



MainLine



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NMRA Australasian Region Directory

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Original uncropped photo files would be preferred.

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A well patronized venerable Lisbon tram photographed in 2019

Photo by the editor

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Editorial Musings

Its that time of the year, a time to reflect on the past year and to look forward to the next year. I'm grateful to the contributions of reports and photos of their activities from most of our Divisions. These show the depth and range of modelling interests of our members. The contribution of articles by members have been most welcome.

We have a new editor for MainLine, Merv Bagnall. An article by Merv on the layout he is building is featured in this issue.

From all of us in the lately rather warm west, happy Christmas and a prosperous new year.

Regards

Rod Tonkin Editor MainLine

A Mountainous Dilemma

Merv Bagnall

Having built a couple of NSWGR themed layouts in the past and having accumulated a reasonable amount of HO scale rolling stock and structures during that time, when a new layout beckoned to be built in 'the train room' of our new home, a big decision needed to be made, stay with an HO OZ layout theme or make a change! I have always liked the rugged landscape of layouts representing the mountainous areas in the USA, so could I really consider building another Australian layout, being that rolling plains seem to dominate the Australian landscape and it's so depicted in many Australian layouts. It seemed as though there is limited mountainous railroading action available to be modelled in Australia, or is there?

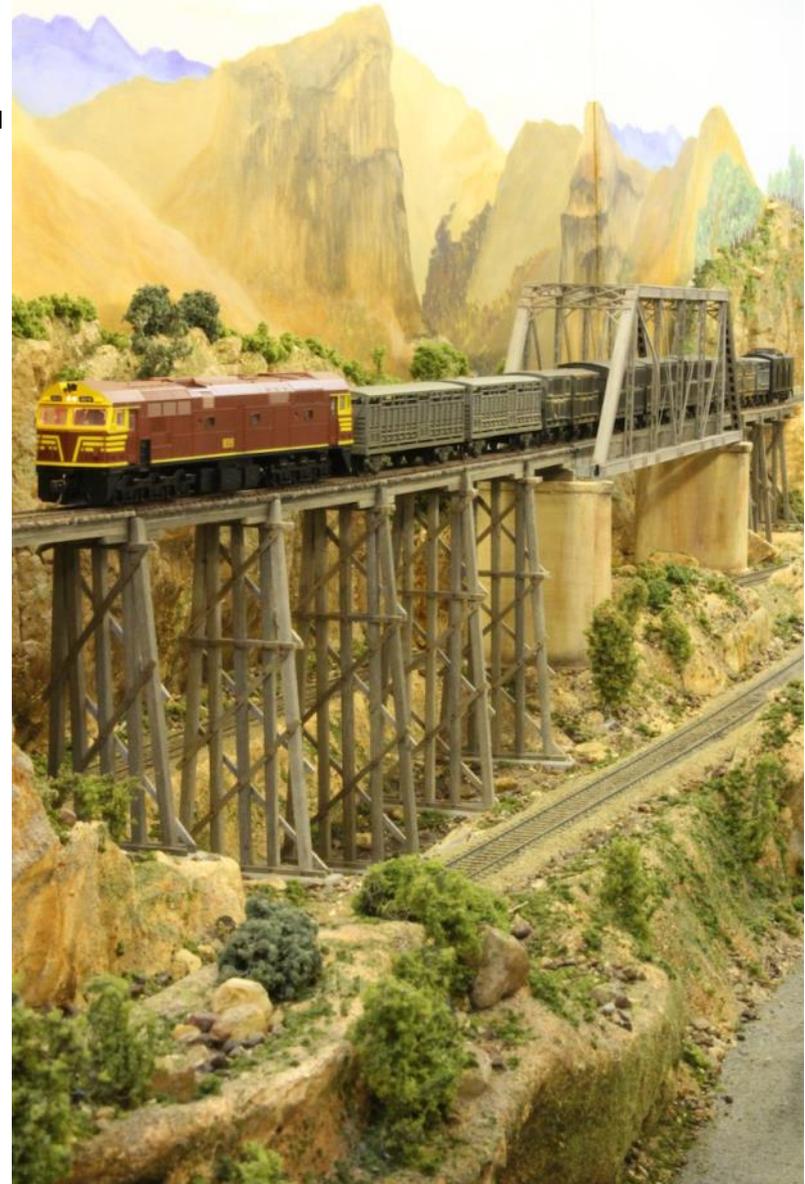
There has been many a rail line planned to be built by the NSWGR in the hey-day of railway construction activity at the turn of the 19th century, but many proposed lines were shelved because of the high difficulty and great cost involved with connecting the inland with the coast and getting across that Great Dividing Range. One of those new rail line proposals that frequently made it into the forefront and which was put before the NSW parliament for approval and then being rejected on no less than four occasions between 1870 and 1914, was a proposed railway to connect the NSW inland town of Braidwood to the NSWGR rail network.

The townsfolk at Braidwood lobbied hard for a rail line so they could transport their sheep, cattle and crops, to market in Sydney in the shortest possible time, by using a train and not taking the many days it was taking at the time by herding the stock along the very crude tracks and roads that linked Sydney to the inland. Numerous rail routes from a variety of locations around the Queanbeyan area to various coastal towns between Jervis Bay and Batemans Bay were submitted for approval, but none were accepted to be subsequently funded by the Government of the day. So when I was researching for a logical location to base my new 'Prototypically Freelanced' NSWGR layout around, I was keen to investigate the 'Braidwood' option further and have a closer look at the terrain.

An approximate 6,000 km round road trip from our QLD home was planned, all in the name of research, to have a closer look and to also take a few hundred photographs, to determine the practicability of building a model train layout to represent a line that had the possibility of servicing the Braidwood area, being a town that never had a railway. For anyone who has made the road trip from Braidwood to Batemans Bay, you would attest to the difficulty the early pioneers would have had in finding a way of getting a vehicle roadway over the range, let alone a railway line. But during our journey I did find rugged mountains that would satisfy

my need to have big hills and incorporate a double spiral and have multiple levels to allow the scenery to be created that would satisfy my model railroading needs in a new layout. This would, in my view, then justify building my version of a railway that connected Braidwood with the east coast and therefore satisfy my need to run my NSWGR rolling stock through mountainous terrain. One of the facets that I thoroughly enjoy in our hobby is scratch building bridges, so I now had my vision of what to build and more importantly, a reason to build my new NSWGR layout with a more rugged landscape and plenty of bridges.

There will be more to follow in the pages of the Mainline Magazine in the coming months to describe more about my layout, 'The Braidwood Division-Part 1'. I say 'Part 1' because I, like many modelers in our great hobby, have been known to bite off more than I can chew when building previous layouts. In the rush to try to complete everything at the same time, the outcome always seemed to be somewhat less than desirable with never getting anywhere near completing the layouts to a high standard.





So when building 'The Braidwood Division', I took a different approach and divided the building of the layout into two halves and tried hard to be disciplined enough to stick to a plan to complete the layout in stages and to systematically complete each stage before proceeding to the next. So far it has worked and I am rapidly approaching the completion of the first half of the layout after about five years work, but with the lessons learned I anticipate the completion of the second half should happen in around two year's time.

I say I build in stages but that didn't stop operational ability. Completing track work, so that I could have operating sessions, was an important early stage as I find having a reason to operate a model railway is quite rewarding and also helps to keep the mind active.

Travelling non stop at scale speed, a loaded train will take just under 14 minutes to traverse the layout through 4 towns with industries and yards and having at least one passing siding in each town, plus another two separate passing sidings.

