CANTERBURY MODEL ENGINEERS · C·S·M·E·E · CHRISTCHURCH N.Z.

Canterbury Tales

Vol.61 April 2022

Dave Markham proudly shows off his new 7¼ ″gauge invisible loco, blissfully unaware of the rapidly approaching express train travelling in the **right** direction....

I wonder how many of us have instinctively ducked when driving under the bridge? Of course, there is no real danger, unless you're a giraffe, or an idiot passenger who insists on standing up and/or waving their arms in the air. Now that risk has been addressed (if not necessarily eliminated) by the installation of highly visible black & yellow markings, iluminated by LEDs. The ever resourceful Wednesday Gang are responsible for this valuable improvement, as well as several other important projects, illustrated overleaf.

John Howie has kindly provided a summary of the group's recent activities:

"Since the last Bulletin the team has been working hard around our club. The biggest project by far has been the new traverser. This is going to replace the small one outside the new engine shed. The traverser has been designed and built from scratch by our team, (see photo) plus a few extras. Amazing what collective engineering can achieve! Its purpose is to enable the transfer of locos from the shed to the main line, while also providing the ability to load from your trailer. It incorporates 5" and 7¼" gauges, which means we are able to load from two sites at the same time. It's at the painting stage now.

Other work on the list has been the replacement raised track tank-stand and fire-hose box. (No more rolling out hoses each Sunday…). It looks really good and, with its wooden tank and metal lid, (a ladder is yet to be fitted), matches the other tank-stand; Well done, Keith and Barry.

Like the Forth Bridge, it's vital to keep up the painting. Keith Robson has been painting the small bridge-rail across the gap which is behind the big traverser,(mainly used for trolleys coming in and out). Keith has also has painted all the timber work around the raised track, and improved the appearance of the raised-track bridges.

We have six new trolleys underway for addition to our club stock.

Our entire stock is in use every Sunday, so another six trolleys will be very handy. That brings us up to around 34 trolleys – the maximum we can store. Thanks to Andrew Hawke, Ritchie Wilson, plus Dave Markham & Phil. Bellany for their work on the bogies and brakes.

We now have a new "low bridge" sign, with LED, lights to warn passengers, thanks to Don Ellis, Tony Roydhouse, Dave Markham and Jim Salter.

The pond has had a big clean-up around the edges, - mowing and weed-eating - an ongoing job. It's starting to recover from the weed spraying but is still collecting rubbish in one corner. Good to see the boaties back on the water.

With the warm and wet summer we have had, the grass has never stopped growing, and as for the roses, - they went mad, keeping our gardeners working flat out. Thanks to Bryan Wood, Rachael Egan, Wayne Johnson and Murray Fowler for trying to keep on top of it!

All this represents just a small part of what's involved in keeping the place up to a high standard. There are so many jobs to be done every week and without our 15 to 23 volunteers, I'm sure we would struggle. Thank you, one and all."

The Traverser Crew: Mike James, Robin McDonald, Rob Wilson, Alan Burney, John Smith, Murray Fowler. (Peter Grounds missing from picture)

New traverser: Paint job by Keith Robson

New traverser

New raised-track water tower

It takes three blokes to change a lightbulb..., observed by Jim Salter

Bryan Wood making a difference with the club's new mulcher

Men at Work

John Hamilton, strictly on the level

Wilson the Welder

Andrew Hawke, body-builder

Peter Grounds

Progress on "The Berkshire" (Part 10)

Since last newsletter, I've been working on the Berkshire smokebox. I thought that this would be a straightforward job, but it was much more work than I thought. It only just fits into the lathe and milling machine, often with only one or two millimetres to spare. There is a lot of detail on a Berkshire smokebox, detail that gives the engine its distinctive look.

