Gauge One 3D Printing Circle

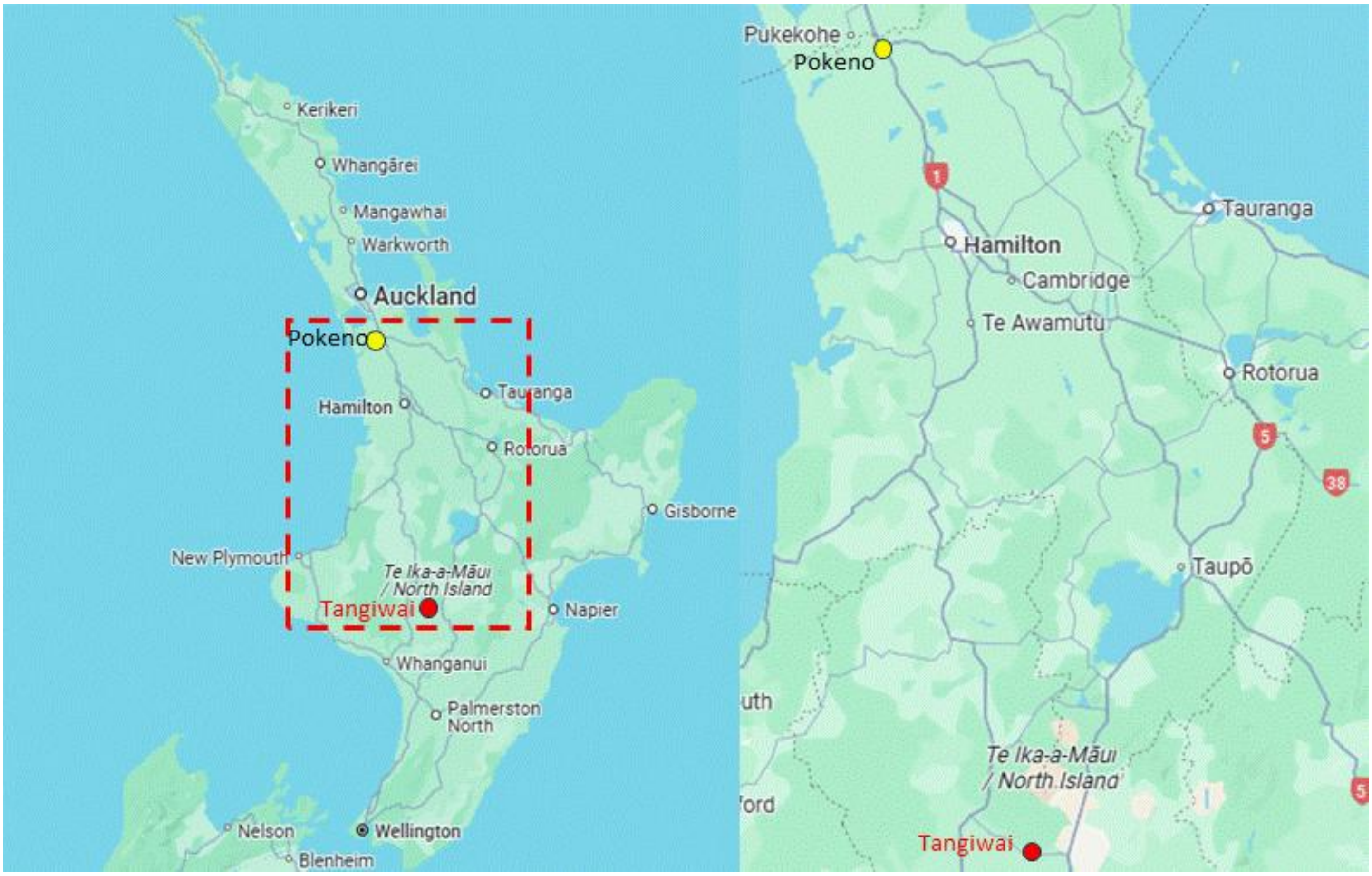
BR Brake Van World Tour 12

Tangiwai

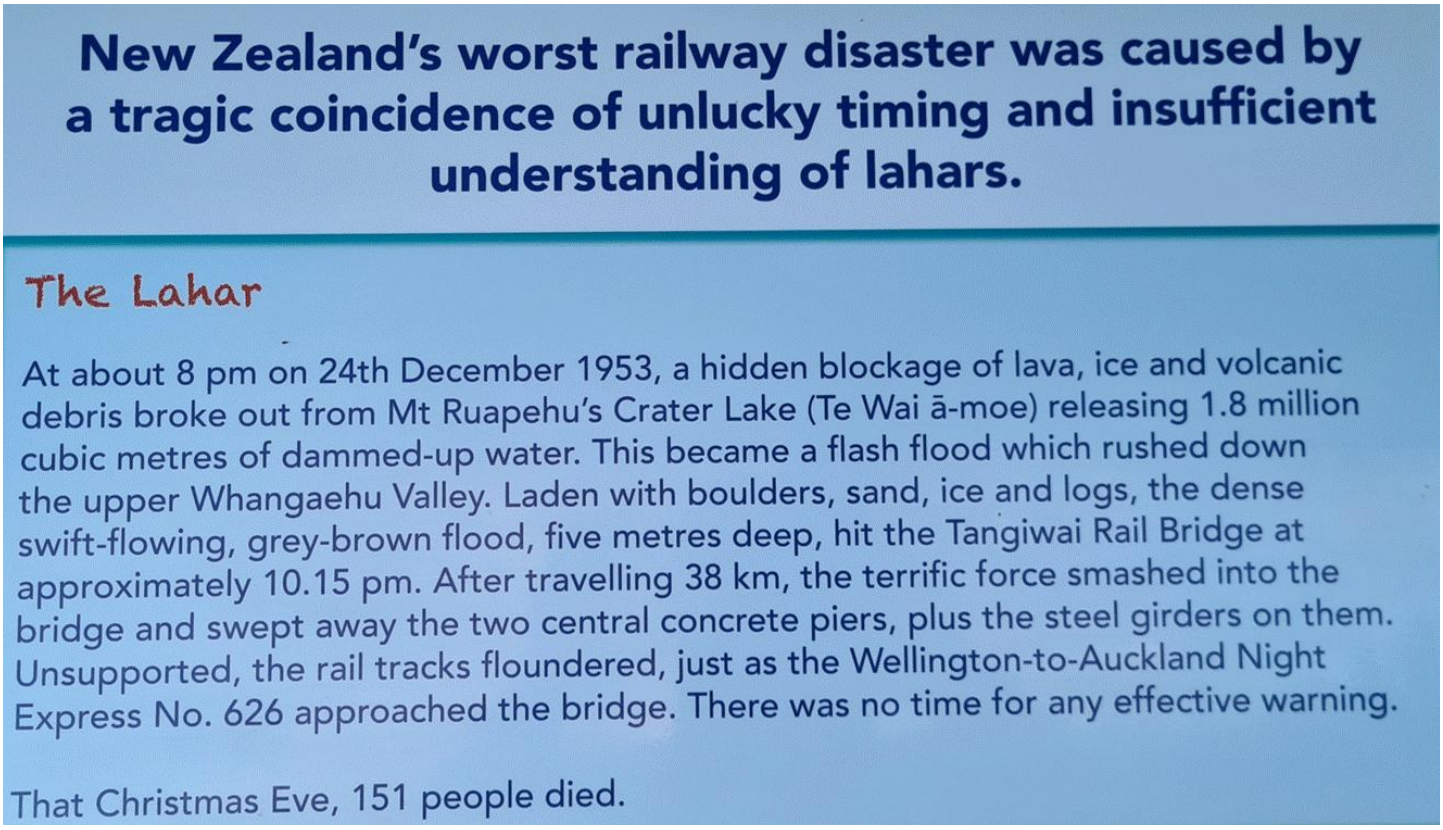
Author: John Boyson

Tangiwai Rail Bridge over the Whangaehu River. This is the outflow of the crater lake on the summit plateau of Mount Ruapehu.

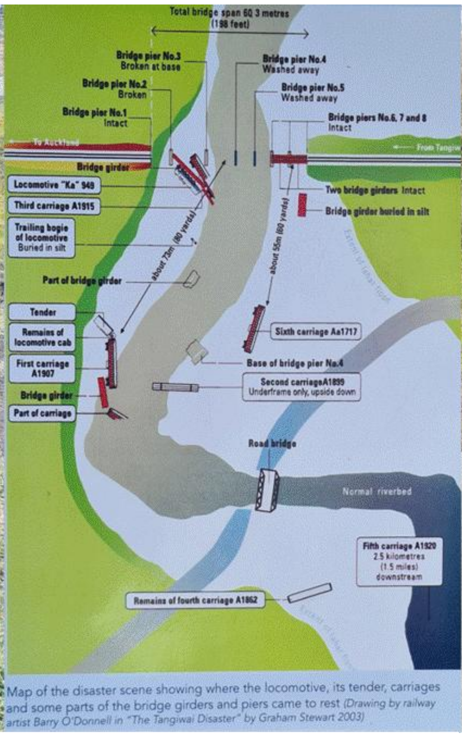
This newsletter covers one place that was deliberately omitted from the last report on the drive to Mount Ruapehu. This is Tangiwai, which is the site of New Zealand's worst railway disaster. The circumstances are unique to my knowledge and entirely due to natural causes with no one to blame. It remains a poignant site despite the passage of time.



The memorial to those who died. In the background, the modern road bridge also rebuilt after the disaster. There are traffic signals and automatic barriers that drop down. These are activated when a lahar approaches.