Naturally the time taken for a train to complete a circuit of the layout will increase when Part 2 is completed. It is planned to include two new yards , more industrial sidings, a separate 9 track staging yard, a separate junction line and yard, plus a multi-tiered spiral (*the spiral is already built*). I can't wait to get started!



Some views of Merv's Layout

TRAMS

John BULLEN

These things have been called **trams, trolleys, traction, streetcars, Interurbans, trolley cars** and **light rail vehicles**. Never mind what they are called – they **all** carry passengers on rails through suburban streets. For simplicity, they are all **TRAMS**. They fall into two major categories. One category ran through the streets of cities and suburbs. A good example is Sydney's city and suburban tram service. At its peak in the 1940s, it was one of the world's biggest and was twice the size of Melbourne's. The second category of trams ran a service through rural regions, linking the cities and towns whose streets it also ran through. These were still called trams in the British Empire, but in USA they were **Interurbans**. Generally they were an American phenomenon, and were bigger, heavier and faster than America's streetcars. The old service that still operates between Adelaide and Glenelg today would be called an interurban in USA. Now – how did it all begin? The old stage coach evolved into the horse bus. In the latter half of the 19th century, the horse tram steadily took over from the horse bus. Being on rails, the horse tram had greater carrying capacity than the horse bus for the same horsepower. First appearing in USA in 1830, the horse tram spread to Europe, Britain and on to the colonies. Sydney's horse trams which came in 1861 were short lived, but they were adopted elsewhere – even in the tiny town of Roebourne in the North West of Western Australia. Other trams began. There were some interesting experiments with battery trams, gas trams, compressed air trams, and fireless steam trams, but all had serious disadvantages and none lasted long. For example, the rich goldfield city of Bendigo started with battery trams in 1890. Inadequately tested, they simply couldn't cope with the hills along the route. The batteries were always running flat, so the fare-paying passengers then had to push their own tram uphill at a speed slower than they could walk themselves! Bendigo's battery trams were hastily abandoned after only thirteen weeks. Steam trams took over. The world's successful tram experiments were **steam** trams, **cable** trams, and finally **electric** trams. Steam trams began in USA in the 1860s, but never really became important there. By the 1880s steam trams were flourishing in Britain, Europe and Australia. Sydney had a big network on the south side as well as several smaller isolated systems. Sydney's steam trams were mostly electrified early in the 20th century, but steam trams still ran to Redbank Wharf on the Parramatta River as late as 1943. In Broken Hill, steam trams ran until 1926. A few steam trams consisted of just one single vehicle, containing both the engine and a passenger compartment. More commonly though, there were two vehicles – an enclosed steam locomotive with a passenger trailer behind. Sometimes there were two trailers.

But the steam trams were doomed. Despite the engine being enclosed inside the housing, they were noisy, they belched smoke, they frightened horses, they upset dogs and they showered soot

over laundry hung out to dry. Not really what you wanted in your own street. Soon came the cable tram. The cable tramcar lowered a rod down through a narrow slot in the road midway between the two running rails. At the bottom end of the rod was a grip mechanism which gripped an endless cable which ran continuously in its own little tunnel beneath the road. The cable was driven by a steam engine in a winding house somewhere along the route. To go, the tram gripped the cable and travelled silently at the same speed as the cable. To stop, the grip-man released the cable and applied the mechanical brakes. The driving car which contained the driver and the grip mechanism was known as the **grip car** or **dummy**, and the passenger car behind was the **trailer**. Other cable trams had driver, grip mechanism and passengers all in one single car.

We all know about coupled electric trams and their simple reversal of direction at a terminus. The driver simply walked to the other end while the conductor changed the trolley pole or bow collector over. But this doesn't work for reversing a steam tram or a cable tram. The power car **always** has to be at the front in the direction of travel. Much skill was developed by drivers in switching the cars over on the move in minimum time as they approached the terminus. This involved slipping the coupling while the tram was still moving. The conductor would then gently touch the brake on the now freely running trailer. Meanwhile, somewhere between the two moving tramcars with passengers aboard, the points would be changed. Safe? Well, maybe. Thanks to all the objections against steam locomotives in urban streets, and also due to the uncertainties of the new-fangled electricity until near the turn of the century, cable trams had an excellent opportunity to



Despite Sydney's steam trams and Melbourne's cable trams lingering until the 1940s, nearly all steam trams and cable trams, worldwide, had been replaced by electric trams back at the beginning of the 20th century. The earliest electric trams used many devices to collect the electric current but the three most common were bow collectors, trolley poles and pantographs. Pantographs are almost universal today. Australia's very first electric tram ran from Box Hill to Doncaster in 1888. A privately owned line, it did not last long, but soon all major cities began to develop their own electric tram networks, Hobart being the first. Hobart trams still used bow collectors right to the very end in the 1950s, while all the others used trolley poles. In the late 19th century, many tram systems incorporated conspicuous symbols in their destination signs, Sydney being a particularly good example. Not only was this important for those who could not read, but it helped everyone on wet evenings when the illuminated coloured symbol could be read from much farther away enabling you to judge when to step out into the weather. In the 1980s and now with the world's biggest tram network, Melbourne converted to pantographs. All modern trams worldwide use pantographs, except for those drawing underground power or using batteries – yes, they're better now than what they had in 19th century Bendigo. Tram services in the first half of the 20th century were well and truly dominated by the electric tram. This applied to Britain, America, Europe, and Australasia. Initially there was only the suburban tram or streetcar, well known in Sydney and Melbourne, but very soon came the bigger, heavier, faster and more comfortable interurban. The interurban really only ever caught on in North America. Before World War One, USA and Canada were big countries with a relatively small amount of reasonable roads outside the main cities. This gave rail service a big advantage over road, and Interurbans were quick to exploit this. They reached their peak mileage of over 15,000 miles in 1916, with 3000 miles of track in Ohio alone. The early 1920s saw the American interurban soar to new heights. The overall track mileage did not increase, but the quality of the vehicles themselves did. Fifty-ton giants were produced. They were really motorised railway coaches, but their appearance was distinctively different. Some had pantographs, but most still had trolley poles. Some were hideous, while others had very pleasing lines, especially the early models with bodies clad in varnished wooden slats, before the steel cars took over. The decline of the interurban came after 1925 as roads improved and car sales increased enormously. Interurbans had mostly gone by the beginning of World War Two. Some Interurbans still exist in Europe today, but they are regarded as normal railways there. A wonderful example is the Swiss-Italian 'Centovalli' line on a two hour run through glorious scenery in mountain country. And of course Adelaide's old Glenelg line still runs today, now equipped with modern trams and recently extended through the city. During the interwar

years, while the interurban faded away, the suburban tram or streetcar went from strength to strength. In 1929, 25 of the largest tramway companies in USA formed the Electric Railway Presidents' Conference Committee and set about designing the perfect tram. After five years they came up with the Presidents' Conference Committee tram design, which now became world famous as the PCC tram. It was an immediate success in USA where it was adopted by many tram networks. Most PCC cars were single ended, requiring a balloon loop at each terminus to change direction, but some were double-ended with a cab at each end. 5000 PCC trams were built and operated in North America, but these are overshadowed by the 20,000 or so that ran in Eastern Europe after World War Two. Some of these are still in service. The PCC cars were swift and comfortable, and became very popular. The aftermath of the Great Depression and the approach of World War Two stopped the PCC cars being adopted even more widely, especially outside North America. Sydney was going to buy some, but the war killed that. They did reach other countries however, including Britain. Melbourne adopted one PCC car in 1949, using a locally made body. It was used until 1971 and is preserved today. The only other PCC car in Australia is double ended, and is a museum import. It is a San Francisco car acquired by the Sydney Tram Museum, and is in running order. Most tram networks around the world reached their peak of operation during World War Two. Wartime austerity curtailed the advance of road transport, and trams carried huge numbers of people.

