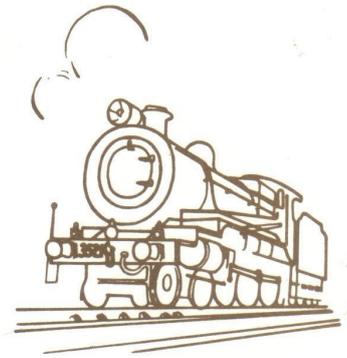


Sydney Live Steam Locomotive Society

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

'Newsletter'

Volume 38. No. 3.
August 2010



The July running day and the ground level crews ready their locos!

May Running Day.

As far as autumn weather goes this May running was about as good as we could have. David Thomas was on the gate and while it was a bit easy early the volume of visitors picked up and we ended up with a very good attendance. The slow start may have been due to the fact that lone sailor Jessica Watson was arriving back in Sydney Harbour and was running rather late. The PM, at that time K.Rudd, and Premier Keneally were waiting about three and a half hours to give their welcome home addresses. Some of us did mention that our biggest loads were very late in the afternoon.

On the elevated track we ran two trains. Jim Leishman steamed the 10 wheeler with three cars and guards van while the second train was a six car four locomotive lash up. Andrew Allison was lead engine with his QGR A10 0-4-2 followed by Arthur H. with "Betty blowfly" and John H. and "Nigel Gresley" 2-8-0 as train engine. I ran Z1915 as attached banker for the afternoon. We had some very good loads throughout the afternoon,

some with far more adults than children. It was rather impressive looking to the head of the train as we rounded the bottom curve to attack the grade, it was always good to be through the reverse curve and on to the straight run up the hill. Andrews A10 ran well but he did tighten some screws along the way. Max Gay had a few laps driving the blowfly seeing how some maintenance (regulator repairs) had gone.

On the inner main ground level Warwick ran the WAGR V1224 2-8-2 on one train while the second train was hauled by 2-6-2 "Mountaineer". Warwick drove the V most of the afternoon and was relieved by David T. late in the day. The "Mountaineer" was driven mainly by Barry T. and Martin, with Peter D. having a drive as well.

On the outer main Jim and Dominic Mulholland steamed C3901 4-8-2 "Green Machine" at the head of one train and were assisted by Ray Lee with C3112 4-6-4 tank engine as attached banker. The second train on the outer saw Lionel with



Nathan Lyons and Barry Millner manning the signal box for the May day.

his 2-8-0 consolidation in front of Henry's TGR R class 4-6-2. Max and Henry shared the driving of the R class.

"The Old Girl" and her goods wagons were out on display in the reverse siding off the outer main station and drew many favourable comments. In the loco depot we saw David Lee's Commonwealth Railways C class chassis, 4-6-0, this is progressing very well. Kelly Mayberry has lifted the boiler off his "King" to give the chassis a tune up. Kelly filled up his time during the afternoon as guard on the ground level and also did some signal duty on the elevated ground frame. One of the party groups utilised the bench over the electric conduits as a picnic table, this space between the ticket office and the picket fence had the sun all afternoon and was the best spot on the grounds.

We were pleased to welcome Emily along, who has kindly agreed to be our resident first aider.

There was a bit of a problem on both the inner and outer mains with a slippery track. Hopefully drivers will be aware of too much oil in the works! Some couplings were bent on a train set

Henry Spencer and his R class double heading with Lionel and the 2-8-0 standing in the outer main platform during the May running day.



and rectification was needed to straighten them before running. Both David on the gate and Di in the kiosk received some complimentary remarks about our operation. I think everyone had a great time.

We had Brian Hurst doing the tickets and it was good to see Nathan in the signal box with Mick and Barry M, and we had Di, Liz and Lee in the kiosk.

At the end of the day Mick provided some light relief by packing up a water column without turning the water off!

June Running Day

Our first winter running day for 2010 was also the winter solstice. The skies were clear, there was a slight cool breeze and a very low sun. It was very pleasant in the sun but in the shade it was cold. Running up the hill on the elevated was not easy as your visibility was hampered looking straight into the sun. Photography was not easy with the long shadows, Mark G. was our photographer for the day. John Tul-

loch was gate keeper and was kept very busy with the queue extending to Anthony Road for some time after the gate was opened. Even by 2.00pm. the bridge was full of visitors waiting to come in. Barry T. and Bernie assisted John with the initial rush. There was some work carried out before we started to remedy a point failure on 6 points. Despite spare parts and re-soldering a loose wire we couldn't solve it, but as detection was OK we were able to run diversions! Another problem with 19 turned out to be low speed, while 44 points needed a micro switch tweak. Later after running started another trouble with 19 turned out to be a leaf obstruction!

There were plenty of elevated locos and just enough for the ground. The Old Girl, and train, was pulled out for display, and a bask in the sun.

On the elevated track we ran three trains. We ran a different locomotive combination on the six car train. David Thomas had his B10 and was keen to couple up with Andrew and the A10.

After some discussion the order was sorted out, I ran Z1915 in the lead followed by Andrew and the A10 and David, B10 train engine. Our attached banker was John H. with "Nigel Gresley". With some heavy loads we saw all locomotives working very hard, John noted that the "Gresley" was certainly working solidly at the rear of the train. Simon was on the guards van for the afternoon and has commented on listening to the bank locomotive working hard up the hill. Jim Leishman ran his 4-6-2 Ps4 on a three car train. Greg Croudace was guard and also had a turn at the regulator during the afternoon. Our third train was Paul with his Hunslet 0-4-0 and two cars, Neville Amy was the guard. Brian Kilgour was station master for the afternoon and recorded our train and passenger movements. There were 57 train movements for a total of 854 rides. The queue for our trains was extensive overlapping with those waiting

to ride on the outer main. It was not till about 4.30pm. that you could see a gap in the lines.

