



The Squeaky Wheel



The MOTAT Society Newsletter
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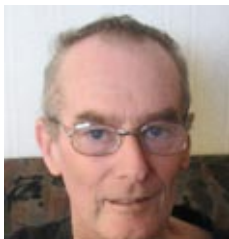
ALL THAT GLITTERS IS - BRASS

*The backhead of locomotive F.180 looking replendant in black paint and polished brass as work nears completion on this iconic locomotive
See page 7 for the latest report on progress on the restoration of this locomotive.*



Editorial

After only a few months in the job I have been forced to tender my resignation from the position of administrator for the Society. However, I will be continuing my role as editor of the The Squeaky Wheel magazine.



As a former journalist, this is within my field of expertise, and I hope that the direction I have been heading with the magazine has met with your approval. I have been involved with MOTAT on and off since the 1960s, and on a regular basis since 1981, and I am endeavouring to produce a magazine that can bind the volunteer groups into a cohesive unit, simply through informing them what everyone else is doing.

One of the things that became obvious when Les Downey persuaded me to join MOTAT in 1981 was that every section was working in its own little vacuum.

I belonged to the Rail Section at the time, and we didn't have a clue what the Aviation Section was up to, even though the workshop was only 100 metres away and we didn't really make the effort to find out either, and I think it was pretty much the same for most other volunteers.

So my aim is to use The Squeaky Wheel to inform the members what is happening in the museum beyond their workshops.

While I endeavour to get out and about to make contact with the various sections, I still need input from the sections to make it work.

So in the meantime the Society is looking for a new secretary/treasurer - PC skills would be an advantage.

You may have noticed that we have introduced a new MOTAT Society logo on the masthead of this issue.

This was designed by committee member Philip Heath, who offered to design a new logo which he felt would better represent the Society as it moved into the future. After several proposals, the new design was approved unanimously by the committee at its September meeting.

Evan James
editor, The Squeaky Wheel

SQUEAKY GOES DIGITAL

This issue of The Squeaky Wheel marks a step into the future, with the emphasis on the digital version.

At the September meeting the Society committee decided to concentrate more on the digital version of the magazine, with those members with e.mailing facilities to receive the digital version only.

This will mean they will receive the magazine in full colour pdf form, to be able to be read on a variety of platforms, including PCs, tablets and smart phones.

However, the 60 or so members with no e.mailing facility would still receive the printed black and white version.

APPRECIATION CERTIFICATES

Three Certificates of Appreciation were awarded at the MOTAT Society's annual general meeting on October 6.

They were to retiring committee members Jonathan Pote and Philip Heath, and to The Driving Wheel editor Frances Young.

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NEW FACES AT THE HELM

It has been all change for the MOTAT Society committee for the coming year.

Gone from the previous committee are Philip Heath, Kim Heppner and Jonathan Pote, who resigned; and Bill Rayner who has been selected onto the MOTAT Board. William Irwin resigned earlier in the year for health reasons.

This left Henry Swan (aviation), John Wolf (trams), Bruce Wild (rail), and Frances Young (village) standing again from the previous committee.

They will be joined by military's Greg Pittams, rail's Richard Wilson, and aviation's Frank Hannay, who were nominated from the floor.

If additional members are deemed to be needed for their expertise, the committee has been given the power to approach those people to request they join the committee.

MAJOR DISRUPTION FOR SOCIETY

The mid term resignation of Administrator Tessa Philips was a major disruption to the MOTAT Society, outgoing chairman Bill Rayner reported to the recent annual general meeting of the Society

"Tessa did an excellent job with a significant contribution to The Driving Wheel magazine," reported Bill.

She was replaced as Administrator by Evan James, who has now announced his intention to retire from the position for health and work reasons, but to continue as Editor of The Squeaky Wheel magazine

In this issue

Page 3 Lush Award

Chairman positive about future

Page 4 Aviation Section - Battle of Britain Day

Page 5 Military Section - Carbon arc searchlight restoration

Page 5 Printing Section - Battle of Britain booklets

Page 6 Rail Section - L 507's great adventure; Restoration news

Page 8 Tram Section - restoration news

AVIATION STALWART IS RECOGNISED

by Jonathan Pote
Aviation Section

A stalwart of the Aviation Section, Eric Judd has been recognised by the MOTAT Society by being the recipient of the 2015 Lush Award.