This applied especially in Australia. No modern transport can approach the ability of Sydney's trams to clear an entire race crowd of 80,000 people after the last race at Randwick in about 20 minutes. An important factor in this was of course the use of the O and P Class "toast-rack" trams. Using 16 entry points along one side only, each coupled pair took only a few seconds to load to its full capacity of 160 seated passengers plus an extra 100 standing. Waiting ready in rows along long platforms connected by overhead walkways, those trams moved colossal crowds unmatched by modern trains at the Sydney Olympics half a century later.



Trams contributed to community life in many ways. In 1947 Bingo was played every Friday night in Naremburn in Sydney, very handy to the Chatswood tramline. Bingo cards cost threepence each and sold prolifically. One night £30 was won by one very lucky man. This was a month and a half's wages for a working man. At the end of the evening he came forward to collect his winnings. He wore a shirt and trousers. His sagging trousers sat well below his enormous stomach, being held up solely by his straining braces which bit deeply into his flabby shoulders. Distrustful of modern methods of payment, he refused to take a £30 cheque, insisting on cash. But all Bingo cards had been bought with threepences and sixpences and the house had no banknotes at all. However he was happy to accept payment in silver, having little idea of what was involved. He filled his trouser pockets to overflowing, then his shirt pockets. But more than half his fortune remained. So he poured this down inside his shirt and slowly staggered off towards the tram stop. Everyone travelled by tram in those days, so he had quite a crowd to compete with when boarding the O Class crossbench tram for Willoughby. By the time he boarded, only standing room was left and he had to grab the overhead handrail for support. Very soon the conductor reached in from the external footboard, "Fares please".

Mr Newly Rich replied "French's Road, mate", thrusting his free hand into his trouser pocket. His overloaded braces parted and his trousers crashed noisily around his ankles. Small coins flew everywhere. This disaster released the huge treasure stowed inside his shirt. Overflowing the tram floor, coins cascaded out onto the footboard and down onto Willoughby Road. You must appreciate that these trams did not have a smooth floor. The floor was of thin strips of wood about 1 cm wide and 1 cm high, with gaps about 1 cm between them. Thus coins could not be quickly swept up from the floor by the handful but had to be laboriously picked out of the gaps between the strips of wood.

The fare was eventually paid. Mr Not Quite So Rich duly got off at French's Road, considerably more lightly laden, leaving behind a compartment full of laughing and now wealthier passengers.

The 1950s saw the decline of the tram all over the world, as the challenge from road transport became too strong. Nearly all trams in America, Britain and Australasia had gone by the 1960s, though many networks in Europe have survived and are now thoroughly modern. Intriguing exceptions include Lisbon and Calcutta which still operate ancient tram fleets. Melbourne is of course the notable exception at this end of the world, thanks to the vision and force of personality of one man – Major General Sir Robert Risson, Chairman of the Melbourne and Metropolitan Tramways Board from 1949 to 1970. In Melbourne, the tram has

triumphed over the car in the inner city where trams pass smoothly through a pedestrian mall prohibited to cars. Sydney is now following a similar path with trams moving back into the city centre and road traffic being forced to retreat. Sydney trams were reintroduced in 1997 and have gone from strength to strength since then. On the opening day, a young man turned up with an esky. He was told that the return trip to Wentworth Park would only take 45 minutes – not long enough to work up a thirst. "No, no" he said, "Dad made us promise that if ever trams were to return to Sydney, he wanted a ride." Opening the esky, out came the urn with his father's ashes.

But before that tram could run, the ancient scrubber car had to be brought out of the Sydney Tram Museum. Specially fitted with a pantograph, its job for a week was to grind the new track perfectly smooth for the new trams.

Trams are now undergoing resurgence, worldwide – especially in Europe. The most technologically advanced trams are possibly to be found in France. Their modern design makes it impossible for certain experiences of the 1950s to be repeated.

Bendigo and the adjacent town of Eaglehawk used to be connected by a single track tramway with occasional passing loops. Years 6 and 7 at Bendigo High School had their classrooms at California Gully along the line to Eaglehawk. At the end of the day, in one of those passing loops, their Bendigo bound tram would cross the outward tram from Bendigo carrying the Eaglehawk Catholics back from the Roman Catholic school in Bendigo. Both groups would line their warriors up – littlies in front, tallest at the back – in the rear doorway of each tram. As they crossed in the passing loop, each squadron would enthusiastically release the ferocious spit they had been saving since boarding the tram. The Eaglehawk Roman Catholics were generally deemed the best spitters. 'Woe betide' any passenger innocently caught in the merciless crossfire.



Finally, a word on model trams... They exist in the popular scales, both in ready to run and in kit form. American, European and Australian models are readily available in HO scale. Some are quite cheap, and others exist in brass. In prototype practice, double trams have always been common around the world, and the modern articulated trams have three to five units joined together, but you never see the long trains common on railways. Thus trams offer no scope for shunting and making up trains. On the other hand, trams and extremely tight curves (such as right angled street corners) go together. This makes for effective modelling in very limited space indeed.

Trams can handle steeper grades too, thanks to the tram having only to move itself, or at the very most, no more than one or two trailer cars. A model tram layout accurately matching its prototype can be a very simple project to construct. But if you want realism, then you need overhead wiring and this is a technical challenge, especially if you'd like to model a Grand Union intersection with fully operating overhead catenary. Grand Union is the title given to a four way street intersection where double tracks come into the intersection from all four streets, and where there are enough turnouts to allow any tram to turn into any of the three other streets leaving the intersection. The point work is complicated enough with 16 switchblades and then there are the best part of 100 frogs to consider. And that's just for the track, before you start thinking about the overhead wiring. Perhaps fortunately, Grand Union junctions are not common in prototype practice. Australia's only example still exists in Caulfield

at the corner of Balaclava and Hawthorn Roads. Auckland used to have two in the city centre and Sydney never had one at all. No-one ever built a Grand Union unless they really had to – a policy plenty good enough for all but the most serious modellers! May I conclude by reading the dedication in this book... *"My mother had two aunts who were so fat that they each took up two seats on the tram. To the conductors who only charged them only one fare each, this book is dedicated."*

The pictures on this page are of those model trams in G scale, O scale and HO scale. They include trams from USA, England, Germany, Mallorca, Hong Kong, Adelaide, Sydney (old and modern) and Melbourne (old and modern). Trams displayed were mainly electric trams seen in cities and suburbs, but also include Interurbans, a cable tram, a steam tram a horse tram and a horse bus.



MODELING A STEELWORKS DOWNUNDER Part One

Garry Glazebrook

Australia is one of the world's major suppliers of both coal and iron ore, and Newcastle, which is the basis of my model railroad, is today the world's largest coal export port. Unfortunately, the BHP steel works in Newcastle was closed in 1999 and demolished soon after. However, as I'm modelling 1965, I had to include the steel mill, which at that time was a scene of bustling activity. This article will briefly cover the history of the mill, and then discuss how I attempted to represent it on my layout, both physically and operationally.

