



# The Bulletin Kaikōura earthquake update

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## NCTIR 2019/20 programme of work

The NZ Transport Agency and KiwiRail have agreed on the final work package for NCTIR to deliver. This includes 33 new projects along SH1 north and south of Kaikōura, as well as the inland route to Waiau. 'Work on these projects is ramping up. We'll be continuing at pace, through to approximately June 2020, before winding down to lights off in December 2020,' says NCTIR Project Director Tony Gallagher.

Teams are currently hard at work constructing six formal safe stopping areas, after the completion of the first at Ōhau Point last year. They're also making safety improvements such as road realignments, installing safety barriers, and adding double centre lines to move traffic further apart. Work is also underway at a number of sites to further improve the resilience of the Main North Line.

'We all want a finished product we can be proud of - a safe and enjoyable journey for future generations,' says Tony.

Some of the milestones for the next phase:

- Inland Road (Route 70) works complete - August 2020
- Rail works complete - September 2020
- SH1 improvement works complete - October 2020
- Recovery/resilience works complete - October 2020

If you would like to find out more about NCTIR's new programme of work for 2019/20 please follow this link to see the map [nzta.govt.nz/projects/kaikoura-earthquake-response/safety/](https://nzta.govt.nz/projects/kaikoura-earthquake-response/safety/)



## Rail Safety Week campaign

As part of Rail Safety Week last week (12-18 August) KiwiRail and TrackSAFE NZ set up 224 'near miss memorials' in 33 locations around the country to raise awareness around the importance of safe behaviour at railway tracks and level crossings. Each of the memorials included a QR code that, when scanned, linked to a video clip showing footage of a real near miss. Over 400 near misses were recorded last year, and while most of these went unreported in the news, every single one left an impact on the train driver, rail staff, witnesses and pedestrians involved. For more information please visit the campaign website: [www.nearmisses.co.nz](http://www.nearmisses.co.nz)



# Guardrails – some of your questions answered

## Why are guardrails being installed along the Kaikōura coast?

In July 2017, the Government announced a \$231 million investment to increase safety and resilience on State Highway 1 between Clarence and Oaro. Guardrails are being installed in certain areas along the Kaikōura coast as part of this investment, to help improve safety for road users. This route safety project also includes the following improvements:

- Double centre lines, which put an extra half metre between traffic lanes, also narrow the lanes from 3.5 metres to 3.25 metres, which has an effect on traffic speeds.
- Road widening to leave a 750mm shoulder between the white line and roadside barrier, allowing for increased reaction time.
- Road realignment, to make the road safer and more consistent to drive by straightening out curves.
- Seven safe stopping areas and more informal pull-in areas, providing safe parking in as many places as possible along the coast.

The Government has recently announced a \$1.4 billion investment to make New Zealand's highest risk roads safer but due to the earthquake we are already working on making SH1 around Kaikōura safer.

## Can you install other safety systems and reduce the number of guardrails?

A range of interventions are considered when looking to improve road safety across the transport network. Guardrails are a safety tool used when the consequences of a vehicle hitting them is less than the hazard which they are protecting. For example, they may be installed near an out-of-context curve to stop someone going down a slope if they lose control. They are useful in narrow corridors where there is limited reaction time and if the vehicle left the road it would have a high chance of rollover or end up in an unrecoverable location.

Some other hazards they will help protect drivers from are:

- rail line and trains that are at road level or up to 1 metre above the road
- drop offs into culverts and rocky shoreline
- power poles
- large trees and rocks
- ground that is unstable for heavy vehicles
- rockfall from slips.

Guardrails are also being installed along the road by the camping grounds to provide protection for campers in tents and caravans.

## Can I walk or cycle along the road by the guardrails?

SH1 is narrow between Clarence and Oaro. Where possible there will be some road widening to achieve a 750mm shoulder between the guardrail and the edge of the road. This is mainly designed to allow for increased reaction time for drivers before they hit the gravel shoulder, but can also accommodate cyclists. Pedestrians are not advised to walk along the road.

