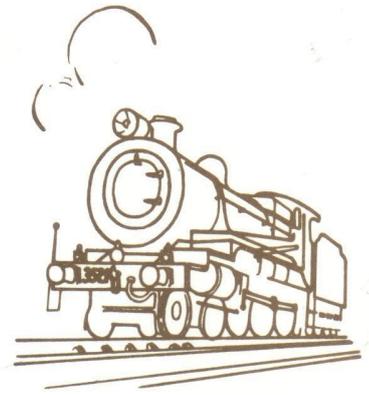


# Sydney Live Steam Locomotive Society

Anthony Road, West Ryde, N.S.W.

## 'Newsletter'

Volume 47. No. 4.  
November 2019



**Andrew Allison with his recently completed Austere Ada. The loco was an unfinished Ebay purchase. The chassis was not too bad, but a new boiler was needed. Just about all the detail work is new. Read about it in this issue.**

### August Running Day.

The end of our 2019 winter running season saw a bright and sunny day with a forecast temperature of 19 degrees. This usually indicates that we will have a busy day. Setting up for the day began about 8.00am with Graeme K blowing the tracks clear of leaf litter. Graeme was soon followed by others who were quickly involved. Passenger cars were brake tested by Barry M, John S and Tony K. James S was unloading his Z12 class and "Gresham" a narrow gauge locomotive having its first outing on our club tracks. Martin D saw that the point motors and signals were well and David L did some programming work

on the PLC box for operating the crossing gates to the central picnic area on the inner main. John L checked the vegetation clearance around the outside of the elevated track as well as checking the track itself.

We had a few things to examine at morning tea. James had the rolling chassis of a Baldwin Sydney steam tram engine with its boiler and a selection of other components. Andrew A showed the timber sides for a similar tram engine he is working on. The August Newsletter was distributed so there was some reading material as well. Between morning tea and lunch Andrew was kept busy with a hydro test for James' tram boiler and then a



**Garry and Impala head downhill with David T driving Nigel Gresley behind while there is action in the inner main with Ray and Graeme coming past Ross & Toneya in the station on our August running day.**

hydro and steam test for the Z12.

As running was underway at 1.30pm Evan L began showing around State Parliament local member Victor Dominello and some of his associates. Evan gave him a good tour of the grounds, a ride on one of our trains and the MP was even seen operating the elevated track lever frame under very close supervision.

On the inner main Ross with Fowler 0-6-2 "Toneya" hauled the green car set with Tony E as guard for the early part of the afternoon. The second train was made up of the red set with Graeme K and 2401 4-6-2 as train engine and Ray L and C3281 4-6-0 running pilot. Ian T and later Barry M were guards on this train. Ray had some problems with the C32's front bogie delaying his running causing Graeme to commence running with a reduced

load. Both inner trains had some problems with the track just as the climb began after the curve at the bottom of the ground. After a track examination by Peter D and David J it was discovered that there were some dips at rail joints so with some help from John S and Peter W and a crowbar the problem was corrected and running continued without incident for the rest of the afternoon. Late in the afternoon Ray and the 32 were replaced by John T and the 2-8-0 J class running till the end of the day. Carol L and Paul B were the stationmasters for the inner track.

There was only one train running on the outer for this running day. The blue car set was hauled by David Lee and both his Commonwealth GM locomotives with Neil Mackellar's B&O 0-6-0 shunting loco running pilot. Graham T was the initial guard on this train and when Tony E took over driving from Neil, Neil then had a turn as guard. Peter D was outer stationmaster and this train ran very well all afternoon.

On the elevated we started with two trains. Wayne and his 2-6-0 were coupled with Tony's ten wheeler to a six car train with John L as guard. David J took over the regulator for the later part of the afternoon till a serious leak from one of the steam chests created a great decrease in power. As the afternoon was winding down the opportunity was taken to put the cars away. James then had his "Gresham" in steam and coupled up to two cars later adding another two. Greg C was guard and Andrew A was seen at the regulator. The second train all afternoon was run with Garry's B1 4-6-0 and David T driving John H's 2-8-0 "Nigel Gresley" pulling four cars. David J started as guard followed by Brian K, Jim M and later John L. The B1 had some steaming problems and Garry returned it to loco for some attention, the 2-8-0 continued with a reduced load. By the time Garry was ready to return to the train

**Ray Lee and 3281 leads Graeme K and 2401 on the inner main on our August running day.**



Evan had taken over driving the "Gresley". Eventually very late in the day they both developed steaming difficulties so the cars were stowed and the locos returned to depot. This left James and "Gresham" with the track to themselves. "Gresham" is a 2.5" scale model of a 2'0" gauge 0-4-2 Dick, Kerr & Co. Ltd. locomotive purchased by the Marian sugar mill between 1896 and 1910. It is a very solid locomotive and James has made a very nice job finishing it off. As things turned out this was the last train in revenue service to operate over the elevated track that has served us since 1976. The following day work began on the replacement of this track. The elevated station was attended to by Paul T, Brian K and Jim M

The signal box was attended to by Barry M and Andrew A with Martin D joining later. Track Super was Steve B. Our kiosk was looked after by Joy, Diane, Elizabeth, Margo and Terri. Peter W sold the tickets and reported the tally for today was 2379. On the gate we had John S assisted by Jo-Anne, they were very busy early on then a steady stream till mid afternoon.

