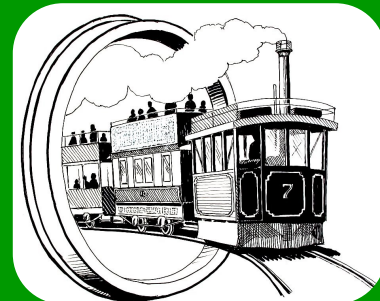


FERRYMEAD

Tram Tracts



The Newsletter of the Tramway Historical Society

Issue 59—September-October 2021



Kitson Boiler Update

Where to for the Bus Shed?

Tram Hunting Revisited—2021 Edition

Bi-Monthly Newsletter of the Tramway Historical Society
Editorial Team: Alastair Cross, Jonathan Day, Dave Hinman, Alan Roi
Contributions welcome. Please send to tracts@ferrymeadtramway.org.nz
All contributions must be received by the first day of each month of publication.

President's Piece—Stephen Taylor



As I am sure most of you are aware, just after the last issue of *Tracts* was sent out, New Zealand went back into Government mandated COVID lockdown again. And for those in the South Island, this has been relaxed from the initial Level 4 lock down to Level 2 where we are currently on 30th September as I write this. So currently, the Society's activities in and

around Ferrymead need to be conducted under Level 2 protocols.

So this has had quite a major impact on the activities of the Society. We have now rescheduled the AGM – originally scheduled for August 25th – for October 27th, based on advice that we can do so without masks. The AGM paperwork and associated Notices of Motion have now been emailed out to most members, and for those who receive their copies of *Tracts* by 'snail mail', yours should arrive (hopefully) with this issue of *Tracts*. We have also had to defer the Society's annual dinner previously planned for 19th September as our planned venue is closed until we are back in level 1.

However, once we got back to Level 2, we were able to re-open the Ferrymead Tramway to operate under Level 2 restrictions – which includes social distancing, etc. on the trams for passengers. The Ferrymead Heritage Park itself is also limited to a maximum of 100 visitors at any one time under current Level 2 restrictions. This has already meant the cancellation of Night Markets and Steam Sundays in September and October, and it is likely that further events (such as the Labour Weekend event, etc.) will be cancelled, deferred or scaled back until we are back in Level 1 or restrictions are decreased by the Government. This will also have an adverse impact on the Society's income, although the full impact of this is not yet fully known.

Also the "Illuminate" event being run at the Park last week and this week has been "rejigged" to

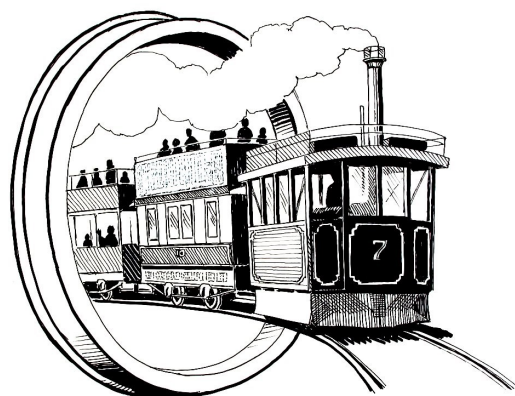
allow attendees to view the event from their cars while driving through the Park rather than being able to walk around and view the exhibits. This has also meant there was no option for the Society to get involved in this event this year.

But, now onto the good news – and there is some. Progress is continuing on three major projects down at the Tram Barn workshops. Don McAra's team of volunteers are back at work, working on Mornington Grip Car 103, Alex Hunter has now got the refurbished boiler tested and installed back on the chassis of the Kitson steam tram, and the HTT teams is back working on the ongoing restoration of Christchurch Hills Car #24.

On the Trolley Bus front, we have had more of our Trolley Bus Poles replaced by Independent Lines – mainly down Truscotts Road and around the Trolley Bus shed – this work being paid for by a grant from the Christchurch City Council last year. And work has continued on tidying up around the Trolley Bus site. We have also obtained a diesel motor to replace the current petrol motor in our Bedford Tower Wagon whose motor is dying.

Regards,

Stephen



From the Editor—Alastair Cross



Welcome to another issue of *Tracts*. I've written enough Editorial pieces over my six years in 'the chair' but as this one is to be my last one, I'll try not to get too carried away.

When I settled into the Editor's chair six years ago, September 2015, Joe Pickering had finally retired (escaped?) from the role after having taken it back up in 2000 for the second time.

Somewhat ironically, since this issue covers September 2021, I guess I could say that I have finished where I started, albeit six years on!

In that six-year timeframe, I have had a lot of help and support from various members; when I first started it was Barry Marchant who sent *Tracts* out to all and sundry—I cannot recall if anyone else was involved so my apologies if I have forgotten anyone!—before Dave Hinman took over when Barry 'retired' with the odd help from Stephen Taylor (who now wears a few hats too many!) and the present-day Editorial team of Alan Roi and Jonathan Day. Thank you gentlemen for your help, support and occasional correction.

Assembling *Tracts* can be a bit of a thankless job as one member has noted—when you get it right there's little thanks, but when mistakes are made there's no end of

criticism! No matter what, the job always gets done in the end and I (sometimes) have fun while doing so. And it's not all sitting in front of a computer screen either—I have in the past gotten out and done stuff for *Tracts* too, such as the hunt for 'Standard' 139 on Kaitorete Spit in January 2017. So far that trip remains the only time Dave Hinman has actually photographed me 'working'; he has indicated he wants to get more photos of me 'working'—and, eventually one day—he will! To be fair he almost caught me once working on Cranmer but by then it was too late, he had already put his camera away...

So, that's it from me. Six years, fifty-nine issues, and a whole lot of knowledge (but none the less wiser for it!)

Welcome Alex Hunter

I'm sure that you will all be wondering by now who the new Editor of *Tracts* will be. I'm delighted to say that none other than our Steam Tram Engineer, Alex Hunter, has expressed an interest in taking on the role.

Thank you Alex for putting your hand up, and welcome to the job. You have the luxury of a great team of supporters. Finally, a word of grateful thanks to our contributors and distributors over the years—too numerous to name but without whom the newsletter simply wouldn't have happened. I am sure you will give Alex the same generous support as you have given me.

(With apologies to Joe—his final words were so well written, I felt they were more appropriate than anything I could have written. Thank you Joe!)

HEALTH AND SAFETY NOTICES

- The "**Workshop**" Risk Register and the "**Plant, Equipment, Tools and Property**" Risk Registers have been reviewed and updated. These are kept at the safety board in Tram Barn 1. Please have a look at these and provide any comment by way of correction, expansion or new addition to Dave Sanders.
- Workshops can be noisy places to work. Remember that while hearing protection PPE is provided it is up to you all individually to take care of you hearing. It is not only long term exposure to loud noise that can cause damage. Hearing damage can come from short exposure time if the noise is loud enough.
- There are a number of equipment items in the Tram Barns that are considered **Essential or Precision** items that we can not afford to have damaged. Only those experienced and competent are permitted to operate these. GWR has a list of these items.
- Use of personal power tools brought to the Tram Barns for your work are your responsibility. These can be safety tested and tagged by making arrangement with Murray Sanders.

Remember – all power tools should be tested and have a current tag applied (the current tag until the end of December 2021 is black/white). Check this before use and inspect the tool for damage that may have occurred since the last test **before use**.

Any out of date or damaged power tools are to be left in the electrical area or brought to the attention of Murray Sanders with a tag describing what is wrong with the equipment.

ANNUAL GENERAL MEETING

Notice is hereby given that
the 52nd Annual Meeting of the Tramway Historical Society Inc
will be held on Wednesday 27 October 2021
commencing at 7.45pm in the Ferrymead Lions Building,
Ferrymead Heritage Park.

The purpose is to review the activities of the Society since the last AGM, to approve the annual accounts for the previous year, to elect the Management Committee, to consider and deal with any Notices of Motion and any General Business. Notices of Motion must be in the hands of the secretary no later than 21 days before the meeting.