## If a vehicle crashes into the new guardrails, would it bounce off into the opposing traffic?

The guardrails are designed to capture and retain vehicles on impact. They absorb the energy of the vehicle by allowing the posts to break off but the solid line of the barrier stays intact. This in turn reduces the speed and severity of the crash for the occupants.

## There have been no deaths on this section of SH1 so why do we need guardrails?

Between 2012 and 2016, four people were killed and 15 people were seriously injured in SH1 crashes north of Kaikōura, up to Waipapa Bay, and south of Kaikōura to Conway Flat.

Of all crashes between Kaikōura and Clarence, 55% were loss of control or head-on crashes on a bend, and 25% had speed as a factor. South of Kaikōura, 79% of crashes were from loss of control or head-on crashes on a bend, and 38% had speed as a factor.

In 2018, the Transport Agency introduced reduced speed limits in parts of the Hundalees (60km/h) and along the coast (80km/h), following consultation with the community. Even when speed doesn't cause a crash, it is most likely to determine whether anyone is killed, injured, or walks away unharmed.

International research has found that even if road users complied with the road rules 100% of the time, there would only be a 50% reduction in deaths and a 30% reduction in injuries. Guardrails protect people in a loss of control or speed crash.

## Will guardrails stop injuries?

Guardrails are designed to 'capture and retain', which means they will soften and/or deflect the impact but will not stop crashes from happening in the first place. When a vehicle hits a guardrail it is slowed down, reducing any resulting injuries.

## Why is there so much guardrail between the road and railway line?

The railway line is a hazard where there is the potential of a vehicle moving onto it and colliding with a train or a vehicle being struck by a train because it's on the track or parked too close to the track. KiwiRail has a requirement that allows controlled access only within 4 metres of the centre line of the track. Guardrail is being installed where the road is adjacent to the track and has a height difference of one metre or less.

## Why can I not stop on the side of the Kaikōura coast where I used to?

We have been assessing places where it is safe to park and open a car door along state Highway 1 between Clarence and Oaro. In general, when there are vehicles travelling at speed adjacent to the park, three metres is the distance required for safe parking.

All possible locations along the coast have been made available for parking, where we have found there is enough space and no other hazards.

## How have you informed the public about the guardrails?

We inform the community about the NCTIR work programme in a number of ways including:

- the Bulletin, a monthly newsletter with hardcopies delivered to numerous Kaikōura businesses and distributed to over 2000 email recipients
- advertisements in the Kaikōura Star
- public information meetings
- work notices to people and parties directly affected.

We also work regularly with two advisory groups, a Restoration Liaison Group made up of representatives from a number of organisations, and the Cultural Advisory Group.

We also welcome public enquiries. You can contact us on **0800 NCTIREQ** (0800 628 4737), by emailing **info@nctir.com** or dropping into our office on Beach Road.



## Around the clock at Jacob's Ladder

Once the distant lights of the Kaikōura Peninsula had flickered out, and the last train of the night had passed, the crew at Jacob's Ladder kicked into high gear over a weekend in July. A pre-approved block of line (BOL) by KiwiRail meant no trains would pass the site, just south of Ōkiwi Bay, for 48 hours, allowing the crew to safely remove a section of rail and install a temporary rail bridge.

The temporary rail bridge was familiar, the same infamous 'ugly bridge' installed at Bridge 131 near Wharenui to get the KiwiRail trains moving again after the November 2016 earthquake. This time the rail bridge is enabling vital work to continue under the road and rail alignment at Jacob's Ladder while trains continue running on time.

