SEPTEMBER 2022, ISSUE #227

# **FRONZ: JOURNAL**

Federation of Rail Organisations of New Zealand Incorporated

#### New logo

We are excited to announce (that after much deliberation), we have a new logo!

#### **Climate survey results**

Thank you to all the groups who filled in the Climate Survey, the information you provide is a huge help in us being able to form the bigger picture.

Also a big thanks to Dan Armstrong for putting out the survey and compiling the results for us.

#### IN THIS ISSUE:

-Conference 2022 -Initial data from the Climate Survey -News from around the Railways -Upcoming Mainline Excursions



PHOTO OF THE MONTH

Ab 699 with the Spring Blossom at the 100th Birthday Celebrations. Photo: David Oakley



### **CONFERENCE 2023 - BAY OF ISLANDS**

Following a visit to Whangarei and the Bay of Islands to view different conference options, we can now advise that the 2023 FRONZ conference will be held at the Copthorne Hotel at Waitangi. This hotel is in a beautiful setting on the waterfront, with views across to Russell and out to the islands.

It has ideal conference facilities, and is close to Paihia allowing many accommodation options for anyone who does not wish to stay at the hotel. Whilst it is a 2km walk to the bars and restaurants in Paihia, we have been able to negotiate a courtesy coach that will operate each evening for anyone who wants to eat or drink away from the hotel.

We recommend that those of you who will be flying there, to book to fly into Kerikeri in the Bay of Islands. We appreciate this may be a long distance to come for many of our members so we are making your trip to Northland worthwhile by offering a pre-conference holiday before the conference (Tuesday to Thursday) as well as Friday being scheduled as a day to see historic Northland by visiting the Waitangi Treaty grounds and also sightseeing in Russell.

Conference registration will be Friday night as usual, with Saturday a business day as well as Sunday morning. We will be visiting both our Northland members the Bay of Islands Vintage Railway (who are our hosts) and the Whangarei Steam and Model Railway Club.

So put the dates in your diary – the 30th of May to the 5th of June for those of you joining us to discover Northland and the 2nd of June to the 5th of June for those of you who will only be attending the conference.

The next Journal will provide more information on the itinerary and costs of the pre-holiday options.

### **INITAL FEEDBACK FROM THE CLIMATE SURVEY**

Dan Armstrong - survey creator

This document provides initial data to the Federation of Rail Organisations of New Zealand [FRONZ] on its Climate Survey, released to members between 31 August and 21 September 2022. This is not the final response to the survey and the final product will have other materials incorporated.

#### Context.

The background to this survey comes simultaneously from the Author's investigating heritage steam and sustainability and FRONZ and its desire to better support its members in this area. Following the author's proposal to establish a pan-heritage sustainability group in August 2022, FRONZ agreed to survey its members to collect data on the subject.

This survey was operated on Survey Monkey with six questions across three subject areas: contact information, fuel consumption/accessibility, and sustainability ork/interest. Additionally, Jeff Tolan, Margaret Gordon, and Grant Craig provided feedback to form the final product.

The Survey was distributed via the FRONZ mailing list to 70 member organisations with 38 responses received. Of those, one group was no longer applicable and two responses were duplicates. Ultimately, 52% of FRONZ members responded during the three weeks provided.

#### Fuel Consumption.

32 organisations in the 2022-23 financial year are operating locomotives to varying degrees. The majority of these (24) utilise diesel (101,250 litres) while 12 respondents use coal totalling 473.5 tonnes. Amongst answers provided low levels of electricity, petrol and wood are also used. Notably, two respondents are planning or already using an alternative fuel source – BioBriqs, compressed sawdust produced in Timaru.

#### Fuel accessibility.

For those that answered on fuel accessibility, the most common type of coal was Strongman (blend/chip/nuts) from Birchfield Coal Mines though some groups get theirs from local mines. Prices per tonne vary drastically, from \$495 (coal/fees/transport) to approximately \$750–a 50% increase.

In comparison, diesel hasn't been difficult to get and two organisations get their fuel from the nearby petrol station.

### **INITAL FEEDBACK FROM THE CLIMATE SURVEY**

continued

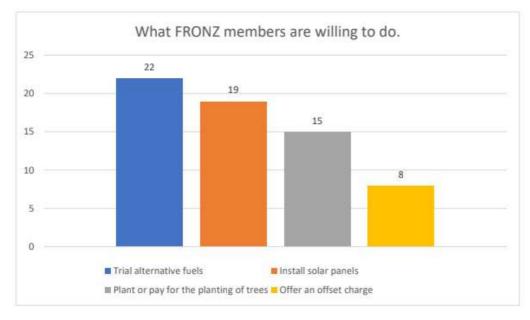
#### What FRONZ members are doing.

