# NORTHERN VIEWS

Website: wmec.org.nz

**ISSUE No 323 … … … … … … … … … April 2019**

Clubrooms/Running Track at Heritage Park, SH14, Maunu, Whangarei.


Whangarei Model Engineering Club Incorporated

# Third Sunday Running

Loadings were good but not as good as some Sundays in the past.

Rankin had his new loco there and it was given a fair bit of work to do and apart from a small hiccup first up, performed beautifully. This was only the second time that it has been seen at the club.

Another event was the appearance of new member Chris Birkett's 0-4-0 "Rosemary". This was for a boiler inspection which it had to have to be on the New Zealand register because it has English papers. I believe it has passed the first stage with a squeeze test and the next one, in steam, will take place toward the end of the month.

Picture on left shows boiler inspector Rodney White doing his stuff.

Chris has promised to give me some copy covering the locomotive's building and consequential shipment to New Zealand.

## QUESTION ???

If you are merrily driving your engine around the track and you hear sounds like "thumpity, thumpity, clunk, clunk … what would you do?

Obviously you would do a quick stop and inspect your engine. You do just that and everything appears to be honkydory [much scratching of head]. You gingerly open the regulator again and nothing untoward happens for a couple of metres, then it's on again.

By this time you have quite an audience then somebody asks "why is a certain wheel of the tender running on the 5" rail while all the others are on the 7¼" rail. It turns out that the offending wheel has decided to go its own way and moved inward on the axle while negotiating a turnout.

This of course necessitates a return to the workshop to rectify the problem.

## CLUB NOTICES

3rd Sunday Running — April 21st, 10 am till 3 pm.

Mid-week Workdays — Mostly Every Wednesday, 10 am — 3 pm.

**Extra Running Days This Month:**

**SEE INSIDE**

THESE WORK IN WITH MUSEUM "LIVE" DAYS AND OTHER EVENTS WHEN HELD

# QUIZ — What is it and where?

**See Page 4.**

# AVÉ JEFFREY

A frequent visitor to our site, actually every running day or special event, Jeffrey was mad keen on trains right from when he was a youngster.

His mother said that he had drawer(s) of trains and used to lay tracks all through the house. His hearing was very acute and he could tell the exact engine should it start off accidentally in the middle of the night.

Unfortunately he had an incurable disease that was first pin-pointed when he was about four years of age, it was something neurological, and the experts said it would get worse and that there was no known cure. It started with his vision and gradually it affected his walking ability and in the end he was completely blind and in a wheelchair.


But it was everyone to the pump to help him on to the trolley when he came to the club to take a ride.

As an honour to him the club named a new engine that had just been purchased, after him.

A plaque was mounted on both sides of the cab to that effect. That plaque also had his name in Braille.

Condolences to his family from the committee and members of the W.M.E.C.

**Views expressed in this newsletter are not necessarily the views of the editor or of the Whangarei Model Engineering Club**

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# *Wednesday Workdays*

**By The Editor**

The WW crew, although they are enthusiastic, are getting thinner on the ground and it would be nice to see some new faces on the scene.

A couple of the bogies on some of the older ride cars are starting to show their age and Rodney and a couple of other keen beans have been giving them some TLC and have found that the wear is quite substantial in some places. Investigation into the importing of some FBU ones from overseas has been discussed but that is where it stands at the moment. The price for these seems to be reasonable.

The picket fence on the edge of the platform is in the process of being cleaned and repainted. It is about half done and it shouldn't take long for the rest.

Some repair work on the points at the back of the "mountain" has also been undertaken.

On the morning of the 27th of March the club (plus any members from other organisations within the Heritage Park boundary) was invited to share some bikkies and a "mug of drug" with members of the Northland Astronomical Society. A right royal doo it was. Apart from all the eatables the society gave all present a really good demonstration of what they did.

We had a quick tour around the night skies as it would appear in any part of the world. It would seem that the Southern Hemisphere puts on a better show than the opposite side of the globe apparently there is less pollution in the south.

After the aforementioned show a few of our group got stuck in sorting though a whole heap engineering magazines that had arrived from somewhere.

## SPECIAL CHARTER!!

**Onerahi Playcentre, Wednesday, April 3rd, 11 am.**

**Two trains.**

**Paeroa: The new 7¼" railway at Paeroa is just about up and running.**

Some information from their executive officer is as follows:

I'd like to invite fellow rail enthusiasts to come down to Waihi and check out our new 7¼" track. It would be appreciated if this could be passed on to your members, as we are keen to have them make use of it.

We are open every day and have a lift to unload locos and rolling stock and water for steamers.

Please feel free to contact me should you have any questions regarding the above.

Many thanks, Peter Cooper, XO Goldfields Railway Inc,

38 Wrigley Street, Waihi 3610, phone 07 863 9020. www.waihirail.co.nz

## Other Club's Events:

**Cambridge Open Weekend:** April 6-7, 2019.

**Hamilton Twilight Running:** 5-9 pm April 13, 2019.

**Havelock North:** Easter Open Weekend, April 19-22, 2019.

**Hamilton Twilight Running:** 5-9 pm May 18, 2019.

**Manukau Live Steamers:** Queens Birthday Weekend, June 1-3, 2019.

# Tacoma Narrows Bridge collapse on November 7, 1940

The 1940 Tacoma Narrows Bridge, the first Tacoma Narrows Bridge, was a suspension bridge in the American state of Washington that spanned the Tacoma Narrows strait of Puget Sound between Tacoma and the Kitsap Peninsula. It opened to traffic on July 1, 1940, and dramatically collapsed into Puget Sound on November 7 of the same year. At the time of its construction (and its destruction), the bridge was the third longest suspension bridge in the world in terms of main span length, behind the Golden Gate Bridge and the George Washington Bridge.

