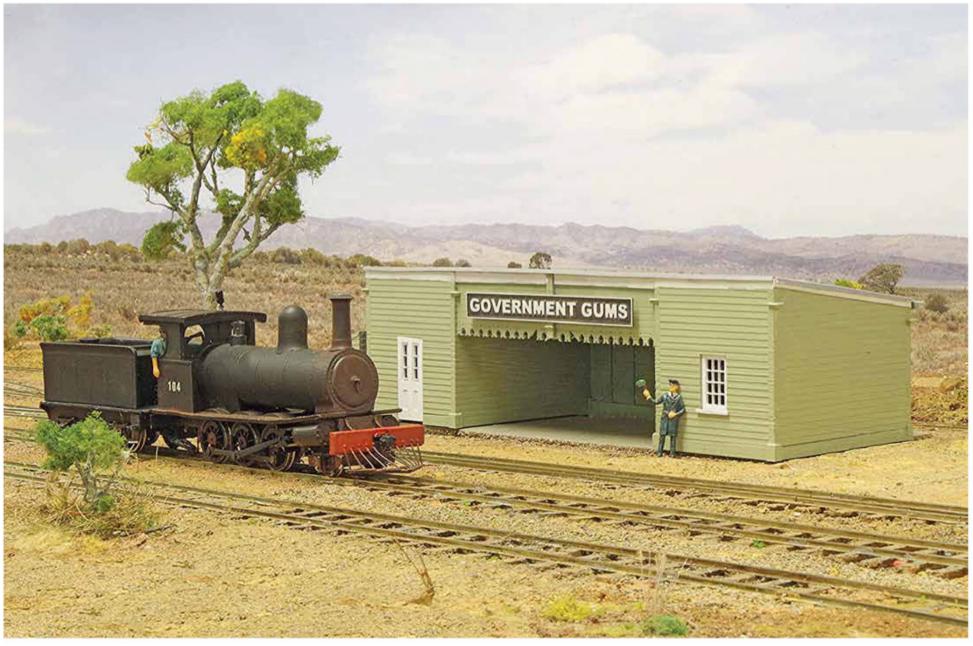
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There was a display layout set up in O scale 1:48, which had two gauges of 2ft and 3ft 6inch, and featuring a good deal of scratchbuilt locomotives and rolling stock by David Griffiths and others. Government Gums was the original name for Farina on the SAR Great Northern Railway. It was the terminus of the first section of line before it went to Alice Springs. The Y class locomotive and layout are the work of many people to bring it to fruition, and a long treasured concept by Rod Parker. It was only at the 2022 MRSA Convention that it was confirmed that the two gauges ran together at Government Gums when Mark Coffey produced a Light Railways Report of South Australia by the late Arnold Lockyer.

A layout work in progress is 'Henley Beach' station. This project layout is the brain child of Rodney Barrington. Rodney presented a history of Henley Beach at this year's convention. Photo AMRM Team.



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An SAR R class insulated van built by Don Bishop, scratchbuilt from laser cut wood on a Steam Era Models underframe. This model represents the first batch of twenty vehicles that were converted from older Y class open wagons by the SAR with their tell-tale side-throw hand brake lever.



A trio of 'Jumbo' railcars in HO Scale built by Sean Rendell. After acquiring the bodies of these 2100-2000-2100 Class cars, Sean designed, drafted and 3D printed interiors and underfloor details to fit out the models to create the commonly seen railcar set of the 1980s. The prototype vehicles were built for the then State Transport Authority by Comeng and entered into service in 1980 and 1981.

An AHHY Wheat hopper in HO scale built by Sean Rendell in Australian National livery. He has designed it as a craftsman kit, which requires some soldering, with a two piece body. Sean did the design and drafting on Sketchup and 3D printing using his own printer to produce the model. The grid catwalks were also drafted by Sean then sent to an Australian company, Mastercut Technologies, to produce the etches. Decals were produced by Signs Of All Kinds for Sean's requirements. There are other kit items in Sean's small business called Scale Model Reproductions.





These distinctive pair of Webb design Brakevans, built after Commissioner Webb took over the reigns of the SAR, were scratch built by Ian Mc Gregor in HO scale. Constructed in styrene, the red version with the side loading doors was one of ten vehicles intended for the narrow gauge but didn't eventuate and were issued to traffic on the broad gauge. The grey van was the more common two window variant seen in many old photos of the SAR.



## CAD Solid Modelling of the Early Days NSWGR Workman's Van

Lee E J Styger outlines the fundamentals of CAD Solid Modelling as he builds a Workman's Van in 7mm scale.

Photos by the author.

#### Introduction

I have been attending the Early Days of the New South Wales Railways Workshops organised by the SCMRA for a few years. I have found these events to be particularly stimulating and always a good opportunity to learn more and share ideas. I can't imagine volunteering, but I can be easily persuaded, and I think this is what probably happened when I agreed to do a talk on Computer Aided Design (CAD) solid modelling techniques at the workshop. Although much of my modelling interest dates to before the turn of the 20th Century and my modern image stock dates to around 1914, I must confess that I typically model Welsh (old Wales, not New South Wales) narrow gauge railways. So, it was decided I should model something more appropriate for the audience, Bob Gallagher suggested the NSWGR Workman's Van. The data for the model was taken from Ian Dunn's excellent book, and the rest, as they say, is history.

#### Background

Technology enabled model making (i.e. CAD, 3D printing, laser profiling, Computerized Numerical Control (CNC) machining etc.) appears to have taken the model railway community by storm in the last few years. There is much debate and indeed opinion around the concept

of "it is not real modelling", "I would love to do it but, I have not got the skills", "I am not going to invest all that money in all that technology" and, my personal favourite "I am too old and it's a game for young people". I am more than happy to take any of these comment 'off line' should anyone wish, but suffice to say, I now own more traditional model making tools than I ever have and I have upped my model making skill base. I built my CAD skill base intuitively, by using the right CAD software. I purchased the CAD Rhinoceros software and it cost me about the same as a good quality kit. I do not own printers, profilers, or CNC machines, choosing instead to use some very good, Australian based, suppliers. And finally, as my adult children and doctor like to point out, I am no spring chicken.

All of that said, there is much misinformation (dare I say opinion) about how you create CAD models for our hobby, and what technologies work best for us as finer scale model makers. Hopefully, this article will provide some insight into the black arts of technology enabled model making and encourage some people to give it a go. This is especially pertinent in the Australian context, where volumes of our prototypes do not always encourage commercial investment, as such, it offers a viable path to creating the models we want be they early, middle or latter days examples.

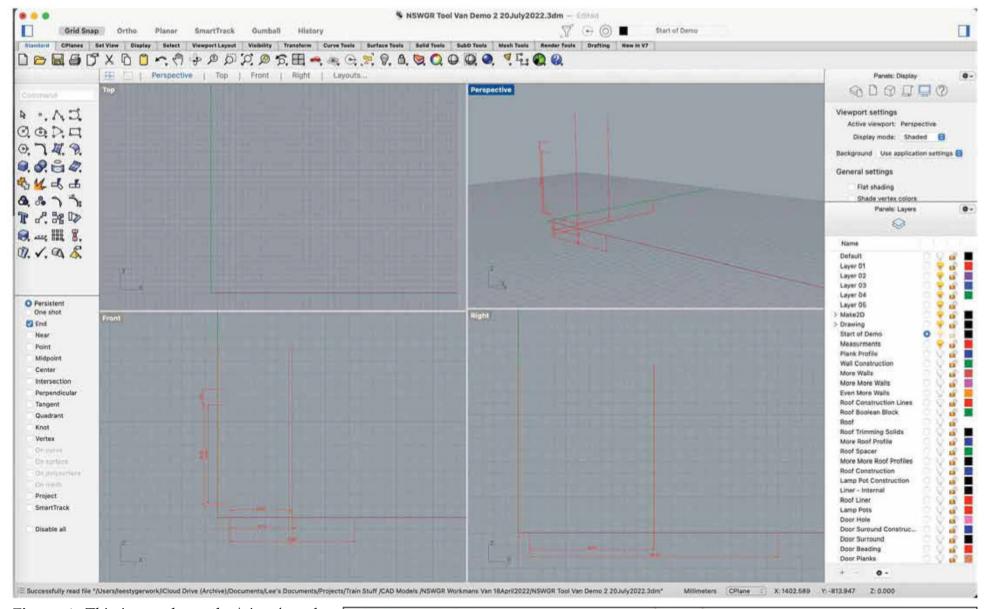
#### **Some Fundamental Principles**

Before moving into the model build sequence for the Van, it is important to lay down a few fundamental principles:

In the context of this article, there is an assumption that most people are familiar with some sort of 2D computer drawing package, no matter how simple, or embedded into a word processing package for example. If not, then please read on, and please reach out, and I will be happy to continue the conversation. We will be using 3D CAD software, that is infinitely more powerful, works in a slightly different way (i.e. three screens not one) and importantly does not work on the principle of creating a full 2D drawing first.

3D CAD software comes in many different guises, but is best thought of as wire frame (i.e. the skeleton of the model), surfacing, (i.e. the skin covering the wireframe) and solid modelling (i.e. the 'filling' between the skins). We will be exploring 3D solid modelling, because solid CAD models are 'absolute' and reduce the risk of model or data error.

The basic principle of CAD modelling consists of taking a series of "primitive" shapes and sticking them together on the screen. So, if you are used to kit building or scratch building, then this technology works in a very similar manner, but virtually.

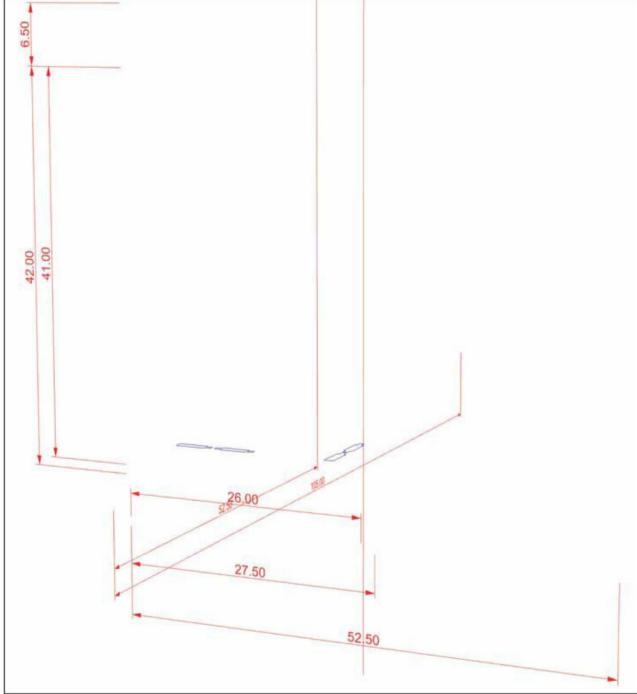


**Figure 1**. This image shows the 'views' used for the 3D construction of the model and also some core construction measurements that are shown in red. Cognisant that we are 'CAD modelling' and not creating a 2D drawing, all we need is the extremas, provided by the measurements to align our primitive solids to. All of the measurements are divided into the three construction planes (top, front and right), but they also reappear in the perspective construction plane in their relative orientations. This is fundamentally the trick with 3D CAD modelling – to remember what plane you need to work in and also to keep verifying that you are working in the correct plane within the 3D environment – i.e., do all your bits line up where they should in the perspective view?

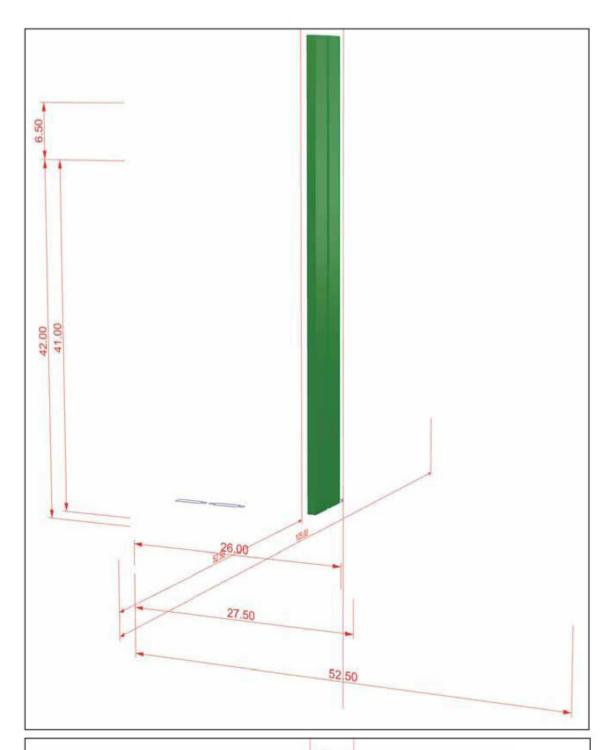
We are making a model, to scale, in this case 7mm scale. Although there is much debate out there about making the CAD model 1:1 scale and then shrinking it down to size (the CAD system is more than capable of doing this), scaling errors will occur that have to be subsequently compensated for (i.e. ¼ inch plate in 7mm scale is about 0.14mm and in HO scale about 0.07mm. If we 'scaled' and did not compensate for the model in its physical environment, the result would be parts of that model that could not support their own weight). I dare say there will be many a letter to our editor on this point, but as we know, certain things don't scale.