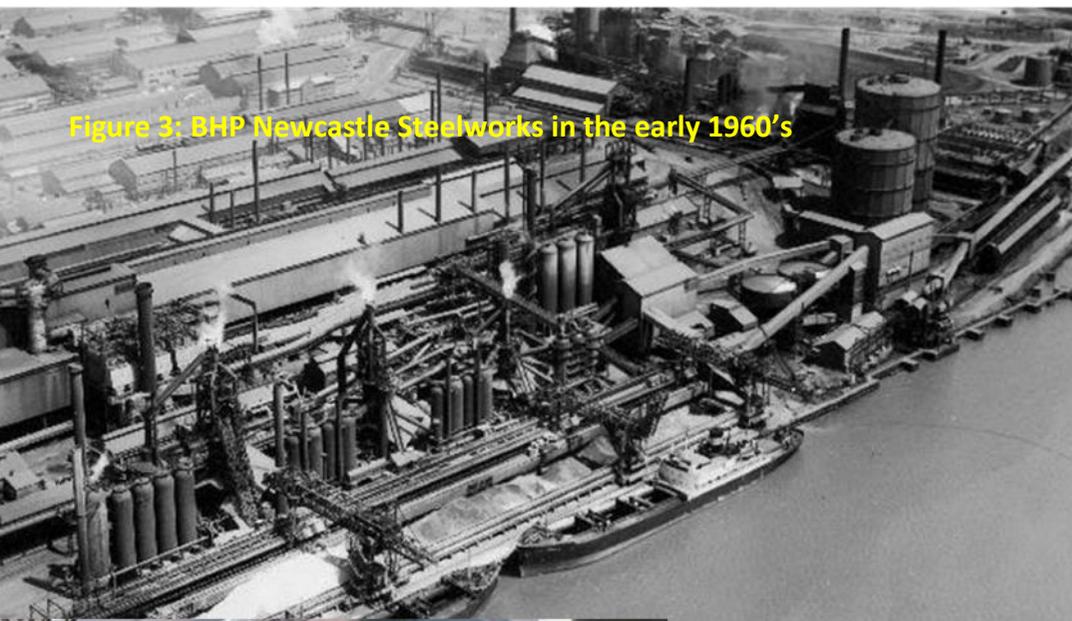


Figure 3: BHP Newcastle Steelworks in the early 1960's



Fig 4: BHP Centre-cab diesels at a blast furnace



Fig 5 End cab diesel shunting near BOS plant

Ed Tomlin
7 July 1999



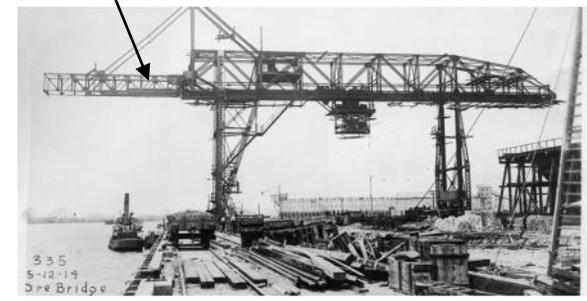
Figure 1: BHP Steel works with Port Waratah and the City of Newcastle in the background

The BHP Steelworks

Broken Hill Proprietary Limited was originally formed to exploit the fabulous silver, lead and zinc deposits in the Broken Hill area in Western New South Wales, about 1000 km west of Sydney and close to the border with South Australia. BHP went on to become the world's largest mining company, with mines and other facilities in many continents. But for over 80 years, BHP was also a significant steel producer, indeed Australia's largest.

By 1910 Australia was beginning to develop its industries, and in 1912 BHP decided to diversify its operations from mining into steel making. Newcastle was a significant coal mining

district by then, and was already exporting the black gold to many countries. After an evaluation of potential sites, BHP decided to establish an integrated steel mill in Newcastle, which also had a supply of skilled labour, a large flat site on the Hunter river with rail access. Figure 2 shows construction underway in 1914, with an early ore bridge (See references for sources of photos etc).



By the 1960s there were four blast furnaces, steel-making facilities, rolling mills etc. (Figure 3), with BHP having some of the earliest Basic Oxygen Smelters and producing some of the cheapest steel in the world at that time.

Internal Rail Network

As with many integrated steel mills, the BHP steel mill was served by a large internal private rail network, both standard gauge and narrow gauge, the latter serving the movement of ingot cars between the iron making and steel making divisions. Other internal rail movements were handled on the standard gauge network. Steam had been replaced by diesels by the early 1960's, as shown in Figures 4 and 5, where a fleet of centre cab and end-cab diesels handled internal traffic, with some of the centre-cab locomotives operating on narrow gauge (3 feet) bogies. Figure 6 shows a plan of the major facilities in 1995, by which time the narrow-gauge ingot rail network had been replaced by continuous casters.

External Rail and Ship Movements

Rail also handled much of the external movement of raw materials and finished product. Coking coal arrived by rail from mines in the local Newcastle area over both New South

Figure 7: Steel Wharf



Wales Government and privately-owned rail networks, and there were direct rail shipments from coke ovens about 250km south of Newcastle. Much of the steel product from the mill was exported by rail to Sydney and other destinations.

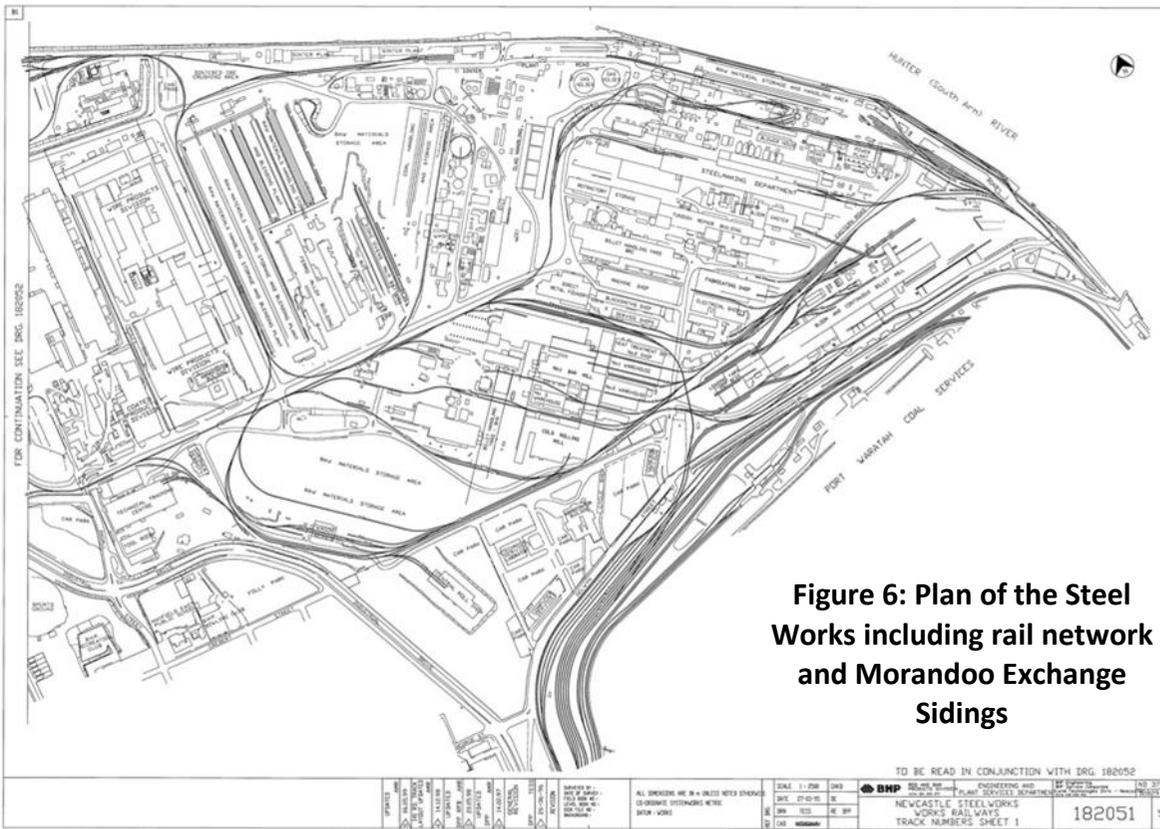
External rail movements were interchanged at the Morandoo Exchange sidings adjacent to the large export coal facilities at Port Waratah. Port Waratah / Morandoo handled high volumes of coal, coke, steel, grain and other traffic, up to 60 trains a day in the 1960's in each direction.

