



Future Directions

Following on from the letter regarding the future direction of our club, which was circulated by Andrew Manning to all members some months ago, a Membership Survey has been conducted in an effort to understand what members want from their society.

The results of that survey have been collated and John Turney made a presentation of the findings at the August General Meeting. As only about a quarter of the membership were present at the meeting, this article covers the same topics, with some updates to percentages based on corrected membership numbers.

The original statistics presented at the August meeting were based on 88 members, but on advice from our Treasurer this has been revised down to 75 current financial full members (excluding honorary members).

35 survey responses were received, which represents approximately 47% of the membership — a good response and certainly a sufficiently large sample size to make the outcomes and views that were expressed important to our future direction as a society.

The overwhelming theme from those who took the time to respond was very positive towards the society and its activities. Some of the responses included detailed commentary on issues facing the club, with many ideas and suggestions for a way forward and for meetings and activities that the club could hold.

An interesting aside taken from a study of the current membership list is that the average length of all memberships in NDMES is just under 10 years. Around 46% of members have been in the society for less than 5 years, while about 41% have been members for 10 years or longer, some members for 33 years!

This shows we have a solid base of long-term members with a large influx of new members in recent years. In fact, 26% of the current members have been with the society less than 1 year. We are a small society, but one that is growing.

Just a few aspects of the great facilities we now enjoy...

Right: Station and club rooms

Below: Garden railway

Bottom: Passing the steam-up sheds on a public run day.



Photos: Tom Winterbourn



Turning to the survey itself, some interesting observations arise from attendances at the Busy Bee day on July 20 and the run day on July 29. Of the 18 members who signed in for the Busy Bee, 15 filled out a survey: representing 83% of the attending members and 43% of the total surveys. There were 27 members signed in for the run day, of which 21 returned a survey: 78% of attending members and 60% of the total surveys.

What this tells us is that those who chose to respond to the survey are mostly those who are already highly committed to club activities such as run days and grounds maintenance. Unfortunately, it also tells us that those of you who chose not to respond are those with whom we seek to connect in order to find out what we should be doing to serve your interests better.

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Facelift at the club grounds

WELL, I know I am a little early in saying this, but it feels like spring is springing at the Club grounds. Thanks to Charles Coppack's great idea, the front of the Club is getting a much-needed face lift, and this will include new gates and fencing which arrived on Saturday. Praise also goes to Peter Maschette for locating these matching gates at a great price, saving the Club about \$500+ (see photo below).

Also, as part of the face lift the doors facing the BMX Club are to be painted dark green when weather permits. The shaper area is to be cleaned up too and laid out with flowering plants. It will be finished with wood chips spread around the area to make the front look more attractive for our visitors. Hopefully, it will become an area of outstanding natural beauty after all these efforts.



New gates we purchased for the front facelift, awaiting installation.

Paul James, one of our new Committee members, is doing great work in driving the Garden Railway project forward, along with other members, who are putting up a roof above the steaming bay in the area. Of course, we all know the difficulties the members of the Garden Railway project have had with leaves falling on the track (to quote British Railways) and help is on the way as we are getting a number of quotes about trimming trees overhanging these tracks.

Another new Committee member, Charles Coppack also has undertaken, along with David Naeser, a safety audit of the Club buildings and grounds. This has revealed some issues with our safety lighting, which have been promptly attended to. Also, it has been agreed that the main building needs a complete tidy-up and the removal of all unwanted items that we seem to have accumulated over a number of years.

President's Report



By
Steve Briggs

On another matter, owing to the success of our Facebook advertising, on a number of run days the Club ran to capacity with the same good people volunteering. So, it has been decided not to advertise for future events until we feel the need to do so again. Customers can still find out about our Club, events and times on Google and Facebook, but only as general information.

Looking forward to next year's AMRA, it is looking like it will be our best representation at the event yet! This is because Paul James and Steve Reeves have already started planning our presence at the venue, and will be liaising with the new AMRA Representative, Ron Romero.

Paul, at a recent Show & Tell at the Members' Meeting, demonstrated a display table he has built to show off our members' stationary models to best effect. He may have more than one of these tables in time for AMRA next year. Steve, of course, with his extensive knowledge of all things steam model related, will be able to bring an overview to our displays at the event.

Lastly, there are lots of projects being undertaken at the Club at the moment so join in by coming down to our weekly Tuesday and Saturday morning informal meetings to catch up with your fellow members, and discuss all things steam.

Steve Briggs



A view of the roofing work on the Garden Railway. Photos: Steve Briggs

Railfest 2018

The Railway Museum in Bassendean will be holding their annual Railfest open day at the Museum on Sunday 7 October, 10 am to 4 pm.

