

Canterbury Tales

From the President's Desk

Well, the extension to our engine shed is semi-complete Still some doors and finishing touches then we will be able to argue as to what goes where. From the discussions that have been had so far it also appears that our new traverser is well into the planning stage and is looking like being a great new addition to that end of the operation.

While we have had several Sunday run-days washed out recently it has been encouraging to feel some warmth starting to arrive, heralding the incoming

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season. This has in turn seen our passenger numbers grow, and last weekend saw a busy day with upwards of ten trains running and every available ride car in service.

Again thanks must go to those who assist with running on Sundays and our ever-busy team that turn up on Wednesdays to keep up with the maintenance of the facility.

Till next time, stay busy and be safe in the workshop.

Alex Cowdell



Prototype of the Club 0-8-0, to be featured in our next issue

MEANZ Matters

The MEANZ Executive has been actively meeting, sorting out a response to the MBIE/ Worksafe public submission form for mooted changes to the legislation covering the Amusement Device Regulations, (under which we run the miniature railway at the Halswell Domain). The intention is to modify current New Zealand legislation so as to be similar to the "Australian Model". The Executive have prepared standard responses to all the questions contained in a questionnaire that all member clubs of MEANZ will be asked to submit to MBIE. The Executive is particularly adamant that allowances and conditions introduced specifically for Model Engineering clubs at the last regulation update be retained within the new legislation

and not lost "in translation." Specifically, such items as Registration Inspections are to continue to be done by MEANZ-experienced "Competent Persons", in preference to using expensive IPENZ Engineers, as all other Amusement Device owners must use.

Also of note is a member club that has been issued with a letter of reprimand from the MEANZ Executive for allegedly bringing the hobby into disrepute by asking Worksafe to agree to their circumventing agreed protocols regarding the external inspection of Duplex Boilers (such boilers being outside the currently recognised AMBSC Boiler Codes 1 and 2), allowing their own club boiler committee to inspect and certify

these boilers. This request flies in the face of direct instructions from the head of Boiler Inspectors at Worksafe, Mr Stuart Wright, to the member club.

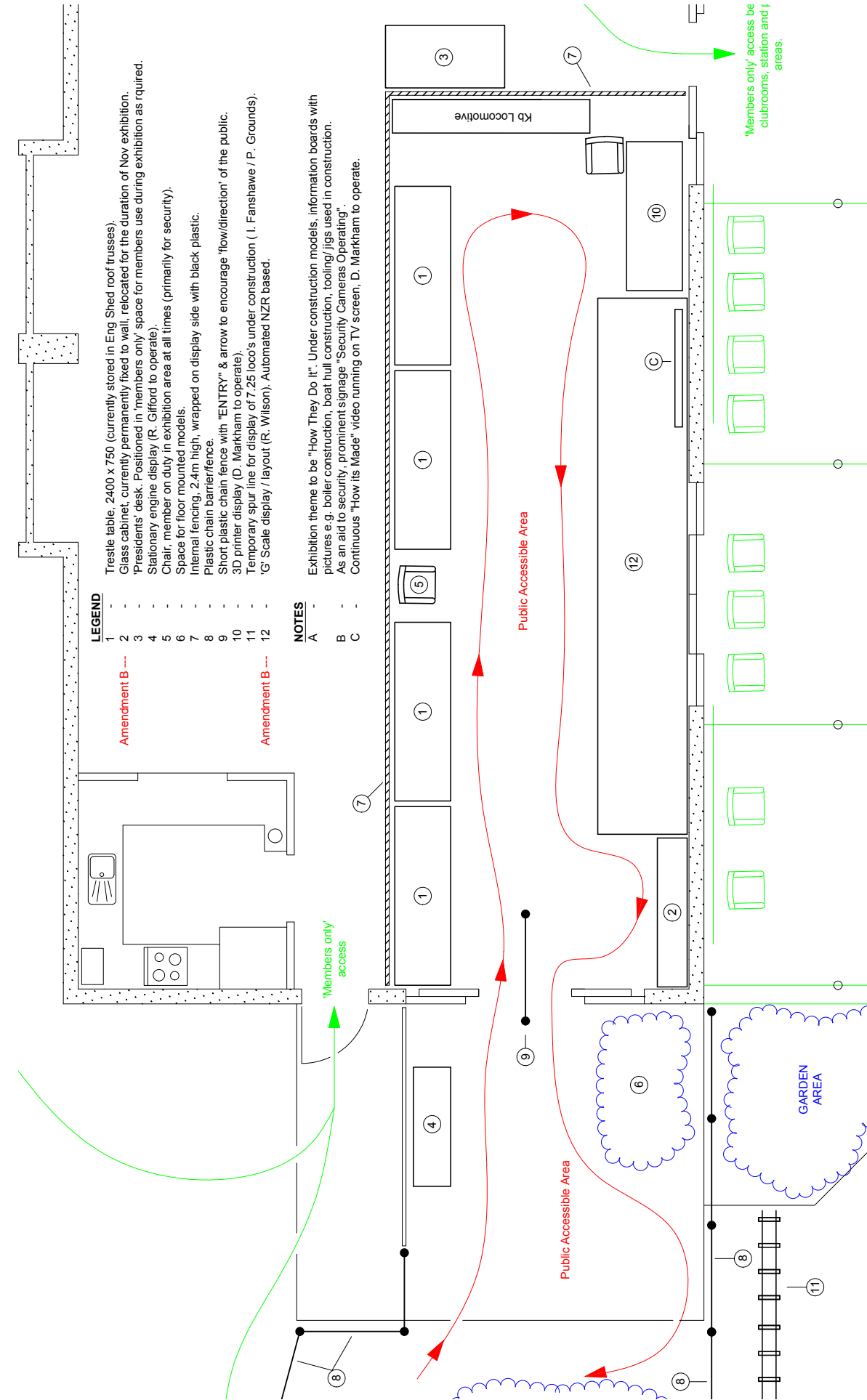
Three of the current four MEANZ Executive officers had previously noted their intention to step down at the Hamilton National Convention in 2020. However, some of these may stay on to ensure continuity with the current MBIE negotiations. I intend to stand down at the National Convention here in Christchurch in 2022, allowing as many as possible S.I. club representatives to take part in voting for my replacement.

