

# 7th

# Heaven



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# Straight Down the Line - Opinion

by John R B Parker

## Time to Celebrate

It almost 2 years since our president, Trevor Hodges first proposed that we should celebrate the tenth anniversary of the Aus7 Modellers Group by holding an exclusively O scale exhibition. What a wonderful opportunity to showcase our hobby to other interested hobbyists as well as the general public! My first reaction, ... surely this is an impossible dream; there are only two fine-scale O scale exhibition layouts in existence. Where would we find the layouts? Who was going to organise it?

At the time I was contributing articles to this esteemed journal documenting the construction of my first O scale layout, "Valley Heights". Well, that would at least provide one other layout, so without really knowing what I was doing, I volunteered to organise and co-ordinate this tenth anniversary celebration. Aus7 ExpO, was born. The executive considered, and approved the proposal for a one-off, one day exhibition together with a special anniversary dinner. This proposal was based on the assumption that somehow we would be able to encourage the construction of at least seven more layouts, so the search began for a suitable venue equipped with good facilities. Requests to our regular Forum traders for assistance with sponsorship packages were successful with the naming rights secured by O-Aust Kits. Other assistance in making this exhibition possible was soon forthcoming from Waratah Models, Model O Kits, The Model Railroad Craftsman, The Railcar and Bergs.

If you are one of the confirmed exhibitors, or one of the Aus7 Modellers Group members who have registered for a package which includes the anniversary dinner, you already have some idea of what to expect when the doors of the Casula Power House Art Centre open at 9.00 am on Saturday March 1. Maybe you were just planning to come on the day? Great! Bring a friend, or two, with you. This should be a day to remember, fifteen layouts, incredibly most are being exhibited for the first time. All the layouts are individual efforts, real proof that you don't have to be part of a large team to build an O scale layout. NSWGR mainline modelling will feature, but also O scale narrow gauge, Queensland O scale 1:48, as well as interesting and creative interpretations on what might have been.

If you are a regular reader of Trevor's Blog 'Morpeth in O-Scale', come and see the real thing. All layouts are O scale, but in a number of variants of that scale, look for the layouts from well-known HO modellers. Spend time at the continuous tree building clinic to be conducted by Dan Pickard. All the specialist traders mentioned above will be in attendance with a range of suitable O scale products, including some exciting new items. Yes, the pilot model of the magnificent O scale AD60 Garratt will make an appearance. Light lunches, as well as tea, coffee and cool drinks will be available all day from the Bellbird Café. A licensed bar will be open from 2.00 pm. Ample free parking is available and, provided no track work is planned, attendance by train could be a great option. Casula station is only about 250 metres from the CPHAC, and the lifts provide easy access from the platforms to street level.

See you there!

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### On The Cover

Do you number your locos for a special reason or do you just pick a random number or maybe from a favourite photograph? My article starting on page 6 explains why 4404 is so significant to me and how I did a little simple work on my model to improve it's authentic 1960s appearance

Paul Chisholm - Ed.

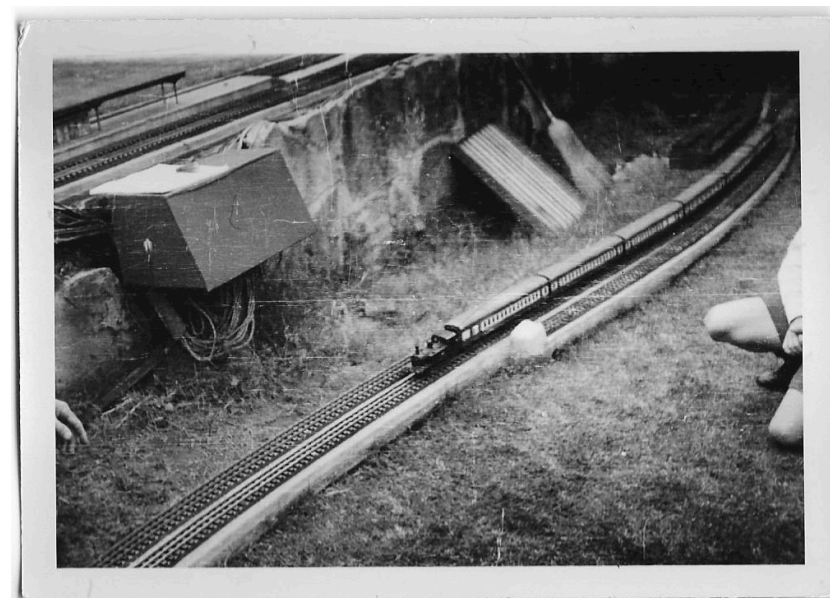
# A Garden Railway by Les Fordham

*Surprisingly, given the climate, O scale garden railways are very common in the U.K but seem to be less so here in Australia. Therefore it was very interesting to receive this article about one such layout that is sadly no longer in existence. If you know of another O scale garden railway here in Australia and would be willing to write an article about it I would be pleased to receive it. Ed.*

Up until the late 1960's, there was an extensive O Gauge 3 rail garden railway in the Northern Sydney suburb of Cheltenham at the home of Mr. Rhodes Brown. The layout was operated on a regular basis up until the late 1950's or early 1960's. In the mid 1960's some young hopefuls and I would try to get things running , but unfortunately did not achieve a great deal.

The layout started under the house where there were cupboards to store locos and rolling stock as well as extensive sidings to hold more rolling stock. A double track main line came out from under the house before turning through a ninety degree left hand curve to run parallel to the fence. There was a straight run beside the fence with a number of storage sidings parallel to the main line.

After about 20 feet the main lines swung off through a ninety degree left hand curve to run along the top level at ground level. There was a concrete arched viaduct before the lines crossed the path that was at the top of the stairs that led to the lower level. The lines then entered a station with an island platform where there was a junction with a short terminating branch line and the single track main line then swung away to the left before running parallel with the fence line. This section would have been about thirty feet long and included a crossing loop. The main line then entered a spiral to begin the descent to the lower level where it crossed a bridge and opened out into double track as it descended to a large station and yard built around a ninety degree left hand curve.



In front of the station was a long curved pit where operators could stand while they worked the yard. This yard had a turntable as well as numerous sidings. From this station the double track main lines continued across the yard through a tunnel under the stairs which led down from the upper level. After a ninety degree left hand curve the tracks entered another large station area. There was an extension under construction to take the track from this station along the back fence to connect with the main line after it had descended the spiral and crossed the bridge. Unfortunately this extension was never completed.