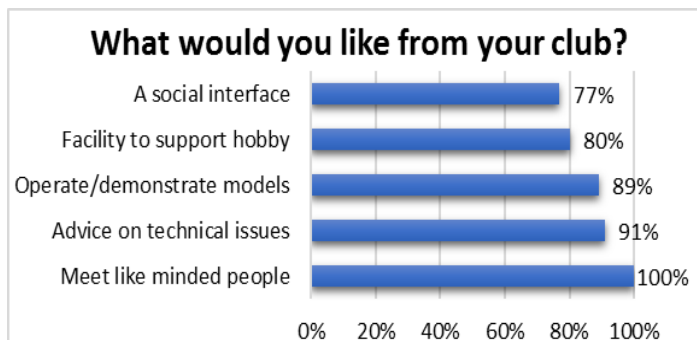
NDMES are not currently planning to put on any specific events there, however you might like to mark it in your calendar as an interesting day out.

For those who haven't been to the Railway Museum before, they have an extensive collection of full size historic locomotives, rolling stock, memorabilia and books.

Future directions: the membership survey

(Continued from page 1)

The responses to the specific questions presented in the survey are presented graphically, the first question being:

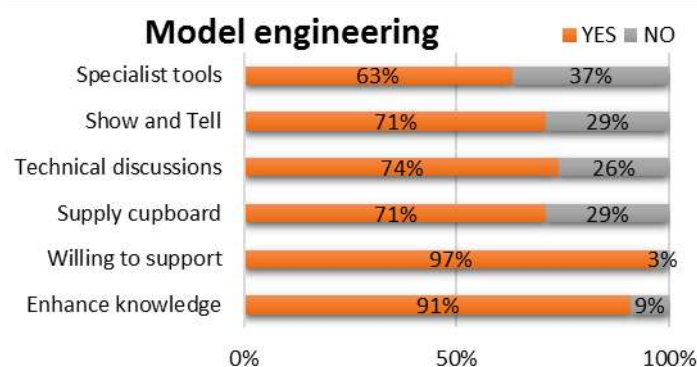


This was a fairly self-evident question: everyone wants to meet like-minded people, and about 90% want support and advice on technical issues and a facility to operate or demonstrate their models.

The next question ranked the membership aspects that you see as most important, and the overall results support the feedback in the previous question. In descending order of importance, the most important things are:

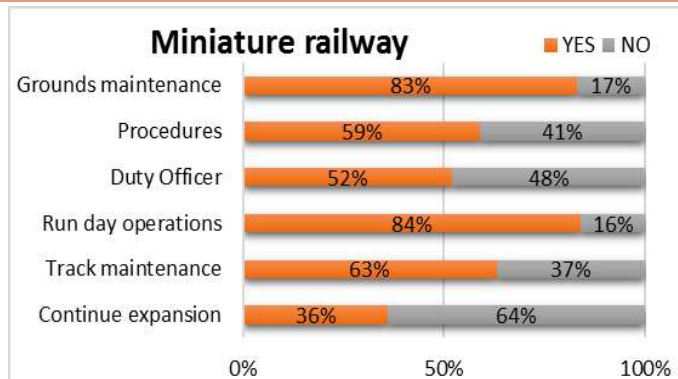
- 1 Fellowship
- 2 Other member's knowledge/assistance
- 3 Ground level track
- 4 Raised track
- 5 Public run days
- 6 Monthly meetings
- 7 Workshop facilities
- 8 Garden railway

The survey went on to gauge your willingness to support and engage in model engineering activities:



These results show that over 90% of you are willing to support and engage with model engineering activities and to enhance your knowledge in this area. For the other four aspects, respondents were split: about two thirds are involved and one third do not find these important.

The next question sought similar information about the miniature railway and our passenger hauling operations (public run days). The first part of the question found that only 36% are in favour of continuing expansion of the miniature railway operations, while 64% were against further expansion (see graph top right).



Remembering that the majority of respondents are already highly committed to club activities and to run days in particular, it is not surprising to see that despite two thirds being against further expansion, over half were prepared to support miniature railway activities, particularly with the run day operations and grounds maintenance (over 80%) and with track maintenance (over 60%). Duty officer is not so popular (52%).

The final question sought opinions on whether the current direction of the club is to your satisfaction:



The responses given here clearly indicate your support and enjoyment of the miniature railway public run day, but they also emphasise the importance of the society's objectives in the model engineering area, where 73% believe that there is not enough emphasis on this.

We can conclude from all this that the desire of the membership is that we can and want to be both a model engineering society and a miniature railway, and there is no reason why we cannot succeed at being both.

The creation of a society vision and the engagement of the membership will require work and commitment from the current and future committee and executive, as well as from the membership at large.

John Turney

Hotham Valley Steam Day

Hotham Valley Railway will be holding a special Steam Day at Dwellingup on Sunday 16 September.

NDMES members will be putting on a display of stationary engines and other model engineering items. The display will get underway about 9am. NDMES is having 2 marquees 6 x 3 metres total and a trailer alongside. One tent will be model engineering and the other tent will be model trains. Some models will be in steam and others running on compressed air.

Traction engines will also be in action. How many is not known at present, but the more the better!

The Hotham Valley Railway steam train is due back in Dwellingup at about 4.30pm and things will be packed away soon after.