Rob Wilson

S.I. MEANZ Rep.



Spotted recently by our eagle-eyed MEANZ Rep



DRAWING NO		DRAWN		DATE	
1 of 1		M. James	J. Hamilton	MAY 2019	
PROPOSED EXHIBITION LAYOUT NOVEMBER 2019					
DRAWING NO		SCALE		DATE	
CSMEE		1 : 50		MAY 2019	
CANTERBURY SOCIETY OF MODEL and EXPERIMENTAL ENGINEERS Inc					
DRAWING NO		SCALE		DATE	
1 of 1		1 : 50		MAY 2019	
CANTERBURY SOCIETY OF MODEL and EXPERIMENTAL ENGINEERS Inc					

TruGrind CBN Wheels



Please note for new orders of Woodcut CBN expect dispatch second week of October 2019

CBN Wheel 150mm diameter x 25.4mm width x 12.7mm hole size x 180 grit

CBN Wheel 150mm diameter x 40mm width x 15mm hole size x 180 grit

CBN Wheel 200mm diameter x 25.4mm width x 15.875mm hole size x 180 grit

CBN Wheel 200mm diameter x 25.4mm width x 15.875mm hole size x 80 grit

CBN Wheel 200mm diameter x 40mm width x 31.75mm hole size x 180 grit

Although by no means new, these Cubic Boron Nitride wheels are growing in popularity. They are not cheap (prices range between NZ\$139 - 199) but will last forever, without losing shape.

A couple of club members have recently acquired some, and speak highly of the wheels.

According to the manufacturer, the wheels offer the following features:

- Smooth grinding from 100 to 3500 rpm.
- Cool cutting - no burnt or blue edges
- Only light pressure required
- CBN wheels retain their shape and size
- Very long lasting
- Don't require dressing or conditioning
- Fine and even finish to tools

What is CBN (Cubic Boron Nitride)?

CBN abrasive is a similar product to synthetic industrial diamonds.

CBN is composed of nitrogen and boron as very very hard crystals - second in hardness only to diamond. A single layer of CBN grit on the surface of a metal wheel can grind the hardest steel and last for many years.

Our electroplated CBN grinding wheels are machined from solid steel, electroplated with a layer of CBN grit and nickel plated.

suited for sharpening high speed steels and will withstand the friction from grinding with much less heat produced than with a diamond wheel.