At the time this issue of Tracts was published, one Notice of Motion had been received as follows:

"That the Society rationalise the diesel bus and trolley bus collection;

- 1. To remove duplications*
- 2. To retain only vehicles which can be housed under cover*
- 3. To concentrate on upgrading to CoF standard those buses which can earn revenue more than operating expenses, thereby contributing to overall funds with the object of upgrading the visual and heritage standards of our museum and ensuring the long term financial viability of the Society."*

Proposed by Murray Sanders

Seconded by Gary Riggs

At this time the latest guidance we have received suggests that we will be able to conduct the AGM without the need to wear face masks, however attendees will still be required to 'sign in' using either the Government's Covid Tracer app or through a paper register.

COTMA UPDATE

The 2021 conference of the Council of Tramway Museums of Australasia (COTMA) has been cancelled and the Annual General Meeting and the Conference General Meeting were held by Zoom on September 17. Ballarat have advised that they will not now host the conference in 2022 and it will go to MOTAT, but this will not be until 2023. Brisbane has agreed to host the 2025 conference. The officers for the next twelve months are:

Auditor: Hugh Ballment

President: Henry Brittain

Immediate past President: Dave Hinman

Deputy President: Rod Atkins

Secretary: Mal Rowe

Treasurer: Howard Clark

Australian Museum Liaison Officer: Peter Hyde

NZ Museum Liaison Officer: Vincent Chan

Ordinary Board Members

Warren Doubleday

Tony Weston

Roy Winslow

The Liston Transport Heritage Park was granted full membership of COTMA.

AWARDS

The Awards were not presented but will be handed out

in person, if possible, at a later date.

From next year the number of Volunteer Awards will be increased from two to four for each museum.

Dave Hinman

FROM THE BUS TEAM

Motor Bus Fleet: Since the last issue some of our bus team have been busy with a tidy up of some of our vehicles. We have polished up bus 612, cleaned the interior and put it through for a COF. It is now available for charter. We have, in fact, done a couple of jobs for our colleagues in the Otago Heritage Bus Society, bringing in some valuable revenue. Bus 510 is at the Trolleybus Shed and is also receiving attention. 538 is also there and will be worked on next.

Trolleybuses: Dunedin 79 has had a maintenance battery charger fitted by Murray Clark of the P&T Society. This means that the control batteries will be kept charged and also last longer before needing replacement. Dunedin trolleybuses were fitted with alkaline batteries, but we have now replaced them with lead/acid ones. We are hopeful that this will be a real success and we can fit suitable chargers to all our operable buses. When trolleybuses were used in normal service, this was unnecessary but as our buses do not operate on a daily basis the batteries can easily flatten.

Wellington 258 had been sitting outside and was

Notices and News



ABOVE: A recent charter undertaken for the Patterson Pitts Group using Christchurch 612; pickup was from the Christchurch Airport.



ABOVE: Recent work at the Trolleybus Shed; the Canterbury Railway Society loader moves another pallet load of fire bricks into the storage area while Ange levels out the future bus parking area.



ABOVE LEFT: 258 Alive! Wellington 258 lays over at the Truscotts terminus of the trolleybus loop after its first post-repair test run, 15/8/21.

ABOVE RIGHT: Work continues to switch existing overhead fittings from old to new poles around the Trolleybus Shed as work continues on ex-Ashburton Bus Company 38 to prepare its motor for extraction and fitment to the Bedford tower wagon.

All photos this page: Alan Roi.

Notices and News

brought into the shed where an electrical team led by Dave Sanders and Callum Brieske have been servicing and cleaning the control system, and, just before the recent lockdown we were able to complete a circuit of the trolleybus route. We are particularly grateful to Harpreet Singh who was the electrical contractor who maintained these trolleys in service. Mention should also be made of Peter Coventry, shift man at the Kilbirnie Workshops and Gerard Cooper who also helped us with advice.

Trolleybus Overhead: Eagle eyed readers may have noticed that a number of poles have been placed along the roadside. These have been put in by our regular contractors Independent Line Services. These are going to be used to support the overhead on bracket arms, allowing us to raise the overhead and also remove the poles on the park side of the road. The poles in the park are hard to access and maintain. The Independent crew also removed all the old poles in the turning circle.

Site Cleanup: Work is continuing with the site clean up to make the site more visually appealing. For part of the Ferrymead Illuminations event 510 was parked in such a way to hide the pallets of bricks and equipment from view the bus also received lighting effects during the event.

With the help of the stonemason's forklift the bricks and other equipment have now been moved to their proper storage area on the other side of the shed out of view of the general public.

Ange, one of our newer volunteers has shown her skills operating a digger and both she and Philip have begun levelling the area to create a new bus storage area.

We would like to thank CRS and Goldfield Stone for the use of their machinery

Bus Committee: Our bus subcommittee was put into recess some time ago and its role undertaken by the Management Committee. As we are now working on revitalizing the bus operation, we have reconvened our bus committee. Dave Sanders has agreed to convene this and Alan Roi and Jonathan Day are the other members at this stage. Further members may be co-opted as required.

Extra photos of most of the above can be found at:
facebook.com/christchurchtramwaysociety.

AND ON A RELATED NOTE... SOMETHING SHOWED UP!

On 3 October, a bus enthusiast posted a trio of photos on the Historical Buses of New Zealand Facebook page showing the rear of a bus he had found hiding on a private property in Ohoka. That bus was ex CTB 458, one of the three AEC Swifts purchased in the 1970s as the CTB's last order for AEC chassis.

When *On the Move* Volume 8 was being written in 1995,

458 was noted as having served as a pie cart in Latimer Square post-withdrawal in 1989, but that it was "...on the West Coast and believed to be immobile." But 458 later reappeared in Picton in 2016 for sale on TradeMe, and, in lieu of further information, we believe it moved to its current home from there. The discussion also confirmed the location of sister 457, now based in Canvastown as a motor caravan, but could not confirm the whereabouts or status of the third Swift, the unique NZMB-bodied 456.

Although one commentator has noted that the THS does not currently possess a Swift, the lack of covered storage and our focus on getting the existing bus fleet means we would not be interested in purchasing one any time in the foreseeable future. Certainly 458 would, in time, be an attractive option if we were to obtain a Swift, as it was the last AEC chassis to be brought by the CTB, and the last all-new AEC chassis to enter NZ service.

STEAM TRAM UPDATE

Monday 21st June saw the boiler moved over the pit road to allow access into the firebox to enable the beading over of the ordinary firetubes and stay tubes, a rather noisy job as it includes peening them over with an air powered caulking gun, kindly loaned by the Canterbury Railway Society. This was a major step forward. Next up it had the various blanking plates fitted and was filled with water in preparation of a hydraulic test, where it is pumped up to 205psi for approximately 30 minutes.

On Tuesday 17th August, we had a visit from Marcus Stocks from SGS boiler inspectors, to witness the hydraulic test of the boiler. I am pleased to report it passed with flying colors.

The body was removed from the frame, and this has allowed the boiler to be removed, and while it is off, we will degrease the inside of the body and paint it in preparation for refitting.

Then on Friday 24th September, we were fortunate to have Gerard Greenlees of the Diesel Traction Group come along with his Scammel Hiab truck to lift the old boiler off and fit the replacement boiler on the frame. Many thanks to Gerard for doing this for us free of charge.

Since then, we have fitted various fittings which we have had in store, overhauled and ready for their turn to be used again.

The boiler inspector is returning in mid-November to do the live steam test; once this step is passed, we can refit the body and fit the new tongue and groove side boards.

Editor's apology: most of this update was prepared in June 2021 for the July issue of Tracts but never made it into the final newsletter. My sincere apologies to Alex, and my thanks to him for bringing this up to date.



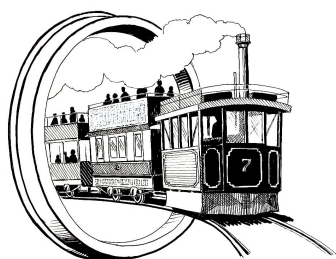
THREE PHOTOS: *From top left:*

- *The firebox tubeplate with all tubes now beaded over*
- *The boiler on the traverser after having ten years' accumulated grinding and welding dust washed out*
- *The tram engine chassis and cab separated in Tram Barn 1 in preparation for the boiler swap.*

Three photos: Alex Hunter.

