



Make a difference and *Nominate!*

FOLLOWING the article about the forthcoming AGM on page 4 of the July-August newsletter, the NDMES committee now wishes to inform ordinary members of the nomination requirements and process involved.

This year, the new Rules of Association require nominations to be in the hand of the secretary by Friday, September 13, and have attached a short supporting statement from another member. This date happens to coincide with our September monthly general meeting date. No further AGM nominations will be accepted after this date. Shortly after the closing of nominations members will be informed of the nominations received.

As in previous years at the AGM, all positions will be declared vacant. For positions where there are several nominations, a secret ballot will be held. Positions without any nominations may be filled from the floor on the night.

A new form has been produced and has been available to members as from the August 9 general meeting.

Any members away on holidays can post their nominations to: PO Box 681 Balcatta WA 6914, but they must comply with the cut off date of September 13.

Please remember: To nominate for the position of president, a member must have served on the committee at some point for at least a year. All other positions can be filled by nominations from ordinary members.

Please consider taking on a position at committee level and submit a completed nomination form. Past committee members are always available to help, if requested to do so.

The society is only as strong as its membership participation!

Paul James — Secretary



Is it full size or a model? Only the heads of giants in the background (Peter Smith and Steve Reeves) give it away. It is Ed Brown's magnificent 5" gauge model of the WAGR Es Class 4-6-2, one of the world's earliest Pacific type locomotives. The original Es308 is preserved at the Railway Museum in Bassendean.

More of Ed's recent work on a WAGR ZB brake van on page 8

Photo: Jim Clark

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President's Report for August 2019

ACTIVITY at our grounds has been a little quieter than usual, the wet cold weather not encouraging outdoor activity. Fortunately both run days were quite fine and well attended, as were the last two general meetings.

Laurie Morgan, Charles Coppack, Richard Turner and John Shugg are progressing with the third circuit of the garden railway, albeit not getting to operate their trains too often.

The planned working bee was not well attended by members, but despite this, quite a large amount of leaf litter was cleared and the following Tuesday and Saturday saw the completion of the clean-up. The grounds looked really good for the July public run day.

The June combined club day and general meeting was special in that Jim Clark displayed and operated his newly built beam engine on steam for the first time (*see photo below*). The castings for this engine were cast by Jim and Ron Collins and the part-built engine featured recently at our AMRA display.

The committee has virtually completed tidying up the society's operating procedures — hopefully they will all be in place by October. Paul James and David Naeser have put a lot of time and effort into our operating procedures and Paul as secretary has been the driving force on the committee and the giver of wise counsel.

Development of the new role of "Rail Operations Coordinator" is progressing, although there will be a pause whilst Paul Costall is on the road in South Australia.



President's Report

By Andrew Manning

Finally, after a long delay we have received the brake kits from DNC. Harry Roser is now able to complete the bogies and thus the two new riding cars. The design and implementation of brakes on the bogies has been subject to close scrutiny by David Naeser. The adopted design has proven reliable and relatively simple to fabricate. Once finally approved, these will be the preferred bogies and braking system to be used on future club passenger cars.

Suzanne Smith has volunteered to take on the treasurer's role. She and Peter are also taking on organising the Sandgropers gathering to be held in November this year (*see item on page 4*). Charles Coppack has quietly gone about cleaning up the front club entry area with ballast and installed a citrus grove.

The last couple of years have seen quite some turbulence in the committee with the resignation of several presidents during their terms in office. Hopefully we will have some stability over the next few years.

The success and effectiveness of the society is up to you, the members who stand up and take on a role. If you have the skills and/or enthusiasm to participate in the running of our society, I urge you to do so. It is not easy and not always comfortable, but when all goes well and the members are happy, it is very rewarding.

The problems with access to the rear of our site, combined with the challenge of developing a new five-year plan, have resulted in some great ideas being floated. I hope the incoming committee can develop these ideas and inspire other members to get more involved in taking the club forward, with improved infrastructure and facilities for all of the various members' interests.

Lastly, as you are aware, two of our former members passed away in June of this year: Dennis Lord and Geoff Evelyn (*see obituaries on pages 6 and 9*). In response to my condolence letters sent on the society's behalf to their respective families, we received their thanks and recognition of the enjoyment that both Dennis and Geoff experienced during their time at NDMES.

