Blast Pipe

Newsletter of The Hutt Valley Model Engineering Society and

The Maidstone Model Engineering Society

December 2026

Hutt Valley Model Engineering Society Inc.

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Notice of Meetings

Our December club meeting is on Wednesday the 2nd. As we have done the last few years, we are having a members' BBQ and fun run.

Same format as the last few years, the club will provide the BBQ; you need to bring your own food and drinks.

Start time is 3.30 pm, but as always, if you have a key, feel free to show up earlier and enjoy a social evening.

Family and friends are welcome.

Public Christmas Run

We are holding our Christmas charitable run at the club on Saturday, December 12th.

We will be open to the public between 1100 and 1700.

As in previous years, we will give away a free train ride for every can of food people donate to the Lower Hutt Foodbank.

We expect a reasonable crowd for this event, and previous events have been our biggest ever, with over 600 rides and over 250 food items for the foodbank.

Any assistance you can offer would be greatly appreciated, such as decorations or bringing an engine to run, particularly on the ground level.



HVMES Notes

The November club night also featured another strong selection of projects.

Lachlan brought along his 5-inch gauge locomotive chassis to show everyone how the project is progressing. He has been busy working on the motor control panel, which has involved several trips to Jaycar for components. A more detailed update on the project is elsewhere in this Blastpipe.

David demonstrated an air dryer used with plasma cutters. Moisture in the compressed air supply can cause oxidation and damage to the plasma cutter's consumable tips. The dryer uses silica gel beads with a cobalt salt indicator to show when they have absorbed moisture. Rather than continually buying expensive replacement beads, David has found that indicator silica gel kitty litter can be used as an alternative. The beads can also be dried out in the oven and reused.

Bill showed us his new electric chainsaw sharpener, recently purchased from The Tool Shed for around $150. Unlike his previous Ozito sharpener, which required manual clamping, the new machine has a cam-operated automatic clamping mechanism that secures the chain as the sharpening head lowers. This makes sharpening much quicker and produces consistently sharp results. David also demonstrated a 3 mm diamond grinding wheel suitable for sharpening tungsten-tipped chains.

Andy brought along a HotRC single-hand controller, featuring the latest generation of eight-channel radio control. It has a colour touchscreen, built-in rechargeable battery and a more straightforward programming interface than some earlier controllers, including the unit Ben has used in his Minecart. HotRC controllers appear to offer good value for money and are available through AliExpress. The manufacturer continues to develop its range, adding new features and functionality.

James presented his book, A Cure for Boredom, which he developed as part of a university project and which was featured in the previous issue of Blastpipe. He explained that the project was a response to the rapid rise and integration of artificial intelligence into everyday life, and the impact this is having on people's engagement with creative activities. James also shared Jacob's Ladder-style display made up of a series of boards featuring photographs he had taken of various fantasy-themed subjects that he had prepared in the darkroom using different techniques.



James presenting about his book at the November meeting. Photo: Calcott

This newsletter is only as good as the stories our members share. Workshop projects, track day photos, technical tips, club history, or even a good mishap story if it's model engineering-related- we want to hear about it. Articles don't need to be polished; send through a few photos and a couple of lines, and we'll help pull it together. Send contributions to the Editor, hvmes.sec@outlook.com, by the 20th of each month.

Christmas Pudding

By Ben Calcott

With this being the final issue of the year, I thought it would be a good opportunity to share a photo of a Christmas-themed layout I built over the Christmas break last year, cleverly housed inside a Rotary Christmas Pudding Tin.



Christmas themed micro layout built into a Rotaty Christmas Pudding tin. Calcott

I laser-cut the layout baseboard from 3 mm plywood, using two layers to add depth. I hand-laid the track on PCB sleepers, rolling the rails to achieve the required tight radius. The station building is a Lineside Huts kit from Peco. To prevent light leakage, I lined the inside with aluminium foil tape and illuminated the building using a flickering flame LED.

I designed the station platform in Fusion and 3D-printed it in ABS before sanding and painting. The traction poles came from a Greenmax kit, were cleaned, and painted before installation.

