7th Heaven

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In this issue:

Straight Down the Line - Opinion

by Trevor Hodges

The Happy Curmudgeon

I have a guilty secret: I'm now a blogger. For those of you who have never heard the term, it means I now write a Web Log. This is essentially an internet page where you can post photos and links, in addition to sharing your deeper thoughts with the world about any topic of your choosing. Of course by now you would have guessed that mine is about O-scale modelling. If you're interested, you can find it at http://7mmaussie.wordpress.com/. It goes by the title of Morpeth in O-scale.

I've been a member of the 7mmAusmodelling Yahoo! group http://groups.yahoo.com/group/7mmAusmodelling/ for many years now and one might have thought that this was sufficient outlet for my ramblings and photos. In addition to this outlet I write regularly for 7th Heaven and I've had material published in AMRM and AJRM. So why the need for a blog?

A few years ago I was exchanging emails with an Aus7 member who had allowed his membership to lapse. When I contacted him and asked him why he said that he was worried about 7th Heaven "draining" content away from AMRM. I could understand his concerns, but my response to this was "what content"? In spite of AMRM's long support for Australian modelling in general, for my tastes there's never going to be enough material on O-scale. I can't really blame the magazine for this: O is a minority scale and will probably always remain so. 7th Heaven is specifically designed to address the needs of O-scale modellers, but outlets like Blogs allow modellers to communicate about topics to a depth, and to a broader audience, than even specialist magazines like 7th Heaven can cater to.

I could summarise why I started the blog as follows:

- The content on the Yahoo! Group is restricted to members of that group. I wanted to take my musing to a worldwide audience. It was actually a Canadian friend of mine who encouraged me to start writing the blog.
- The material I intend to write about on my blog is quite specific and reasonably technical. I wasn't sure that all of the members of the Yahoo! group would have been happy at me clogging up their in boxes.
- On my blog I am free to post what I want, when I want and this is accessible by anyone from anywhere in the world. I recently got six hits from web surfers in Afghanistan!
- I'm a bit of a curmudgeon about a lot of what's happening in the world today. However I also believe strongly that if you want to draw new adherents, especially young ones, into the hobby, then you need go where the market is and these days that means on-line.

I make no claims that my blog qualifies as being exciting or "with it": I can be just as boring on line as in print. But if just a few people read it and find an answer to a question they have about modelling then this is no bad thing, especially if they're service personnel in Afghanistan. And if a few potential young modellers find their way to O-scale via the blog and this helps to perpetuate the scale then all the better. I happen to believe that making something with your hands and interacting with friends face to face (as opposed to social media) through the medium of a hobby you happen to share beats "virtual" anything every time.

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On The Cover
Arakoola township and station viewed from the road bridge as a ballast train trundles through on its way to some track work further up the line. A short update on developments with the layout is on page 11

Upgrading the Running on a Waratah/Haskell CPH

Part 2

Trevor Hodges

The Power Bogie

After making the changes detailed in Part 1 of this series, I tested the running of my CPH again and found a definite improvement, however this was still not sufficient to satisfy myself that the problems had been solved. The real test was how smooth the model was when run at a crawl and there was a distinct judder at the lowest speeds. The running problems went beyond resistance in the drive train and the pressure on the backs of the wheels from the pickups. If I was going to get the type of running I was after I was going to have to upgrade the way the rotation of the drive shaft was transferred into the rotation of the wheels.

The power bogie uses the side frames to retain the axles through 3mm extensions that pass through the wheels at each end. These sit in holes drilled into the four axle boxes which are each retained by a small plate held in place with two screws into the bottom of the side frames. I started disassembling the bogie by removing the screws on the bolster that hold the side frames in correct relation to each other. This allowed me to separate the wheels from the side frames and the pickups. I also removed the screws that held the small retaining plates in place so I could separate the axle boxes from the side frames. Set all the screws and components aside and start by examining the four axle boxes. I wanted to ensure that the axle boxes sat square and true in the slot provided for them in the side frames. There is a pivot beam incorporated into the side frame that is supposed to allow suspension for the wheels but I found that the springs used were so stiff that the side frames were essentially solid. I toyed with the idea of replacing these springs with something lighter to allow movement but I am yet to be convinced that suspension is actually needed. In a bogie vehicle such as this the movement in the bogie already allows the wheels a considerable degree of movement in tracking less than perfect trackwork. I left the original springs in place. I took a look at the axle boxes and gently filed the bearing surfaces on the sides of these which are intended to slide in the suspension slots. While I was pretty sure that there would be minimum movement of the axle boxes, paint on bearing surfaces needs to be removed if any movement is going to take place.

The next step was to evaluate the bogie's gears and drive shafts (Photo 13). The gears in the power train of the bogie can be accessed by the removal of the two screws on top of the two cast black gear housings. These housings can be separated down the centre and slid to each side to reveal the gears. The gearing arrangement of the power bogie is wonderfully compact and neat but I was unhappy with the length of the drive shaft on the motor end of the bogie (the right hand side of the photo) and the way this was supported by only one bushing. I concluded that this short drive shaft was the main culprit in the poor running of my CPH. Being so short and only supported by one bearing the considerable forces acting upon it were very likely causing it to shift, probably resulting in meshing problems with the other gears. While I have no proof that this is what the problem was I took the decision that I would replace the entire gear assembly, including the wheels, as I could see no way of removing the pre-existing gears without damaging the axles. After a lot of looking about for replacement components I settled on a set of Slater's spoked wheels, a Slater's FD01 3:1 reduction gearbox to drive the motor end axle and a set of Micro Mark miniature Delrin sprockets and chain to drive the front axle (Photo 14). The choice of the Micro Mark components was dictated by the fact that their sprockets are made to work on a 1/8" axle and this matched the axle on the Slater's wheelsets. I also decided to replace the universal drive shaft with a Delrin shaft sourced from the UK company Branchlines. Make sure you order the 2mmx2mm variety when ordering. The Branchlines shaft is splined, which simplifies installation and it also has a telescoping action which is perfect for this application. I would recommend using this over components such as those available from North West Short Line. I purchased and tested some NWSL components and I found them unsuitable for this application.

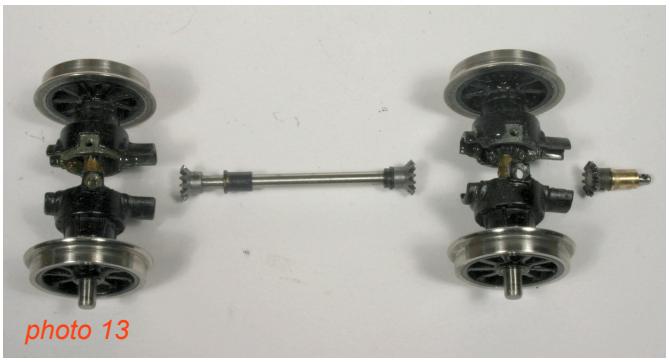

photo 13

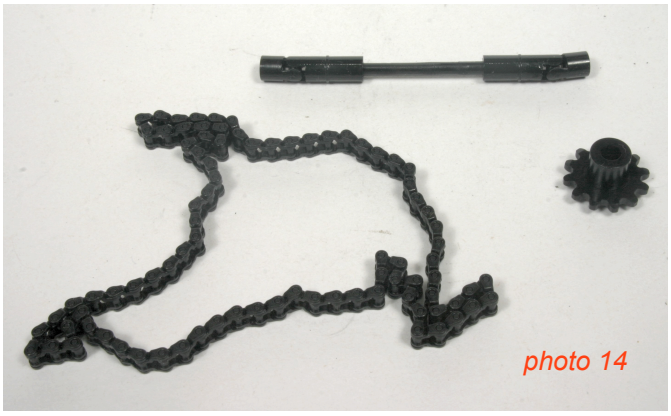
photo 14

The first task in replacing the gearing in the power bogie is to alter the axle boxes so they will accept a Slater's top hat bearing. Because the outside diameter of these bearings is smaller (2.5mm) than the pre-existing holes in the axle boxes (3mm) they need to be packed out with some suitable brass tube. I can't provide you with a part number for the brass tube I used as it was in amongst the dozen or so different sizes I keep on hand, however it is almost certainly from the K&S range. You will need a thin walled tube with an inside diameter as close as possible to the outside diameter of the Slater's bearing. The inside diameter of the tube I used was a little under this size at about 2.4mm but I was able drill it out 2.5mm so the bearing was a sliding fit after a bit of filing of the bearings. I then drilled out the holes in the axle boxes to 1/8" (approx 3.1mm) to match the outside diameter of the brass packing tube, as the pre-existing holes were 3mm (Photo 15). In the photo an unmodified Slater's bearing is on the right with the packed out bearing in the middle. As the pre-existing hole in the axle box is not deep enough to accept a Slater's bearing the drilling procedure also requires that the hole be made to the depth required: about 1.5mm extra depth is needed. This drilling operation should most definitely be taken very carefully: drill a little and check often is my advice. Keep a Slater's bearing close at hand and use this to check whether you've got sufficient depth for this to sit flush in the hole. A small bench top pillar drill is a must for this operation. I soldered the packing tube onto each bearing and filed everything smooth after which I retained the bearings in the axle boxes with Loctite 501. I reassembled the bogie and tested the wheelsets to see if they would spin. They were a little tight so I reduced the length of the axles slightly by filing and re-profiling the pin point on the end of the axles. The wheelsets must spin freely so keep filing and adjusting until they do.