#### **Model Build Sequence**

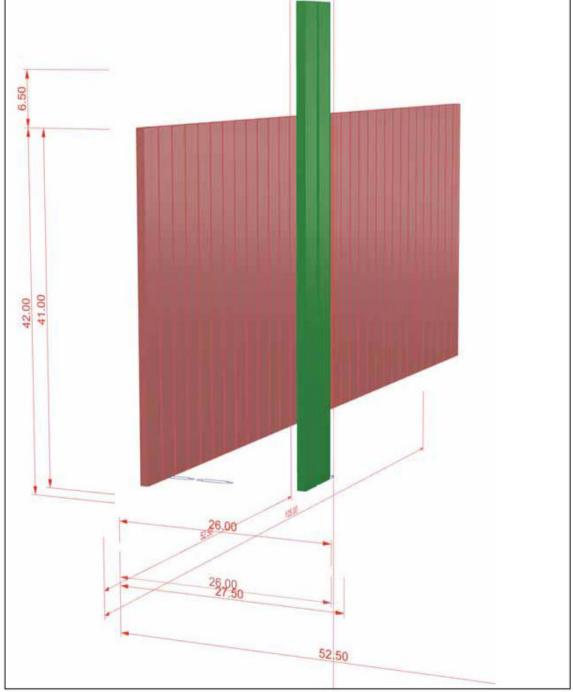
The accompanying images and notes describe the CAD modelling sequence for the NSWGR Workman's Van in 7mm scale.



**Figure 2**. For clarity in this publication, we have moved over to the perspective view on the CAD system, and changed the view type. However, all of the work described, was conducted in the three views as shown in Figure 1.0. In this image we see more clearly the construction measurements for the van (extremas) in red. There are also four blue profiles, drawn in 2D, that represent the cross section of the planks for the Van. These profiles will next be used to 'extrude' a solid model of the planks.



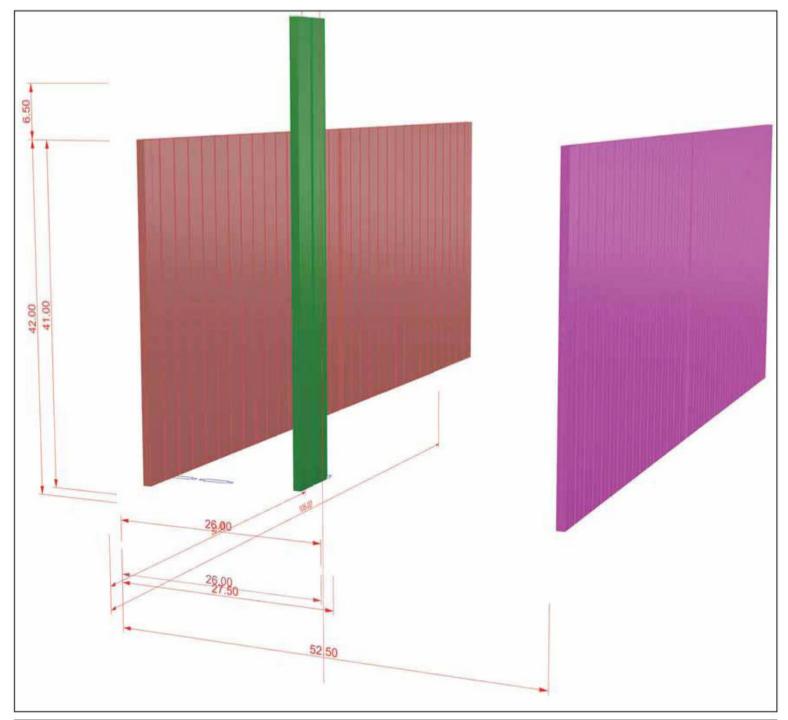
**Figure 3**. The first two green planks have been extruded. The nearest plank has a flat face that will represent the corner planks, the one behind has two protrusions. The protrusions have two roles: The first to act as the spaces between the planks of the Van sides and ends in model form, and the second is to interact with each other, so when it comes to 'sticking' it all together (Boolean join) the parts interfere with each other and thereby make the mathematics easier to perform (i.e., the model is more robust). If we modelled the plank 1:1 scale and allowed for a flush fit, as in the prototype, and subsequently scaled the plank down, two things would happen: The Van sides and ends would appear to be a single slab, because at this scale the individual definition would be too fine to distinguish, and the CAD system could have difficulty joining them all together, because the planks technically don't touch each other in the virtual environment.



**Figure 4.** Once the first planks have been modelled, it is a simple matter of performing a 'copy, paste' and drag the new planks in to place, to rapidly create the side of the Van.

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Figure 5. The opposite side of the van is created by a 'mirror' command in the system, through the centre line created with the extrema geometry illustrated in Figure 1.0. Two points to note at this stage are: We get internal detail 'free' and there are no features to the sides currently. Doors and windows etc. will be modelled later.



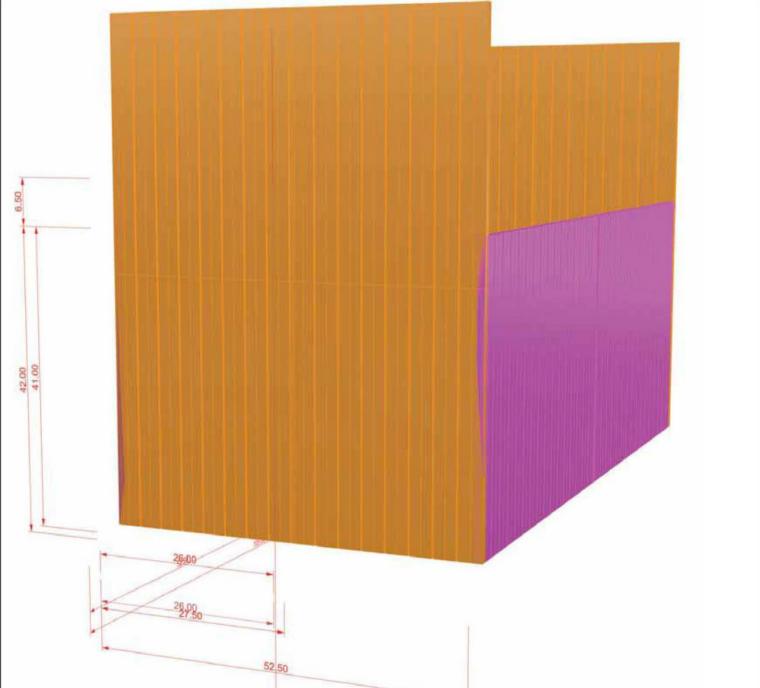
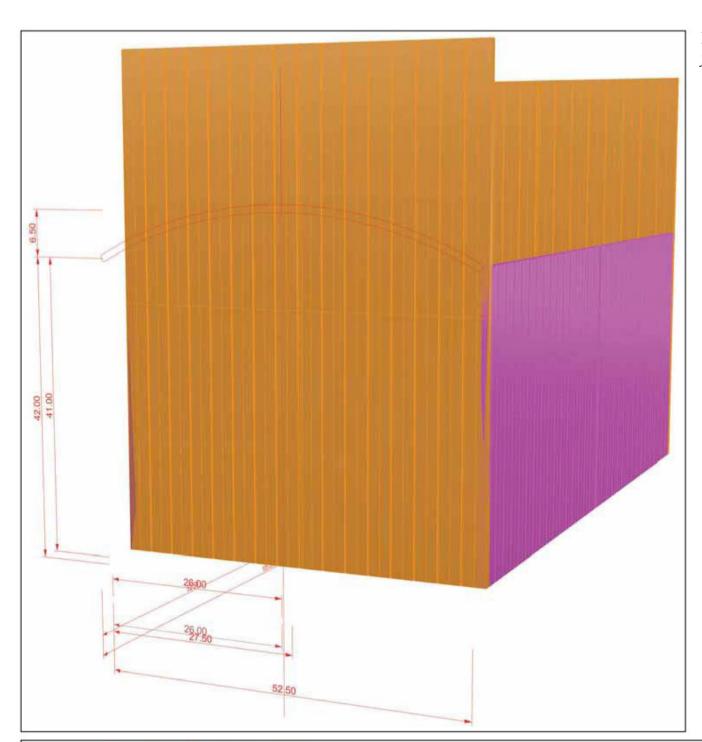


Figure 6. The first end is created by a 'copy rotate' command. Once this has been done, it is copied and dragged above the first to provide more height for the roof curvature. The end section is then 'mirrored' to create the second end.



**Figure 7**. The roof curve is next created from a 2D profile, in a similar manner to the plank profile.

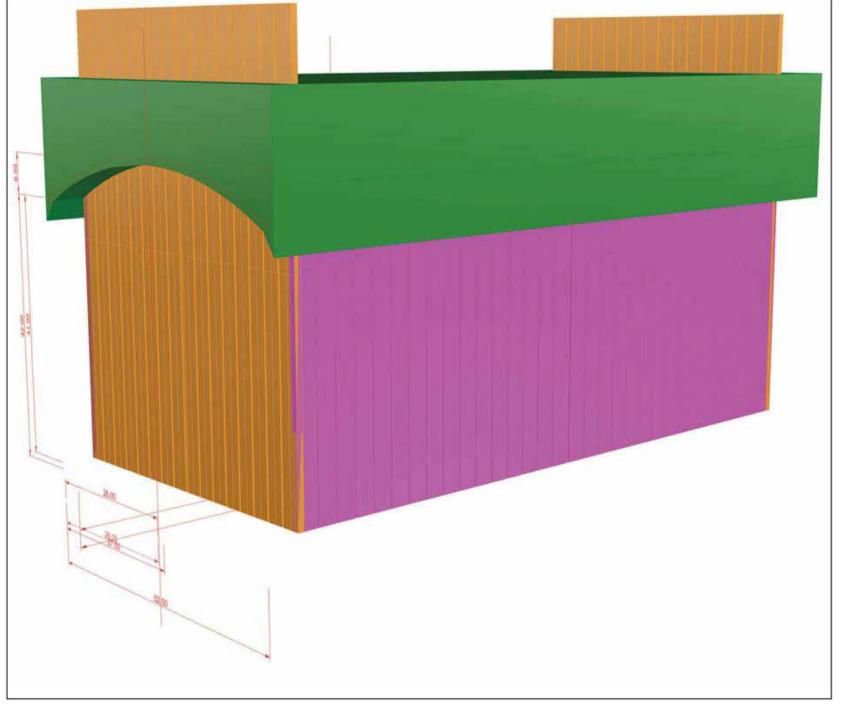
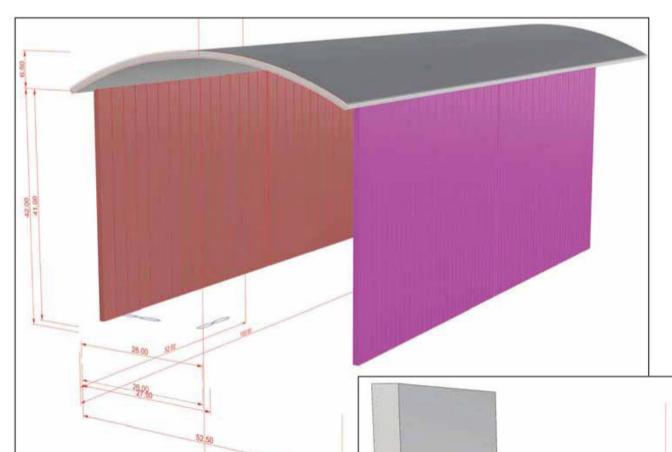


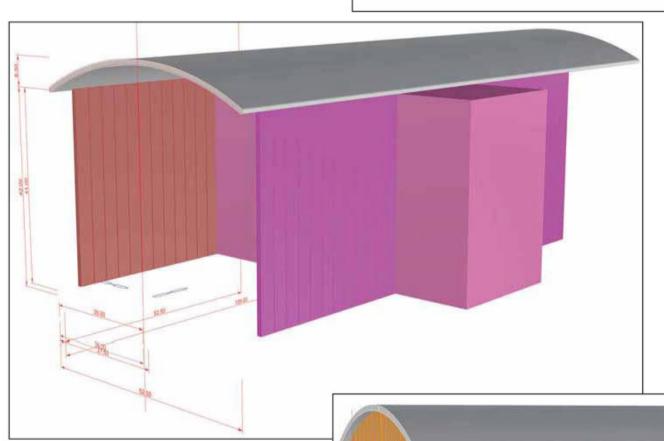
Figure 8. A construction block is used to remove excess side material. This construction block is created using an extruded solid based on selected geometry of the 2D roof profile.