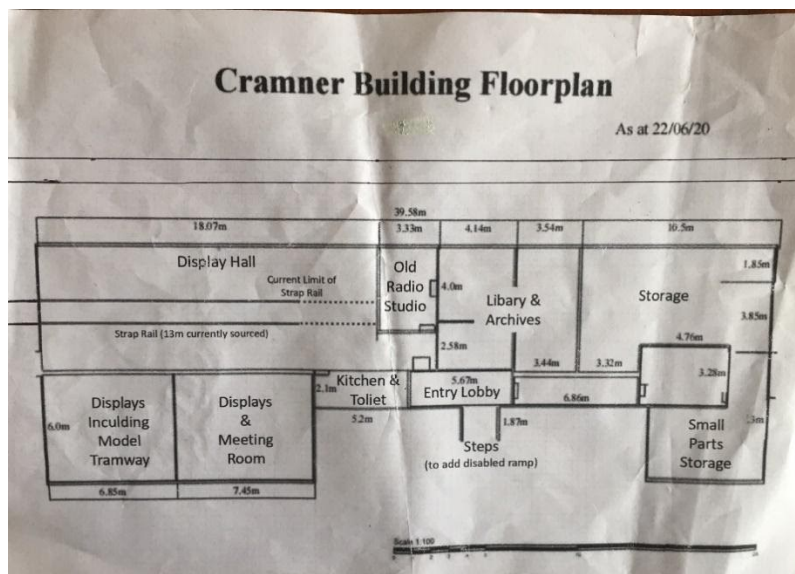
FRONT COVER: *The big swap takes place! Gerard Greenlees' Hiab crane lifts the new boiler into place on the chassis, 24/9/21. Since this photo was taken, Alex and Steve Lea have re-drilled the firebox mounting plates to adapt those on the new boiler to the Kitson's chassis.*

Photo: Alex Hunter.



Cranmer Building

Since the last issue of *Tracts* progress has continued to be made on all parts of the Cranmer building. We requested ideas from members on the ideas that had so far been suggested and a number have been received. We are still interested in hearing from you and here is a floor plan (by Jonathan Day) of the whole of the building for your guidance.



Main Display Hall Area

As shown on the plan, the western end will consist of a main display hall which will feature a tram track down the centre, lowered to the original floor height from when the building had been constructed as a fire museum.

Inside the building we will use old horse tram strap rail. This is because both of the low roof height and its rarity value. We have had this rail in stock for many years and no one can recall where it came from – possibly some very old rail out of the street on the North Beach line. Photos of the rail appeared on p.5 of May *Tracts* and we noted that a further ten metres would be good to have. No one has come back to us offering any more (we would be prepared to pay), but we can survive without. One idea is to use our most

historic and oldest unrestored tram – 1879 Stephenson Double Decker trailer (Canterbury Tramway Company No. unknown - CTB No. 64) as an example of what we have to start with in our restoration projects and photos of 64 also appear on p. 5 of the May issue. This tram does not have any proper wheels, and one possibility under consideration would be to use a set of ex Melbourne (standard gauge) wheels and axles and temporarily attach them to the body, using a mock up (or possibly real) set of Stephenson pedestals. We have the patterns, having made them for trams 10 and 74. The Melbourne wheel sets had been given to us by the Tramway Museum Society of Victoria in 1969 to use on 74 together with genuine, but different pedestals, but they proved unsuitable because the wheelsets had very narrow chilled iron wheels which were worn out and kept derailing. We sent the pedestals back to Melbourne but have had the wheels ever since and while no good for operations will be perfect for static display. We are now reassessing this option as we have since been advised of height restrictions imposed by the doorway and roof trusses which would potentially prevent us from using these wheels.

Finally, along the north side of the display hall there will be room for displays of artefacts, etc., and in what was previously a small storage room, toilet facilities will be added – giving us a disabled access which we currently don't have. Work on replacing the floor and opening up the centre for the tram track has been in progress for some months, mainly by Stephen Taylor, with the latest being to open up and frame around the floor at the west end. This is now mostly complete, however the remaining floor there still needs to be removed, the old fire station doors will be removed and replaced by a modern roller door, wide enough for tram entry to be followed by the putting in of the replacement flooring throughout the display hall area.

Side Annex Display Areas

The side annexes to the main display hall will be used both for the purposes of artefact/plans displays. One will include Barry Marchant's model tramway which will be restored to going order and potentially enlarged, and in the case of the slightly larger annex, will also serve as a room for showing videos, PowerPoint presentations, etc. and as a members' meeting room, replacing except for very large meetings, our present Lions Room Venue for which we have to pay for the use of. There are large glass windows and doors separating the annex from the main hall and this will enable the building to be open with minimal supervision. So far the main activities in these rooms has been the removal of rotten carpet where there has been leakage from the roof, some temporary storage and the setting up of some tables for Barry to use for working on his models.



Cranmer Building

The Library/Archive area

This is the central part of the building, formerly used as reception and by Radio Ferrymead for their two studios, and a small part of their huge collection of records. This will become our future library and archives storage, allowing the present library in Tram Barn 1 to be converted into an expanded meal room and small workshop supervisor's office. Last issue we showed on p.6 how it had been pressed into urgent use following the donation of John Shanks' vast tramway and railway collection and since then more car loads of boxes have arrived. Henry Deer and Dave Hinman continue to be the main (temporary) sorters of the collection. A further important collection has arrived recently - from Alan Williamson, delivered by his son-in-law Graeme Barr who is the great nephew of the late Dave Barr who worked at the CTB until the early 1950s, and in particular is remembered for his demolition of the old tramway power house in Falsgrave Street. Dave Hinman and Bruce Maffei together with Roger Horton, met Graeme on the Saturday afternoon and unloaded his collection into Trailer 202, having spent the morning cleaning it out and making it suitable for temporary archive storage. It had previously been used as a small theatre and meeting room but was no longer needed for that purpose.

Over the last couple of weeks the archives store in the trolleybus shed has been emptied because the space is needed for trolleybus related purposes and those archives have been relocated to one of the side annexes in Cranmer, keeping clear of the wet areas described above. They will stay there until permanent storage is located in either the new library/archive (paper records, books, films etc.), or in the Eastern End Storage Area once that has been completed.

We are not relocating any items from the Tram Barn Library at this stage – that will need to wait until the new space has been appropriately insulated and furnished – and like all other parts of the building requires funding.

Eastern End Storage Area.

This was formerly the workshop space for both the Fire Museum and the Radio Preservation Society and in the days of the RPS was altered considerably by the addition of a mezzanine floor to provide additional workshop space. Unfortunately this has obstructed the full use of the eastern door, originally a wooden fire station door and we have decided to remove it and the rather jerrybuilt mezzanine and replace it with pallet racking. This end of the building has a well built concrete floor which will enable the use of a fork lift. Our heritage electric lift has recently been overhauled by the HTT and will be well suited to the task.

Because of a shortage of workshop space in the tram barns some tram parts and equipment have already been brought to this storage area by the HTT, but in this case in a planned manner – the annex area has already been repaired and a combination of existing shelving and pallet racking used to create this area in its final form. The main workshop area will follow once the old staircase, mezzanine and superfluous walls are removed and this work is now underway, being undertaken on Saturday's by Community Service Workers. We are awaiting the removal of some added sprinkler pipes and this work is imminent. Once this is done new pallet racking can be installed.

Exterior.

Stephen Taylor and Graeme Belworthy have spent some time and effort on commencing weather proofing activities on the building with fixing new roof flashing and replacing roofing nails on the west end and fixing/replacing part of the south wall on the east end. However, more work and expenditure is required on weather proofing, including guttering and storm water drainage (which is currently mostly missing),

We are planning on fundraising to continue these activities and more information will be reported on here as this proceeds.

STOP PRESS—Last Minute Notes

VOLUNTEER AWARDS

Each two years COTMA gives awards to individual members of museums on the recommendation of those museums. Normally these are done in person, but because of COVID-19 this year they were awarded at a Zoom meeting on 20 October. The THS this year has given awards to Larry Day and Brian Andrew (Peanut).

NEIL HOLDER

We are sorry to report that Neil is quite ill, and is currently in Ward B1 at Burwood Hospital. He is likely to

be there for two weeks. His wife Kathleen is keen for him to have visitors. Visiting hours are from 3- 7pm. Call Kathleen on 03 323 7118.

CHRISTCHURCH TRAMWAY EXTENSION

It's been a while since we gave an update. One of the items that been a long time coming has been the point work and we are delighted to report it was finally seen on site ready for installing earlier this week.