Next I test fitted the sprockets and chain drive to check clearances (Photo 16): for clarity the photo shows the bogie without pickups and gearbox. A suitable amount of the chain was detached and fitted and it turned out (to my surprise) that an almost a perfect fit could be achieved, with no slop in the chain. I'd been told that some method of placing tension on the chain would be required but this was not required. However as the chain passes over the top of the bogie bolster and under the chassis floor it turned out there was not enough clearance for the chain to pass. I remedied this by placing two KD paper washers between the bolster and the chassis which allowed enough clearance for the chain. You'll need to place two more washers on the bolster of the trailing bogie to match this slight rise in height. The pickups on the side with the chain fitted inside the circle of chain, so there was no need to replace these. If you were to use sprockets with fewer teeth – thus being a smaller diameter – to allow the chain to go under the bogie bolster, the pickups would need to be replaced with some other arrangement. The position of the sprockets is a matter of trial and error, but I chose to have the longer shoulder nearest the backs of the wheels to keep the chain as close as possible to the centre of the bogie. I made some measurements and allowed 1.5mm between the rear of the wheel and the end of the sprocket's shoulder. After test fitting the chain I disassembled the bogie and moved onto fitting the gearbox.


photo 15

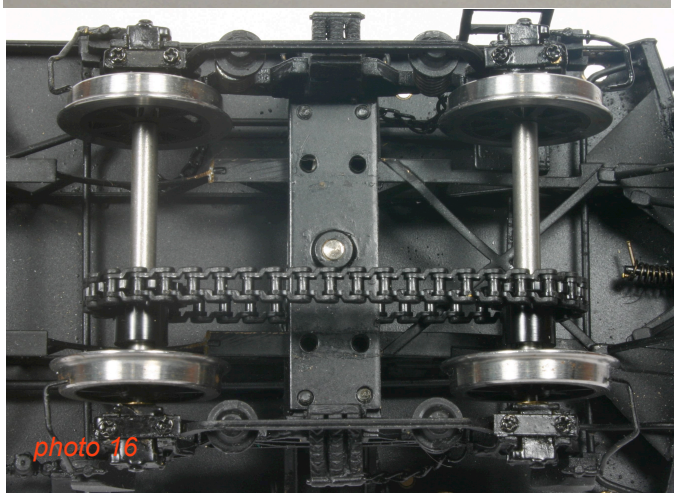
photo 16

The Gearbox

Before I could fit the gearbox to the axle I needed to prepare it and ensure that all the parts fitted cleanly and operated together smoothly. The FD01 is designed to fit a standard Slater's 11/64" locomotive axle but it is supplied with bushings that allow it to be fitted to a 1/8" axle. Specify that you wish to use a 1/8" axle when ordering to ensure you're supplied with the correct item. I tested and adjusted the components until I was satisfied that they fitted together perfectly. I used needle

files to ease out the holes in the brass casing but I was extremely gentle as I did this. To reframe the old motto: file once and check twice. The gearbox casing is held together with two 10 BA cheese head screws, screwed in from opposite sides with the other half of the casing threaded so that separate nuts are not required. The heads of these screws protrude above the surface of the gearbox sides. As the chain would be passing very close to one side of the gearbox I decided to let in the head of one screw by carefully drilling one side of the casing out with a drill bit large enough to allow the top of the screw head to sit flush with the gearbox side (Photo 17). I did not let in the screw on the other side as I intended to use it to retain a short length of brass angle to stabilize the gearbox and prevent it from rotating on the axle.

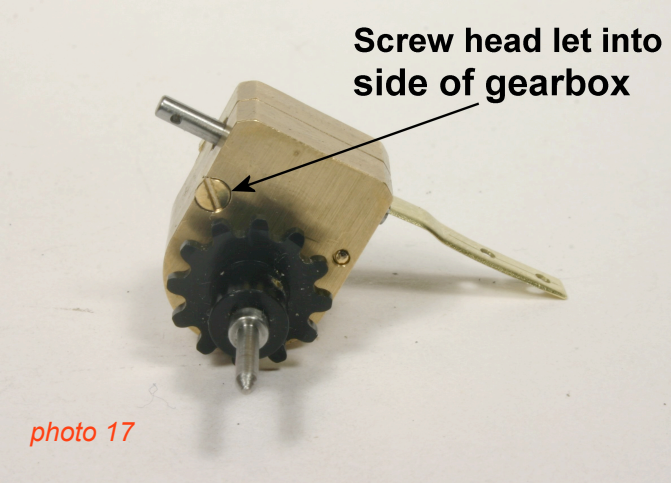

photo 17

Once I was sure that all the components of the gearbox were operating smoothly together it was time to assemble these and attach them to the axle. Testing had shown that the plastic components, while a tight fit, would not operate correctly without being pinned. The universal drive shaft and the sprockets for the chain needed to be retained solidly on their steel shafts so that they didn't rotate. Loctite make a liquid adhesive especially designed for this application but this is expensive, so before purchasing a bottle of this adhesive, I decided to try drilling 1mm holes through the 2mm steel shafts to allow a brass pin to be inserted to prevent rotation. My first attempts at this operation were on a short length of scrap shaft and were a dismal failure. The hole needs to be pretty much dead centre and there is very little room for error. I emailed a US modelling acquaintance to get some suggestions and he said that a sharp drill bit was essential. Secondly, a small flat spot should be filed on the shaft to allow a dimple to be centre popped onto the face of the shaft and then it's simply a matter of careful lining up by eye and drilling in a pillar drill. Easier said than done!

I took a trip to the local Bunnings and looked at their range of metric drill bits. I was after two 1mm drill bits (I wanted a spare just in case one broke) that were specially designed for drilling hard materials such as steel. They had a range of cobalt coated bits but were out of stock of the smaller sizes. These were priced around $5 each. On the way home I dropped into a local specialist tool shop and found the bits I was after for $1 each. It pays to shop around! I'm told that these cobalt pits have a tendency to "grab", but once I got home I took my US friends advice and had the three holes required drilled in no time. One hole was needed in the drive shaft that emerges from the new gearbox and both of the sprockets need to be pinned through the long shoulder. I inserted 1mm brass wire into the resultant holes and retained these with Loctite 501. You should be able to see the brass pins in some of the photos.

Assembling the gearbox components and plastic sprockets onto the axle is a delicate operation and needs a good deal of thought and planning (Photo 18). I decided to start by installing the sprocket first, as I needed to drill this before any of the other components were in the way. I then made the mistake of pinning this permanently into position. I should have drilled the hole for the pin but then removed the sprocket while I installed the gearbox because having the sprocket in place while I worked on the gearbox made things a lot more complicated. To install the gearbox first determine where you want it to be placed on the axle. It doesn't have to be dead centre but the closer to the middle the better. I decided to place my gearbox ever so slightly off centre (.35mm) to give myself just a little more space on the chain side. You can see the spacings I used between the components in the photo: they should total 29mm. Because I had already pinned the sprocket in place I had to glue the main gear in place with half of the gearbox trapped between the gear and the sprocket but it all worked out in the end. I used Loctite 501 to retain the gear: do not be tempted to use superglue. After the Loctite had set, I assembled the rest of the gearbox and tested it with my fingers. Everything seemed to be working fine so I moved onto the next step.