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**Figure 9**. The roof is next extruded using the 2D profile. Note how the ends of the Van and the construction block have disappeared. Currently both still exist in the CAD system, but, they have simply been switched off to enable access into the model. Note also how the roof is over length at both ends, this will be addressed next.

**Figure 10**. As identified in Figure 9.0, the roof is over length at both ends and needs to be trimmed to size. This is a simple matter in 3D solid modelling, where two construction solids, made from a extrusion solid command, are created and dragged into the desired position (i.e., the final overhang distance needed for the roof). A Boolean difference command is then executed where the roof is taken away from the blocks and the result is the roof 'cut' to length.



**Figure 11**. Until now, there has been no provision for the doors on this model. Following a similar process to trimming the roof to length, a construction solid is made and then Boolean difference from the van sides to create the door aperture.

**Figure 12**. *Illustrates the CAD model once the door apertures have been created.* 



**Figure 13**. The door is made as a single assembly, from a series of extruded solids in a similar manner to the van sides.



**Figure 14**. Once the first door has been created, it is mirrored and copied to make the other three doors of the van.



**Figure 15**. Associated 'iron work' such as bolts, hinges and door locks are once again created from a series of simple primitive solids and copied and mirrored for placement around the model.



**Figure 16**. In common with the planks, doors and iron work, the beading is created from primitive solids and mirrored and copied in place.

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#### Conclusion

It is self-evident that technology enhanced model making offers significant opportunity for the hobby, especially in the context of Australian prototypes, where often the projected volumes cannot support the commercial production of ready to run products or kits. The use of these 'advanced manufacturing technologies' is gaining traction, but there is currently a learning curve to traverse before these technologies and techniques become more mainstream.

CAD modelling is the driver and gateway for all the very useful construction technologies now available to the hobby, but investment in, and practice with a robust, functional and quality CAD system is essential in producing good, reliable outcomes every time. As noted above, investment in a quality CAD system need not be prohibitive, mine cost me about the same as a quality kit.

#### **Authors Note**

I have set up a simple website where I can be contacted at www.billandron.com.au if anyone would like to continue the conversation.

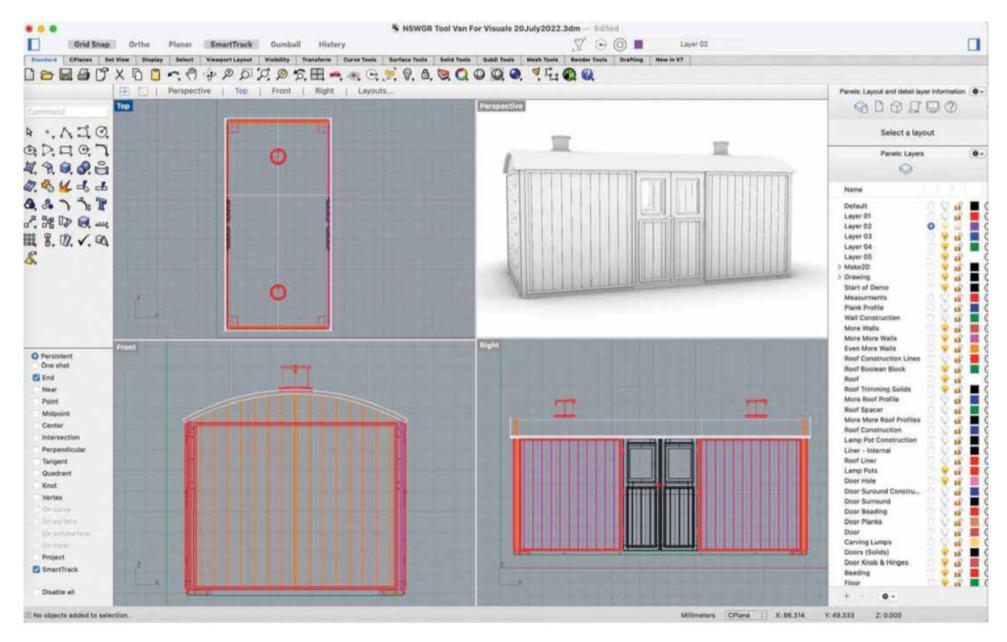
#### References

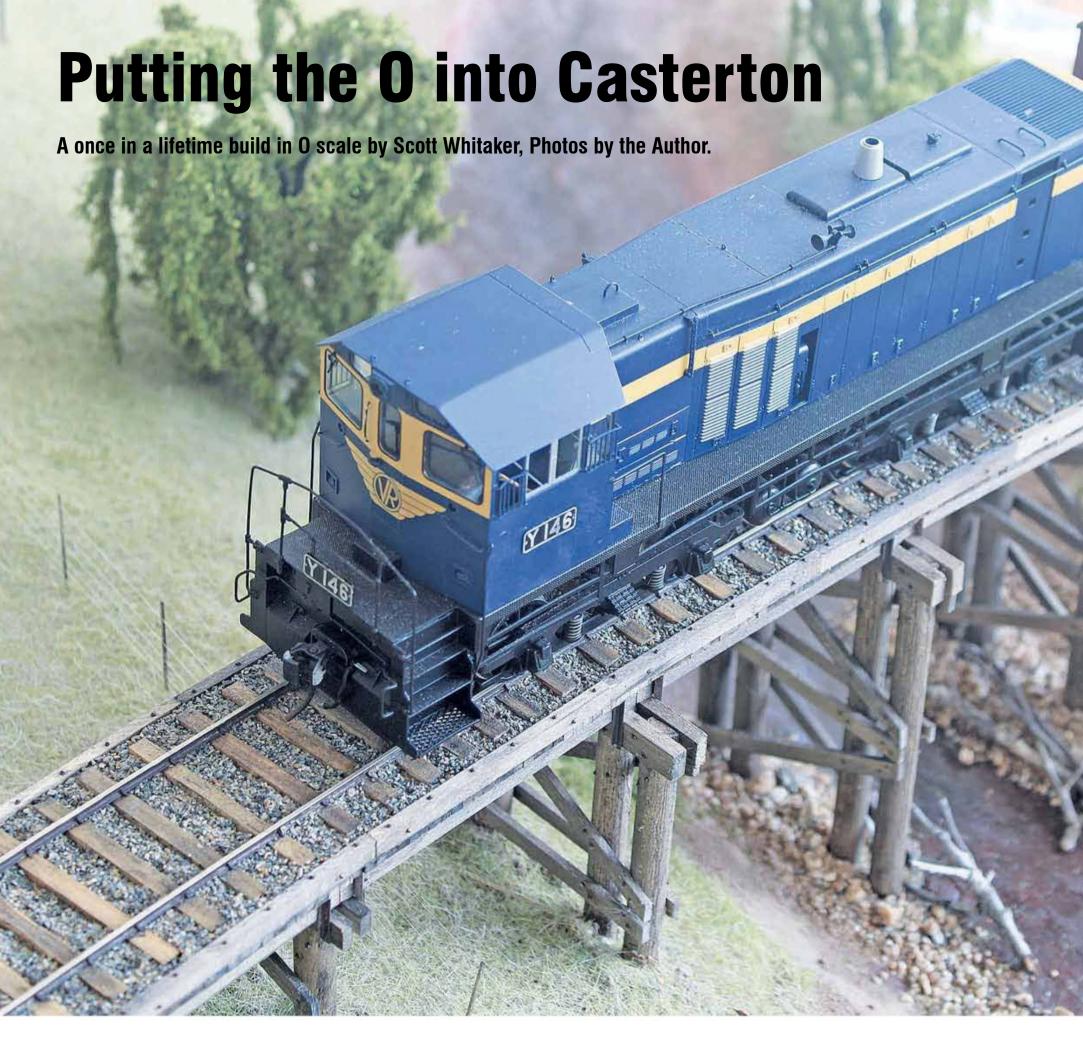
Dunn I, Goods Wagons of the NSW Railways 1855 – 1905. Eveleigh Press.



**Figure 17**. The floor and lamp pots are created using basic primitive solids.

**Figure 18**. This image brings the process back to the start, where all three working views now show the completed van, with the perspective view confirming that all of the bits line up where they should.





After growing up in Victoria, my employment took me all over the country before I finished up back in the city of my birth. However, it was during my time in Queensland that I decided that when the time was right, I'd relocate to the Sunshine state.

As a child, I had an insatiable interest in trains. This culminated on one fantastic Christmas morning, when a beautiful Hornby train set was waiting for me under the tree. Having a grandfather who formerly worked for the Victorian Railways was a bonus, and every chance I got; I would quiz him on all thing's trains. My paternal grandparents lived near the Newmarket stock yards, and I vividly remember sitting on a fence post, for hours on end, watching the shunting of stock wagons across Ascot Vale Road: Ls and Ms, smelly, noisy; and every now and then, a LL or an MM. I can't remember

seeing any other kids doing that. Sometimes I got lucky and scored a ride in the locomotive cab or the van.

My first proper layout was Marlee Junction that featured in issue 290 of AMRM. Constructed over a period of 10 years, it was about 97% complete, when the move north was realised. This layout was then dismantled and sold. Based on the Mansfield line in North-eastern Victoria, it featured wide open scenery and continuous running.

After I purchased a house in North Queensland, in 2017, a return to the wonderful hobby of model railways was not far from my thoughts. I started planning and scheming, initially rather modestly. But one thing was a given: I wanted to move to O scale (1:48) and model my memories of the Victorian Railways.

But where? I wanted somewhere a bit different that combined wide open spaces

with operational interest. Somewhere that had large infrastructure, such as long bridges, loco depots, and junction stations. Then it came to me, why not Casterton in South-western Victoria? A 46km-long branch line that was opened in 1884 and closed in 1977.

During my early teens, my grandparents retired to Casterton with a property on the Glenelg River, about 40km from the South Australian border. I used to visit regularly in the late 1970s and 80s, but by then the trains had stopped running and the infrastructure had fallen into disrepair. My grandparent's house over-looked the Glenelg River and the magnificent timber trestle bridge that spanned both the watercourse and floodplain. I remember crossing the bridge on foot many times and wandering into the railway yard. Deserted, albeit for a couple of GY wagons used to store superphosphate, it



Locomotive Y146 trundles across the Wannon River, near Sandford, with a down goods. The timber bridges on the Casterton line employed the straight (Type 1) rather than angled piles used more commonly across the network. The river will be poured once this module, and its neighbours are mounted on the benchwork. Because the layout is set in spring 1969, the river will be quite high. Beyond the bridge is the popular Sandford beach, although none of the locals will be willing to go for a dip until the weather warms up a little. All bridges are scratch built to the original Victorian Railways plans. Mount Albert scale lumber, 9.5 and 12mm diameter Tasmanian oak dowel, and nut and bolt washer castings from Grandt Line [Refer https://sanjuandetails.com Editor] are used in the build.

Extract of the July 1973 Victorian Railways map — showing the Casterton branch line. Image courtesy of David Clark. Note: Miakite was located about half-way between Branxholme and Grassdale.

bridge 4.8m long with 49 openings. The bridge took about six months to build.

#### Finding a home for the layout

The initial plan was to extend the garage and evict my car. I could fit the bridge and an abbreviated Casterton yard at one end with a hidden staging area at the other. Over time, this idea began to lose favour, and I started searching for other options. Big options.

After the garage extension was rejected, I looked at buying the vacant block of land next door. But this plan was soon discarded as I would have been thwarted by covenants and planning restrictions. Later, a couple of shops in town with an attached warehouse became available, and considered, but, in the end, I would have needed as much money to make it waterproof as building a new structure.