Using a TruGrind CBN wheel

Sharpen your tools in the same way as with a conventional stone wheel on a standard bench grinder.

Wheel speed can be anything up to 3000 rpm. Only minimal pressure is required.

Be careful not to not knock the tool accidentally against the spinning wheel because you might dislodge some of the precious particles of CBN grit.

Treated with care, your CBN wheel will last for many years.

If preferred, the grinder wheel shrouds can be removed as there is no danger of the CBN wheel breaking up, as there can be with conventional wheels.


Normal safety eye protection should however always be used.

https://www.woodcut-tools.com/store/p78/Tru-Grind_CBN_Wheel.html

Dave Markham introduces our new 3D printer

Our new 3D printer is an **Ultimaker 2+**, originally manufactured in the Netherlands, although the company has offices and an assembly line in the US. They make FFF 3D printers, develop 3D printing software, and sell branded 3D printing materials. With anything new comes new technology, new words to add to our dictionary and a few headaches. So where do we start with this new toy.....? At the club's last general meeting (3/09/2019) John Hamilton & I gave an introduction called **3D Printing 101**. We went through the list below.

FIVE GOALS TO SUCCESS

1. Have that  moment.
2. Draw & design your idea.
3. Convert your design for 3D printing.
4. Learn about the printing process.
5. PRINT.....

1. Have that  moment.

Ideas can come (usually in the middle of the night..... pen & paper handy ?) –
- from a problem that needs a solution.
- from something that needs some improvement.

2. Draw & design your idea.

There are many FREE computer programs that will help with designing your idea. **Fusion 360** is a free download from **AutoCad**, which allows you to design your project & export it for the next stage.

3. Convert your design for 3D printing.

All designs need to be converted into a language that the 3D printer can read (G-code). For the CSMEE printer we must use **CURA**. This is a very versatile **slicing program** developed by **Ultimaker**.

4. Learn about the printing process.

We have the **Ultimaker 2+** manual that will give you most of the answers you need to start. The internet (Mr Google) is a great place to start. There are a number of CSMEE members with knowledge to assist you

5. PRINT

What you need:

- Your sliced design on an SD card
- Some time to get familiar with the **Ultimaker 2+** printer
- More ideas.....



Some information about our printer

Print technology :- Fused Filament Fabrication (FFF)

This is the process of depositing layers of filament, one on top of the other, to build up shapes and models. Also known as additive manufacturing technology, it's the process used by all **Ultimaker** 3D printers.

Printer - BUILD VOLUME: width 223 x length 223 x height 205 mm

Layer Resolution

0.25 mm nozzle: 150 to 60 micron

0.40 mm nozzle: 200 to 20 micron

0.60 mm nozzle: 400 to 20 micron

0.80 mm nozzle: 600 to 20 micron

A micron is the measurement used to define the thickness of a 3D printed layer. 20 microns is 0.02 mm thick. 600 microns is 0.60 mm. Thinner layers are used for high detailed prints, thicker layers are great for fast prototypes.

MATERIALS

The **Ultimaker 2+** has an open filament system, this means you're able to use any kind of filament to get precisely the finish you're after. When you combine different materials with different nozzles the possibilities are endless.

Filament diameter

For **Ultimaker 2+**, you *must* use 2.85mm diameter filament; this is the optimal size.

Supported materials

PLA, ABS, CPE is similar to PETG. The **Ultimaker 2+** is a highly flexible 3D printer and gives you the freedom to choose whatever type of filament that suits your project. The **Ultimaker 2+** is optimized for Ultimaker PLA, ABS and CPE (PETG)

Have you got a Flash Memory stick ?

Bring your (8 gig) Flash Memory stick to the club; we have a lot of files to get you started. If there is enough interest, we could run a regular 3D printing night, so let us know. There are several members who can help you get started, Dave Markham, John Hamilton, Tony Roydhouse, Isaac Lester & a few more. One of us will be at the club most Sundays.

There are many aspects of our hobby that can be enhanced with this new technology. Why not give it a go?

From the Engine Shed



Robin Wilson reports a successful delivery of popular ex-CSMEE loco **Bundaberg** to the new miniature railway track at the Hokitika Heritage Park. Dual member Jim Staton is pleased with his purchase.

From the Loco Foreman

I am very pleased to report that there are three members who have agreed to be Assistant Loco Foremen. They are Dave Markham, Peter Grounds and Barrie Doublesin. Dave has prepared a roster for themselves to provide cover for when I can't make the Sunday run-day.