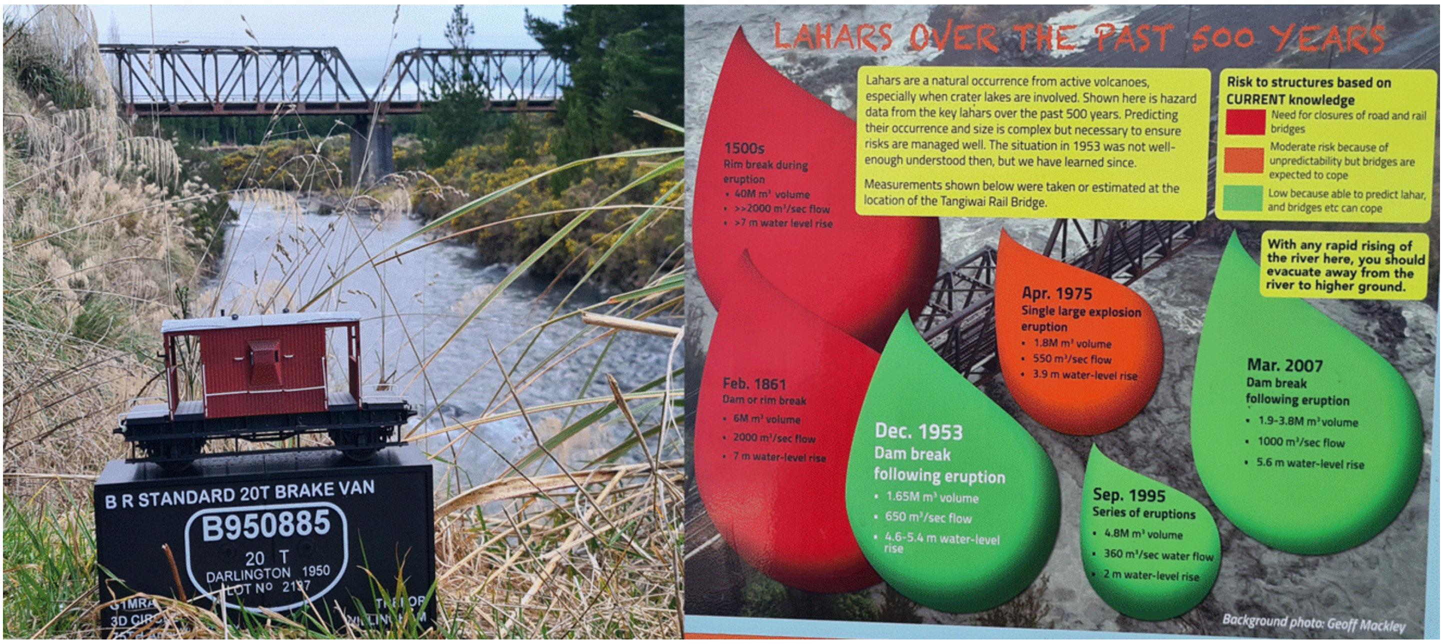
I should add to the explanatory note that the lahar had descended about 1700 metres in its 38km journey from the crater to the bridges, so the kinetic energy contained in the flow of water etc. would have been monumental even allowing for friction over that distance. The road bridge was also taken out, fortunately without further casualties. However, this further complicated the rescue and recovery efforts in terms of access.



Two further memorials and a plan of where things ended up after the disaster.

A bogie and undercarriage section.

An information sign with an artist’s impression of the event.



The replacement bridge and some history of volcanic events impacting on the site. The source of the river becomes obvious as soon as you arrive. The smell of sulphur is significant even at this distance from the crater!

The bridge and approach from the south. The bridges and warning systems both worked following the 1995 and 1996 eruptions and the resulting 2007 lahar (after the lake broke its dam once again 11 years after these). On this occasion, the lahar was even larger than the 1953 event. However, this time we were warned it was coming (both bridges were closed as a result) and they were both strong enough to withstand the torrent.

To lighten the mood of this newsletter, which has been written whilst we were travelling around Japan (without the brake van which was banned by a higher authority!):

Here are some views of the Shinkansen viewing point on Hokkaido where the line enters the tunnel crossing Tsugaru Strait to reach Honshu. The main line tracks are dual gauge to accommodate Japan 3' 6" standard gauge lines as well as the 4' 8" for the Shinkansen trains. Dedicated 3' 6" locomotives are also required for the freights using the narrower gauge since they use the same power supply as the Shinkansen's. Thus, they are dual voltage. All other 3' 6" stock has to be hauled through by these locomotives.


A Hakodate bound Shinkansen having left the tunnel.


And heading towards Hakodate.

Where else in the world would you find a tourist attraction that is a train spotting facility? They even provide a working timetable showing all the passing trains and the direction they are each running in.

Some statistics: The Seikan Tunnel construction started in 1964 and opened in 1988 initially to 3'6" only. It is built largely through hard volcanic rock at a point where two tectonic plates meet. It runs to a depth of 240 metres below sea level at its deepest (the deepest part of the strait is 140 metres) and is over 50km long. For the majority of the tunnel, the rock was too hard for TBMs. Accordingly, blasting was the method used over most of its length. The speed over the joint line is governed by the freights at 160kph (100mph). Thus, the trains are passing at a reasonable speed for photography. Elsewhere the Shinkansen's normal operating speed is 300kph.


A Shinkansen heading for the tunnel and Honshu.


A few minutes later, a 3’ 6” gauge freight train heading for the tunnel in the same direction.

All these trains were precisely on time to the minute including the freight train.

What the tunnel goes under from Cape Tappi on Honshu. The line of the tunnel is shown on the dais as a red line.