All NDMES members are invited and asked to wear club shirts where possible. The day is purely volunteer — our club is not making any money on

this occasion, this is just an opportunity to show the public what we do and to have a great day out.

If you would like to participate in the display, please contact Allen Ward for details: 0412 310 852. Otherwise we hope to see you there on Sunday the 16th!

Do you read AME?

If you are one of those who likes to browse your local newsagent and pick up an occasional copy of Australian Model Engineer, you may soon be disappointed.

Due to increased distribution costs, AME will no longer be available through newsagents after the current issue. It will become a subscription-only magazine.

So if you don't already have one, you might like to consider supporting the magazine that supports our hobby in Australia, by taking out a subscription to AME. As they say, use it or lose it! See www.ameng.com.au for details.

Calendar of Forthcoming Events

General Meeting	Friday	14 September	7:30 pm	
Club Run Day	Sunday	16 September	9:00 am — 2:00 pm	
Hotham Valley Steam Day	Sunday	16 September	Approx .10am — 4pm	(see article above)
Public Run Day	Sunday	30 September	10:00 am — 2:00 pm	
Annual General Meeting	Friday	12 October	7:30 pm	Followed by General Meeting
Club Run Day	Sunday	14 October	9:00 am — 2:00 pm	
Public Run Day	Sunday	28 October	10:00 am — 2:00 pm	

Know your Society

President	Steve Briggs	0400 691 864	president@ndmes.org
Vice President	Tom Winterbourn	0415 682 931	vicepresident@ndmes.org
Secretary	Tania Mackellar	0498 098 597	secretary@ndmes.org
Treasurer	David Edmunds	0432 426 891	treasurer@ndmes.org
Committee Members	Charles Coppack	0437 709 703	charles.coppack@swan.wa.gov.au
	Paul James	9457 7175	pkjames47@hotmail.com
	David Naeser	0423 088 703	dnaeser@iinet.net.au
	Dave Robinson	0417 943 678	dave.robinson10@bigpond.com
	Ron Collins	0427 461 279	
Boiler Inspectors	Phill Gibbons	9390 4390	
	Steve Reeves	9354 1395	
	Noel Outram	9525 1234	
	John Martin	9300 2180	
Librarian	Paul Costall	9572 1385	
Birthday Bookings	Phill Gibbons	9390 4390	
Driver Training	David Naeser	9276 8709	
Safety Compliance Officer	Jim Clark	0407 988 746	jimclark@hardwareandsoftware.com.au
Newsletter Editor			Not currently available
Website			
Society On-site Phone Number		9349 0693	
Society Grounds and Track Site	Vasto Place (off Balcatta Road), Balcatta		
Postal Address	NDMES, PO Box 681, Balcatta 6914, Western Australia		

What is our vision for NDMES into the future?

WHEN the Society was established some 30 years ago, the vision was to establish a model engineering facility looking largely like that which we now have, in accordance with the objectives that are included in our Rules of Association. What a success!

Having reached that goal, we now need to look forward and set a vision, a challenge, for the next 10 years and beyond. First, we should ask: Is the original vision still relevant to our current membership?

In my recent note to all members I called on the membership to identify and recognise the challenges currently facing our society, the outcomes of which can be summarised as follows:

We need to create a vision for the society — where do the members want the society to be in 5 years or 10 years time?

We need to engage the membership — members need to own their society, have pride in it and get involved in some or all aspects of the society.

The membership survey (*detailed on pages 1 and 3*) has provided us with an indication of what members would like out of the society. We can use this as a base to develop an up to date vision for our future.

Many of the ideas brought forward by the survey need to be discussed and fleshed out to create a vision as a basis for a long term plan that will get us there.

Below are a few of my own thoughts:

We need to decide how we want to operate as a group incorporating the range of differing needs including:-

- ♦ Public running (miniature railway and revenue raising)
- ♦ Club run days (informal days for members and guests)
- ♦ Model engineering (both making and operating models)
- ♦ Garden railway (garden track and models to run on it)
- ♦ Infrastructure maintenance (club grounds and track)
- ♦ New projects (new activities and/or extra facilities)
- ♦ Technical sessions (show & tell, presentations etc.)
- ♦ Or just enjoying a yarn with like-minded people!

Some of these activities require funding and the survey indicates a majority of members support the monthly public run day as an enjoyable activity and as the main source of funding for NDMES activities.

However, if the various interest groups (other than the miniature railway) expect to get funding from run day revenues, surely these members must be prepared to support the public run day operations. This can be done either on the run day or by helping out at other times with maintenance and improvement of the infrastructure that supports the public run days, i.e. the club track and grounds. This is something we need to discuss in detail and build into our future planning.

For the last 30 years members have been developing the grounds and infrastructure and it is now in a mature state. A lot of it was built on a shoestring budget and as a result is high maintenance, so let's work to reduce that maintenance burden.

For example, the club rooms have never been fully completed and are hardly a facility that members respect enough to keep neat and tidy. We could plan a progressive completion and an upgrade.

We should then consider what workshop facilities we need to develop to support our model engineering activities and rolling stock maintenance on site.