As can be seen from the photographs the trains normally operated were New South Wales prototypes and I would not be surprised if some of these were models used on the Dept. of Railways O Gauge layout that was displayed at the Sydney Royal Easter Shows in the nineteen fifties.

From the 'photos locos identified are 285 Class 0.6.0 tank (later Z.18), 79 Class 4.4.0 (later Z.12), 105 Class 4.4.0 (Baldwin), 93 Class 0.6.0 (later Z.19), C.36 Class Round Boiler, C.38 Class Streamlined, C.38 Class Non Streamlined, D.50 Class Standard Goods and a two car



diesel set. In early 'photos of the Dept. of Railways layout at the Sydney Royal Easter Shows, a number of very early N.S.W. locos were displayed on the layout. There was a high level section on the layout where these models operated.

My favourite loco was the green C. 38 No.3802. This loco was passed to one of the operating group to repair and that was the last time we saw that loco. Because this has been my life long favourite loco, I was able to legally purchase the builders plate from the Dept. of Railways many years ago.

Also identified from the 'photos were goods wagons "S", "LCH", "Milk Tank" and an HG Guards Van. There were also a number of carriages but the 'photos were not sharp enough to be identified. At that time digital cameras had not been invented !

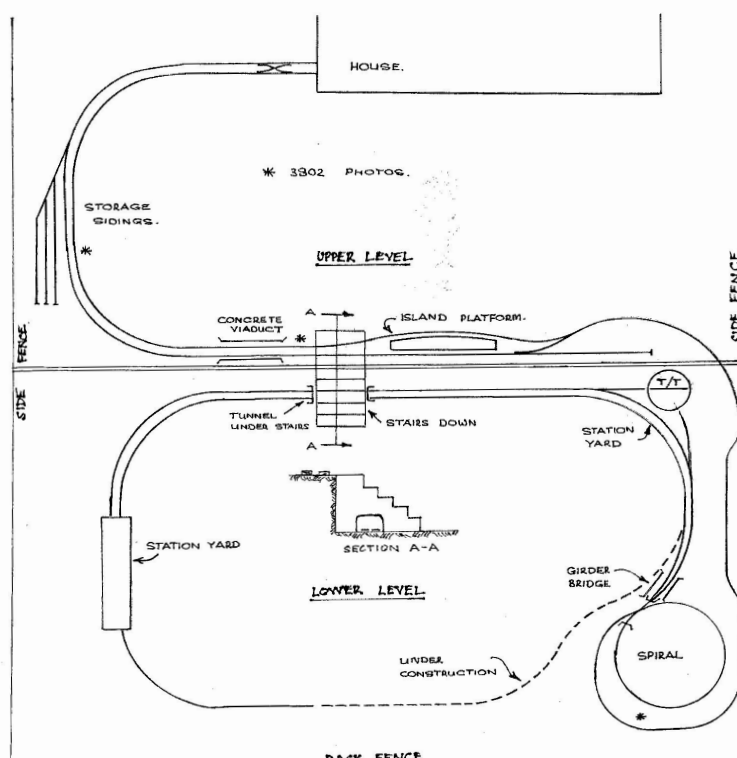
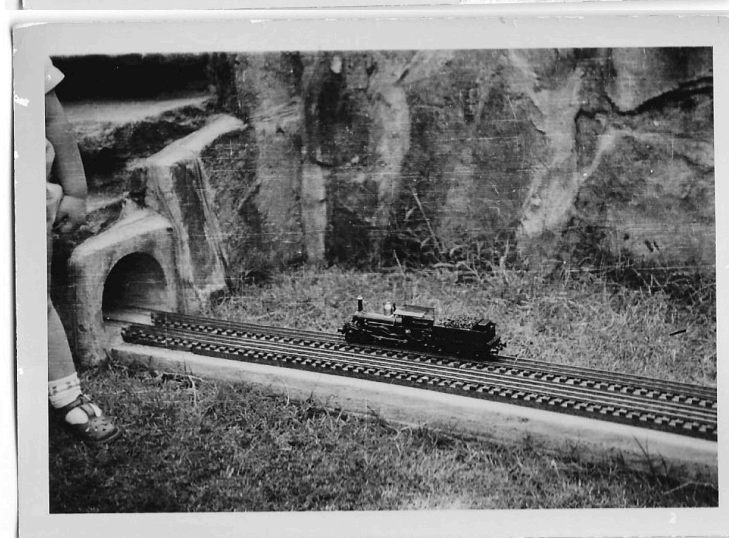
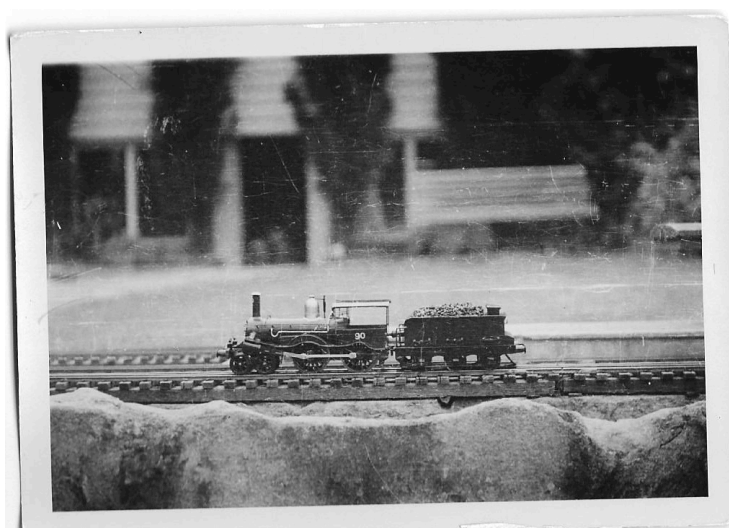
The three rail layout was at ground level set on a concrete base with wooden sleepers to which the Austral Bronze 702 section brass rail was spiked. I can still remember when I was about five or six years old, my father delivered to Mr. Brown a large bundle of this rail in 6'0" lengths strapped to the roof of our Ford Prefect sedan.

There were operating panels under the house, at the island/junction station and at the lower level station with the turntable. The points (or turnouts) at the island/junction station, the crossing loop and the junction points at the bottom of the spiral were all electrically operated from the control panels.