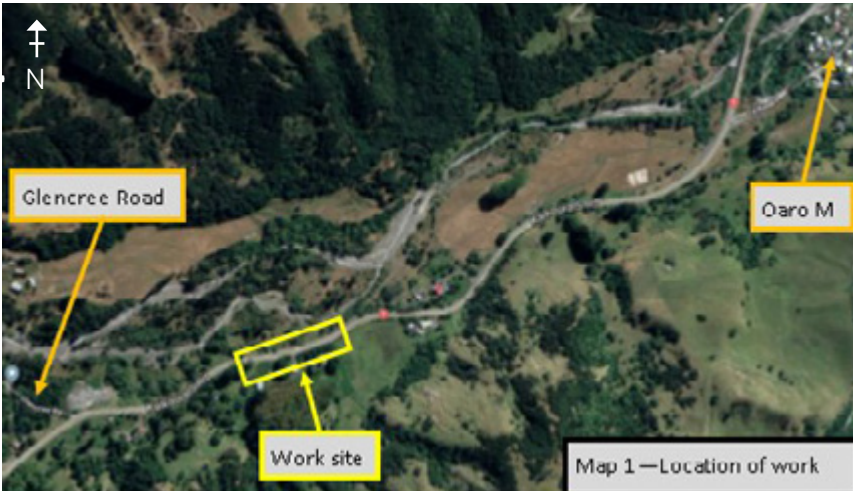
Leading up to the BOL, crews were hard at work prepping the area and, in the precast yard adjacent to site, boxing and pouring wing walls for the permanent rail bridge that will be installed later this year. Project Manager David Larcombe explains that teamwork has been key to moving forward at Jacob's Ladder. Project Engineer Adrian Blok agrees, pointing out the strong communication between Earthworks Superintendent Warren Arnold, and Structures Superintendent Hemi Foster. The task of installing the temporary rail bridge began just after midnight, and required all hands on deck. The hard work paid off, and the temporary rail bridge was opened and ready for the next scheduled train.

Site Engineer Rana Hassnain says the temporary rail bridge will be removed and the tracks reinstated in time for the Coastal Pacific train to start on the last Friday of September. "We'll put the normal track lines back, and they will sit on the newly installed 4x4m<sup>3</sup> culvert." As for the ugly bridge? It will return to KiwiRail until it is needed by another site.



## Oaro Gita repairs

Work is underway to repair culverts and build retaining walls at two sites past Oaro, where there is existing damage from Cyclone Gita (see map below for location). Works are expected to continue for four months, with one-way traffic in place around the worksite. Work will generally take place between 7am and 5pm Monday to Friday, with some occasional weekend work. Expect delays and allow extra travel time.



## Half Moon Bay debris bridge work

Work is underway at a debris rail bridge near Half Moon Bay to further improve the resilience of the Main North Line. By installing a new, wider bridge the capacity of the channel will be increased. This work



will be completed in time for the Coastal Pacific passenger train to return at the end of September. Two 63 tonne precast beams, which form the sides of the bridge deck, were driven up from Christchurch and installed during two hour-long road closures. Now that these have been fitted, work can begin in 24-hour shifts to prepare the bridge deck for a concrete pour. After the concrete has cured, the main 'deck swap' will occur within a 54-hour window (old bridge will be lifted out, the new bridge desk slid into place), and the road and rail will be closed for a short period during this time in late September.

## What will NCTIR do with its assets once work wraps up?

A number of locals have expressed interest in the shipping containers, traffic shelters and other various materials that have been used by NCTIR over the course of our work.

Many of these assets seen at our worksites are not owned by NCTIR - they are either hired, on loan, or belong to subcontractors working with us on the recovery.

When NCTIR-owned equipment or material is no longer required, the NZ Transport Agency and KiwiRail, as funders of the project, will decide whether they will keep, donate or dispose of the equipment/material.

If the Transport Agency or KiwiRail do not require the equipment, it will be offered at fair market value to the NCTIR alliance contractors (HEB, Higgins, Fulton Hogan and Downer).

Anything they do not purchase will be put up for auction using client-approved auction companies.

Some NCTIR assets will have no market value, either through age or condition, and will be sold for residual scrap value where possible, or will be disposed of appropriately. Any revenue will be returned to KiwiRail and the Transport Agency.



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### CONTACT US

Call our freephone: **0800 NCTIR EQ** (0800 628 4737) or email us: [info@nctir.com](mailto:info@nctir.com)

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.