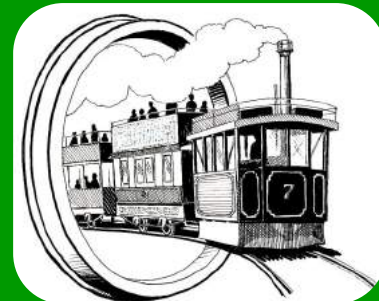


FERRYMEAD

Tram Tracts



The Journal of the Tramway Historical Society

Issue 16—July 2017



Laurence Cooper Presents... Restoration and CAD Tools

Using new technology to help restore a 114-year old cable car

More Riccarton Road Relics

Another piece of the trap point mechanism surfaces

Trolleybus Farewell Tour 2017

Come and farewell the last New Zealand trolleybus network this August!

President's Piece—Graeme Belworthy



Hi All,

I was a bit disappointed at the low turnout for the June General Meeting. We covered several topics including a report from the recent FRONZ Conference held in Dunedin over Queens birthday weekend, an update on tram related relics found in Riccarton Road during recent drainage work, Don McAra reported on the progress on the proposed cable tram instal-

lation for Dunedin and there were updates on the Diesel Bus Barn project and on Yank 12 which is now just a chassis. The Management Committee has also reconfirmed the original decision not to varnish the interior of Hills car 24 in line with the vote at the previous General Meeting. These meetings are an ideal opportunity for members to ask questions on any subject or raise any issues they may have. It is our intention to have a General Meeting every month, February to November inclusive, on the 3rd Wednesday.

Progress on the Diesel Bus Barn has included starting moving some services and preparing the ground for the fence on the Bridle Path Road boundary which should be done in the 1st week of July. The fence needs to be completed before any of the major earthworks are started as the site would then be open to the public. A Resource Consent Application is currently with the City Council. We can finally see some physical work happening after

all the behind the scenes work John Atkinson has been doing.

Cleaning up around the site is continuing with the coke container moved to the main carpark beside the south west corner of Tram Barn 2 and the new sleepers are stacked next to Tram Barn 3. The concrete bases that were for the telephone boxes have been removed and returned to the P & T Society. The ground in this area will be leveled and where necessary grass will be sown and made more user friendly for our visitors.

David Jones is busy training up several new drivers. Congratulations to Neville Armstrong who has just passed his test and is now on the roster. Thanks to the efforts of John Harris the tram driving roster for the school holidays is now full. Thank you to all who have offered their time to come down and drive the trams, this is greatly appreciated not only by Park visitors but our Society as a whole.

The usual repairs and maintenance continues including the installation of the windows in bus 538. This sort of work is what keeps the Society operating and is unseen by the public. We are always looking for people willing to help and there are tasks suitable for everyone regardless of their ability or experience. If you would like to help just make yourself known to someone at the Tram Barn.

Please mark in your calendar 16 August for the Society AGM. More details elsewhere in Tracts.

Cheers,

Graeme

Alastair's Angle—Alastair Cross



Welcome to another issue of *Tracts*. It may be cold outside and the school holidays may be upon us once again, but it's still business as usual at Ferrymead. For those wanting a change of scene, we have received notice of a planned trolleybus tour around what little is left of Wellington's trolleybus network before it is scheduled to close later this year. The trip is being organised by the Omnibus Society and offers to cover all wired routes—aboard a trolleybus, naturally. Please refer to the advert on p. 6 for more information.

Work has continued apace on 'Yank' 12 and 'Hills' 24 back at Ferrymead, with work on the former halted for the time being until further funding can be raised by its owners, the Sydney Tramway Museum. Due to space constraints, we can't show everything that has been

done to date, but we have received an image of the not-dissimilar Sydney G-class cars from the STM. But are the two types related? Well, possibly. I won't say any more than that!

We are now just six months out from yet another major milestone in the Society's history—fifty years since tram operation commenced at Ferrymead. Nothing has been planned as of yet, but we're looking for help to plan out what could—and will—be done for this occasion. Please refer to the notice on page 3 for more details. We'd love to hear your suggestions for celebratory events!

Next month, we plan to bring you our FRONZ coverage, including Dave Hinman's award for heritage tramway advocacy. Well done Dave, it's a well-deserved award.

Well, that's about all from me this time. Until next month!

