



The Bulletin Kaikōura earthquake update

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Coastal Pacific – that's a wrap

KiwiRail's Coastal Pacific service wrapped up for the season on Sunday 28 April after a busy summer, following a two-year hiatus. The much-loved service will return on 27 September, offering the experience of enjoying the beautiful Kaikōura coastline from the comfort of the train.

'Kiwis and overseas visitors alike have been thrilled to once again be able to travel along the stunning Kaikōura coastline by train, as well as get an up-close view of the amazing post-quake rebuild effort,' says KiwiRail Head of Tourism Ahleen Rayner.

'Our Great Journeys help drive regional growth and that includes in Kaikōura and Marlborough, where Coastal Pacific passengers are estimated to spend \$34m across the two regions, supporting about 300 local jobs.'

Waiting patiently in the sun at the Kaikōura platform to enjoy the last train were Waikato locals, Abigail and Robert Walker. After a beautiful day whale watching and looking around Kaikōura they were ready for the twilight trip to experience the rest of the coastline from Kaikōura to Christchurch.

'We couldn't believe the amount of work that's been done and how impressive it all looks compared to what you see on the TV,' Abigail says.

This year Abigail and Robert are on a 'train trilogy' journey. Along with the Coastal Pacific, they have recently been on the Northern Explorer, and, after a couple of days in Christchurch, were off to experience the TranzAlpine.

'Last year we did cruises, this year is trains, and who knows what we will get up to next year!'



Abigail and Robert Walker



Final Coastal Pacific of the season departing Kaikōura

FUN FACTS

During the Coastal Pacific season, passengers consumed:

- Nearly 22,000 cups of tea and coffee
- Nearly 5000 bottles of wine (with Delectat Sauvignon Blanc the top choice)
- 4568 bottles of beer (with Monteith's Golden Lager the most popular option)
- 5788 sandwiches (with ham, cheese and egg the most popular filling)
- 1774 pies
- 1077 cheese platters
- Nearly 6000 ice creams (the best-seller was raspberry and white chocolate)
- More than 700 roast chicken meals

This Bulletin provides the latest information about the rebuild of road and rail networks damaged by the Kaikōura earthquake in November 2016. The Bulletin is produced by the North Canterbury Transport Infrastructure Recovery (NCTIR) – an alliance representing the NZ Transport Agency and KiwiRail, on behalf of Government.





Coastal Pacific passengers consumed nearly **22,000** cups of tea and coffee, **5,788** sandwiches were eaten, with ham, cheese & egg the most popular filling

27,380 passengers on the Coastal Pacific between December 2018 and March 2019, compared to **25,158** for the same period in 2016

98km of Pacific Coastline along the Coastal Pacific route

The Coastal Pacific returns on 27 September **2019**

29 December was the **busiest day of the season**, with passengers in total **258** travelling on the Coastal Pacific that day

21 tunnels on the Coastal Pacific route - **20** tunnels were repaired

183 bridges on the Coastal Pacific route - **60** bridges damaged, **3** new bridges built, **3** bridges replaced

6 hours' journey from Christchurch to Picton on the Coastal Pacific

Post-earthquake rail repairs is the **largest rail** construction effort in the South Island since WWII

60,000 fewer truck movements on upper South Island roads since rail reopened to freight trains on 8 August 2017

Main North Line buried under more than **100** slips and landslides in the **7.8** earthquake

More than **800,000** tonnes of freight moved since 8 August 2017

SEAL ALERT



Safety alert: seal pups

'The seal population in Kaikōura is booming,' says environmental advisor and trained seal handler Elisa Chillingworth. 'Since the earthquake they've spread out along the coast and found new habitats. This is good news considering the change in sea level from the earthquake and the disruptions from all the work along SH1.'

While the growth in seal population is positive, it also means sightings on the road are increasing. Seal pups are typically born between November and January, becoming more active and independent around April - and love to lie on the warm road.

'NCTIR has completed most of the work that would affect seal habitats, at this point our priority is protecting and monitoring the population,' says Elisa.

Fences are being installed in areas where there is a high risk of seals accessing the road. Road users should drive carefully and obey the speed limits. If you see a seal, slow down, be aware of traffic behind you and keep to your side of the road. Put your hazards on and drive carefully around the seal. First and foremost think about your own safety and the safety of other drivers. If you have a passenger they can notify DOC by calling 0800 362 468. Please contact info@nctir.com if you have any concerns.