It had been a busy day and we had just enough members to get by, a good effort by all.

### September Running Day.

During the week before this running day we had experienced a good lot of rain over the greater Sydney region. We were fortunate that the rain had cleared but we experienced a rather humid day and a temperature in the high twenties. It also came with lots of very annoying flies. The cloud did return later in the day but there was no further rain.

John H and Barry M were early arrivals followed soon after by Graeme K, David J, Neil Mac, Mike D and Eddie, a prospective new member. Bernie C and David J put out the signage while Mick and Scott put out some new signs that hopefully will help inform our passengers of the best way to get on and off our carriages safely. As well Mick put up a recruitment poster that may encourage some potential members. The ground level cars were brake tested by Barry M, Mick and David J. Graeme K cleared the leaves from the track while John L trimmed any overhanging vegetation around the perimeter of the elevated track. Mark G and Martin D checked and oiled the point mechanisms and replaced the power supply for one of the CCTV cameras. David L did more testing on the PLC box. Before morning tea John H carried out a load test with Wayne F's Alco diesel. This was built by the late Ross Styles. The loco went well hauling 13 cars on the inner GL main. Neil Mac had the Gunning built "Coronation" for a hydro and steam test. While the hydrostatic test was fine a leaking wet header foiled the steam test. This was the first time this loco had steamed since 1976!



**Neil and the Switcher leads David Lee and his double GMs on the outer main on our August running day.**

Running on the elevated today was very special for it was the initial revenue running with the beginning of the track replacement. The first section was from the back of the signal box to the carriage shed siding stub points. Garry with his B1 hauled the first train over this section. The blue car set was hauled by Wayne's Alco diesel locomotive driven by John H with initially, John L riding guard. The locomotive ran well all afternoon and handled the loads quite well. Some of our visitors even requested waiting for the "diesel". The second train had some variation of motive power. Initially the red set of cars was to begin running with Garry, B1 4-6-0 and John T and the 2-8-0 J class. With the J short of steam it was replaced by Simon with the "Simplex". Garry later had injector problems and was replaced by the now ready J class with John T. Wayne was the initial guard on this train. The elevated station was looked after by Paul T and Eddie.

The inner ground level had the big power for the after-

**Simon and Simplex leads Garry and Impala in September.**





**Ray Lee and 3506 leads Graeme Kirkby uphill on the September running day.**

noon. The green set was hauled by the Wolgan Valley Shay with Scott M at the regulator and Martin Y as guard. Ross B with Fowler "Toneya" hauled the red set and Tony E was guard. Peter D took a turn at the regulator of the Fowler. Both of these trains ran well all afternoon and Ian T was inner station master.

On the outer main Jim M ran the 4-8-2 "Green Machine" on one train, Central West set, for the afternoon. Ray L was guard early in the run then Neal B. There was some assistance for the 4-8-2 mid afternoon when Neil coupled the 0-6-0 switcher in front and both locomotives saw out the end of the running. The second train, the blue set had Graeme K and pacific 2401 train engine and Ray L's C3506 driven by Matt Lee on the front. Bernie was guard and later Evan. Outer station staff were Peter D and Tony K.

**Ross Bishop and Toneya on the inner main on our September running day.**



The kiosk was looked after today by Elizabeth, Diane, Margo, Joy and Terri, they were reasonably busy for the afternoon. The signal box was staffed for the afternoon by Mike D, Barry M, Martin D and David J. Our track superintendent was David T.

Neal B was gate keeper assisted by Jo-Anne and our ticket seller was Peter W, assisted by Margo for a short time. Including pre-sold tickets the day accounted for 2027 rides. We finished another very busy afternoon with all present working very hard. Thank you to all members for their big effort.

### **October Running Day.**

This started as a bright sunny day but into the afternoon clouds rolled in and we had a few drops of rain. We had

some competition in the local area today with the Granny Smith Festival taking place in neighbouring Eastwood. This usually gives a slow start with numbers picking up later in the afternoon. Ticket sales of 1653 told the story. Peter W was the main ticket seller with some support from Margo. On the gate was Ian T.