The announcement was made at the Society's annual general meeting, but because he was unable to attend the meeting, Eric was presented the award at the Aviation Section's workday the following day.

Eric had been a volunteer with the Aviation Section since 1996 and still maintained a 100 percent attendance record every Wednesday, pretty much being the first in and last out.

Genes decreed Eric would be a tailor by trade; the third generation first-born male of his family to "cut the cloth".

However as he finished his apprenticeship, over a cup of coffee, a group of compatriots noticed an advertisement for a qualified tailor to join the RNZAF.

With happy memories of compulsory military training, Eric applied and was accepted, knowing he would spend his career at Hobsonville and Whenuapai.

After a further six weeks at Taieri, whilst his fellow classmates went for further training, Eric was now ready to join the fray.

Tailoring in the RNZAF involved mainly alterations rather than making whole uniforms.

With promotion, personnel needed higher ranks sewn onto their "Number One" uniform and, unsurprisingly, with higher rank also came greater weight and more "letting out".

Although a uniformed airman, a corporal, he was somewhat outside the normal hierarchy and thus a person the Station Commander could chat to informally as a "sounding board".

It is not thought Eric had a deciding influence on any major military interventions but he certainly influenced the day-to-day running of Hobsonville and Whenuapai.

Retiring in 1999, Eric was one of quite a few new volunteers to MOTAT in those days, of whom only Norm McKelvey and Owen Reeve and Eric remain, although he also knew Graham Choat whilst in the RNZAF.

Not being an engineer meant that rather than doing nothing, Eric did everything - metalwork, woodwork, and of course fabric work.

He remembers the biggest single job was cleaning corrosion off the inside of the Sunderland hull, a finicky and unfulfilling job and a case of painting the Firth of Forth bridge if ever there was one.

Soon the Sunderland will emerge in pristine glory, and



The Three Musketeers: Eric Judd (centre) is congratulated by Norm McKelvey (left) and Owen Reeve on his being awarded the MOTAT Society's Lush Award for 2015. The three men are the last of the Aviation Section's early volunteer members.

Jonathan Pote photo

whilst Eric's work has been seen by few, his personal contribution to the project has been second to none.

Eric has not been immune to the effects of the increasing number of birthdays that affects us all, and some would have called it a day long ago, happy with what they had done.

Not Eric. These days he spends a full day sweeping the restoration hangar floor.

Volunteers are messy people doing a messy job, but the workshop must be clean.

Aviation volunteers can happily "mess away", knowing they barely need to sweep up after themselves, even though they should.

By doing that job, Eric frees up others to spend more time at their workstations, and so his contribution is still, 25 years on, as great as anyone's.

VOLUNTEER ROLE EMPHASISED BY CHAIRMAN

The role of the volunteers at MOTAT was emphasised by MOTAT Society acting chairman Henry Swan in his report to the recent annual meeting of the Society.

He said that under a recently introduced changes, the volunteers were no longer working under section heads, and this had produced confusion within the volunteer sections.

However, following meetings with Museum Chief Executive Officer Michael Frawley, he anticipated there would be a greater understanding of the roles of the Society and the volunteers and their work.

He hoped that this would continue into the coming year and the Society and the volunteers would be able to consolidate on what they had collectively achieved over the years.

"I most sincerely hope the coming year will be more positive, allowing us to develop the Society acceptance within the Museum to gain a parallel improvement in relations and respect for the volunteers and their work," he said.

He thanked everyone involved with the Society for their work and input.

"It was greatly appreciated and very necessary," he said.

BATTLE OF BRITAIN DAY ATTRACTIONS

Special attractions at the Aviation Display Hall were a feature of Battle of Britain Day 75th anniversary commemorations at MOTAT on September 20.

The day attracted a large number of visitors to the Aviation Hall, despite wet weather conditions.

Top attraction was the Grumman Avenger, a carrier based torpedo bomber, which demonstrated its folding wings, and the bomb bay doors opening and closing, with former Fleet Air Arm engineer Peter Dilley at the controls, assisted by Henry Swan.