We also need a robust set of operating guidelines and procedures for public running as this becomes a bigger and more complex event. We cannot afford to have a serious mishap in this area. Again, this needs detailed discussion to determine how we should best organise and manage these days to keep them within the capabilities of the membership, make them enjoyable for both us and the public, and ensure the safety of all.

Over to you — we now have a great opportunity to build on past successes and to enhance the enjoyment of this great hobby by all our fellow members.

Andrew Manning

Notes from the Boiler Group

Things have been rather quiet on the boiler making front in Ron's absence, but no doubt a few people have been beaver away on boiler projects in their own workshops.

Lyall Austin is one of those, and brought two laser-cut grate halves to the recent Wednesday boiler group. These are cut so that they can be inserted and withdrawn through the fire hole door once the boiler is completed and fixed to a base, when the grate will be otherwise inaccessible.

It pays to think ahead as to how you will best be able to operate your plant! Lyall's boiler will soon be finished.

Several members are showing interest in small engines, some of which could be powered from the steam boilers. Other members are looking at simple engine projects such

as a 'Flame Gulper' (or vacuum engine) that would provide an interesting talking point on various model engineering techniques during their construction.

We also have a highly experienced clockmaker in the person of Garth Caesar who has indicated his willingness to share knowledge and expertise on building a relatively simple clock movement from stock materials, which could form the basis for a mantel clock, wall clock or a long-case clock.

If there is sufficient interest, we could look at getting some sets of materials together to have some club-based projects going to provide interest for members and something for Show & Tell. What do you think?

New Rules of Association for NDMES

This article summarises a presentation given by John Turney at the August General Meeting.

THE NDMES Constitution was originally conceived at the foundation of the society and was revised to become our current Rules of Association in October 2004. This no longer meets the requirements of the Associations Act (2015). The Western Australian Government requires that by July 1, 2019 all associations within WA (such as NDMES) have a Constitution which is compliant with the Associations Act.

We simply must meet that requirement — there are no exceptions.

Back in 2016, considerable discussion of this topic occurred at general meetings, and the ‘Model Rules’ contained in the Act were adopted at a Special General Meeting on September 9, 2016 by a three fourths majority of the 28 members present. However, no further action was taken by the Committee at the time and these new Rules were not lodged with the Government in accordance with the requirements.

This means that we are still operating under the 2004 Rules of Association and we need to re-start the process of adopting a new set of Rules compliant with the Act. We have around 9 months to get it done.

The way forward is as follows:

The Committee has previously demonstrated that it is comfortable to work within the ‘Model Rules’ provided in the Act. In fact, attempting to change these ‘Model Rules’ is extremely difficult and is not recommended.

Therefore the Committee should accept “without reservation or adjustment, the Model Rules as the basis for the new Constitution.” (The wording is important).

The NDMES membership will need to endorse this decision at a Special General Meeting. The new Constitution must then be lodged with the Government within one month of the meeting.

We are then able to develop our own By-Laws which sit under this new Constitution and govern the way we operate day-to-day. Sections of our old Constitution which dealt with these matters should be extracted to form the basis of our new By-Laws, as our operational rules will no longer be contained within the Model Rules.

There are five aspects of the new Constitution which we must determine for ourselves, and these are:

- 1) The Association name — this is “Northern Districts Model Engineering Society (Perth) Inc”. This name has a proud history and is representative of what we are and what we do.
- 2) Objects of Association — this is essentially the purpose for which the association has been formed and under which it operates.

There should be minimal changes from the 2004 Constitution, which is quite comprehensive and reads:

“Aims & Objects of Society.

(a) As a voluntary non-profit organisation, the objects of the Society are to further the activities of model engineering by:

- 1) Arranging and providing facilities for regular meetings and associated activities;*
- 2) Providing and maintaining facilities for Members and guests to assist with construction, maintenance and operation of engineering models;*
- 3) Providing and maintaining a site suitable for Members and guests to operate and display engineering models safely;*
- 4) Promoting the experimentation of engineering concepts and the development of any form of engineering and engineering miniatures without being limited to any particular field;*
- 5) Fostering national standards and when appropriate, making recommendations to the AALS pertaining to the hobby.*

(b) The assets and income of the Society shall be applied solely to the furtherance of the Objects of the Society and no portion shall be distributed directly or indirectly to the Members of the Society except as bona fide compensation for services rendered or expenses incurred on behalf of the Society.”

We may need to look closely at Section (b), as the wording may conflict with the Model Rules with regard to payments to members for services rendered.

- 3) The size of the quorum for Member’s meetings — the minimum number of members who must be present for the Annual General Meeting, Special General Meeting and General Meetings. This is currently set at 25% of the total financial membership, and given our usual meeting turnout of 20+, it should be satisfactory.

We need to be mindful that as membership grows in any society it becomes increasingly difficult to get a large number of the members together for a meeting, so the quorum size may need to be made a smaller percentage if we continue to grow.