Wild Winds Batter Ferrymead!

On Wednesday 13 October, Society President Stephen Taylor received a forwarded email from Ferrymead Heritage Park receptionist Jaimee. The email in question came from a local resident who had noticed some missing sheets of roofing iron from a building across KiwiRail's Main South Line—and that building was our Trolleybus Shed.

Further investigations around Ferrymead soon proved that the Trolleybus Shed roof was not the our only victim of the gale-force winds that day. Tram Barn 1 had lost some new long-run steel sheeting which had been blown off the lean-to section and been bent, possibly beyond repair. Tram Barn 2 had suffered instances of roofing lift, and a number of windows had been smashed.

The fourth and final Society asset to be damaged was AEC Mk IV 290, which had been parked beneath the willow trees beside Tram Barn 3. A branch had broken off and landed on the bus with enough force to smash one of the offside windows. Graeme Richardson quickly obtained some plywood and has now covered over the damaged window to keep the weather, and other unwelcome guests, out.

At least one other Ferrymead group have also suffered wind damage, as Alan Roi notes that the Idea Services building lost both one corner of its verandah and several rose bushes to a second fallen tree branch. Stephen has now lodged an insurance claim for the damages suffered by THS assets, and we hope that most, if not all, of the repair costs will be suitably covered by this.

ABOVE RIGHT TOP: *At least three sheets of roofing iron were torn off the Trolleybus Shed during the winds; the damage is more clearly visible from nearly directly below (**middle top**)*

LEFT: *Mk IV 290 showing the repairs carried out by Graeme Richardson to keep it weather and visitor proof.*

BELOW RIGHT: *The high winds were accompanied by heavy rain, which flooded part of the ring road around the Trolleybus Shed. Thankfully none of the buses shown were damaged or at risk of damage, although it has been noted that rainwater did penetrate through the bottom of Bristol Hess 538's door seals.*

All photos: Alan Roi.



Revisiting... the Bus Shed



The Society has for many years planned to erect the much needed new bus shed on our land located between Bridle Path Road and the back of Tram Barn 1. Draft plans were prepared by the late John Atkinson and a resource consent was granted by the Council. That consent requires extensive earthworks, including the removal of contaminated fill. Even including removal of vegetation by THS members, already done once and now overgrown again, will be an expensive exercise estimated several years ago to cost up to \$10,000. The building kitset itself, with a floor area of 520m² was expected to cost approximately \$100,000, not including the cost of excavation, pouring a floor slab, provision of services and final fit-out. Because of

these costs, the project has proceeded no further, and the acquisition of the Cranmer Building has diverted both labour and fundraising to that project.

Recently members came up with another idea for siting the bus shed - the grassed area inside the ring road between Tram Barn 1 and Cranmer. This has a number of advantages over the current site:

- It is not contaminated and can be readily cleared of the existing bus fleet and one large bluegum tree which is dangerous and overdue for removal.
- It is flat and can accommodate a standard wide-span type building (like Tram Barn 3), rather than the specific design required for the current site.
- It is easily accessible to building contractors, and would also be easy for volunteer labor to build the foundations as we did for Tram Barn 3.
- This configuration allows for between twelve and fifteen buses, compared to the maximum of eight buses on the current site.
- It would be easier to provide services - with power, water, including a fire sprinkler system, drainage and sewer.

There are some disadvantages also. These include:

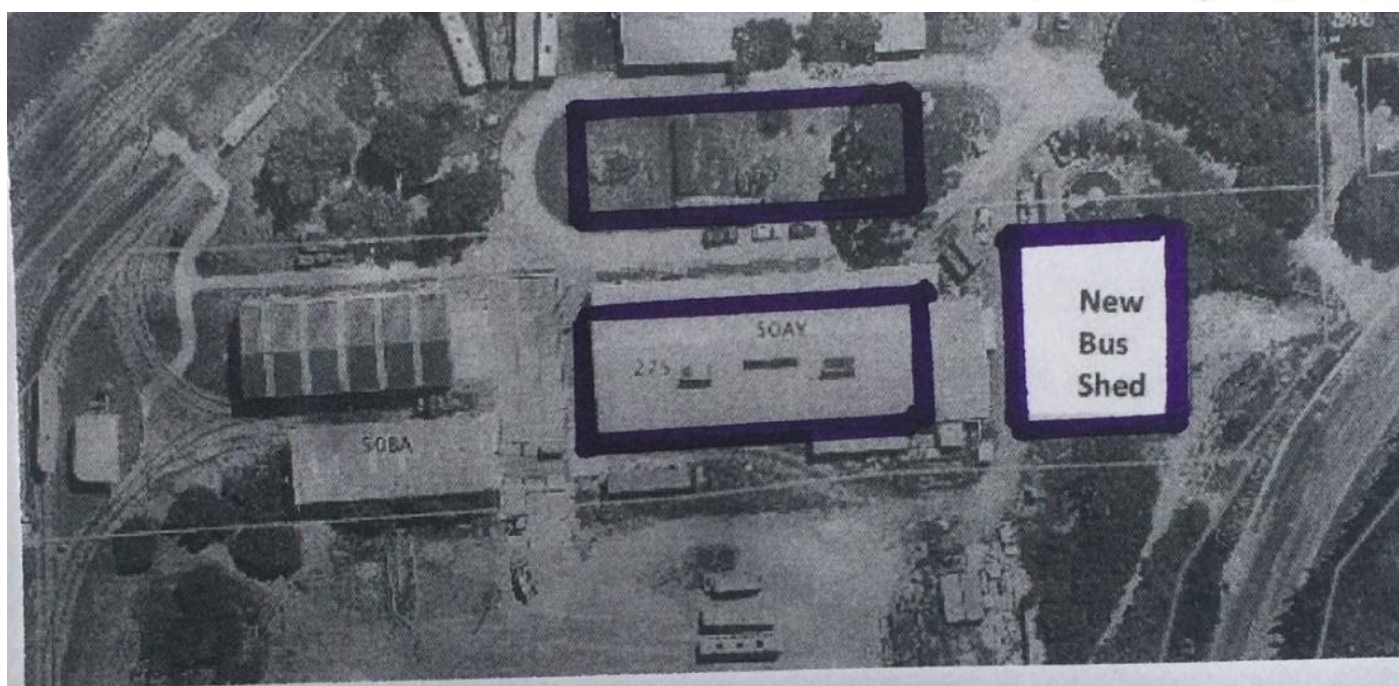
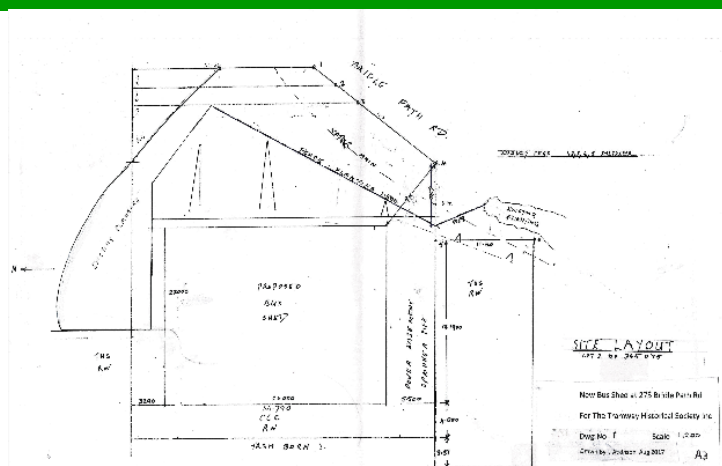
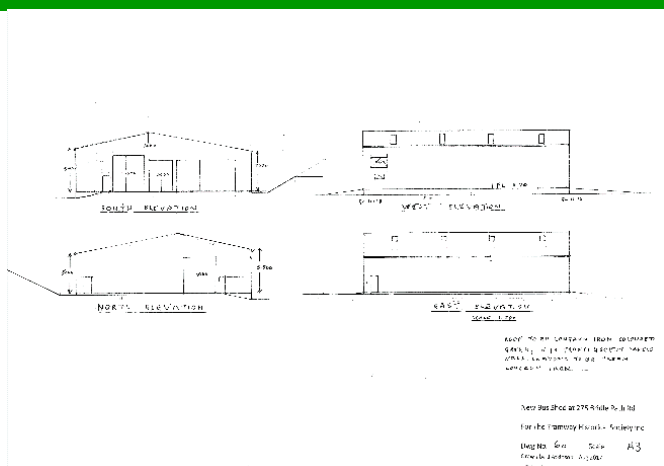
- The Society does not currently own most of the land and there would be costs to purchase from the Council.
- There would be legal costs for transferring the land to the Society.
- There would be a loss of green space between Tram Barn 1 and the Cranmer Building.
- We would also need to obtain a further resource consent and geotechnical report for the new site.