However, most ore and limestone arrived by sea, and some steel was also exported by sea via the steel wharf (Figure 7). The original ore bridges were upgraded after the 1960s and much of the ore was moved by conveyor to the sinter plant before being returned to the blast furnaces, with Blast Furnace No 4 receiving inputs direct by conveyor rather than the earlier system of skips.

Modelling the Steel Works

Despite having a large space (approximately 40 feet * 25 feet) for my layout, of which about 25% was available for the steelworks and Port Waratah, I had to be very selective as to which facilities to model, and then further compress those facilities. Table 1 below shows those selected and why they were chosen. Nevertheless, the resulting facility is extensive, and includes sixty-five tracks and industrial spurs, which can be divided into four zones (Figure 8). The total complex can accommodate ten or more coal and freight trains, and requires a minimum of two operators to handle the marshalling and break-up of trains and the movements internal to the steelworks itself.

Figure 6: Plan of the Steel Works including rail network and Morandoo Exchange Sidings



FOR CONTINUATION SEE DRG. 182052

TO BE READ IN CONJUNCTION WITH DRG. 182052		BHP		ENGINEERING AND		NO. 2052	
NEWCASTLE STEELWORKS		WORKS RAILWAYS		TRACK NUMBERS SHEET 1		182051 5	

Table 1: Selected Facilities modelled

Figure 9 shows various views of the Steelworks and Port Waratah area as at mid - 2019. The final arrangement has evolved over the last few years, with various changes to the locations of key facilities and alterations to the track plan to make it as close to the prototype as possible. Note that tracks have not yet been ballasted, and some of the structures are merely mock-ups at this stage, while much painting, detailing and weathering has yet to be added. The emphasis to date has been on achieving an operating layout, with scenery and structures given a lower priority at this stage. It is anticipated that these will take a minimum of ten years to complete.

Facility	Features	Why Selected
Blast Furnaces	Only one of four modelled; based on Walthers kit.	Visual impact and complex operations
Ore Bridge and wharf	One of three modelled; Walthers kit	Visual impact
Basic Oxygen Furnace	Currently a mock-up. Scratch-building opportunity	Visual impact and rail operations
Engine/Blower House	Characteristic Facility- Walthers kit	Visual Impact
Gas Holder	One of two modelled – scratch-built	Visual Impact
Coke Ovens	54 Oven Battery modelled (based on three Walthers kits)	Visual impact and operational interest
Rolling Mill	Currently a mock-up; will be based on Walthers kit	Visual impact and operational interest
Refinery	Small facility modelled	Visual impact and operations
Comsteel Plant	Rolling Mill, Electric Arc Furnace. Walthers' Kits	Visual impact and operations
Slag Dump		Visual impact and operations
Lime Kilns	Will be scratch-built	Operations

The second instalment of this article will be published in a future issue of MainLine Editor.

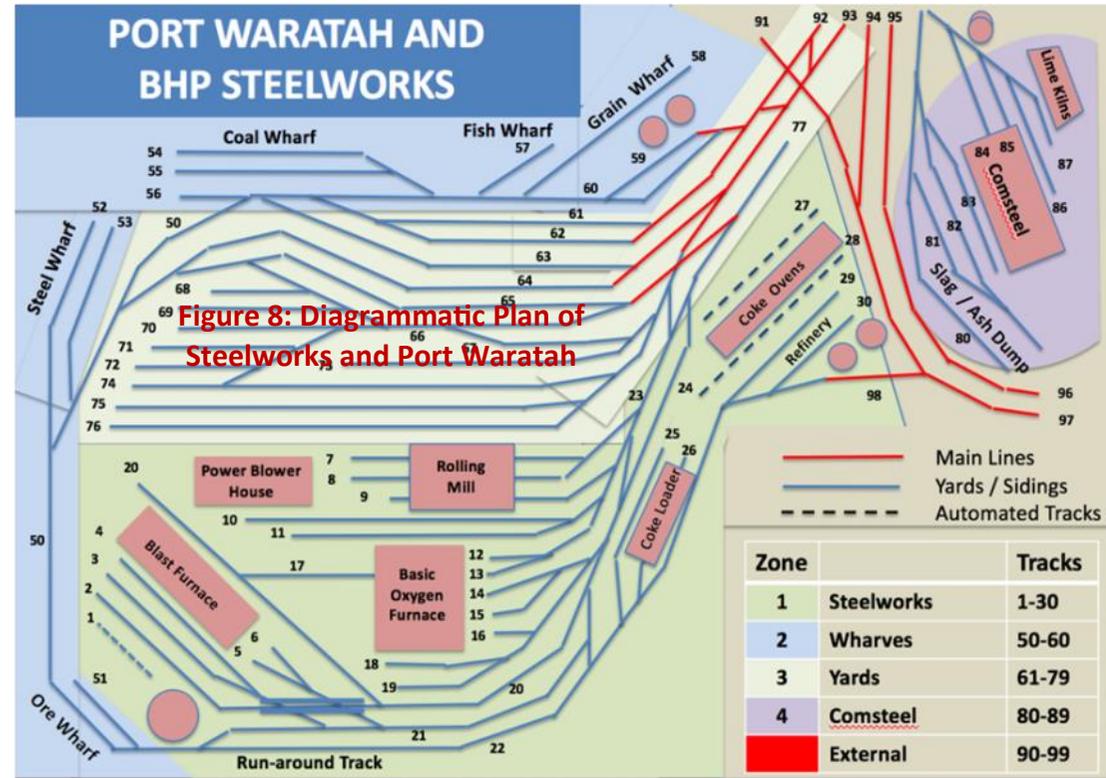


Figure 8: Diagrammatic Plan of Steelworks and Port Waratah



Fig 9 Garry's progress modelling the steelworks



Division Nine

13 Division 9 members met for a luncheon not only to celebrate Christmas, but also to present a plaque to our first MMR in the division - Michael Bartlett.

The plaque was presented by the Divisional Superintendent Chris Minahan and in Michael's response he reiterated his message regarding the benefits of the AP programme.

Michael Bartlett receiving his MMR plaque



Ipswich Model Railway Club

T-Trak Modules.



Doug Harding's Mosquito Creek

As seen by Division One members in October this year



Division One Highlights

October 2019

The October meeting has come and gone. It was a great day.... mostly.... with only the rain causing some minor headaches whilst trying to perform the weathering clinic. However, we won't begrudge the rain given how dry the country has been.