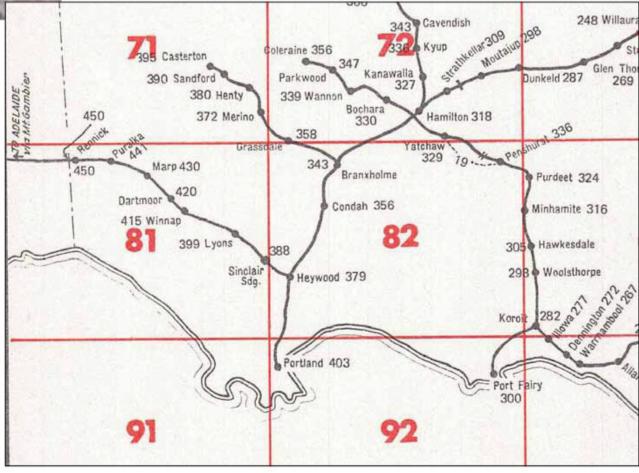
The problem was that existing commercial-style properties and vacant land were far too expensive for me. Eventually, I found a 2000 sq m vacant block at Merinda, about 10km from home. Situated right on the Bruce Highway, it's the perfect spot, overlooking a railway provisioning centre and the passing parade of trains on the main East-Coast railway between Brisbane and Cairns.

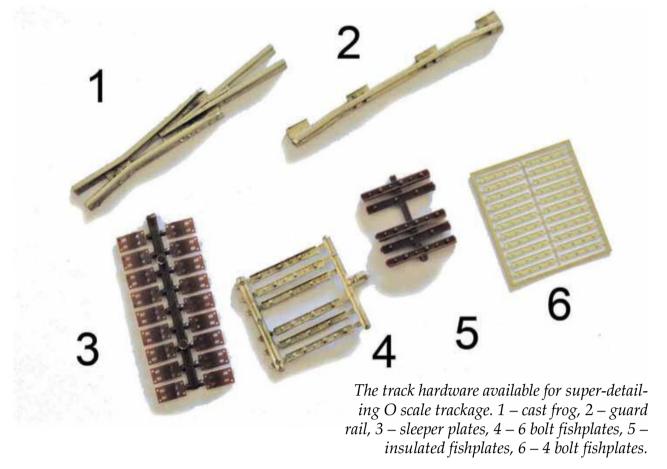
As I had my land, thoughts then turned to building a shed to house the model railway, which by now had grown somewhat. After consulting with a local builder, who, incidentally, didn't laugh when I told him what I was going to use the shed for, and who now uses the term 'layout' on a regular basis, plans were drawn up and council approval obtained. The shed will be 18m wide by 25m long, or 450 sq m in area, and 5m tall, with construction due for completion in late 2022. The slab alone will consume nearly 100 cubic metres of concrete. Fully insulated and lined inside, a bank of five 10kW airconditioners will handle the worst of the tropical heat and humidity, all backed up

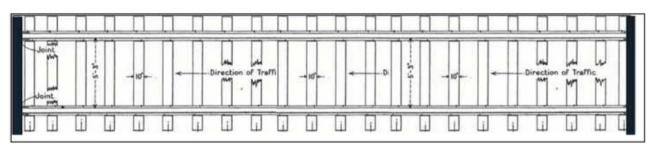
was a treasure trove for this young gunzel. Sometimes an elderly local would wander down and tell me stories, of the time before cars and trucks, when the railway was such an important asset to the town. Sadly, the wonderful old bridge has since been dismantled, although a similar length bridge still exists (in very dilapidated condition) over the Wannon River, about 3km east of Casterton.

#### The Bridge

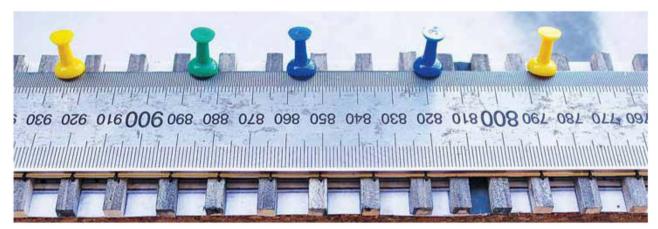
I had the location for my future model railway, and immediately started working on the bridge. According to the original contract documents, the bridge comprised 12 openings of 30ft (9.2m) and 63 openings of 15ft (4.6m) making it 1305ft (398m) long. Scaled to 1:48 proportions, a model of 8.3m long would be required. But my lounge-room isn't that big, so I had to compromise, ending up with a







For 80 and 94 lb rail. 45' lengths. The black vertical lines make it easy to spot the joints.



Using a straight edge to help align the first rail. The foam/cork sandwich makes securing the ruler with pins and spiking an easy task. Spiking is not random. The Victorian Railways employed several different spiking patterns to help prevent rail creep. Rail creep is the movement of the rail laterally because of gravity or by the passage of trains. I use a zig-zag pattern as my standard on both rails. This makes it easier for me to spike, as no matter the orientation of the track, I always spike towards the right of the sleeper. Some sleepers have been distressed with a craft knife or laid askew to put a bit of variation in the finished track.



Once the first rail has been secured, the second rail is gauged to the first rail with the help of Fast Tracks sweep sticks. I usually spike about 300mm (less on curves) on one side before removing the sweep stick and securing the other rail. Then the gauge is check against a NMRA standards gauge and adjusted if necessary. To finish, notches will be cut in the rail head to simulate joints and cosmetic fishplates will be soldered to the rail. The rails will then be painted.

by a 30kW solar array, which will make the project energy neutral. Along with a workshop, a bathroom for people with disabilities will be installed also. Two viewing decks, about 1.2m above floor level, will provide panoramic views over the entire layout. Pretty ambitious? Crazy? Sure is, but without crazy and ambitious people, we would not have gone to the moon – well that's how I justify the project to disbelieving first-timers as they shake their heads.

#### Initial track plan design concept

Even with a large amount of space available, I must undertake some selective compression and mirror-imaging to fit it all in. Another compromise is the period in which the model railway is set in. Although operationally based in the Spring of 1969, with all rolling stock from that era, I plan to pick out the best bits of the line as it was built, time-travelling if you will.

The track plan starts at Casterton as it was in 1927. A five-road yard, loco shed, turntable, goods shed, warehouses, and an impressive station building complete the scene. After crossing the Glenelg, the line winds through open grazing land to Sandford station, a simple passing loop. Another long bridge is encountered before arriving at Henty, with its three roads. Further on we reach Merino, another three-road layout. The sleepy halts at Grassdale and Murndale (renamed Miakite in 1892, before being closed in 1943) have been omitted.

We then arrive at Branxholme, where the Casterton line branched with the Ararat to Portland main line. Curiously, the junction here faced Portland, rather than Melbourne, a unique situation brought about, not by typography, but the political landscape of the era. Branxholme will be modelled at its maximum extent, with four roads, carriage dock, turntable, and loco facilities, sometime around 1910. From Branxholme the line will pass through Coleraine Junction, once the site of a large loco facility and roundhouse. From here branches led to Koroit, on the Port Fairy line, and to the town of Coleraine. Then it's on to the major regional centre of Hamilton, as it was in the 1930s, complete with its fully interlocked yard.

Although the real Casterton line never proceeded any further, there were several plans developed to do so. I have adopted that idea too, with Casterton becoming a through station to eventually enter the other end of Hamilton yard, thus enabling continual running while the layout is in display mode. A couple of hidden loops will reverse trains through Hamilton yard and back to the main line via the Coleraine branch or into Branxholme from the north.

#### The layout modules

The basic building blocks of the layout are modules, 1200mm by 1800mm. A frame of 19mm by 64mm pine supports

50mm thick sheets of high-density polyethylene foam. The track bed is a lamination of 6mm cork on 30mm foam. Apart from the hidden track, all trackwork is hand-laid with code 100 rail to represent the 60/yd (27kg/m) rail, and code 125 to replicate the heavier plant found on the main line. Each module is essentially complete with scenery and electrics, ready to be installed on the benchwork. The scenery ceases a short distance from the edges of the modules. Once the modules are bolted together, the scenery across the joins will be completed. Trackwork is accurately laid across the joint of the adjoining module with the help of a laser.

#### Time travel and rolling stock

The concept of being a time traveller relates to not just the layout. To make a start in O scale, means embarking on a journey back in time. Long before myriad ready-to-run HO items of rollingstock, covering just about every railway system in the country were available, hobbyists wishing to model Australian prototype had to build pretty much everything from scratch, just as it is in O scale. But things are improving. A new hobby shop in Sydney, Scalemodelco Hobby Centre, caters for the O scale enthusiast, and several small manufacturers produce kits of rollingstock and infrastructure using both traditional: white metal, brass, and resin, and the new: laser cut and 3D printing, techniques to produce commendable results. And a few years back, I was able to pick up a DERM and Y class diesel from Haskell, and a B class diesel and R class steam locomotive from Precision Scale Models. But without one manufacturer, Veteran Models, the task would be a lot harder. Richard Leeder, of Veteran Models, produces a vast array of highquality Victorian rolling stock kits and infrastructure items. Along with numerous rolling stock kits, I've got a K and a D<sup>3</sup> class steam locomotive kit and several second and third series T class locomotives still to be assembled. The T class kits are a dress-up kit, designed to go over a Atlas O SW8 locomotive (switcher). All signalling on the layout will be of the semaphore type, built up from kits supplied by Heritage Scale Models.

These days, it is relatively easy to model a train of a particular era. Multiple online resources help, as do the series of books by Train Hobby. On the branch, short pick-up goods trains, rail motors and the occasional race special will feature, while on the main, longer goods and passenger trains will run. In my imagination, I see a three way cross a Branxholme as part of the operation. The first train to arrive will be the DERM into the passenger dock. Not long after, a Portland bound passenger train, comprising classic W series cars arrives. While the passengers are changing trains, a north-bound empty grain special, headed by a B class, crawls through on two road, the lengthy consist of GYs clattering through the turnouts,

performing a most credible impression of Thomas the Tank's troublesome trucks. To mix it up, occasionally the dock road maybe occupied, perhaps with a workman's sleeper. After discharging the passengers onto the main platform, the DERM would then set-back onto the Casterton branch and be held at the home signal whilst the passenger train comes and goes. Once one road is clear, and the home signal lowered, the DERM returns to the platform. This form of operation, either performed manually, or automatically by the computer control system, is based on information gleaned over many years, and from interviews with drivers and guards who once operated trains over the line.

#### **Permanent Way**

After finishing the Glenelg River bridge, my attention turned to the permanent way. Although several brands of O scale flexible track and turnouts are available, none have the sleeper pattern or the look of traditional Victorian trackage. On the branch, the light rails were 22ft (6.7m) long with 11 sleepers per length. The larger plant on the mainline – 94lb/yd – was 45ft (13.7m) long with 22 sleepers per length. On both, the sleeper spacing varied, closing-up towards the joints. To achieve this, I first produced a template using information sourced from Victorianrailways.net, an invaluable resource for Victorian modellers of all scales. A diagram was found and rescaled using my desktop publishing software. Once printed out, the sleepers are simply glued in place at the correct spacing.

But I'm getting a little ahead of myself. Before tracklaying could commence, bulk supplies had to be sought and compromises made. The timber sleepers, and turnout jigs (the number six jig closely resembles a 600ft (182m) radius VR turnout) come from Fast Tracks in Canada, whilst the code 100 and 125 rail and rail spikes are from Micro Engineering of the USA. Track and turnout jewellery: fishplates, sleeper plates, cast turnout frogs and guard rails are from Right-O-Way in California, with code 100 cosmetic fishplates sourced from Keiran Ryan Models.

First compromise: the sleepers and the gauge. Complications arise because of Victoria's use of broad gauge (1600mm). However, traditional O scale standards specify a scale gauge of 5ft (1524mm) which equates to 31.75mm on the model. To model true broad gauge, one would need to set the gauge to 33.33mm. Although I wanted accuracy, the concept of discarding those beautifully machined track laying jigs, and then adjusting the gauge of rollingstock kits by about 1.5mm, was not warranted.

To make the track look right, I reduced the sleeper length from the standard 9ft (2.7m) to 8ft 6in. This small adjustment means that the rails are closer to the ends of the sleepers to simulate broad gauge. In addition, the sleeper width is milled to a USA standard of 9 inches, rather than

the Victorian 10 inches, but fortunately, this minor discrepancy is imperceptible in 1:48 scale. The sleepers are then individually stained a greyish colour using a brew of non-aqueous India ink and Isopropyl alcohol. Both are bought in bulk to minimise cost. A 50mm bottle of ink can cost up to \$50, whereas I was able to source a 500 ml bottle for around \$180 from a specialist art supplier in Melbourne. Same with the Isopropyl. I get mine in 51 containers from a specialist hairdressing supply company at a fraction of the price charged by hardware stores.

For a simple straight section of track, a strip of 30mm foam is cut to the same length of the sleepers, and 838mm long (the approximate length of the Micro Engineering rail). Next, 6mm thick cork floor tiles are cut with a band saw and glued onto the foam strip using polyurethane adhesive, activated with a light misting of water from a spray bottle. The sandwich is then clamped for several hours. This is important because the adhesive expands rapidly as it cures, and if left unclamped, it will distort the surface. The result is a remarkably strong and smooth surface for tracklaying, with excellent sound deadening qualities. Once cured, the templates are glued on top of the cork. I've found that Poly Vinyl Acetate (PVA) diluted with water to the ratio of 1 to 4 works well. The sleepers are then glued in place with full-strength PVA and the whole assembly lightly clamped until set.