- 4) The size of the quorum for Committee meetings — this is the minimum number of members who must be present at a Committee Meeting. This has been decided to be five members.
- 5) The Financial Year — This should be October 1 through to 30 September the following year.

As stated in ‘The way forward’, we need to act promptly on this issue and ensure that the process is completed and the new Constitution properly lodged with Government before July next year. It is a somewhat tedious administrative task, but one which is fundamental to the continued existence of the NDMES.

John Turney

Some interesting comments from the survey

THE quantative results of the survey expressed in numbers and graphs are of value (*see article pages 1-3*), but capturing the direct thoughts of the members is also useful. Many members added their ideas to the survey.

A selection of these ideas is shown below, grouped under several headings, as some consistent themes emerged from the comments written on the surveys:

On new members:

"We are new members and have always been welcomed by most club members."

"The club grounds are outstanding, so for us to join and reap the rewards of all the hard work done over years by members, we are truly grateful."

"We need more young members to take over when we are all 20 years older."

"Expand our horizons to attract a younger membership."

"If we want to encourage more younger members we must provide adequate engineering workshop facilities."

On public run day and expansion:

"The grounds size acts as a safety valve to stop us growing bigger, keeping it manageable for the membership."

"Into the park, no room at club grounds."

"I would prefer the run day to be smaller in scope."

"Run day profits should be used to employ contractors to do maintenance work."

"The club is at an enjoyable size we need to have fun, enjoy and maintain what we have."

"I think that advertising in the media should be cut back for a while to prevent overloading."

"Why do we need all the money?"

"While we need public run days to pay the bills, this has put an extra load on some people and other older members."

On model engineering:

"The recent get together of stationary engines was great."

"Show and tell used to have greater variety."

"We could promote model engineering through displays of models and projects to the general public."

"Perhaps construction of some simple engines or other models by members for ongoing discussions at meetings (Show & Tell)."

"The materials cupboard is another good idea for purchasing bar stock and plate."

"The best thing to happen recently is the Wednesday group at Ron's."

"How about an annual award (or awards) for various aspects of club activities? e.g. 'Best Model Completed.'"

On what has changed in model engineering:

"Model engineering seems to be much the same although people tend to buy parts rather than make them."

"Kits have become popular, there is less investment in machinery. The world has changed from trade skills to support based."

On monthly meetings:

"Club monthly meetings should be about model engineering (in any form from railway running to engines) with minimum of formal business."

"Club business should be done by the committee."

"Return Show & Tell to original post-meeting timeslot."

"I really dislike meetings on Friday night."

"Guest speakers on Friday night."

"There is no understanding of governance responsibilities."

On general issues:

"Don't let's end up like other clubs and implode from too much bureaucracy."

"We probably need to create a think tank to look at ways to promote the aims and objectives of our society, i.e. model engineering in all its forms, not just steam."

"The club is changing, not just ageing, but a different view to our purpose."

"Boiler group has become popular because of not fostering to interests of broader membership."

"The balance will always change. We need tolerance and appreciation of each other's efforts."

"Our membership is unfortunately ageing and tiring from the voluntary work by a limited number of members."

These quotes are just some of your fellow member's ideas. Hopefully, the survey results and the comments above will encourage other members to offer other ideas for future discussions within the club.

One of the main objectives of the membership survey was to encourage the involvement and engagement of members with the society.

While we have had a useful response from many of you, there remains around 53% of the membership from whom we have not yet heard.

Therefore, I hope this series of articles will inspire you to discuss your own thoughts and concerns with your fellow members and especially with our newer members, and to put forward your own ideas for advancing the society.

John Turney

The end of steam — but not of steam locomotives

Member profile No 8, Bill Walker

DURING my working life I worked on three different railways and after retiring became a full time student studying history. Now after many years and careful thought I have returned to one of my first interests, building a model steam locomotive.

The first railway I worked on is probably of most interest to members and rather than describe all the railways I worked on I will describe it because it was in the steam age. It was the London Midland Region of British Railways. In some ways it is hard to visualise as it has now almost disappeared.

I began as an apprentice fitter and turner at Crewe Locomotive Works. It was the largest Locomotive works in the UK, more than a mile long and it employed more than 6,000 people. New Standard locomotives “Britannia” class were being built, and they were up to 70040 “Clive of India” when I started work. These were followed by a three cylinder locomotive “Duke of Gloucester” and then the Franco Crosti 2-10-0s.

Halfway through my apprenticeship I transferred to Mold Junction Shed in the Motive Power Department (MPD) then to Chester MPD. This was a main shed and looked after seven garage sheds from Holyhead to Birkenhead. I completed my apprenticeship as a Locomotive Fitter at Chester MPD and worked as a fitter on steam locomotives.

My apprenticeship was coming at the end of a long tradition of running and repairing steam engines — within eight years of completing my apprenticeship steam engines on British Rail disappeared. I, like most of the steam fitters, was trying to learn about diesel traction and we were all caught up in the diesel fiasco.

Chester MPD had a wheel drop, changed wheels, springs, piston rings, crossheads, axle boxes, big ends and almost every other component except boilers. The locomotives I worked on included compounds, Super Ds, 8Fs, 4Fs, Standard LM and BR locomotives.