Guided tours of the exhibits also proved to be very popular.

To commemorate the day, a special booklet was produced by the Printing Section. This proved to be very popular, with more supplies having to be delivered midway through the day.

A special flypast by the Warbirds Association flew over

AVIATION

the aviation building, but very wet weather affected both the number of planes taking part, and ability of the MOTAT patrons to see them.

Battle of Britain Day celebrations hold a special place in the New Zealand psyche, with New Zealanders making up the second largest contingent of overseas pilots who fought in the battle.

The RAF recognises 135 New Zealand aircrew who fought in the Battle, just 10 behind the Polish who provided the largest contingent of overseas crews for the battle.

This meant that about one in 20 of the RAF pilots was a New Zealander,

The most prominent New Zealander in the Battle was Air Vice Marshall Keith Park, a high scoring air ace in the First World War and a member of the RAF since its creation. He was Commander of No. 11 Group RAF, which was tasked with the defence of London and south-east England.

A huge statue of him looks out over the Aviation Display Hall, a replica of his Hurricane fighter stands outside the building, and the Keith Park station on the adjacent Western Springs Railway is named after him.

In the meantime work has been continuing on the restoration of the Short Sunderland flying boat, with sections of the fin being rebuilt as the Aviation Section works towards a Christmas completion.



The bust of Air Vice Marshall Sir Keith Park looks out over the Aviation Display Hall.



Peter Dilley, a former Fleet Air Arm engineer and Korean War veteran, at the controls of the Grumman Avenger, assisted by Henry Swan. The carrier based torpedo bomber has recently been restored to a standard where the folding wings work, and the bomb bay doors open and close, powered by an outside power source rather than through the aeroplane's own hydraulic system.



Aviation Hall volunteer tour guide Philip Cass (right), has an attentive audience of aviation enthusiasts as he explains the exhibits in the Aviation Display Hall.

all pictures by Evan James



Working on the fin of the Short Sunderland flying boat are Norm McKelvie (left) and Ron Wilson, as new metal is rivetted into place to replace corroded sections.

SPECIAL BOOKLET PRODUCED FOR BATTLE ANNIVERSARY

A little bit of digital technology was used when the Printing Section produced a booklet to mark the 75th anniversary of the Battle of Britain on September 20.

Printing Section head Graham O'Keefe explained that with the Linotype machine out of action, the decision was made to produce the booklet digitally, but print it on the letterpress machines by using a commercially produced polymer plate.

The print run was 900, and so popular was the booklet that a second delivery had to be made to the Aviation Display Hall midway through the day.

The booklet was written by Jim Swabey, with a file picture from Canada News of a memorial flight involving Spitfires, Hurricanes, and a Lancaster bomber on the cover.

In the meantime the section produced evidence bags for Crime Scene MOTAT which was MOTAT's school holiday feature attraction.

A small windfall has come the section's way with the donation of a large amount of wooden type by former printer Neville Smith of Napier, who also runs a printing museum.

Wooden type was the large type used in posters until the advent of digital technology, and according to Graham, is getting increasingly rare to find because much of it was simply burnt when letterpress printing was replaced by digital printing

PRINTING



Print Section member Denis Wadsworth producing evidence bags for the MOTAT school holiday feature programme Crime Scene MOTAT on the section's Heidelberg platen printing machine.

Evan James photo

SEARCHLIGHT SECRETS EXPOSED

MILITARY

A Bofors anti-aircraft gun, similar to that used during the Battle of Britain was the central point of the Military Section's display on September 20.

Also on show in the workshop was the inner workings of a carbon arc anti aircraft searchlight which played such a big part on the defence of Britain throughout the war.

This is currently under overhaul to replace the mechanism in the section's current light, which has featured in live demonstrations in the past.

According to Section spokesman John Tutchin, the original mechanism, called the Projector, could be cosmetically restored as a display item at some time in the future.