Setting up had members busy with the many tasks as they arrived. Dennis OB was into cleaning the park benches and carriage seats, David J and Eddie put out the signage. Graeme, as usual, blew the tracks and pathways clear of leaves while John L trimmed all the overhanging vines and leafy branches to clear the elevated track. John S cleaned out the public toilets. Barry M tested the brakes on the ground level cars while the elevated ones were tested by John S and Eddie. Mike D had recently repainted and reinstalled the disc of no. 7 shunt signal and the latches of the level crossing gates. Before running started Neal tested his 3½" gauge battery operated diesel locomotive. At the end of running Neal ran the loco again and Jo had a turn as well. In the club house at morning tea time Warwick showed us a pair of wooden framed six wheel bogies for a set of Pullman cars. The bogies are very detailed with lots of metal plates and angles and M2 fastenings, great detailed work. John H had a very intriguing vice for holding unusual shaped components. A few remarked that it looked like some form of medieval torture device more at home in a dungeon than a workshop.

As running was underway on the elevated it was discovered that a missing fastening on one of the deck timbers on no.1 stub points needed attention, this was quickly repaired by David L and Nigel W. The blue set of cars was hauled by Simon with 0-6-0 "Simplex" running in front of Garry's B1 4-6-0. They ran very well till the end of the day. The second train of six of the red cars was hauled by Wayne's Alco diesel loco. Some time back the loco was named "Grant" to be pronounced "grunt"! Early on David J had a turn driving commenting how different the driving method was. While handling the load easily there were a couple of issues, a blown compressor hose

## Duty Roster.

**December:** Mick Murray. Andrew Allison. Mark Gibbons. Wayne Fletcher. Graeme Kirkby. John Noller. Ian Tomlinson. Glen Scott. Bruce Hartwell

**January:** Evan Lister . Simon Collier. Garry Buttell. Barry Millner. Scott Murray. Graham Tindale. Paul Brotchie, Mike Dumble, Deven Shirke

**February:** David Thomas. Bernard Courtenay, Greg Croudace. Stuart Larkin. Lionel Pascoe. Shaun Sorensen. David Lee. Brad Wilkinson. Geoff Hague. Martin Dewhurst

**March:** John Hurst. Jim Leishman. John Lyons. Matthew Lee. Jim Mulholland. Martin Yule. Warwick Allison. Evan Lister. Nigel Woolley. Bill Perrin

## Gate Roster:

**December** P. Brotchie; **January** G. Buttell; **February** B. Carter; **March:** S. Collier

## Track Superintendents

**December** Steve Border **January** Mick Murray; **February** David Thomas; **March:** Neal Bates.

was the first thing and then the cooling fan lost one of its blades and the loco was then retired for the day. Guards were John S on the red set and John L with the blue set. Station attendants were Paul T, John S and David T.

Ground level running saw Ray L with C3803 on the outer main hauling the blue car set. Tony E was guard initially and the pair alternated duties throughout the afternoon. The second train on this line was

double headed with Neil and the 0-6-0 switcher leading Graeme with 4-6-2 2401 hauling the Central West set. Neal B and later Jo-Anne were guards. There was a brief problem with 44 points but Mark G was able to sort out the trouble. Apart from that issue both trains ran well for the entire afternoon.

On the inner main we had Warwick with WAGR V1224 hauling the red car set. This was Warwick's first run since returning from his northern hemisphere summer adventure. Paul B was guard for this train. David T had a turn at the V's regulator and Nigel W was guard for a time. The green set was run by Mick's Shay with Scott M acting as guard. During the afternoon Scott and Mick swapped duties around. Inner station masters were Bernie C and Nigel W.

The signal box crew were Martin D, Mike D and Barry M, track superintendent was David L. Our kiosk was very well attended to by Diane, Lee, Margo and Terri.

A big thank you to all who assisted with the day's operation, while the numbers were down a bit we were still quite busy.

## Works Reports.

**Retaining Wall.** Work has started on this project on the western side of the elevated track. Neal B is leading this project. We have all the components on hand, galvanised posts and treated pine timber beams. This will allow a better alignment when the elevated track replacement gets to that side of the ground.

**Ground Level Track.** Work is continuing on the replacement of ties on sections of the track. The old ties are being replaced with stainless steel ones. If you saw the condition of the replaced ones



Retaining wall construction scenes.

you can understand why stainless steel is being used. Paul B, Peter D and Tony K with other helping are leading this work. Thanks to Wayne for the sleepers.