I sourced the Christmas tree from a discount shop. Originally USB-powered, it was shortened to fit the layout, and the lights were rearranged to suit its new size. A set of Noch winter figures was added to bring the scene to life, while the snow effects were created using the Deluxe Materials Scenic Snow Kit.

The layout and lighting run on a pair of AA batteries; there is no speed control, but the Kato Pocket Line trains run at a reasonable speed on 3 volts. The extremely tight radius does impose some limitations, however, as the trains are restricted to light engine movements because the couplings don't line up to couple a wagon to the locomotive!

Wishing everyone a very Merry Christmas and a happy holiday season. I look forward to seeing what everyone worked on over the Christmas break at our February meeting!

Simple 5” Gauge Locomotive Part 2

By Lachlan Clark

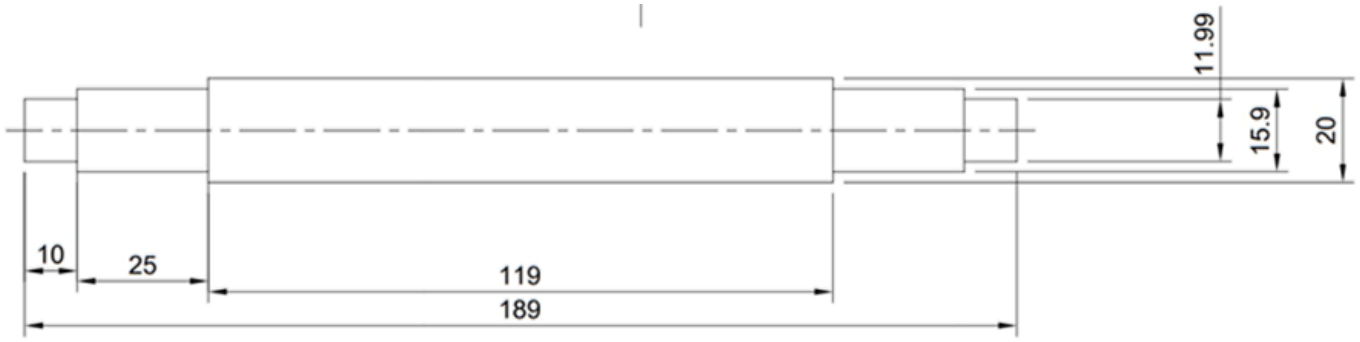
In the September issue, I covered the thinking behind this project: a simple, affordable 5” gauge electric locomotive that a new member could build without a fully equipped workshop or a big budget. I also talked about learning Fusion to draw it up, and the 14 kg box of laser-cut parts that turned up at reception at work. This instalment picks up from there with the wheels, axles and drive set-up, plus my first battle with the wiring.

Wheels

With the motors mounted, attention turned to the wheels. My original plan was to have a local machine shop turn them to a custom design. The quote came back at $1,250 for eight, or around $156 a wheel, which was hard to justify for an engine meant to be affordable. Instead, I sourced CNC machined wheels from E J Winter in Australia. They landed on my desk for about $45 each, and arrived within a week.