On the outer ground level we had two locomotives from Lionel's collection, they were D5920 and C3811 double heading on the Central West Express set. Arthur Hurst was driver of 5920 with Lionel handling the 38. Lionel shared the driving with Graeme Kirkby and Max Gay. We have not seen these two locomotives running together before and it did look very good. The other outer train was Matt Lee and C3506 on the blue set with C3112 and Ray Lee on banking duties. Peter Ryan acted as guard. It was good to see Peter down at the grounds as he had missed a couple of running days!

On the inner we had Warwick and WAGR V1224 first out with Steve Border as guard. It was good to see Steve who probably came up for the day to warm up! The other inner train was Barry Tulloch, and Martin Yule with Mountaineer 2-6-2. For most of the afternoon the trains were running to capacity.

We had two incidents of people falling off, (both on the inner) but fortunately Emily our first aider had no injuries to patch.

We gave a total of 3116 rides for the afternoon. While not a record (we did 3502 in August 2004) we have been consistently above the average each day this year such that the January to June total is 13745, second only to 14206 in 2005. However we are ahead of 2004 which was our best year on record, so weather permitting, this could be a record year!

In the canteen Diane, Joy, Lee and Margo had a busy time looking after our visitors. Thanks to Peter Wagner for doing the tickets on such a busy day. Our signal crew worked hard keeping everything running smoothly, Brian R., Mick, Barry M. And Mark. We were almost running till sunset and were packing up in the dark.

July Running Day.

The week prior to this mid winter running day had been wet and windy but we were pleased to have a fine sunny day with little wind. The sun angle was not as difficult as last month.

Our numbers were bolstered by the attendance of Barry Potter and his friends from the central west with a collection of locomotives, all NSWGR prototypes. Barry D5507, Greg Bird C3239, Les Bird Z2708 completed the loco list. Roger Kershaw and Bob Bennett were also in the contingent. Such was our locomotive roster that Graeme Kirkby 2401 and Henry's TGR R class were not steamed.

First out onto the outer was Barry Potter D5507 being led by Greg Birds C3239. This took (appropriately) the Central West set and ran well until late afternoon when a crankpin worked loose on the 32. Ray Lee had C3803 in light steam in the round house and was soon up to working pressure to replace the 32 class. The



June saw John Lyons and 1915 leading Andrew Allison and the A10 and David Thomas and the B10 heading up the hill into a low sun.

train then ran until the end. Our Orange loco men took turns at sharing the locos and made a great day of it.

The other train on the outer was again powered by locomotives from Lionel's collection. Train loco was Lionel and the 2-8-0 while Arthur drove the 2-8-2 as lead loco. This loco was Ted Herbert's 2-8-2 and was originally fitted with a steel boiler. Now with a copper boiler it is over 50 years old and goes great! The 2-8-0 gave some difficulty with the cylinder drains and was replaced mid afternoon by Matt Lee and 3506 after which the train ran until the end. The 2-8-2 is fitted with relatively small driving wheels, they were certainly spinning around to keep ahead of the 2-8-0

The inner main was the usual big engine domain. "Mountaineer" 2-6-2 on one being driven by Barry Tulloch and Martin Yule, while the other was WAGR V1224 being driven by Warwick until mid afternoon and then by David Thomas until the end. Almost at the last train, a suspect hole developed in the superheater of the V which affected the steaming. Fortunately though at this stage it was all over and it managed to limp back to loco where a test in mid gear showed how to make steam clouds!

The elevated ran a special 6 car NSWGR triple headed black engine train with John Lyons leading with Z1915, followed by Les Bird and Z2708, with John Tulloch and Z2905 train engine.

The same train as above showing the rear end. Simon is guard with John Hurst and Nigel Gresley as banker! The trains are so long you just can't capture all the action in a single photo!





Matt Lee and 3506 drift down the outer main on the June running day.

Three black NSWGR goods engines, it did look good. John T. ran the train well under brakes down the hill and we were able to maintain a nice steady pace on the grade. Visitor Craig Hill took over the regulator of the J late in the afternoon and continued the steady running. We had some very heavy loads. Paul Taffa ran 2 cars with Hunslet, 0-4-0 with an occasional bank in the rear by Jim or Dominic Mulholland and Pansy 0-6-0 pannier tank. John Hurst and "Nigel Gresley" 2-8-0 ran 3 cars. All ran well, although John's Nigel locked up near the end of the day due to a screw that works loose and jams the wheel. At least this time John knew exactly what the problem was and it was repaired back in the Hurst workshop. The mission critical signalling ran perfectly with Brian Rawlinson and Steve Border at the levers. In the kiosk we had Liz, Di, Joy, Margo, and Lee who fed the hungry hoards (as well as tea for the drivers on the run.) Bernie did the gate and there was still people coming in after 4pm, with a lot of questions of "How late do you run till?" Total rides were 3024. The trains were full but didn't seem as heavy as last month, perhaps there were more kids.. It was still about 700 above an average July. Cumulative for a January to December year we are doing the second best (to 2005) for the last 17 years. Once again Brian K. was elevated station master

much appreciated.

Arthur has delivered our new concrete mixer. It looked very smart and will be easier to use than the old one. Many thanks Arthur.

Special Members and Friends Running Day

It was agreed to adopt a suggestion from John Lyons that the first Saturday in September (Sept 4) will be a members and friends running day. Our last day like this was a great success with everyone having a great time. There will be NO HEAVY work on this day.

Annual General Meeting

Office Bearers for the coming year are:

President:	Warwick Allison
Vice President:	Mick Murray
Secretary:	Simon Collier
Treasurer:	John Hurst
Directors:	Henry Spencer, Barry Tulloch and Mark Gibbons

Thanks especially to Peter Wagner who acted as returning officer for the evening and to those who nominated for positions.

Some of the June crowds that enjoyed our train rides.



We welcome Simon and Mark to the Board, and thank Henry for his 20 years as Secretary, the longest in our history. Thanks also to Jim Leishman who retires as a Director and was elected a life member of the Society. Thanks also to David Thomas who had been a Director for the last 2 years. Presentation certificates were made to Henry and Jim. Jim Leishman well deserved his Life Membership. He has made a valuable contribution to the Society as a board member. Jim has looked after many of the things that help us to function as we do. Such things as ordering materials, arranging deliveries, sorting out trades people on the rare occasions when we cannot do something ourselves and general input to our design problems. Congratulations Jim.