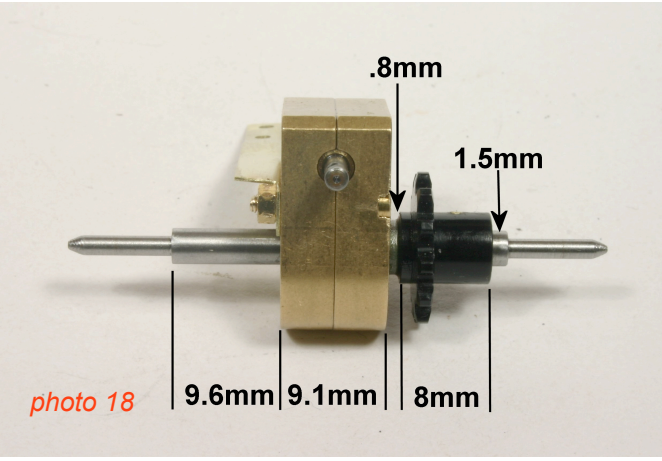

photo 18

The gearbox is prevented from moving laterally by being attached to the axle, but it also needs to be prevented from rotating round the axle as the model moves down the track. I decided that the best way to achieve this

was with a 35mm length of K&S brass angle modified in such a way that it could be bolted to the side of the gearbox and attached to the bolster, thus preventing the gearbox from rotating (Photo 19). I drilled two holes to clear 10BA bolts in the top of the angle at the bolster end and removed approximately 20mm of one side of the web at this end so that it could sit flat on the bolster. I used these two holes to guide the drilling and tapping of two holes in the bolster which is cast brass. At the gearbox end I drilled two holes at the same spacings as the 10BA bolts that hold the gearbox halves together and used these to retain the brass angle. On one end I simply screwed the BA bolt home but on the other end I used a ½" 10BA bolt to allow the fixing of a nut to hold the angle. I had to bend a joggle into the web of the angle to allow it to sit in line with the bolts in the gearbox. Once this was completed I reinstalled the wheels (Photo 20) and checked that everything fitted correctly and that the angle held the gearbox in correct relation to the axle (Photo 21). The final step was to reassemble the bogie on the chassis and give the railmotor a test run.

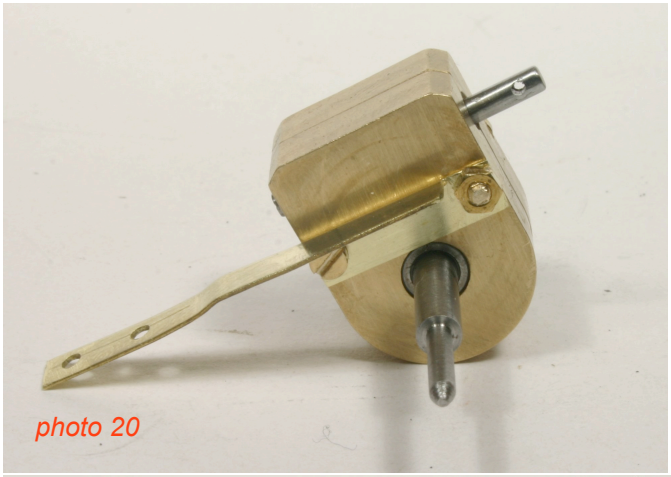

photo 20

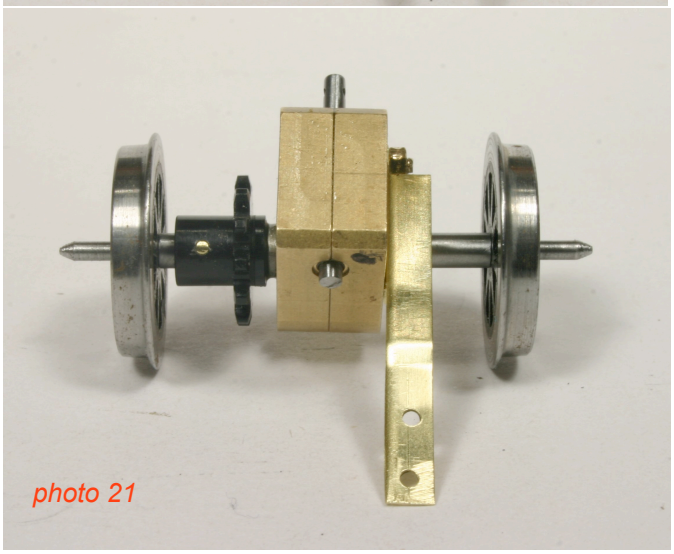

photo 21

The use of the Slater's gearbox raises the centerline of the universal drive shaft about 8mm compared to the model as supplied. While this straightens out the angle at which the universal drive shaft sits in relation to the floor, it pushes it a little higher than is ideal (Photo 22).

On the prototype the angle of the universal drive shaft is fairly flat but it sits lower than this modification causes it to be. I can live with this compromise as the cross section of the Branchlines universal drive shaft is finer than that supplied on the model and is closer to the prototype. There is a cross brace in the under-frame that fouls the drive shaft and this needs to be removed (Photo 23). I used a pair of flush cutting side cutters for this. You can easily touch up the paint with some matt black.

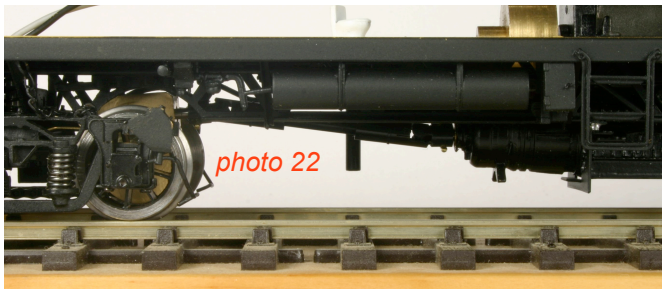

photo 22

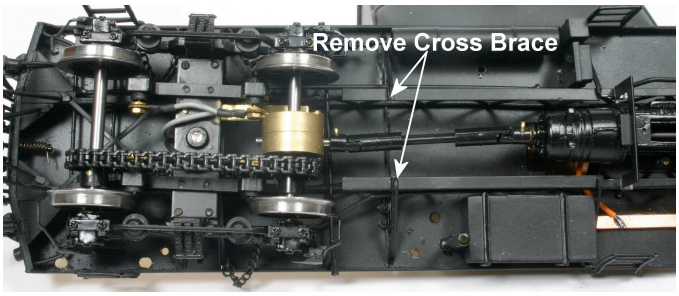

photo 23

Conclusion

As soon as I tested my CPH I knew that the upgrade had been worthwhile. It moved down the track at a beautifully smooth pace. The added 3:1 reduction of the Slater's gearbox slowed down the acceleration and lowered the top speed. I'm yet to do any tests into whether this more closely matches the prototype's speed range but I'm extremely happy with the result. There is a very slight hissing as the chain slides over the bolster but this is barely discernable, even at speed. I had already installed a Loksound DCC decoder and speaker into my CPH so after the drive train modification I was able to reassemble the model and she was ready to enter service in time for the exhibition in 2012. You might find that you don't need to go as far as I did in this project; perhaps simply reducing the pressure on the back of the wheels and installing the bearing on the drive shaft will be sufficient to improve the running qualities of your model. I've tried to set this article out in such a way that each stage can be carried out as a discreet project. You don't need to do it all at once or do everything as I did.

BEYOND BLACK MOUNTAIN

AN O SCALE LAYOUT UNDER DEVELOPMENT

By Peter Krause

In January 2007 a significant change occurred in my life with a move from a suburban environment to acreage in a rural environment. Where I now live is zoned Residential Parkland.

The down side of this move was the necessity to demolish my "West of the Divide" layout (featured in AMRM October 2007) which I had been building for about 15 years. Unfortunately, I had built this layout in such a way that it was impossible to break it up into modules that could be separated and moved to the new location.

The new abode had a separate four bay garage and initially I had visions of constructing my new layout in this building. However with three cars to accommodate, being limited to a 6 metre by 3 metre space lacked appeal.