Construction on the bridge began in September 1938. From the time the deck was built, it began to move vertically in windy conditions, which led to construction workers giving the bridge the nickname Galloping Gertie. The motion was observed even when the bridge opened to the public. Several measures aimed at stopping the motion were ineffective and the bridge's main span finally collapsed under 40-mile-per-hour (64 km/h) wind conditions on the morning of November 7, 1940.

Following the collapse, the United States' involvement in World War II delayed plans to replace the bridge. The portions of the bridge still standing after the collapse, including the towers and cables, were dismantled and sold as scrap metal. Nearly 10 years after the collapse, a new Tacoma Narrows Bridge opened in the same location, using the original bridge's tower pedestals and cable anchorages. The portion of the bridge that fell into the water now serves as an artificial reef.

The bridge's collapse had a lasting effect on science and engineering. In many physics textbooks, the event is presented as an example of elementary forced resonance; the bridge collapsed because normal speed winds produced aeroelastic flutter that matched the bridge's natural frequency. The collapse boosted research into bridge aerodynamics-aeroelastics, which has influenced the designs of all later long-span bridges.

The original Tacoma Narrows Bridge was the first to be built with girders of carbon steel anchored in concrete blocks; preceding designs typically had open lattice beam trusses underneath the roadbed. This bridge was the first of its type to employ plate girders (pairs of deep I-beams) to support the roadbed. With the earlier designs, any wind would simply pass through the truss, but in the new design the wind would be diverted above and below the structure. Shortly after construction finished at the end of June (opened to traffic on July 1, 1940), it was discovered that the bridge would sway and buckle dangerously in relatively mild windy conditions that are common for the area, and worse during severe winds. This vibration was transverse, one-half of the central span rising while the other lowered. Drivers would see cars approaching from the other direction rise and fall, riding the violent energy wave through the bridge. However, at that time the mass of the bridge was considered to be sufficient to keep it structurally sound.

The failure of the bridge occurred when a never-before-seen twisting mode occurred, from winds at 40 miles per hour (64 km/h). This is a so-called torsional vibration mode (which is different from the transversal or longitudinal vibration mode), whereby when the left side of the roadway went down, the right side would rise, and vice versa (i.e., the two halves of the bridge twisted in opposite directions), with the centre line of the road remaining still (motionless). Two men proved this point by walking along the centre line, unaffected by the flapping of the roadway rising and falling to each side. This vibration was caused by aeroelastic fluttering.

Fluttering is a physical phenomenon in which several degrees of freedom of a structure become coupled in an unstable oscillation driven by the wind. Eventually, the amplitude of the motion produced by the fluttering increased beyond the strength of a vital part, in this case the suspender cables. Once several cables failed, the weight of the deck transferred to the adjacent cables that broke in turn until almost all of the central deck fell into the water below the span.

The underwater remains of the highway deck of the old suspension bridge act as a large artificial reef, and these are listed on the National Register of Historic Places with reference number 92001068.

The Harbour History Museum has a display in their main gallery regarding the 1940 bridge, its collapse, and the subsequent two bridges. ◆

A Gift from the Family

**Tony, as we all know, has been spending an inordinate amount of time building his A3 over the past nine years.**

**The family must have decided that his tools were not always were he left them, so they made the beautiful wooden box for him to put them into. I don't know about you others but I was unaware that the A3 even had a name which according to the lid of the box is "CARBINE".**

**I hope that we can see Carbine in action before the end of the year.**

**(Is it named after the racehorse or a rifle)?**

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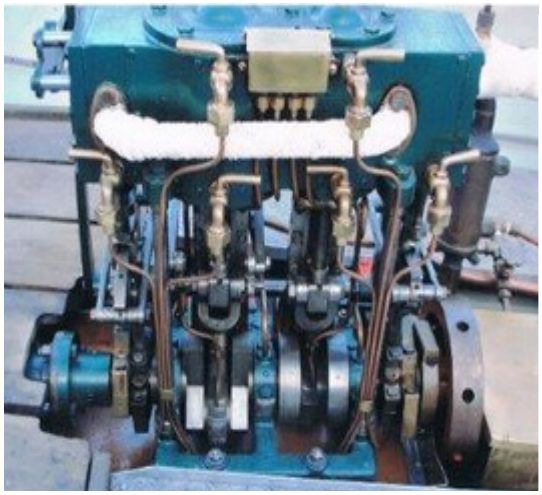
# FOR SALE

## GYPSY

This beautifully built 18ft replica of an 1880's steam launch has recently been restored and is now regrettably for sale.



Built by Dave Jackson of Warkworth in 1987 using two diagonal skins of kauri, epoxy glued and sheathed in glass and epoxy.

The machinery is a Stuart Turner #6 2-cylinder compound built in 1960 and restored in 1987. The boiler was built by Dyers of Penrose in 1987 and is of vertical fire tube construction and the tubes are made of copper. Burns coal or wood. Boiler has recently been tested to 180 psi and the safety valve which is set to 100 psi, serviced.

A special feature of the vessel is that it has a *"Windamere Kettle"*, a device for making tea with the water being boiled using steam from the boiler to heat the water.

A road trailer is included in the price. This trailer has recently had new tyres, axles and wheel bearings.

GREATLY REDUCED PRICE IS

**$15,000**

**Contact Details: Kelvin Minchin,**

**Phone 09 434 3649; mobile 021 260 9181, E-mail: kminchin@xtra.co.nz**

IF UNDELIVERED PLEASE RETURN TO:—
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Northern Views

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