

# The Generator

Issue 531  
March 2026



**Palmerston Model Engineering Club**  
[www.pnmeec.net.nz](http://www.pnmeec.net.nz) - [pnmeec@trains.net.nz](mailto:pnmeec@trains.net.nz)

Managers of the Marriner Reserve Railway - Marriner Street - Palmerston North  
C/- 119 Ruapehu Drive - Palmerston North 4410

## **The Palmerston North Model Engineering Club** **Upcoming Club Events**

Club Nights typically start at 7.30pm and are usually held at the  
The Hall, 435 Church Street, Palmerston North.

### **Thursday 26th March**

Club Night  
3D Printing.

Join Richard Sheehan (Model Boats) along with our fellow PNMEC club  
members with their latest printed creations.

### **Thursday 23rd April**

Annual General Meeting  
The Board Room  
Palmerston North Hospital

## **Marriner Reserve Railway**

A planned rebuild of 42 metres of concrete track base along our  
Pioneer Bank has commenced and hence there is no track running  
until further notice!

### **Thursdays**

Open for boiler testing and limited track running for testing only  
Contact track manager (Richard Lockett 027 2541059)

## Club Notices

### Club Night 26th March

Guest Richard Sheehan is joining us for the evening to speak to his latest 3D printed creations used on his model boats along with the creations from within our own club members and their projects. Feel free to also bring along anything that would be of interest to your fellow club members!

### Club Night 23rd April

Advanced notice of the club's Annual General Meeting. To be held at The Board Room, Palmerston North Hospital, Heretaunga Street on Thursday the 23rd of April 2026 at 7.30 pm.

At the conclusion of the AGM we will have a look at construction toys! Most of us would have had the use of a construction toy during our formative years, maybe briefly or what would turn out to be a lifetime hobby. We're talking of Lego, Meccano, Buz, Technics, Junior Engineer, Vex Robotics to name a few common products but there's possibly a few I don't know of or have forgotten about. If you still model with your construction toy build a model and bring it along, hence the early notice. If you are a collector of construction toy sets, vintage or new etc bring some along or if you have something that is new and exciting bring it along and speak to it.



If you have any construction sets lying about, build up a model and bring it along or bring along the set, vintage or new, or borrow your grandkids set or go and buy them one and bring that!



### Heritage Festival

The 2026 Heritage Festival is currently underway as you read this edition of the Generator and club members have been spotted at some of the activities. Cynthia Cooper has been studying the event schedule and there are some events on in the next week that may of interest to club members.

#### **Saturday 21st and Sunday 22nd March**

The Great Manawatu Steam Fair, Maewa, Feilding. 10 am daily.

#### **Saturday 21st March**

Open day, Thomson's Motorcycle Museum, Rongotea Road, Kopane. 10am

#### **Sunday 22nd March**

Open day, Hoffman Kiln, Featherston Street, Palmerston North. 11am

#### **Friday 27th March and Saturday 28 March.**

Guided visit, Engineer corps Memorial Centre, Linton Camp, 10.30am **Registration needed!**

#### **Sunday 29th March**

Guided visit, Biggin Hill Historic Aircraft Centre, Ohakea 9.50am **Registration needed!**

#### **Sunday 29th March**

Open day, Palmerston North Electric Power Station, Keith Street, Palmerston North. 1.00pm

#### **Sunday 29th March**

Open Day, Tokomaru Steam Engine Museum, Tokomaru. 1.00 pm

For guided visits please register via email at [heritage@pncc.govt.nz](mailto:heritage@pncc.govt.nz) limited numbers so be quick!

## Club Night Report

A small number of club members remembered to turn up to our first club night of the new year which was themed as a project progress night. First up Richard Lockett gave an update on the work undertaken by club members to restore our railway at Marriner Reserve to an operational standard after the large tree removal work undertaken by PNCC contractors and that a planned track upgrade project will still take place following on from the unplanned track work.

Merv George has been making good progress with his bobber motorcycle project and having sorted out the ABS braking was building up the wiring loom for all the other electrical aspects to the project and had brought along some trick electronic components sourced from Germany which allowed for a much simpler wiring loom i.e. less wire's re earth returns etc. Merv also showed off a pair of clamps recently purchased in which the jaws could be reversed giving the ability to stretch things apart as well as together!

Mark Hendry had made the trip over from Whanganui and had with him the boiler drawings for his Sweet Pea 0-4-0 locomotive project. These had been sourced from Winter's in Australia and were modified from the original UK design to fully comply with the AMBSC copper code 1.

Richard Lockett had got in a fair amount of workshop time during the windy early spring and our even windier summer and was nearing the completion of the build of the tender to his NZR U class 4-6-0 locomotive in 7.25 inch gauge.