Axles

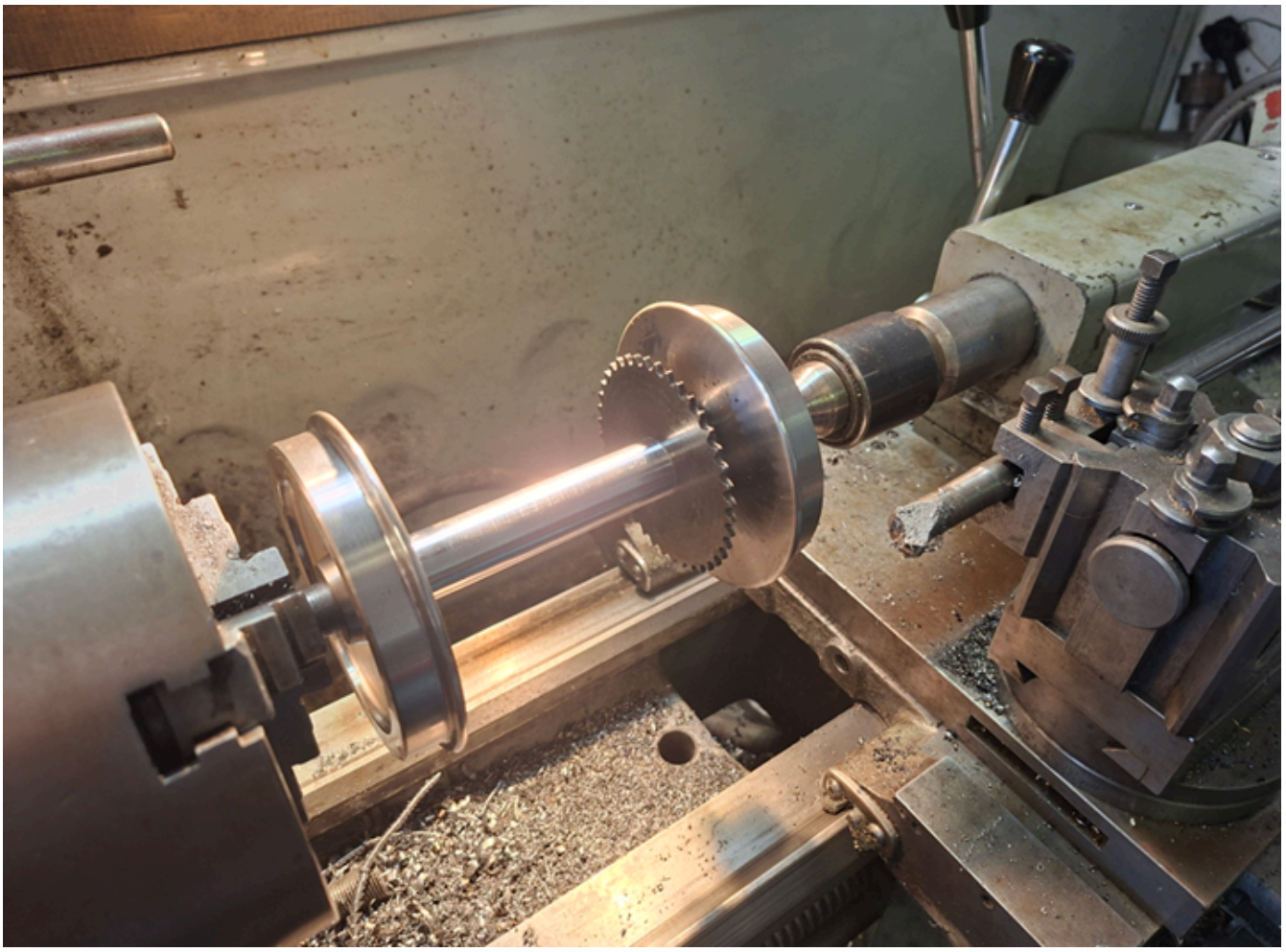
With no lathe of my own, I headed to a member’s house here in Wellington to turn the axles. Thanks to David Grant-Taylor for letting me use his lathe, and thanks also to all the members who kindly offered theirs. For the final version, I will try to get the axles machined commercially, in keeping with the aim of a locomotive that can be built without a full workshop.



CAD drawing showing the axle.

Sprockets

The sprockets came from China and were bored out on the lathe to suit the axles. Everything pressed on with no issues, so I must have got the tolerances right. I then put flats on the axles so the sprocket grub screws had something to bite.



The complete wheelset mounted in the lathe to test for trueness. The sprocket used is for ANSI 25H chain; this is common on electric scooter motors from China. Photo: Clark

First Push Around the Track

With everything back together, the locomotive sat on the track and was pushed around. It ran mostly okay, but there is one issue to fix: chain tension. The centre of the motor isn't aligned with the axle, so as the wheels move on the suspension, the tension on the drive chain changes. Not ideal. Stiffer springs and a chain tensioner might need to be fitted.