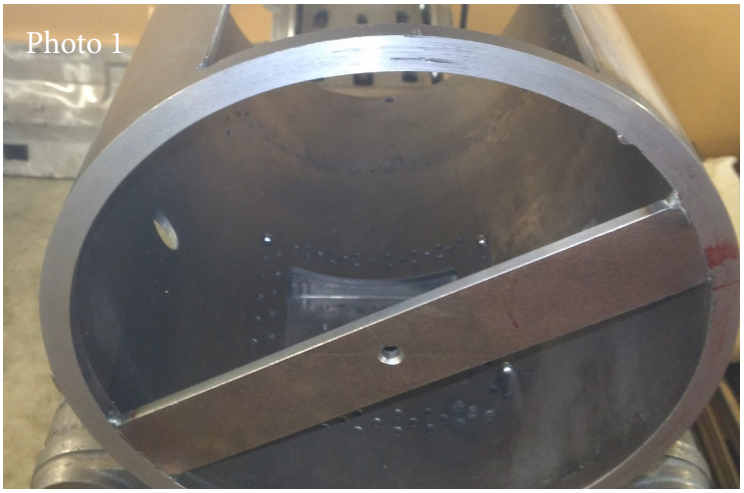


Photo 1

Photo 1 shows the smokebox in position on the saddle. That large cross bar is temporary. It has the smokebox axial centre, important for marking out and supporting the smokebox when it's in the lathe. The crossbar is secured by TIG welds that will be easy to cut through when the time comes to remove it. However, I don't want to remove it too soon, or I will have to weld it back in again. There are a lot of cut-outs in the smokebox. The front rectangular one is for the feedwater heater, (non-working in the model, but a large structure on the full size engine), so I need to model it on my Berkshire. When the time comes, it will be fabricated from 3mm steel plate, and welded in. Behind this cut-out is a 75mm round hole for the chimney. Further back are two more rectangular cut-outs, one each side of the smokebox centre line. These give access to the superheater header and throttle. A curved cover plate will go over these, secured by 44(!) studs and dogs.

Photo 2 shows the left (fireman's) side of the smokebox. Prominent is the bracket for the feedwater hot pump (non-working on my model). The brass fitting is for the blower connection. It is a 1/8" BSPF commercial fitting. Low down and in-line with the chimney centre line is the very oblique 18mm diameter hole for the steam pipe to the left cylinder. It was fun machining that in!

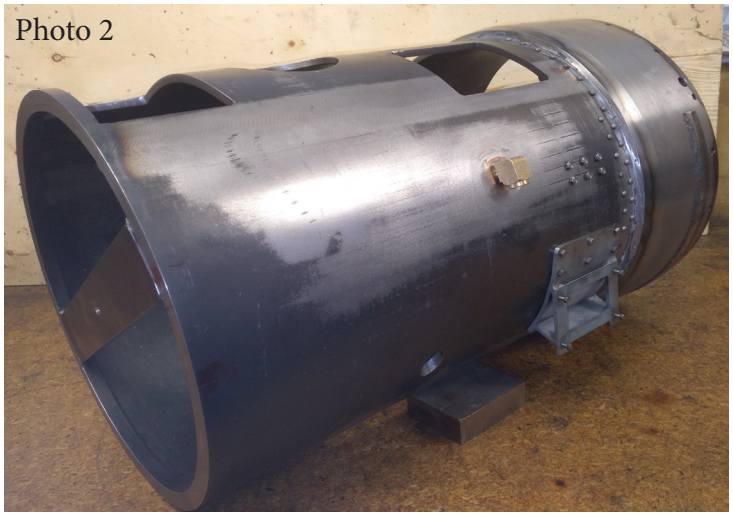


Photo 2

Photo 3 shows the right (driver's) side of the smokebox. The smaller rectangular cut-out is for the throttle stuffing box. And of course, there is another oblique hole for the right cylinder steam supply.

Photo 4 is of the inside of the smokebox. There is a large cut-out on the smokebox floor, where it bolts on to the saddle, which is part of the cylinder casting. The stand pipe (blast pipe) is bolted to the flat top of the cylinder casting. Since the smokebox operates under partial vacuum, sealant will be applied to the saddle flange. There are 72 x 2BA screws securing the smokebox to the saddle. Remember that box of 2BA screws that were being given away at the club a few months back? Now you know where they are!