Some 43 members were on hand to participate in a great day at Bob and Mary Harding's residence.

The feature of the day for yours truly was Bobs Layout, "Mosquito Creek", I have to say I was totally gob smacked at the skill level and attention to detail that Bob has applied to his masterpiece layout. In short Mosquito Creek is an awe inspiring and mouth-watering expose of model railroading skill at its best. There is no lacking attention to detail. Far too much to describe here in this report and the photos do not do his masterpiece justice. (The photos of this layout are displayed separately in this issue to more fully do them justice. Editor).

We held 2 clinics: Weathering and Painting clouds using foam. Both these clinics were well received with many questions being asked. I'd like to thank Ken Leach and Tim Rollason for getting hands on during the clinic.

There was a larger than normal amount of show and tell this month. I'm very encouraged that the members are taking a significant interest in this part of the meeting day. It is great to see new and old members display items that they think may be of interest to others. I know I pick up tips at each show and tell session.

On behalf of the NMRA Div 1 membership I would like to thank Bob and Mary Harding for accommodating the rest of us for the Saturday's activities. We sure did appreciate your hospitality.

Show and Tell

Phil Morrow: Narrow gauge locomotive acquisitions – amazing engines individually hand-crafted as requested by the purchaser

Gary Paper: Fast tracks turnout assembly fixtures (HO)

James Lampard: Newly acquired locomotives

Darren Lees – throttle harness

Bob Harding's foam cutting tools

Ken Edge Williams: Workbench lamp and knickknacks' for the work bench

Craig Mackie: small components made from everyday household items



Phil Morrow's Narrow gauge locomotives



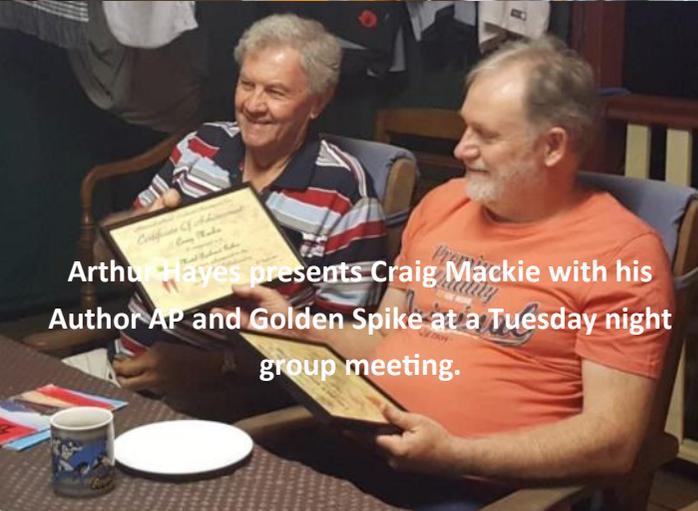
Bob Harding's
Foam cutting tools



16th November 2019. Ipswich Model Railway Club.

Many thanks to Maureen and crew for an awesome lunch which included cakes, chocolates etc. 30 souls braved the 40° heat to attend the meeting.

The all important lunch



Arthur Hayes presents Craig Mackie with his Author AP and Golden Spike at a Tuesday night group meeting.

Achievement Program Awards

Michael Parker. AP's Motive Power and Cars.

Craig Mackie. AP - Author, Golden Spike.

John Kennedy. Golden Spike.

Show and Tell

Alvin Kathage: Video of his Big Boy Trip.

Luke Kathage: 3D printing of Cars/

Structures.

Maureen Kathage: Articulated "N" Scale vehicles.

Bob Cuffe, Building curved points on a straight Fast Track Jig.

Bob Harding: Paint stirrers.

Ken Leitch: Overview of Watco Operation at Warwick.

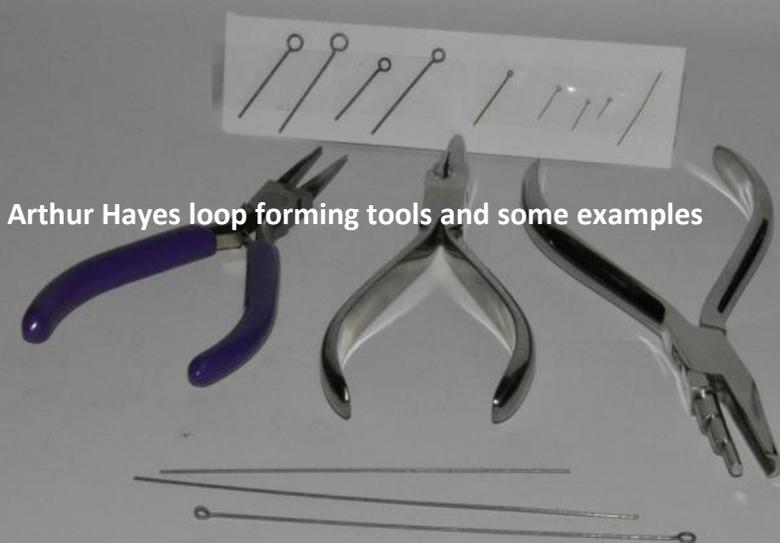
Arthur Hayes: QR H0n42 Scratch built models, Louvered Baggage Car, Wagon load of oranges, Wagon load of pineapples.



Bob demonstrates his curved point construction method.



Arthur Hayes loop forming tools and some examples



Division Two Highlights

Stephen O'BRIEN, Rob NESBITT and John GILLIES all mentioned the 16th National N Scale Convention Canberra held at the Ibis Styles Hotel in Narrabundah on 10 - 13 October 2019. The Convention was run by N Scale Conventions Australia as an independent not-for-profit group affiliated with the NMRA AR with the organisation and running of the Convention largely undertaken by members of the Canberra Monaro N Scale Group, many of whom are also members of Division 2. They did a fabulous job.

The Convention Convenor was Div 2 member Stephen CURRY and he received able assistance from fellow Div 2 members Ross BALDERSON, Peter Dinham, Chandy Paul, Mal RISBY, Steve WALKER, Rob NESBITT and Stephen O'BRIEN with their activities ranging from displaying layouts, giving presentations, opening their layouts for the layout tour, providing tour transport, hosting an operating session, judging the modelling competition using NMRA judging rules and welcoming attendees at registration. 101 people attended the Convention and at least 20 were NMRA AR members.

All three commented on the excellent layouts, modelling and presentations given at the Convention and what a great time they had. Ross Balderson's "Newcastle 1899" layout was publicly displayed and operated for the first time and perfectly displayed Ross' scratch building craftsmanship and detail we've seen as over the last 7 years as he's given us progress snapshots at monthly meetings. Everything on the layout from his large incredibly detailed styrene buildings, locomotives, good wagons, passenger carriages (many featuring etched brass construction based on his own drawings), track work, ships and horse drawn wagons are scratch built. Ross advised he still has over two years work to complete the layout. Ross received the "People's Choice" popular vote award for his Newcastle layout at the Convention banquet on Saturday night. Congratulations on your well-deserved win Ross!

An innovative layout mentioned was Robbie Popovski's small "Gunbower" layout which models a small Victorian Railways station and surrounds. Tomix and Kato set track was carefully ballasted to improve its appearance and innovative use of 3D printing to produce the locomotive bodies, passenger and goods equipment, buildings, fencing, etc - everything on the layout except the trees and some small details were 3D printed.