Responses varied in depth. Some answers provided detail or clarity on their work, while others were vague making a full understanding of what the sector is doing difficult. What is evident is that some groups around the country are taking steps individually to minimise their footprints. Some efforts highlighted were:

- Use of LED lights.
- Installation of solar panels.
- Providing environmental/conservation classes.
- Waste minimisation/recycling including scrap metal drives.
- Attempting to design and sell efficient boilers.
- Promoting/training crew to fire their locomotives efficiently.
- Scheduling timetables to limit unnecessary idling.
- Firing of steam locomotives on wood/biomass.
- Planting of trees.
- Carrying out emissions profiles/reviews.

#### What FRONZ members are willing to do.

Even with the above list, most member groups that responded to the survey are at least open to additional steps.



The openness to using fuel alternatives was the most supported choice by members with solar and tree plantings also having broad backing. This is unsurprising as some railways are already firing on wood and BioBriqs, have installed solar panels and have carried out plantings. Lastly, providing an offset charge – i.e. visitors pay an extra \$1 to offset emissions which goes towards sustainability projects decisively received the lowest support. Perhaps emblematic as the author is aware of only one group in the country trialling such a process. Regardless, the results show an openness to further work in this sector.

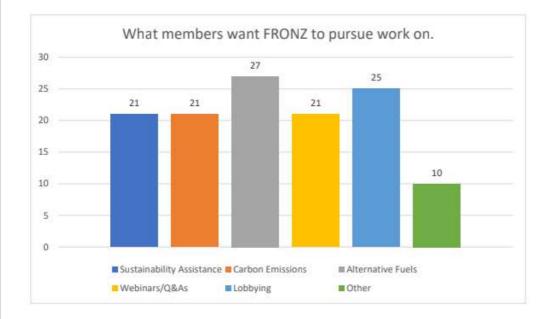
### **INITAL FEEDBACK FROM THE CLIMATE SURVEY**

#### continued

Please note: The options were selected as all four are carried out by the *Talyllyn Railway* in Wales amongst other initiatives.

#### What members want FRONZ to pursue.

Given that FRONZ represents much of the heritage rail industry in Aotearoa, members were asked what sustainability work the umbrella organisation should undertake.



Like the previous section, alternative fuels stood out as the preferred area FRONZ should focus its sustainability work. That said, all other options – from lobbying to webinars were supported too which suggests that FRONZ has a wide range of works to undertake going forward.

Of the Others, suggestions provided a range of further ideas for FRONZ to consider:

- EV charging points at stations.
- Sustainability fund for groups to access.
- Group collaboration.
- Further support/backing for groups already taking meaningful steps.
- Extension of current PL insurance to cover the use of biomass fuel.

### **NEWS FROM AROUND THE RAILWAYS**

### **MOUNTAIN THUNDER - THE FIRST IN 36 YEARS!**

Yarn, September 2022 - Corban Fray

It's as the title implies, 36 years the New Zealand Railways has gone without a 20 carriage monster of a train, capable of hauling some 800 passengers at a time. But thanks to a joint effort between the Glenbrook Vintage Railway and Steam Incorporated, Mountain Thunder was born and it lived up to the name!

I was fortunate enough to be a crew member for the excursion, having been Onboard Service Manager for the "Discover Ruapehu Rail Tour" passengers that journeyed from Auckland to the Central Plateau with us on Friday August 5th 2022. A tight-knit group travelled onwards to Palmerston North with us to travel on the Mountain Thunder trip the following day.

The sun rose on Saturday 6th August as the GVR crew prepped our train, and DA's 1410 and 1431 arrived with 13 carriages from Paekakariki, having begun their journey in darkness that morning. Hundreds of people littered the platform, as the train was shunted together and made even the spacious Palmerston North station platform look only just adequate.

As the train set off with our very own General Manager Tim Kerwin at the pointy end in DBR 1254, the hard work serving well over a couple of hundred passengers began, one of three bar setups, ours in the AL. Our offerings from hot food to soft drink, cold snack to alcoholic beverage were met with such demand, that a lot of the crew at the back of the train didn't get a good opportunity to see the front of our mega-train until some 2 hours later emerging from the Mangaweka Tunnel! Our leg stretch at Taihape revealed the sheer scale of what the GVR and Stream Inc team had put together, with some 800 passengers wandering the Taihape yard taking a view of the train. The gaggle of foamers lined the road overbridge awaiting our departure as well.