This will be my last president's report and I would like to take this opportunity to thank all of the current committee for their efforts throughout the year. I would also like to thank all of those members who have made a contribution to the society, from maintaining track and grounds, to participating in the public run days, to those in the background working on administrative, service and development functions. A special thanks also to Lesley Hodges and Sue Armstrong for their work in the canteen and for ensuring Tuesday morning teas are a treat.

Happy modelling to you all,

Andrew Manning — President



Jim Clark and Andy Davies at the June club day discussing Jim's new beam engine, seen here in steam for the first time.

Photo: Lyall Austin

The planets were aligned for our July run

WHAT a glorious winter's day on which to hold a public run! Conditions could not have been kinder for us on July 28 and our public patrons came out in numbers to support us.

We had nine locos in action, with three on the raised track and six on the GLT. They were Steve Reeves' 'Ocker' battery loco and Blowfly, Paul Costall's 'Firefly', Allen Ward's 'Waterloo', Phill Gibbons' Mallet, Tom Winterbourn's Black Five, Dave Robinson's big diesel, Scott Andrews' tram and the club's Heidi steamer.

It was the first time Scott had his tram in action at a public run and the public loved it, being prepared to wait for a ride, even though it could only take two or three at a time.

Again Lesley and Sue did a marvellous job in the canteen, while on the track there were no mishaps and the station staff kept things moving along smoothly.

Here are some pics taken on the day.

Article and photos by Tom Winterbourn

Right: Dave Robinson and his diesel convey another four-car load of passengers out of the station as the queue for rides backs up the stairway.



Above: Phill Gibbons and his Mallet passing Allen Ward at the station.
Below right: Phill's Mallet casts shadows on a beautiful winter's day.



The role of Station Master

THE job description to perform the role of Station Master on our public run days is quite straightforward:

To oversee the loading and unloading of the trains, keep passengers and children safely away from trains when in the station, seat them safely and control train dispatch so as to keep trains well spaced on the track.

The Station Master must have a good working knowledge of both AALS rules and the NDMES rules and procedures.

The main tasks can be summarised as follows:

- 1) Oversee passenger loading and unloading.
- 2) Keep passengers (especially children) clear of moving trains.
- 3) Ensure that passengers are seated correctly and feet are on running boards. Closed shoes must be worn.
- 4) Small children should not be placed at ends of coaches. Request a parent or adult to ride with very young children.
- 5) Before dispatching each train, advise the passengers that:
 - ◆ They should sit straight, and not to lean off the train.
 - ◆ They must keep their feet on the running boards.
 - ◆ They may not take photos/videos while riding for safety reasons.
- 6) Ensure that the line is clear ahead before dispatching each train.

Further tasks for the Station Master include:

- 1) Only registered drivers may carry public passengers. Be observant of possible non-compliance.
- 2) Only locomotives and carriages which comply with AALS requirements shall be used for conveying passengers. (Locomotives and carriages registered with NDMES do comply). Be aware of the locomotives and

carriages being used and be observant of train make up and possible contraventions of AALS/NDMES codes.

In the event of any uncertainty in this regard, the Duty Officer should be advised and requested to rule on the eligibility of drivers, locomotives and carriages.

- 3) Be observant of train operation, advise the Duty Officer of non-compliances with NDMES standing instructions and AALS regulations (e.g. licence, speed, following distance, guards, end-boards, etc).
- 4) Know where the first aid kit is kept - in the clubhouse. Know the location of the nearest medical centre (Warwick) and any on-site first-aider(s).
- 5) Know how to deal with passengers who may sustain some injury. (Refer to Duty Officer for recording of name, address etc. Do not admit any liability).
- 6) Confirm that any accident is recorded in the accident record book and the Duty Officer has been notified.
- 7) Any disputes with passengers should be referred to the Duty Officer.

At a recent club meeting a Power Point presentation was shown summarising the duties of the Station Master and illustrating a few of the tasks to be done.

If you would like a copy, or are interested in training for this role, please contact David Naeser at dnaeser@iinet.net.au or by phone: 0433 088 703.