A new shed was the answer, however finding a suitable flat piece of land on our far from level block proved to be an even bigger challenge than getting the domestic authorities permission to add a shed to our property in the first place. Eventually a suitable site was identified behind the garage and a day's work with a 6 tonne excavator levelled a site big enough to accommodate a 14 metre by 4 metre shed. Ideally I would have liked it a bit wider as the internal measurements would restrict me to 5 foot minimum radius curves but a large mature gum tree stood in the way so 4 metres it was

The other constraint was that one of the shed's fivebays was to be set aside as a workshop/garden shed, so I was left with about 11 metres by 3.5 metres internal width for the layout.
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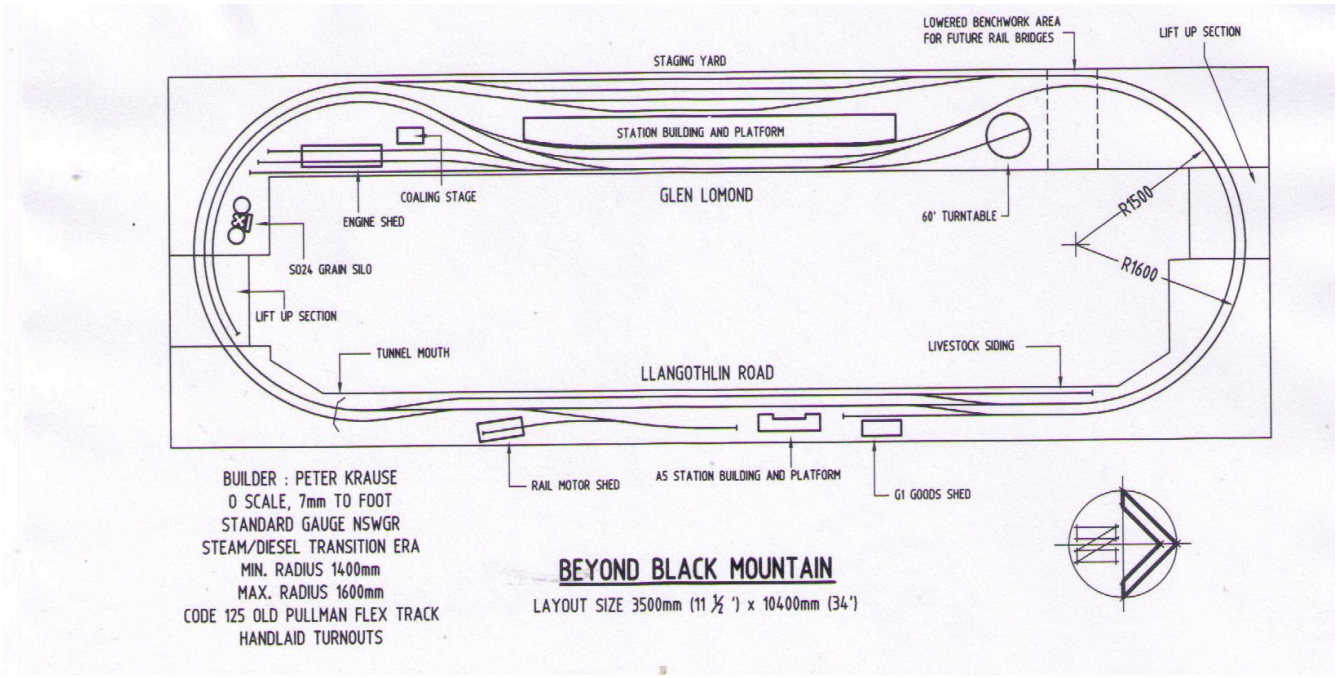


Before commencing designing the new layout the major constraint that I set myself was that it had to be built in modular form so it could be moved if required at a later date.

My initial design was for a terminus to fiddle yard layout 11 metres long – a sort of "Queens Wharf" on steroids. I managed to get all the track laid before deciding that it was not the outcome I was seeking so I removed all the track and built some additional modules which resulted eventually (at the third design attempt) in the layout that appears in this article

With a significant surface area as a backdrop, the challenge was to find a suitable medium to create an appropriate backscene. Given that as a landscape artist I make a good modeller, and that I know no artists who would be interested in painting a 30 metre long landscape for a carton of XXXX, I had a challenge. About that time I became aware of a business in the USA called "The Backdrop Warehouse". After countless hours of research on their website I settled on two scenes that appeared suitable for use as Australian scenery, one based on Oroville California and one based on Rodney Ohio. The former (background to Glen Lomond) was perfect, the latter (background to Llangothlin Road) less so as what it appeared as on the computer screen did not translate in real life. I am confident that I can find a way to Australianise it – just not sure how yet. As an aside about two weeks after I had glued the backdrops in place I found out that Haskell was producing Australian backdrops. Cie la vie.

The next challenge was to decide on the theme for the layout. Having made numerous trips along the New England Highway the thought of basing the layout on this region had appeal. As most of my travelling on this road has been since trains stopped running it does leave me pondering what might have been. A 32 racing along with the Glen Innes Mail or the Brisbane Express via Wallangarra would have been a sight to behold. Pity I am 50 years too late. I hesitated because I do like having at least one block train (grain or coal) and such traffic was almost non existent in this region apart from (I am told) occasional wagon loads of corn from around Warwick in Queensland (transhipped at Wallangarra) bound for the Kellogg's factory at Botany.

Another complication was that I had planned to build an S024 Grain Silo at one end to have something for the trains to "disappear" behind rather than resort to too many tunnels. In the end I decided that New England it was and it would have a grain silo regardless. Too bad if it upsets anyone; it is after all my layout.

Selecting names was the next challenge and in this regard I must acknowledge the assistance given by Trevor Hodges, firstly by getting me off my backside and think up some names as well as providing a number of suggestions. In the end two of the three names selected were suggestions from Trevor that appealed to me. The layout itself has been called "Beyond Black Mountain" (with apologies to "Beyond Bulliac") because I think as a name it encapsulates nicely the region to the north of Armidale. The main station has been christened "Glenn Lomond" (no prizes for guessing how that came to be) and the other one "Llangothlin Road". It was not feasible to give them names of real locations as the track design was intended to achieve optimum use of space and running of trains rather than be based on a specific prototypical location.

The track design allows me to run and watch trains rolling along through the countryside with a number of shunting opportunities thrown in if the mood takes me. The track has all been laid but there are a number of "bugs" that need to be ironed out before any serious work on the scenery can be progressed.

Track is mostly Old Pullman code 124 flextrack with a bit of Peco used in the staging yard. I ran out of Old Pullman and had the Peco left over from the previous layout. Seven points (6 X #8 and 1 X #8 three way) were sourced from Old Pullman and six Pecos were used in the staging yard. The rest of the points are hand made. All points are powered with Tortoise motors.

I have eight trains to operate on the layout which is about as many as it can accommodate. These are listed in the chart on the next page:Locomotives used on my layout at this stage include 2 X 32, 1 X 50 and 2 X 48 as well as the CPH. In addition I have a USRA Heavy Mikado (Overland Models Brass) which was a present from my wife so it stays. Also a 19 class and a 30 tank are on hand but are yet to have a DCC chip installed. In the future I hope to add a couple of 44s and a 30T to the collection. And maybe a 38 although I currently find it hard to justify one as I potentially have enough locomotives either in place or in the pipeline for my immediate needs and 38s never ran in this region anyhow, but then again neither did a USRA Heavy Mikado.

Most of the buildings are in place, albeit some only partially built. At "Llangothlin Road" there is an A5 station building and a G1 goods shed from my previous layout and a partially constructed railmotor shed to house my CPH when not in use. A signal box or two will also be added but there is little scope for any additional buildings over and above those mentioned. Some creativeness to de-Americanise the backdrop will also need to be looked at.

Most of the scenery task will involve blending the benchwork with the backdrop. I propose having the track "disappear" behind hills at the northern end and behind the grain silos ("Glenn Lomond") and into a tunnel ("Llangothlin Road") at the southern end. The staging yard behind "Glenn Lomond" will be particularly challenging as I need to make it appear realistic while not being able to hide it completely for access purposes. The station building at "Glen Lomond" will be based on the original plan for Tenterfield which I obtained from the Tenterfield Railway Station Preservation Society. Being about 4 feet long it should attract viewer attention away from the staging yard behind.