I believe the owner, Mr. Rhodes Brown, passed away in the late nineteen fifties and his family kept the home for a number of years before moving to the Monaro region of N.S.W. sometime later. From memory the son's name was Robbie, however, with numerous moves unfortunately I lost touch.

If anyone has more information about this layout or the Brown family, I would be very grateful if they could pass it on to me through the Editor.

Early O Gauge models and layouts are worth recording in word and picture as they are part of the history of the model railway hobby in Australia.



THE GARDEN LAYOUT OF MR. RHODES BROWN, CHELTENHAM, N.S.W.  
O GAUGE 7MM SCALE. DRAWING NOT TO SCALE. L.FORDHAM, 20.11.13.



Paul Chisholm

When I was a boy growing up in the late 1950s my parents were keen caravaners so several times a year and certainly every Christmas we joined the slow procession of traffic up the two lane Pacific Highway to any one of a number of beach side destinations. By today's standards these trips were a test of endurance and patience for both man and machine and many a steaming overheated vehicle was passed on the way. But our V8 Pontiac was more than up to the task and so we would eventually arrive at a caravan park and set up camp for the usual fortnight or so of swimming, fishing and generally lazing around. However for a ten year old, once the novelty of the Christmas presents had worn off boredom would start to set in. But at one particular spot this was never a problem because right nearby was the main North Coast railway line and for the budding rail enthusiast that was enough. This spot was the caravan park at Park Beach just north of Coffs Harbour. At this location the line crossed a small tidal waterway, Coffs Creek, by means of a steel plate girder bridge and you could sunbake on the sand or take a swim and listen for the sound of the approaching trains as they either blew the horn and accelerated away from Coffs Harbour station on their way north or slowed under brakes to enter the town. No steam I am afraid but almost as good

was the constant procession of 40, 43 and 44 class diesels on mail trains, the daylight expresses, fruit expresses made up of a variety of louvre vans and the pick up goods. They were mostly single units and a multiple unit combo was not common. In the case of the 44s most of them were almost new

I didn't have any particular favourites. All classes were welcome but for some reason one particular locomotive seemed to make its appearance quite regularly and that was 4404. This number became firmly implanted in my railway recollections memory bank. So not long after, when modelling NSWGR became an interest, the first of what was to become many versions of 4404 came into being and there have been quite a few over the years.

The first was a Fleischmann FA locomotive which bore a very slight passing resemblance to a 44 if you didn't count the long nose, four wheel bogies, single end cab and the black and white colour scheme. Amazing what just painting "4404" on the side can do for the imagination. Some time later a very early attempt at scratch building saw the next 4404 emerge in brass and running on a Hornby Deltic mechanism. Quite an improvement on the FA! Then one day Australian Model







Railway Magazine announced that Lima would be producing a model of the 44 so one of these was acquired and duly decorated with that number. However as I became more discerning the faults in the Lima loco became very apparent so it was discarded and for some years there was no 44 amongst the growing collection of mostly brass locos from Bergs, Model Dockyard and Mansfield until Mansfield came to the rescue with their brass model. So 4404 rose again and this time had a partner numbered 4465. Then the RTR Trainorama version was released but by that time I had moved on to O scale so once again there was no 44 on the roster.

Things changed one day during a visit to Bergs Hobbies when Peter Berg told me he was considering his own brass O scale model. Of course I assured him it would be a winner! So after some development Peter released a list of the versions and proposed numbers for his models. I was aghast. There was no 4404! A chat with Peter about some of the boyhood memories mentioned above must have impressed him because not long after

the number list was revised and there was 4404. Now this may have just been a coincidence BUT thanks Peter.

Around a year later 4404 was back and this time accompanied by 4416. Now it's a funny thing but I can build a kit build loco or item of rolling stock and have no reservations at all about attacking it with the air brush, washes and whatever to get a realistic weathered finish. But when confronted with an expensive pristine model in it's impressive presentation case nerves set in. I know it has to be done. I know how to do it. I have done it before. But just taking that first step is really hard. Apparently I am not alone in this as a number of my Arakoola friends were suffering the same anxieties. So we drew collective support and after nine months of procrastinating decided to get on with it. And once begun the curse is broken and you wonder what you were afraid of. I now have two locos which look much more like those I saw at Coffs Harbour and many other places in the late 50s and through my train chasing and



riding years of the 60s. After that rambling tale here is a brief outline of how I gave 4404 the treatment.

The first thing to realise is that 44s and other first generation diesel locos in the mid 60s, which is the era I model, were generally not the neglected, faded and dirty contraptions we saw in the 70s and beyond when they were relegated to secondary roles and heading for retirement. In 1965 4404 was only seven years old, the last of the order 4460 was only four years old and the first of the second series 4461 was delivered in October of that year. Even the 40s which were about thirteen years old had been repainted from the green so were in pretty good condition. In addition the railways actually cleaned them regularly. So I was not looking to overdo it. I just wanted some subtle dirtying up of areas that didn't get cleaned so often or which got dirty again really quickly. These were the roof, pilots, bogies, fuel tanks, the mesh along the side vents and a small amount on the lower body sides and ends and over the nose where it was hard for the cleaners to reach, at least until they added the grab handles. If you look at the photograph of the locos on the back cover of Ron Preston's book 44 The World Down Under. Eveleigh Press 2007 you will get some idea of the finish I wanted to achieve.

I started by separating the body and the underframe then put the underframe to one side for a while. The first sections treated were the cooling fan and the mesh covering the various air intakes, filters etc. along the upper side. This mesh was painted yellow on the first ten units when delivered but soon became grimy and discoloured in service. Subsequent units were painted the same red as the body but this also soon took on the same grimy appearance. So unless you are modelling a freshly outshopped unit these areas need to be dirtied up. This includes the section between the drivers window and the cab door. These areas were hand painted with Tamiya Nato Black - XF 69 using a very fine brush to avoid getting paint onto the red lining. This is very laborious process involving a steady hand and good eyesight and at least two coats of paint to get adequate coverage. It also requires a dabbing action with the loaded brush to get the paint to flow down into the mesh and in some cases a sharpened tooth pick has to be used near the edges of the mesh section. This gives a uniform dirty black/grey appearance which is not prototypical so further treatment of this area is needed later. The fan mesh was treated in a similar manner.

