Canterbury Tales

Vol.64 April 2023

From the President's Desk

Well, another year is upon us. This past year saw a number of notable achievements, the biggest, I think, being the granting of our new track extension proposals. There has been a huge amount of work involved in getting this project to its current stage and I would like to thank all those who have been working on this project, most notably John Hamilton.

I would also like to acknowledge our Wednesday work team. Earlier this year we hosted another CANMOD event, and the work that was put into modifying and upgrading our facility prior to the event was impressive – from the new traverser and turntable right through to the grounds maintenance. There was a tremendous amount of work completed and to a very high standard.

Sunday running has continued to be busy and I would like to thank those who turn up each week to make this happen. I often get complaints that we are no longer a model engineering and boating group and that we are too focused on the revenue side of things. This is a challenging debate as, being based in a public location as we are, there is little opportunity for us to reduce the number of passengers. Balanced with the need to meet our on-going costs of operation and growth, we need to maintain our Sunday revenue. To achieve this we need members' support. So, to all those who come down each week and help to keep things moving – a big thank you.

CANMOD 2023 attendees

Looking ahead this year – the big one is obviously our track extension. It is under way, track is now being manufactured, the main beams for the bridge are in, and our focus is turning towards the day when we can start to lay the first track. It is an exciting time to be a member of one of New Zealand's premier model engineering clubs and I would encourage all members to step in and help wherever they can over the next year.

I would also like to take this opportunity to thank those who have filled committee and volunteer roles this past year. Without members stepping up to assist in running the club we would not be where we are today. Again, thank you for your help and time – it is much appreciated.

Alex Cowdell

President

CANMOD 2023

CANMOD 2022, held in 2023...Now that's something we didn't really forsee when planning things back in 2020!

Nevertheless, it was a very well-publicised event, with HUGE crowds coming through for rides, and many showing a lively interest in the other events going on. From the pond and its great array of boats, to the road engines, to the stationary exhibits, - there was certainly plenty to see and do for the public!

I was busy trackside with my camera, attempting to get a reasonable number of video clips to put together a production of some sorts... To give you an idea, I took 257 individual video clips on the Thursday alone! Yep, I had to purchase another External Hard-Drive to cope with the volume of video footage... The Raised Track and Boating videos are done, and up on YouTube. The Ground Level videos are a whole different kettle of fish, with over 600 clips to process!

To the hard-working CANMOD Committee, thank you very much for your efforts in putting on a great event! I had nothing but positive feedback from those I talked with throughout the event, so well done to all involved.

Photos & article by

Ben Sewell

From the Shed

Hi everyone! The weeks tick by so quickly, and we are now heading into winter. Since our last bulletin the Wednesday team have been busy with all sorts of jobs. There was a big push to get ready for CANMOD, held in January. The new small traverser worked well, and this took the pressure off the main traverser. Also, the new turntable was able to accommodate extra locos, giving more room to prepare at a higher level. Of course, the day-to-day maintenance of lawns & gardens continued as usual. The great effort made by everyone to get ready for this event was truly remarkable. A great time was had by all who attended.

On top of all that the new track extension, led by John Hamilton got under way, and good progress was made on this. The new bridge at the pond end is completed and some test track has been laid across it. We are concentrating on the fixed points at the moment; once they have been done, the rest of the track will be lined up. There is a bit of digging out to be done between the bridge and the CCC toilets, before heading up to join up at the points box. This is Stage One. Additional signals have been added between the viaduct and the station as, on entering the trees it is difficult to see around the corner. Safety first!

The shed tidy-up is under way. A new tools cabinet has been purchased in the hopes that this will help keep things tidy and in their right place, once everything has settled down. After CANMOD we got started on the fuel shed extension, and this has gone well. We lifted the shed about 400mm, so no more head banging. We are still fitting it out with coal bins and shelves. A new tray has been installed to accommodate the loco fuel containers. Painting is still to be done and shelves are still to be fitted..