Cheers,

Alastair

Notices

July 2017 GENERAL MEETING

When: Wednesday 19 July 2017

Where: Lions Building (Entry from Gate A, Ferrymead Park Drive)

Time: 7:30pm

What: Vincent Chan will be educating and entertaining us with a night of delving into archival treasures - colour film from the last years and days of the Auckland tramway system, signalling at the Queen St and Wellesley St Grand Union from the Ian W. Stewart Collection, drawings from around the country from the Public Works Department Archives, Hocken Library, Dunedin and Wellington City Council Archives, plus an update on the restoration of Auckland 1930 Class car 235. This is going to be another really interesting and informative evening. So please make the effort to come, enjoy and be educated!

Cost: \$2.00 per person for supper

ANNUAL GENERAL MEETING 2017

NOTICE IS HEREBY GIVEN that the Annual General Meeting of the Society will be held on **Wednesday 16 August 2017** at **7.45pm** in the **Ferrymead Lions Building**.

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 (these must be in the hands of the Secretary no later than 21 days before the meeting).

Supper will be provided.

New members

This month we welcome new member **Rata Ingram** to the Society. Rata has already been working in the Tram Barn for a short time, and as noted last month, she is now also training to become a motorman/woman.

Advance Notice — FERRYMEAD TRAMWAY 50

Saturday 6 January 2018 marks 50 years to the day since the official commencement of tramway operation at what would later become the Ferrymead Heritage Park. The Society has formed a Subcommittee to plan the celebrations for this anniversary.

If you have any suggestions for Ferrymead Tramway 50, or would like to help the Subcommittee plan the event, please email secretary@ferrymeadtramway.org.nz.



Trams 11, 178 and 15 stored in Cathedral Junction overnight during a period of works in and around the Tram Shed. See overleaf for more. Photo: Dave Hinman

Tram Driving Tips with David Jones

When approaching Ferrymead Village at Church Corner motormen are reminded to exercise caution, travel slowly and ring the gong. The corner is tight, vision is limited and there may be a tram parked at the platform or people in the vicinity of the tram tracks.

News in Brief

Diesel Bus Shed

As noted in the President's piece, this project is making progress, with a resource consent application being discussed with CCC staff, boundary fencing agreed with the Council, and now some physical works on site. Dave Hinman took a selection of photos on Saturday 24 June, when the Society hired a small digger and relocated an existing telephone line as well as breaking up some of the old seal where the fence will be going. Large rocks were relocated to prevent unauthorised vehicle access, and a start was made in cleaning up the area vacated by the old tea kiosk, which has now been relocated to the Ferrymead township.

Christchurch Tramway Update

As reported to attendees at our June General Meeting, while it might be a quiet time of year, there have been some interesting goings on in town. These included a few days (12-14 June) of short running on the original Armagh Loop to allow for earthquake damaged broken rails to be repaired near the Armagh/Colombo corner and on the track leading to the tram shed in Tramway Lane. This had become a bit of an issue when the contractor advised that each would take a couple of days to fix – and insisted that there be no trams during that time! So, the old temporary traffic management plan was dusted off, and managed by City Care and CTL staff, trams safely negotiated New Regent Street and Worcester Boulevard through to Rolleston Ave in both directions on the single track, passing at the loop in Cathedral Square. This time, two-way vehicle traffic was maintained behind the Cathedral and was controlled by City Care using “Stop/Go” paddles and by radio contact with the trams. With the restaurant tram out of action (see further below) tram operation ceased at 5pm with normal road operations resuming. As the tram shed was inaccessible to the trams in service, No's 178, 15 and 11 spent three nights parked under cover in Cathedral Junction, courtesy of the Junction Management.

A further complication which happened to coincide with this work was the closure of Oxford Terrace between Hereford and Worcester Streets for its repaving, similar to what has already been done south to Cashel Street, as part of the Avon River Precinct works. This had been due to start some time ago, but in the event, it also began on 12 June. Oxford Terrace, and the Worcester Street intersection are now gated off, with only guided tram and construction traffic allowed through, similar to the procedure adopted for the earlier works. At this stage, it also applies to trams heading along Worcester Boulevard and was even more complicated when they were

running in both directions. However, with a great working relationship with the contractor (Hawkins) it is going well, and again CTL operate the gates outside of working hours. Oxford Terrace is expected to remain closed for the rest of the year.

Finally, the Restaurant tram (aka W2 411) has been out of action for most of June for refurbishment work, including an exterior repaint and this was undertaken in the town shed by CTL staff with the assistance of Clinton Pearce of Tramworks, Auckland. Having three trams out of the shed for a few days coincided nicely with their repainting programme (*below*).