Before going any further it was noted that the model lacked the silvery grey metal window surrounds of the prototype and represented the later practice where this was simply painted over with the yellow colour used around the windscreen area. I wanted this silver surround so this was carefully picked out with a fine brush using Humbrol metallic silver. This is pretty easy for the front windscreen but the windows at the number two end needed masking along the edges with some electrical tape to ensure the brush didn't stray. The curved corners still had to be done carefully by hand. Unfortunately this process does tend to emphasise one of the models deficiencies which is the recessed glazing, whereas the real thing had glass flush with the outer surface of the window panel. I couldn't see any way to rectify this so for the moment have put it in the too hard file.

Next the roof was airbrushed with Nato Black in such a way as to give a non uniform coverage that was concentrated more towards the centre where the exhaust settles and faded off towards the ends and down over the curved roof onto the upper sides. This was extended just past the horns on the yellow cab roof where it was faded out to represent the area where cleaners hands could no longer easily reach. Next a very light haze was applied to the nose and the #2 end, just enough to soften the brilliance of the yellow slightly. This area was generally kept fairly clean and I just wanted the merest suggestion of road grime.

The body was now put aside for a while and the underframe and bogies commenced. The nice glossy black paint on the bogies disguises all that terrific detail of springs, brackets, roller bearings, steps, cables etc. and was crying out for treatment. If I was really enthusiastic, or crazy, I would have disassembled the bogies and done a thorough job, but life is too short and it's really not necessary. Once again using Nato Black I airbrushed the wheels, bogie side fames, pilots, buffing plates, fuel tank and air reservoirs. If the air brush couldn't reach a section I left it. This paint gives a dead flat finish which doesn't look quite right so I always seal it with an airbrushed coverage of Floquil Clear Flat which gives a nice eggshell finish, not shiny but not completely flat.

Another of my favourite weathering colours is Tamiya Khaki Drab - XF51 To me this is very close to that faintly grey/green dirty nondescript colour that was often seen on all manner of locos and rolling stock. I used this in the air brush to do a very faint misting over the previously blackened mesh areas, just enough to give some variation and reduce the uniformity of the black. A light misting was also applied to the roof and the lower body sides and ends. Be careful with this. The difference between too much and just right is a heartbeat.

I then moved back to the underframe and misted on the XF51 to the pilots, bogies, fuel tanks etc. but with slightly more than applied to the body. When you do this it is magical to watch how the detail begins to jump out at you.

Moving back to the body I applied some flat black to the non mirror side of the rear vision mirrors and used a dab of superglue to secure them in position so they didn't twist about all over the place. This didn't work very well and I will need to find a better method of securing them in place.

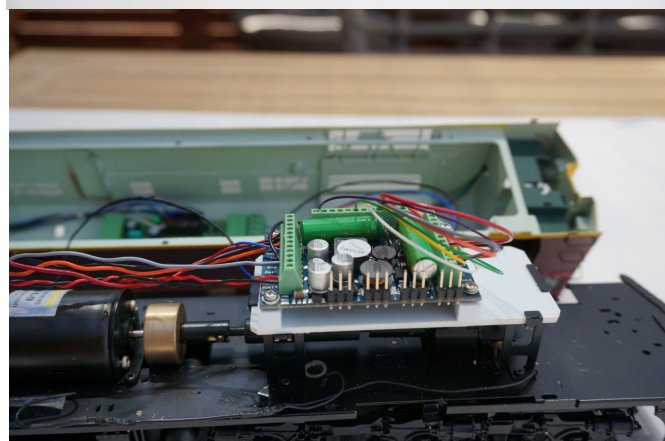
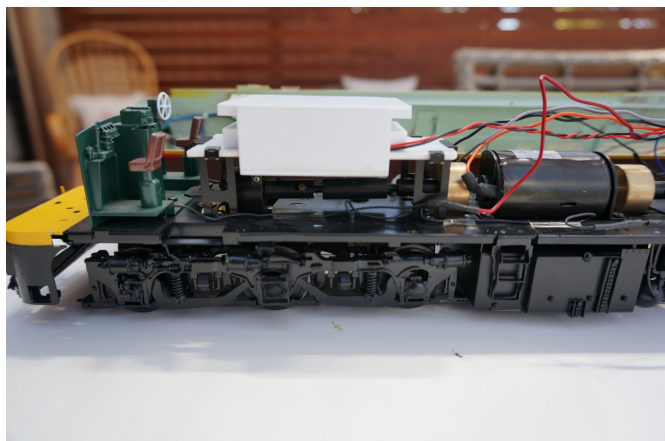
No model is perfect and the 44 has few issues which I won't go into here. Most of these I can live with but a strange bit of my rivet counting nature emerged when I saw the green coloured control stands inside the cabs. During the period I model all the real ones I saw were painted suede grey, so that was applied to mine and a few lights and so forth picked out with the ends of a toothpick.

Of course no loco should be trundling around without a crew, unless it's second unit of course, so some suitable personnel were sourced. I prefer the Phoenix figures range from S & D Models in the U.K. They have a great web site <http://www.sanddmodels.co.uk/> where you can



look at the figures, an online ordering service and a very quick mail out. They are around three pounds U.K plus postage. I have found these to be close to real person size, unlike some of the emaciated bulk lot plastic folk you can buy on Ebay and they don't have that sort of cartoonish look that even some other expensive ranges do. They are unpainted so you can decorate them to suit your own purpose. These folk were positioned on the seats so that they were seated at the correct height. This required a bit of packing in some cases as the seats in the model seem to be rather low. You will also have to decide which of the cabs is manned. You can always say the second crew in the other end is traveling home passenger. To let you have a better look at them some of the glazing was removed from the drivers side windows.

Before reassembling the loco the very necessary question of a decoder, sound and lights had to be dealt with. Along with rest of the Arakoola guys I settled on the Loksound XL V4 decoder loaded with the 44 class sound files supplied by DCC sound. The proprietor, Mike Walters was very helpful and the sound when heard through the Jaycar 4 ohm Mylar speaker #AS 3028 is quite impressive. Puts HO sound to shame. You can just settle for the Alco 251 sound files that come with the appropriate version of the Loksound decoder but in my opinion it is a very poor representation of the real thing and no match for the DCC Sound version recorded from 4490 at The Rail Transport Museum. The speaker was fitted with a styrene enclosure and mounted in place of the front platform over the top of the #1 end bogie. The decoder was mounted on the rear platform and all the connections made by generally following the guidelines in the handbook supplied with the model by Bergs who also supplied the replacement DCC interface board which is mounted in the roof. There is no provision for cab lighting in the model so this was made up using Protowhite 3mm LEDs from either Gwydir Valley Models or DCC Concepts wired through 5K resistors and connected to the appropriate terminals on the decoder.