Get ready for Sandgropers 2019

SANDGROPERs 2019 will be held at the NDMES Balcatta track site on the weekend of November 9-10.

Endless tea and coffee will be provided, morning and afternoon teas and lunches will be available on both days, with a catered dinner on the Saturday night.

There is room at Balcatta for all gauges of trains and riding cars. There will not be a night run on Saturday evening, as we have left that for a nice dinner and a chance to catch up with friends over a drink or two. We are having security on site so engines can be left overnight.

We are hoping that the guys at the garden railway will put on a great display as well. A display of stationary steam engines and other models would be great too, so if you have something to show, please bring it along.

We would like traction engines to attend if rear access to the grounds can be arranged — details of this are still to be confirmed.

This event is open to all AALS-affiliated clubs in WA. If there are some eastern states club members here at that time they are most welcome, just let us know.

Eileen Briggs is helping put together a registration form via our website ndmes.org.au which will be available soon. Meal choices, costs and details of what engines people are bringing can be entered there. *Peter and Sue Smith*

HVR Steam Festival

A FINAL reminder about the Hotham Valley Steam Festival on Sunday, September 15.

We have been allocated a display area near the Visitor's Centre. For those who are helping to set up or bringing displays, it would be good to be on site by about 8am.

If you are running live steam of any sort please make sure you have your current Boiler Certificate with you.

Hope to see many of you there! *Allen Ward*

Calendar of Forthcoming Events

General Meeting	Friday	13 September	8:00 pm	
Hotham Valley Steam Festival	Sunday	15 September	Hotham Valley Railway,	Dwellingup
Public Run Day	Sunday	29 September	10:00 am — 2:00 pm	
Annual General Meeting	Friday	11 October	8:00 pm	Followed by G.M.
Club Run Day	Sunday	13 October	9:00 am — 2:00 pm	
Public Run Day	Sunday	27 October	10:00 am — 2:00 pm	

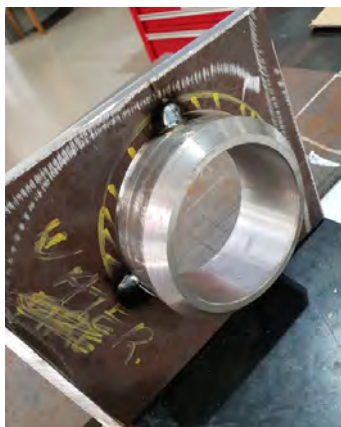
Know your Society

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	David Naeser	0433 088 703	
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Boiler Inspectors	Ron Collins	0427 461 279	
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	Steve Reeves	9354 1395	
	Noel Outram	9525 1234	
Librarian	John Martin	9206 2325	
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Website			www.ndmes.org.au
Society Grounds and Track Site	Vasto Place (off Balcatta Road), Balcatta		
Postal Address	NDMES, PO Box 681, Balcatta 6914, Western Australia		

Building a steel boiler at home

(continued from July-August issue)

THE next job is the firebox rear plate. This has to have the fire hole ring welded into it, which can be done later but is very difficult. So as a courtesy to the welder, do it before fitting the rear plate.



Left: The fire hole ring tacked in place in the rear plate. This can be fully welded to make a complete sub-assembly before the next step.

The rear plate complete with the fire hole ring needs to be welded into the firebox now. Next is the foundation

ring strip. Tack it in place then it can be fully welded, with a sealing run on the inside.

Then prepare the backhead — you will need to put your tags on (small pieces of steel scrap in three positions to hold the backhead level).

You will probably have to do some grinding here to get the backhead to drop in freely, but free it must be. Whether the welder has to weld up a weld prep with a 3mm gap or even 5 or 6mm doesn't matter; what matters is that the backhead looks nice and square to the rest of the firebox. A little fettling with an angle grinder will fix a lot of sins.



Engineering Matters with boiler inspector Phill Gibbons

When the backhead welding is complete, fit plugs and do a first test for leaks by filling the boiler with water and pressurising it. If you have any leaks, and I would be surprised if you have, mark them, drain the boiler, grind out the weld in the marked places and re-weld. If a leak is in a position where it's impossible to grind out, then run a weld over the top of the leak.

Once the boiler welding is finished, it is time to carry out the full hydrostatic test to the satisfaction of your boiler inspector.