PHOTO: Dave Hinman

From The Press, 22 June

" Tram route may be extended

Christchurch's tram route may once again run down to lower High St and could extend even further in the future. Property developers, residents and the Tramway Historical Society have lobbied the Christchurch City Council for the tramway extension. Developers Richard Peebles and Mike Percasky, who have property interests on lower High St, want the route extended through Poplar Lane to the end of High St where it meets Madras St. Developer Richard Peebles is keen to see the tram head down his end of High St. City council staff are due to report to councillors in August 2017 on the extension of the tram line to High St. Possible further extension of the tram line beyond High St would be considered as part of the 2018-2028 long term plan. Lower High St was damaged by the February 2011 earthquake and has been shut since. A recommendation supported by councillors during Tuesday's annual plan deliberations noted council staff were confident timing of the tram route extension could be aligned with nearby construction on High St. Development is under way along the street itself and in surrounding areas. The tram route currently stopped at the corner of High,

News in Brief

Manchester and Lichfield Streets. Council city services general manager David Adamson said the council wanted to coordinate street work with development. "The council therefore is requesting a report on the cost of the co-ordination of this work," he said. It was hoped the report would be on the July or August Infrastructure, Transport and Environment Committee agenda, but no date had been set for the start of extension work. No decisions had been made on any extension beyond the south end of High St. "Trams are part of the transport infrastructure within the city. "Whether it remains a pure tourist option or takes a more commuter role has not been discussed," Adamson said. The council previously stated the extension would cost \$3 million. In a submission to the council's 2017-18 draft annual plan, Peebles said the tram was important for helping urban regeneration, but the council's budget to 2025 did not include funding for a tram extension as was planned before the earthquake."

The full report with several photographs can be found on the Fairfax website at

<http://www.stuff.co.nz/the-press/news/93922808/citycouncil-investigating-christchurch-tram-extension-further-expansion-a-possibility> This follows on from an earlier report of the Annual Plan hearing, where Don McAra presented on behalf of the Society:

<http://www.stuff.co.nz/the-press/news/92589676/christchurch-property-developers-richard-peeble-and-mike-percasky-call-for-tram-route-to-reach-madras-st>

The actual Council resolution as recommended to the Annual Plan meeting on 20 June stated:

"Tram extension

In order to support alignment of the tram extension with nearby construction projects in High Street

The Council:

a. Notes staff are due to report to Council in August 2017 on the extension of the tram line to High Street and any further extension of the tram line beyond High Street to be considered as part of the 2018-2028 Long Term Plan.

b. Notes staff are confident that the timing of the extension of the tram line to High Street can be aligned with nearby construction. "

We wait with interest to see what happens next.

New lathe for the Heritage Tramways Trust (HTT)

At the February Heritage Tramways Trust meeting, HTT workshop supervisor Gary Webber submitted a proposal to purchase a new lathe for the engineering workshop. This lathe, with its digital readout and modern safety features, will enable us to perform more accurate turning than we can now and Gary already has work lined up for the new machine in the near future. Murray Hobbs approached Scott Machinery for a purchase quote and put the last one in the warehouse on hold, the HTT committee approved the purchase of the machine at its March meeting and it was ordered the next day and delivered four days later. We have kept the old lathe for general turning and moved it against the south wall. The new lathe will be locked out and our engineers will have a key. If you need to use this machine Gary Webber or Graeme Richardson will assess the ability and need and approve its use. We need to keep this lathe in good condition to enable us to machine components to a high standard of finish and accuracy.

It is good to be returning to a position where we can look at improving the workshop capability.

Murray Hobbs (HTT Chairman)



The new lathe in place. Photo: Dave Hinman.

2017 Trolleybus Farewell Tour—Advance Notice



They want to get rid of me.... Please come and say goodbye before I go!

TROLLEY BUS TOUR: THURSDAY 10 AUGUST 2017.

Go Wellington have kindly allowed the Omnibus Society NZ to undertake an enthusiasts' tour of the system before its scheduled closure on 31 October 2017.

Bookings are essential. Cost is \$40 per person, payable in cash on the day.

The tour will start at 10 a.m. from the Railway Station terminus and will finish at the Railway terminus no later than 4pm.

The Itinerary is as follows:

- to Kingston,
- to Aro Street,
- to Karori,
- Karori to Lyall Bay,
- Lyall Bay to Miramar and Seatoun,
- Seatoun to Zoo
- Back to the Railway Station via Hataitai.

If any wired parts are missed we will endeavour to cover them in an Ansaldo and then, if time permits, some of the closed routes will be traversed.

BOOKINGS must be made through Peter Rendall at obnz@paradise.net.nz advising name, the number of

passengers and contact details, as soon as possible, and no later than **Friday 4 August**.