Eddie Clark has built a new library unit at the south end of the clubroom, and this should accommodate books for the next few

years. Next on the list is the swale crossing at the northwest. As you come past the turntable area the new track will continue straight ahead and across the swale towards the roadway and carpark. This crossing will be built-up as a solid bridge with a 300mm pipe at the bottom for the water to flow through.

There's still plenty of work to keep us going as we head into winter.

Many thanks to all the members who give up their time to keep our railway on track

John Howie

Clerk of works

Blenheim Adventure

We enjoyed a beautifully-fine spell in Blenheim over Waitangi Weekend (Feb 4th to 6th), with fantastic crowds turning up for rides. There was a good number of visiting equipment, with people coming from Christchurch (CSMEE and Christchurch Live Steamers), Greymouth, Hokitika, and Nelson. Supplemented by the local equipment, there was no shortage of motive power or ridecars.

Saturday evening running was from 7pm to 9pm, and with a lot of trains on the circuit, I ended up leaving my own parked up, instead working the incoming points in an effort to keep things flowing nicely.

Sunday running, from 11am to 4pm, was very well patronised by the Marlborough public. This is their normal 1st Sunday run, and with the extra visiting trains, proved to be an even better attraction. A members' BBQ was held in the evening, which saw a good turnout with great fellowship and camaraderie.

On Monday (Waitangi Day - known locally as 'Heritage Day'), the other organisations that call Brayshaw Heritage Park home were all open and operating continuously from 10am to 4pm. I didn't get the chance to have a look around the rest of the park on this day, as I was busy driving my loco, helping move the HUGE crowds that came out for a train ride.

A MASSIVE thanks to the MAMS members who came and helped out, and of course to those who made the trek to Blenheim to enjoy the terrific weather and good company!

Photos & article by Ben Sewell

Peter Grounds "The Berkshire" (Part 13)

At the time of the last bulletin, I had expanded-in the tubes, but still had to bead over the superheater flues inside the combustion chamber. This proved hard work due to limited access. I made a larger version of the "J" punch used on the tubes, with a round guide that located inside the flue. Then it was a case of rotating the punch slowly, tapping the end of the punch with a small hammer. I couldn't see what I was doing, so it was done by feel. I wasn't satisfied that the beaded over copper was in sufficient contact with the tubeplate, so I made a flat drift to push the copper fully home. Tapping this with a hammer didn't get me anywhere, so I modified the drift to fit my compressed air rivet gun. With the pressure set to about 5 psi, this thing rattled the bead into place with ease. Working inside the steel boiler with the rivet gun made a devil of a din. I don't know what the neighbours thought, I went over to check that it wasn't annoying them too much only to find that they had moved house for some reason. Happily all that noisy stuff is over. At least for a while.


Photo 1

Photo 1 is the flue roller in action inside the combustion chamber. I inherited a great old Sidchrome socket set from my grandfather, and this has sufficient extensions, a universal coupling and a wonderful speed-brace that enabled me to turn the roller through the firehole door.

Photo 2 shows the flat tube drift and **photo 3** shows the tube drift attached to my rivet gun.


Photo 2


Photo 3

At this point, it was time to hydraulically test the boiler. I acquired some boiler water treatment chemical from the club, as the boiler may as well have this from the start. There were a few minor leaks around some of the tubes, mainly at the smokebox end. Just a light re-roll of these tubes and all was well. Under official test the boiler held 200psi for one hour without pressure drop. So it looks like all is well. When emptying the boiler, I put the water into a large plastic bin which allowed me to calculate the internal volume of the boiler. The maximum allowed volume is 50 litres. The boiler was designed to be 47 litres. It worked out to be 48 litres in real life, so all is well in that department.