Next job is to machine the chimney and smokebox front. And a whole lot more brackets to bolt to the smokebox, plus brackets to hold running boards, air reservoir tanks, foot-steps, etc.

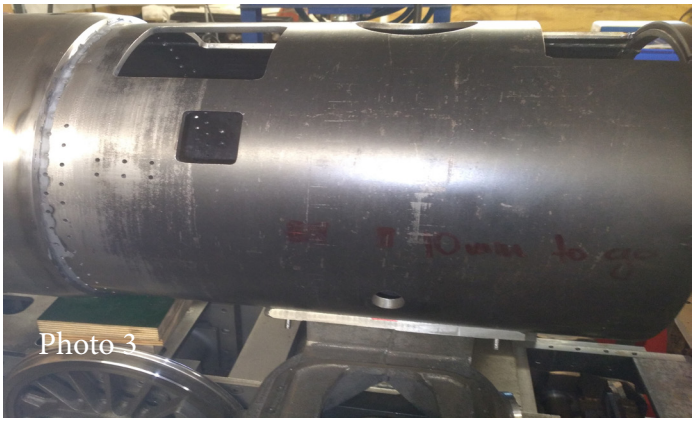


Photo 3

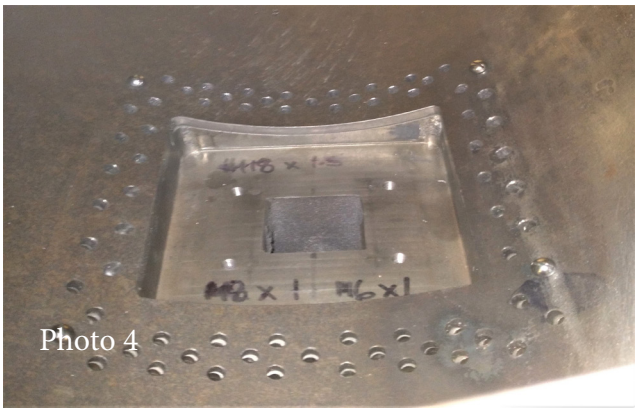
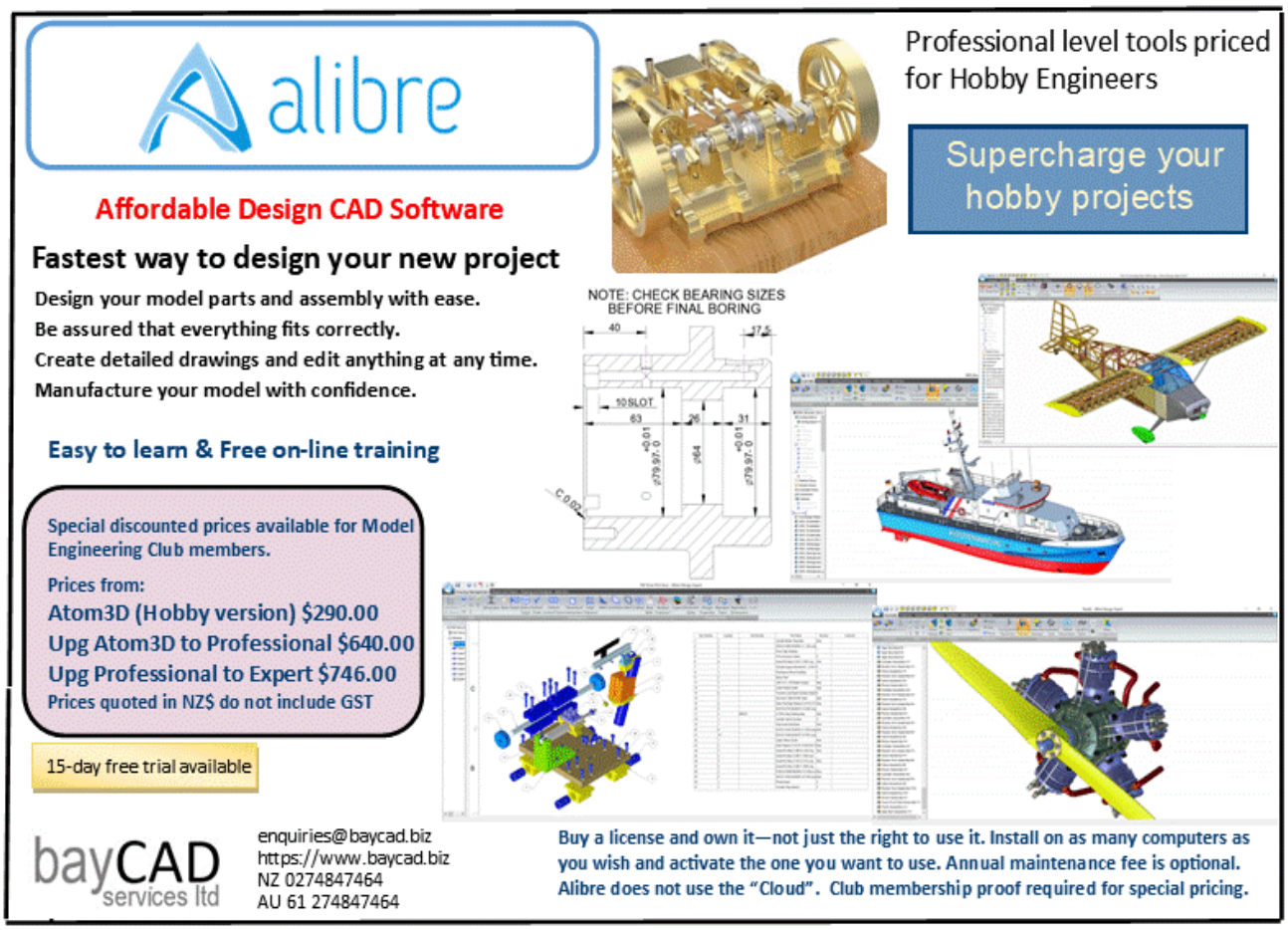