**Gardening.** With a little bit of rain and the warmer weather there is plenty of growth to keep us busy. Simon has been working on the ticket office garden with it looking very good. David T is always working around



## Diary

30 November	Special General Meeting, 9am
7 December	WRNCC Christmas party (lunch) and SLSLS Christmas Party (evening)
21 December	Public Running Day
<b>2020</b>	
7 January	Directors meeting, 8pm
18 January	Public Running Day
15 February	Public Running Day & next newsletter!
1 March	Members Day
3 March	Directors Meeting 8pm
7 March	Special General Meeting 9am.
21 March	Public Running Day
10-13 April	AALS Convention Bulla Victoria
30 May	Presidents Breakfast AGM & SGM.



**Above: David T attacks an unwanted branch. Below: Mike and Neal attend to fence rail renewals. Further below, Martin, Deven & Paul enjoy the mulcher!**

the other parts of the grounds. David was also able to organise the removal of the privet tree that was growing over the fence and shading the lever frame end of the elevated station. This will give a lot more light to the station area and will save the gutter cleaning that has to be done quite often. Mike D and Bernie have continued their work cleaning and repainting the signals around the track. They are looking much fresher and brighter. Martin D continues to work on the relay box

on #7 signal post and with Mark G spend a good amount of time maintaining the GL point mechanisms and signal systems. John L attended to an elevated signal wire pulley block that had its anchor pieces rusted out. The rusted parts were angle ground clean and two stainless steel angle brackets were welded to the block. This was then fastened under the point rods with dynabolts.



**Mike D has proven to be a true Rembrandt, here showing how it is done. The signals have never looked so good!**



**Elevated Track.** On the Sunday following the August running day work started on the elevated track replacement. The first section was about a 30 metre straight run south from the carriage shed siding stub points south to the back of the signal box. Andrew had led the preparation for this event over the previous few months. John H had worked on a device for lifting and transporting the old concrete beams. Work began at about 8.00am and with a good team of members and friends the old track, beams and posts were cleared by morning tea time. The rest of the day allowed time for a good clean up of the site and foundation preparation for the new piers to be placed in position. Over the following Saturdays the new beams and track were positioned and the anti-tipping rails fitted. Work was undertaken to slew and modify the old track to give a seamless connection from the old to the new section. All was ready with a week to spare before the September running day. It was great to see that Andrew and his team's planning and preparation had been so successful. Running on the September running day was without drama so we can look forward to this project making further progress. *(See photo coverage opposite).*



**Evan showing local MP Victor Dominelli our operation.**



Thanks to David Judex for the photos in this issue.

*(Reports continues on Page 14)*



### The Elevated Track Replacement

Shown left is the before situation while at right is the newly installed top section. Other scenes show the work under way. Firstly the old track was demolished, then the new piers set up, the new support channels were put in place. Some welding is needed on the anti tip rail brackets and the final removal of the old beams. Thanks to David Judex for the photos.



### Editorial

As we come to the end of another year we have made a very good start on two major projects that will keep us involved well into the future. We will need a good participation of members to see these improvements make steady progress. On a sad note we had the passing of Alan Mackellar, a gentleman, a wonderful model engineer and a mentor to us all. He was involved with the SLCLS from its beginning.

To all the members and friends of the society best wishes for the Christmas season and may 2020 be a happy, safe and productive year.

John Lyons  
Fill in Editor.

# Our Small Ga 2 & 3 Novem



# uge Festival mber 2019



## Ada

## Andrew Allison

One of my favorite books as a kid was 'LBSC - his life and locomotives' by Brian Hollingsworth. I never read the words - but my brothers and I would play a game where we had to choose our favorite loco on that page. As I got older I found the loco index in the back excellent and would regularly look up loco serials in the clubs ME library. One of my favorite LBSC designs was Austere Ada. The brutish appearance looked like it meant business.

Looking around the Internet one day on gumtree I came across what was undoubtedly a part built Austere Ada in South Australia for \$550. From the brief exchange I had with the seller, he didn't seem to know much about it, it was something his late father had stashed away. From the photos it was difficult to tell what stage or condition it was in. Part built 2.5" gauge locos are really not worth much and as an unknown quantity it wasn't what I would say is cheap, but as it was one of my favorites decided it was worth a punt.

When it arrived I was quite impressed with the workmanship. The tender and loco chassis were almost complete, and the valve gear was mostly there. The tender plate work was sawn to shape, axle and hand pumps complete and a start made on the smokebox and chimney. There was a boiler, which was not quite finished (dome bush not tapped out, etc) but had obviously had a pressure test as the crown was collapsed. The plates had no radius and the staying was not up to code, lots of soft solder present... so it was a pretty obvious the boiler was scrap!

The chassis of the loco and tender were rusted and gummed up, so the wheels and rods were removed and the lot cleaned up and some bits painted while reassembled.

