

# The Generator

Issue 460  
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**Palmerston Model Engineering Club**  
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Managers of the Marriner Reserve Railway - Marriner Street - Palmerston North  
PO Box 4132 - Manawatu Mail Centre - Palmerston North 4442

## The Palmerston North Model Engineering Club Upcoming Club Nights

### 24 October 2019 7:30pm

We will be visiting the new  
Palmerston North City Library Blueprint - Makerspace @ 7:30  
They have all kinds fun and interesting machines for making things.

### Saturday 23 November 2019 Outing

The club will be visiting a variety of venues in Foxton on the Saturday afternoon. Current plans are to start at the Windmill at 1pm, moving on to the Mavtech Film museum, Flax museum, History museum in Library, New Whirokino Trestle and Manawatu River Bridge. (Under negotiation)  
Finishing with dinner at the RSA at 5:30pm.

### 23 January 2020

President's BBQ. This will be at Robert and Margaret's again.  
More details next month.

### **Inclement Weather on Run Days**

If the weather looks a bit rough, squally, wet, wild or just iffy on the morning of a regular Sunday Run Day and you are wondering if trains will be running; then phone **Kerry Puklowski** and he will let you know if running is going ahead or has been cancelled. **Kerry 027-220-9030 or (06) 353-6189**

## What's on this month and in the future PNMEC Club Calendar

### Track running at Marriner Reserve Railway

Nov	3 <sup>rd</sup>	1pm - 4pm
Nov	7 <sup>th</sup>	1pm - 4pm
Dec	1 <sup>st</sup>	1pm - 4pm
Dec	15 <sup>th</sup>	1pm - 4pm

### Club night 24 September 2019

Robert (President) opened the meeting.

Cynthia discussed the format of the October meeting (24<sup>th</sup>) which will be at the Palmerston North Public Library. Here we will see what they have in the way of machines such as 3D printers and laser etchers that are available for public use. The meeting will start as usual at 7.30 pm and the entrance to the space is off the Square (near where the Public Trust used to be.)

The main event of the evening was a talk by Robin Wallace of National Gas Ltd of Palmerston North (known more widely as Flash). His talk was very interesting and he displayed a wide knowledge of the properties of domestic and commercial gases and their containment gained over his 35 years in the trade.

He began the talk by describing the main types of cylinders used in New Zealand and discussing their mode of manufacture. Steel cylinders such as those used for domestic LPG and other commercial gases are fabricated from steel. Aluminium cylinders are formed from pressed billets. The very high pressure cylinders (450 bar, 6500 psi) have a thin aluminium inner wall and this is enclosed by a layer of carbon fibre and epoxy resin. These are quite light and are used for fire fighters breathing apparatus and similar uses.

The facilities at National Gas include IANZ certified testing apparatus for most types of cylinders used in New Zealand. Flash did not specifically say so but I got the impression that much of this equipment had been designed and built in house. The cylinders commonly used for barbecues etc are washed and inspected visually and given a pressure test to 2x normal working pressure and this pressure has to be maintained with less than 1% loss for a fixed period of time.



The composition of the natural gas available in NZ was also discussed and the

change in the ratio of propane to butane with different rates of draw off and at different ambient temperatures was enlightening (to me at least).

An very informative evening and there was considerable discussion of various aspects of the talk over the supper cups. A vote of thanks to Flash for a very interesting and informative talk.



National Gas Ltd in Bourke St PN.



The LPG Filling Station.

## A Unique New Zealand Vehicle.

The following article is from the June 1991 "New Zealand Model Railway Journal". Editor: John Whyte. Found and submitted by Chris Morton.

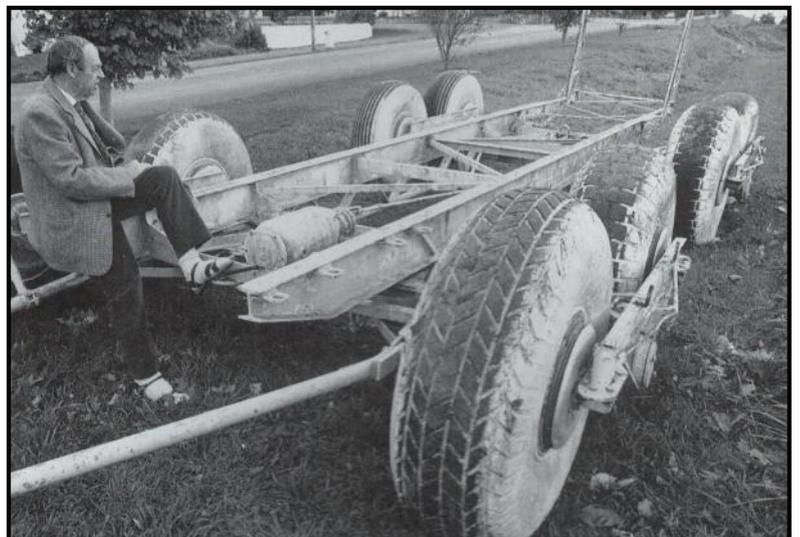
**Here is a little piece of New Zealand History which I feel is worth recording. John Darlington has organised the information in these notes and also obtained the transporter photograph for us.**

In the 1960's one could see a strange sight on the streets around Dannevirke; a venerable ex army 4 x 4 towing an 8 wheeled trailer with a railway wagon loaded onto it!

This was Andrew Patterson's wagon transporter, a vehicle unique in New Zealand. Some early history:-

Andrew's father was a Civil Engineer who was involved in railway construction at The Catlins, Otago Central, Whangarei and the survey of the Otira Tunnel.