Photo 4



Gordon McDermott, manager Bay CAD Services Ltd., writes:

"Alibre management in USA have recently kept us busy debating and revising the final discounts we can offer to Hobby Engineering Clubs. The scope of this offer has increased to include all Model Engineering – Structural, Mechanical, Steam, as well as Model Aircraft and Marine Craft hobby clubs and their members.

Alibre LLC are pleased to offer this discount as they recognise many members of these hobby clubs are retirees with limited budgets. And it is these people who are in the best position to foster interest and encourage young people to take up engineering. Alibre LLC have been supporting model engineering in the USA for a long time, and I am very pleased they have agreed to spread the goodwill to NZ and Australia.

Note:

- The prices shown are the **discounted** prices
- Clubs and members must purchase an Alibre Atom 3 licence first and can then upgrade
- Members must provide proof of current membership to benefit from the discounts
- We have a Christchurch member who provides demonstrations and offers training sessions, and who could be of assistance to club members, if requested"
- CSMEE has a copy, kindly donated by Gordon McDermott, for use by members for practice.

Latest news from Rob Wilson's workshop

Latest from the shed is a 1/6th scale NZR late model Toshiba electric loco. These locos were purchased to replace the aging original English Electric EO locos used on the electrified Otira tunnel. Sometimes used in triple heading the new locos provided many years of service until the railway brass in Wellington decided to remove the wires from the tunnel. Adapted Dx locos were then used to bring the ever bigger coal trains through the Otira tunnel for delivery to Lyttelton for on-shipment.

The retired locos did have a short extension to their life after withdrawal by being used "top and tail", due to their having only one cab. The paint scheme on the loco is as used on the Johnsonville suburban line. I originally intended to use battery power. However, an offer of an Eaton hydrostatic changed my mind to petrol power. The engine is a 5.5kw electric-start over 4 stroke from Topmaq. I had machined a set of wheels for use on the loco but realized that I had made them too small. These will be used on a 7 ¼" loco for Ben. The loco looks and runs well and I'm pleased with the end product.