"Glenn Lomond" currently has a 2 bay engine shed and an S024 grain silo, both partially built. A suitable station building is yet to be started and the odd signal cabin and water tank will be added.

Thirteen kilos of Martins Creek O Scale ballast from Chucks Ballast supplies is on hand to ballast the tracks. I have no idea whether it will be enough or not.

Trains are operated using a Lenz DCC control system and the steam locos have Tsunami sound chips while the 48s currently operate using Lenz 4amp chips (i.e. no sound) but Locksound is planned.
I am hoping to get the layout substantially completed during 2012 even if it means scaling back the amount of time that I can devote to O-Aust Kits. I am conscious of the fact that at 66 time is marching on and I would like to be able to get some enjoyment from this layout before I get too much older. The demands of maintaining a 1.5 acre property also compete for my time. Naturally the layout will take a long time to complete but I am aiming to have a finished appearance by Christmas 2012.

Watch for the next update.

TRAIN	PROTOTYPE	CONSIST
Mail Train	Glen Innes Mail	ACM/ACM/CR/FS/BR/MHO
R Car Set 103	Northern Tablelands Express	FR/RFR/BR/FR/EHO
R Car Set 101	Passenger Extra	HR/FR/RBR/BR/FR/HR
Express Freight Train	Trains 419/420	MLVs/LLVs/MRCs + PHG
Pick Up Goods		Various
Block Grain Train		WHXs/BWHs/RUs
Block Livestock train		BCWs/CWs
Railmotor.		CPH 18

ARAKOOLA UPDATE

Arakoola had its first showing at the Liverpool AMRA exhibition last year and although it looked impressive it was far from finished. What layout ever is? Over the last few months the team have worked hard on a couple of major projects prior to the second outing at the recent Epping Model Railway Club exhibition at Thornleigh.

You could hardly miss the new back scene which was the major demand on time and money but we think it is worth every minute and cent. It transforms the layout and gives a real sense of place to the township and station. The scene was produced by downloading a suitable photograph from the internet then photo shopping it to line up joins over the five panels. The resulting sections were commercially printed and pasted onto the five MDF sheets forming the main scene and two returns at the ends. Our newest member Glenn and his computer skilled friend Rod deserve most of the credit.

To eliminate shadows cast onto the scene from the overhanging pelmets and to enhance the lighting we have installed white corflute ceilings resulting in a nice soft lighting effect which enhances the buildings and trains.

A great deal of effort was put into the signal system by Anthony and our friend and ex Aus7 President John Lee. John designed and built the electronics for a system which allows the signals to work automatically but with the option of an over ride to manual operation for shunting and conflicting movements. Anthony constructed the lower quadrant semaphores from Keiran Ryan kits and they had to be made removable for transport and storage. Unfortunately time beat them and only one of the three signals could be made operational in time for the exhibition. They should all be working next time.

Our other John spent a lot of time on his tunnel mouth to eliminate the “hole in the wall” where trains arrive and depart the scene at the river end and it too makes a striking difference. Other improvements were matters of detail and probably escaped the notice of most but we know they are there and they all add to the character and interest value of the layout.

We haven’t forgotten about the trains and this time we had a few new locos running (two 48s and a 41) and some rolling stock in the form of a scratchbuilt CR coach to form a mixed train and Roger’s attention grabbing ballast train. See Showcase for a look at these.

We have gained a lot of satisfaction from constructing the layout and learned a great deal as well but the best part is the friendships formed and the sense of shared achievement. We encourage others out there to form a group and get working on a challenger. Your layouts are needed for the Aus7 tenth anniversary extravaganza!

L C L More or Less Part One. Prototype and Construction

By Stephen Reynolds

In the middle of 2011 I purchased one of O-Aust Kits LCL Container kits. On arrival I was impressed with the quality of the castings and the kit included brass etchings for the lifting hooks on the roof as well as decals for one of the main routes that these containers travelled, Sydney to Melbourne. Unfortunately because the doors and their locking device castings were so well done it was unsuitable for the purpose I had intended for the final fate of this LCL.

The prototype being used as originally intended

Let me elaborate. What I had in mind was not to complete the kit as per instructions and then place it on a piece of rolling stock but to use it as a small storage shed/fettlers hut. The idea for this came from the best place of all; the prototype.

At Wyee Station on the NSW Central Coast/ Newcastle main line, located under the footbridge is an LCL container, the subject of this article. Almost unnoticeable, blending in with its surrounds. I never knew that it resided there until a friend told me many years ago and it still exists today. What was its intended use both then and now I have no idea as the immediate area around the container offers no evidence of its purpose other than to collect graffiti and rust. What a great combination for the modeller.

Hidden at Wyee Station

I decided to scratch build an LCL myself using the O-Aust kit as a guide. I wanted to portray the model with both doors open and detail the inside. The best material for this type of project is Styrene so it was off to Gosford Hobbies to purchase Evergreen Scale Models Styrene. To represent the vertical steel panels I used two types of pre cut Styrene strips. Item # 139 (0.75 x 6.3 mm) and Item # 135 (0.75 x 2.5 mm) once again using the O-Aust kit as a guide for thickness and width. I already had a good supply of sheet styrene in both 0.25 and 1.mm.

All measurements are in 7mm scale feet. Six pieces of 1mm sheet Styrene were cut to the following dimensions.

One for the floor = 7ft x 6ft 3inches.

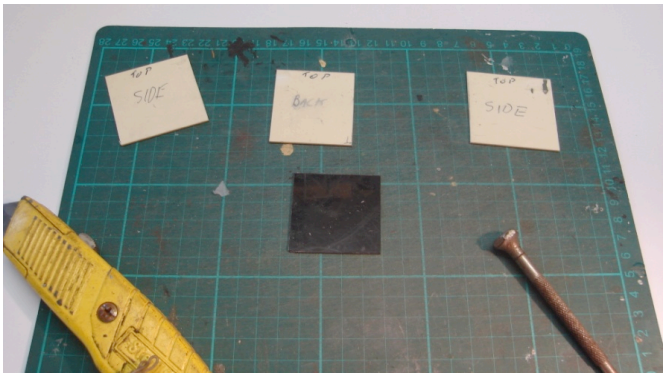
Two for the sides = 7ft high x 6ft 9inches wide.

One for the back = 7ft high x 6ft 3inches wide.

Two for the doors = 6ft 6inches x 2ft 6inches wide.

Then using a North West Short line Chopper I cut several lengths of 2.5mm wide Styrene strips 6 and a half scale feet long as well as two 6.3mm wide strips.

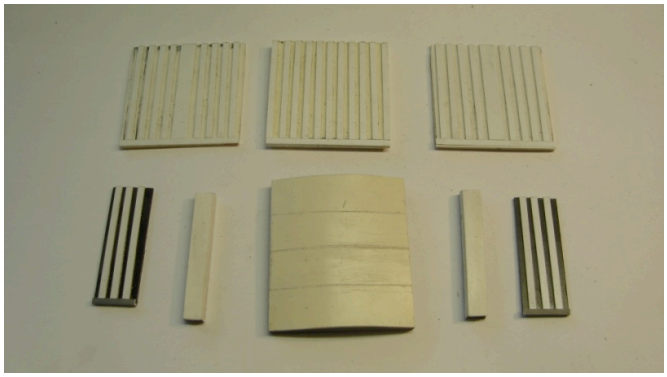
These are for the vertical strips and the two wider ones go in the middle of the two side panels. One 2.5 mm strip was added horizontal to the bottom of each wall first and the vertical strips were butted up this bottom plate and glued to the already cut 1mm sheet styrene. Using the O-Aust panels as a sort of template for their spacing's made this part of the construction a lot quicker and easier. The three sides were glued together using the floor as a jig to square the body assembly. The two front panels that the two doors hang off were last. One piece of 6.3 wide styrene strip cut 7 scale feet long and one piece of 2.5 styrene strip were butted up against each other to form a right angle with the 6.3mm piece facing the front. Pieces of scrap styrene were used to fill the void in behind these angles. Scrap styrene was used for the cross brace at the front above the doors.