Big Thanks to John Hurst for the very prompt and professional production of our annual report and also to Peter Spencer for the auditing of the report. Following the meeting our usual AGM special supper was had. Thanks to Stuart Larkin for setting this out and not burning the pies and sausage rolls!

Annual Inspection of Non-boiler Plant and Equipment - 2010

The annual inspection of the Society's grounds and facilities was conducted on 8 May 2009 pursuant to the requirements of Section 4 of the Australian Association of Live Steamers Code of Practice for the Operation of Miniature Railways, Road Vehicles and Plant - Hazard Identification and Management (Sub-section 4.5: Owner/user Inspection of Non-boiler Plant and Equipment).

The Society's Policy, General Appendix, Qualifications, Assessment of Competency, Hazards and Controls analysis and Maintenance policy and supporting documents generally comply with the recommendations of the Australian Association of Live Steamers Code of Practice for the Operation of Miniature Railways, Road Vehicles and Plant.

The continuing focus of the Society in addressing identified safety issues again continues to make it hard to find items for attention. The main items noted for attention at this year's inspection were:

- Tight clearances between mainlines and Inner Main Carriage Shed – recent near miss reported on Outer Main,
- Corrugated iron stored at Park Avenue fence – sharp edges at ankle height,
- A number of fencing issues,
- Dead branches in trees.

A copy of this year's checklist has been placed on display on the notice board in the clubhouse.

Special mention must be made regarding the ongoing identified risk from falling dead branches in a number of trees around the



June also had double headed Lionel locos! 5920 with Arthur Hurst leads Graeme Kirkby and 3811.

grounds. In particular, it is noted that SLSLS has made representations to Ryde City Council regarding the risk posed by the Blue Gum tree in the "island". Council has refused the SLSLS application to remove the tree. Consequently, the SLSLS Board has engaged a suitably qualified Arborist to inspect the Blue Gum and other "at risk" trees and to provide a report on condition and a recommended management regime. The Arborist inspected the trees on Friday 14 May 2010 and his report remains pending at the date of this report.

SLSLS should review the Arborist's report and implement an appropriate tree management program based on the observations and recommendations contained in the report

The Society's Rolling Stock, Track, Infrastructure and Signaling, continues to be maintained in a generally satisfactory manner.

The Running Day Inspections of Carriages, Track & Structures and Signals (per the SLSLS Running Day Inspection Sheet

July and we have Arthur Hurst on Lionel's vintage 2-8-2 (see back page) passing David Thomas relieving Warwick on V1224.





Trains everywhere! Elevated and two ground level trains pass on the July running day.

2008) have been performed and signed off on a consistent basis throughout the year under review.

A review of the Society's Risk Register and Hazard Control Matrix has been conducted by myself and Warwick Allison on 8 May 2009 and the Matrix has been confirmed as appropriate to the Society's current operations.

An additional hazard – "Injury from stored material" - has been added arising from the Annual Inspection with the following control being proposed:

- Periodic Inspection

A copy of the current Hazard Control Matrix is displayed on the notice board in the clubhouse.

Warwick has provided an updated "Review of Hazard Assessment" for the current year dated 9 May 2010, a copy of which has been appended to my report for 2010.

Mick Murray
Inspecting Engineer

Members News.

We have elected Peter Ryan a full member of the Society. Congratulations Peter, we hope your membership is long and enjoyable! It was good to see Brian Rawlinson back at the grounds after his visit to the UK. We have received an application for membership from Ian Tomlinson. Ian is retired ex RailCorp and

has been an air conditioning expert and trainer. We have also had some serious enquiries for new members. Lets hope some eventuate!

We received a nice photo memory of our RedKite day from RedKite. We also nominated for the Group Volunteer of the Year Awards run by Ryde Council. We didn't win but the certificate is quite nice and is now on the club house wall.

By the time you are reading this Newsletter Alan Cottrell will have celebrated his ninetieth birthday. At the August meeting those present signed a card sending our collective best wishes. Well done Alan.

Thanks to Jim Mulholland who offered to obtain a job lot of high quality whistles and lanyards for anyone who wants one. In the end he obtained quite a number! We also welcome Neal Bates who has submitted his application form.

Locomotive and Rolling Stock News.

Dennis O'Brien showed us some Bowman O gauge 4-4-0s which just happened to fit on the gaps between our rails! Simon brought along his B1 tender, and a very nice job he is making of it. This lovely kit of brass is complete with tabs and slots and simply pushes together. Certainly a lot easier than trying to cut brass and assemble ones self! He also showed us his hand brake stand for his Springbok. A lovely job.

Brian M had the chassis of his U105 complete with machined

Editorial.

I stopped getting Model Engineer magazine at the end of 1999, but have continued to see what they are up to first thanks to a friend but now for the last couple of years with Toronto library. As we got to the end of '99 the standard seemed to fall away compared to that of the seventies and eighties. Some of the drawings were so disorganised that if my students handed up work like it I would have put a red line through their effort. The companion magazine Model Engineers Workshop seemed a bit expensive so was given a miss. In the last few months my local library has started getting MEW and can be booked for borrowing as soon as it is off restriction as a new publication. Looking at the two magazines, they both have the same editor, there seems to be a form of renaissance in the quality of the publications. New writers are coming to the fore and there is even a move to republish some of old articles for a new generation of builders. The supply of components, laser cut plates and fine detail castings, locomotive kits, completed boilers or even complete ready to run locomotives can introduce anyone to the hobby; the next generation of model engineer will have a different approach to the way many of us have operated.

John Lyons.

cylinders, the bar frames makes it an interesting piece.

Mick Murray kept working on the weed killer wagon. This has reached the working stage, and work it does! The MG set sits comfortably on the wagon, and the spray heads have been repositioned back (they stuck out and were bent). The handle now has a pump control switch on it, and it all seems to work very well. Mick has a few small adjustments and final touches to make, and then we should be able to get a quality and quicker spray of the track.