As regards the day-to-day activities of the Loco Foreman again I am happy to report harmony in the camp (hopefully), apart from some small issues that are being resolved.

I am gratified to see members step up when required especially on

busy run days such as on recent Sundays.

I believe we continue to provide a facility that gives the members and the paying public a railway experience second to none, - especially for the price. We look forward to the imminent completion of the Engine Shed extension and the provision of a new upgraded traverser for the engine shed, with lifting/unloading/loading capability.

As noted above, a popular loco from the club has been sold to a member who lives in Hokitika for use on their new track at the Heritage Park miniature railway. They are also looking to purchase another 7 1/4" loco for their club to have as a workhorse of their own,

as well as looking to purchase at least 6 passenger cars similar to ours for use on their track.

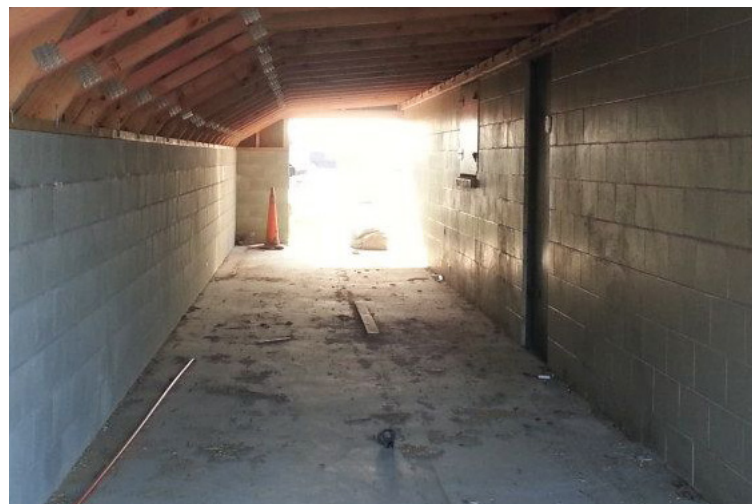
Food for thought: Maybe we could have a running day with a NZGR steam theme and feature our growing stable of NZGR locos.

Onward and upward!

Rob Wilson

Loco Foreman

Halswell Engine-Shed Extension nears completion



AWARDS NIGHT IS HERE!
Tuesday 1 October at 7.30 pm

Mary makes her début



(Photos by Wayne Johnson)

Jim Salter had his little 5" gauge Mary out for its first run recently. There were no problems with the fire-up and, as you will see in the photos, there were plenty of on-lookers eagerly awaiting steam.



Out onto the raised track and away she went! After the third time around, with Dave Campbell keeping a close eye on it, Jim took it around by himself with me sitting behind.



Jim was having problems with the injector not poking enough (or any) water into the boiler and the axle pump was not providing enough to keep the water level high enough. With no hand pump on the loco it was decided, after much tinkering, that we'd better drop the fire. Dave surmised that the problem was more than likely a blockage in the injector and took it home with him to run some tests.



Peter Grounds

The Berkshire trailing truck now has wheels and axles. Like our passenger trolleys, the bearings are inside the wheels. Those leaf springs I spent so much time making will slot down inside the casting, never to be seen again!

The truck is fully compensated; four part-made equalizing bars are shown in the second picture. They are straight off the milling machine and need draw-filing and the ends radiused to make them look nice. Then they too disappear down inside the casting! I have a total of 11 equalizing bars to make for the Berkshire. Some of these are transverse.

A friend is photo-etching some nicely detailed axlebox covers for me - out of nickel silver (very appropriate for a Nickel Plate engine). I still have the spring hangers, the pivot bearing and the centralizing devices to make. Lots of work for the milling machine.

Progress on "the Berkshire" (Part 3)



AWARDS NIGHT IS HERE!

Tuesday 1 October at 7.30 pm

Living the Dream - Part II

John Howie's Vulcan nears completion

As a boy I always enjoyed riding in the railcar on the West Coast. So now I am an old boy I have decided to try and build one. A big job, since I have never built a large model before. A great idea... but how do we make it happen?

Some time previously I had bought the steel frame, thinking that I would build an F7 one day. But sadly, that idea soon went out of the window. Instead, I decided on the Vulcan railcar as that would be easier! What a joke! So, after some thought I called Rob Wilson for some help. He couldn't wait to get started.