After testing to check that all worked as it should the body and underframe were reunited. This is a very fiddly job with those tiny screws so not something you want to have to do very often.

Then some final weathering was done using ground up pastels of various rusty or muddy shades around the pilots, bogies, fuel tanks, and lower body sides. Once again this highlights a lot more detail.

On Arakoola we use Waratah couplers so my models are fitted with these. You can use either the dummy or

operating type but the one on the nose end will require a new hole to be drilled in the shank about half way between the existing hole and the end so that it is long enough for the face of the coupler to clear the buffing plate. This is not needed at the #2 end.

So, there is my current and what will probably be my final version of 4404. The real thing was retired in 1988 and eventually went to scrap but it survives in my memory and model form.



**44 class Wiring Diagram – Bergs/O-Aust Kits**

**Left hand rail.**  
 TrkL Not used.  
 TrkR Right hand rail.  
 Mot+ Motor +  
 U+ Not used  
 U+ Not used  
 Gnd Not used  
 Mot- Motor -  
 Input Not used  
 Mot- Not used  
 Spk1+ Speaker  
 Spk1- Speaker

**Right hand rail.**  
 RL Headlight B end  
 FL Headlight A end  
 In1 Not used  
 Aux1 Aux1 White Marker A end  
 Aux2 Aux2 Red Marker B end  
 Aux3 Aux3 White Marker B end  
 In2 Not used  
 Aux4 Aux4 Red Marker A end  
 Aux5 Aux5 Front Cab Light  
 Off Not used  
 Aux6 Aux6 Number Lights  
 U+ Common

**DCC FUNCTIONS**  
 F0 Directional Headlights.  
 F1 Sound start up/run down.  
 F2 Horn.  
 F3 Short Horn.  
 F4 Directional Marker lights.  
 F5 Motor Notch up.  
 F6 Motor Notch down.  
 F7 Number lights.  
 F8 Volume-six steps & mute.  
 F9 Front Cab light.  
 F10 Rear Cab light.  
 F11 Dim Cab lights.  
 F12 Air let-off sound.  
 F13 Compression sound.

**Front Bogie**  
 Motor

**Rear Bogie**  
 Front Cab Light  
 Rear Cab Light

**1K to 5K ohm resistor**

**This wire is 'White'**

**This model does not follow wire colour standards. Check that the correct individual connection is made irrespective of wire colour.**

Diagram by John R. B. Parker





## Introduction

I started modelling various parts of the NSW branch-line to Morpeth after I switched from HO to O-scale around 2000. I've built three small layouts based around the Morepeth line in that time and the bench-work has gradually developed in tandem with my modelling. My first Morpeth layout was built from dimensional radiata pine in traditional fashion using L-girders, screws, plywood and MDF. It was a nice little layout and it was operationally everything I wanted from the design however it failed to survive a house move because it was heavy and was not built to be transportable. This was the third layout I'd torn down in less than a decade so after Morpeth came down I resolved never to build a "permanent" layout again. I invest far too much time and resources in my layouts to tear them down every five or so years: there had to be a better way.

My last two layouts have been built from transportable modules that work well as exhibition displays, however these layouts were not actually built primarily to take to model railway exhibitions. If truth be told I don't actually enjoy attending exhibitions with my layouts all that much: I'd much prefer to go as a member of the paying public and let someone else do all the hard work! While my most recent layouts *can* be exhibited, I would have built them in the same manner even if I had never intended to take them to an exhibition. The primary aim was to make them in segments that were light enough to be transportable so they could come with me when I had to move house. Being able to exhibit the resulting layouts was a side "benefit".

## Wood Versus Aluminium

Many years ago I worked for a short period of time as a carpenter's apprentice so I am familiar with wood and have a good range of tools to work with whenever I have a need to make something from timber. However just because you are familiar with a particular material doesn't automatically mean it's the best for a particular job. A frame of 2X1 pine with a chip board top may seem like a good, solid combination of materials to build a model railway baseboard from, especially if you're working to a budget, but only if you never intend moving the layout that results. While such materials are readily available I would suggest that things have moved on from the "good old days". Any good local hardware store and warehouse outlets such as Bunnings and Masters are crammed to the rafters with a huge variety of materials crying out to be used in the benchwork of model railway layouts.

At around the same time I was developing my plans for my first portable layout Queens Wharf, a group of Sydney based modellers were gathering on a regular basis to build the O-scale layout Stringybark Creek. This layout was cutting edge in many ways, not the least in that it was constructed entirely from square aluminium tube and extruded insulation foam. I was involved in the construction of this layout and can attest to how light the modules were. The use of aluminium in constructing model railway layouts seems to be a fairly rare occurrence and, after seeing what the Stringybark Creek group had achieved, I decided that it had definite possibilities. Aluminium is light, rigid and is readily available at comparable in prices to dimensional lumber. While it does require slightly different methods of

working to those required with timber, once these have been mastered it is no more difficult to work with than a softwood like radiata pine.

## Design Development

The design for my layout modules has developed over about twelve years and has been used in two different layouts; first in Queens Wharf and also in my new layout Morpeth which is still under construction. The basic idea for the modules comes from a TV documentary I was watching on the construction of airplane wings which are essentially a series of cross beams held together by long strips of aluminium. My two layouts were built about a decade apart and there have been some developments in the design over that time so I'll separate the descriptions into two sections based on the two layouts.

### Queens Wharf

My original need to make Queens Wharf as light as possible came from the way the layout was to be transported. It consisted of two modules and they were designed to "nest" together in a single unit so when they were lifted you would essentially be lifting two sections of layout. While this made for a very small layout to transport it did mean that if it were to be made entirely from wood it would be extremely heavy. I decided that I'd construct the base units (which were 1.5m long X 600mm wide) from four lengths of 25mm aluminium angle which would run down the length of the module and these would be separated by cross beams made from 4X1 radiata pine (photo 1). To keep the weight of this timber to a minimum the pine had five large holes cut in them. These holes were staggered up and down so that they didn't all sit in the same grain lines in the hope that this would increase the strength of the beams. The aluminium and wood were connected with counter sunk wood screws and construction adhesive. The corners of the units were strengthened with short lengths of 2X1 pine (photo 2).