Andrew fired up the Old Girl and gave her an oil around. She did several laps and the exhaust is stirring to the ears! A couple of steam valves were in need of attention and these have been removed and fitted with new handles. Some more thinking was done about the tender, and how to repair the corroded interior. It is not going to be simple or easy!



David Lee and his Commonwealth Railways C class chassis.

Warwick brought along the V to show off the leaky superheater and David Thomas obliged with a hydraulic test. Mark Gibbons suggested we plum the pressure gauge to the mains to see what we get and we got 105psi!

Who needs a boiler test pump! Matthew Lee brought along C3506 and Ray and David were involved in a boiler test, then a steam test to ensure we have another functional loco for running days!

Works Report.

Following the RedKite day we were left with numerous frozen left overs. Lunch was sausages in rolls with onions, and we did this for a few weeks until it was gone! Thanks to all who assisted in the cooking and organization.

Henry has waited in vain for some fence contractors to turn out to give us a quote for the new fence needed down the western side of the grounds. This is proving a difficult job. Doesn't anyone want the job?

David Thomas has been installing some more plants! He managed to get a load of mulch delivered. This was on the entrance driveway and has been placed along the lower fence over a layer of newspaper. We also covered the ticket office garden and some of the area under the pine tree opposite the clubhouse.

We also placed some near the BBQ area to cover some bare ground. A dead tree across from the BBQ was removed and mulched and some overhanging tree branches were trimmed. Nathan and Paul T assisted with the cleanup of branches with Paul T working the mulcher.

We cleaned out the ballast pit and Jim Leishman arranged for a new load of ballast. We also cleaned out the sand-pit and had it recharged for the concrete mixing we had planned.

Henry and Warwick did the rounds

Diary

4 September	Members and friends BBQ and running day.
7 September	Directors meeting
18 September	Public Running Day
2-3 October	10 th Model Engineering Exhibition, Melbourne
5 October	Members Meeting
16 October	Public Running Day
16-17 October	WDLs 42 nd Birthday Run.
2 November	Directors Meeting
6-7 November	Wagga Invitation Run
20 November	Public Running Day
4 December	SLSLS Members & Friends Evening Christmas Party
7 December	Members meeting.
18 December	Public Running Day

Paul Taffa and Hunslet on 2 cars with Jim Mulholland and Pansy banking in the rear. Dom Mulholland is guard.



and using a portable appliance tester, tested and tagged all the leads and appliances. This took quite a while as we have a lot!

Mick Murray has done the rounds with the weed-killer, an essential part of keeping the tracks clear. Jim L. went around and renewed our yellow painted safety edges. This doesn't seem to last long, particularly when sprayed over previous coatings. Perhaps some surface preparation before hand is needed.

We have also received the report from the tree people. It recommends certain pruning and management and the next step is to submit this to council to obtain permission for the pruning.

We were visited by council for our 5 yearly inspection to check out that we are good tenants. You would think they would come on running days! This went well. Thanks to Simon and John Hurst who attended. Barry Tulloch is arranging a cover for the switch board panel in the clubhouse to impress the council!

We agreed to have the club house treated for pests and Simon is arranging this for after a running day. Simon even vacuumed the club house (even brought along his own machine!)

Some barbed wire on the lower fences that was sagging has been repaired.

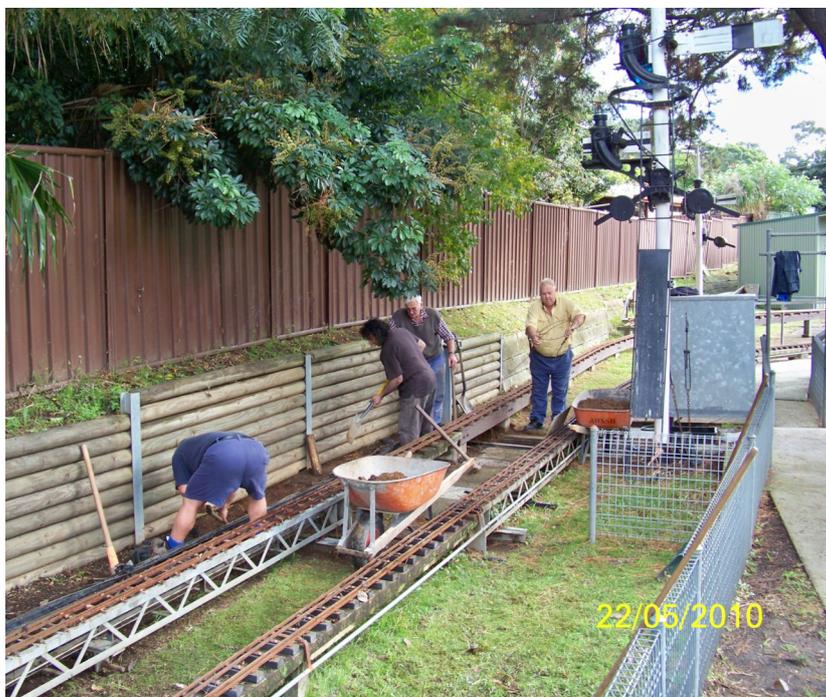
Ground level track.

Mark Gibbons did a survey on our signalling bits and pieces and has located our spares and checked currents and resistors in a number of points motors. The intention at this stage is to see if the resistors can be replaced with something more suitable, the micro switches upgraded with better ones sourced by Mick and some arcing snubbing capacitors included..Mark has attended to one of the point machine boxes, including cleaning and painting the interior. Currently a search is on for suitable adjustable resistors.

John Hurst and Mick Murray attended to the brakes on some of the carriages. New diaphragms and a general work over is an important part of keeping our cars in going trim!

Mark Gibbons replaced a damaged buffer on one of the blue set cars.