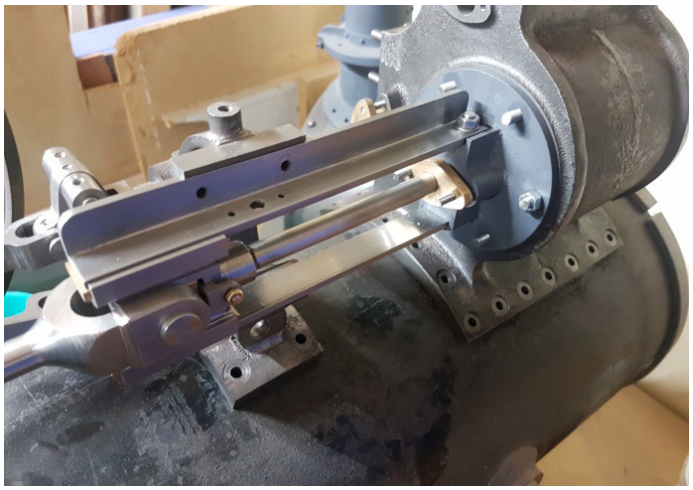
I also made two driver's ride cars for two members and have also re-powered Alan Orwin's London Metropolitan loco for Jayden. Next, I will continue with constructing an O scale small exhibition railway, and a 5" loco for Barrie.

John Begg's 3" Fowler: Slide-bars & Crosshead

Spurred on by what I regarded as good, and very satisfying progress on the valve gear, I pushed on with the piston, cross-head and slide-bars for my 3" Fowler A7.
The piston is CI and the piston rod stainless steel (another old washing machine shaft bites the dust). I had some CI piston rings,, so I have used them for now. Other than that it is really a straightforward turning job.

Next I made the slide-bars. I used stainless steel (another two washing machine shafts) and after a lot of milling the result came out really nice. The plan called for case-hardening these slide bars but I had heard that doing that almost always resulted in distortion. I was doubtful that case-hardening was really required and after some discussion with other club members, (who didn't case-harden their locomotive slide bars) I decided not to and to leave them as is, and keep them well lubricated. Time will tell but I am confident it will be fine.

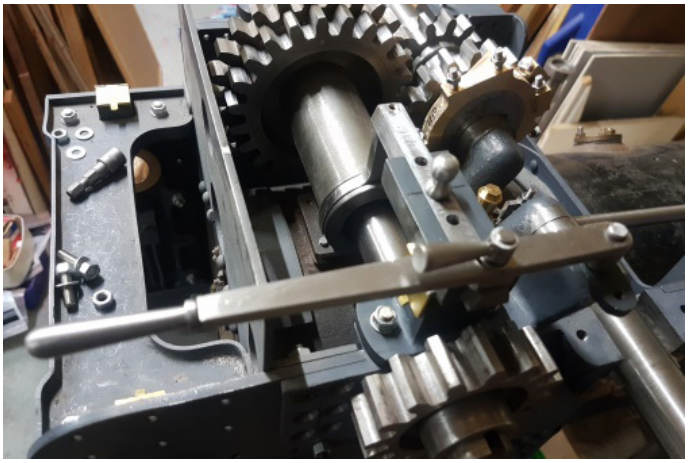
The next part was the cross-head which is machined out of quite a big chunk of metal. No washing machine shafts here but Steel and Tube, Stainless Division were really helpful and I soon had my block of stainless. Quite a lot of machining here but no big dramas if taken one step at a time. I have made some bronze slippers to run on the slide bars and when it was all assembled on the cylinder end it was very pleasing that it all fitted together, with little fettling required to have it all running smoothly.