The next job is the superheater. I have decided on radiant superheat, where the superheater elements go beyond the flues, through the combustion chamber and over the fire. These are long elements, 1250 millimetres long. There are five pairs of them. I purchased 18 metres of 12.7 millimetre thick walled stainless tube for this. I also had some thick-walled stainless tube about 28 millimetres diameter on hand for the headers. I acquired a large steam service ball valve (Swagelok) from eBay. So, it's now all stainless steel pipework. The ball valve is screwed in place with NPT pipe

threads. Cutting large diameter threads in stainless steel proved interesting, but it's all done now. Much of the pipe work has been TIG welded using stainless steel filler. I may use silver solder to secure the elements at the smokebox end. Silver solder does a nice neat job, but, on the other hand, TIG is very good at filling any gaps. We'll see. The firebox ends of the elements will definitely be TIG welded.

Photo 4 shows the wet header. The dry header will be welded behind this. **Photo 5** shows the wet header and throttle valve in position. This is a work in progress!


Photo 4

Meanwhile....

Remember the Ab ?

(last seen March 2021 , vol.58)

As many of you know, there is a parallel project in my workshop, a 7.25" NZR Ab locomotive. I have been working on wheel and cylinder castings on and off for a while now. While I was still in "boiler mode", I decided to design a steel boiler suitable for an Ab. It's been quite a while since I last designed anything with AutoCad, so I needed to re-acquaint myself with it. Mike James helped a lot, and turned my efforts into professional looking drawings. Ian Fanshawe, Alex Hunter, Mike James and Alex Cowdell all had input, so it was almost a "Committee" design. I'm very happy with the result. The boiler "looks right", with good proportions. Three, possibly four boilers could be built to this design. A number of NZR locomotives used Ab boilers at some stage of their lives. Wab, Q, Aa and probably A class locomotives all had Ab boilers. I'm very happy for any model engineer to use these drawings, just ask the Boiler Committee for copies. **Photo 6** is the side elevation. There are four sheets in total.