These disadvantages should be relatively easy to overcome because:

- The Society already has a ten-year lease with further rights of renewal on the land occupied by the Cranmer Building which extends to cover most of the ring road area and the cost of this is not excessive.
- There is plenty of green space remaining to the east and west of the Cranmer Building, and the grassed area between Cranmer and Tram Barn 1 is no longer green space – it has been covered with buses for years.
- This area is to all intents and purposes part of Ferrymead Heritage Park with the only public access being for pedestrians and cyclists who are free to pass through this part of the Ferrymead site at any time. The Council has previously indicated it has no real interest in the site as a Council reserve.

The Management Committee has approved investigating this option to assess its feasibility. We would be interested in hearing what you think about the idea.

Dave Hinman



Approximate comparisons with Tram Barn 1

Tram barn 1 (original size) 45m x 15m x 15m = 1350m²

Interior of ring road 45m x 16m approx. = 720m²

Current proposed bus barn – 22m x 26m = 572m²

TRAM DRIVING TIPS WITH DAVID JONES

ATTENTION ALL MEMBERS AND STAFF WORKING IN TRAM BARN 1.

When turning the pole on single pole trams inside Tram Barn 1, tram crews must check that the red painted area on the floor alongside the tram is completely clear. There must be **NO** storage or intrusion of any kind in this space. This is a serious safety issue for the protection of tram crews as they need to concentrate on the pole traversing above their heads to ensure it does not collide with the building structure and cause damage. Any intrusion into this clearly marked floor space must be reported immediately to the Safety Case Manager on 027 840 0340 or at jonathan@dayj.co.nz and noted on the Running Sheet. A "KEEP CLEAR" sign has been painted over the red area on the floor

More Tram Hunting

As part of the research for Graham Stewart's new (and last!) book Bruce Maffei, Henry Deer and Dave Hinman, went looking for the last trams still believed to be in the wild. Some of these we hadn't seen since 1967, another since the 1990s and one in the early 2000s. We used the old tram hunting books which Murray Sanders had begun in 1967 and which had been updated over the years as our base.

The first was a former Stephenson double-decker body, one of the first nine trailers built in 1879 for the former Canterbury Tramway Co. Neither its company nor CTB numbers are known. We first found it on 19 July 2010, in a small curios and collectables shop called the Little Blue Kiwi in Tuam Street, almost opposite the then CCC offices. It was owned by a guy called Chris, who had started restoring it. He has been to Ferry Road several times seeking info. about Stephenson and double-deckers generally. After the February 2011 earthquake the building was condemned and Chris was very lucky to get the tram out – undamaged - we think he had to bribe a contractor with beer! We lost track of Chris for a while and then he and the tram turned up at Chaos Collections in Ferry Road - basically an old house with a shed and a workshop out the back – which is where the tram is. Chris has been rather busy trying to get the business back on its feet, and has not done much more with the tram in recent times - it does have some new undercoat and a new cover, but he intends to eventually complete its restoration. The attached photos show it as first found by Chris, in store at its former Tuam Street home, being extracted in 2011 and its current state at Ferry Road.



More Tram Hunting

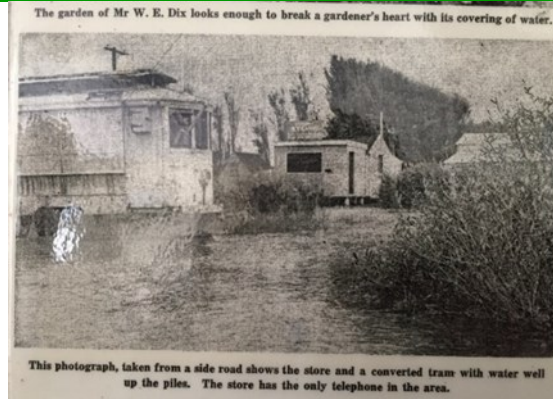
The second was another double decker body, this time a Boon & Stephens, which had originally been found at Pines Beach by Barry Marchant in 1996 and positively identified as CTB 97, a former City & Suburban Tramway Company trailer. Some Society members had revisited this trailer in November 2010, but we had not been back since and were not sure if it has survived the February 2011 and later earthquakes. There were tall buildings (two-storey holiday homes) very nearby and there could have been liquefaction. We had always intended to go back but never got around to it.

We found details of CTB 97 in our tram bodies photo books, including photos, drawings and a street address. There was even a phone number - a land line, but it no longer worked. Our memory of it was that it had been hard to find, because it was hidden behind other much more recent buildings, but thanks to Mr. Google we were guided all the way to the site. We found a rather battered letter box, walked up a driveway and there between some buildings and exactly as we remembered it, was the trailer body. But no one was at home at any of the surrounding houses, even though none of them were locked - perhaps due to the fact that a couple of large and fierce looking dogs were roaming the site. So we did not enter and look inside the tram, but the end apron with 97 on it was still planted in the garden. We are still interested in obtaining this tram in the future as it is a good example of a Boon & Stevens-built tramcar as well as being an example of a C&STCo. tram, a company which we do not currently have a representative vehicle from in our collection. The photos below show it as it was in 2010, and as we found it in the present day.



The third was Boon 47 at South Rakaia Huts. We had first found this tram on 3 June 1967, but had recorded no other details than that it was at the "Rakaia Huts". At that time there were no streets (legal or otherwise) marked out as such and we didn't realize then there were also huts on the north side of the Rakaia with a 50km journey in between. Bruce had seen the tram about 20 years ago but hadn't been back since, and a couple of years ago Christchurch Tramway Ltd. expressed interest in a second Boon. To our knowledge the only known survivors were N^o 6 at Yaldhurst, and possibly this one - N^o 47, last of the Mark I Boons. One of our recently joined THS members (Richard Holland, ex owner of Brill 194!) has a hut at Rakaia Huts but when he was there last year he couldn't find it. It turned out that his hut was at *North* Rakaia Huts! So there was still a chance that it might exist.

More Tram Hunting

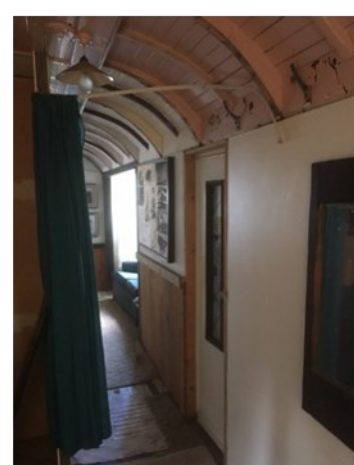
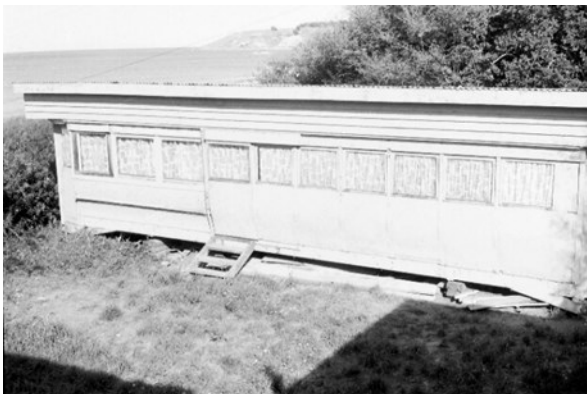


When we arrived we found a beautifully laid out settlement with all properties having street numbers. We were just about to start hunting around when along came the very friendly caretaker on his four-wheel bike, and full of information about all the huts and residences and their owners. He was able to take us directly to the tram, and later to the local little museum which among its photos showed 47 at earlier stages of its evolution. Today it is beautifully restored, is called DUN -TRAM - INN and its owner, Noel Muckle lives locally. Bruce is still trying to locate him as we would like to see inside the tram as Johnny didn't have a key.