Mark Gibbons and Warwick attended to a signalling fault on 6 points. After much investigation this turned out to be a broken crimp connection inside the plug coupler to the control unit. In the course of correcting this fault we also tracked down the cause of the buzzing relays! (Barry M will be pleased!) It was



Above: Excavation for the concreting beneath the channel rodding is underway. Below Brian Muston's U105 chassis is coming along.



very pleasing to see the points respond properly after a lot of fiddling!

Mick and David Lee are also well advanced in the fitting of the new brake operating system to the blue set. See details elsewhere in this newsletter!

Elevated track.

John L. has been busy levelling some track beams. These are then grouted into position. Various members have assisted at different times, Mark, Jim L. Jim M. Arthur has assisted and I am sure John would be willing to pass on the technique! Slowly but surely the track is being restored! The method followed has been basically to simply sight the track from a distance, jack the beams off the posts and when it looks right fill the gaps with cement and sand mortar, it is starting to look better but there is plenty to go on with.

Brian Muston and Jim Leishman have excavated around the elevated air line. Their task was to install some extra air fittings on the elevated loco and to pipe it down to the loop for locos in trouble.

Jim Mulholland put in some useful hours with the large angle grinder slotting the concrete footings and following up with a hammer and chisel. This is to set the pipes into and keep them clear of lawnmowers and other issues of damage!

Elevated Signalling Concreting!

Arthur and Lionel worked steadily away at digging out under the elevated signalling channel iron. John L. Paul and Warwick

Simon Collier's B1 tender chassis showing the fine work.





Warwick presents certificates to Henry on his retirement from the Secretary's position after 20 years in the job and to Jim Leishman on his being granted Life Membership of the Society at the AGM.

assisted. This is the largest and hardest part of the digging. Further work was not as difficult, as it did not require as much to be dug out. The spoil was used to fill in the old tree stump which is rotting and creating cavities in the picnic area. This was a painstaking task but it has been done so we can concrete it all and prevent the rubbish accumulation which we currently get there. The concrete pour was planned for the next Saturday at 9am by mini truck to make it easy for us. However the rain all week has certainly made the place soggy. The Concrete was called off and we were so disappointed! We kept on digging and planned it for the following week.

Then it was an on and off and on again! The good soaking received again resulted in the cancellation of our concrete pour, but Arthur was up and at things early. Bright sunshine and clear blue skies (plus some early morning phone calls) and it was on again! We put it back to 10am to give people a chance to get there. By the time the truck arrived there were a good number present. Vic and John L. had wrapped the elevated track in plastic, and some of the point rodding in aluminium foil to help keep it clean, while Arthur had put the sleeper bridge in place.

The finished concrete and painted rods. Much easier to maintain!

They had also removed all the fence panels so the truck had clear access.

The concrete mixer arrived just after 10 and we were into it! There was not a lot of room initially but as Lionel, Arthur, Mark, John, Vic, Peter and Brian worked hard, the pour progressed a second group of finishers worked their way in. It was tricky placing the stuff around all the cranks and rods. The

truck didn't have quite enough so we extracted our own cement mixer and with Ray Lee and Peter Wagner doing the cooking and Arthur wheeling the product.

After lunch we floated off the concrete and fitted it with tarps to keep any rain away until its gone off a bit more. It certainly was a great effort and a big day, resulting in a job well done. Thanks to all who helped! On following occasions the rest of the excavation was done down to No.1 points.

Arthur and Lionel formed up the concreting works and set the mixer up. By morning tea we had over half the job done with Mark and Peter Wagner's help, and by lunch the job was done. Trouble was experienced with the mixer. Firstly the drive was slipping on the gearing (we think this is terminal). Peter helped the drum go round to pour it! Then we had a total failure which turned out to be the switch giving up the ghost. We bridged it out to get the job completed.

We then agreed to purchase a new Concrete as the gears had gone after 27 years. Arthur did the shopping for us. Arthur and Brian Muston attacked the old mixer. They removed all the useful bits and Arthur has taken the remaining steel scrap to Sims-metal.

Peter Wagner, Arthur Hurst and Ray Lee feed the mixer in its final service with SLSLS. Peter had to help the barrel go round!





Here we are placing concrete under the channel iron. Plenty of hands!

Brian Hurst has been steadily cleaning and painting the channel iron, now the concrete has been poured beneath. It is looking very good! The signalling was hooked up again and tested revealing some problems which were attended to, a couple of adjustments, and the ground frame is again in action.

Ticket Office.

Simon has fitted the final screws into the ticket office roof. This is a great job to be completed and ensures the roof is there for-

The cab of Matt Lee's 3506 seen on the June running day.



ever! Extremely good progress was made with 7 out of 9 rows completed on one day with the remaining two more difficult rows the following week. Inside Peter Wagner has painted and finished the skirting boards and fixing them into position. Peter has also applied some paint to the trim.

Simon fixed the cornice in the kitchen. The last work in the ticket office is the brackets for the ticket seller's table which have been provided by Rob Murphy and will be assembled by Martin.

Jim Leishman has erected a cover over the ticket office air conditioner piping. This has been superbly fashioned out of plastic down pipe, and looks quite smick!

The spoil from the signal rodding excavations was placed behind the ticket office for the new station garden being planned there. We scrubbed out the weeds and grass before placing the dirt and David Thomas directed soil operations.

Simon Collier and his brother then planted it out. By the time they finished it was on its way with Lavender, Geraniums (red ones!), a Camellia, a rose and other green things! We later gave it a good mulching. The tank has been fitted with a suitable fitting to allow use of tank water in watering this garden. Some of our country stations were well known for their garden displays and ours will be no exception. Early in August Simon was adding more blooms to the beds and by the middle of spring it should be a wonderful sight.

Elevated Station

Following the AGM we had our usual member's special general meeting. At this meeting approval was given to proceed with the new elevated station. Detailed design work on this has been completed. This includes CAD drawings for water cutting the various components. The fascias will have the same decorative shape as the ticket office, the roof brackets will be fancy, similar to Stanmore station but with a shield with SLS in them, and we will also accommodate a station destination indicator and some more white picket fencing.