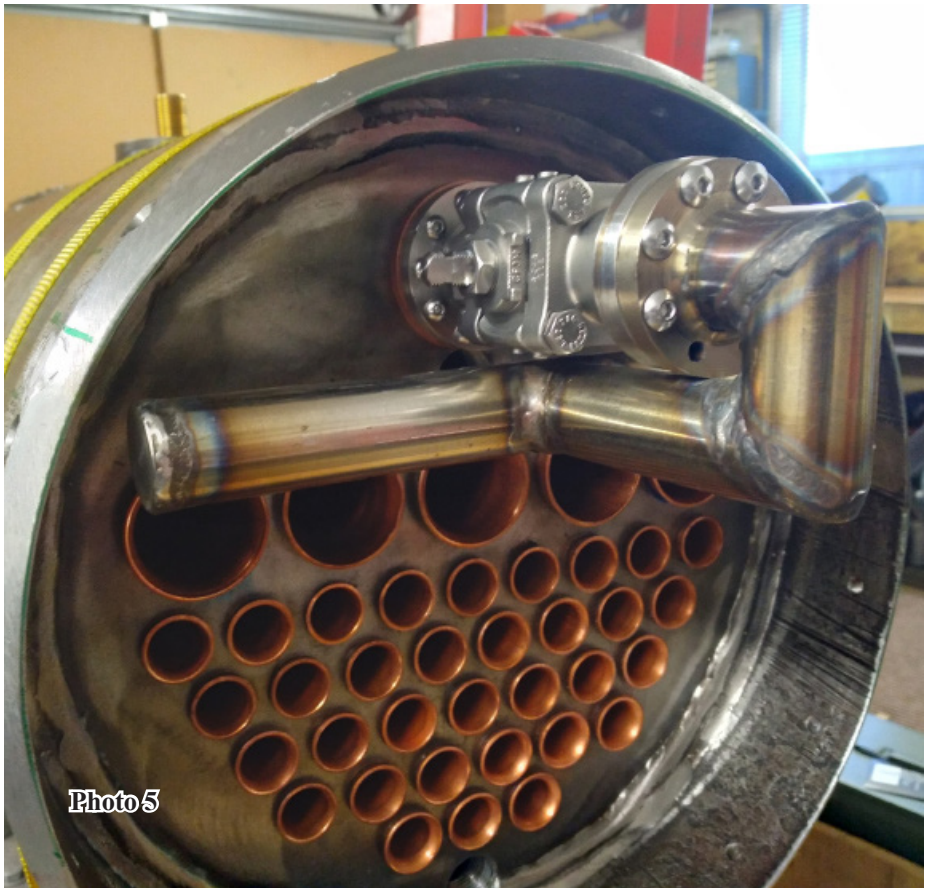


Photo 5

Photo 7 has nothing to do with Berkshires or Ab's. The wheel is a boxpok type for an American heavy pacific. I'm turning them for a Nelson model engineer, as he hasn't access to a lathe big enough. They were almost too big for my lathe! They were too big for my 4-jaw chuck, so they are mounted on a faceplate to allow the axle bore to be made. Once this is complete they can be mounted on a mandrel so the rims can be machined.

Well, from the above, you will see that I have plenty to do. I had better get into the workshop and