In the real world, the light rails of the branch line were simply spiked to the sleeper after it had been adzed (profiled) to the coning slope of 1 in 20, matching that of the wheel tread profile. As model railways happily operate on flat-topped track, this profiling is not required in model form. For my track, a thin bead of Pliobond (contact adhesive) is applied to both the bottom of the rail and to the sleepers. After a few minutes of cure time, the two surfaces are offered up together. With a little pressure either by hand, or from the heat of a soldering iron, a very strong bond results that still retains a little bit of flexibility. A straight edge (in my case a steel metre ruler) is placed against the web of the rail, and spikes inserted along the intermediate sleepers (the joint sleepers are left un-spiked at this stage). After spiking for about 300mm, the ruler is removed, and the rail spiked on the other side. Like a lot of skills in this hobby, spiking takes a bit of practice to get right. Specialist spiking pliers are a must, along with copious amounts of patience. At first, you'll probably bend more spikes than you'd like, but over time, proficiency and speed will evolve. I use a guided technique that suits me well. With the spike secured in the plier jaw, I hold the jaw of the pliers steady with my left hand as I drive the spike home with my right. When I was an active member of a tourist railway, it used to be two hits and a tap to drive home a real dog spike. Now it's just a couple of pushes!



A completed section of 60lb/yd ready to be used on the layout. All track panels are labelled to assist with orientation on the modules and for wiring.

Once you have the first rail in place it is time to install the second rail. To ensure correct gauge, I use a Sweepstick, a handy product produced by Fast Tracks. It is a laser cut length of thin ply that is inserted between the rails. While holding the second rail firmly against the Sweepstick, spiking is commenced using the same process outlined above. Regularly remove the Sweepstick and double check the gauge with a NMRA standards gauge or similar product, that has been calibrated, i.e., checked against a vernier calliper to ensure it's accurate.

Once the two rails are in place, a thin notch in the rail head is cut at each joint with a jewellers' saw. Cosmetic fishplates are then sweat soldered across the simulated joint using solder paste. I find a little flux helps, but the residue of the flux must be cleaned away as soon as possible. I use a small wire brush to clean, followed by a quick swipe of a sanding stick across the top of the rail, the whole being flushed with isopropyl. The sleepers at the joints are then secured with spikes.

Track feeder wires are then soldered to the bottom of the rail. One thing to consider with O scale, especially for large layouts, is the power requirements of the locomotives. As my heaviest locos weigh around 2kg and draw up to 8 amps, this current draw must be considered when planning the wiring. I use 1.5mm builders wire in red and black as track feeders, with the black wire always connected to the rail closest to the back of the layout. When building track, I plan my build to enable that section of track to be painted on the same day. After masking the sleepers, I use Rustoleum Camo Brown, straight from the spray can, to paint the rails.

Curves are built along similar lines. My tightest radius in the display area is 2.3m, and 1.8m on the hidden trackwork. Each curve commences with a transition of about 1m in length. Starting at around 10m radius (almost straight), the transition then tightens up to the desired radius, and once through the curve, the transition back to straight uses the same tech-

nique. Superelevation is achieved using scale 2 by 3-inch strip wood, (about 2mm high) that is glued to the outside curve of the template, beneath the rail, before the sleepers are attached. The curve also requires a vertical transition from flat to the full 2mm of superelevation. This is easily achieved with the use of an orbital sander to put a slight gradient on the 400mm length of Strip wood. The curved Sweepsticks (available in many different radii) make what could be a difficult task, very straightforward.

For the code 125 used on the mainline, the track build is similar, except that sleeper plates are inserted under the rail before the spikes are driven. Right-O-Way provide two types of plastic plates: one with the coning slope of 1 in 20 cast in, which is used on the main; and flat plates that are used through the turnouts and yards. I've found the easiest way to insert the plates is by placing a small dot of PVA on the sleeper and sliding the plate through the glue and under the rail. The glue helps the plate stay put while the spikes are driven. The result looks very realistic, and because the rail slope matches that machined on the wheels of the rolling stock, everything rides a little bit better, with a little bit less side-to-side 'hunting' apparent. Prototypically, a series of transition plates would be installed to manage the change from sloped to flat plates. This is accomplished on the layout using shims.

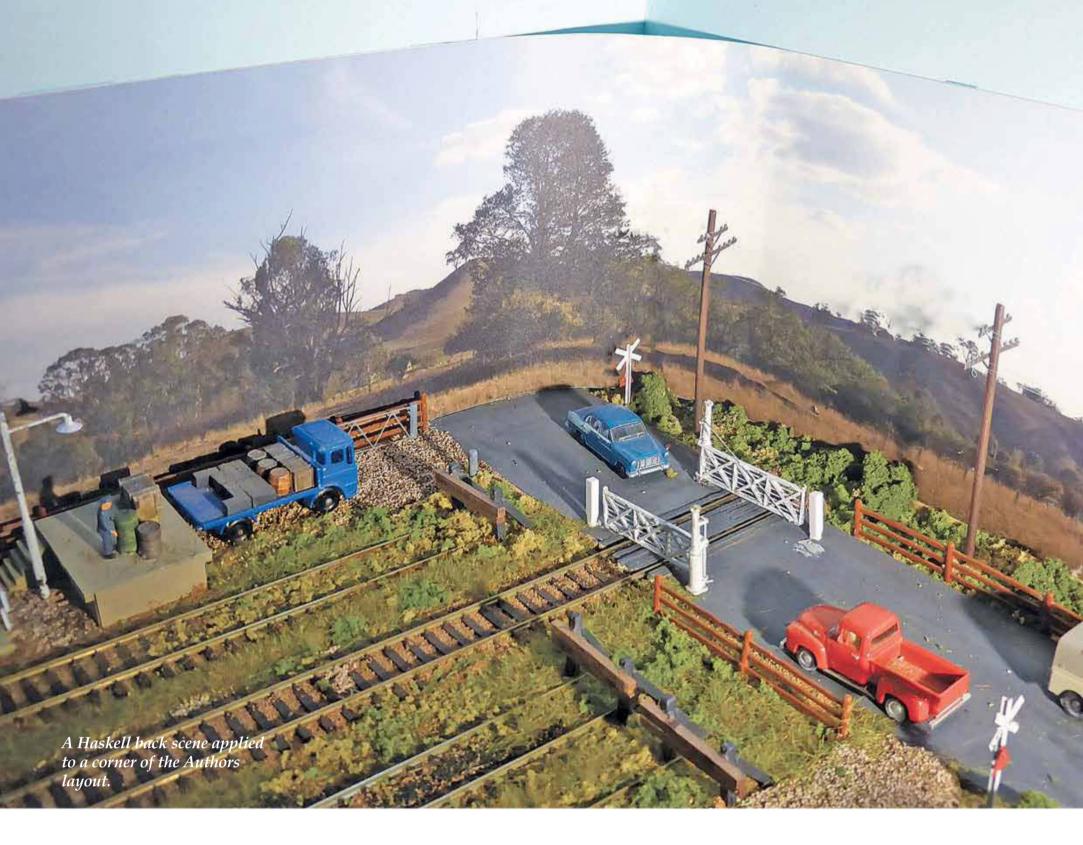
The track panels are then joined in much the same way as traditional sectional track is used. Once the scenery is complete, the track is ballasted and cleaned.

In the next part, I'll discuss hand-laid turnouts and building bridges. Until then, enjoy the ride!



Partially completed modules stacked up in what used to be the master bedroom!

Page 56. December 2022



## Installing Backscenes

Les Fordham shares his techniques for installing propriety backdrops. Photo by the author.

Backscenes certainly improve the appearance and finish to a layout. Unfortunately, many of us do not have the artistic flair to paint our own scenes and are therefore having to use a propriety product.

I have read numerous times about modellers using propriety backscenes and complaining that the backscene comes away from its backboard or it develops bubbles.

I have never liked the idea of trying to apply the printed article to a vertical surface and get a perfect finish with no wrinkles or bubbles and lined up.

I have used the Haskell backscenes, printed on a heavy vinyl material with a self adhesive back. I generally use their 15cms high scenes. It comes in a roll 125cm long.

See their website:

haskellco.net/australian\_backdrops

The first thing I do is to mount the backscene onto heavy cardboard sheet

that is flexible enough to curve into corners if required. This is best undertaken with the aid of an assistant and a good workspace. The backing paper is removed from a small section of the printed backscene and affixed to the card with the bottom edge of the backscene level with the bottom edge of the card.

As your able assistant unrolls the backscene and slowly pulls away the backing paper, draw a ruler across the backscene at right angles across the height of the backscene and smooth it down onto the card. As it is slowly unrolled and the backing paper pulled away, the ruler eliminates any wrinkles and bubbles and ensures that the backscene is firmly stuck to the card.

Once the back scene if affixed to the first piece of card, this card is trimmed; a second card is butted up to the first, and the back scene is further rolled out and stuck down.

Where the backing cards join is usually strong enough for our purposes but could

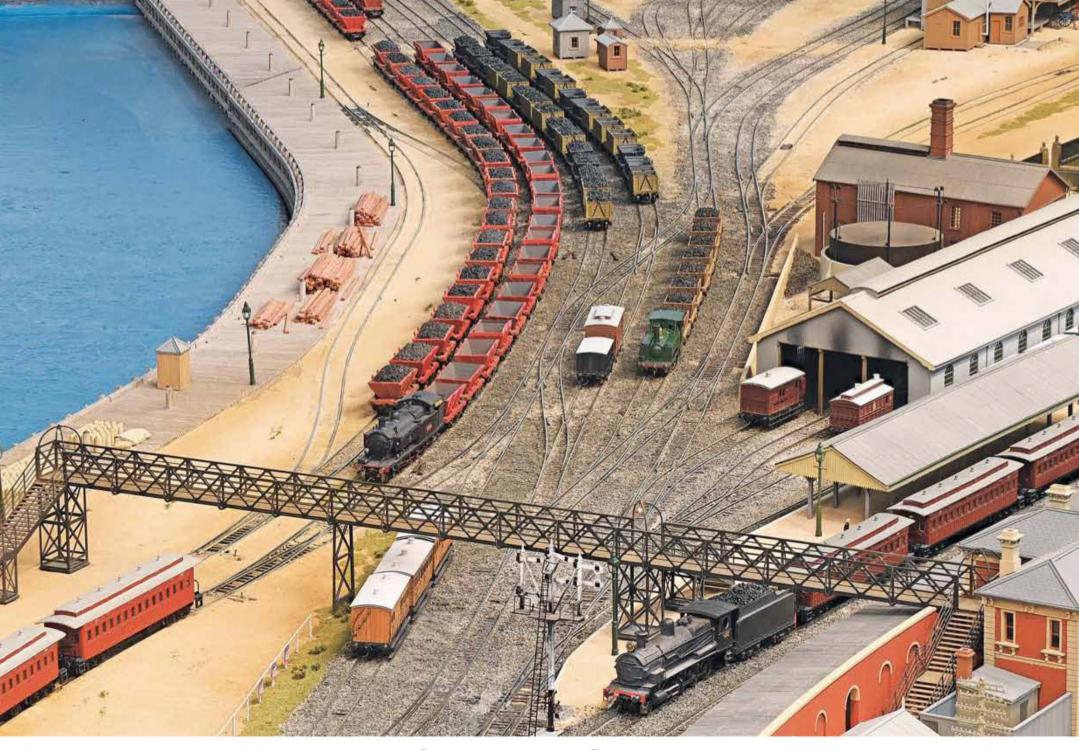
be strengthened with paper glued across the join.

The mounted backscene can then be used on the layout. On my layout I normally have a backscene board of 3mm Medium Density Fibreboard (MDF), painted with a sky blue colour to which the printed scene is affixed.

The back scene is then held up against the MDF and the area it will cover is marked on the MDF. Poly Vinyl Acetate (PVA) is then applied to this area of the MDF.

The card with the backscene can then be moved into place, curved around corners if required and then pressed against the backboard. I clamp a second piece of MDF against the front of the back scene (if possible) just to ensure it is well held while it dries.

With all the printed backscenes I have installed this way, none have peeled off or bubbled. It is certainly much easier to apply on a horizontal surface rather than a vertical.



## 2022 N Scale Convention

Greg Sadler provides a gallery report on this year's N scale convention in Goulburn NSW.

Photos by Mark Jesser.