There is no guarantee that intending passengers without a booking can be accommodated on the day.

This has come up at rather short notice, particularly for anyone from overseas interested in coming. We have enquired about the possibility of later tours, closer to the closing date but have been advised that this will be the only one being organised by OBNZ and it is doubtful that others will be sanctioned.

The reason for the timing was to avoid the risk of some routes already being closed which could happen before the planned closure date e.g. in the event of overhead damage, or buses becoming unserviceable and not being repaired.

If we hear of any other available tours, closer to the end date in October, we will let you know. If this is the only tour, then... see you in Wellington!

BELOW: *Keen to be green—trolleybus 331 is a zero-emission vehicle. But GWRC is determined to retire it and replace it with straight-diesel and hybrid buses! Where else but dysfunctional old New Zealand...!*



More Relics from Riccarton Road

Dave Hinman reports on the recovery of more tramway remnants from the Riccarton Road level crossing:

Further to last month's report in Tracts, some more pieces of the mechanism for operating the former catch or trap points on the tram line near the Riccarton Road railway crossing have been unearthed. Earlier when seeking information about the rodding that had been found, Rachel Tucker, signals expert at CRS had noted: "...*The contractors might also find some cranks as well...*". And sure enough, as shown in the marked up aerial photo (**below right**) supplied by Downer, a set of levers was retrieved to the west of the railway crossing. These would have been for the catch points on the inbound track and their discovery confirms the location of these points. On seeing a photo of this latest treasure, Rachel confirmed "...*Yes, that is the drive crank for the trap points. They used standard cranks where possible however where two lines crossed over they modified some items to suit...*" The attached photo (**below left**) shows the cranks, looking slightly worse for wear, mostly likely damaged during removal.

A couple of eagle-eyed readers (Barry Marchant and Henry Deer) both noticed an error in last month's edition. We had reported that there were five tram/railway crossings in Christchurch, but we had forgotten some others. These were the branch tram line from the Riccarton line in Main South Road which crossed the South Island Main Trunk railway line into the Plumpton Park Racecourse (later Wigram Aerodrome) and the Riccarton Racecourse branch railway off the SIMT at Sockburn which crossed the Riccarton tram line at both Main South Road and Racecourse Road just before entering the racecourse. A total therefore of eight tramway/railway crossings. Does anyone know whether these latter three had semaphore signals and catch points? Henry suggests that this might have been the case for the short-lived Plumpton Park line (1915-1928) given that it was crossing the main NZR line but not so for the Racecourse branch where it is likely that they would have relied on flagmen on race days, the only time that the branch was in use.

As a matter of interest, Christchurch had more tramway/railway level crossings than anywhere else in New Zealand. The only others were Invercargill (one in Conon St, crossed by trams going to Georgetown and South Invercargill) and Napier (a main line crossing in Waghorne Street, an industrial siding in Thackeray Street, and two Harbour Board railway crossings in Bridge Street), with Dunedin and Wanganui also having some industrial sidings crossing tram lines. There were none in Auckland, New Plymouth, Gisborne or Wellington.



In The Works

CTB 'Yank' 12 (Sydney Tramway Museum)

A significant milestone has been reached with the Yank 12 project. Following a careful photographic record and measured drawings being made, the chassis has now been completely stripped of all its old floor boards. Equipment and parts of the tram which had been directly attached to the floor (such as the sand box mechanisms) have been removed and placed in the container. This has enabled a start on the long road to restoration. Michael Hobbs, working for the HTT, has cleaned down the chassis framework and given it a fresh coat of paint, and then installed and painted a new plywood floor. In the meantime new steel side frames have been purchased, and will be on site within a few days. The project has now got to the stage where the current funding provided by Sydney has now all been expended. With tram shed space at a premium, the chassis including the new side frames, together with the old ones, still being retained as patterns and for further research, will now be wrapped in plastic and stored*, pending further funding. HTT are in close contact with Sydney regarding the programme and restoration details. (* there will be photos of this for next *Tracts*!)

Recently received from Howard Clark at the Sydney Tramway Museum is a very clear maker's photo of one of the Brill built Sydney G class trams. Taken at the Brill factory in 1899 prior to shipping to Australia, this shows the striking resemblance to our Stephenson Yanks in their original form. With both having almost identical dimensions, the only obvious differences are the hallmark Brill features of the Sydney tram, including its curved top windows, the ornate cast iron kickboard adjoining the motorman's step, (as seen on our Dunedin no. 11), the solid wood rollover seatbacks and the Brill 22E trucks. The large Providence fenders, an early feature of the original Christchurch electric fleet, were

not fitted.