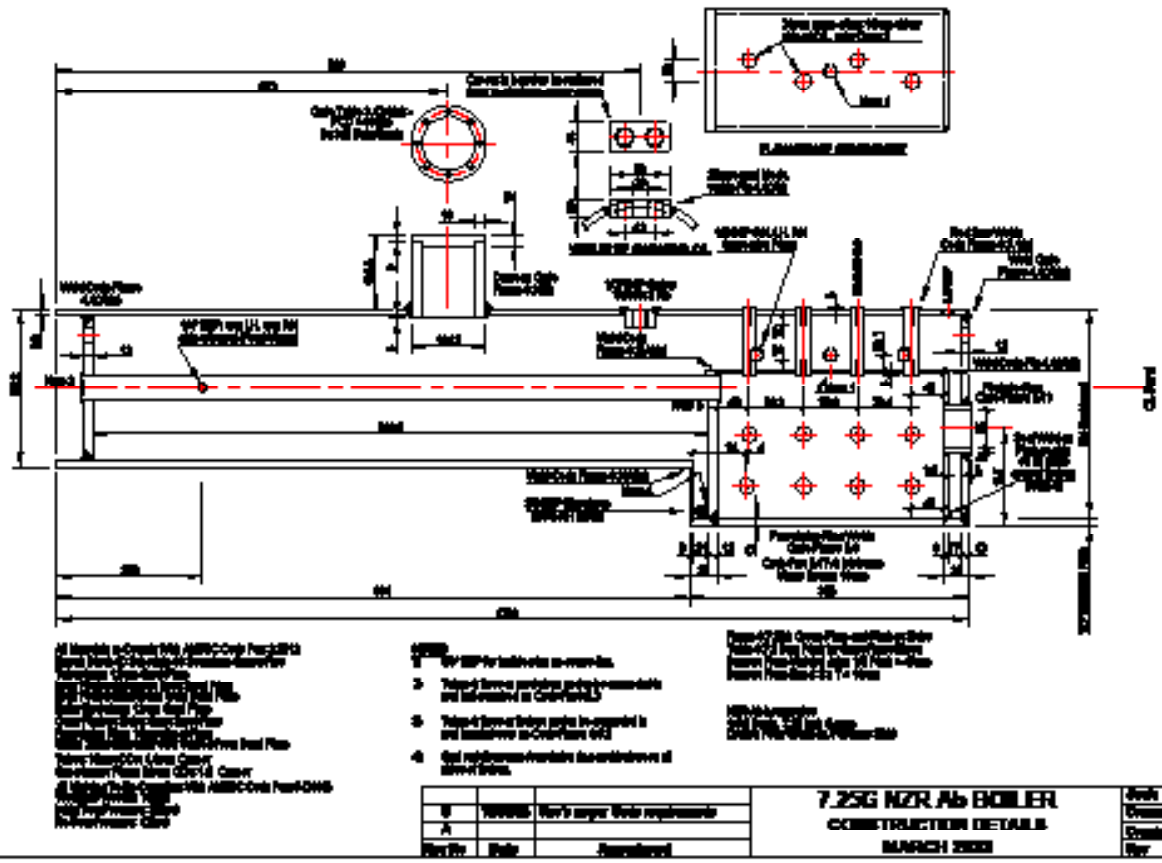


Photo 6

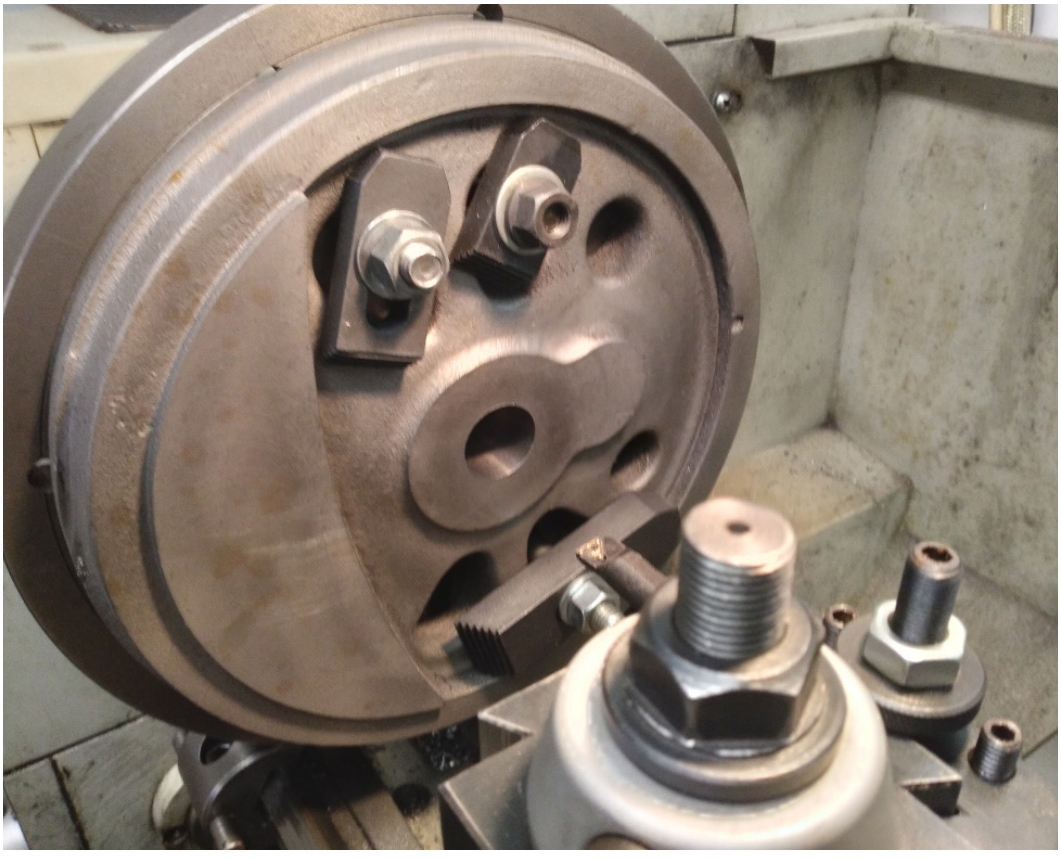


Photo 7

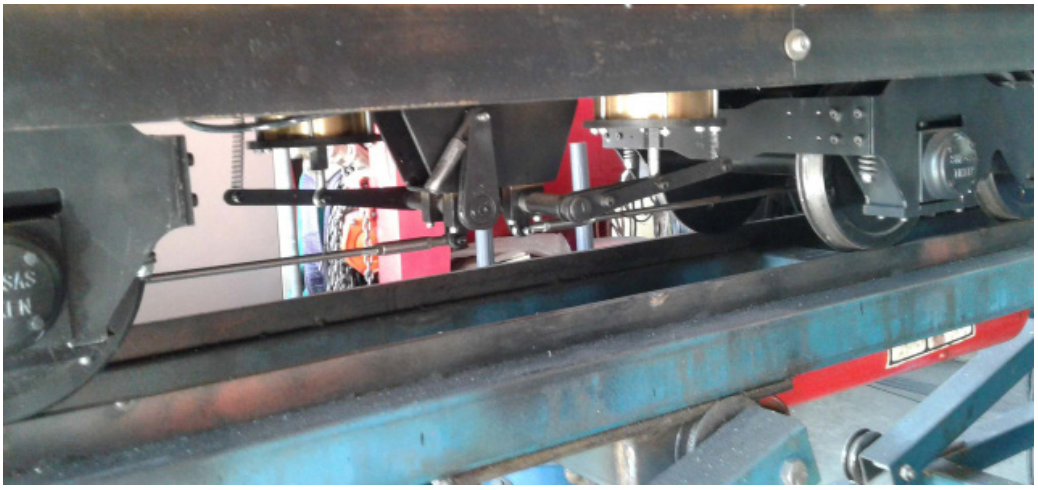
Ian Fanshawe: Latest progress on the 7¼" gauge S.A.R. Class 15F locomotive

As will be seen from the pictures a fair bit has happened since the last article. It is amazing how a few large parts can transform a project. The boiler cladding has gone on, along with the stainless boiler bands and the dome cover. Next came the fabrication of the cab in 3mm steel, and then for bit of a change from tin-bashing, the engraving of the cab-side number plates, on the mill.

I decided then that the tender needed some attention. I already had the two 3-axle bogies made, minus the brake gear, which were then made up and fitted. Following this, the tender chassis with brake-actuating air cylinders, levers and pull rods was completed.

Next it was on to the tender tank, giving the appearance of great progress. Lots more to do. though. when you come down to all the frilly bits like ladders, hand rails and edge beading etc. The tank is 3mm steel and, due to corrosion problems, will not be used to hold the water directly. This will be in separate stainless steel tanks. leaving space for the brake air-compressor and receiver, plus various tools and other paraphernalia we usually lug around. The coal bunker area will have room for a seat with a back (got to have your comfort especially at my age). The coal will be kept underneath and down the back of the seat.