The completed wheelsets sitting on the raised track at Petone. Photo: Clark

Wiring

Next, I started on the wiring. Over the years, I have watched Mel Kennedy do electrical work a couple of times. Mel makes it look easy and always does a very clean job. On this project, I fought it every step of the way: wrong terminals and crimps that were either too tight or too soft. This was a real lesson in how the professionals make their trade look seamless.

In my case, only Jaycar was winning, with multiple return visits in a single weekend. Once this is sorted, I will provide a more definite parts list.

Where Things Stand

The locomotive is currently sitting with most of the wiring done, and it's almost ready for a trial run. With luck, I will have a report on how it performs under power in the next issue.

Update: Since this was written, the loco had its first trial run on Sunday, November 15th. Check out the next Blastpipe to hear how it went.



The chassis sitting on its wheels, ready for wiring. Photo: Clark



Happy locomotive designer at the controls during the trial run. Photo: Calcott

Halloween Run

By Ben Calcott

Members started setting up at the park around midday for our Halloween Run, and at first, the park looked a little empty. However, as 4 pm approached, people began arriving for rides, and by 4:30 pm, the queue was so long that you could barely see the station from the ticket office!

There was certainly plenty to be scared of, with ghosts, zombies and werewolves roaming the park. Thankfully, Superman, The Hulk and even Duff Man were on hand to keep everyone safe!

Abi had done a fantastic job setting up the lights, while the skeleton driving trains on the raised track proved particularly popular. A graveyard appeared beside the traverser, and pumpkins had sprouted at various locations around the track, adding to the spooky atmosphere.



2970 heading past the graveyard. Photo: Henderson

Brian Hawke brought along Maidstone's Tr107, which performed really well hauling passengers. The EC and 2970 also took turns carrying passengers throughout the evening.

All up, we carried more than 380 people during the event, making it a fantastic evening for the club and a great fundraiser. A big thank you to everyone who helped with the setup, decorations, trains and running of the event, as well as everyone who came along to support us.

It was great to see so many people enjoying the trains, and we're already looking forward to the next event!



The Seaview Fire Station team, our scarry raised track driver and 2970 running passenger services. Photo: Calcott



The Petone beach graveyard. Photo: Calcott



The pumpkins were sprouting everwhere. Photo: Bjerre



Brian Hawke with Maidstones Tr107 hauling passengers during one of the quiet periods. Photo: Calcott

Rail Ex

RailEx was held on 21 and 22 November and was once again a great event, bringing together an impressive collection of model railway layouts and displays.

Congratulations to the RailEx organising clubs and the RailEx committee for another successful show. A huge amount of work goes on behind the scenes each year to bring the event together, and they consistently deliver an excellent variety of layouts for visitors to enjoy.

The HVMES display featured a great selection of models brought along by members. There was plenty of interest from visitors, particularly in our upcoming Christmas Run. It was great to see so much interest in the display, with the running engines proving particularly popular with the public.





Some photos of the HVMES display with a good variety of models on display. The public seemed to enjoy the display, and the running engines were well received. Photos: Calcott

Join us for our 50th Birthday bash

Saturday 23rd and Sunday24th January
Marriner Reserve Railway, Palmerston North.

Yes the Palmerston North Model Engineering Club Inc is Fifty years old in 2027





This will be a non public passenger hauling event, just a relaxing weekend messing around with miniature locomotives (3.5"-5"-7.25"- Traction Engines) at our Marriner Reserve. A small registration fee ($15) to cover Saturday Night Barbeque etc would be appreciated.





RSVP to Stephen Drummond at stephendrumhome@gmail.com with your details, numbers of, loco's etc.

$15.00 to PN Model Engineering Club 06-0996-0831663-00

Name as Ref



SATURDAY 12 DECEMBER

11am – 5pm

Marine Parade, Petone

FREE TRAIN RIDES

Bring a can of food in exchange for a free train ride!

Donations go to the Lower Hutt Food Bank.

Otherwise: $2 per ride • 6-ride ticket $10 (buy 5, get 1 free)

EFTPOS available