Stephen Curry's scratch built N Scale locomotives



Stephen Curry's "Hexhamish" layout is in the early stages of construction but is a great showcase for his excellent scratch building skills creating small steam locomotives and coal wagon bodies on modified Peco chassis. Stephen's models demonstrated great reliability as up to three continuously operating trains circulated around the small layout based on the Hexham area of the NSW Hunter Valley. Stephen also gave interesting presentations on chassis construction for beginners and cheap aids to modelling.

Other interesting presentations mentioned covered a wide range of topics from using Qubelok aluminium frame and folding legs for layout modules, cattle yards, compact and transportable layout construction, 3D modelling software, signalling for model railways, converting from DC to DCC by Peter Dinham and computer control of model railways by Chandy Paul who demonstrated this perfectly on his "Shin Canberra" Japanese layout during the layout tour. Ross BALDERSON delivered an informative and expanded version of his building styrene structures presentation while Steve Walker gave a well-received presentation on his weathering techniques. 14 of the 36 presentations delivered were by NMRA members. Mal Risby also showed he's made considerable progress on his new layout on the layout tour.

The Convention featured a good range of N Scale manufacturers, commercial traders and attendees selling second hand items. It was very well organised and run and everyone had a great time, even those Horribly Oversized modellers who attended to see what modern N Scale offers and how much it has improved in terms of detail, quality and reliability over the last 20 or more years. The modelling skills of many N Scale modellers are very high and with the wide range of activities offered; those attending recommend attending when the N Scale Convention is next held in Canberra. You won't be disappointed!



Ross BALDERSON setting up his massive "Newcastle 1899" layout featuring Ross's scratch built structures, ships, point work, carriages, trams, horse drawn carriages, etc.



Robbie POPOVSKI: "Gunbower" featuring everything from the motive power, wagons, buildings and line side structures, was 3D drawn, printed and cast

Kevin KNIGHT: "Ale Dock", a 1:152 (2mm Scale) model inspired by a picture of a beer van being loaded at one of the many breweries at Burton-on-Trent

Old CANBERRA Stations by Canberra Monaro N scale Club member Pat GAGEL "The 1914 Station won the Bryan Dwyer Memorial Plate for "Best In Show" model."



Division Three Highlights

by Rod Hutchinson

2019 November

The November meeting was held at the home of your reporter, Rod and Julie Hutchinson, located in the foothills of the Dandenong Ranges. Rod builds in Hon30 and O-16.5. Pictures of his diorama style railways are available at:

Regnans Tramway HOn30 <https://ibb.co/album/g1YrYv>

The Points O-16.5 <https://ibb.co/album/kLQG0a>



Rod's home allows for cool and warm days. This day was quite cool so all attendees huddled in the warmth of his downstairs rumpus room to enjoy a full spread of good, and bad, eats created by his wife, Julie. In all around 14 members and 1 guest attended this meeting whilst a large number were apologies.

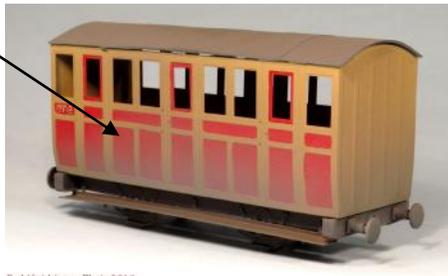
A great day was spent talking railways and enjoying a barbecue. Allan Ogden, Superintendent Div 3, presented Rod with his thank you plaque.

Modelling presented for display included

Allan Ogden – Tallylyn Coach, O-16.5 by Mercian Models

Dan Pickard – Puffing Billy Rolling Stock – On30 by Ian Lindsay Models

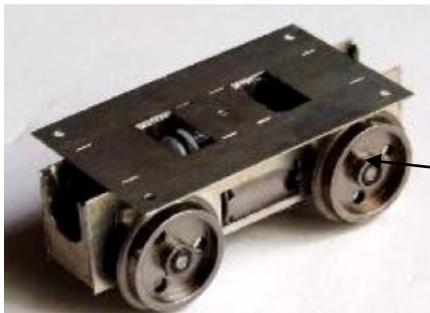
Grant McAdam – Two water-line steam powered boats – O scale scratch built from card.



Ian Johnson – Puffing Billy NBC van – On30 by Steam and Things

Peter Macdonald – VR Lattice frame VR signal kit – O scale.

Rod Hutchinson – Locos N Stuff – On30 Bogie Kit by Locos N Stuff UK.



Rod Hutchinson Photo 2019

2019 December

The December meeting was held at the home of Grant McAdam, which is quite central to most Division three members. Grant is a prolific structure builder, both scratch and kit builds. He has provided many modelling presentations. Two of his most popular are casting, and figure painting.

14 members and partners attended in what became the most perfect weather day. The afternoon was spent admiring the models on display and discussing all things model railroading, gardening and plans for year of 2020. Two members will attend the 7mm Narrow Gauge Association AGM in June 2020. Grant McAdam brought along the book "Townsend Hook and Dorking Greystone Lime Co Ltd". The most notable part of this book is the drawings of the Fletcher Jennings 0-4-0 NG locomotive, "Townsend Hook", which is being offered as an O-16.5 kit by EDM models in the UK.

As this was the Christmas function, we all enjoyed an extensive array of sweets provided by the prolific cooking of Grant McAdam.

Items were on display included:

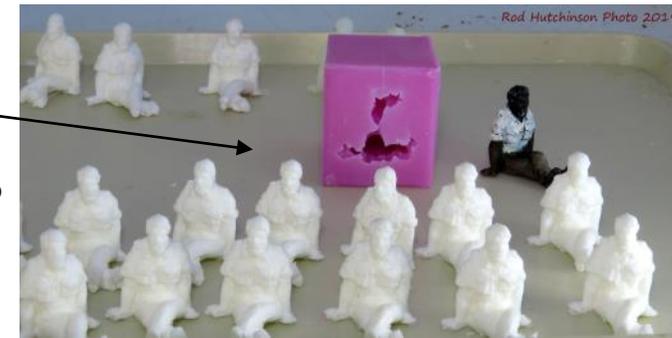
Grant McAdam produced copies of an aboriginal sculpture by Ian Fainges (with permission).

Grant McAdam – Book: Townsend Hook and Dorking Greystone Lime Co Ltd

Paul Ritchie – two HO buildings and three S scale motorbikes.

Peter Kendall – Two O scale buildings and one HO scale sawmill;

Rod Hutchinson brought along a weathering book for model railways by AK Interactive called "Trainspotting".



Rod Hutchinson Photo 2019



One of Grant McAdam's steam launches

Rod Hutchinson Photo 2019



One of Paul Ritchie's HO Scale buildings



Rod Hutchinson Photo 2019

Peter Kendall's HO Scale sawmill



Rod Hutchinson Photo 2019

Dan Pickard's On30 freight cars



Grant McAdam's O scale Launch



Ian Johnson's On30 NBC

Peter Kendall's O Scale building



Rod Hutchinson Photo 2019

Peter Kendall's HO Scale Hotel



Rod Hutchinson Photo 2019

Division 5 News

October 2019

The City of Sails MRC (CoSMRC) held its October meeting at the home of Elizabeth Mead and Philip Sharp.

In a break from tradition, supper was at the start of the meeting. During supper Paul Hobbs showed Mike and Joshua Hill books that contained plans for the tracks around a coaling tower. Mike and Joshua were in need of this information for a layout they are working on.