It is intended to install a slave throttle-lever on one side of the seat and a brake actuation lever on the other side. This will save leaning forward all the time to keep a hand on the throttle. As can be seen, there is much paintwork to do on the cab and tender.




SOUTH AFRICAN RAILWAYS
3044
15 F
SUID-AFRIKAANSE SPOORWEE
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John Begg's 3" Fowler A7

Last time I described progress with the tender. At that stage I was about to make the back and rivet it on. After some careful rolling the back fitted quite well, so riveting was not too onerous. At last the basic tender structure was completed.(Photos 1-2)

Photo 1

Next was the towing bar and towing straps. For this model I have used scraps of material, that we all have around the workshop, wherever possible. One of the things I enjoy is seeing a component materialise out of a, seemingly, nondescript piece of metal. A good example was the towing bar brackets. These evolved from a piece of steel bar, milled to size, then further milled to fit the tow bar then bend and riveted to the back of the tender. These tow bar brackets in turn accepted the tow bar. (Photos 3-5)

Photo 2

Photo 3

Another interesting challenge were the winch rope rollers. The rollers themselves were straightforward but the brackets were tricky as there is barely a straight edge on them and several parts to fabricate. Making up some jigs to hold things in place and some careful TIG welding did the trick and provided a good outcome. (Photo 6)