Rob built up the bogie sets, extended the frame length to 3.7 metres, and fitted up the engine and chain-drive. After that, I delivered it to my workshop where I started to build the body. Not having very much experience with metal I was going to build it in plywood but after talking it over with a friend, I decided to go for steel. With the help of a metal-



worker we got the body rolled, after which it was all downhill for a while, as I learned how to work with this material. Being a woodworker it was all a big learning curve. Having to solder and MIG-weld everything was slow going.

The whole job has taken over 15 months, 5 days a week at the rate of 3 to 4 hours a day - a total of over 1,200 hours. That's a long time away from home! Now I can look back and enjoy the view. I still have a couple of things to get finished before Awards Night, such as the strip down the sides and the ventilators on the roof, and then.... on to the tracks!



From the Dockside

Well, what a quiet last few months we've had! Lots of rain and bitterly cold winds have stopped us from sailing, but now that warmer weather is starting to come through, we should see some very good sailing ahead. We look forward to the arrival of some new boats, as well as some older ones that have been in for servicing. The Wednesday Crew have now finished off the edging on the pond and it's looking good. Great work, team! The next night run should see quite a few of us on the water, so keep your eyes out for that one.

That's all from me

Andrew Willis

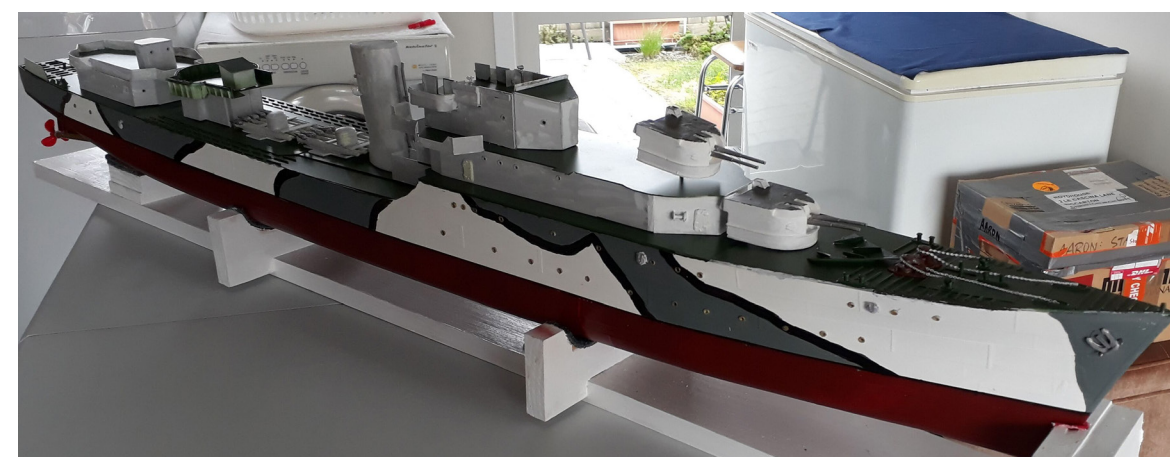
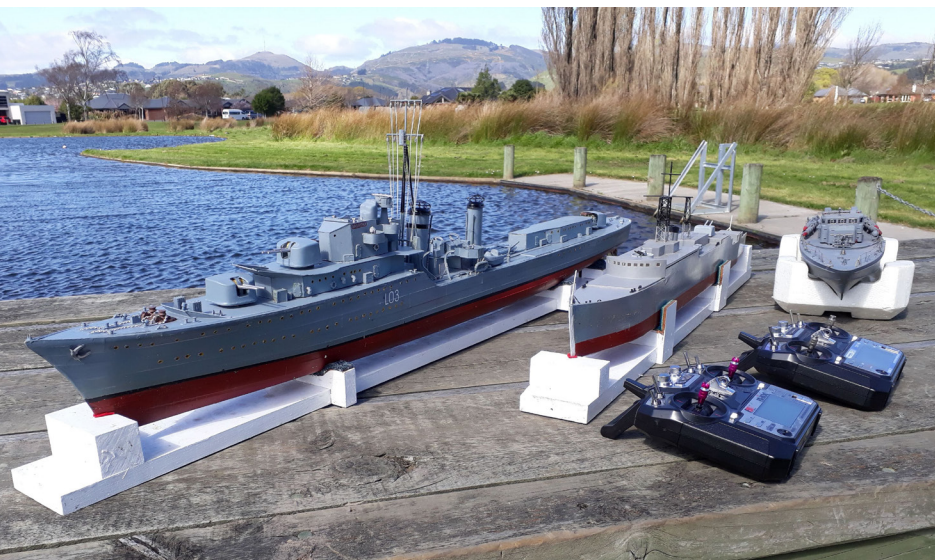
Commodore

Tony Roydhouse

Three of my radio-controlled vessels.

