

The Generator

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Palmerston Model Engineering Club
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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
Hearing Association Hall, 435 Church Street, Palmerston North.

Thursday 25 January

Club Night and Barbeque

Please note the change of date from previous advertised and the
5.30 pm start. Details on page two

Thursday 22 February

Visit to a private museum south of Palmerston North
Details in the February Generator

Marriner Reserve Railway

Sunday 4 February & Sunday 18 February

Railway operations at the Marriner Reserve
Trains in operation from 1pm to 4pm
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

Club Night and Barbeque.

To be held on Thursday the 25th of January at the home of Owen, Natasha, Kyle and Alex Mudgway starting at 5.30pm. Located on Milson Line at Ruakina Farm on the right hand side half way between the Mangone Stream bridge and the Bunnythorpe, Kairanga road intersection. Bring along your favourite food and beverage, barbeque supplied along with tea and coffee. Owen is currently undertaking a large restoration project ie a Peterbuilt truck which will be of interest to you all!

Please note the change of previous advertised date and earlier start time than normal.



Above
Bruce Geange has finished his model of a six wheeler MAN dump truck. Back at the September club night Bruce showed us progress at that stage being a completed cab.
Photo Bruce Geange



Left
Mid December 2023 on a Thursday at the Marriner Reserve Railway and it was pointed out to the editor that our much loved Rata tree was in flower, the best yet for this young tree. The editor got photo bombed whilst taking the shot.

2023 End of Year Gathering

The day started mid morning with a visit to Graham and Viv Hawtree's museum of radio's along with Graham's other interests of Meccano and diecast earthmoving models.

The members present for this visit found the collection of radio's of great interest and were able to reflect on the fact that things we all take for granted now for entertainment and news from around the world as its happening, TV's, computer internet, smart phones etc started with a radio set.

Your early radio's took pride of place in peoples homes, large ornate wooden cabinets and were a symbol of status within society (some things don't change) and kept the joinery trade flourishing. Until the advent of cheap TV's a radio would have been the only piece of technology kept in one's lounge untill they became mass produced in increasingly larger numbers, smaller and plastic replaced wood for the cabinets, imports replacing local manufacture.



Early Plastic cased radio's all the similar apart from the colour but not quite if you look a bit closer. Photo editor

The giant block setting crane, every kid with a Meccano set would have had ambitions to build one of these but like your editor never had enough parts to do so. Photo Jon Mason



After a very nice lunch at the Barracks Sports bar we headed out to Aramoho where Ewan Pound gave us a very informative tour of Axiam Metals Diecasting factory. We've all grown up with diecast items that we treasure, in my case Matchbox and Dinky toys made from low temperature zinc based alloys and the diecast model industry is massive today and if you drive a Tesla car the chassis is a large diecasting rather than the traditional spot welded sheet metal structure.

Axiam Metals specialise in low volume high quality cast components finished to the painted and packaged stage for customers such as medical equipment manufactures and as such areas in the factory for pressure die and sand casting, fettling, machining, inspection, cleaning, powder coating and packaging of the finished components.

Some time was spent around the pressure die cast machines with Ewan explaining in detail what happens or should happen when in operation as properly none of us had seen a die cast machine in the flesh before. These machines are rated in tons of clamping force on the two halves of the die and one if I remember correctly was 800 ton with a couple of others at 600 ton as you don't want liquid alloy spraying around. So briefly you have an electric crucible full of alloy kept hot 24/7 beside the machine, a mechanical arm takes a measured amount from the crucible and places it into the shot tube and with the die halves closed the alloy ejected into the die via a hydraulic ram at great force.

The entry to the die called the gate is so designed that the alloy with the temperature and force is basically vaporised and blown into the mould at great speed! After time to cool the die is opened where upon a robot arm grabs the ejected component from the machine and stacks it to cool. Being a Saturday these machines where not in operation but the crucibles where full and hot. These are large machines and the dies big so the dies are oil heated and brought up to temperature 12 hours plus before operation and have water cooling so that the ideal die temperature is



The moveable patten and closed die (centre) and shot tube (right) Photo Editor

maintained during operation.

After fettling ie removing of the gates and any flashing etc some customers components may be measured on a coordinate measuring machine contained within a temperature control room and measured to ensure dimensions are maintained within specifications before further processing. All machining is carried out on CNC machining centres all with 4th axis rotation so as 4 side of a component can be machined during one set up. These machines were new and the tool change time was 0.6 of a second. Post machining may involve a second visit to the coordinate measuring machine before an automated cleaning process and further surface treatments and or powder coating.



**Ewen Pound explains some of the finer points in the Pressure Diecasting process
Photo Jon Mason**

The day was finished off by some with a visit and cuppa to Janice and Graeme Hall's to finish off what turned out to be a long day but very interesting on the technical stuff along with a great lunch and associated banter. Thanks to Jon, Chris, Graeme and Janice for putting the day together and to Graham and Viv Hawtree and Ewan Pound for giving some of their precious time for our end of year gathering.

Like Father Like Son

This is a 1954 Farmall Cub with a c22 sickle bar mower with a 10 horsepower inline 4, side valve engine. It sat in a shed for many years until one day little Owen decided he wanted it going so he fixed a stuck valve and moved a fire wood heap to get it out of the shed. So with his now running tractor he would mow the side of the road with the Farmall cub and remembering at the time he was just old enough to reach the pedals. From then on he would use it for jobs and mowing the paddocks. But once again time won and after the move from Linton to Milson the Cub got put in the back of the workshop. Me being Kyle I just had to get it going once more and with help from my dad at the age of eleven I got it out and driving around the paddock. After some time I rebuilt the hay mower and now do some odd jobs with the tractor.

Kyle Mudgway doing useful work with the 1954 Farmall Cub tractor



**Story Kyle Mudgway
Photo Owen Mudgway**

Date and Time			Activity
Thursday	25th January	5.30pm	Club Night Barbeque and shed visit Owen Mudgway's Milson Line
Thursday	1st February	7.30pm	Committee Meeting
Sunday	4th February	1pm to 4pm	Marriner Reserve Railway
Sunday	18th February	1pm to 4pm	Marriner Reserve Railway
Thursday	22nd February	7 pm	Club Night Private Museum
Sunday	3rd March	1pm to 4pm	Marriner Reserve Railway
Thursday	7th March	7.30pm	Committee Meeting
Sunday	17th March	1pm to 4pm	Marriner Reserve Railway
Thursday	28th March	7.30 pm	Club Night Mosquito Night

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