Descending the Raurimu Spiral was a great opportunity to see, well, only about half of our train at the time, thanks in no small part to the tight cuttings and winding corners of the spiral. Once the locomotives ran around our train and began the climb of the spiral, it was the DA's turn to lead and what a show they put on! Watching from the viewing platform of the AG carriage made for a sight and sound like no other!

Thanks to many passengers waiting for the dinner service at Hunterville, a well-earned rest for some of the bar staff was had on the return journey. Arriving at Hunterville was another first, load 500+ dinners for the passengers and crew as quickly as possible! That was one challenge overcome, the next was serving it. Thanks to some fantastic prep work done by the local pub that conjured up these meals, serving was quick and easy, and delightful comments flowed from the passengers who enjoyed their meal.

And with that, the rest of the journey was a chance to take in the momentus occasion we had all partaken in, and enjoy what sights were left as darkness fell and the headlights shone. Passengers disembarked at Feilding and Palmerston North, and many passed on their wish of being able to travel like this again!

### **MOUNTAIN THUNDER - THE FIRST IN 36 YEARS!**

#### continued

But through all of this, what stood out for me was the passion, enthusiasm, and teamwork involved from both crews, and especially those from GVR. whether it was serving customers from the busy bars, managing rubbish and lavatories onboard, or our own drivers Tim and Teapot, it was a fantastic effort from everyone to ensure all ran smoothly!

As a mere crew member with a full-time job outside of the railway, it was an incredible pleasure to be a part of this trip, and I have done my best to quickly summarise some of the fantastic parts of this trip. I'm sure there is many more stories and hours of work I haven't covered, and words can never describe this trip to it's fullest. So, for now, enjoy some stunning photos from the likes of our Operations Manager Finn O'Regan, and "GVR Marketing Photographer" (or Number #1 Foamer as he is affectionately referred to) Jack Still.

I would also highly recommend you watch the fantastic video produced by Finn at TNZ Studios on YouTube! Just search "Mountain Thunder - largest NZ Heritage Train in 36 years!".





# PLEASANT POINT RAILWAY CELEBRATES SPECIAL MILESTONE

#### Stuff, Sept. 25 2022 - Lauren Pattemore

It was only expected to have a lifespan of 40 years, so those who have helped ensure it clocked up 100 have plenty of reason to celebrate Pleasant Point's 85-tonne steam train.

Pleasant Point Museum and Railway president Bryan Blanchard said Ab699 is one of 150 Ab trains built, and of those is one of just seven still in one piece and one of three still running.

Many had met their fate at the scrapyard, Blanchard said.

"If it wasn't for groups like us, it would've been cut up for scrap."

Celebrations started with a dinner on Saturday night which was attended by more than 90 people including author Jim Sullivan, who was the guest speaker.

Two people, who had worked for A & G Price, of Thames, which built the Ab engines also attended and helped during Sunday's festivities, Blanchard said.

He said they had sold more than 900 tickets to ride the train on Sunday, the railway was also offering a special night train on Sunday from 7-9pm.

"We don't do it very often," he said.

Sunday's festivities included a magic show, live band, movies, a sausage sizzle and cake. Blanchard said he had spoken to people from all over New Zealand, who had come to Pleasant Point especially for the anniversary event.

"There's lots of people from here, there and everyone."

Blanchard said there was a lot of nostalgia for steam trains.

"It's a bit like vintage cars and vintage aircrafts, a lot of people live in the past."

And, he said having visitors travel to Pleasant Point to see the AB699 is nothing new, with the railway hosting many international travellers since it was purchased in November 1970.

"There's a lot of people interested in steam trains, the Ab is a drawcard, it brings people in from all over the world."

The celebrations coincided with another milestone, across the road from the steam train celebrations on Sunday – the Pleasant Point Market committee was celebrating two years of being in operation.

Committee member and stallholder, Ian Thompson, said the market was "definitely busier" because of the 100-year celebrations for the steam train. "It was like pre-Covid days."

Thompson said there was lots of people out and about, enjoying the relaxed atmosphere and warmer weather.