The valve gear was largely complete except for the return

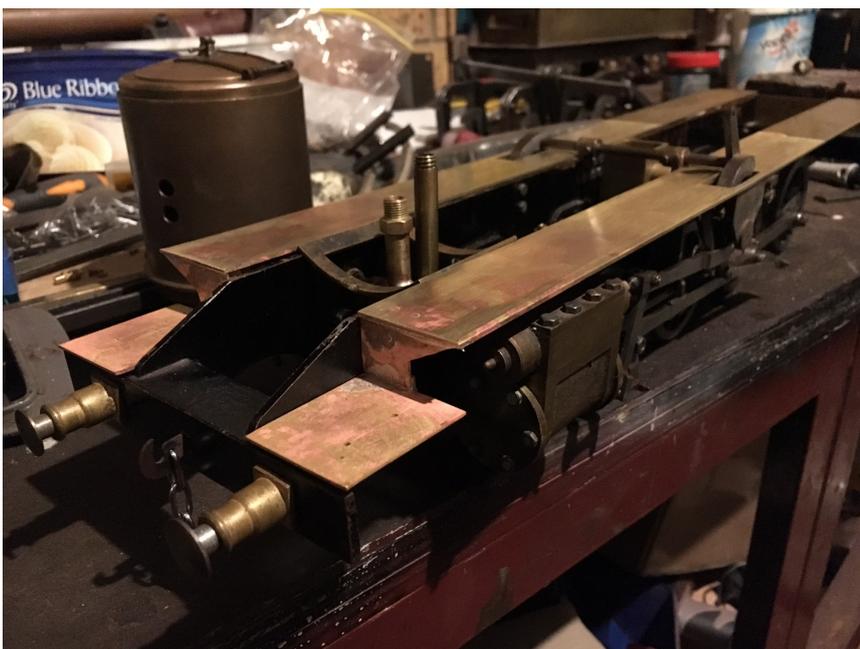
cranks, eccentric rods and it had no valves or valve nuts. I followed the LBSC instructions to complete the chassis and 2 weeks after receiving it, Ada was running on air. After this I fitted the lubricator. This was a modified steam fittings lubricator, but I changed the spring-return plunger to a scotch crank arrangement. As well as reducing the load on the mechanism, this halves the oil output as now the ram has to drive up, whereas with the spring it returned to the open position very quickly! (It still pumps way too quick and further mods may be required to reduce oil consumption!)

Attention then turned to the tender. The plates were filed up and with appropriate bits of angle and rivets held together and soldered up. Buffers made for loco and tender and a bit of time was spent making various details for the tender, vacuum swan neck, lamp irons, ladders and air vents. The lot was then left aside for several years!

After completing my 7/8" scale 45mm gauge Jack loco which was fitted with an experimental boiler, I was keen to continue experimenting with what I thought were the successes of that design. This small 2" diameter coal fired boiler had a very low crown, with the increasing water capacity and very thick plates to provide increased heat capacitance. The trade off for this is less tubes can be fitted - It was only had 2 x 1/2" tubes. The large tubes avoid the clogging up that seems to cut short the run on small locos. This had proved itself on the small garden railway loco however I was keen to see if it could also be applied to the larger gauges as the demands on the garden gauge are quite different with a relatively flat track meaning a constant regulator setting is maintained unlike the more rigorous demands of passenger haulers.

With this in mind a boiler design was drawn up for Ada to meet the AMBSC code. The 3.5" diameter barrel, with other plates and wrappers is from 2.5mm thick copper. As well as providing heat capacitance, the thick plates add useful adhesive weight! The crown was lowered to be on the centreline, and the number of tubes reduced from 9 to 5 with tube ligaments of 3mm. The 2 large superheater flues are fitted with 1/4" stainless radiant spearhead superheaters. Incidentally one benefit of radiants is that it removes the spear point terminating block from inside the flues so unnecessary restrictions through the flues are reduced. The foundation ring actually sits on top of the frames with the inner wrapper extending just another 1/2" into the frames. The firebox is very shallow as a result. A benefit of the low crown is that it allows the water level to be carried lower, which reduces the risk of priming.

A few other considerations were made. Tube sweeping is always a pain, and especially so in a small smokebox filled







not complete!) in time. After all I had an air running chassis, boiler, and completed tender sitting under the bench, it seemed possible. A list of items required to get it running, from axle pump plumbing to tender drawbar was made. I worked on the biggest and most time consuming items first and thought about the tricky items for a while! It certainly helps making a list of things you can tick off to maintain productivity. Another thing I find useful to stay inspired is to take a photo of where I am up to on my phone, this allows you to look at it and think about next steps when you are on the train going to work etc so when you next get a workshop opportunity you know what you're doing next.