▲ Ross Balderson's 'Newcastle' 1899. After the success of Ross's previous layout, 'Central', he has recreated the Newcastle waterfront in 1899, again in N Scale whichhe exhibited at this year's National N Scale Convention held in Goulburn New South Wales in early October. The layout measures roughly 9m long by 3m deep. The layout features subtle lighting, appropriate for the era, and ambient sounds, such as an occasional ship's horn sounding, emanating from a speaker beneath the framework. In full exhibition guise there is even a monitor giving a slideshow of the many photographs Ross discovered as part of his research for this project. Although essentially complete, Ross feels that the harbour is a little empty, and is in the process of building a sister ship to the 'Polly Woodside', already in the water. One of the standout features of the overall scene is the mooted colours used so as not to create any particular 'look at me' features.



Castlemaine, Victoria railway station by Tony Scott. Castlemaine is on the northern mainline, between Bendigo and Melbourne. This is a representation of Castlemaine railway station in 1980, as it stood on platform one, the Up platform. This is a scratch built structure made almost entirely from styrene, with printed card being used for the external appearance of the brick walls and slate roof.



Cowan Boyd 'Freight Rail' 120 tonne wreck crane by Rob Popovski. This particular crane was built in 1995 in the United Kingdom, and shipped to Australia for use by Freight Rail. It had a surprisingly short career, after being involved in a rollover incident in 2007 at Sefton Junction in Sydney's inner west. It languished around the Sydney region for many years after, without being repaired, until it was acquired by the preservation team at Dorrigo. Rob's model is scratch built from etched brass, styrene, and 3D printed parts. The decals on the model are homemade.

## Reviews

#### WestEdge3D Figures Various Scales. Prices in text. Website: https://westedge3d.com.au Email: Info@westedge3d.com.au

WestEdge3D (WE3D) market a series of figures of people and tombstones that have been scanned from real people and head stones they are great! WE3D figures are available in N 1:160, HO 1:87.1 and O 1:43 (7mm). Other scales of the same models are available to order.

All models are colour printed. The tomb stones are nice. In many cases the prototypes modelled are elaborate and detailed. The colours of the tomb stones appear to capture the weathered hues of the scanned originals faithfully. They would make excellent feature monuments in any cemetery scene.

The human figures are outstanding! The colour scans of the 'prototype humans' have been modelled in great detail. The shapes of the models are much finer than the typical injection moulded figures we've been used to. This is particularly noticeable on the hands, feet and heads of the figures. The other outstanding feature is the reproduction of the clothing in shape and colour. The shades of clothing, like faded jeans or check shirts are brilliant. The scanning process also replicates any folds or creases in the original clothing.

Due to the colour printing and the natural folds in clothes there is no need to apply a wash to bring out detail like there is in injection moulded figures. In fact, doing so would probably detract or even ruin the effect already achieved. The colour of checked shirts or other printed multicolour clothing is beyond anything realistically possible on an injection moulded figure. Ironically, most of this detail is too small to see on N and HO figures without a bright light and magnifying glasses. The benefits of this manufacturing process are best appreciated in the O scale figures.

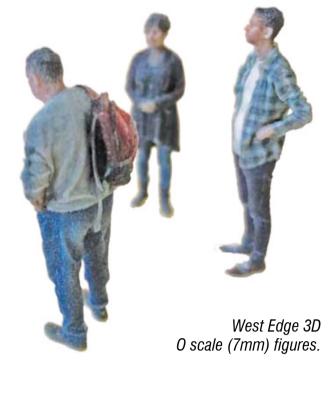
The figures are suitable for the 1980s to current. The figures of the older females may also be appropriate to the 1960s and 70s.

If taking close up photographs of these figures it may pay to dull coat the figures first. While the figures do not have an overall gloss finish, dark colours do have a semi-gloss finish and the 3D layering printing process leaves fine edges that tend to reflect light from certain angles when being photographed. This reflection issue is not apparent under normal viewing.

Figures are sold in sets of four for – N scale \$19.95, HO scale \$29.95, O scale (7mm) \$47.95. There are two series of cemetery Items, Cemetery Memorials and Headstones. The elaborate Cemetery Memorials are available in two sets of six memorials. N scale \$32.95, HO scale \$44.95, O scale (7mm) \$66.95. There are three sets of Headstones consisting of five items each. They are priced the same as the human figures.



West Edge 3D HO scale figures.





West Edge 3D N scale figures



West Edge 3D HO scale figures.



#### **REVIEWS**

The products covered in the Review pages have been supplied or made available by the manufacturer, producer, importer or retailer listed in each product heading. AMRM welcomes access to new product lines for inclusion in the Review pages and requests items be addressed to the Editor at Australian Model Railway Magazine, PO Box 345, Matraville 2036. Readers are reminded that the prices quoted in the reviews are those applicable at the time of going to press. Those using the prices as a guide to purchasing products by mail order should always add extra for postage, or contact the supplier for the additional cost for mail order.

**Editor** 



West Edge 3D O scale (7mm) Tombstone.

## **Recent Releases**



Auscision Models has recently released NR40 in National Rail 'The Ghan' livery in r-t-r HO scale. Photo Auscision Models.

Auscision Models has recently released NR66 in Pacific National 'Real trains not road trains' livery in r-t-r HO scale. Photo Auscision Models.



Auscision Models has recently released two four packs of AHGX grain hoppers in Genesee and Wyoming Australia livery in r-t-r HO scale, available in green roof (shown) and yellow roof (roll top) versions. Photo Auscision Models.

Auscision Models has recently released a re-run of their AHGX grain hoppers in South Australian Railways yellow, Australian National Railways grey (shown) and red, Australian National green and yellow and Manildra yellow and green (patched) liveries in r-t-r HO scale. Photo Auscision Models.





Auscision Models has recently released a re-run of their PTC NTY (shown) / NGTY grain hoppers in State Rail Authority of New South Wales (SRA of NSW) and Freight Rail liveries in r-t-r HO scale. Photo Auscision Models.

Auscision Models has recently released a re-run of their NGKF grain hoppers in State Rail Authority of New South Wales (SRA of NSW) and Freight Rail and FreightCorp (shown) liveries in r-t-r HO scale. Photo Auscision Models.





Auscision Models has recently released a re-run of their NGGF sugar hoppers in State Rail Authority of New South Wales (SRA of NSW) livery in r-t-r HO scale. Photo Auscision Models.











Auscision Models has recently released HO scale figures of the Auscision team. Photo Auscision Models.

## **Recent Releases**



### **Natural Brass**

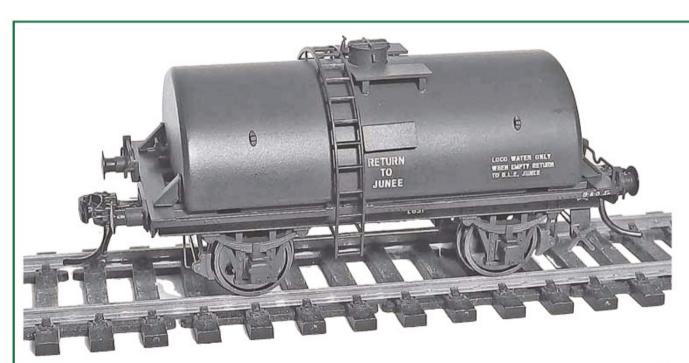






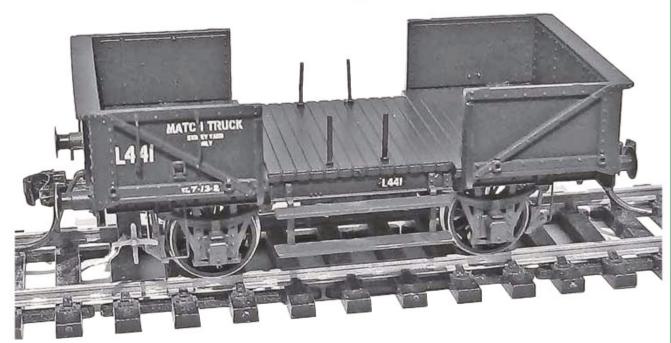
Victorian Railways 3D Models have recently released natural and polished brass level crossing gates in HO scale.

## **AMRM News**



Casula Hobbies expect their production run of New South Wales Government Railways (NSWGR) four-wheel water tank and shunters float wagons r-t-r in HO scale are expected to arrive about the time of publication.

Casula Hobbies NSWGR four-wheel water tank wagon r-t-r in HO scale. Photo Casula Hobbies.



Casula Hobbies NSWGR four-wheel shunters float wagon r-t-r in HO scale. Photo Casula Hobbies.

## **AMRM News**



Auscision Models have received painted factory pilot models of their N scale r-t-r NHFF, NHJF, NHKF coal hoppers in State Rail Authority of New South Wales (SRA of NSW) with Candy and blue L7 logo, FreightCorp, Pacific National and 'Patch' livery and BGKF Grain hoppers in Southern Shorthaul Railroad livery.

Ausicision Models has also received painted factory pilot models of their HO scale r-t-r CHS, NHVF coal hoppers in PTC blue, SRA of NSW, Freight Rail, FreightCorp, and Pacific National liveries and BGVF grain hoppers in Southern Shorthaul Railroad livery.

Ausicision Models have announced a re-run of their Australian National AN class diesel locomotive r-t-r in HO scale.





Auscision Models factory unpainted pilot model of their

scale. Photo Auscision Models.

Victorian Railways 'Harris' Motor car with two doors r-t-r in HO



Auscision Models factory unpainted pilot model of their Victorian Railways 'Harris' Motor car with three doors r-t-r in HO scale. Photo Auscision Models.



Photo Auscision Models.

Pacific Tartonal

Auscision Models painted factory pilot model of their NHVF in Pacific National livery r-t-r in HO scale.
Photo Auscision Models.

InFront Models have developed a Fielder's Glucose 20' ISO Tanktainer kit in HO scale. The prototype operated from Tamworth–Sydney–Melbourne, from the mid 1970s to mid 1990s. The kit consists of seven pieces, all 3D printed and a decal sheet.





IDR Models have received their shipment of Victorian Railways DERM and MT Railmotors and trailers r-t-r in HO scale.

Ixion Model Railways' factory decorated pilot models of the r-t-r HO scale VR bogie MF cattle and LF sheep wagons are being prepared now, and the production run should occur this year.

After the bogie live stock wagons are complete, the re-run of the r-t-r HO scale VR J Class 2–8–0 steam locomotive will commence, and design work on the VR A² class 4–6–0 steam locomotive r-t-r in HO scale will begin in earnest in early 2023. **Kerroby Models** has had to increase their prices, as the metal cost has tripled!

They have kept the increase as low as possible, this is the first increase since 2016.

Matt's Ballast now has a range of coal and ballast loads for NSWGR S and K trucks on HO scale. They are also developing loads for some Victorian wagons, and will also be creating loads for Western Australian Government Railways wagons as well.

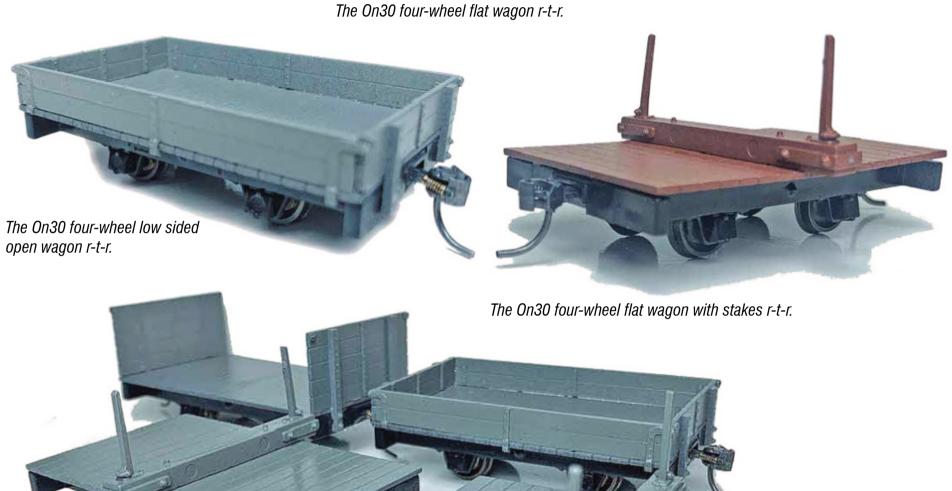
AMRM News continues on page 67

## **AMRM News**

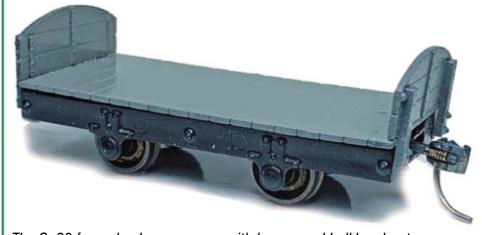
 $\textbf{Haskell Co} \ \text{have developed On 30}$ four-wheel wagon four packs and mixed packs.