Left; Birthday hats all around. Tony Cameron. Right: A gift for Pleasant Point Railway from A & G Price, at the birthday dinner. Courtney Kilner

### **WESTERN SPRINGS TRAMWAY**

The Controller July/August 2022

#### **Overhead Line Work**

Paul Gourley and his loyal team of two, have made good use of the shut-down of the MOTAT Motions Road tram line, to attend to some major overhead repair work. A year or so back (covid adds months to everything), a dewired trolley pole on a tram departing MOTAT Motions Road at a rate of knots, almost destroyed the tension hangers, smashing the glass insulators to pieces. Although still doing the job, the hangers did not look very nice, and these have now been replaced, together with a badly bent piece of running wire.

Before the MOTAT Motions Road extension reopens, the team will also replace the left-turn "split-switch" that takes the single running wire leaving MOTAT Motions Road and splits it back into two wires – one for each direction of travel. This new right-turn switch will allow a straight line exit from the MOTAT Motions Road loop, with trams inbound to MOTAT Motions Road already down to a walking-pace for the facing rail points and the trolley head will be negotiating the "kick-in" to the single line at a far more appropriate speed. On a positive note, the program which started a year ago, to rust treat and repaint all the tramway traction poles inside the MOTAT Great North Road grounds was finally completed in late June. Advanced Corrosion Treatments' team battled bad weather, covid lockdowns and bouts of covid themselves, to finally see around 30 poles treated and given a fresh coat of tramway traction green.

#### No.11

Peter Montgomery and his team had only just completed some coachwork repairs to this car, before she was relocated to the Mechanical Workshop, where one of the two Witton traction motors, which had an intermittent fault, was to be removed and sent off to Gouk & Sullivan Ltd to be repaired. While the tram was up in the air on the hydraulic jacks, and the truck at the No.2 end rolled out for motor removal, Leyton Chan suggested that this was the golden opportunity to disassemble the truck, piece by piece, so he could measure up and create CAD drawings of each component that makes up the Brush-built D1 style truck.

There are little or no known drawings of the D1, so this was a very worthwhile exercise, as in coming years new trucks can be built from Leyton's drawings, for other Auckland trams that used the un-modified D1.

In disassembling the no.2 end truck, there was a concerning amount of wear discovered in a number of places and this prompted Andy and Wayne, with help from their Tuesday volunteers, to roll out the No.1 end truck for closer inspection. Here the wear was considerably worse, so now, work will be undertaken to renew much of No.11's running gear – thankfully the four axles passed a crack test undertaken in early July, so just the ends of each axle require building up to correct some uneven wear in places.



Left: Progress made on 21. Albert Chan. Right: The damaged overhead wire. Paul Gourley

### **GISBORNE CITY VINTAGE RAILWAY**

#### Graeme Scott

The AGM of the Gisborne City Vintage Railway Society Inc will be held at the Engine Shed, Gisborne Railway Yard on Tuesday 11th October 2022 starting at 7:30pm. Visitors are welcome to attend to find out more about us and what we do.

Our 2022/2023 season excursions start at Labour Weekend with 2 public trips and the SteamPunk Convention Carnage (more details at www.gcvr.org.nz/bookings/).

The bridge across the Tauranganui River, which was built in 1923 is in need of repair work. The condition of the bridge is such that our train will not be able to cross it to pick up cruise ship passengers from the port this season. Alternative arrangements are being discussed. Our diesel shunter took one of our passenger carriages to a position near the bridge to check the suitability of that area for cruise ship passengers to board/alight from the train. They would need to be taken there by bus from the port.

The last fire brick has been fitted into the Wa165 firebox. It had to be removed three times to be trimmed to fit correctly. As the fire bricks weigh around 30kg each and the fire box opening is rather small, that was not an easy task. The brakes are being serviced at the moment.

Work has continued on the brakes on DSC2759. A closer examination has revealed that 5 of the 16 brake caliper mounting pins were badly worn. Replacement items were manufactured by GCVR members using equipment in their home workshops as well as the GCVR workshop. Some of the old pins were so rusted in place that a 60 tonne puller had to be used to get them out. The replacement brake caliper pin shown still has to have the head milled to a spanner fitting. A lubricating hole will be drilled part-way along the length of the bolt and a grease nipple fitted to enable grease to be pumped into the brake mounts. It was also found that two axle suspension bearing dust guards (out of the eight normally installed) were missing, allowing dust and dirt etc. into the traction motors and a third one had a broken locating pin allowing the dust guard to rotate freely. Two replacement dust guards are being sought.

Work has been completed on the annual carriage inspections, which includes inspecting the underside of the carriages and the bogies as well as performing brake tests. Once the brake servicing work has been completed on Wa165 and DSC2759, they will under-go their inspections.