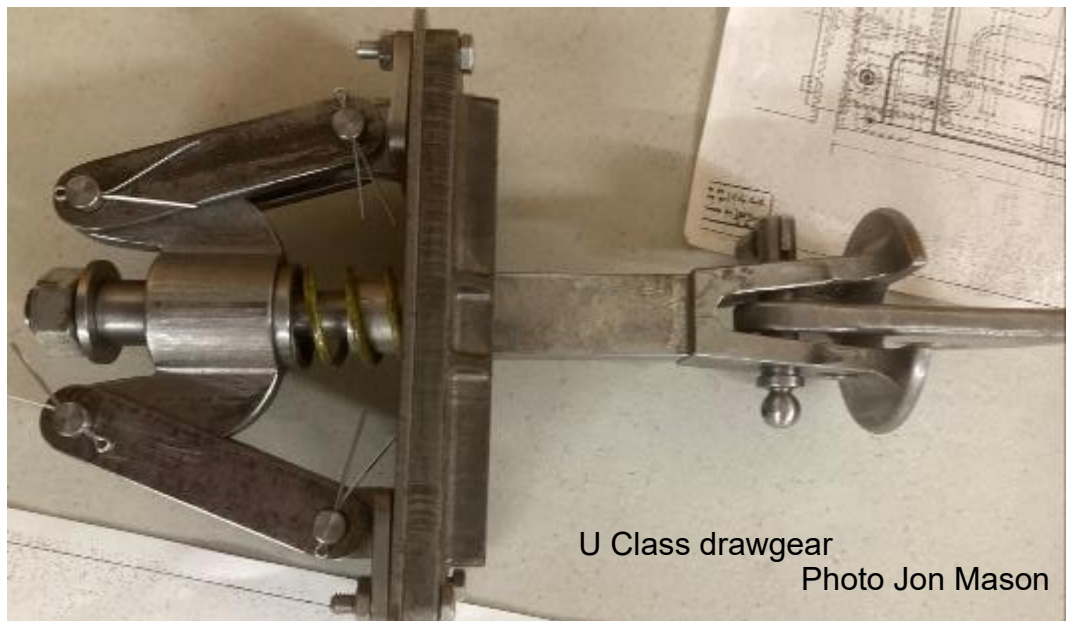
Richard had machined up the drawgear for the tender and the locomotive which are sprung for compression and tension and with the coupling machined from solid steel bar. The vacuum brake diaphragm housings had finally been machined 5 years after purchasing the 130mm dia free machining aluminium billet. The delay explained by the need to finish the tender chassis build so clearances can be checked

with a view to having the largest diameter vacuum diaphragm fitting into the available space. A 100mm dia bore was achieved which allowed for a 80mm dia piston and as with vacuum there's not a lot to play with so piston dia and leverage is the variable we have to design around to give us the required clamping force at the wheels!



Merv George with clamps

Photo Jon Mason



U Class drawgear

Photo Jon Mason

As the clubs Marriner Reserve Railway passenger carrying rolling stock uses continuous vacuum for braking the tender brakes have to be compatible. A continuous vacuum system has vacuum being generated in the train pipe from the locomotive's steam ejector continuously with the braking applied by vacuum stored in a vessel separate to what's available in the diaphragm housing, hence the two pipe fittings shown in the photo. Fitting a vacuum storage vessel into the tender somewhere was the challenge and this was resolved by two long 32mm dia tubes hidden between the frame solebars as they were called in the day 1897 or frame channel as you might name them now and this setup has been tested with positive results.



Vacuum braking setup being tested  
Photo Richard Lockett



U class tender bogie with vacuum diaphragm fitted  
Photo Jon Mason

## [Marriner Reserve Railway](#)

The planned rebuild of 42 meters of rail track bed has commenced with the rail along the Pioneer Bank being lifted and taken to our steaming bays where additional work is to be carried out on them. Steel sleepers are cleaned up and drilled for the new masonry anchor's, painted with a fresh coat of cold galv paint and then new conveyor belt packing are to be glued to the underside of the sleepers. This aspect of the project is well underway. The existing track bed has been uplifted and soil excavated to the new track bed width and formwork setup to the new grade. Owen Mudgeway's excavator made light work of the dry stoney ground along the bank which was built 38 years ago using fill from the Te Awe Awe Street reconstruction and the Mail Centre build, up by the Mathews Ave Railway Station. Because the bank as we call it was made from fill efforts were made to minimise the compaction that would take place to the fill in the years ahead by boring down into the fill and placing concrete into them (piles) on which the track bed sat. It would appear that considerable ground movement has occurred over the years and not necessarily only downwards as the new vertical alinement has necessitated the breaking up of the tops of most of these piles! As you read this steel reinforcing should have been placed into the formwork ready for concrete, hopefully the next Saturday. This rebuild will give a 1 in 87 climbing grade from the Hapuwhenua viaduct exit to the start of the curve preceding Compton's Crossing. A big shout out to those of you who have turned up to do the mahi. Thank you! With the reserve tree issues and our planned works we will have lost 4 months of track running which is a big chunk out of the year.



Formwork positioned for new vertical alignment  
Photo Jon Mason



Owen Mudgway and Lawrence Brooshooft excavating the cut.  
Photo Jon Mason



Smoko not that any of us smoke, Cynthia, John, Richard and Jon having a break. Photo Lawrence Brooshooft

## Blast from the Past

This photo taken by Laurie Perkins some time in about the year 2000 shows the excavation of the steaming bay and storage bunker area. This photo and a couple of others taken at the time have recently come to light and no one could identify the operator or remember who he was! No worries as the operator still has his memory intact. The machine is a 7.5 ton Komatsu and it did a full 8 hour day.



| Date and Time       |                  | Activity                              |
|---------------------|------------------|---------------------------------------|
| Thursday 26th March | 7.30pm           | Club Night<br>3D Printed Models       |
| Thursday 2nd April  | 7.30pm           | Committee Meeting                     |
| Sunday 19th April   | 1pm to 3pm Maybe | Marriner Reserve Railway              |
| Thursday 23rd April | 7.30pm           | Club Night AGM plus Construction Toys |
| Sunday 3rd May      | 1pm to 3pm       | Marriner Reserve Railway              |
| Thursday 7th May    | 7.30pm           | Committee Meeting                     |
| Sunday 17th May     | 1pm to 3pm       | Marriner Reserve Railway              |
| Thursday 28th May   | 7.30 pm          | Club Night Guest Speaker              |

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