Finally in one of our photo captions last month we referred to the "Stephenson factory in New York". Henry Deer has reminded us that the new Stephenson Electric Car factory (from 1888) was in Bay Way, Elizabeth NEW JERSEY, having been moved from just across the river in New York City, where the horsecars were made. And there is another connection with Brill. In 1904, at about the time the early Christchurch fleet had been ordered and was under construction at the Stephenson factory, the company was acquired by the J. G. Brill Company of Philadelphia. It continued to operate in New Jersey under the Stephenson name until 1917 when the plant was sold to an aircraft manufacturing company, the Standard Aero Corporation. Did the Brill takeover influence the design of the Christchurch Yanks? - possibly but note that the CTB tender documents, with quite accurate illustrations of the various car types, including the Yanks, had been signed by the CTB's engineer, F. Hubert Chamberlain, and were dated 25 September 1903!

CTB 'Hills' 24 (below)

Currently work on 'Hills' car 24 is focused on the roof, which is now being reassembled and made ready to be refitted to the body. Project Leader, Stephen Taylor, states that recent work has been focused on stripping off the last of the old paint, and to restore the ends of the roof bows. During this process, it has been discovered that the roof slats and bows in the open section were not varnished at any point during their service life.

The most recent work to be undertaken on the roof has been to give it a coat of clear primer, while the steel roof bow reinforcing bands have also been sandblasted and primed. Once the primer on the roof has been sanded down, the reinforcing bands and side rails will be refitted permanently.



PHOTO: Stephen Taylor

Using CAD as a Restoration Tool

As work proceeds on Mornington grip tram 103, the Tramway Historical Society has turned to a new method which is hoped to make the work of producing new components much easier. Thanks to the assistance of ex-New Zealand Railways draftsman **Lawrence Cooper**, the Society is now using Computer Aided Design (CAD) software to aid in the process of manufacturing missing or deteriorated components.

Restoration using CAD tools

Written by Lawrence Cooper

I have become involved with tram restoration only recently, coming from a long career in the mechanical engineering and manufacturing sector. While I was employed at NZ Railways Workshops, Hillside, Dunedin, I was fortunate, about 1984, to be introduced to a tool that was just starting to make an appearance in the workplace. This new tool was the personal computer. By today's standards these machines were not very powerful and had only a limited usefulness. The early CAD software was somewhat clumsy and also of limited use, no better than manual drawing, which was the way engineering drawings were produced until then. These machines, though, proved to be very useful for organizing data using database software, and performed complex calculations using spreadsheet software.

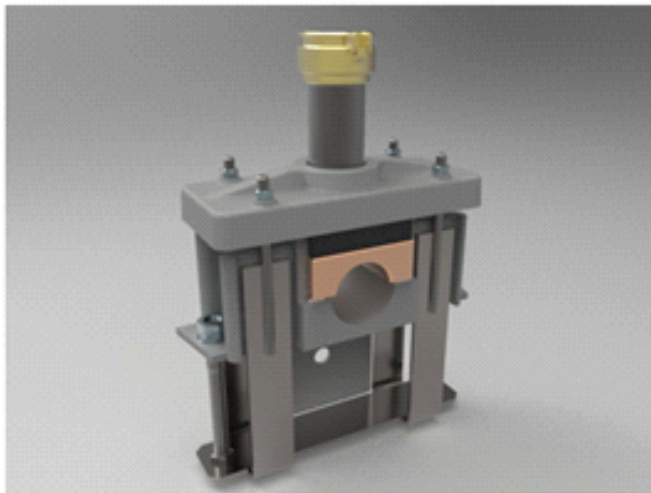
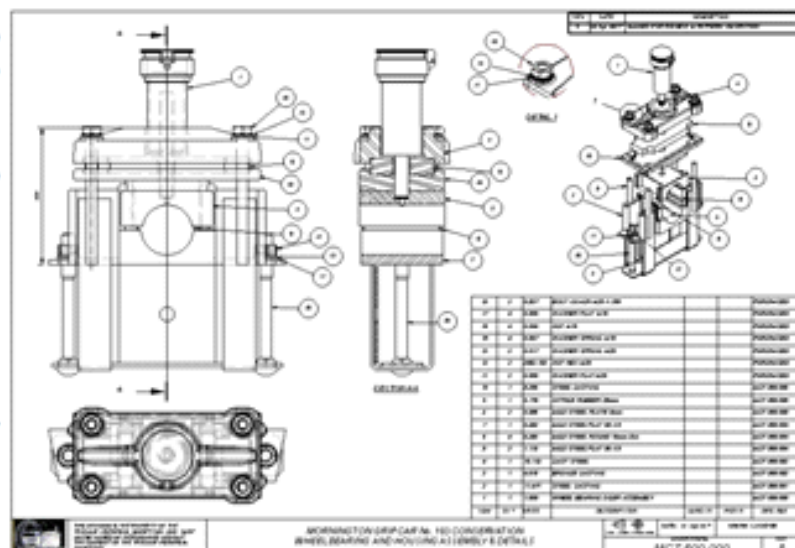