These models are generic in design but inspired by wagons from Ida Bay (Southern Tasmania) to North Qld to Maylands brick works (Perth, WA).





The On30 four-wheel wagon mixed pack r-t-r.



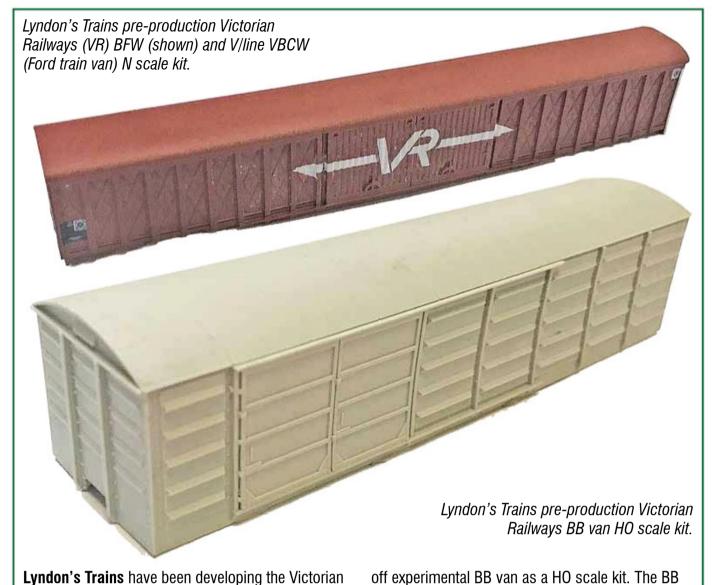
The On30 four-wheel open wagon with low curved bulkheads r-t-r.



The On30 four-wheel flat wagon with high curved bulkheads r-t-r.



### **AMRM News**



**Lyndon's Trains** have been developing the Victorian Railways (VR) BFW and V/line VBCW (Ford train van) as a N scale kit.

Lyndon's Trains is producing a model of the one

van trialled the first double sliding doors that were later used on the BLF and VLX vans.

**OnTrack Models**' Victorian Railways–V/Line–Freight Australia 40' vans VLX/VLCX r-t-r in HO scale have finished being assembled in the factory and the Victorian Railways–V/Line–Freight Australia 56' Vans VSX/VLEX r-t-r in HO scale are currently being assembled.

They're expected to leave the factory at the end of November/early December.

Phoenix Reproductions' Victorian Railways (VR) D<sup>3</sup> 4–6–0 steam locomotive r-t-r in HO scale is back in stock with the Canadian Red liveried version again proving popular. Phoenix Reproductions next VR steam locomotive project is the venerable K class 2–8–0 r-t-r in HO scale, this model is now in production with delivery expected mid 2023. Phoenix Reproductions would have preferred to deliver this

model sooner, however production lead-times, material supplies and assembly are still subject to ongoing labour supply issues in China.

**SDS Models**. The balance of the series two SRA of NSW 81 class diesel locomotive model r-t-r in HO scale are in transit They are awaiting shipping confirmation of the third and fourth series models early in 2023.

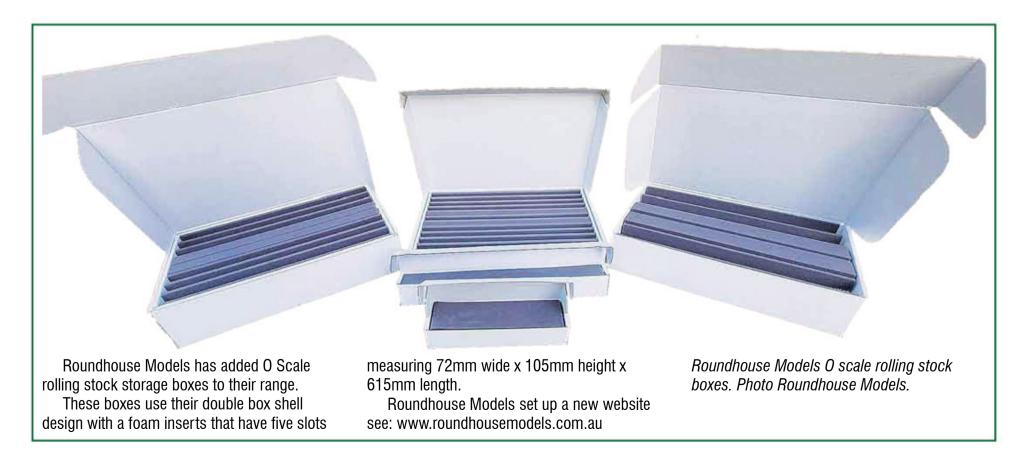
The South Australian Railways (SAR) 900 class diesel locomotives r-t-r in HO scale are presently in the factory assembly stage and should be shipped before the end of the year. SDS Models SAR 700 class coaches r-t-r in HO scale have started pre-production preparation, however there are many paint samples to be checked. They will likely commence full assembly after the 2023 Chinese New Year holidays.

SDS Models other recent arrivals include NSWGR S trucks r-t-r in HO scale with the earlier period buffers and spoked wheels as standard fitment. The Australian National (AN) / National Rail (NRC) AOQY/ROQF/ROHF ore concentrate wagons r-t-r in HO scale are likely to arrive later this year. These will be followed by the AN coil steel wagon AKEX r-t-r in HO scale in early 2023.

NSWGR Brake vans and Mail vans r-t-r in HO scale will be in abundance in early 2023 with two suppliers shipping the LHO/LHY/KP/MHO/VHO/DMC late this year.

New for 2023, as SDS Models' suppliers predict a return to some form of normality, SDS Models will produce the NSWGR *Caves Express* coaches, the RG Greyhound car and the LFX Dogboxes r-t-r in HO scale.

For the VR and V/line market SDS



Models will move into second and third series T class diesel locomotive production r-t-r in HO scale, and will follow up with a re-run of the Y class diesel locomotive r-t-r in HO scale.

Scalemodelco Hobby Centre/
ModelOkits are about to launch,
under the OZ Kit (Anton's brand), a
new range of HO scale NSWGR
building kits made from laser cut
board with corrugated and
weatherboard styrene. The first
buildings in this new range are the
A1 and A2 station buildings and the
C2 station buildings and C2 toilet
blocks. These will be available by
the end of the year.

Recently launched are two 7mm (O Scale) Bedford Truck kits (TK and S Models) under the ModelOkits brand. Both are made from resin 3D printed, laser cut and vacuum formed components.

Also recently launched are a number of new 7mm (O Scale)
Australian lineside detail items under the Waratah brand including two Telephone boxes, Petrol Station Pumps/Tyre Rack/Oil bottle stands and NSWGR Point Throws.

ModelOkits 7mm (O Scale) S model Bedford Truck kit (left) and the 7mm (O Scale) TK model Bedford Truck kit (right).



Waratah Telephone box kit type one digital rendering in 7mm (O Scale) (left) and the type two digital rendering in 7mm (O Scale) (right).



Waratah Petrol Station Pump single hose kit digital rendering in 7mm (O Scale) (left) a double hose kit digital rendering in 7mm (O Scale) (centre) and tyre rack kit digital rendering in 7mm (O Scale) (right).







## Diary

#### **EXHIBITIONS & EXPOS**

**COWES – VIC.** January 21 & 22, 2023. The Phillip Island & District Railway Modellers Inc Model Railway Exhibition, Senior Citizens Club, Lions Court, Cowes. 10am–5pm (Sat), 10am–4pm (Sun). Admission: \$8 Adults, \$5 Child under 15, (children under 5 free), \$20 Family (2 Adult & 3 Children).

Martin Murden 0416 186 589.

**GEELONG WEST – VIC**. January 28-29, 2023. Corio Model Railway Club 48th Model Railway Exhibition, Geelong West Town Hall, 53 Pakington Street, Geelong West. 10am-5pm (Sat), 10am-4pm (Sun). Adults \$10, Children \$5, Family \$20.

Peter Briggs 0413 061 269 seafuryfan@hotmail.com KALEEN – ACT. March 25-26, 2023. 34th Canberra Model Railway Expo, UC High School, 104 Baldwin Drive, Kaleen. 9am–5pm (Sat), 9am–3pm (Sun). Adults \$20, Children – School age and under free, Concession \$10, Family (2 adults plus children) \$30. Andrew (02) 6231 9799 www.cmrci.info

ROSEHILL – NSW. May 6-7, 2023. Great Train Show, Rosehill Gardens Racecourse. Entry from James Ruse Drive or Grand Avenue Rosehill. 10am-5pm (Sat), 10am-4pm (Sun). Mike 0408 817 554.

#### **OPEN DAYS**

**EPPING** – **NSW**. November 12, 2022. 10am–2.30pm. SCMRA and EMRCI. Epping Creative Centre, Dence Park, 26 Stanley Rd, Epping. Free Entry. Scenery Clinic at 11am.

Trevor 0419 492 553 for details or to confirm attendance.

**EPPING** – **NSW**. January 14, 2023. 10.00am – 2.30pm. SCMRA and EMRCI. Epping Creative Centre, Dence Park, 26 Stanley Rd, Epping. Free Entry. Getting Started in Model Railways clinic at 11am. Trevor 0419 492 553 for details or to confirm attendance.

**EPPING** – **NSW**. July 8, 2023. 10am–2.30pm. SCMRA and EMRCI. Epping Creative Centre, Dence Park, 26 Stanley Rd, Epping. Free Entry. Getting Started in Model Railways Clinic at 11am. Trevor 0419 492 553 for details or to confirm attendance.

#### SALE DAYS

EPPING – NSW. November 26, 2022. Model Railway Market Day by Epping Model Railway Club. Epping Creative Centre, Dence Park, 26 Stanley Rd, Epping. 10am–1pm. Tables with lots of pre-loved models. Free Entry. Table rental contact Mike 0408 817 554.

BRISBANE – QLD. November 27, 2022. All Gauge Model Railway Club, Queensland Rifle Association (QRA) Restaurant, 1485 Old Cleveland Rd, Belmont. Ron Parker. Phone: 0420 597 460.
Email: rlp39@yahoo.com.au

## **VALE**Lloyd Norman Sawyer 1943 – 2022

Sadly, we record the passing of Lloyd, the man behind Lloyd's Model Railways and Footplate Models.

Novocastrian born; Lloyd grew up in the heart of steam railway country where he could be found when missing from home. Educated in the New South Wales New England region where he met the love of his life, Norma. Lloyd joined the army shortly after leaving school moving to Victoria for his training. His two-decade stint in the Army saw him do three tours of Vietnam, a legacy he bore to the end.

Settling in Canberra, he became part of the technical education system and he and Norma chose the city to raise his family of three children; Norm, Tony and Kim. He also took the opportunity to expand his railway interest first with smaller models and later with live-steam, more correctly known as model engineering.

Initially, he commenced building his model railway empire under the floor and, like many struggled to find all the components he needed commercially in Australia to suit his modelling needs. So, he used his army and work experience to open a mail order supply system, using parts of his model railway for packing and storage as the demand for his services increased. Having a healthy interest in Australian railways, particularly New South Wales Government Railways, he saw the opportunity to help increase the availability of lineside infrastructure and wagons. With John Sever as patternmaker, components from white metal castings and 'Milky Bar' resin mouldings from CMA in the UK became common through his outlet. Lloyd's skill at sourcing and maintaining



parts for his kits and other products was only matched by his enthusiasm and attendance at model railway displays as exhibitors where he and Norma became a permanent fixture at east coast city and country exhibitions for many, many years.

In among all of this activity, just as the hobby was demanding locomotives, be they ready-to-run or kits; Lloyd headed the team who organized the Footplate Models range of locomotives. Firstly, as an etched brass-based locally produced kit, and then, from one of the best kit makers in the world, DJH Models. These kits had an enormous impact on our hobby and provided the stepping stone for the ready-to-run market to develop. This issue alone highlights the importance of Lloyds Model Railway and the Footplate Models kits on the Australian market. Some can correctly

say, one of the most important developments in our hobby!

It is difficult to measure the contribution Lloyd made to the Australian model railway hobby. We all thank him and Norma for their contribution. Eventually Lloyd and Norma sold the business and Lloyd embarked on his live steam adventure, where again, he and Norma shared many hours with a wide range of the hobby fraternity.

Pre-Covid exhibitor attendees were able to catch up with Lloyd and Norma, the couple were always available for a chat. We will miss Lloyd and thus share the grief of his passing with Norma and his family.