When this is done, you can weld the lagging frame on. My preference is to use 20 x 20 RHS tube for the lagging frame, as you can easily clamp your lagging material to it and then pop rivet it in place.

Now a word of warning! I used zinc-anneal sheet for the lagging on 'Irma' and two years later this has seriously rusted. It may have been the felt insulation I used holding the moisture behind the sheet.

Whatever the cause, it has to be replaced, so stainless steel or brass sheet is the go. My preference now is to use an air gap for insulation on steel boilers, not an insulation material.

Before you apply the lagging and finally seal this boiler up, dry it out in the sun for a while or use a gas torch to rid the outside of moisture, then paint it with a heavy coat of red oxide paint.

I hope this series of articles helps take the mystery out of building steel boilers at home!

Article by Phill Gibbons, photos by Steve Reeves

Thanks to Phill Gibbons for this extensive and informative series of technical articles. We might put this into a small booklet, available to members.



Above and right: Steve Reeves' boiler, hydro tested and complete with the lagging frame fitted, only requiring a final coat of paint.

Farewell Dennis Lord 1921—2019

DENNIS Lord passed away peacefully on June 24, 2019, at the age of 97. Dennis will be fondly remembered by members who had the privilege of knowing him and the remarkable life he experienced. At the time of his passing, Dennis had one of the longest memberships of NDMES.

He was an active member of the society and a prolific modeller. Dennis built boats, yachts, planes, steam locomotives and stationary engines and developed an extensive OO gauge layout.

He was always happy to assist members in solving electrical/electronic problems when requested. I recall at around the age of 94 he was still running conduit for additional signals and working on club power supplies.

I became more aware of his diverse interests a few years ago when he asked for my assistance with a couple of his locos. I spent quite some time with him and saw all of the bits and pieces he had built. Dennis also told me stories of his life in the navy as a boy sailor at 15, his time serving during World War II and later as a technical officer at the Harwell nuclear research centre.

Dennis donated a large part of his workshop and models to the society and most of these were sold to members for donations to the society. Some of the items remain in the workshop for members to use.

It is the intention of the Society to use some of the donated funds to purchase a durable park bench as a memorial to Dennis.

Dennis spent his last two years in care. He was in and out of hospital a couple of times but seemed to cope fairly well. More recently when I saw him he seemed to be happy in his memories of his time in the navy and was looking forward to getting home to his wife.

Our condolences go to Kelvin, Valery, Stephany and his great granddaughters.

Andrew Manning



Above: Dennis Lord at work on the 12 volt power supplies in the steaming bay in 2014. Photo: Tom Winterbourn



Dennis heads off home after a working bee one Tuesday in 2014. Photo: Tom Winterbourn

Right: Dennis cutting his 94th birthday cake in the company of club members. Photo: Tom Winterbourn



Dennis' first 5" gauge model, of a Tennant 2-4-0 loco, built to the Martin Evans design from the ME series in the early 2000s and refurbished in 2017 by Andrew Manning. Photo: Jim Clark

'Lord' of the Admiralty

SADLY, on June 24, 2019, Dennis Ernest Lord, a long-time member and friend of NDMES, passed away at the grand old age of 97.

Dennis joined the society in October, 1985, and was an ever present contributor to club projects and events until a few years ago when, finally deprived of the capacity to live at home on his own, he was settled into a care home in Osborne Park. He was well into his 80s when his driving licence was eventually revoked, but even then Tuesday and Saturday morning work days and run-days always saw him cruising to Balcatta on his trusty mobility scooter with his toolbox.

Dennis was a keen builder of a variety of models from his early days in the Royal Navy and onwards. As early as 1945 he built a 3½" gauge 'Heilan Lassie'. He also built a model of HMS St Kitts, a destroyer he served on in 1946.

In Australia he built a model dynamometer car which we put to use on our track one weekend, undertaking performance trials on members' locos.

He built a very fine scale model of another of the RN warships he had served on. On completion, he told me he had sailed it for a while on the lake in a park in Stirling and it sank before he could get it back to shore. Stirling Council organised a rowing boat to search for it, but this was apparently unsuccessful. I later accompanied Dennis to the site equipped with a scuba tank but was still unfortunately unable to trace the ship after a very thorough grid search in poor visibility.