BR Class 9F 2-10-0 with Franco-Crosti boiler in the Erecting Shop at Crewe Works 17 March 1955. By chance I was there when they took this photo and made a note of it.
National Railway Museum Collection PRB311 NO. 55/197



Bill working on his current project, a 7¹/₄” ‘Lion’ locomotive.
Photo: Jim Clark

We carried out weekly boiler washouts, fortnightly examinations and major overhauls.

I remember working with these older experienced fitters who were using knowledge accumulated over many years and who would pass on tips on how to do certain jobs.

Most of this knowledge was lost as they retired or left the railways.

British Rail was very good at training people and encouraging people to study. I was studying and was selected as an “Improver on Probation”. This was a course, lasting a year, to learn to be a Locomotive Shed Master. I trained at Edge Hill MPD in Liverpool. An interesting part of my training was riding as a third man on locomotives. I went on locomotives in shunting yards, on the “Flat Iron” marshalling yard, in the docks, on freight and passenger trains, local and express. I went on lodging turns and stayed in the engine men’s barracks at Camden, Willesden and Carlisle Upperby.

Many trips were eventful. One was on an old steam locomotive to the docks and return on a single track through a very old narrow and steep tunnel. I was told to continuously operate the gravity feed sanders because if we slipped and came to a halt we could choke to death. I remember one moment being in complete darkness with smoke all around us then the fireman opened the firebox door letting out intense heat and light into the small open cab so he could shovel coal into the fire. I was pulling and pushing the sander lever and I could see the driver intensely concentrating on the tunnel wall and the train movement ensuring that the wheels did not slip. It was a relief when we got out of the tunnel!

Other eventful trips were on the Liverpool to Leeds trains. They were very hard runs with water collection from the water troughs in Standedge Tunnel. I remember one, on a Leeds train with an engine that was clearly overdue for shopping: its movement was so rough that it was difficult to stand on the footplate without holding on to something. I tried firing it, filled the shovel with coal, steadied, swung the shovel back and aimed for the fire through the open door. The cab went one way and I went the other, the shovel hit the front of the firebox sending a shock wave up my arm into my elbow and shoulder, the shovel fell to the floor and the coal went in all directions around the cab. The fireman and driver were doubled up with laughter while I was doubled up with pain.

To be continued in future issues...

School holiday bliss for young families

THE two school holiday runs in July provided great interaction between our society and our increasing public support base. The first run on July 3 indicated the attractiveness of our train rides outweighed the poor weather forecast, with a surprisingly big number of people prepared to brave the elements. Their confidences were vindicated, with little rain falling.

The second run on July 10 was one of those gorgeous days, with perfect winter weather, big public support and a great atmosphere. And comments from parents during and after the run were most encouraging.

We had three GLT locos in operation on both days and they adequately coped with the demand for rides. On the first day there was David Robinson's big yellow diesel, the club steamer driven by Peter Smith, with Sue Smith's battery loco "Sues" in reserve. On July 10, David's diesel was back in action, along with my Black 5 and Terry Skinner's battery-powered diesel. On one two-car train behind the Black 5, no fewer than 17 adults and children were counted! And on both days, the steamers were very much in demand.

Doing an excellent job on both days looking after our visitors on arrival and with drinks, etc. during the day were Tania Mackellar and Lesley Hodges. And thanks also for all those members who helped with preparing for the day, manning the station and all those other necessary duties.

Article by Tom Winterbourn, photos by David Naeser



An all-round good day!

SUNDAY, July 29, was one of those perfect winter days for a public run — and our valued clients seemed to agree. The picnic grounds were filled with happy families and the queue for rides was consistent right up to closing time. AND, there was no prior promotion on Facebook!

The day was a breeze for all concerned, with the station staff despatching passengers in a quick and friendly manner and the locos operating without any major problems, with just the club steamer momentarily running a little short of breath. To give an idea of the level of public support we received, at one point about lunch time almost 100 passengers were counted out on the track, with seemingly little dent in numbers queueing for rides or in the picnic grounds.

For the record, we had 10 locos operating, six on the GLT and four on the raised track. They were the club's Heidi, my Black 5, Phill Gibbons' Irma, Sue's "Sues" (with plastic raincoat just in case it rained!), Dave Robinson's yellow diesel and Allen Ward's "Waterloo" on the GLT, with Paul James' "Bushfly", Steve Reeves' "Blowfly" and "Ocker" and Noel Outram's WAGR "H" class "Lachlan" on the raised track.

As usual, we had Andy Davies and Clive Chapman driving the BBQ, with a few chat potatoes left over from the previous



Phill Gibbons waits for the all clear. Photo: David Naeser

night's Christmas in July thrown in for good measure! Needless to say, the revenue wasn't bad either!

Article by Tom Winterbourn

Christmas in July dinner a success

IN a new social initiative for the club, about 30 members, partners and guests sat down to a traditional English “Christmas in July” dinner in the clubhouse on Saturday, July 28.