When the two modules are connected they are held in alignment with pattern makers dowels and secured with T-nuts and standard hex bolts. Both modules were wrapped in a skin of 6mm MDF which provided the low backdrops and fascias for the layout (photo 3). 6mm MDF was settled on as the thinnest material I could use for the backdrops: it has no grain lines (important in a hand painted backdrop) and is self supporting with no need for thick frames to help hold it in position. 3mm MDF would have been found to be far too flexible for this application. The downside to using MDF is that it is extremely heavy. I also used 12mm MDF for the track base which was a mistake as it swelled up when I ballasted the track. Never again! When the modules were to be transported they could be nested and formed a box which quickly acquired the name of the "the coffin" (photo 4). I eventually installed trundle wheels into one of the boxes so that this box could be pushed along reducing the amount of lifting required.

### Morpeth

After approximately eight years of transporting and developing Queens Wharf I was able to commence construction on Morpeth. This layout would be over

twice the length of Queens Wharf and would also incorporate several ideas I'd been thinking about that I hoped would reduce the weight of each module by a considerable amount. These new modules would be a development from what I'd done with Queens Wharf rather than a complete redesign.

From the start two jobs I wanted to remove from the "to do" list was having to drill the holes in the radiata pine cross beams, which had been a real trial, and also reduce the number of counter sunk holes I would have to drill in the aluminium. In around 2004 I had a critical discussion with two modellers, John Parker and Roger Porter, when I took the base modules for Queens Wharf along to an O-scale Modellers Forum. I had the modules set up in a similar condition to that which you can see in the photos and I can remember having some in depth discussions with John and Roger about the design and ideas John was developing for his own layout Valley Heights. From this discussion I decided that one way to remove even more weight was to do away with the pine in the cross beams. I chose to retain pine for the end plates of each module but the new layout would have cross beams made up from a sandwich of aluminium angle and thin (3.5mm) plywood (photo 5) with holes drilled through to provide wiring access and reduce weight even further. These cross beams would be assembled with bead of construction adhesive run down the inside of each piece of angle and retained with a small number of pop rivets (photo 6).

Due to the layout's track design and restrictions on the amount of space in the available transport I had to incorporate a clipped corner into the two wider scenic modules so that they would neatly marry up with the narrower central section. The end plates were to be made from 4X1 and 3X1 radiata pine. Using pine for the end plates would allow me to use the same type of pattern makers dowels and T-nuts I'd successfully used in Queens Wharf. The timber I used had been sitting flat in my garage for many years so it had had plenty of time to dry out and was extremely stable. In fact it was recycled timber from my first Morpeth layout which had been pulled down in 2004. I ran this timber through my thicknesser-planer to reduce its cross section slightly and ensure it was all exactly the same size dimensionally. When timber is sold as 4X1 (or any other size) this is only a nominal dimension: there can be a fair bit of variation in size between batches of timber so it's worth checking. By reducing the size of the timber I also reduced its weight. Most of the end plates were made up in the same way as those on Queens Wharf, which had a sort length of 2X1 butt jointed into the corner to increase stability, but two of them had angled timber incorporated into one end to allow for the clipped corner on the wider modules (photo 7). When it came to assembling the modules I simply cut a notch in the aluminium, bent it to these angles and attached it to the timber with wood screws.

The layout base modules are connected in the same way that was employed on Queens Wharf: pattern makers dowels from Station Road Baseboards ensure alignment with T nuts holding the sections together (photo 8). The cross beams are attached to the longitudinal aluminium angle with pop rivets (2 per joint) and the end plates are held in place with wood screws and construction adhesive. The heads of the wood



screws are counter sunk so they don't protrude above the surface of the aluminium but there are far fewer than in the Queens Wharf modules. When the modules are assembled ([photo 9](#)) they provide a solid, light foundation for the track base and scenery but I still wrapped them in a shell of 6mm MDF ([photo 10](#)) which provides the backdrops and fascias and also provides a lot of stability and strength to the structure.

## Conclusion

I feel that given time, we all develop a style in the modelling we do. Over the years I suppose I've developed my own style of building layouts and this is very apparent to me when I compare Queens Wharf with the still developing Morpeth. While I really enjoy socially interacting with other modellers, in my own modelling, I tend to be a one man band. So if there are problems with the way I build my layouts then there's no one to blame but myself however this also means I don't have to debate the pros and cons of an idea with someone before I can try it out. For me good design in this hobby is not about fancy qualifications, it's about experience, good sense and a lot of thought. The benchmark system I have developed is not perfect but it suits my needs and I'm not above incorporating new materials and new ideas into the design if I feel they will improve and reduce the cost of construction. In the end the only new tool I needed to work efficiently with aluminium was a new blade for my mitre saw that was designed to cut aluminium. I think the cost of this was more than offset by the improvements in my benchwork..



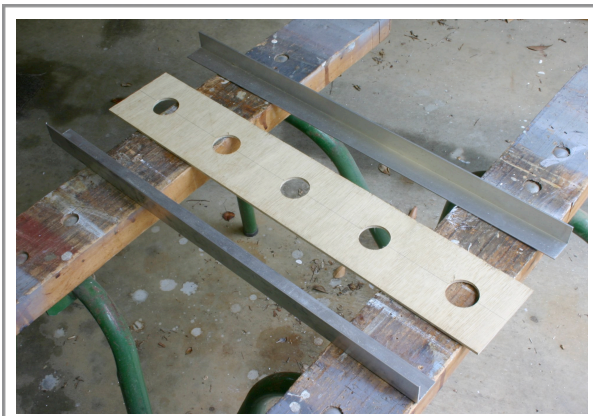
1. This is the base of one of the Queens Wharf modules. The modules are 1.5mX600mm in size. When the two modules are connected they form an extremely rigid grid which is more than adequate to hold trains off the ground.



2. The inside corner of the Queens Wharf module. The length of 2X1 acts as re-reinforcement for the corner and gives more surface area for the glue and screws to grip in this vital area. One of the T-nuts is visible close to



3. This is the layout in full and wrapped in a skin of 6mm MDF. The front fascia is made up of two pieces of MDF, one slightly narrower than the other, to provide a slot for the backdrop on the other module to drop into.