He also built a radio-controlled model of 'Australia II', a Tiger tank, a Spitfire, a 3½" gauge and a Gauge 1 'Evening Star', a 5" gauge XPT battery loco, a Carousel, a traction engine and a number of stationary engines.

In the early 1990s, Dennis served a term as secretary of NDMES. From his career he brought specialist electrical and electronic skills which were deployed in the development and maintenance of the club's signalling system. He helped me to convert the club semaphore signals from incandescent lighting to LEDs, motorise them and integrate these into the track systems.

For several years we worked together tracing faults in and modifying the operation of the track signalling in general. In the course of this Dennis would often refer back to his earlier naval experiences, particularly his wartime escapades and his luck in surviving where many of his shipmates didn't. His recollections were vivid in detail but as I was to discover, none of these memories was on record. I suggested that he commit his life history to paper and agreed to give him any proof reading or word processing assistance he required. He immediately immersed himself in the project and produced his story from birth in 1921 to the completion of his service in the Royal Navy in 1953.



Above: Dennis Lord driving his 3½" gauge GNR Atlantic 'Maisie'.

Photo: Dick Langford collection

He followed this up with an introduction to his first civilian career job as Instrument Inspector with the Atomic Energy Authority at Harwell in UK. He did say he had more instalments for me, but unfortunately these never materialised.

Nevertheless, I have many pages of his history on file. A summary of this is as follows, and should any member wish to access the details, they can be made available:

1936 - 1937 Signed up as a boy sailor with the Royal Navy at (land-based) HMS Ganges in Ipswich.

1937 - 1939 Graduated and assigned to training ship HMS Ramilies, then posted to HMS York, an 8" cruiser (*see note below*) on North and South America patrols.

1939 - Second World War began. Posted to HMS Royal Sovereign, a 15" battleship on North Atlantic supply convoys between America and Britain.

1940 - Promoted to AB and assigned to a fleet of small boats to cross the English Channel and help evacuate allied soldiers from the Dunkirk shores. Later that year he was posted to HMS Orion, a 6" cruiser supporting troops in the Mediterranean. Orion was sunk in Alexandria, was re-floated, patched up and sailed to Cape Town for more temporary repairs, then sailed to San Francisco in August for re-commissioning. Dennis remained as part of a skeleton crew which helped out in the dockyard during the six-month re-fit. Pearl Harbour was attacked on December 7, 1940.

HMS Orion repairs and sea trials were completed by March, 1941, and they sailed back to England. Dennis was married in Hull to his fiancée, Kathy. Two weeks later he was sent to HMS Vernon in Brighton to train as a Leading Torpedo Operator, upon which he was

(Continued on page 8)

Note: 8" and 15" refers to the size of the guns carried by the ships.

'Lord' of the Admiralty (cont...)

(Continued from page 7)

promoted to Acting Petty Officer and drafted to HMS Woodcock, a new 1500 ton frigate as part of a five-ship U-boat Hunter Killer group. This group sank many enemy submarines right up to the end of the war in Europe, which ceased in May, 1945.

In 1945, Dennis was drafted as a Senior Electrical Officer to HMS St Kitts, a Battle Class destroyer which was in dock for extensive electrical overhaul. On completion, the ship underwent sea trials and sailed to Trinidad, returning to England for Christmas.

In 1946, the ship was then fitted out to undertake sea trials in Arctic waters, which commenced after the crew returned from Christmas leave. The ship continued to patrol waters nearer home through to 1949, when Dennis was drafted back to shore barracks to serve out his final two years of service. This was extended by a further two years due to the outbreak of the Korean War, but he returned to civilian life in 1953.

So we say a fond farewell to Dennis, (our) Lord of the Admiralty — departed but not forgotten.

John Martin

Notes from the Boiler Group

ONE Wednesday in early June, the boiler group was treated to a casting demo at the 'C&C Foundry'. The items to be cast in aluminium were the smokebox fronts and doors for the large 7¹/₄" locos currently being built by Ron Collins and Paul Costall.

Paul brought his machined and assembled smokebox door and frame to Show & Tell at the June general meeting a few days later.

