

The Generator

Issue 525
August 2025



Palmerston Model Engineering Club
www.pnmec.net.nz - pnmec@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 28th August

Club Night
Marine Engineering with Richard Sheehan

Thursday 25th September

Club Night
Metal Selection
Which, Where and Why

Marriner Reserve Railway

Sunday 7th September & Sunday 21st September

Railway operations at the Marriner Reserve
Trains in operation from 1pm to 3pm
Weather permitting (Richard Lockett 06 323 0948)

Thursdays

Railway operations for club members
Subject to ongoing track maintenance and weather
Contact track manager (Richard Lockett 06 323 0948)

Club Notices

August Club Night

This months club night will feature Richard Sheehan who has been modelling ships over many years and he will speak about a radio control tug boat that he has been working on for a few of those years. This model tug has 4 operational 360 degree thruster pods providing outstanding manoeuvrability as required by a tug.

In addition it would be good to see some marine projects that PNMEC members have built or have under construction on the table to peruse on the night!

CentrePort's (Wellington) newest Tug Tapuhi built in Hunan China in 2013. Powered by 2 Caterpillar 3516B diesel engines of 2800 HP each providing propulsion via Azimuthing Stern drive units.



Photo Web

A Reminder

Club members are always welcome to bring along their currant project or any other item that may be of interest to our membership to our monthly Thursday club nights regardless of what may be advertised as the theme for the evening!

Whanganui Model Railway Expo

The Whanganui Model Railway and Engineering Society are holding a exhibition of their members railway layouts and engineering models on the 20th and 21st of September. PNMEC members will be displaying some of their models at this exhibition and if you would also like to take part with a display give Ewan Pound a call on **06 3439299**.

Library News

Club Librarian Merv George has received a donation of model and engineering plans. Thank you Verdon Heath.

- ♦ NZ Railways Freight Rolling Stock Plan Book Vol 1 & 2
- ♦ Model Maker Plans by L H Sparey and others.
 - MM 136 Collet Set
 - MM 135 Micrometre Boring Head
 - MM 161 Motorised Hand Shaper
 - MM211 Windmill (S Mock Mill)
 - MM 220 Gear Pump (Coolant)
- ♦ Domestic Refrigerator by L C Sherrel.

To access the Library phone Merv on **021 08169930**

**Wanganui Model Railway
& Engineering Society**

PRESENTS THE
WANGANUI MODEL RAILWAY EXPO



Wanganui City College Hall
84 Ingestre Street, Wanganui
Saturday & Sunday
20th & 21st September 2025
10am to 4pm
Adults \$7
Children \$3
Family \$18



July Club Night Report

A Special General Meeting was held as advertised to formally approve the proposed new club constitution as required under the new Incorporated Societies Act. A vote was taken to approve the proposed constitution and this was passed. A vote was then taken to formally submit the new club constitution to the registrar of Incorporated Societies for approval, this was also passed.

The committee would like to thank those members who took the time to read through the document which being of a legal nature is not an easy task especially if you're a bloke! All feed back and suggestions were looked into and thought through by the constitution sub committee.

Again a thanks to all club members who have been involved in this process and hopefully the constitution gains acceptance by the registrar. Following the SGM a quiz was held with railway knowledge put to the test to which we collectively failed, but it was fun, Thanks Lawrence.

A Special General Meeting may have not been of great interest to some of you but you never know who or what may turn up on the night! On this occasion an invite was extended for club members to join the Manawatu Vintage Machinery Club on their visit to the Hirock Quarry out at Linton the following Saturday which some of us did.

Linton Quarry

A good number of club members took the opportunity to visit the HiRock Quarry out the back of Linton. The quarry supplies crushed aggregate to civil engineering projects throughout the lower North Island, which is sourced from a large hole in the Tararua foothills.

Hirock through their blasting contractor RedBull Powder laid on a demonstration blast for the many machinery and modelling enthusiasts present with a lucky person getting to light the fuse and run! Not quite, in this day and age its all electronic just the flick of a switch. A puff of dust from each of the bore holes drilled into the terrace being blasted signalled that the charges had fired, the ground rose slightly with the edge of the terrace crumbling and a lot more dust becoming airborne, it sure made the ground underfoot shake!



The Linton Quarry. Terrace to be blasted in foreground.