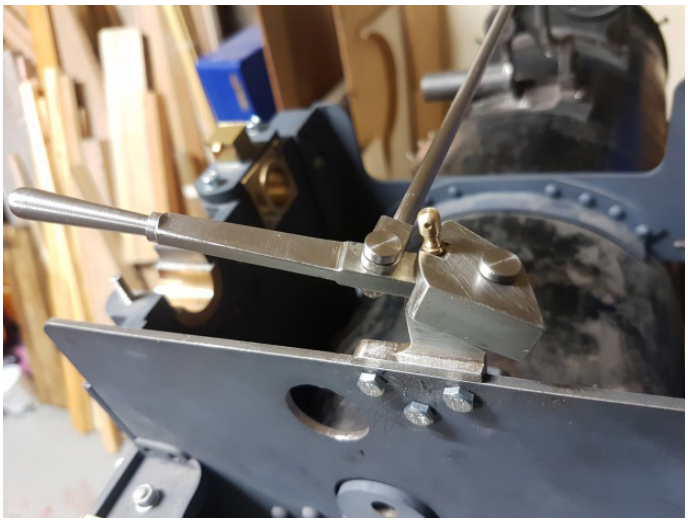
I just had to put all the recent work together and then I could turn it all over by hand using the flywheel. Looked great (to me) and satisfying to see all those parts working together. A major milestone.

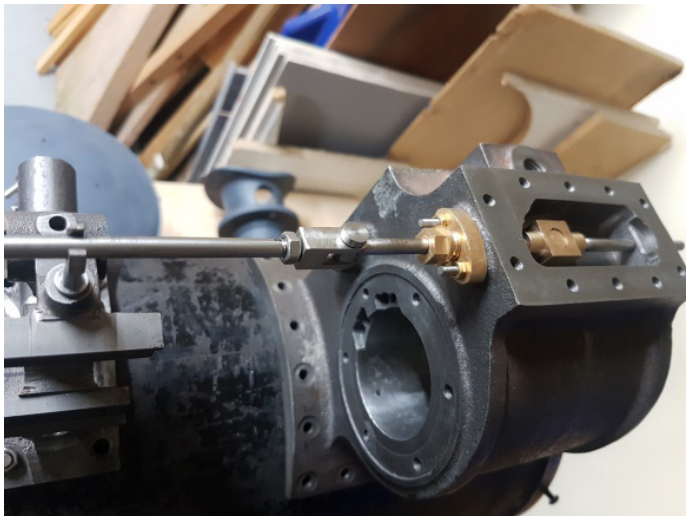
Having got that far, I thought I would next finish off the gear-change mechanism and regulator.

I had already made the gear change slider as part of the second shaft bearing housing so what was now needed was the fork to engage the gear shaft and the gear change lever itself, plus associated pivots and locking levers etc. It was surprising how many little bits and pieces are required, although I shouldn't be surprised by such things by now!



I had already made the regulator valve itself as part of the work on the cylinder so now turned my attention to the regulator lever and regulator rod. More stainless to the fore. Since I was working in that area I also made up the steam manifold and supply for the injector and water lifter and mounted the pressure gauge. This part of the engine is really starting to look, dare I say it, almost finished!





After what has been a long time working around the cylinder, motion, shafts etc., it is time for a change of scene. I have begun thinking about how to go about building the tender. Thanks to ideas and discussion with Rex Walker, I have a good idea how I am going to build the tender. That should keep me occupied for most of the rest of the year!

Also, there is a winch mounted on the rear axle that looks like a juicy piece of work, if I want a break from tender building.

Annual General Meeting

TUESDAY, 3 MAY

at 7.30pm in the Clubroom

Nomination forms for Committee may be obtained from Rob Wilson or from the Club noticeboard

From the Boiler Committee: Boiler Hydraulic Retests

When a boiler requires a re-test for renewal of the Boiler Certificate, it is essential that the owner contacts a Boiler Committee member in advance to arrange a suitable time and date for the test/ inspection to take place. Turning up with a boiler for test without prior contact does not guarantee that there will be two inspectors available on site to carry out the test.