Jim Clark



Right: Ron Collins checking the sand moulds shortly after the metal was poured, watched by a large and appreciative audience including Phill Gibbons, Noel Outram, Richard Turner, Tom Winterbourn, Lyall Austin and Paul James.



Left: Fresh out of the sand and everyone seems pleased with the results, while Garth Caesar (left) hoses down the hot metal of the two new smokebox frames.

Photos: Bill Walker

Large coal donation by global company

FUGRO, a world leader in geo-science services, has made a valuable donation to NDMES' operational requirements, saving the club thousands of dollars in future purchases. It has offered us about 2.5 tonnes of Newcastle coal which are surplus to its scientific research requirements.

Fugro is claimed to be the world's leading service provider for the collection and interpretation of data relating to the earth's surface and sub-surface and has branches throughout the world.

According to company spokesperson Smruthi Unnikrishnan (Ruth), the coal was provided via the Australian Coal Association Research Program and was

sent from TUNRA (The University of Newcastle Research Associates). It was sourced from BHP mines in the NSW Hunter Valley region.

The offer from the Osborne Park-based company was originally made to South-West Model Engineering Association in Bunbury, but president John Matthews advised the company it was more appropriate the coal be offered to our society and accordingly advised Tom Winterbourn of its availability.

As this issue of Steam Lines was being signed off for printing, arrangements were being made to pick up the coal and store it. If the coal is of the quality we expect, our fuel needs for the next few years could be satisfied.

Lasting legacy for a model-making gardener!

YOU'VE all probably seen his name, but if you have joined the club in the last 10 years or so, have you ever wondered who the person behind the name in "Geoff's Wood" is? This sign is partly buried in the foliage next to the elevated track as it rounds the curve after leaving the station (*see photo at right*).

"Geoff" is Geoff Evelyn, a long-time early member of NDMES who sadly passed away in June. He had been a club member about 20 years ago and he and wife Gwen were well-known to members in the 1990s.

Geoff was a keen model engineer and gardener and was known as a smart and well-dressed man. This is evident in the accompanying pics.

Another long-time member, Steve Briggs, remembered Geoff and Gwen well, recounting they lived at Quinns Rock at the time but later retired to the NSW South Coast.



The sign "Geoff's Wood" was erected by members in recognition of the work Geoff did in helping to landscape the club grounds and keeping them maintained. *Photo: Tom Winterbourn*

Steve said Geoff built an excellent NSWGR 38 class Pacific, 3801, in 3½" gauge, and this loco was featured in a historical summary of the club by Dick Langford on page 8 of Steamlines in January-February, 2005.

Apart from model engineering, Steve said Geoff's other interests were photography and caravanning. *Tom Winterbourn*



Right: Geoff and Gwen Evelyn with their 3½" gauge 3801 on the elevated track at Balcatta sometime in the 1990's.

Photos: Dick Langford collection



Above: Geoff and Gwen doing a Santa Special run for Christmas 1993, as featured in the 2005 edition of Steamlines.

Gwen Evelyn, responding to condolences and photos sent to her from NDMES, writes: "We have wonderful memories of our 38 charging around the Balcatta site on the elevated track, and at Geoff's funeral on July 2 I showed a video which was made by a close friend all those years ago. It's nice that there are still some members who remember us. Of course, this is where the 3801 did its inaugural trip many moons ago now, but still very present in our/my mind.

Geoff was building a 7¼" Stirling Single wheeler. He completed the tender, which is magnificent, and made good progress on the engine, but his dementia halted everything, even his life on June 23, 2019.

His engineering feats were many — he even built a "G" gauge tank engine 'Edwyn', which was written up in the Australian Model Engineer magazine, and a replica of Ardglen Railway Station as his father was A.S.M. there when Geoff was a lad.

The 3801, station, stationary steam plant and many other railway related items we donated to the Australian Railway Monument and Rail Journeys Museum at Werris Creek. Geoff wanted the Stirling Single to grace the tracks so a member of our local club has taken it on to complete, so one day in the not too distant future Geoff's dream will become a reality."

Extract reproduced courtesy of Gwen Evelyn.

July members run day, from a personal perspective

I FEEL it has been good for the club to hold a general meeting on a club run day, as it is bringing out a larger turnout than on a day when there is no meeting.