When asked if he had enjoyed a life-long interest in railways in respect of his father's involvement, Andrew replied "When you live in houses which have a railway passing the front door you can't help but develop an interest".



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This in reference to his father's movements about the country.

Andrew himself was involved in survey work pertaining to river control schemes, irrigation schemes and then road and bridge construction, including overhead bridges crossing railway lines.

## **The railway wagon transporter.**

The concept of the transporter came to Andrew (typically) as he drove his upright Ford Prefect along the disused rails of the closed Foxton Branch. He has discovered that the Prefect's track was 3'-6" and initially used guide wheels to keep it on the track. Andrew later found these not necessary and travelled many miles on the rails!

After 10 years of R & D he obtained the patent rights for his transporter design in 1960.

The basis of the transporter is an RSJ frame, set to 3'-6". This is carried by two bogies. The bogies are self steering and the front one has the drawbar attached to it so the whole unit is very manoeuvrable. The bogie wheels are off Mosquito Bombers. The transporter was built by a local engineering works.



In operation the transporter was towed to the rail yards by the 4 x 4, with the faithful Prefect acting as pilot vehicle. Once located over the tracks the rear ramp was lowered and the wagon hauled up with the 4 x 4's winch.

Because of the width of the vehicle and its weight, many restrictions were placed on its use and an annual Heavy Traffic Fee of £800 was levied. This made the unit's viability as a transport alternative less attractive and caused Andrew to spend thousands of hours over many years petitioning the Authorities to allow this unique invention to be used freely.

Even so the transporter did shift a



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surprising amount of cargo, including 1000 tons of steel, 15 tons per wagon, destined for motorway construction in Wellington.

Flat steel on NC wagons was carried, unloaded directly in the building of Easton's Engineering with their overhead crane.

14 wagons of wheat were shifted, the transporter being towed on a parallel course to the harvester for direct loading into the wagon.

Other loads included a wagon load of bricks to a local house site and a small building on an NC wagon.

These days in retirement, Andrew is a keen Radio Ham. The truck and transporter are stored, withdrawn from service, on a local farm. Andrew's locally famous Prefect grazes quietly on the back lawn. Nearby rests an LA wagon, used as a demonstration wagon for the transporter and now, suitably sealed, as a swimming pool!

So ends a bit of Kiwi ingenuity - perhaps an interesting subject for a model?

## Ship Inspections

On a lighter note (photo on the right) shows part of a pod of fresh water dolphins that live in the St Johns river. Every day navy divers arrive to inspect the underside of all structures and any navy ships anchored in the service area (checking for bombs and other devices that untrustworthy contractors may have planted).



The local dolphins know the sound of the outboard motor on the tender and arrive in the area before the divers ready for the daily game. The dolphins play with the divers pushing them around, pulling them around by their flippers, stealing their torches, bumping into them, stealing their tool bags (c/w tools), and generally making a nuisance of themselves. This is a prelude to a two act play that provides daily entertainment for the whole yard.

Act 1 is watching the dolphins chasing each other playing their daily game of tag with the tools they have stolen.

Act 2 is watching the divers chasing the dolphins around trying to get their tools back. The dolphins are a protected species and just have to be tolerated. Before the divers pack up the dolphins vanish, off to the next inspection site waiting for the divers to arrive. Ready for the next innings of the same game.

The last common method of removing a ship from the water is the use of a "Dry Dock". Photo 12 is a file photo showing the dry dock operated by Stark Brothers in Lyttelton. The ship is floated into the dock and the watertight door is closed behind the vessel. The water is pumped out of the dock until the ship is left sitting on its

blocks. There are two dry docks in New Zealand, the other being at the Devonport Naval Base. Both are small and only suitable for smaller vessels. The Cook Strait Ferries for example are too big for either of these docks and are sailed to Singapore or China for their inspections.

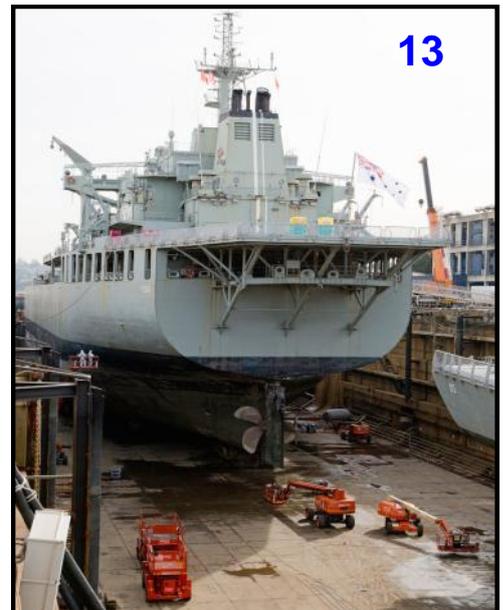
To give a perspective of size, Photo 13 shows the back end of the HMAS Sirius, the Australia Fleet Refuelling Tanker in the dry dock at the Garden Island Naval Base Sydney. This is a moderately sized tanker and it barely occupies half of the length of this particular dock.

Points to note:

This facility was built during the great depression.

The hole that forms this dock was dug by hand and the excavated soil was moved in wheelbarrows. All the concrete required was mixed on site in small concrete mixers, moved and poured into the wooden form work in steel wheeled wheelbarrows.

David Bell



## For Sale

Metal turning lathe, and a mill drill, both in excellent working condition with lots of accessories and bits, will split the two if required. For details and price please contact Shorty Cole 06-363 6795

If you would like to be notified when this newsletter is published, send us an email with your **Name, Club** and **Email** address to [pnmec@trains.org.nz](mailto:pnmec@trains.org.nz) with **“Generator Please”** in the subject line.