Then it was downstairs to Philip's near empty train room. Philip's prototype is the branchline from Flaxa (Orangeville Junction) to Owen Sound in Southern Ontario during the 1880s and 1890s. Members of the CoSMRC made suggestions on how to build the benchwork and how to make the best use of the space for a one-deck layout. The room is 14' square and the benchwork has to work around the entrance door, another door, a work area, a small kitchen and a largish closet.

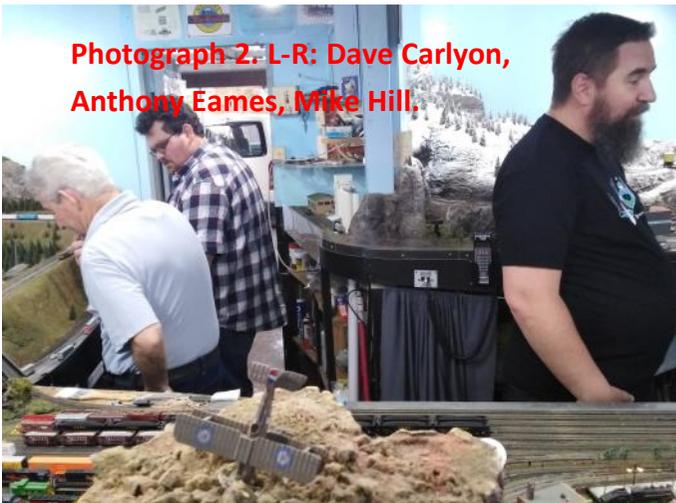
The discussions about how to best use the train room continued for several days after the meeting using email. Philip circulated draft plans for the benchwork and track, and agreement was quickly reached.

November 2019

CoSMRC members participated in two activities mid-November and had a meeting late November.

Both activities were on the same weekend. The bigger of the two activities was the second annual Out West Model Expo in West Auckland. The Expo was run by the Auckland Märklin

Club to promote the hobby and to raise money for the AMC. CoSMRC members helped at two of the layouts at the expo. Craig Mayall, and Mike and Joshua Hill ran trains on the HO layout of the Western Districts MRC, and Philip Sharp ran trains on the layout of the Auckland Garden Railway Society. Steve Anderton had planned to have a layout at the show but had a



Photograph 2. L-R: Dave Carlyon, Anthony Eames, Mike Hill.



Photograph 1. The Free-Mo layout in Paeroa.

prior engagement. Paul Hobbs set up a table and built kits.

The other activity was a Free-Mo running meet in Paeroa, a small town 120km southeast of Auckland by road. CoSMRC members James Kelso, Craig Mayall, and Mike and Joshua Hill, attended Saturday. Some CoSMRC members are now thinking of building their own Free-Mo module. Photograph 1 shows most of the Free-Mo layout.

The meeting late November was at the home of well known American modelers Dave and Kenneth Carlyon. The Carlyons have long had a medium-sized N scale layout in a shed in their backyard. They have recently been building a smaller HO scale layout in an attached shed.

Photograph 2 shows part of the N scale layout. From left to right are Dave Carlyon, Anthony Eames who is joining the NMRA and the CoSMRC, and Mike Hill. Photograph 3 shows part of the HO layout. Kenneth Carlyon is closest to the camera. Behind him are Joshua and Mike Hill. Joshua is the youngest member of the CoSMRC and possibly the youngest NMRA member in New Zealand. Joshua has a second recreation – competitive road cycling.

Achievement Program

Early this year several members expressed an interest in earning AP certificates. All of these members work full-time and not surprisingly progress has been slow. Philip Sharp very recently earned the Author and Volunteer certificates to go with the Chief Dispatchers certificate he earned a while back.



Photograph 3. L-R: Kenneth Carlyon, Joshua Hill, Mike Hill.

Division Six happenings

Our November meeting was held at Ray and Gael Brownbill's home and I presented Ray with his Host Plaque and thanked him for having us. There were 23 members present and Ray won the raffle this time. We have two new members. Marcel van Eck who we welcomed and Matthew Redden who was not present.

Apologizes from Ainslie as he has needed some heart surgery but now on the mend. He asked me to tell members about the signs of a heart attack and some brochures were available for members. Michael and I stopped off at Ainslie's home and picked up the videos and DVD's that Marcelle Applebee has donated to our library. It was good to see Kim McWaters at the meeting as he has been recovering from some health issues also. Bring and Brag:

David Orr showed us some of his N scale rolling stock that were gifts from N scale conventions he had attended in the early 90's and also decals he had received that were applied to wagons. There were some that a friend had done for him who has since passed away also.

Vern Cracknell showed us a sample bag that was given out at the Shepparton Exhibition from the Jaycar stall. Kim mentioned he may be able to take this idea further and would speak to Ron regarding this.

John Prattis showed us his coin collection relating to Australian Train events.

Casey Tonkin showed us her new N scale "Blue Bonnet" Kato set from an auction house.

John Marsh showed us some electronic servos he had come across.

Geoff Chatwin showed us a neat idea by using old plastic pill sheets to save using too much glue. He showed us a 1mm. and upwards round sanding stick for N scale and micro soldering.

Ray Brownbill told us about how he and Ron saw a new rail grinding machine at Two Wells.

Scott Taylor showed us his wagon (G Scale) he has been building and also the decals he made. It is a model of two prototypes which were combined to make this wagon. Very impressive it was.

We concluded our meeting by indulging in a lovely afternoon tea and some conversation between members while waiting to admire Ray's "Wild Creek" layout and some members did some Timetable car cards and waybills running. Ken House took a video and downloaded onto YouTube. The link is <https://www.youtube.com/watch?v=B7Q51Eul8Jw>
Photos taken by Michael Robinson.

Regards,

Jane Robinson
Division 6 Superintendent



Two views of Ray Brownbill's Layout



Scott Taylor with his G Scale wagon



John Marsh with some of his servos



David Orr with his N scale rolling stock



Vern Cracknell's sample bag



Michael with one of our library DVD's



Members at the meeting

Division Seven



Eighty three members attended the November meeting at David Howarth's. We were able to present two members with their 25 years membership plaques and able to admire progress on David's O scale layout



Ron Sneddon receiving his 25yrs Award



Greg Morris receiving his 25vrs Award

34th National Model Rail Convention 2020



Extended June Long weekend 2020



5TH: Layout tours/operating sessions
6TH - 7TH: Clinics - International and Australian Speakers,
Partners Program & 'Great Train Show'
8TH - 9TH: Layout tours/operating Sessions



Rydges Parramatta
116 James Ruse Drive, Rosehill NSW 2142
Accommodation packages available

Adult Registration. Full price: \$160
Early Bird Tickets available: \$145
(incl 2 days entry to the Epping Model Railway
Club's 'Great Train Show')

Non-Rail Program. Full price: \$55
Early Bird Tickets available: \$50
<http://www.nmra.org.au/conventions/index.html>



3616 on the Wyong turn table in 1969

These photos are now memories from the late 1960s but there is plenty to see in and around Sydney during and after the 2020 convention

AD60 passing through Redfern in 1968 on a goods train bound for the Darling Harbour goods line

Prototype Observations

Trams/light rail are still with us. The debate will no doubt continue as to their effectiveness but they do add to the urban scene. The photos shown date from the 1980s until today



Lisbon 2019



Lilyfield 2012



Glenelg 1983



Sydney 2006



Melbourne 1986