The all threaded steel for the new station column feet bolting has been obtained. Henry cut up 20 pieces of old steel and Arthur and Lionel welded these onto the threaded rod to make 5 sets of foundations. Martin is arranging the steelwork.

Duty Roster.			
September.	B.Hurst, T.Eyre, M.Lee, R.Lee, R.Smithers, P.Taffa, B.Tulloch, J.Tulloch.		
October.	H.Spencer, A.Allison, M.Gibbons, W.Fletcher, G.Kirkby, B.Muston, J.Noller, P.Sayers, I Tomlinson.		
November.	W.Allison, G.Buttel, B.Millner, M.Murray, S.Murray, S.Collier, P.Ryan, V.Scicluna.		
December.	B.Courtenay, G.Croudace, S.Larkin, N.Lyons, L.Pascoe, S.Sorensen, D.Thomas, D.Lee, N.Bates.		
Gate Roster.			
September.	M.Yule	October.	A.Allison.
		November.	W.Allison.
		December.	K.Baker.

FEATURES

EXPERIMENTING WITH “TWIZZLE STICKS”

By Graeme Kirkby

I was intrigued to read recently in Australian Model Engineering magazine No. 143, an article by a Stu Martyn regarding his experiment with stainless steel “twizzle sticks”. These he had fitted into the tubes of a gas fired five-inch gauge “Speedy” loco and later, into a gas fired vertical boiler for his Stanley steam car. Judging by his remarks he experienced very good results. I was interested in his experiment and being inclined for dabbling in such experiments, I decided to follow Stu’s idea. I was curious if the experiment would have a marked effect of better steaming of a coal or char burning model railway locomotive and perhaps, reduce fuel consumption.

The loco for this experiment was my five inch gauge freelance Pacific which has always been a good steamer whether burning char or poor grades of coal. Once she is hot, she retains full steam pressure easily. Therefore, there was no need for inserting twizzle sticks into the tubes, but my curiosity got the better of me!

Until recently the 45 square inch fire grate was of the bar type having approximately 38% air gaps/grate area but not long ago I made and fitted a “Rosebud” or holey grate with 416, 3/16th inch holes giving approximately 25% air/grate area. On busy club running days this new grate is proving effective in fuel consumption by burning the fuel more completely resulting in less ash and as a bonus, less mess of ash dust around the ashpan and trailing truck by not dropping smouldering lumps of fuel on the track.

The boiler is of conventional loco-boiler design, being constructed of copper and is fitted with 13 x ½ inch i.d. tubes and 3 x 7/8 inch i.d. flues, all of which are 21 inches long. The three flues each contain a single return “superheater” element. The boiler with a full glass of water contains 19 pints (10.7 litres). A stainless steel “arch” is fitted in the firebox, set at about 55 degrees from horizontal extending back almost half the fire box and having an 1 1/8 inch (30mm) gap between its top edge and the flat crown sheet.

It goes without saying that the railway steam loco is wasteful of the heat it produces in the firebox. A very large percentage of heat from the fire (not to mention the exhausting steam) disappears up the chimney. Much of the heat from the fire does its work in the firebox while the remainder slips through the tubes pretty quickly and does lesser work there. If this gas flow could be slowed down or given a longer path through a given tube length, it would have more time to dissipate its heat to the water surrounding the tubes and, according to John Foster’s email letter published on page 65 of A.M.E. No. 145, break up the “laminar boundary layer” that tends to insulate the inner walls of the tube. It seemed to me – in theory at least – that this could provide a more economical way of using our fuel.

Into my scrap bin I went and found a small sheet of 1mm. thick stainless steel that I’d once thought “might come in handy”. Due to the size of the sheet I could only make my twizzle sticks 14 inches (355mm.) long for the 21 inch (533mm.) tubes and due to some constrictions in the smokebox, I could only insert eleven stick, two tubes missed out. The sticks were cut with a cutting disc (which also disappeared rather quickly!) to a width of ½ inch (12mm.). A 7/32 inch (5.3mm.) hole was drilled close to the end of



Henry, Brian and Mick tending the members BBQ lunch using RedKite leftovers!

each stick. A simple tool was made of small diameter rod with a short, right angle bend at one end to engage the hole of a twizzle stick to remove them easily. Each stick was twisted cold 1½ turns (540 degrees) anti-clockwise.

The first test run was in October on the “Windy Ridge” private line burning a mixture of about 70% char and 30% coal. A light load of about 70 kg. was behind the tender. I discerned no difference in lighting up both in ease and time taken, but a little more steam blower was necessary to raise steam to full pressure. Setting off with the train and running at about 8km/h con-

John Lyons and Mark Gibbons pack mortar for re-levelling the elevated track beams.





stood in steam okay although a little more steam blower was needed to keep boiler pressure near the red line. Once again, the fuel being burnt was about 70% char and 30% coal. Upon whistling out and shunting to the train, boiler pressure fell rather quickly and did not rally with the blower hard on. As time was short and it appeared there was a strong risk of steaming troubles or failure on the road during the three hour run, I decided to whip the twizzle sticks out. This took a few minutes of fiddling, and in the hurry, I removed all but one. Steam pressure immediately rose and a normal and successful afternoon run of over three hours was had. Later at home I removed the one twizzle stick that I had missed earlier. I noticed this tube contained a lot more soot in it than any of the others. On this score, I was glad I had removed the sticks at the start of the day. Being rather disappointed in these results, I promptly gave the sticks to our club Treas-

Above: Simon had his brother help plant out the ticket office garden. Below: Mark helps Mick test the weed spraying wagon.

tinuously for 15 minutes saw the need for a considerable amount of steam blower while steam pressure gradually fell. Into Loco I went, removed sticks and whistled out again to resume identical running with the same load. Steaming of the boiler was immediately back to its normal self, easily maintaining pressure and water level. I was rather disappointed and puzzled by this result but assumed that perhaps there is some significant difference in heat dispersion when comparing a gas fired loco boiler to a coal fired one.