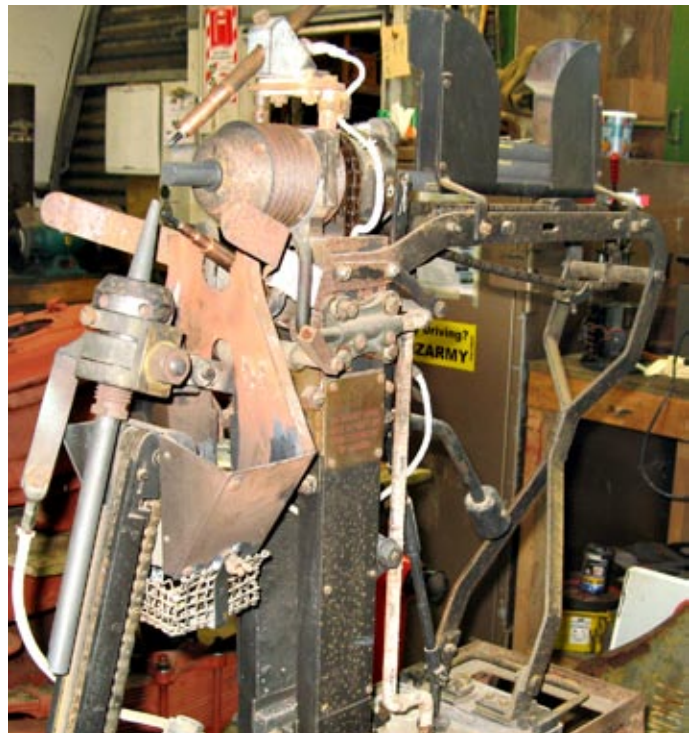
The mechanism produced an intense light with the aid of two 16mm diameter carbon rods almost touching, a 19 inch long negative rod and 9 inches long positive rod.

The carbons were adjusted by chain drives from electric motors. The positive carbons were changed automatically from a magazine, while the negative carbon was changed manually, at about 45 minute intervals..

They produced 800 million candle power of light with a beam length of five to six miles, and cost \$60,000 each when produced from 1932 to 1944, about \$1 million in today's money.

Also in the workshop are new header tanks for the Valentine tank radiators.

With none available to be purchased, the section is currently making patterns to get a new set of tanks cast locally.



The projector mechanism of the MOTAT carbon arc anti aircraft searchlight, currently being overhauled by the Military Section. The 19 inch negative carbon slopes upwards at the left of the picture, almost touching the 9 inch positive carbon sitting horizontally above it. The magazine holding new positive carbons is the grey box at top right of the picture, and spent carbon ends drop into the rusty red receptacle beside the negative carbon.

Evan James photo



507's GREAT ADVENTURE

A BEAUTIFUL PAIR OF BRISTOLS. There's 46 years in difference between the ages of these two products from Bristol, England, working together at the Bush Tramway's line at Pukemiro, near Huntly.

LEFT: MOTAT's L.507 (Avonside 1205/1877) leads Bush Tramway's Peckett (1630/1923) uphill between Rotowaro and Pukemiro on August 1

David Maciulaitis photo

BELOW LEFT: Three members of the crews involved, Chris Mann of Bush Tramway (left), and MOTAT's Pete Cairncross (middle) and David Maciulaitis.

photo supplied by David Maciulaitis

RAIL SECTION



by David Maciulaitis

L.507 has continued being one of MOTAT's most travelled exhibits, with a five month stay at the Bush Tramway Club's railway at Pukemiro, near Huntly.

The Bush Tramway Club has had a very close affiliation with MOTAT since the early days of MOTAT when it shared the Western Springs site before acquiring its own railway when the NZ Railways closed its coal hauling branchline between Rotowaro and Glen Afton.

It then set up headquarters at Pukemiro, formerly a junction of a branch line to a nearby coal mine, while the line itself has since become isolated with an open pit coal mine now occupying the space where the Rotowaro station once stood.

To demonstrate the friendship between the two organisations, Bush Tramway's Cb 117 was transported to MOTAT to feature in the MOTAT Rail Section's 30th anniversary celebrations in 2012, and has been a regular visitor during the summer ever since when the Bush Tramway's line is restricted to diesel locomotive operation only during the closed fire season.