The fourth was Hills Car 168 which we last saw in 1967, but we know it still exists as Charlie Dickson, an ex-Christchurch City Council colleague of Dave has a bach nearby and is up there most weekends. Charlie brought back some photos of it and these show how nicely it has been converted into a holiday home since first going to Gore Bay.

These photos have now been sent on to Graham Stewart and a number of them will appear in his new book.

Bruce Maffei & Dave Hinman



Improved Bearing Casting

I am now working on fitting the new wheel sets manufactured for us by A & G Price Ltd, Thames, New Zealand. The wheel sets have come out well, as would be expected, with plenty of assistance with the design and specifications, from A & G Price, to come up with a design that could be made in NZ and would be up to the task. With over 100 years of experience with this type of product, this is what you would expect to get, from a company like A & G Price Ltd.



The wheel bearing assemblies were the first major mechanical component for the Mornington 103 cable car restoration. As with all the major mechanical assemblies, we have started with little technical detail as regards to the design of the original. Our starting point is a few old black and white photographs, one or two details found in the odd line of print in books written about these examples of Victorian and Edwardian era technology, along with a bit of engineering and mechanical design theory.



An initial design was developed from old photographs and the 3D models of the parts were sent to a pattern-maker. These were used to produce basic patterns for the parts that were to be cast. For the parts that were cast from SG iron, the top casting and the part that is the casting that the rubber shock pad is sandwiched between, these being simple, have worked out well. It is a different story for the bronze bearing casting. This part, as we are making it, is a good example of not understanding this component as well as we should have at the start. The bearing castings as cast will work, and do the task they have been designed for, but require way too much machining to be completed. This machining has been performed by me, with no cost for my time, and some by the workshop staff engineer Bob.

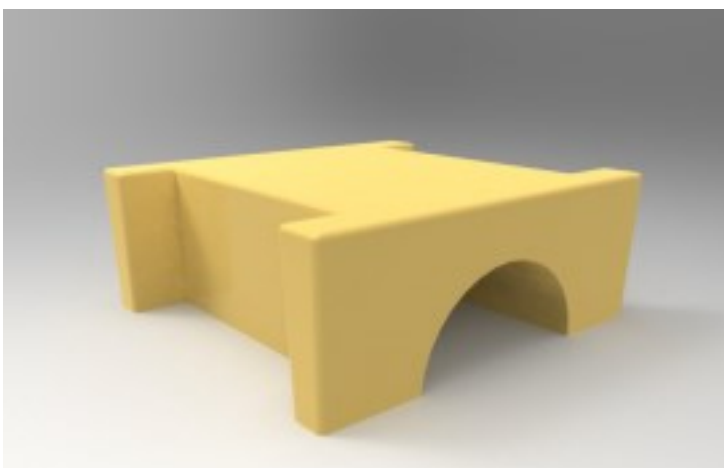
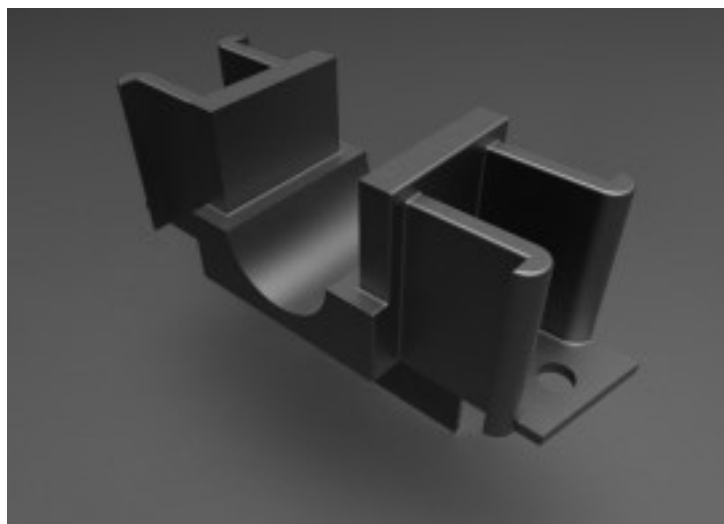
This probably doesn't really matter, there being much work to be done on this restoration project, and it is not really affecting the overall task of putting Mornington 103 back together.

When this machining time will become a nuisance will be if Mornington 103 gets to be run again. The wheel bearings will be the part of the bearing assembly that will wear the most, so making these a cheaper item to reproduce would be an improvement.

Even though these parts are being finished at this time, I think revisiting the design and construction of the wheel sets and bearing assemblies will be a useful exercise. We will just look at a way to improve the actual cast bearing brasses, mainly the patterns and casting method. After looking through an old foundry textbook, from 1902, I also came across common practices when making cast wheels. From the old photographs of the original wheels, I suspect these were made from chilled cast iron rather than the cast steel the replacements have been made from. The curved spokes these originals have is a requirement when this type of casting is produced in cast iron. The curved spokes help reduce the stress concentration that can build up as the casting cools. Cast iron is a brittle material, steel is a more ductile material, so the curved spokes are not required. The image, here (*shown overleaf*), is a rendered image generated from the 3D cad model.

Improved Bearing Casting

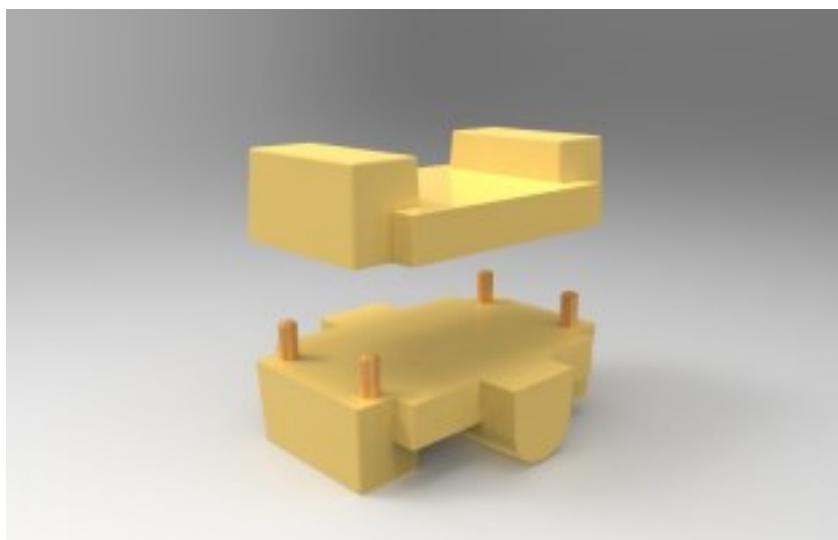
Although this model is a good representation of the existing castings, fixed to the chassis frame, the most important detail, looking at the existing castings, is that there are no machined faces where the bearing shells are located, and move up and down. These are, as cast, not machined faces. This detail probably was not taken notice of as much as it should have been. As these are just cast faces the original bearing was a loose fit. How loose, is anyone's guess. The first pattern made from my 3D CAD model was quite a loose fit. When the parts were cast this pattern was not used. The tram barn foreman made another pattern which had a generous allowance for machining, and this was used for the castings. The original was quite a loose fit, though if packing shims had been used on assembly, this might have proved to be a good way to adjust the wheel alignment. The original pattern possibly may have been too loose a fit, but there is definitely too much machining on the pattern used. Also due to the taper designed into the original pattern to allow for the wood pattern to be withdrawn from the sand mould, the locating faces in the bearing casting needed to be quite tapered. This taper possibly would have been a problem.