Four pieces of 1mm Styrene, two for the sides, one for the back and one for the floor.

For the roof, four strips of styrene were cut.Two 8 scale ft and two 6 scale ft long. The 6 ft pieces were shaped in an arch to match the prototype, using the O- Aust roof casting as a guide. A sheet of .25mm styrene that had been stored rolled-up was cut a little oversize to fit the area of the roof and once glued trimmed to a neat fit.

Left like this the roof is a bit bland. Referring to the photos of the prototype at Wyee as well as other photos of the containers working on the NSWGR, I noticed a large hatch in the middle of the roof on not all but some LCLs and decided to model this great detail on both containers. The hatches were apparently used to load the containers from the top with the likes of grain or barley, supposedly unloaded by opening the hatch in the bottom of the doors! The hatches are 4 scale feet long by 2 scale ft wide, constructed out of scrap styrene sheet, strips and angle. A brass rod runs down each side with the brackets holding this in place and the handle was fabricated out of styrene. Before adding the hatches I scribed three lines across the roof evenly spaced, 2 ft apart, to represent the four panels that make up the roof. Even if you don't add the hatch this is a nice easy detail to add. Four lifting hooks were fabricated out of brass and applied in each corner. As with most of my buildings, I never attach the roof because I wanted to add interior detail.


All pieces including roof ready for assembly

The doors were the last parts to be constructed, same method as the walls but I used angle at the bottom and ran the strips into this. I went to a lot of trouble reproducing the steel bars that are the locking mechanism on each door. I used brass wire to represent this along with a styrene handle but this detail is somewhat lost because of my desire to have the doors open and therefore facing backwards into the container but I know they're there.

That brings us to the end of part one. In part two I will cover painting, weathering and presentation

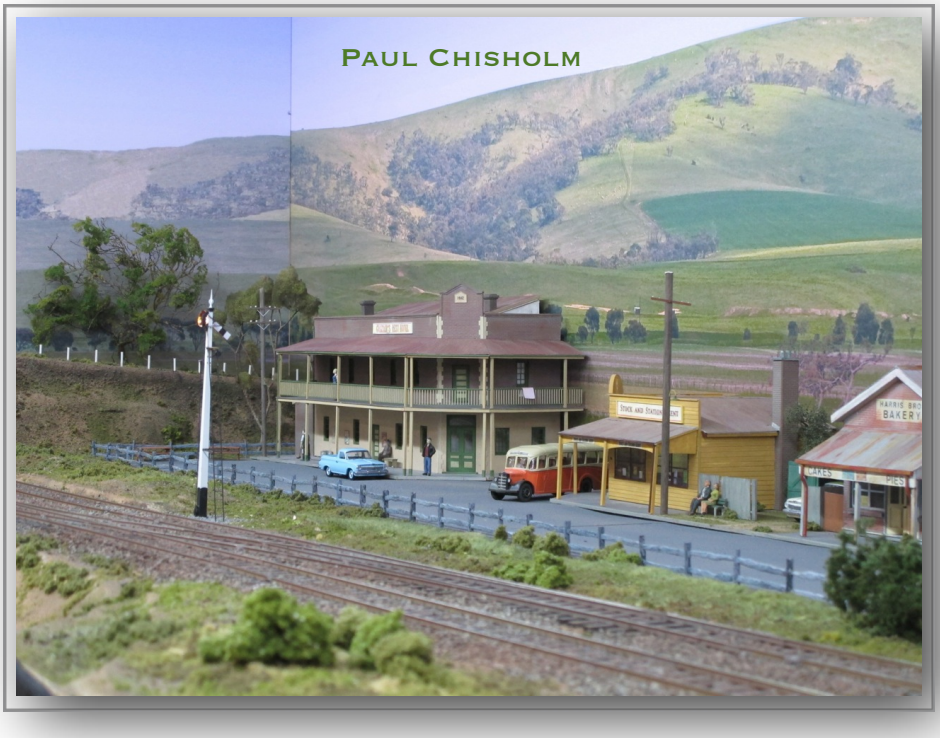
Until next time.

Articles Needed

Please consider sharing your work with your fellow Aus7 members by telling us about your layout (planned or under construction), some rolling stock you have built, a kit you have modified, some materials or tools you have found useful, techniques that work for you or just send some photographs for the Showcase page. Don't think that your efforts are not good enough or not of interest to others. Send me something!
Paul Chisholm – Editor

The Grizzler's Rest

Paul Chisholm



Every self respecting Australian country town has to have a hotel or two and Arakoola is no exception. Maybe the NORCO Co-Op is the largest building in town but for the locals the Grizzlers Rest is the most important. This building always seems to attract a lot of comment at exhibitions with many viewers swearing they know where the real one is so I thought I might tell you a little about it.

The pub started life about seven years ago when a hotel was needed for the township of Stringybark Creek and it just so happened that I had always admired the many country hotels encountered on my travels, for their architecture and character not their product, and always had in the back of my mind that I would like to build a model of one. But until then I had no real need to do so. Consequently I volunteered for the "contract" and started searching through my photographs of likely prototype buildings. Many were discarded for various reasons. Too large, too elaborate or just didn't look right for the layout. Then I remembered a photograph of the pub at Merrygoen in Byways of Steam 6 that I had always thought looked like a typical small town hotel. Not too fancy but still with lots of character and whats more it was located on a street corner just like the hotel for Stringybark had to be. So despite never having been there and only having the photographs to go on I decided it was the one.

Then, what to do? A trip to Merrygoen was not possible and I didn't really want an exact model, more of something that just captured its character but fitted the model scene. So I just started drawing up plans. Once you have a starting point and a dimension it easy fairly easy to extrapolate so I began with an estimate of the measurements of the large front doors on the corner of the pub and worked from there. This allowed me to estimate verandah heights, column spacings, window sizes and spacing. The overall dimensions were adjusted until it just looked right and of course fitted the site for which it was intended. A half dozen or so drawings were produced and each one amended until I was happy with its overall appearance.

A major consideration for the pub and all the buildings was that they had to be portable and and placed on the layout each time it was set up for an exhibition. This dictated a solid base and I chose plywood to form the base and extend out to represent the footpath and kerb as well.

I like to experiment with different materials and had read about the use of foamcore for model buildings so I used this for the basic structure. I found it easy to work and quite rigid and strong enough for the purpose. The lower floor is just foamcore painted to represent a rendered surface while the upper walls are covered with Slaters embossed styrene brickwork. These sheets were painted with an appropriate "brick" colour from the Humbrol enamel range and then a mid grey colour brushed over the surface and quickly wiped off so that it settled into the joins to look like mortar. It also gives a slightly hazy film on the bricks and makes them appear aged.

The biggest challenge was the geometry involved in getting the section across the corner to the right proportion and matching up with the straight side and front walls.

The doors, windows, chimneys and verandah railing came from the Grandt Line range and the roof is an aluminium corrugated iron material. The figures are from the Phoenix range in the U.K. and the posters were sourced on the internet and printed on a regular inkjet printer. So far no one has made mention of the intimate garments on the washing strung out on the balcony.

After a few appearances on Stringybark a miraculous reincarnation occured and the hotel took up residence on Arakoola along with many of the other Stringybark structures. As for the name. Originally it was going to be just "The Railway Hotel" of which there must be a couple of hundred spread around the country. However it became "The Grizzlers Rest" named after one of our team, as are most of the shops and businesses on the layout. If you know any of us you may be able to figure out who, but I'm not telling.

The Tottenham Branch

Part One

By Derick Cullen

Introduction and Opening

The branch from Bogan Gate to Tottenham was opened in three stages: Bogan Gate to Trundle on 6 August 1907; Trundle to Tullamore on 15 December 1908; and Tullamore to Tottenham 17 October 1916. Apart from small-scale copper mines near Tottenham, the traffic potential of the line was based in the farming output of the region. That the line still exists is testimony that the farming output is substantial.

I lived in Trundle in the mid-fifties, a time of rural boom, and this article is a mixture of recollections of childhood and factual information drawn from other published sources.

Basic Information

The table below summarises the essential features of the branch. Noteworthy is the provision of bulk grain facilities at many stations and sidings. The three stations noted as attended, train staff stations in the 1968 working timetable, Trundle, Tullamore and Tottenham, were also significant service towns for their immediate region. The only other settlement along the line is Albert. All other places were platforms or platforms with siding designed to service the surrounding sparsely settled districts.