And in return for those favours, MOTAT's L 507 was transported to Pukemiro to help the Bush Tramway Club celebrate its 50th anniversary.

As part of their planning the club contacted MOTAT requesting a visit from one of its locomotives, and negotiations quietly proceeding regarding this for around five weeks.

L 507 went down to Pukemiro during the week after the MOTAT Steam event on May 24th, for what was to be a three month visit. However that was extended to October when it ran on October 4, the final run for steam locomotives before their use is banned during the closed fire season.

As the Bush Tramway Club line runs through a lot of bush and wooded areas there was a high awareness of the risk of the railway starting fires, so a request was made for the Rail Section to ensure the locomotive's spark arresting capabilities were at their best.

To that end it was decided to fit the balloon funnel that had been made for F 180 to L 507.

The first step in the fitting process was started just prior to the steam festival on May 24 with the removal of the straight funnel from the L (this had originally been fitted to F 180 when it arrived at MOTAT, but was fitted to the L to replace a truncated funnel fitted at the Portland cement works, which donated the L to MOTAT).

This work revealed some wasted metal in the top of the smoke box, which was repaired over the next few days. The work was completed on the Saturday morning before the festival.

While at Pukemiro the L ran in conjunction with the BTC's main operating locomotive, Peckett 0-6-0 no. 1630, which is the only preserved steam locomotive in the New Zealand operating on its original line. Both are products of locomotive builders in Bristol, England.

Under cover storage was in the Pukemiro engine shed along with the BTC's other locomotives; BTC is fortunate to have a caretaker who lives on site and maintains the security of the site.

Although the BTC is in the process of extended its line back to the original terminus at Glen Afton, the L ran mostly on the lower half of the railway from Pukemiro toward Huntly the same as Peckett locomotive does.

However, a number of runs were also made to the top of the line with the Peckett on the rear to be lead loco for the return journey.

While at Pukemiro, L 507 has featured during the monthly running days on the first Sunday of the month, in addition to a special club day on June 6, and special night time sessions, racking up about 160 kilometres.

For crews from MOTAT, operating the L at Pukemiro had involved a long days of up to 15 hours including travel time from Auckland

However, as crew accommodation was available at Pukemiro, as well as a motel at Huntly, most crews opted to go down Saturday and light up the L, then bank the fire overnight for a 8am start to relight the fire.

THE DNA OF A NUMBER

What in a number?

L 507 has featured two numbers while at MOTAT, both correct.

The L was built by Avonside as their number 1205 in 1877. When the L entered service in Wellington it was numbered as L 3, under the renumbering of the railways in 1888 (often incorrectly referred to as the 1890's renumbering) it became L 207 the number it carried until it was sold to the Public Works Department in 1901 for the sum of 500 pounds.

It was not until 1905 that the PWD was issued its 'block' of numbers from the NZR (500-550), during this time the L was devoid of a number plate, but there is a photograph, showing it wearing a number plate with PWD on it.

In 1905 all PWD engines were numbered in the 5xx block, the L becoming 507.

Therefore it should of course be referred to as PWD 507 of the L class. Documentation from 1908 does show the engine being referred to in internal communications as L 507.

My main point is that the NZR never had an L 507, but the PWD did have an engine numbered 507 of the former L class.

The 207 number was transferred to a new L class 4-4-2T locomotive which was built in New Zealand at the Petone workshops in Wellington.

L 507 carried that number until 1931 when it was sold to the New Plymouth Harbour Board and probably lost its number. In 1954 it was on-sold to Wilsons Portland Cement where it operated on its extensive railway system at Portland, near Whangarei.

It was then gifted to MOTAT in 1967 and delivered in 1971. It was restored to running condition in 1977 when it required its

by Evan James

with assistance from David Maciulaitis

original number of L 207.

During its ownership by the Public Works Department, L 507 was involved in the construction of the North Island Main Trunk Line, and was used to haul the first passenger train between Wellington and Auckland over sections of that line in the middle of the North Island in August 1908.

To help celebrate the centennial of the line, L 507 featured in a re-enactment of that first train

Before going to Ohakune it was given an extensive overhaul which included a re-paint into the livery it probably wore at the time of the sale to the PWD, and a set of new 507 number plates were cast, which it still wears.