Image generated from a rendered CAD model of Bearing Assembly for Dunedin Grip Car No. 103 restoration

As the personal computer evolved, it became more powerful and software too was developed and improved. The personal computer has now become a very useful engineering tool. In the 1990's the personal computer had become powerful enough to run useful CAD, or computer aided drafting, as it was known then. This was mostly a 2D software, which automated traditional engineering, architectural, and other technical graphics. CAD integration with the manufacturing process began in the 2D world, with the process of exporting 2D data into software programs used to produce CNC programs written in G code.

This could then be used to drive profile cutting machines, such as Lasers, Gas Cutting, Plasma cutting, water jet, and turret punch machines. These machines had up to this time been programmed by manually, writing lines of G code in a text editor or by entering the lines of code directly using a key pad on the machine controller.

Computer Aided Design and Manufacturing, or CAD-CAM as it is often labelled, has become a very useful tool in engineering design and manufacture. With the CAD 3D modelling-based methods in use now, this process produces much more than the drawings for the manufacture of equipment and machines which were previously produced by manual and 2D CAD drawings. The parts modelled can now be given the properties of materials used in the real 3D world.

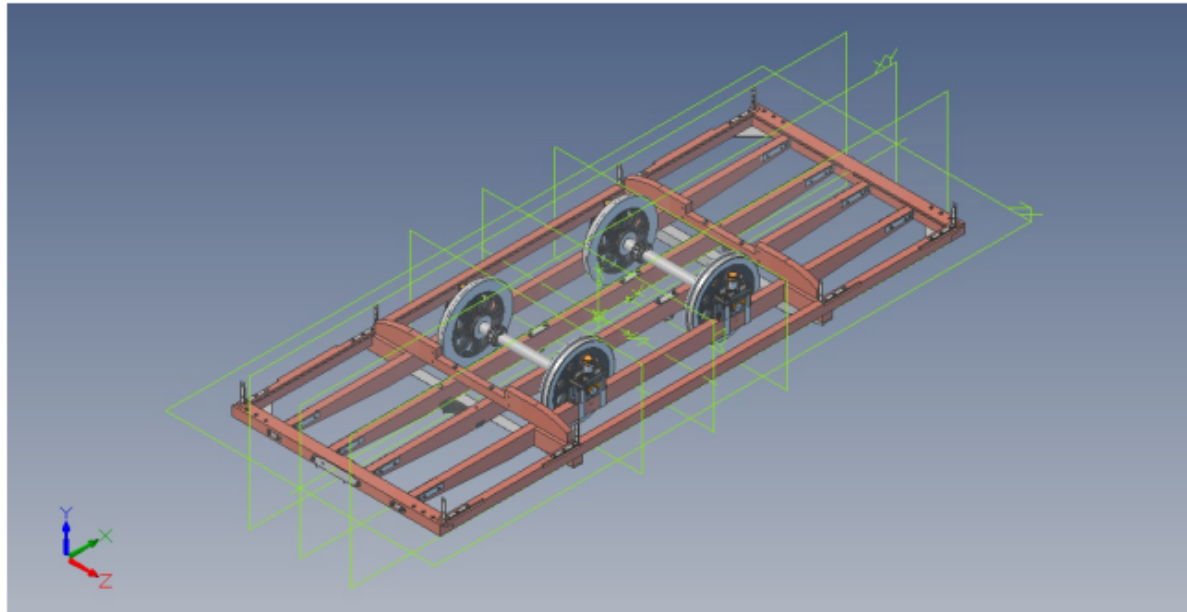


CAD drawing produced from Bearing Assembly 3D model

Using CAD as a Restoration Tool

Accurate information can be extracted from the CAD model that is of use in determining manufacturing costs. Mechanisms modelled in this way can be also be animated to check their operation. The 3D parts models produced with modern 3D model based engineering software, can also be used to make the programming of CNC machines easier.