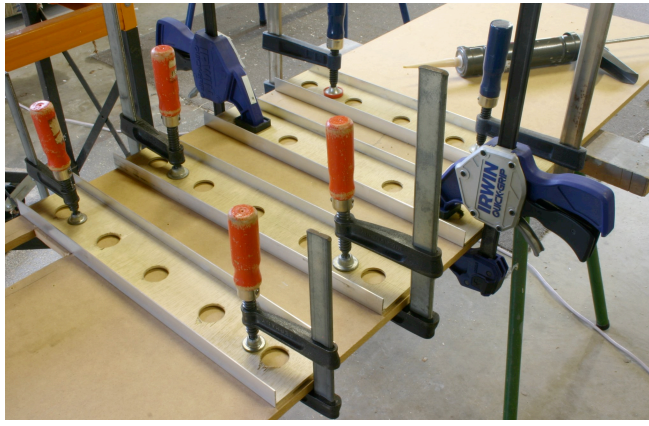


5. These are the components for the cross braces. Simple to make and surprisingly strong and light.



4. Queens Wharf in its "nested" form ready for transport.





6. This is the production line I set up to glue the cross braces prior to adding pop rivets.



7. The end plates are the only sections of timber that remain in the design of the Morpeth modules compared



8. Joining the modules is precise with the use of pattern makers dowels. The ones pictured are from Station Road Baseboards in the UK.



10. The 6mm MDF is secured with small bolts and nuts through holes drilled in the aluminium angle.



9. This photo shows two of the modules connected up and sitting on their stands. The overall saving in weight over the Queens Wharf modules is approximately 35%.

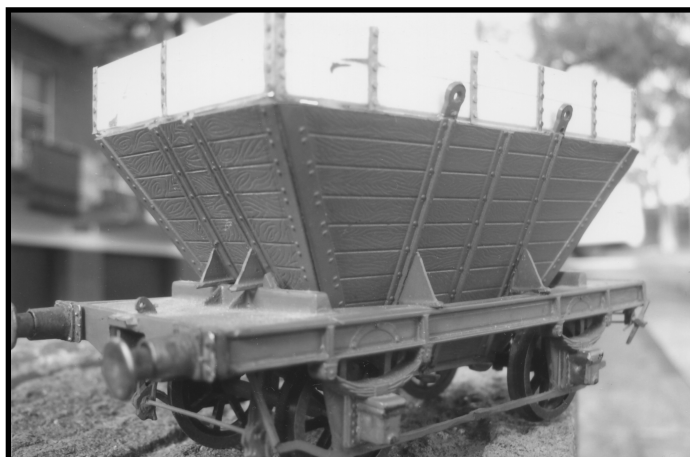


# LCH to CCH Four Wheel Coal Hopper

Chris Sim

In recent years, Bergs Hobbies commissioned a run of O gauge plastic injection moulded four wheel coal hoppers of the LCH type, manufactured in India. These models had a modicum of imperfections, but had many strong points and could be made into very acceptable models by even the relatively inexperienced kit-basher. In a recent conversation, Peter Berg said he is investigating the production of another run of these, with improvements.

The version I remember most vividly from my childhood living by the Illawarra line at Como in the steam days was the CCH, effectively an LCH fitted with hungry boards in order to increase coal capacity. These were commonly seen both within general goods trains and also in block loads being hauled by Standard Goods engines or Garratts, the 60 class being utilised only as far as Waterfall on Down loads in order to take advantage of their horsepower on the long 1-in-40 grades of Como and Loftus Banks.



The big articulateds were not permitted to work through single track tunnels such as the one further south at Coalcliff (or the one at Ardglen on the main north), lest a stall occur in which case the crew would have difficulty exiting the fully enclosed cab. Thus the train would be worked south from Waterfall by a Standard Goods engine or a 48 class. Prior to the introduction of this limited Garratt working on the Illawarra, double Standard Goods engines would perform the task, with one coming off at Waterfall, turning on the table, then returning to Enfield, perhaps attached to an Up goods. Always looking to save money, NSWGR accountants calculated that one 60 class crew was cheaper than two standard goods engine crews for the Waterfall run. Of course, those of us too young to have seen the 57s and 58s in action can only wish NSWGR had kept a few of the big 4-8-2s for the Illawarra coal runs, for then they could have obviated the Waterfall changeover and worked right through to Thirroul.....wouldn't we steam buffs have loved that...

In order to fashion the hungry boards out of plastic to fit to the Bergs model, I undertook the simple dodge of examining Ron Cunningham's Eureka Models HO CCH and simply doubled the measurements, thus arriving at 96mm by 11.5mm for the lengthwise pieces and 54mm by 11.5mm for the end pieces. I then cut these four pieces from 1.5mm-thick plastic to represent the double board, scribing the separation of the two boards with a cutting blade. Another modeller might prefer to make each board separately. Wood grain could be represented with judicious scribing, though I haven't bothered. Other modellers may opt to make the hungry boards from timber or balsa. Often when I'm 'mocking-up' self-shaped pieces, I tack them together with what I call 'wonder glue' aka white glue (PVA such as Aquadhere). Thus any slight errors in shaping and filing can be easily undone and adjusted before committing to the final 'serious' glue – Supaglu or Araldite. In some modelling situations, the white glue has remained the principal bond, on almost any surface, and that is why I call it 'wonder glue'.

Next challenge was to represent the vertical rivet strips which hold the hungry boards together, six along each lengthwise section, and three each on the end sections. Noticing that Antons Trains produce an O gauge turntable

with rivet strips, I approached Anton about the possibility of obtaining spare parts for use on the CCH. His business associate John Dersch duly supplied me with the parts and these proved most satisfactory. I cannot pass comment on the future availability of such detailing parts, which would seemingly possess any number of applications in O scale modelling. Should readers seek further information, they can contact Anton, who regularly attends exhibitions with his product stand, and advertises in the model railway press.



The attached photographs depict the model firstly in unpainted form in order to better illustrate the process undertaken, and then as painted.



*Readers will no doubt be aware that Model O Kits have entered the O Scale locomotive kit market by not starting small but just about as big as it's possible to get with a NSWGR model, the AD60 Garratt. Proprietor Glenn Scott asked Roger Porter and myself to take a look at the model and we were joined by fellow Aus7 members David and Chris Lord. We thought those of you who have ordered a kit or who may still be considering doing so might find our impressions useful so David has summarised our "critique". Ed.*

### **Impressions of the Model O kits AD60 Garratt Locomotive Kit - Pilot Model**

Firstly, just looking at the AD60 Garratt, it is impressive. A C38 in O scale is impressive as we have seen at the forum but the 7mm Garratt is really impressive. The size, bulk and all those wheels make for one hell of a locomotive. As to the finish and overall authenticity, that is a lot harder to evaluate.