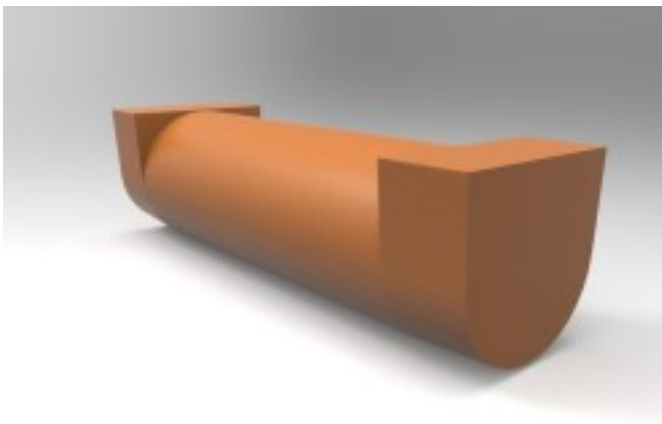
The original wooden pattern

Now the actual specifications for the required pattern are starting to sort themselves out. Firstly, for reasons considering the nature of the mating faces, and secondly, for the cost of the labour input required, we want to eliminate most of this machining. For good functioning in service the only faces that need to be machined are the thrust faces each end of the bearing, and the radial face that runs on the axle. As the faces that fit against the existing bottom casting are running against are, as-cast, and not machined faces, these are only required to be as-cast faces as well. It is preferable that these be square and parallel, that is, have no taper. Going back to the 1970's and 1980's when I was learning my trade and working on an NZCE

qualification, we learned a little about casting. Also in the 1980's I worked in the production office at NZR Hillside Workshops. I was not involved in designing cast parts, just getting the paperwork and organizing their manufacture, but did get to see the way good castings were produced. If we use cores in our sand mould, we can achieve a better accuracy of these cast faces, also eliminating the taper on these as-cast faces. The new pattern is more complicated than the original, and it will also require core boxes to be made. It could be made on a CNC machine, as were the original patterns, but is still simple enough to be made by hand, using standard woodworking tools and machinery. If replacement bearings are required, the savings in machining time would make this a worthwhile improvement to making replacement parts. This pattern will need to be of the split type with three cores required, but only two core boxes, as



Improved Bearing Casting

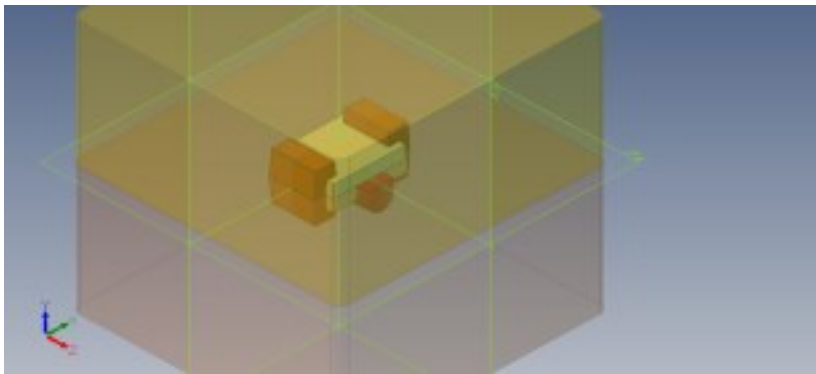


Type 1 core—one required



Type 2 core—two required

two of the cores will be identical. Here (*bottom of previous page*) is a basic model of a possible casting setup. The casting, in this image, is the yellow block. The recesses, in each side locate the type 2 cores.



The type 1 core in the bottom casting forms the rough bore that will be machined to fit where the bearing fits the axle bearing surface. Back in the 1980's, before our modern computer-based technology became the tool it is today, getting castings and their patterns made was a different process. A paper drawing would be produced, and a skilled pattern-maker would become involved. A pattern-maker was a well-qualified and

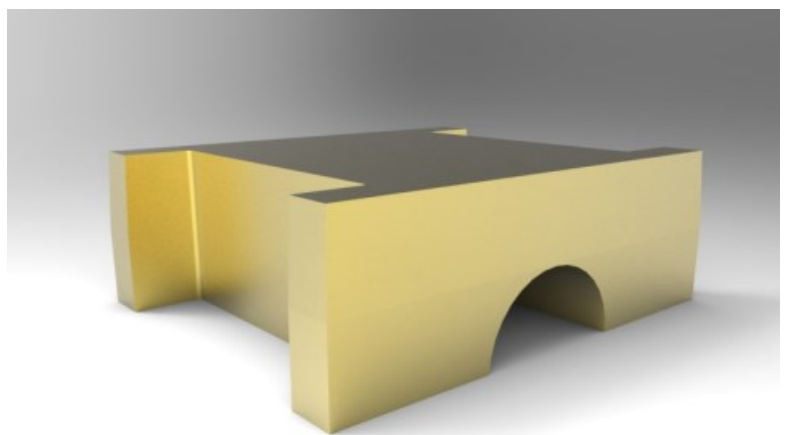
experienced tradesperson. Pattern-makers not only had the skill to make the actual pattern, but also understood the whole casting process and would, just from the drawing, work out and design the complete moulding and casting process. My experience with getting these parts, designed and cast makes me think that this may no longer be the case, as the local pattern-maker just took the 3D model I produced and used this to produce a wooden replica on a CNC machine. With simple parts like these, though the best way to cast these parts might not happen, a lot of machining time for just 4 off doesn't make too much difference.

With the more complex and expensive wheel castings, working with a company such as A & G Price, is the better way to go, as from the drawings, they designed and made the pattern, worked out the entire casing process. Designing a system to produce sound, usable cast steel wheels is a job for the professionals.

Going through an old "Modern Engineering Foundry Practice" textbook, from 1903, has been an interesting read, in the context of making parts for a machine from the same era. It may now be 2021, but the information in old textbooks like this still applies today.

Lawrie Cooper

Tracts would like to thank Lawrie for his time in putting together not only this article but the CAD images that were provided as well.



A Gruesome Tale...

Editor's advisory: If you are reading this before having something to eat, we advise caution. You may find that your appetite is ruined, just as Don's was.

As a pupil in 1950 at Macandrew Intermediate in Forbury, South Dunedin, each day I would travel from the hill suburb of Roslyn by bus and tram to what was then an outstanding school. The return trip was by electric tram to the Exchange area, and from there up to Roslyn by cable car. That line was on its last legs then, running only between 10 a.m. and 8.p.m.

The trams running from St. Clair through Forbury to the city were mainly Sydney Bogies, long, drop centre cars. It was my habit to stand in the leading cabin, looking through the bulkhead window into the motorman's compartment, watching everything he did with the controller to negotiate curves and leading points in the track. So it was that one day I witnessed a particularly unpleasant event. I do not remember the number of the Sydney Bogie I was riding.

We crested the hill which led down into the Exchange area, and were set to pull up beside the pedestrian zone just below the Post Office. The tram was coasting and lightly braking ready to stop. Suddenly from my vantage point I saw a stumbling figure lurch into the leading right hand corner of the tram, and then fall to the ground beside it.

The motorman sprang into action furiously spinning the brake wheel to his right. Dunedin trams were never fitted with airbrakes, and with the rheostatic brake not working since the motorman had cut off power, the Motorman had to rely on the wheel brakes. Even though the car was moving only slowly it took at least another ten feet to actually stop.

The motorman jumped out, took one look under the front bogie and ran around the tram yelling for everyone to get out. Get out!! But the damage had been done; lightening the tram's load achieved nothing. When I got out I foolishly went around to have a look.

When he had been knocked down the drunk man had not been caught by the lifesaver. Instead his legs shot under just in front of the maximum traction bogie's drive wheel, which severed one leg at the calf, and the other at the ankle. I had an eye-ful of a foot in a shoe.

I did not manage to eat any dinner that night. The victim did not survive.

Don McAra



TWO PHOTOS: Back in the present day and slightly more palatable, Don and his team have recently restored this bell for Mornington grip tram 103. In later years these bells with their distinctive tones were painted all over, ostensibly to prevent verdigris.

Both these images were received in time for our previous issue of Tracts but did not make it to publication at that time. Both photos: Don McAra.



FRONZ 2021

The 2021 Federation of Rail Organizations of New Zealand (FRONZ) Conference was held in Gisborne over Queens Birthday Weekend and hosted by Gisborne City Vintage Rail.



THS and CTL attendees: Dave & Dot Hinman, Steve & Lois Lea, Alan Roi, David Maciulaitis and Alex Hunter

On the way to the conference Dave and Steve, together with Dot and Lois, visited Graham Stewart, Peter Rendall, the Wellington Tramway Museum (where they found some spares for New Plymouth trolleybus 3 and stopped for lunch, *left*), and John and Pauline Smith, former operations manager of Christchurch Tramway Ltd. They also travelled via Foxton and viewed the trolley buses and the De Molen flour mill.

At Gracefield Peter Rendall found some useful electronic parts for trolley bus 258.

Graham Stewart was finalising his last book on trams in New Zealand and Dave spent some time with him working on this.