The provision of rail facilities every 10 km or so along the line reflects the execrable condition of the road network in the region until the late 1960's. The gravel roads were dusty and beset with vehicle-breaking washboard-like corrugations and potholes during dry weather and degenerated into impassable quagmires cut with muddy streams in the wet. The vibrancy of life in the little towns of Trundle, Tullamore and Tottenham owed a lot to the pain of travelling to Parkes, the major regional center, as well as the boom times. The railway played a vital role moving not only the bounty of the land but also providing passenger and mail services and a considerable inward traffic in parcels and the requirements of civilization.

The line traversed gently undulating to flat country and despite the "pioneer" standards of construction (unfenced right of way, 60 lb. per yard rail, ash ballast and minimal earthworks), grades and curves were generally easy. There were a few short stretches of grades sharper than 1 in 100, some being 1 in 71, and curves were of 20 chains radius or broader, except for one of 12 chains at the junction with the Broken Hill line at Bogan Gate. As a result the branchline power allocated could haul quite respectable loads.

Table 1: Basic Information

Station	Mile.chain (1)	Kilometers (2)	Height m. (2)	Opened (2)	Closed (2)	(1,2) Facilities	(3,4) Grain Storage
Bogan Gate	300.14	483.082	234.3	15-Dec-1896		a,t,,ots	S054, B067, E270
Botfield	309.26	497.807	299.9	06-Aug-07	23-Nov-74	u	
Trundle	315.75	508.455	251.7	06-Aug-07		a,t,ots	S068, C288
The Troffs	322.79	519.715	263.3	15-Dec-08	23-Nov-74	u	S016, B067
Kadungle	327.56	527.376	283.7	15-Dec-08	23-Nov-74	u	S016, D150
Gobondery	333.13	536.167	256.6	15-Dec-08	23-Nov-74	u	S016, E164
Tullamore	337.48	543.306	238.9	15-Dec-08		a,t,ots	S024, B067
Yethera	344.50	554.601	242.0	17-Oct-16	23-Nov-74	u	D150
Middlefield	351.71	566.310	238.0	17-Oct-16	23-Nov-74	u	
Albert	358.33	576.822	220.6	17-Oct-16		u,t	D150
Minemoorong	364.33	586.462	219.1	17-Oct-16	23-Nov-74	u	
Tottenham	371.18	597.441	236.5	17-Oct-16		a,t,ots	A191, E270

(1) 1968 Western Working Timetable
(2) Station Names, 3rd edition 1979 (PTC of NSW) (km of Bogan Gate, Kadungle estimated)
(3) AMRM issue 164 (Oct 1990) "Storing the Golden Grain"
(4) Graincorp Website
a=attended station, u=unattended
t=telephone
ots=ordinary train staff station
Maximum grade: 1 in 80
Most curves 20 chains radius or greater, except 12 chain curve at Bogan Gate with 15mph restriction.

Along the Line

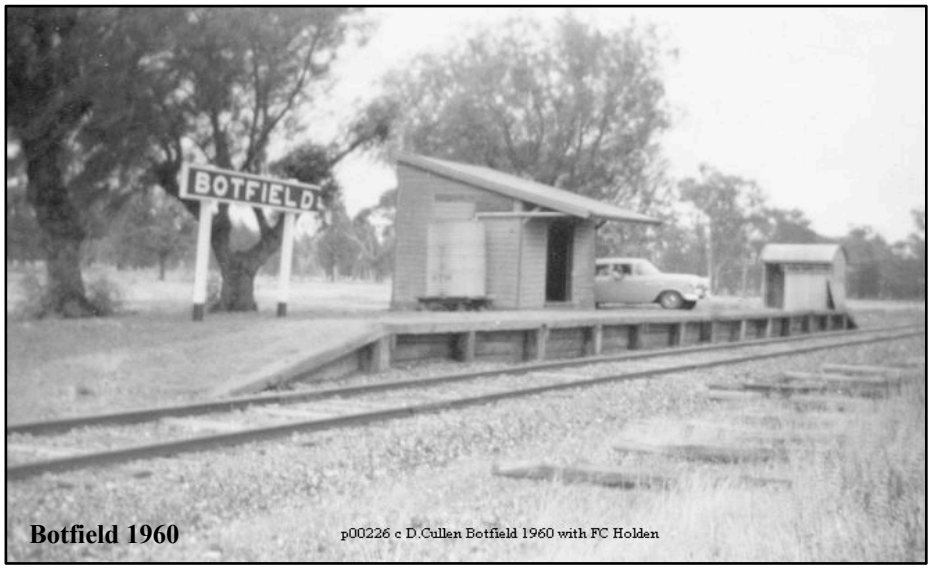
After curving away from Bogan Gate, the line heads in a generally northwest direction through a gap in some low hills and climbs out of the Gunningbland Creek catchment towards the highest point on the branch just before the platform named Botfield. From the summit the line descends into country drained by a tributary of the westward flowing Yarrabandai Creek and Trundle.

At Trundle the station yard, and indeed the surrounding country, is dominated by the tall concrete grain silo. The silo is one of the earliest bulk facilities, being constructed in 1920 to the same general "Metcalf" design as the pioneer 1918 silo at Peak Hill. It is substantially larger

than other vertical grain storages on the line, with a capacity of 6,800 tonnes

The other facilities in the yard consists of weatherboard station, standard goods shed, crane, loadbank, road vehicle weighbridge and stock yard spread out in the usual places and track layout expected for NSW country towns. There was a large overhead iron water tank of standard pattern for locomotive purposes at the Tottenham end of the yard. The water supply for this tank was some distance away and consisted of an earthen dam fed from the same creek that supplied the reticulated, but non-potable, water to the town. There was a standard steam driven pump in a pumphouse on the banks of the railway dam, which in times of low water was fired up by the station master and his assistant, at which time the aroma of coal smoke wafted over the nearby Trundle Central school, to the delight of the inmates. The "railway dam" had a deserved reputation amongst the said inmates for supplying the best yabbies of all the waterholes near the town, and a probably related reputation for being the most leech-infested swimming hole.

After the 1956 wheat harvest there was a huge stack of bagged wheat constructed in the yard, roofed with galvanised iron, with side sheets of hessian and a "mouse-proof" fence. This stack provided steady employment for a gang of three or four local wheat "lumpers" who doggedly manhandled the 3 bushel 180 pound jute bags into S and K wagons stacked in accordance with diagrams posted on the walls of the goods shed. It seemed to take about 6 months for the stack to disappear. Such stacks were to be found at other locations on the line, and perpetuated the methods of wheat handling prior to the push towards bulk handling that started in the 1920's. Even wheat delivered to the silo frequently came in bags. I can recall "assisting" my father who helped one of his farmer friends cart the wheat from farm to silo. The routine was to park the truck loaded with wheat bags in the queue and await grain receival time in the early morning. The number of trucks in the queue overnight was a topic of discussion at school in much the same way as test cricket match scores.