At the pilot viewing we had access to a number of books, photos, drawings and three different HO models. We did find a couple of detail items that might be missing. For example what we think is a compressor exhaust silencer on the boiler smoke box right hand side. However this was missing on some of the photographs as well, so that even if DJH rectify this and supply the part modellers might decide to install or not depending on photographic evidence of the particular loco being modelled and at a particular point in time. The pilot was missing a couple of items such as cab interior and floor, also the coal screw extension that went under the cab floor. These had been left out so the pilot could arrive in Australia in time for Christmas, DJH indicating these would be sent to Glenn shortly.

Dimensionally, remembering how difficult it can be to measure some items of a completed model, the model is very slightly longer than original, literally about 2mm because the boiler/cab and water/bunker ends require that little bit more space between to go around corners. This was much more apparent in the HO models but in the 7mm model, hardly even noticeable. Just about every measurement made was as close to being accurate as is possible in a model kit expected to operate around curves of about six feet radius.

One thing that did become apparent from looking so closely at the model and prototype data was that if you want an accurate model of an AD60 Garratt look at as many photos as possible and choose a particular loco at a particular period and build appropriately as photos seem to indicate wide variations in detail over time.

The standard of building by DJH is generally very good, but on this model there were a number of small areas that to my eye could have been very slightly better assembled, but this may be due to it being a pilot constructed quickly to make it available for evaluation. The standard of finish gives the impression that the model would go together very well with sufficient time, skill and care.

Performance on track, although only on a straight length, was very good for a new model. Considering the rather basic controller being used, the model started quite well and slowed down to a very slow smooth stop indicating that with modern state of the art control, be it DCC or DC, you could expect even better performance.

Installing DCC should not be a problem, both chassis ends have all the room required for two large sound decoders, whilst the boiler has more than sufficient space for the largest of speakers currently in use and space for possibility of adding smoke generation. I know of no other 7mm model that would have the possibilities of sound and the space to do all this than the AD60 Garratt.

Were there any issues? None that I believe would warrant anyone not wanting to buy. To my mind, there was absolutely nothing that would prevent me from purchasing this kit as is. My order is in and I am not changing it.

David Lord



# Commercial News

Trevor Hodges

## Model O Kits

Model O Kits, PO Box 379, Sydney, NSW, 1700, (02) 97073390, 040493663, <http://www.modelokits.com> & [glenn.scott@hhpackaging.com.au](mailto:glenn.scott@hhpackaging.com.au) have passed on the news that the AD60 Garratt pilot is available for viewing by appointment at Model O's Yagoona offices Monday to Friday. Things are on track for kit delivery by the end of March or the beginning of April, 2014. Any last minute orders should be made ASAP.

Detailed CAD drawings of both the G and GP wagons have been finalised and sent off to DJH for evaluation. If all is okay DJH will be proceed with tooling for these kits. Pilot models should be available by the end of March with delivery expected May/June. These will be stocked items but production runs will be limited.

Preliminary 3D CAD drawings of the FS and BS carriages have been sent off to DJH for evaluation. Delivery is scheduled for the end of 2014. These will be stocked items but production runs will be limited.

CAD drawings for the 36 class project were being prepared at the time of writing. Expected delivery is early 2015.

There will be some new laser cut kits revealed at the Exp-O (March 1, 2014).

## O-Aust

O-Aust Kits [info@oaustkits.com.au](mailto:info@oaustkits.com.au), and via the web site at [www.oaustkits.com.au](http://www.oaustkits.com.au), at PO Box 743, Albany Creek, Qld, 4035, mob 0419680584 or (07) 3298 6283 have advised that the 4 wheel private owner coal hopper released at Liverpool is currently being re-vamped prior to production of a second run. This will include a cast pewter chassis (similar in style to that used on the 3000 gallon tank car) replacing the polyurethane one provided in the first batch. Brake rigging will be produced as lost wax brass castings.

The next run of CX dogboxes will have a revised roof profile and will be supplied with 2AD bogies rather than the 2AA ones supplied with the first batch.

Three projects are currently underway for 2014 release. The first of these will be an FO end platform carriage. Patterns for this project are well advanced with Cad drawings prepared. The second project is the long delayed MHG guards van. Patterns for both 2AP and 2AT bogies have been completed as the first part of this project and these bogies will be going into production shortly. Both bogies will be available as a separate product line. The third project is the completion of the O-Aust Kits version of the C30T.

**O-Aust Kits**  
**Aus7 ExpO**  
**Saturday March 1 2014**  
9.00 am to 4.00 pm  
**Casula Powerhouse Arts Centre Casula NSW**



Model and Photograph – Roger Porter

The Aus7 Modellers Group is celebrating its 10th Birthday at this unique location with an O scale Model Railway Exhibition.

Many of the layouts will be making their first public appearance. Free parking, a group of specialist traders together with the Powerhouse's excellent Bistro and Bar facilities will make this a day to remember.

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<http://aus7modellersgroup.org/>

CASULA POWERHOUSE ARTS CENTRE



## ARAKOOLA OPEN DAY

The Arakoola Open Day held on Sunday 1st December was attended by around thirty Aus7 members and their guests and it was a very enjoyable day. The team really enjoyed giving others the chance to let their locos have a run on the layout and it was terrific to see the usual parade of NSWGR replaced by a British diesel hydraulic hauling the mail train, a South Australian 930 looking very colourful in red and silver and even a Union Pacific Challenger which only just managed to clear the platform as it rolled through the station.

A great BBQ lunch was well received and everyone seemed to depart happy, well fed and hopefully motivated to start that model, layout or whatever that has been languishing in the "must do" file.

Another day is planned for later this year.



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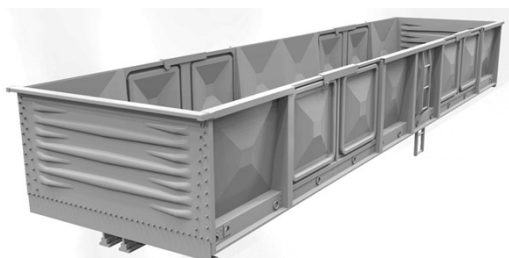
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		Slaters 7129AU 2'8" 9			
		spoke			
		Slaters 7130 2'89" disc			

Items marked \* are not always readily available - please check before ordering.

WIP = work in progress planned for 2014 release.