I made the superheater assembly using some 1/4" stainless welded spearpoint elements that had come from Jim Leishman. The smokebox front as it came was not very convincing so this was all re-machined and a new locking mechanism for the door, along with the lamp irons was added. The dummy compressor on the smokebox is a 1:20.3 scale Accucraft product intended for narrow gauge (3') locomotives in 45mm gauge. I was worried about ash getting into the rear axle boxes with the LBSC arrangement that dropped ashpan and grate in one go. Instead I fitted a fixed ashpan spanning

ing, and made the regulator and blower assemblies for Ada, and he duly completed the boiler. Later, while making safety valves for the other locos he produced 2 valves for Ada as well.

All this sat untouched for a while longer, except for making the smokebox saddle, which is quite distinctive with all its little ribs. 2 months out from the 2018 small gauge day I wondered if it may be possible to get it running (but

the width of the frames across the top of the hornblocks to help shield the axles from ash. The grate is 6mm plate and my standard formula of 4mm holes on 10mm pitch, for an air area of 12.5%. The grate has feet at the front that sit on the ashpan floor, and a single pin holding it up at the rear. The grate can be removed completely out the back of the ashpan. The firebox door, other necessary fittings and pipework were complete over 4 weeks, the tender was painted and it was ready for its steam test one month from small gauge day.



The steam test was fine but during running it stopped suddenly - rolling the loco it could not complete a full revolution and something was jamming near front dead centre. Investigation revealed that it was the piston that had been unscrewing off the piston rod! Attempting to remove the piston rod from the crosshead proved futile without the risk or causing more damage/work, so in-situ I drilled 2 blind holes into the piston for a pin spanner, tightened the piston onto the rod with a bit of loctite and then placed a couple of centre pops around the edge of the piston rod to swell it a bit. The other piston was also treated the same way.

On second steaming the hand pump stopped working - plain steel balls had been used. I fixed the pump but then questioned why are emergency hand pumps so small in capacity? So the original pump went on the shelf, and a new pump with a 5/8" bore was made, 4 x the capacity of the original! This has proved to be an excellent move. It is quick to fill the boiler with the pump from cold and if the water is a bit low on the run, a couple of relaxed strokes will fix it rather than the frantic panic pumping!

The next run was at 2018 small gauge weekend. On the Saturday the axle pump wasn't working, I took it home that night and the dreaded rusted steel ball was in the bottom fitting. I suspected the top ball was also steel but that was not easily replaceable!

With the bottom ball replaced the loco performed very well on the Sunday, being first loco on and last loco off the track! It had many drivers all very impressed with how well it went.

Over the next year in dribs and drabs the running boards, cab, cladding and various details were all manufactured, usually in brass or stainless. A Bachmann OO scale model had been purchased to help decide the relevant details to include and what size to make them. The usual LBSC problems were encountered, the loco is really only a caricature of the full size with wheels far too far apart and boiler too high, but I did what I could, mostly working from the OO scale model and a full size GA. In particular one thing that really helped the appearance was cutting down the loco width a bit. Still although not a close scale model, it is attractive. No whistle or injector was provided, as it is likely that the loco will get minimal use and the less parts to fail the better!

For the livery there was a few options. There was a range of prototype liveries, from desert sand, grey, army green and plain black. I decided to make it one of the locos that worked on Longmoor Military Railway. This was a railway at an army base to provide training to soldiers in railway operations. The livery of the Longmoor locos was dark blue with details changing and becoming increasing garish over time, red frames, blue rods, white wall tyres... I picked one of the more restrained liveries which I think looks very stylish!

The loco steams superbly and is fun, verging on boring to drive! Despite the tiny wheels the loco is capable of a surprising turn of speed. Without an immediate comparison it is difficult to know to what degree the boiler design may have contributed to the success, but what I think it does show is traditional designs can be challenged with good results.

Ada was never really my main project but when I worked on it, things came together very quickly. Everything is easily manageable and material costs are low. A very fun and easily portable loco is the result. I would certainly build another 2.5" gauge loco!

## Fabricating Eccentric Straps By James Sanders

Today as castings become harder to source or harder to machine due to foundries rushing the release of castings from the sand box too quickly fabrication is becoming a more sensible option. Recently, during the construction of a NSW 35 class loco I had need of some eccentric straps and having trialed a method previously on a Sydney Steam Tram thought that I might replicate it but on a larger scale.

The eccentric straps can be fabricated utilising brass square bar and bronze hollow LG2 section, both readily available.



Prior to making the eccentric straps I machined 5 eccentrics, 4 for the valve gear and a 5th for a potential axle pump. I also made another dummy eccentric as a plug gauge.