Harvey Armstrong flew up from Christchurch to carry out a track inspection, which had to be done using our motorised jigger as our hi-rail Mazda truck is off the road (and rails) for engine servicing. The airport was rather busy and the jigger had to wait for 3 aircraft to land, including a RNZAF C130H Hercules, before it was able to cross the runway.

### **GISBORNE CITY VINTAGE RAILWAY**

#### continued

Out at Muriwai, the ground beneath the shade sails has been slowly settling over the years, creating uneven areas where the tables and chairs are placed. Once again, a local farming family has volunteered to help us, this time by leveling the ground for us. The ground matting was lifted, taken back to the workshop, laid over the turntable and water-blasted to clean it.

See our website www.gcvr.org.nz for the latest updates and our more detailed newsletters.



Left: Passenger loading investigation. Right: Replacement Brake Caliper pin

### **WELLINGTON TRAMWAY MUSEUM**

Tramlines, September - October 2022



Left: During the two months July and August Tram 17 has been out on test several times. Here Russell Jenkins carefully returns the tram into the workshop and over the maintenance pit after one such test. 10th August 2022 Right: Tram 17 rounds the corner between poles 11 and 14 (Collett's Corner) where 16 tie bars were installed on 4th August. Photos: Mike Flinn

### **TRAMWAY HISTORICAL SOCIETY**

Ferrymead Tram Tracts, September 2022

#### Kitson Steam Tram Update - Alex Hunter reports.

Another month passes... and as I write this there is signs of spring on the way with daffodils starting to shoot up. First of all I would like to thank the team for their continued good effort over the last few weeks, it is much appreciated.

Earlier in the month saw the Kitson placed over the pit to allow the repairs to the well water tank under the boiler, this has some reasonably severe corrosion inside it, and we have taken this opportunity to get inside it and remove and treat the rust.

Callum Brieske has been doing the TIG welding repairs to it to allow the new inspection hatch to be fitted shortly.

Stephen Taylor has been busy making the new corner boards for the body, these are rather complex in their simplicity but they certainly look great, Stephen has got them all fitted up finally now, since then they have been painted by the HTT staff and really look the part.

The rotating bell for warning all and sundry that the Kitson is in the area, has been home to my workshop for a freshen up, it was still in reasonable condition, all that was required was a sharpen up of the pawls for engaging the rotating bell clapper.

The Side Skirts have had some attention, these had quite a number of dents and bent parts, the dents have been smoothed out and bent parts straightened, and they have been painted by the HTT staff. Additionally 1 of the 4 locking pins was different to the other 3, a replica has been made and fitted and really looks the part.

The Roof water tank repairs, these tanks date back to 1929 and are of Arc welded construction. The repair of these has been quite a major job and has required a good amount of welding, earlier in the month the first tank was cut open and the interior was sandblasted buy the HTT staff, and then a new section of 3mm plate was purchased, and welded into place by myself, then the second tank was cut open for the same treatment, although the repair was slightly different and was only half cut open. Next a new piece of 3mm steel was welded in, next up it was painted with special tank paint on the inside to prevent any further corrosion and hopefully they last at least another 93 years.

Steve lea has been busy sorting bits on the bodywork, now that the tongue and groove sides are fitted, the many screw holes needed to be filled and sanded back, these have now been sanded back and the new boards are looking great.

Myself ive been sorting all sorts of odd and ends. One of the tricky jobs has been fitting the last bearing block for the reverser, this is in a tricky place under the boiler and I did feel a bit like a contortionist getting the bolts done up.

One other job has been making the new guides for the water valves in the cab, these were Sheetmetal previously and did flop about a bit, now they rotate rather sturdily.

Most recently the Kitson has been moved into the paint booth to begin the bodywork painting, a job of which I am most looking forward to seeing it with paint on it.

The progress is good and we are tentatively looking for it to enter service on Labour weekend.

### **TRAMWAY HISTORICAL SOCIETY**

Ferrymead Tram Tracts, September 2022



Left: Stephen Taylor making adjustments to the panels. Right: The panels disassembled and Stephen and myself were sanding them ready for painting. Photos: Alex Hunter



Left: Callum inside the Well Tank, TIG Welding a patch into the tank, and next up is to clean out all the rust, a rather mucky job... and then paint the inside. Right: Post rust removal. Photos: left- Alex Hunter, right- Graeme Richardson



Left: Bill and Marlene drill a piece of wood for 103. Right: Two of the team shifting a Bulkhead for sanding. Photos: Alex Hunter

### OAMARU STEAM AND RAIL

#### Oamaru Steam and Rail Digest

- 113 passengers were carried during a pretty wet and miserable August.
- The Husky had a few small leaks identified and tightened up.
- The steel and parts sheds have been re-clad.
- TR35's gearbox has been refitted while panel and paint work continues.
- The guards van's exterior moldings are almost finished.
- Alliance Lorneville's DSC 2421 has been lifted off its bogies so they can be refurbished, and the troublesome engine/generator set has been removed.