Photo 4

Photo 5

Photo 6

The tender does seem to have its share of fiddly, time consuming, components. A good example is the reversing mechanism. First up was the reversing lever itself together with the trigger. All made from stainless steel with several small fiddly bits. Then the quadrant which bolts to the tender was made and the reach rod forward to the weigh shaft. (Photos 7-8)

Photo 7

The ends of the reach rod were another example of using a piece of stainless rod from the bin, milling it rectangular and then fashioning the two end pieces. (Photos 9-10)

Photo 8

Photo 9

Photo 10

The final pieces of the tender puzzle were completed with the addition of some brass “bling” around the edges, and a timber floor for the driver to stand on. The brass was from some 12 mm half round section that you can obtain from boat shops. I heated it up to bend it around the corners and bonded it with epoxy to the steel of the tender. Hopefully it stays put. (Photos 11-12)

Photo 11

Tender finished (other than final painting) and assembly! It feels good to write that.

On to the next stage now…….

Photo 12

Rob Wilson's Workshop

Latest from the Workshop. I've nearly finished a “fire engine” for member Dave Mumberson. The prototype is made by a German company Windhoff who make units called “Cargo Sprinters”. These are a universal machine adapted for various uses such as weed spraying, leaf fall removal, rail grinding and other uses. The fire and rescue units were ordered for the Swiss National Railway company SBB. There are several consists made up of either 3 or 4 units, one being a bulk liquid tanker unit and the others being firefighting platforms and carrying rescue equipment. I’m making the tank unit. It will have a working water monitor mounted on top of the cab (shown in the second photo). Power is an electric start 5kw petrol engine with an Eaton hydrostatic transmission with all-wheel drive. Photo 3 (overleaf) shows the rear section installed.

Photo 1

After that I have a “calf” unit for Jayden plus a ride car, a ride car for John Blanchard, a 6-wheel shunter for new member Dave Unwin, and then maybe I’ll make a 5” Ec for me.

I’ve also made an On30 layout which I’m taking to Dunedin for a train show in a couple of weeks.

(continued overleaf)


Photo 2


Photo 3

Ferrymead Visit to "Hall of Flame"

Organised by John Begg, this well-attended event offered access not only to public areas but to those behind the scenes. The building is a re-purposed supermarket, and houses a really impressive display of dozens of gleaming machines.


The start of the visit


Matt Agnew poses heroically


John Begg and John Smith are impressed by beard

Phil Bellaney and Rob Wilson are ecstatic

Around the Site

Coal shed gets a raise

New coal bunkers

New traverser

Planning the route

Bridge piles assembled

Driving the first pile

Cross beams & bearers added

Deck & approaches

From the Dockside

From the Commodore

Sunday boating

We have re-instituted an official boating day at the Domain, namely **every second Sunday of the month.**

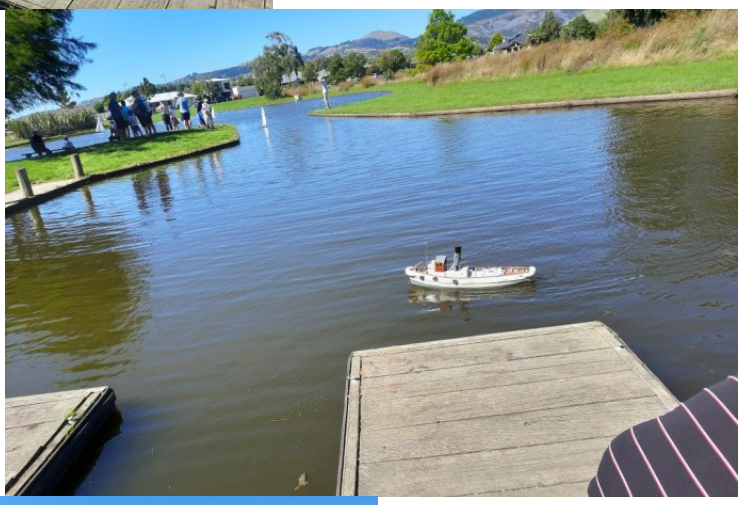
Our first such event on 12 March was a huge success, with many more boats on the lake than have been seen for some time. Even mother nature co-operated with outstanding weather. There was plenty of wind for the yachties, but not so much as to deter the steam and electric enthusiasts. We had three new boats built by club members either on show or on the water.