The straps themselves started as a length a little longer than enough for 5 out of 64mm OD 44mm ID bronze hollow bar. Prior to any machining being carried out, 5 slices were cut off the bronze using my hafco bandsaw, each slice being 1mm wider than the final machined dimension. The extra length was important so that the bronze round could be adequately held to cut it - it is not a good idea just to buy only "enough" to do the job, knowing my track record sometimes mistakes are made - but thankfully not this time.

Once cut, thankfully each blank was just about square on the end and mounted in my 5" 3 jaw chuck and faced, then turned around and faced until they were all about 3 or 4 thou thicker than final thickness.

The blanks were then transferred to the milling vice and milled in the vertical milling machine in a systematic way to get the flats to attach the brass blocks to. A depth stop was used to get them uniform. The brass blocks through which the nuts and bolts that hold the strap halves together were cut off slightly longer using the bandsaw, a split bush made to hold them in the 3 jaw lathe chuck where they were faced to length and drilled clearance size for the bolts. All parts were silver soldered together following this and pickled. A quick polish followed and each eccentric strap was checked for adequate silver solder penetration then once a couple of





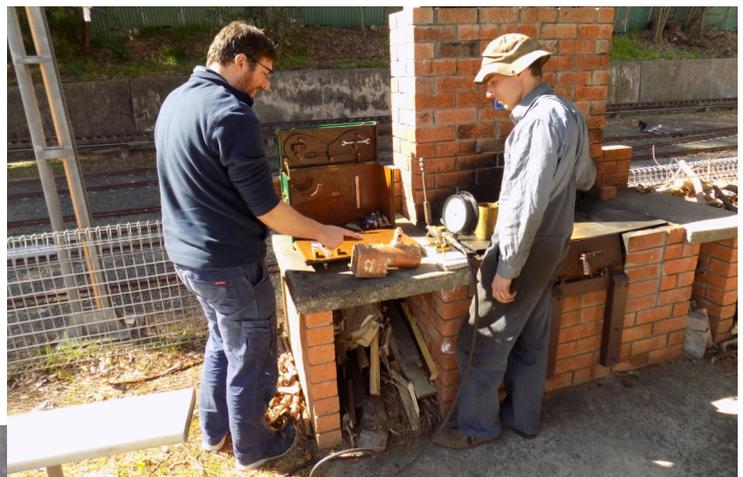
Above: John Lyon's Avonside chassis.

spots were remedied they were all marked out through the centreline of the strap and the brass bolt blocks top and bottom. Each strap was then carefully cut in half using the band-saw and lightly cleaned up with a file Nuts and bolts were used to "assemble" the straps and then each remounted in the 4 jaw chuck on the lathe and bored to fit the plug gauge. I had attempted to chuck the strap assemblies in the 3 jaw to save setup time but the geometry of the brass blocks simply wouldn't allow it. The plug gauge was 10 or so thou thinner than the thickness of the eccentrics so that once bored they could be mounted on this with a bit of paper between the strap and the plug so that when the bolts were tightened the strap could be held to face the final couple of thou off so that the strap would be a nice sideways fit on each eccentric.

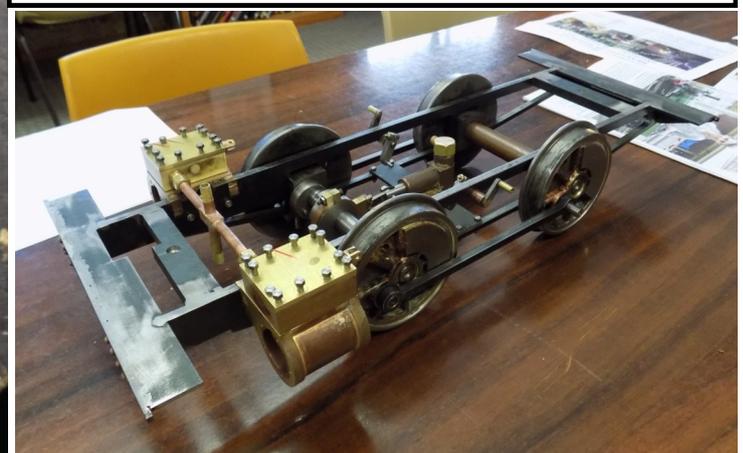
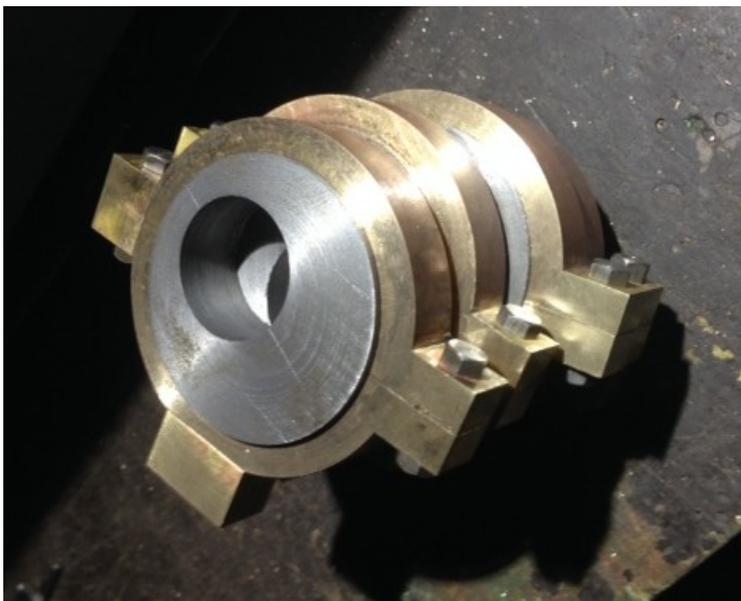
I am yet to drill and tap for grease nipples under each eccentric to provide lubrication, however to this stage I am pleased with the result. The process was not as onerous as I had anticipated - it be quicker than one might think especially since no castings had to be tidied up and the thought process of having to work out how to hold them wasn't necessary. I hope this provides model engineers with another option to a potential which doesn't have to slow a project down.