The Public Works Department was established in 1876 by the government undertake large infrastructure projects, including railway, power supply and military installations.

As was common in the days before large scale earthmoving machinery, those projects involved the laying of light railways for servicing those sites, and over a period of time the PWD, which was later renamed the Ministry of Works and Development, had a total of 55 locomotives in its fleet.

The MOWD was corporatised in 1988 and split into various divisions, and in 1996 the works division, then known as Works Corporation, was purchased by Cable Price Downer.

That company had started life in New Zealand in 1933 as Downer and Co, and merged with Cable Price in 1964 to become Cable Price Downer.

Downers is still a major player in infrastructure work in New Zealand, so it could be said that L 507 is an ancestor of the yellow and black Downer trucks seen on road works around New Zealand.

NEW RUNNER WAGON FOR CRANE 283

A runner wagon for crane 283, which featured in the last issue of The Squeaky Wheel, is the current project for the Rail Section's wagon restoration team.

This will be a bogie wagon, using a frame which started life under horse box wagon Uga 2, and came to MOTAT as wagon Ea 3271.

According to a section spokesman Pete Cairncross the work so far has mainly involved replacing rusted metal and painting. Once finished a new deck will be built on the wagon, which will replace runner wagon N 76.

Other projects underway are refurbishing regular service carvan Af 970. This has been in service continuously since it arrived at MOTAT in 1982, receiving little more than a repaint and new seats at the time, and this will be the first major work undertaken on the carvan since then.

First to be worked on is the guard's compartment of the vehicle.

Meantime work has continued on locomotive F 180, with the backhead now almost finished. It features a brass surround around the edge of the backhead, as featured on the cover of this issue of The Squeaky Wheel.

With assistance from contractor Steve Subritzky it involved heating the brass, and panelbeating it with the aid of sand

bags until the metal cooled, and then reheating it to start to process all over again.

Work is continuing on the cab, which featured in a hot rivetting demonstration featured in the last issue of The Squeaky Wheel, before work starts hot rivetting the saddle water tanks.



The chassis for the new runner wagon for crane 283 has received its coat of primer after metal work has been finished.

Evan James photo



Albert Chan photo

TRAM 135 LOOKING VERY SMART



ABOVE: Computer generated vinyl signage on the cant rails.

Evan James photo



Evan James photo

The refurbishment of Wellington tram 135 reached another milestone with the completion of the signwriting by contractor Osmand Signs.

The numbers were done in similar fashion to tram 47 using traditional sign writing methods of gold leaf shaded with paint.

The more modern technique of using computer generated vinyl signs was used for the cant rails.

Tram Section spokesman Leyton Chan said this technique was ideal where the signage could not be viewed from a close distance.

The tram is one of MOTAT's original exhibits, arriving at the museum on May 29 1964, and it is 35 years since its previous restoration when it was returned to as-built condition.

ABOVE LEFT: Tram 135 resplendent in its new livery and signwriting.

ABOVE: Signwriting of the numbers in progress with the outlines being painted before the gold leaf is applied.

FLOOR FIT FOR A DANCE

The floor of Wanganui tram trailer 21 has been finished, and work has now started on the superstructure.

The final sections of the floor were popped into place on August 25, culminating in many months of intensive work which saw the floor being reconstructed to the original specifications.

This involved using 4 inches by 7/8th inch tongue and grooved kauri, which was especially sourced for the job, and machined to shape by outside contractors.

A novel method of using car jacks was developed to force the boards into place, before being screwed down with steel slotted woodworking screws which had to be imported from the United States of America because none were available in New Zealand.

Once that had been finished the floor was given a thorough inspection, with any imperfections filled with builder's "bog", and then it was sanded by using a hired commercial floor sanding machine.

This was followed by a seal coat of shellac and three coats of White Knight flooring grey paint.

Wood for the body has now been purchased including American ash for the pillars and totara for the roof beams



Vincent Chan (left) and twin brother Leyton sanding the floor of trailer 21.

Evan James photo

and is currently being readied for cutting to the correct profiles.

This will be done using CAD drawings developed by project leader Leyton Chan.