(L-R)

1. **HMS Cossack**, a "Tribal" class destroyer, 1:96 scale, built circa 1939,
2. **HMS Rocket**, a 1:144 scale frigate.
3. A 1:72 scale PT boat



"Battle" class destroyer **HMS Solebay** under construction. Again, 1:96 scale, built about 1943.

Maiden Voyage

A couple of shots to mark the successful maiden voyage (23 September, 2019) of my model of the first American naval ship. This was a 1763 continental schooner called **Hannah** and was requisitioned by George Washington. The model is of plank on frame construction, with a resin & cloth skin.



Malcolm Cowie

Blasts from the Past

Norm Pickford sent this nostalgic little item:

"Both *Kerr Stuart* (freezing works shunter) and the Dsb NZR were built from scratch by myself approximately 35 years ago, and were run on our own track at "Cedar Downs", West Melton, where we had about 600 meters of track. A great entertainment vehicle for boys' and girls' birthdays. They were built for 7 1/4 inch track, with great detail, and to scale. We don't reside there anymore, and the track no longer



Kerr Stuart 0-6-0T, with scale water-tank



Winter at West Melton



Andrews Crescent Days



John Beauchamp drives his *Sweet Pea*



Alan Orwin & the Club's 0-8-0



John Turner (Blenheim) behind yet another *Sweet Pea*



Hydraulic hoist (3 levels)

Steaming bays



Pond (note safety fence to prevent railway passengers from falling in)

Halswell - CANMOD 2006

Aerial photos by Alistair Ward



A lot has changed in 13 years....

Morning tea at the Vicarage



CSMEE Officers for 2019 - 20

Patron: Glen Martin

President	Alex Cowdell	03 318 1908
Vice President	Graeme Chisnall	024 731 1979
Past President	John Howie	328 7459
Secretary	Rob Wilson	960 4305
Treasurer	Mike James	321 7051
Loco Foreman	Rob Wilson	960 4305
Commodore	Andrew Willis	0274 509334
Clerk of Works	John Howie	328 7459
Librarian	Dave Markham	322 7524
Boiler Committee Chair	Mike James	321 7051
Safety	Committee Members	

Committee Members

Robin Shand	021 217 3601
John Crampton	322 4915
Barrie Doublesin	383 3827
Neale Craighead	960 8796
Mike Harrison	349 6946
John Blanchard	359 4053

Constitution and Rules Committee

John Hamilton	322 4574
John Howie	328 7549
John Pattinson	329 4441

Boiler Committee

Jock Miller	332 1614
Ian Fanshawe	942 2937
Mike James	321 7051
John Hamilton	322 4574
George Johnson	337 1137 or 338 5928
George Hodges	323 5019
Dave Campbell	326 5585
Peter Grounds	324 3662

Volunteer Positions

Awards Night Convener	Dave Campbell	326 5585	Visiting Speakers	John Begg	339 8448
Asst. Librarian	John Crampton	322 4915	Asst.V. Speakers		
Asst. Loco Foremen	Dave Markham	322 7524	Membership	John Blanchard	359 4053
	Phil Bellaney	03 312 5659	Canterbury Tales	John Pattinson	329 4441
Asst. Clerk of Works	John Hamilton	322 4574	Shed Foreman	Alan Barlow	344 0244
Projects Manager	John Hamilton	322 4574	Asst. Shed Foreman	Ben Sewell	322 4219
Archivist			Mech. Maintenance	Peter Grounds	343 1443
Webmaster	John Begg	339 8448	Roster Reminder	George Maylam	324 3469
Publicity	Glen Batchelor	359 5411	Facebook	Patrick Whillis	382 6452
	Nicky Tily	03 318 4785	Ticket Box	Jim Rosanowski	332 1370