Waimā Bridge completion

Physical repairs on the Waimā bridge, north of the Clarence River, have recently been completed. The seven-piered bridge was a 'cool little job' in comparison to some of the project's bigger jobs, according to project engineer Adrian Blok - but it also presented its share of challenges. Damage from the 2016 earthquake meant a total repair job was necessary. Ecologists had to go 'electric fishing' on-site during the river diversion process in order to protect any native fish, while a crew of nine people pumped the remaining water away from each individual pile to complete the work.

Works involved re-sleeving and re-casting existing columns/piers below the ground. A sleeve is a cylindrical steel housing for concrete to be poured into, which creates a casing. All seven piers required such repairs. 'It was a good learning experience in a really challenging environment,' says site engineer Olga Joensuu.

What's next for this team? Repairs at Jacob's Ladder and the Clarence road bridge will keep the crews busy well into winter.



Behind the scenes at Blue Duck corner



Temporary traffic lights have been installed between Irongate Bridge and Blue Duck Valley Road to allow for stabilisation work on the seaward edge of the corner. There is a great deal of work being done to improve ground conditions and stabilise the road. Large reinforced concrete piles have been constructed on the cliff edge into the ground. Rock anchors are being installed, and these will be tied into a capping beam constructed at the top of the piles. When this work is completed the road will be constructed to finished level and the road barriers installed.

Traffic has been reduced to one lane as the worksite is on a very narrow corner, and the crew have limited space to use machinery. The stabilisation process involves inserting rock anchors that are 17.5 metres long at a 15 degree angle into the sea edge, under the road, and up to 8 metres into the rock bank. The rock anchors consist of a

steel rod inside a plastic tube. Grout is inserted inside to secure the rod. Due to the length of these rods and tubes (17.5 metres), the engineers have developed a unique grouting system. A 'ski ramp' has been built at a 15 degree angle (the same angle they are inserted into the ground), and the tubes are laid down the ramp while the grout is being injected.

Next these 17.5-metre lengths are moved to the worksite and inserted into predrilled holes in the ground. Grout is used to secure these plastic tubes into the predrilled holes. Once the 49 rock anchors are installed, the road barrier and capping beam to be completed, and the road rebuilt. Work is expected to complete by the end of July 2019. Road sealing will be done in September or October when weather conditions are suitable.

Anzac Day

NCTIR wellbeing officer Rob Roche was honoured to participate in this year's Anzac Day parade, laying a wreath on behalf of the team during a ceremony at the Garden of Memories.



SH1 safety improvements

Along the Kaikōura coast the NZ Transport Agency is carrying out a series of improvement works, as part of the rebuild, that will improve the inherent safety for road users. The KiwiRAP tool - www.kiwirap.org.nz - is used to rate the overall safety of the road. The pre-earthquake KiwiRAP star rating for the coastal sections of the road was between 2 and 3 out of 5. The Transport Agency has tasked NCTIR with improving this rating to be in excess of 3, so how will this be done?

- Double centre line markings put an extra ½ metre between traffic lanes, so motorists are less likely to enter the opposite lane if they cross the white line by mistake. This allows for extra reaction time if a motorist has a lapse in concentration or judgement.
- Narrowing lanes from 3.5 metres to 3.25 metres (with double white lines between) moves cars further away from a head-on collision. Narrowing lanes has also been shown to reduce traffic speeds.
- Road widening will allow a 750mm shoulder between the white line and roadside barrier, allowing for increased reaction time. It also reduces the risk of drivers dropping a tyre off the side of the seal, which could result in the car losing control. The additional widening also provides some additional space to allow for confident cyclists to ride along the road.
- Guardrails are being placed to reduce the chances of vehicles running off the road and landing upside-down on the foreshore or hitting solid objects (such as trees) on the roadside. Barriers absorb the energy when a vehicle hits them, reducing the severity of the crash for the occupants.
- Road realignment in Half Moon Bay and Rākautara will make the road safer and more consistent to drive by straightening out curves, reducing the chances of a driver losing control on the corners.
- Safe stopping areas and informal pull-in areas will be provided in as many places as possible along the coast, and dangerous parks in unsafe areas have been reduced.
- Speed reduction has occurred in parts of the Hundalees (60km/h) and along the coast (80km/h) due to the inherent safety risk of the road. Kaikōura's narrow transport corridor cannot accommodate the 20-metre width required to build a road safe enough to travel at 100km/h.

The engineering behind these improvements will provide a safer state highway for locals and visitors for years to come. Over a five year period, these safety improvements are forecast to result in eight fewer deaths and serious injuries, representing a 35% reduction.



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