Now that I am involved in the restoration of Mornington Grip Car 103 I have the skills and experience to make use of these valuable tools. I also bring to this project, along with having used these tools for many years, a full legal and licensed copy of a commercial software that is



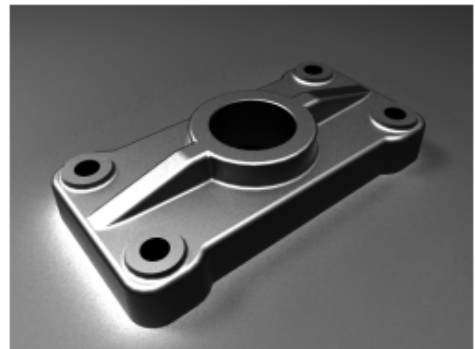
CAD model of rolling chasis at present stage of restoration but without wheelsets

made for mechanical design. I purchased this software to produce a range of industrial fans and dust filtration equipment for an engineer I worked with in the past when he started his own company. I have completed that project, and now in semi-retirement, have the time, the skills, and the software to apply these tools to this project.

Working with the CAD model has proved to be a useful tool in this process. The model enables us to work out vague details, try out possible alternatives, along with pricing and the manufacturing of the missing parts.

Another positive from the modelling of this restoration has been by supplying 3D part models to a local pattern maker, who uses a CNC machine to make patterns. The cost of these patterns will be reduced as the CAD model simplifies the programming of the CNC machine. As the present intention is to restore this grip car to a fully operational condition, with the long term possibility of the construction of an operational track to run restored car along, a complete set of drawings of the restored car will be part of the process to certify for operational use.

Adding a CAD component to your restoration project can prove to be a useful additional tool. The main obstacle to doing this comes down to having a member of your team with the training required to make use of CAD and the costs involved with purchasing commercial releases of the



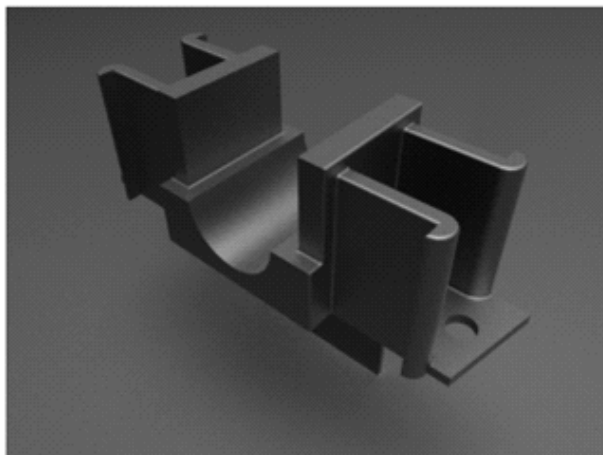
Model of bearing housing top casting

Using CAD as a Restoration Tool

software. As for cost, a very good 2D drawing program Draftsight has a free version. A web search should find this. Draftsight has versions for Windows 64 bit, Windows 32 bit, Mac and Linux. Another possibility would be for the Tramway Society, as a not for profit educational organisation, to apply to the makers of the main commercial 3D programs, Solid Works, Solid Edge, Inventor and Pro Engineer for an educational use licence. For a free 3D modelling option there is FreeCad, an open source project with versions for Windows Mac and Linux. At its present stage of development it is just starting to be useful.

Of the commercial 3D Cad systems the best for the price would be a product, Geomagic Design, available from a company 3D systems. 3D systems is a company that is involved with large scale industrial 3D printers and scanners. For around about \$3,000 NZ dollars you get a fully featured 3D CAD design and drafting software package with good sheet metal tools, assembly tools, calculation driven designs as well as a good photo-realistic rendering package, Keyshot, included, at price well below other fully featured products. This is the software I am using as it had the tools and performance at an affordable price. As with other CAD products, available from the 3D Systems web site, are manuals and tutorial videos that can be viewed and downloaded. Another source of tutorial videos can be found on you-tube. As is with most commercial CAD offerings, a 30 day full featured demo can be downloaded to try it out.