I came to the track at 10:30, walking through the small gate, to see ahead of me a large group gathered around the stationary engines outside the club rooms. To my left several locomotives were being steamed up in the under cover steaming bay area.

There were engines running on the elevated railway, so I headed to the station. All were 3½" gauge — the first one I saw was Clive Jarman running his Juliet named 'Romeo', with his daughter and family. Behind him a bright green Maisie could be seen. Also there was Geoff Wilkinson with his Dad's South African 4-6-0 tank, that purred along like a Swiss sewing machine. Not bad for an engine more than 50 years old. When the wind changed in the right direction, the exhaust beats of Gauge 1 engines could be heard down at the station area. It sounded like there was more than one engine running, so the garden railway guys were having fun too.

A little later Paul Costall rolled into the yard on Ed Brown's Es Class on the ground level track. The engine was pulling Ed's latest project, a WAGR ZB class brake van/second class compartment. These were built in 1926 for country mixed trains, some lasting till the 1970's. Built to a scale of 1½" to the foot running on 5" gauge, it is fully detailed inside and out, the doors open and it has working vacuum brakes. Painted in the original Indian Red it looked great.

The general meeting started on time at 11am. There were some challenging subjects discussed which I know can be hard on a president and secretary, but with a larger turnout of members, there was a greater cross section of points of view. This means better outcomes, as well as providing some guidelines for the committee to be steered by, on matters they need to sort out. So a win-win for everybody.

After this was Show & Tell. Several people brought something along, two examples being a stainless steel whistle and a 3D printed pattern you can almost eat! After the meeting our faithful cooks Andy Davies and Clive Chapman prepared hotdogs with many members staying to enjoy them.

Neil Blinco has bought 'Jamie', a 4" scale, 7¼" gauge,



Quarry Hunslet to the Don Young design (*see photo at left*). He was seen doing some laps of the ground level track.

This engine was started by one of our founder members, not long after our club started. He got as far as a running chassis and making the smoke box before the engine was sold on.



Top: The smile never left Geoff Wilkinson's face, running his South African 4-6-0 tank engine.

Above: Ed Brown's superb 5" ZB brake van.

Right: Check out the level of detail on the brake van!



Another of our members Barry Pierce bought it and had Willis Engineering finish it off including the driver's car. This means Phill Gibbons has worked on this engine, as well as so many others.

The engine ran at Castledare for many years and was responsible for the starting of Toodyay Miniature Railway. It then went underground for about 20 years, popping up every now and then in the Sunday Times readers mart!

Neil bought it a little while ago and he has been steadily cosmetically restoring it, as well as doing those odd mechanical maintenance jobs. It is running really well now, thanks to the tuition by members of the boiler group who have been helping Neil out with valuable advice.

The day ended around 2:30pm having been a fine sunny day enjoyed by all.

Article and photos by Steve Reeves

Tips for successful brass plate work (cont...)

(Continued from July-August issue)

PREVIOUSLY, we prepared the plates, did a trial assembly and cleaned everything ready for pre-tinning of all the joint surfaces. To pre-tin the joints you will first need to apply a solder flux or paste to all the areas previously marked out as being mating surfaces.

Baker's Flux is a good one to use, available in liquid, and under other brand names as a paste. You will also need some soft solder. Plumber's solder or solder sticks are best used for the pre-tinning stage, but if you are intending to use resin-cored electrician's solder to finish the joint, make sure they are the same type of alloy as your electrician's solder, or the two solders may not be compatible.

Electrician's solder is particularly good for finishing the joints, as it contains a resin core flux, which will assist with the flow of solder into the joint. You can also use it for the pre-tinning stage, either with or without extra flux.

The heat source is important. You will need quite a bit of heat, especially for large plates, but not intense heat. A small propane or butane gas torch is ideal. A large electrician's soldering iron (at least 150 watt) is useful for spreading out the solder and controlling the heat flow. If you don't have one of these, a small wooden stick with a flattened end can be used to push the solder along the plate.



Using the gas torch and the soldering iron, heat the brass gently along the marked joint until the solder will melt onto it. Spread out the solder with the soldering iron or pusher stick.