The conference was held in Gisborne at the Emerald Hotel on the 4-7 June 2021, with more than 80 members and delegates, observers and partners attending. Saturday consisted of workshops. The keynote speaker was the Turangi Ki Wairoa Rail Feasibility Group, updating the conference on the possibilities of repairing and reopening the Wairoa to Gisborne section of the Palmerston North Gisborne Line.

Other speakers were from NZTA, KiwiRail, Mike Anderson on the FRONZ Heritage Technical Committee, an update on the NZ Rail Heritage Trust by Murray King, followed by a Tramways update by Dave Hinman. It concluded with a video of members' activities over the last two years by Lindsay Benbrook. Three breakout groups followed, including tramway operators, and at the tramway operators meeting Dave Hinman retired from the Convenorship. Henry Brittan has succeeded him. Saturday evening was free.

On Sunday morning the AGM was held. On Sunday afternoon we all enjoyed a ride to Muriwai and back on the Gisborne City Vintage Rail train hauled by their unique steam locomotive W^A 165. They have a great set up having taken over the former engine shed and workshop area. Muriwai is 18kms from Gisborne and famously the line passes over the Gisborne Airport runway.

Sunday night was the Awards Dinner and Steve Lea, as one of the instigators (together with Christchurch Tramway Limited management and the Sydney Tramway Museum), accepted the Tramway Award for the Re-Restoration of Restaurant Tram 411, a combined effort by HTT, CTL and THS.

On Monday we went to the East Coast Museum of Technology, located at Makaraka on the former Moutohora branch line. A wonderful morning tea was put on for us and afterwards we could wander at will through their numerous sheds and buildings, which were filled with wonderous things, including some former relics from the former Gisborne Corporation Tramways.

Next year we will be meeting in Invercargill where the host group is the Waimea Plains Railway. It will be held from

TWO PHOTOS: W^A 165 and its train await departure from the Gisborne station, 6/6/21. The station building has seen better days, but is still standing. Both photos: Dave Hinman.



FRONZ 2021



Friday 3 to Monday 6 June.

Following this Dave, Steve, Lois and Dot travelled north up the East Coast visiting Tolaga Bay to see the wharf with the rail line on it, then through Tokomaru Bay and on to Te Puia Springs where we had accommodation booked at an old hotel. Unfortunately for us the hotel was basically closed, no meals and nowhere to cook any. Food could be purchased at the petrol station across the road, and before their closing time of 5pm. The hotel lounge had no heating so was very cold. We were the only people staying the first night, but there was one other staying the next night. The hot springs were rather run down but it was nice to soak in the hot thermal water. Unfortunately Dave had a medical mishap and had to be ambulated back to Gisborne in the middle of the night putting an end to our travels around the East Cape. Steve and Lois carried on once Dave and Dot flew back to Christchurch.

Dave Hinman



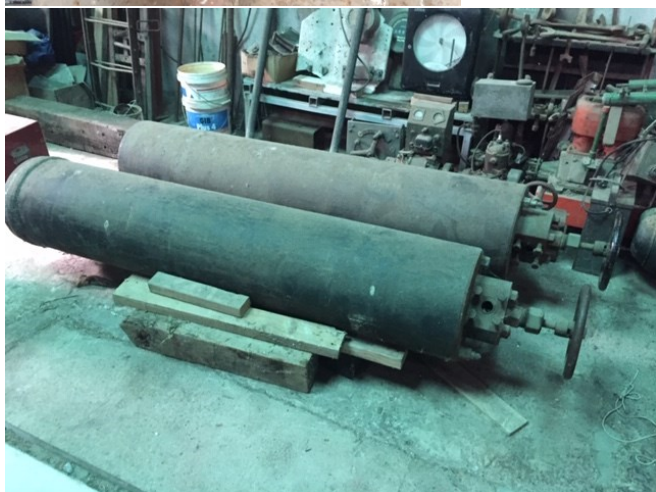
TOP LEFT: Steve Lea accepts the FRONZ Tramway Award on Sunday night for Restaurant Tram 411 with Dave Hinman and Alex Hunter, 6/6/21.

TOP RIGHT: Delegates are welcomed to the grounds of the East Coast Museum of Technology, 7/6/21. In the background is the ex-Matawhero Railway Station building from the Palmerston North-Gisborne Line.

BELOW LEFT: Among the relics at the ECMT, Dave noted these two large cylinders, once a part of the battery-charging equipment mounted in the Gisborne Corporation Tramways power house in Carnarvon Street. Also noted **(left)** was a handbrake stem from one of the four battery-electric tramcars.

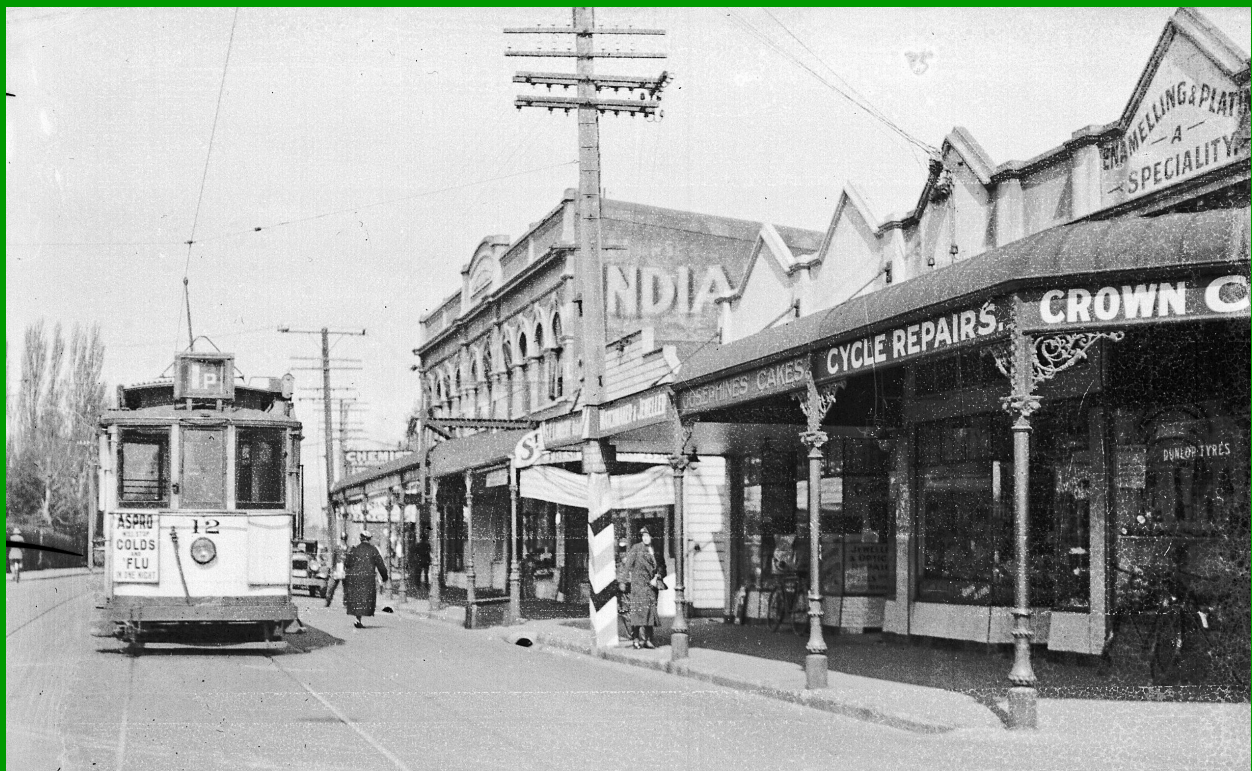
BELOW RIGHT: Journey's end. Following his medical incident, Dave—still in good spirits—prepares to fly back to Christchurch from Gisborne while Steve Lea sorts out the Hinman's luggage.

All photos: Dave Hinman.





A CHRISTCHURCH TRAMWAY MISCELLANY



TOP: A CTB tower wagon at work in front of the Dalgety's building in Cathedral Square, sometime in the 1930s. The site is now occupied by the new Spark Building; note also the trolleybus wires at top left.

BOTTOM: 'Yank' 12 on a Papanui service runs down Colombo Street inbound, passing through what is believed to be the Beckenham shops.

Both photos: Ferrymead Photographic Society, courtesy Mick Braithwaite