Back home in the workshop I reduced the twist in the sticks to one full turn (360 degrees) and decided to try again, this time on our S.L.S.L.S. track. Here, working a loco is much heavier. Loads of between 1,500kg and 2,200kg are usually behind the tender but as a rule, shared by two locos. This further test was commenced on our running day in October 2009, but unfortunately wasn't carried through to a final positive conclusion. The Pacific raised steam from cold just as normal, no quicker or slower and



Mark Gibbons gives the Old Girl a spin to keep it in good nick!



urer, John, as he was looking to try some in a model traction engine. Perhaps we shall hear of his results soon. Has anyone else had good or bad experiences with twizzle sticks?

FOOTNOTE: I have admired Stu Martyn's casual style in his occasional articles in A.M.E. and of how he made his Stanley steam cars and other small models, very readable style. But after reading his "twizzle stick" article, I admire him a lot more – just how did he cut 63 metres worth of 1.6mm. stainless steel sheet using standard tin snips? I have two different design snips and both barely made a cut in 1mm. stainless steel. Maybe I should eat more spinach! Stu has since written to A.M.E. (published in No. 147, p.65), and he states he twisted his twizzle sticks anti-clockwise as I had done. Dear Dorothy Dix, should I now make a new set and twist them clockwise?!



Jims at work! Left Jim Mulholland cuts a slot for new air pipes while, above, Jim Leishman puts it all together.

Cockatoo Island.

John Lyons.

Cockatoo Island, for the last couple of months, has been one of the sites for the Sydney Biennale contemporary art exhibition. Both Warwick and myself were at the Island on separate occasions so here are some of my thoughts on the venue.

If you have not visited Cockatoo Island it is well worth while to make the effort, first, a little bit of its history. The Island is in the Parramatta River near the mouth of the Lane Cove River and has had a rather varied history. In the period 1839 to 1850 an Imperial Prison was established there to house convicts withdrawn from Norfolk Island. In the twenty years to 1870 the convicts were put to work constructing the Fitzroy Dry Dock and work shop facilities in order to service the Royal Navy and other ships needing attention. This required considerable excavation of the sand stone of the Island and increased its area as well. The excavation was very extensive and some of the blasting provided a spectacle for the good folk of Balmain. There were grain stores dug into the sandstone and you can still see the covers of these on the top of the island. The convicts started a hole three foot or so in diameter and then when down far enough opened out the hole to provide the required storage volume. Their only consolation was that the Sydney sandstone was not that hard and that they were working out of the sun. I do not know how deep they were but there were more than one of them. For the ten years to 1880 when the prisoners had been relocated to Darlinghurst Gaol the Island was used as an Industrial School for Girls and a Reformatory. A ship, the Vernon, was anchored nearby for the purpose of training wayward and orphaned boys. Between 1880 and 1900 shipbuilding and repair activities expanded steadily and a second dry dock, the Sutherland was completed. During that time the Island reverted to its original use as a penitentiary due to overcrowding in other places.

In 1913 the Island became the Commonwealth Naval Dockyard and the first Australian steel warship was constructed there. Things probably slowed a bit during the depression years to pick up with the advent of World War Two. Following the fall of Singapore in early 1942 Cockatoo became the major shipbuilding and dockyard facility for the South West Pacific. There were air raid shelters dug into the rock and a couple of tunnels that you can still walk through, the north – south tunnel runs from one side to the other. The

next thirty or so years saw a great amount of work completed and a work force that reached the four thousand mark. There was an impressive list of vessels constructed and repaired. The biggest ship to make use of the Sutherland Dock was HMAS Melbourne on the two occasions it needed major bow reconstruction. The first was after the HMAS Voyager sinking and the second after it hit the USS Frank E. Evans. Voyager had been built on the Island. From what I can remember the second repair needed less preparation as they had all the details and patterns from the Voyager repair.

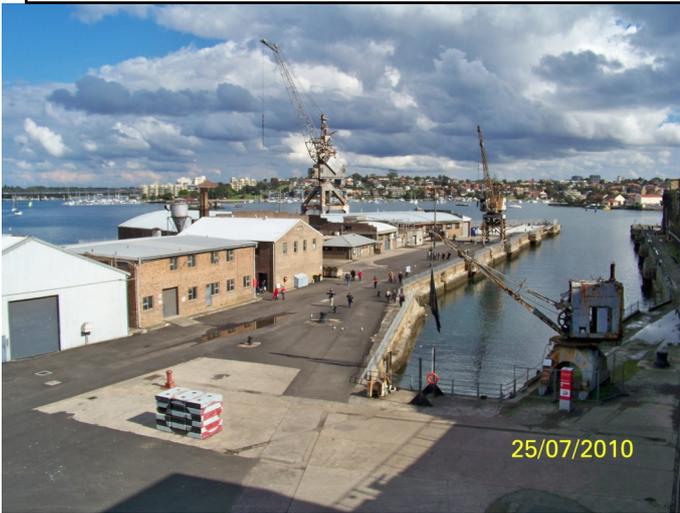
By 1992 the Island's industrial time was over. Much of the machinery and equipment was sold off and many of the workshop buildings that had been constructed as the facility grew were demolished. For some years there were suggestions as to the Island's future. Finally in 2001 The Sydney Harbour Federation Trust assumed control of the Island to give it a whole new lease of life. After a lot of remediation work the Island was first opened on a limited basis but now as this work is continuing you can visit the place at any time. The inner Parramatta River ferry service stops there on its normal run. (wharf 5, Circular Quay) It would now be classed as an event space and has been used for music festivals, art and comedy shows. There are camping facilities on the northern part of the place, the facilities are good and the BBQ's are free! Some of the residences on the top of the Island can be rented out. A viewing platform has been constructed at the top of the sand stone wall facing east to the Harbour Bridge and overlooking a large flat area. It would be a great place to watch the sun rise over Sydney. There is a kiosk that does good coffee and light snacks (at a price). It is

The island's 1891 steam crane now under restoration.





Above: Inside the powerhouse, Below the Sutherland dock.



such a good vantage point for the NYE fireworks that the camping spots are balloted for at a premium price.