Proceed a short distance along the seam, then quickly wipe off the molten solder using a wad of old cloth, which should leave behind a shiny silvery surface over the whole area you just treated.

If the solder hasn't taken in some spots, scratch them up with an old file or a piece of dry Scotchbrite, apply more flux and pre-tin the dodgy bits again. Don't skimp on this step, especially for a tender or water tank where you want all your seams to be leak-free.

When all the surfaces have been pre-tinned, do the final assembly using rivets. Watch out for any solder lumps left from pre-tinning that might misalign the plates — re-heat them and wipe the excess solder off, or file off any small high spots if necessary. Any other last-minute adjustments to the fitting can be done now.

Apply a bit more flux over the inside of the rivets (not the outside, or the solder will wick out onto the outer plate). Start at one end of the assembly and work towards the



The completed tender for Britannia, painted and lined.

other end, so the heat distribution is fairly even. You will need to apply more heat than during the pre-tinning stage as there are several plates together now.

Using your gas torch, heat along each seam, heating the inside and outside plates as evenly as possible. Flow in a little more of the resin cored solder wire into the seam as you go, feeding the solder from the inside and watching for it to wick through to the outside. You can use a cloth to wipe away surplus hot solder at this stage — that is usually easier and neater than trying to file it away afterwards.

When the assembly is complete, a good pickle in the acid bath will remove any residual Baker's Flux. The resin flux from electrician's solder is a bit harder to remove, and requires a vigorous clean-up with a small wire brush and Scotchbrite. You must get rid of all the old flux, especially around rivets and in seams, or it will slowly react with the metal and ugly blemishes will appear under the paintwork after a while.

As part of the final clean-up you should bring all the shiny brass surfaces back to an even fine matte finish which will help the paint to adhere. This can be done with wet-and-dry paper, a small rotary wire brush in a drill, or if you're game enough and have access to the equipment, a light sand or bead blasting.

Job done — ready for painting! Which is another subject all to itself, on which many articles and several books have been written. The main thing after the final clean and dry is to get a full coat of etch primer onto the metal as soon as possible to protect it and give a good base for the subsequent paintwork.

Wattyl Industrial Etch is a good one in a spray can, but there are many others. Follow the instructions on the can for preparation, degreasing (removing your finger marks!) and application of the chosen primer.

Article and photos by Jim Clark

Every Clock Tells a Story

WHEN I took my old railway clock up to the boiler group to get the pendulum looked at, I didn't expect to get so much help and so much background on a clock that I never regarded as being anything special.

My Dad and I each bought one of these station clocks back in 1978 for 20 Rand when the South African Railways converted all their clocks to electric. After emigrating twice and after countless house moves, I finally managed to damage the pendulum spring about 16 years ago (during yet another move). I replaced the spring but the clock hadn't run since.

I thought that Garth Caesar may be able to give some advice with regard to the pendulum, but his eyes just lit up and he proceeded to dismantle my treasure, having it in bits on the table at Ron's place in no time... That was when the banter started... (*see photo at right!*)

But Garth is a stoic and he batted all this away and had everything cleaned, polished and reassembled ready to go in not much more than an hour, giving us some background information about the clock on the way.

The clock would have been made in the last decade of the 19th century, so it would have originally been marked as either: Natal Government Railways, Cape Government Railways or Central South African Railways. It was noted that the number on the clock case and the number on the mechanism don't correspond, and also that the clock face is marked as "SAR-SAS" and therefore the face must have been refurbished after 1916 when the unified state owned railway system came into being.

Unfortunately, there is no way of telling which station this clock had belonged to, but I like to think of it in a country station like Mariannhill or Nshongweni, and that it watched me waking up at 5:30 in the morning in a passing train, going on holiday trips down that wonderful, winding, tunneled railway line to Durban and the seaside.

Article by Geoff Wilkinson



Above: Garth has the clock stripped down amongst the morning tea and cakes, ignoring comments like: "Now I suppose you're going to have to Google the assembly instructions" and "I hope you counted all those bits first". *Photo: Jim Clark*



Above: The SAR clock now ticks happily in its new place beside the entrance to my workshop... **first time it's run for 21 years!** Thanks to our fantastic club members, it now stops only when I forget to wind it! *Photo: Geoff Wilkinson*



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