The Boiler Committee are: Dave Campbell, Ian Fanshawe, Peter Grounds, John Hamilton, Alex Hunter, Mike James, Keith Robson.

For a trouble-free test it is recommended that the boiler be hydraulically pressurised prior to being presented for the re-test. Any leaks e.g. steam valves/regulators etc., should be plugged or blanked off. The boiler should be presented in clean condition. Tube-plates and firebox walls and crown should be brushed clean, and ash and soot vacuumed from the smokebox. Fusible plugs need to be removed for inspection.

For steel boilers the inspection is in two stages. An internal inspection is done first, so the boiler should be presented with the inspection plugs removed. On completion of the internal inspection the plugs are then refitted and the hydraulic test carried out. It is recommended that gauge glasses and seals fitted to boilers which do a lot of steaming be replaced at re-test time.

Future Developments

At a meeting of the Reserves Hearing Panel, on Monday 4 April, the CSMEE's proposals regarding the extension to our existing track, and the formalisation of use of the pond were considered.

The overwhelmingly strong support for the proposal included 80 submitters who made no further comment. The remaining 179 in support expressed appreciation for the CSMEE's activities. More than a quarter of submitters noted the CSMEE operation as a real asset to the Halswell community, and nearly as many commented that the miniature trains are also an attraction for wider Christchurch and beyond.

Two of the three submissions opposing the proposal came from local residents. Both are concerned that the changes that have happened over time affect their quality of life as residents. They both consider the CSMEE operation is intrusive and noisy (especially the tooting from the trains)*. The other resident indicating opposition to the proposal is from a nearby suburb. However, they stated in their submission that they support the lease if the proposal is amended to mitigate the impact on existing vegetation including mature trees, and plantings are only eco sourced natives.

At the conclusion of the hearing, the Panel forwarded their recommendation to the Waipuna Halswell-Hornby-Riccarton Community Board. The outcome still lies somewhere in the future, although all the signs so far are very encouraging.

* **Members please note**: "Tooting" is for the purpose of safety only, and must **not** be used as a form of greeting.

CSMEE Officers for 2021 - 22

Patron: Jock Miller

President	Alex Cowdell	03 318 1908
Vice President	Jonathan Grueber	365 0604
Past President	John Howie	328 7459
Secretary	Rob Wilson	021 816 505
Treasurer	Mike James	321 7051
Loco Foreman	Rob Wilson	021 816 505
Commodore	Robin Shand	021 217 3601
Clerk of Works	John Howie	328 7459
Librarian	Dave Markham	322 7524
Boiler Committee Chair	Dave Campbell	326 5585
Safety	Committee	

Committee Members

Nick Gilder	942 3133
Bev Brash	329 6113
Eddie Clark	359 9615
Isaac Lester	027 867 9933
Mike Harrison	349 6946
John Blanchard	359 4053

Boiler Committee

Ian Fanshawe	942 2937
Mike James	383 4985
John Hamilton	322 4574
Keith Robson	324 4195
Dave Campbell	326 5585
Peter Grounds	343 1443

Constitution and By-Laws Chair: John Howie 328 7549

Volunteer Positions

Awards Night Conv.	Dave Campbell	326 5585	**Visiting Spkrs.**	John Begg	3398448
Asst. Librarian	TBA		**Membership**	Murray Fowler	03 349 5691
Asst. Loco Foremen	Dave Markham	322 7524	**Canterbury Tales**	John Pattinson	329 4441
	Barry Doublesin	383 3827	**Shed Foreman**	Alan Barlow	021 224 9031
	Peter Grounds	03 3243662	**Mech. Mtce.**	Peter Grounds	03 324 3662
Asst. Clerk of Works	John Hamilton	322 4574	**Roster**	George Maylam	324 3469
Projects Manager	John Hamilton	322 4574	**Facebook**	Patrick Whillis	318 7301
Archivist	TBA		**Ticket Box**	Jim Rosanowski	359 1370
Webmaster	John Begg	339 8448	**Publicity**	Ben Sewell	027 384 5651
				Glen Batchelor	351 5411