Some of the machinery is still there. A couple of the large lathes have remained along with a mixture of other machines. There are a number of smaller lathes, a horizontal boring machine, a plan-

ing machine and various presses to mention a few. There are many cranes, some have seen some cosmetic restoration and one steam crane is under restoration by the volunteer group on the Island. The crane was constructed at Mort's Dock in 1891. The power station and boiler house are still intact but there is limited access. The power station has a number of high speed reciprocating engines and a couple of turbines each connected to their own generator (or may be alternators). There is an impressive bank of mercury vapour rectifiers on the western wall. The boiler house chimney is a very visible feature of the western end of the place.

I can tell a story how a friend nearly shut the works down. He was studying engineering at Sydney University in the mid 1950's and had a Christmas holiday job as a fitters assistant on the Island. One task they had to do was change a wheel on a grinder. This lad was sent ahead of the fitter to locate the machine and prepare for the job. When he got to the grinder he assessed the situation, to change the wheel the guard had to come off, to remove the guard the light had to come out. As any smart lad would do he got to work, took the globe out and started to dismantle the guard. At this stage the fitter arrived and asked who took the globe out for him. When he said he did the fitter told him in no uncertain terms to put the XXXX globe back in place and organise an electrician to come to the machine to remove it. One and a half hours later when the electrician arrived and took the globe they got back to work. Such as the union demarcation rules were at the time his action of removing the globe could have resulted in a walk out. They waited for an electrician to replace the globe so the machine could be tested. You can understand why multi-skilling was introduced.

As for the art. Well contemporary can be very confronting and weird. There was a well made full size replica of the Hubble space telescope, a very fine frame structure, 150mm dressed Oregon with exquisite metal braces and brackets with a baby grand piano suspended in the middle of it. There were a number of audio visual displays, excellent photography, but difficult to see the point. In the power house there was an electrical discharge machine setting off every so often and a series of discharge diagrams. All very strange!

It is free to get on to the Island but for, I think \$5.00, you can hire an audio device and a map so you can get a description of the features of the place as you wander around. On a nice day it is a great way to fill in a few hours.

Below: Artistic works inside the Turbine Hall. Right: The power house chimney and a typical crane, one of many on the site.



Emergency Brake Operation

David Lee

The brakes fitted to our trains are simple vacuum brakes applied by the locomotive vacuum ejector.

A vacuum brake reservoir has been fitted to the guards van together with an emergency brake button.

The emergency brake fitted to the guards van is a **Push to Operate / Twist to Release** actuator. The gauge immediately in front of the push button indicates the vacuum in the brake reservoir. The blue hose and fittings are a **Through Pipe** and have been fitted to all carriages so that they are standardized.

The **Brake Pipe** is connected to the through pipe mid-way along the consist as part of the safety measures.

Brake Application by Driver. When the driver applies the brake, all brakes apply in the normal way. The vacuum reservoir will also charge.

Emergency Brake application by Guard. The guard pushes the red button to activate the emergency brake. This applies the brakes on the rear half of the train only. When the driver applies the brakes those on the front half of the train will then activate as well.

If there is a failure in the front half of the train. When the emergency brake is applied, the valve will isolate the front half and the brakes will be applied to the back half.

If there is a failure in the back half of the train. When the emergency brake is applied, the valve will isolate the back half of the train and the driver can apply the brakes in the usual way. This will only work on the front half of the train.



1. (left) Locomotive Connection

The locomotive is connected to the rake of cars in the usual way, to the brake pipe.



2. (Right) Normal Piping

This is the normal connection on all cars, except the Mid Rake Split.

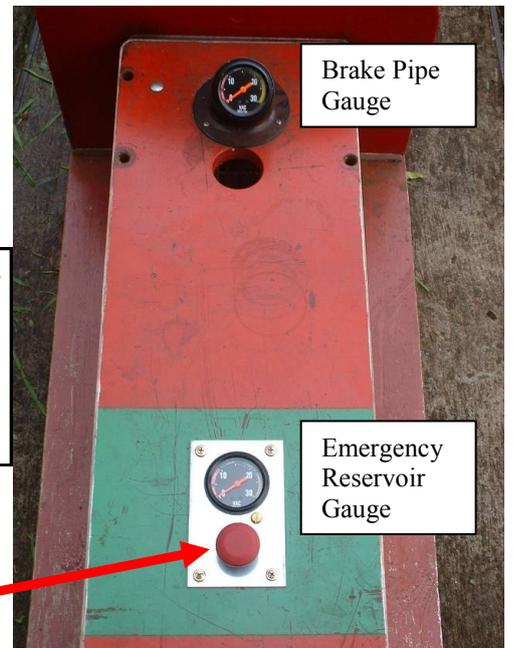


3. (Left) Mid Rake Split

Half way along the rake or cars the brake pipe is connected to the through pipe and the unused brake on the front of the carriage is to be plugged.

4. (Right) Charging the Emergency Brake Reservoir

After connecting the locomotive and ensuring all the pipes are connected, apply the brakes until both gauges are reading the same.



Brake Pipe Gauge

Emergency Reservoir Gauge

5. Operating the Emergency Brake

PUSH THE BIG RED BUTTON

Fines for improper use of Emergency Brake may include verbal abuse from loco driver and or loss of tea and biscuit privileges.



Top: Greg Croudace driving Jim Leishman's Ps4 on the June running day. Above: Andrew Allison & his A10 leads Arthur & John Hurst on Bettie the Blowfly and Nigel Gresley on the May running day. Bringing up the rear behind guard Simon Collier is John Lyons and 1915. Below: Lionel Pascoe brought along the original Ted Herbert 2-8-2 for a run at the July running day.



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

Telephone: (02) 9874 8696. **Postal Address:** The Secretary, PO Box 124, West Ryde, NSW, 1685

Web Page Address: <http://www.slsls.asn.au>

Public Running Day is the **THIRD** Saturday in each month from 1.30pm. Entry is \$2 adults, \$1 children. Rides are \$1 each.

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