Bob Gallagher

## Mailbag

## Vehicles – Setting the era and the October issue of the AMRM

Recently when visiting my local hobby shop, I enquired about what HO scale model cars were stocked. The answer was disappointing. Almost all were American ones and the only one from a different country was an American Classics brand 1982 Honda Accord. A bit late for the 1950s/1970s 'Camjong' line but I bought it anyway!

The dearth of HO scale models of British cars is understandable because of the predominance of OO scale modelling in the UK but there should be HO scale models of European cars. I certainly can buy lots of boxes of HO scale people made in Germany.

I look forward to reading some responses from other readers.

Some comments on the October issue AMRM:

Thank you for telling us about your 'Murray River Bridge' layout – simple in concept, simple to build, simple to publish (only one diagram).

Take Three – 'The Corner Inlet Light Railway' was also very interesting. Different styles of layout – different gauges – different prototypes – different eras. It's interesting to note that David Axup uses DC control with twin Morley controllers, I too use these controllers and they are adequate for me. Model railways and their creators are like paintings and their artists, each

presenting their message in their own individual way and in these models through excellent photos.

Australian track work – interesting that the AMRM team had to increase sleeper spacing for Australian bridges. I had to reduce sleeper spacing in PECO code 75 track to get the correct spacing for the Nepean River Bridge model.

The Yard Junk photos are good. Authors' ideas are very useful but some photos from earlier times would be helpful for people modelling earlier periods. By the way who are 'the authors'? [The 'AMRM Team' consists of the members of the AMRM Editorial team plus one ultra modern modeller: Editor]

Looking forward to hearing that another bridge model article is to be published

Thank you for an interesting issue of AMRN

Thank you for an interesting issue of AMRM.

Michael Gourlay
The Gap, Qld 4061

#### Vehicles - Setting the era

I saw the letter from Michael Gourlay of The Gap QLD about other HO vehicles suitable for Australian layouts. Indeed, there are many model vehicles of European origin available, including various Minis, Jaguars, VWs and so on including some 'pretend Holdens' (Opels). There is an issue in that right hand drive models are harder to find, but depending on the location on the layout, you can get away with left hand drive. Asian cars can be harder to locate for older vehicles. but there are exceptions such as the J4 Land Cruisers. Finally, we have a catalogue page

on our web site and you can browse or download the HO catalogue to see what is available. Hope that helps.

> Tony Lawton RW Hobby Lilydale Vic 3140 https://rwhobby.vpweb.com.au

#### **Inox MX3**

Thank you for your helpful article on lnox MX3 as a track cleaning agent. The reasoning and effect seem to be like what is claimed for Wahl oil.

Do any contributors or readers have experience comparing the effectiveness of Inox MX3 to Wahl oil?

Peter Schulz St Agnes SA

#### **MAILBAG**

Australian MODEL RAILWAY Magazine welcomes letters on any pertinent model railway subject for inclusion in Mailbag.
Letters should be sent to Mailbag, SCR Publications, PO Box 345, Matraville 2036, emailed to amrmagzn@tpg. com.au or faxed to (02) 9661 4323. All Mailbag contributions must include the writer's name, address and phone number to permit verification.
Contributions without this information will not be considered for publication.

## **Robert Kosmider's** Manning Wardle K-Class Photos by the author.





My 7mm scale model is of a Manning Wardle K class, similar to the prototype that ran on the Camden Tramway in New South Wales. The model is built from a Slater's etched brass kit which came complete with its own Slater's wheels and a Mashima motor. The Manning Wardle locomotives in general underwent many modifications during their lifetimes, but my prototype did not which meant there was no need for any changes to the kit. I did however replace the original etched steel hinged coupling rods with solid rods as I found the former too flimsy and the solid ones worked better than the hinged ones, quite likely as my chassis building was not up to par. The various bits of piping, valves etc. are modified castings from the kit or made from pieces of brass as per photographs of the prototype. Presumably the very tall chimney on the NSW loco was a special order with Manning's or maybe it was changed later in Australia for some operational reason.

## Victorian Railways X Class 2-8-2

Composite etched brass, nickel silver and cast white metal kits by DJH are now available with a choice of welded or riveted tenders. Price \$595.00 + \$17.00 post/pack.



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#### SPRING, SPARK & STEAM

The author takes us on an interesting and informative journey from the beginnings of toy and model trains in Australia and New Zealand, to the days of mass production of what is now known as HO gauge. The book covers the pre and post World War 2 period when experienced model makers were leaving their regular employment to start cottage industries, producing models for a toy-starved public up until the 1960s. These cottage industries grew to the point where they

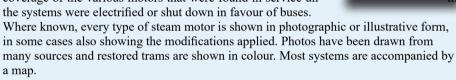
contributed to the economy of the country, employing

considerable numbers of workers in their production, before crumbling under the onslaught of imported toys, changing tastes, and the arrival of TV. As well as the details of fifty-five manufacturers such as Ferris, Maurlyn, Robilt, and Scorpion, the book has over six hundred full-colour photographs of many of the models produced and includes coverage of the retail outlets that were the public face of the industry.

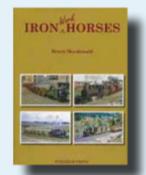
SPRING, SPARK & STEAM has 144 full-colour pages. Page size is 215 x 277mm, with a full-colour hard cover \$60.00 plus postage

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a map.

#### IRON WORK HORSES

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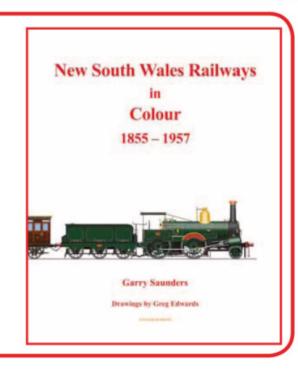
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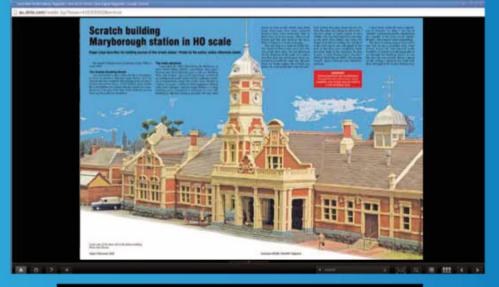
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Advertising deadline is: 1 December 2022

The Febrauray 2023 issue should be available at the normal outlets around 19 January 2023.

#### **BRASSTIC KITS**

By popular demand, the Australian Model Railway Magazine is once again stocking the brass castings for the BRASSTIC NSWR 45 class, SAR 600 class and NSWR 48 class modifications, as described in articles in AMRM.

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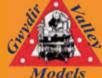
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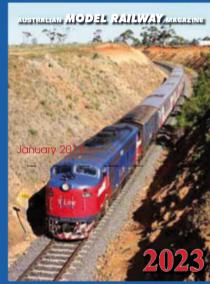
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The diesel cover features V/Line A60 on a commuter train to Bacchus Marsh. Other photographs include: John Holland 48s34 and 48s36 on the Tottenham branch; NT67/NSU62 in Darwin Yard with the Larrimah mixed; NSW 42106/42203/4203 at Yass Junction; a cane train north of Mossman; GM23/42217 haul a northbound freight through Kilmore; Australian National DL36 on a coal train at Leigh Creek; 4431/4485/8044 on a freight between Wallerawang and Marrangaroo siding; S303/ T357/T333/T378/B74 haul an El Zorro grain train between Ballarat and Warrenheip; Southern Shorthaul Railroad grain train hauled by RL306/4917/B61/C504/BRM001 between Quirindi and Murrurundi; Queensland Railways 1620 with a maintenance train on the Brisbane Valley branch; Hamersley Iron 3010/4035/4055 cross the steel arch bridge spanning Spring Creek, between Paraburdoo and Tom Price; V13 shunting the sidings along the Tamar River at Launceston.

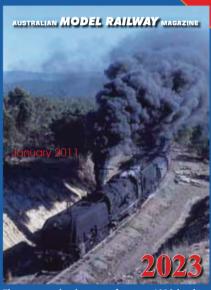
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The steam calendar cover features 6018 hauling a coal train from Awaba State Mine to Wangi Wangi Power Station. Other photos include: Victorian J class on a goods near Nhill; NSW 3245 returns to Galong from Boorowa with No.92 mixed; NSW 3135 departing Marayong on the Richmond branch; South Australia 524 at Adelaide station; NSW 3665+3651 haul a goods train near Borenore; Victorian R719 on the turntable at Ararat; NSW 3528+6002 on an express freight near Lisarow; Tasmanian MA4 works a goods from Herrick to Launceston; NSW Beyer-Garratt 6018 climbs McDougall's Hill, north of Singleton with an empty coal train; Queensland BB181/4 1088 hauls a coal train near Bundamba; 3825 leads No.20 Southern Highlands Express from Goulburn to Sydney Terminal; Western Australian W937 hauls No.52A goods.



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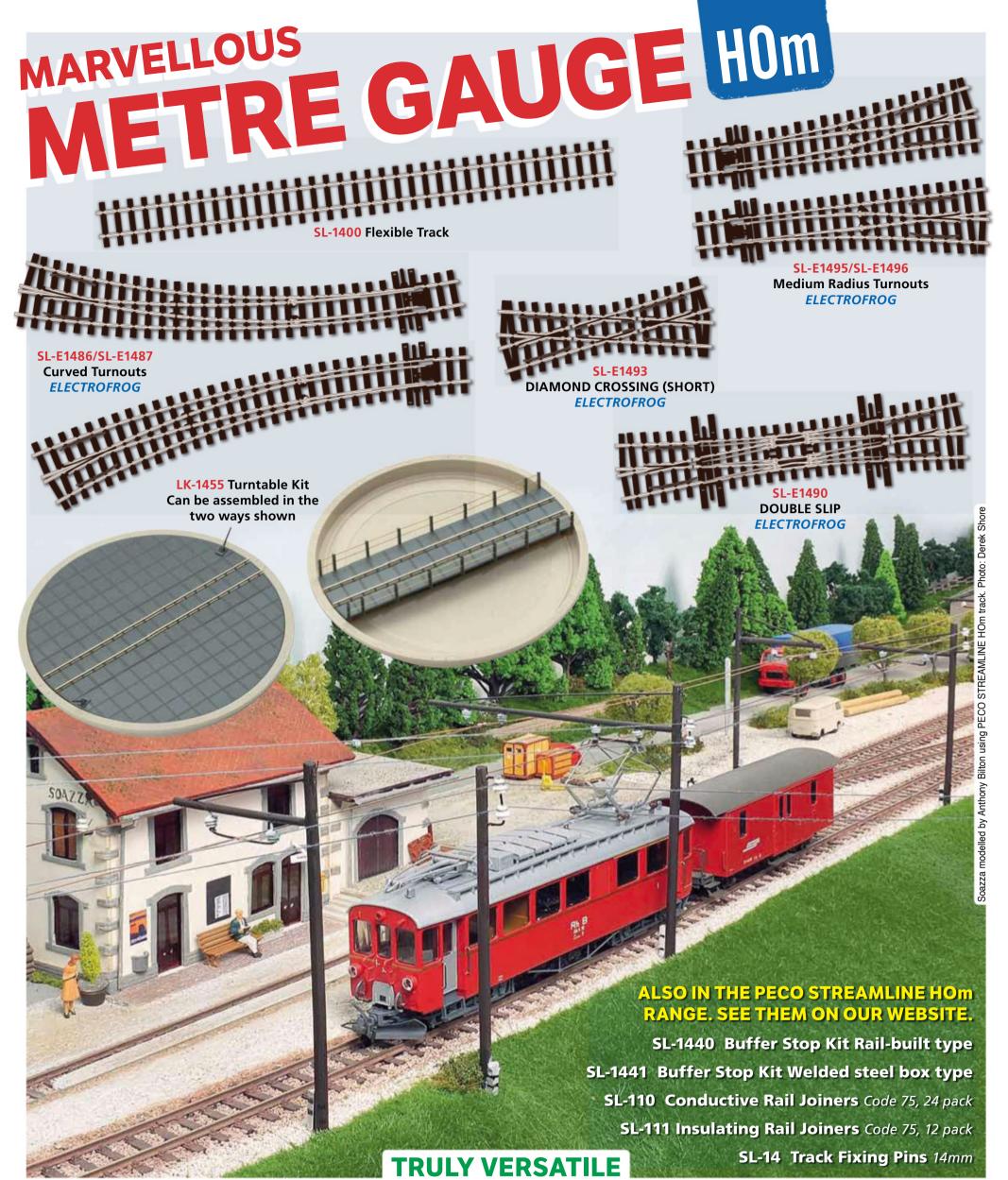


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