Photos: The Oamaru Steam and Rail Digest

## **DIESEL TRACTION GROUP**

#### Facebook

De 512 detailing continued this weekend at Waipara, with the doors finally reunited with the loco to be masked out for the stripe. Handrails, headlight surrounds and other handles were painted plus the addition of a new first aid kit box in the cab.



### PAHIATUA RAILCAR SOCIETY

#### Facebook

A long overdue depot update - Sometime ago our long 60m No2 railcar workshop had the concrete floor poured in the first 5 bays of 16 at the north end to facilitate the twinset project. Now work is finally underway to complete the remaining 11 bays - around 40m. This is a mix of contract work using Brian McKail contracting (a PRS member) and volunteer labour. In order to get this done before the end of the year some of work on the railcar projects is deferred. The aim shortly is to have RM 24 inside the building along side RM 121.



Left: a near 40m long concrete track beam being prepared for fixing rails on the East side in the long No 2 Railcar Shed. Right: West side boxing prep. Photos: Facebook



Left: Tristan shunting out one of yet to be restored twinset bogies to make room for the concrete floor work. Right: RM 121's No 1 end shunted outside for a couple of hours. Photos: Facebook

### **CLIMAX 1317**

#### Lions Club of Te Awamutu facebook

In 2003 Te Awamutu Lions Club began a restoration project of the Climax 1317 train - which had spent 48 years as part of the Te Awamutu Memorial Park. The project, which has involved over 12,000 hours of work, \$300,000 of grant money & donations; countless discounts and free use of tools & equipment provided by local businesses, is now complete - and on 18th September 2022 the restored locomotive was formally handed back to the Waipa District Council.





Photos: Lions Club of Te Awamutu Facebook

### **SHANTYTOWN**

Shantytown Facebook

Kaitangata has been going through the long-winded maintenance process over the past few months. Pictured here, the team lifts Katie high so that her wheel sets can be removed and prepared for replacement.

The Shantytown steam crew brought in a crane to lift the main body of our Kaitangata heritage steam train. An Improved F-Class loco currently going through general maintenance and servicing. Once lifted, the team could pull the old wheelset out and slip some temporary wheels in. Now that the big wheels are removed they will be restored and replaced as necessary.





Photos: Shantytown Facebook (right is a screen capture of a video)

### **UPCOMING MAINLINE EXCURSIONS**

# Excursions are subject to Covid Restrictions- check directly with operators prior to travel

#### **Glenbrook Vintage Railway**

GVR have a tonne of trips available, including The King Country Steam Limited (7 October), The Putaruru Flyer & Dairyland Steam Express (8 October), Auckland Steam Supreme (15 October), and many more! For more details visit - <u>www.gvr.org.nz/events/whats-on</u>

#### **Steam Incorporated**

Steam Incorporated (along with GVR) have The Grand North Island Steam Tour in October departing both Auckland and Wellington with pre - tour activities available, and the Manawatu Flyer departing 23rd October.

More information is available at- www.steaminc.org.nz/book-train-trip

#### **Dunedin Railways**

Another Summer of "Trains not Planes" is underway, with the Seasider and Inlander both operating regularly over the summer. There are also special trips including the Twilight Train Quiz Night, and the Victorian.

More information is available at- www.dunedinrailways.co.nz/journeys

#### Gisborne City Vintage Railway

SteamPunk Convention Carnage - Saturday 22nd October, departing 4.30pm. More details available at- https://www.gcvr.org.nz/bookings/

#### Pahiatua Railcar Society

The Manawatu Gorge Shuttles are operating on the 29th of October, along with Round the Hills on the 30th of October.

More information is available at- https://www.railcars.co.nz/excursions

#### Feilding and District Steam Rail Society Inc

Around the Block 3 - To Wellington is operating on the 9th of October, along with The New Plymouth Express 2022 on the 13th of November More information is available at- https://events.steamrail.org.nz/?page\_id=4

## FRONZ JOURNAL #227 WAS PUBLISHED 2 October 2022.

CONTENTS MAY BE REPUBLISHED WITH ACKNOWLEDGEMENT.