Photo Bill Krippner

The main interest for the assembled visitors was in the machinery used at the quarry (after the blast) In this case being excavators, dump trucks and front end loaders all being of the Caterpillar variety. Excavators used down in the hole were 75 ton machines with smaller machines used for loading rock into the crushing plant located up top. Large dump trucks used to haul rock out of the hole onto stock piles beside the crushing plant. Large front end loaders used to load out finished product into trucks which depart via a weigh bridge.



Bill Krippner posing with the Front End Loaders.

Photo Wendy Krippner

Club member Owen Mudgeway currently operates a Transportable Impact Crusher for HiRock which is moved to various sites across the Manawatu and Tararua Districts depending on operational requirements. Impact crushers are primarily designed to crush broken concrete even to handle the rebar but also can crush rock. Owen was able to demonstrate the crusher and processed a hopper full of rock before a look inside to view the heart of the machine a large rotating drum with very hard removeable blades with fling the rock against other blades set to a gap dimension which shatters the rock. Any rock which fails to past through the screens is returned to be impacted again. Owen explained that the crusher did not like trying to crush digger bucket teeth, bucket wear plates or cutters used to drill the bore holes for blasting, all these item seem to find their way into crushing plant and did very expensive damage with resulting down time!



The Transportable Impact Crusher.

Photo Editor

Thanks goes to the HiRock, Manawatu Vintage machinery Club and Owen Mudgeway for the invite making for an interesting visit!

The Bobber Project Part 6

Making the Frame.

Technical drawings were done but presented problems in getting true lengths due to there being bends just not straight tubes. However they were good enough to get the bend points. After watching YouTube there were 2 courses of action for folding the tubes. One was to make extensive "jig boxes" or just to wing it. We had the bend angles and start points so we decided to wing it and see how it went: good enough as it happens.

Critical point was to have a datum for all the angles. A pointer was affixed to the tube which a magnetic angle gauge could attach to. This stayed attached until all the bending was completed.

Once the tubes were bent they needed to be cut to length with associated notching with different angles and tube sizes to consider. The welding table / headstock jig was invaluable. The finished result was satisfactory with more gussets, brackets and mounts still to be added.

The swinging arm mounts were a shaped piece of 3mm plate, achieved by clamping in a jig at the correct angle, inserting a set of bosses into the pivot hole, adding a long handle, heating the plate and levering vertical downwards until the boss was horizontal. It took a lot of heat but the result was obtained. Then to do the mirror image bracket. These were then welded onto the frame.

I can't take credit for the welding. That is where sons come in handy.



The completed Bobber frame.



Tubes being notched using a fly cutter in a Milling Machine, digital angle gauge used to position tube.

The top suspension mount nicely welded to the rear of the top tube.

Photo's Merv George



The Swinging Arm



The completed swinging arm.

Photo Merv George

Next was the swinging arm which I displayed at a recent meeting. I was lucky to have a rolling machine to roll tubes as an artistic shape was required. For consistency one piece of tube was rolled and then cut up for the 4 main tubes. The notching was difficult but wooden supports took up the curvature ok. Again angles had to be cut and I took too many shortcuts “she will be right” resulting in a second set having to be manufactured with much more attention to angles, datums and taking out the variables as much as possible!

Swinging arms need to be strong and stiff. Cross tubes were rolled, notched and welded in.

The suspension required a mounting point central in the swinging arm. A box shape was fabricated for this, positioned in the jig, mated up with the cross tubes and a series of plates shaped, rolled and folded to tie it all together. More gussets around the axle area plus a brake anti torque bracket and some decorative panels in the cross member area still to be added.

Merv George

Date and Time			Activity
Thursday 28th August	7.30pm		Club Night Marine Engineering, Richard Sheehan’s Tug Boat built and perfected over many years!
Thursday 4th September	7.30pm		Committee Meeting
Sunday 7th September	1pm to 3pm		Marriner Reserve Railway
Sunday 21st September	1pm to 3pm		Marriner Reserve Railway
Thursday 25th September	7.30pm		Club Night Metal Selection. Which, Where and Why
Thursday 2nd October	7.30pm		Committee Meeting
Sunday 5th October	1pm to 4pm		Marriner Reserve Railway
Sunday 19th October	1pm to 4pm		Marriner Reserve Railway
Thursday 23rd October	7.30 pm		Club Night Your recent hobby purchase

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