**Reports** (continued from Page 6)

**Model Engineering.** Andrew is making steady progress on a 26 class in gauge 1, it will have a great deal of detail with good use of laser cut components. Ray L had his latest 5" gauge C32 class chassis at the grounds checking that the clearances were good. The place to use is the top curve on the elevated track, the tightest curve on the grounds. The workmanship is as good as ever. We have seen James Sanders Baldwin steam tram chassis and boiler as well as a timber side for a similar tram being built by Andrew. John L had the



Above: The steam tram boiler being tested.  
Below: James' steam tram chassis.





**Above: "Coronation" having its recent boiler test. Right: Peter and Martin reassemble the banner signal after adjustments..**

Avonside chassis as an 0-2-0 showing the valve gear mechanism completed. There still has to be some component ends surface hardened and polished. Warwick has completed a pair of Pullman coach six wheeled bogies, they are well made in timber and steel plate and angle as the full size ones, very detailed work. At the small gauge day Ross B displayed the Fowler ploughing engine he is working on. The size is impressive and the quality on the work great.

**Members News.** Congratulations to James S and Saranne on the birth of their daughter Rosemary in early September, all is going well and from photos she looks to be a happy and contented little girl.



### Alan Mackellar.

Alan Mackellar, Foundation Member, model engineer and Life Member of the Sydney Live Steam Locomotive Society passed away on Monday 4 November aged 98. Alan was involved with the society from its very beginning; it was a major part of his long life. It would probably be true to say that there was not a prouder member for the leadership that the SLSS has given in our live steam movement in Australia through the Miniature Boiler Code, the Easter Conventions and the NSW Inter-Club days and the standard of our grounds, facilities and tracks at West Ryde. He was the last surviving model engineer who attended the inaugural Easter convention in 1956. He was Secretary of the Society between 1980 to 1990.

As a model engineer Alan was very involved from the very beginning. A lot of the early locomotives in the society had boilers built or partly built by Alan. In later years some of us were fortunate enough to visit his workshop and see the great craftsmanship that he was capable of. It was an absolute inspiration to see what can be achieved with patience and perseverance. His 5" gauge NSWGR M class 4-4-2 chassis was incredible; the driving wheels were machined from solid! It was as good if not better, than anything we have seen in Model Engineer Magazine over the years.

Alan was very pleased to see the progress anyone of us was making with our own models, especially, if they were NSW locomotives. He often had little bits of advice as how something could be done that just made the task easier.

We will miss Alan, it was always good to sit and talk with him or enjoy a cuppa in the club house. He truly loved the Society.

To Neil, Terri and family our very best wishes.



The last and the firsts across our replaced section of elevated track.. Above: James and Gresham has a long train of carriages to return to the sheds. This was the last movement over the old track. Below Left: Garry Buttler and Impala on test over the new track while Right: John Hurst and the diesel was the first passenger train both our September running day.



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Track location is Anthony Rd, West Ryde adjacent to Betts St, behind West Ryde shops. 33° 48' 15.99" S; 151° 05' 12.78" E

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Public Running Day is the **THIRD** Saturday in each month from 1.30pm. Entry is \$4 adults, \$2 children. Rides are \$2 each.

***To ride on the trains, enclosed footwear must be worn.***