To become familiar and competent with CAD software is not a simple task as to get the most out



Model of existing bearing bottom casting

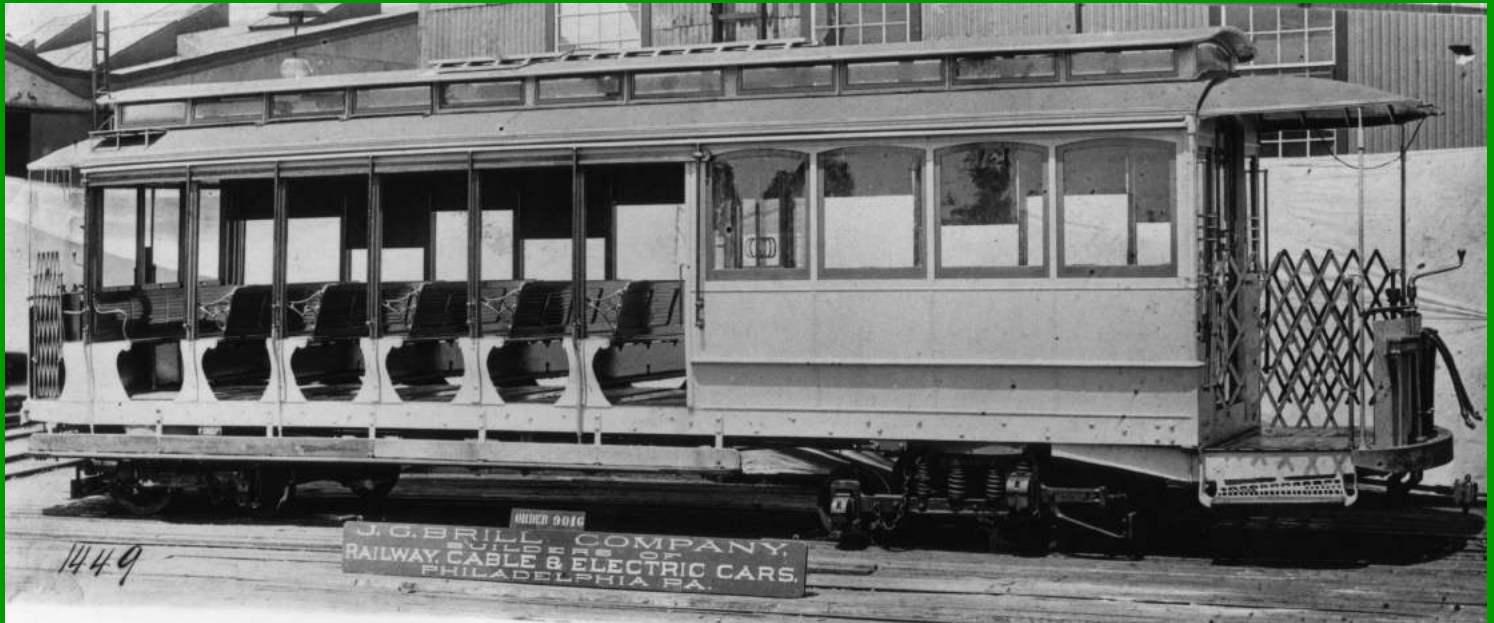
of this tool requires good computer skills along with a sound engineering knowledge. I am fortunate as starting with my first steps while working for the railways my employers have spent both time and money on my training. If possible recruiting volunteers with the CAD experience and skills for your restoration projects could be of value.



Model of existing chassis wrought iron anchoring bolt



Runback pawl modelled from Dunedin Tramways Drawings



Factory fresh...

ABOVE: Fresh from the paint shop of the J. G. Brill Company factory in Philadelphia, Pennsylvania, a Sydney G-class combination tramcar poses for the type's official builder's photo in 1899. As noted in this issue of *Tracts*, these trams were very similar to the Christchurch 'Yanks' with only a number of minor detail differences between the two types. Regrettably, no Sydney G-class cars survived, hence the Sydney Tramway Museum's decision to acquire CTB 'Yank' 12 from Takamatua on Banks Peninsula to give them a similar representative vehicle in their collection which already includes a number of international examples as well as many trams from NSW and other parts of Australia.

Photo: Courtesy Howard Clark (STM).

FRONT COVER: The date is 6 January 1968, and Kitson steam-tram No. 7 is waiting with two trailers—New Brighton Co. double-decker No. 10 and Christchurch Tramway Board 'Duckhouse' 115 — for passengers on the official opening day of the Tramway Historical Society's first section of what would become the Ferrymead Tramway. With a small selection of buses and trolleybuses on static display, along with an operating traction engine and trailer, this event was one of the first major special events to be held at the then-undeveloped Ferrymead site. We are now looking to plan a commemorative event fifty years later on 6 January 2018; please refer to page 3 for more details.

Photo: Dave Hinman.

Ferrymead Tram Tracts

The newsletter of the Tramway Historical Society

Editor: Alastair Cross—tracts@ferrymeadtramway.org.nz

We welcome contributions of material for publication in Tram Tracts—if you have anything tram, bus or trolleybus-related you want to share with us, please email it to the Editor at tracts@ferrymeadtramway.org.nz.