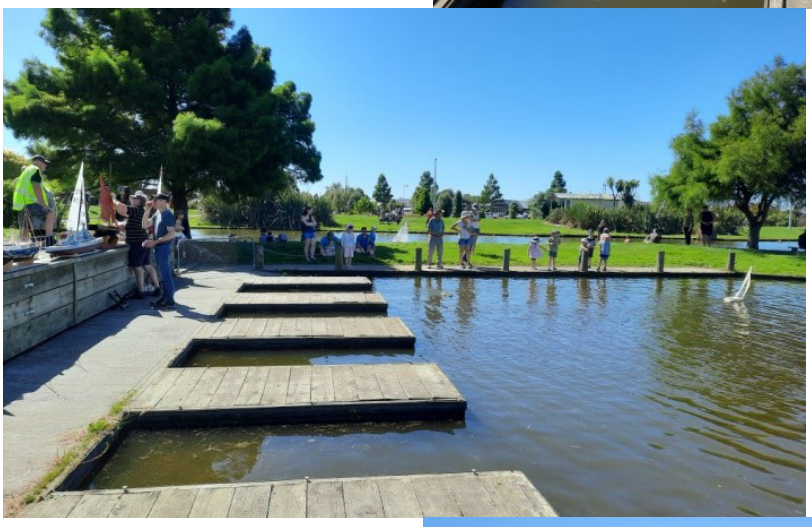
Graham Pulfords *Hood* is a magnificent example of his workmanship. While he still has plenty to do to finish her, it was great to see his progress to date.

There was a great turnout both from members and from the public. Lots of fun and laughter. **See you all again on the next second Sunday of the month**

Keith Schroder's nearly complete version of *Greta*

Howard Shears launching his new addition to the fleet





From the Boiler Committee

The CSMEE Boiler Committee wishes to draw the attention of members to the updated comments pertaining to boiler water-level gauge glasses discussed in the **Steam Drivers' Manual.*** The Manual will be amended accordingly.

The **Boiler Water Level Gauge Glass** or **Sight Glass** is crucial for the safe operation of the boiler and is installed to enable the driver to maintain the water level so that the fire box crown is **NEVER** uncovered in operation. Mid-way up the glass is the ideal level for most purposes, e.g. starting your fire, starting running. Do not overfill the boiler as this may cause water to carry over to the cylinders.

The **Gauge Glass Blow-down Valve** uses the boiler pressure to blow the water out of the gauge glass and help ensure the water level is reading correctly. The water must return rapidly after closing the valve, otherwise you should suspect a blockage in the boiler gauge fittings. To test the gauges for correct operation, close the steam connection cock and open the water connection cock then open the blow-down for sufficient time to show a good flow. This indicates the connection is clear. Next open the steam and close the water connections and blow-down as before. Finally, close the blow-down and open the steam and water cocks. The water level should then rapidly return to the level in the boiler. Should the water slowly rise to the top of the glass, then suspect a blocked or partially blocked water connection; if it rapidly rises to the top then suspect a blocked steam connection. Steam condensing at the top causes a reduction in pressure in the upper glass and fitting in relation to the pressure in the boiler thus forcing the level to rise. This is where two gauges are an advantage, as both are unlikely to block at the same time and will reveal any discrepancy in levels.

*Note: A copy of the **Steam Driver's Manual** may be found in the Members' Section of the CSMEE website.

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Boiler Committee Chair	Ian Fanshawe	942 2937
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Boiler Committee

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John Hamilton	322 4574
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Dave Campbell	326 5585
Peter Grounds	343 1443

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