The food was prepared by Tom Winterbourn and Jenny De Gouw and the upstairs meeting room was tastefully decorated by club president Steve Briggs.

The menu offered roast turkey or baked ham while the sweet choices were steamed home-made Christmas pudding and brandy sauce or deep apple pie and cream. Mostly, the choice was turkey and Christmas pudding.

Eileen Briggs put together a video compilation, featuring a “railway walk” documentary on disused UK railway tracks now being used as walking trails.

The dinner was an experiment and was considered a success by those who attended. The committee will now decide whether to hold another similar event next year. Pictured here are some of those who attended the dinner.



Above: Andrew Blackmore and some of his guests with, at left, Richard and Jose Turner.



Tania Mackellar and Scott Andrews.



Kaye and Lyle Austin, Paul James and Clive Chapman.

Article and photos by Tom Winterbourn

A perfect day for a train ride!

THE club was blessed by perfect late winter weather for its August public run on August 26.

There was a steady stream of public visitors and trains were kept busy until just after midday, with a reduced number of trains running until 2pm.

Seven locos were in action. Ron Collins and Paul Costall returned from the winter holidays in warmer climes (Ron in Canada and Paul in WA’s North-west), bringing their 7¼” Heidi and 5” Firefly respectively. Other GLT locos in action were Tom’s Black 5, Allen Ward’s 5” ‘Waterloo’, John Jenkin’s ‘Jumbuck’ and David Robinson’s big yellow diesel. Also in use was the club’s 5” battery loco.

Andy Davies and John Martin looked after the BBQ while most other members present were utilised running the railway. The canteen was managed by Leslie Hodges assisted by Suzanne Smith.

There were several big birthday parties in the picnic grounds, some featuring train-themed birthday cakes (see pics). The event was not promoted on Facebook, in accordance with a decision taken at the previous members’ meeting, and public support was noticeably down as a result.

Article and photos by Tom Winterbourn



Above: Xavier Rose of Kingsley, seen here with mum Kate (who made the train-theme cake).



Top right: Andy Davies and John Martin at work on the BBQ.

Below: Bob Hutt brings Ron Collins’ Heidi back to the station.



Above: Jaxson Pentland of Mt Hawthorn had this 12-cup cake train made by his mum Kylie.

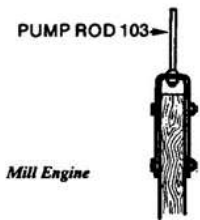
Building a $\frac{1}{3}$ scale Southern Cross windmill

(Continued from July-August Steamlines)

I wanted to ensure it had a long outdoor life, so I had the tower and the wind wheel and its tail hot-dip galvanised by Hartway Galvanisers in Canning Vale. There were some concerns that the steel sheet in the blades and tail might distort with the heat of the galvanising process, but having seen how rigid the assemblies were after welding them up, I decided to go ahead anyway and they turned out fine.

The original windmill typically had a single-acting pump with a leather flap valve in the bottom – simple and relatively reliable, but I thought I should try for something better, so I designed a double-acting pump using O rings and ball valves, similar to a loco tender hand pump. The mill head provides a 50mm reciprocating stroke, so you could of course fit up anything that can use that motion.

One interesting point I hadn't realised is that the full-size windmills all had a wooden section in the pump rods (see illustration at left). Someone pointed out to me that was done so that if the pump end seized, the pump rod would splinter and break off, rather than gaunching the mill head to destruction if it was coupled up with all steel linkages. So, I have included a length of 20x20 mm wooden pump rod in mine too.



Another point to note is that while the diameter of the wind wheel scales linearly, the area on which the wind impinges scales by the square root: for example a $\frac{1}{3}$ scale wheel only has $\frac{1}{9}$ of the wind area, hence very much less power is available compared to a full-size unit. Also, my garden has many large trees and unfortunately I seem to have picked a spot in an area of considerable wind shadow, so it needs quite a windy day to do much.

It is therefore probably better to have the largest size wind wheel possible for the tower, so I am now building a



The completed scale windmill installed near a garden path.

second 10 foot wheel which scales down to 1050 mm diameter and should provide a bit more power and pick up more wind than the current 8 foot (800 mm) one.

In summary, making a windmill is a really interesting and satisfying model engineering project. It contains most of the classic elements of building a reciprocating engine, but is not so tedious or complicated that it takes excessively long to do. There is also considerable scope to adapt the design to suit your own inclinations and available materials as you go along, and still end up with a realistic and functional result.

It is certainly a bonus if you have some useful work for the windmill to do. In my case, it is located next to a large pond and is intended to pump water up from a rainwater tank to keep the pond topped up during summer. The scale looks right for the paved path next to it and for the garden landscape we have created.

For those with smaller gardens, it would still be possible to build at say $\frac{1}{4}$ or even $\frac{1}{6}$ scale and get a reasonable working unit capable of circulating water in a fish pond or small garden water feature, for example.

It's certainly worth considering if you're interested in windmills and are looking for a new challenge!