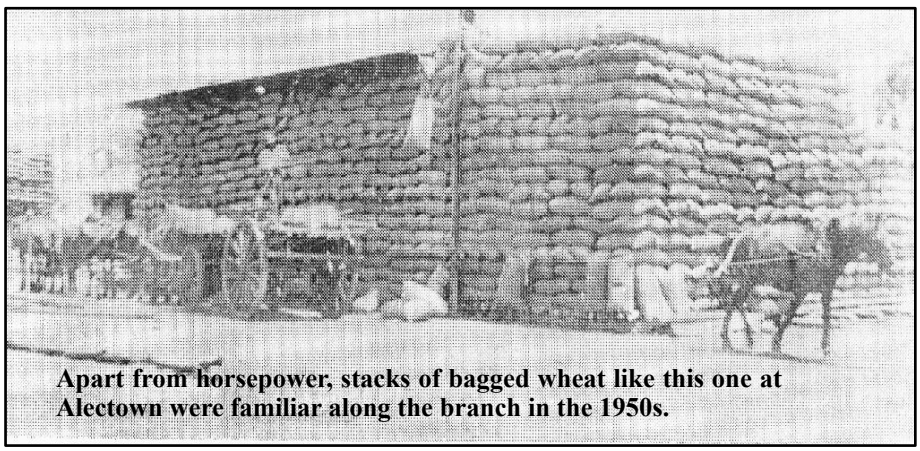
Botfield 1960 p00226 c D.Cullen Botfield 1960 with FC Holden

My father and I would man his mate's truck early in the morning, weigh at the weighbridge, and proceed to bulk receival or bag stack as directed. The bulk receival hopper at the silo could take 2 trucks at once, which superiority in queue moving capacity over the 1 truck at a time arrangement at Bogan Gate was remarked on when discussing the relative merits of the little regional towns. After sampling tests on the load had been passed, the cords with which the bags had been hand sewn laboriously only a few hours beforehand were slashed and the bags emptied into the receival hopper, and the empty bags stacked neatly for re-use. Then back to the weighbridge to "tare off". My father's mate's farm was reasonably close to town and we usually then set off to collect another load. Wheat stripping was done at night as well. The night's harvest had to be bagged, sewn and loaded on the flatbed truck with the aid of an ingenious bag hoist attachment powered by the truck's motor. Then back to town, and the queue.

Discussion during the bag sewing sessions usually involved calculation of yields, quoted as bushels per acre.

Really modern farmers avoided the manual labour and not inconsiderable cost of bags by having a bulk wheat bin tailored to fit their truck by the local welders. This was not popular with the town-dwelling inmates of the school, however. After a flatbed truck had had its load of wheat bags dispatched, a considerable amount of grain was left behind on the flatbed. As the next stop after tareing off for many drivers was one of the two pubs, a small boy equipped with a dustpan, broom and wheat bag could collect up to half a bag of wheat off the trucks now queued outside the watering holes. Over the weeks of the harvest enough grain could be collected this way to supplement the foraging diet of the family chooks for a good part of the year.

To be continued.


Apart from horsepower, stacks of bagged wheat like this one at Alectown were familiar along the branch in the 1950s.

SHOWCASE

An attention grabber running on Arakoola was Roger Porter's recently completed ballast train hauled by 4108. The level of detail can be appreciated by taking a look inside the loco cab.

Below is a scratchbuilt CR composite carriage recently completed by Paul Chisholm.

Commercial News

Trevor Hodges

O-Aust

O-Aust Kits info@oaustkits.com.au, and via the web site at www.oaustkits.com.au, at PO Box 743, Albany Creek, Qld, 4035, mob 0419680584 or (07) 3298 6283 have advised that they are no longer able to accept orders for ready to run locomotives and rolling-stock. All orders for ready to run placed prior to 30 June 2012 will be honoured.

As previously announced the R cars are shortly to be discontinued. There will be a small production run in later this year to fill outstanding orders. Orders placed by the end of August will be factored into the numbers for the final production runs.

The first batch of GSVs sold out and the second run should be available in late July. Anyone who purchased kits from the first but is yet to receive their decals should contact either Bergs Hobbies or O-Aust Kits to arrange supply of these.

The EHO passenger guards van kit is now in production and should be available by the end of Winter, 2012. The kit is based on the mansard roofed version originally produced in 1907.

The next rolling stock kit release will be the 1959 built BSV bogie sheep van. It is hoped that the first batch of these will be available in time for the Liverpool Exhibition.

There are two rolling-stock kits in 1:48 scale for Victorian Railways modellers now listed in the O-Aust Kits product range to compliment the Flat Top T locomotive kit. These are the ELX bogie open wagon which is now available and the B four wheel box van which should be available later in 2012. Future projects in this area will be governed by the response to these two rolling-stock kits.

Graham Holland has advised that he expects to be in a position to start distributing 30T locomotive kits in September to those who have ordered them from him. There have been a couple of last minute changes to the kit, including the use of etched rods rather than the cast brass ones used in previous Century Models locomotive kits.

O-Aust Kits plan to release their own 30T kit. Production schedules are being examined in order to choose a time that does not clash with the release of locomotive projects announced by other manufacturers.

Waratah Model Railway Co

Waratah Model Railway Company, 149 Kyle Bay Rd, Kyle Bay, NSW, 2221 (02) 97851166 charris@nigelbowen.com.au and waratahmrc@optusnet.com.au have announced that the TRC project is progressing satisfactorily. This is the first Waratah project to employ rapid prototyping technology and the results so far have been very pleasing. Some detail samples have been received including the end panels and these look very promising. The BD project has been slowed due to personal circumstances however the instructions are in the final stages of preparation and this kit should be available for release in time for the Liverpool exhibition or the Forum soon after that.

Bergs/Haskell/O-Aust Kits

Bergs Hobbies, Keiran Haskell & O-Aus have passed on the news that the NSWR 44-class locomotives are currently on the production line at the factory in China. Delivery is expected in late September. The final pilot model is expected to be on display at Bergs Hobbies from Monday 16 July.

Ixion Models

Ixion Models, PO Box 303, Quakers Hill, NSW, 2763, Australia, (02) 9626 9273 or (02) 4957 415, info@ixionmodels.com and www.ixionmodels.com have announced that the brass RTR model of NSWGR 1021 is sold out.

The RTR 7mm Hudswell Clarke production run is due for completion on July 20th. Once stock is available in Australia, these models can be purchased from Ixion's website, www.ixionmodels.com . They will also be available at a limited number of exhibitions such as the AMRA show at Liverpool. Look for the Pallas Hobbies stand.

Notice of Aus7 Modellers Group

Annual General Meeting

Venue: North Sydney Leagues Club,
Saturday the 27 of Oct 2012, 12.45 pm

Agenda Items

1. **Election of officer holders**
2. **President's Report**
3. **Presentation of financial accounts**
4. **General Business**

Note: For the convenience of members the AGM has been incorporated into a regular O Scale Forum. This will reduce the time available for general business. So if you have an item you would like to add to the agenda it would be appreciated if you could advise the executive in advance. Any financial member of the Aus7 Modellers Group is entitled to vote at the meeting. Proxy voting will be allowed. Any member wishing to vote by proxy may get a form for this purpose from the Secretary and have their vote used at the AGM by another financial member. Any one member attending is limited to using a total of no more than five proxy votes.

Forum Bring & Buy

North Sydney Leagues Club,
Saturday the 27 of Oct 2012

As a service to members, the executive will be trialling a Bring & Buy table at the next Forum. The Bring & Buy will allow attendees at the Forum to sell off excess model railway items to others at the Forum. The conditions of selling or buying are detailed in full in the document "Selling and Buying Guidelines" available from the Aus7 Modellers Group web site. The following are the main details:

- **Registration must occur before 9.30am with selling concluding at 12.45pm.**
- **A $5 registration fee applies to all sellers. This fee allows a seller to place up to 5 items on the table. A further 3% commission applies to all items sold with a value above $20.**
- **Sellers can choose to sell either by "buy it now" set price or by silent auction.**
- **All sale items should be of general relevance and interest to O-scale modellers (1:43.5 & 1:48)**

If the Bring & Buy is a success it will be held at upcoming Forums so please support this initiative and come along with items to sell.

Please contact the President with any queries.

Please

Don't let your membership lapse

Membership of the Aus7 Modellers Group costs just $AU30 per year.

Memberships are due for renewal by June 30th no matter what time of year you joined. Please forward payment to the Treasurer, Anthony Furniss at 32a Hillview Street Hornsby Heights NSW 2077. You must be a financial member to vote at the AGM in October.

If membership is not renewed this is the last issue you will receive. To receive all four issues per year you need to renew before September.

Renewals can now be done through online banking. Deposit directly to the Aus7 account BSB 062-233 Account Number 1017 2076 Be sure to supply your name.

O-Aust Kits

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Email info@oaustkits.com.au
Web www.oaustkits.com.au

NSWR GSV 4 WHEEL SHEEP VAN

KIT NOW AVAILABLE

ALSO NOW AVAILABLE
NSWR 3AG PASSENGER BOGIE
VR ELX OPEN WAGON (1:48)
VR XCS FREIGHT BOGIE (1:48)

FUTURE PLANS
NSWR BSV BOGIE SHEEP VAN
NSWR EHO GUARDS VAN
NSWR CX COMPOSITE PASS CAR