Article and photos by Jim Clark

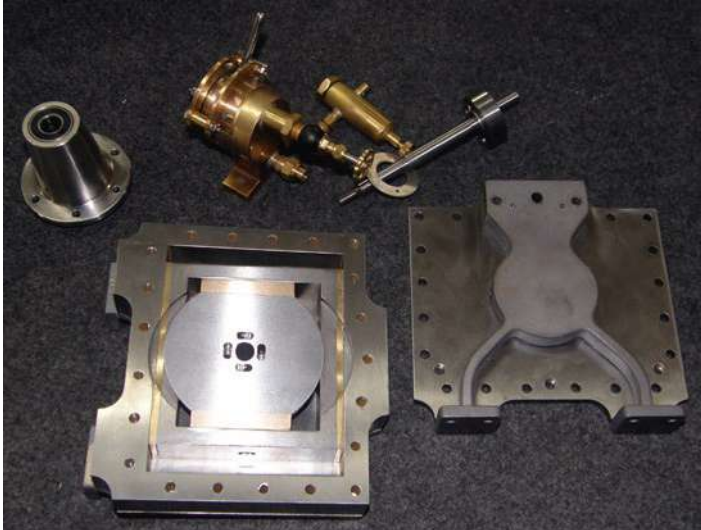
(Illustrations from a USA agent's catalogue circa 1950)



The internals of the mill head or 'mill engine' (weather cover removed).

A square piston engine — the ‘Root’ or ‘Dake’ engine

BACK in the May-June issue we mentioned this intriguing engine which was then under construction by Ron Collins. The component parts are shown below:

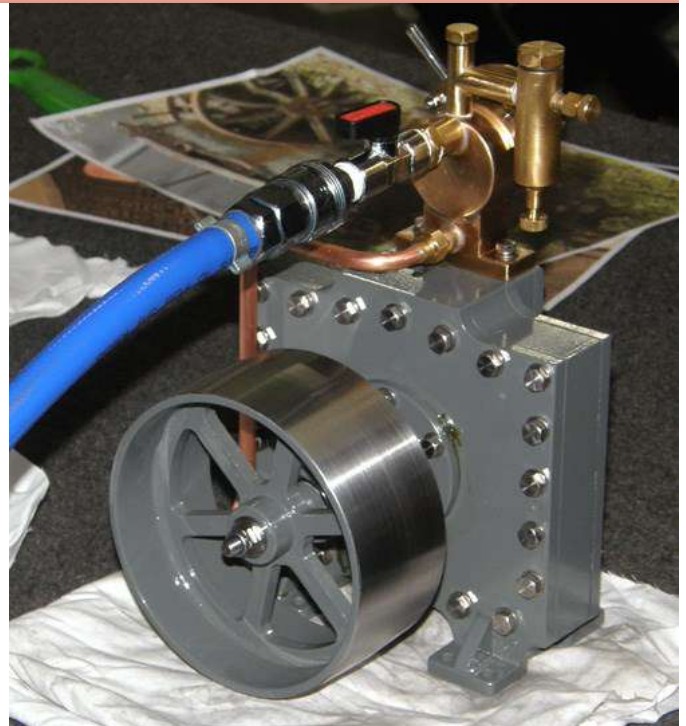


The assembly shown in the left hand lower corner is the square cylinder and pistons, with the cover removed (at right). Above it is the reversing valve and crankshaft.

The way it works is that the inner flat piston (the centre circular part in the left assembly) rotates on a crank and slides left and right inside the outer square piston as the crank rotates, whilst the outer piston slides up and down in the square cylinder, allowing a fully circular motion to be obtained from the two 90° opposed radial movements. Bronze slippers provide the wearing surfaces and seals.

The movement of the pistons exposes and covers steam ports in a sequence that allows steam into the appropriate spaces on alternating sides of the square pistons in turn, providing the motive force. Reversing is done simply by swapping input and exhaust ports. No other moving parts!

As mentioned last time, the original design appears to have been by J B Root in the 1860s. However, one William Dake patented a very similar design in 1888 and

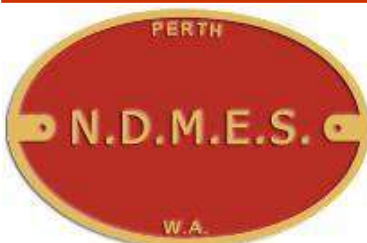


Above: The completed engine connected up to an air supply. In the background are some pictures of an old steam tractor/forklift that used an engine of this type as its power unit (in full size).

then went on to found the Dake Engine Company in the USA, which continued manufacturing this type of engine for around 50 years or more. It was useful in applications such as steering, winches and mechanical stokers, where its almost instant starting, compact size and lack of complex moving parts was an advantage.

Ron's engine certainly starts easily, runs surprisingly smoothly and has lots of torque even at low revs. He said the main challenge in making it (apart from getting his head around square pistons, a square cylinder and the associated valve events!) was achieving the very small sliding clearances necessary.

Article and photos by Jim Clark



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