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## **Ohau viewing platform taking shape**

NCTIR's first safe stopping area at Ōhau Point is scheduled to be completed by 18 October and Project Manager David McGoey

is confident the team will meet that deadline. The 8.3 metre wide, 4 tonnes cantilever that travelled up the coast and recently arrived at Ōhau Stream serves as the base for the viewing platform.

The arrival of the cantilever was poignant for many of the crew members who joined NCTIR when access to site was limited to helicopter or escorted passage through Tunnel 19, which runs through Ōhau Point, due the massive landslide.

'A lot of us have been working here together from the start,' says foreman Cam Brockie of Site 7. 'Last year it was a race to the finish, as we were the last section of road to be joined up around Ōhau Point in order to get the road opened by 15 December. We built the seawall, and now we get to create this beautiful viewing platform. It's a place where we can look back on all that's been done.'



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. Please note the next edition of The Bulletin will be published on Monday, 24 September.

### IN THIS ISSUE

- Take your breath away
- NCTIR innovation goes global
- Road rebuilding at Whale's Back underway
- Your Kaikōura questions answered
- Rob's head for high places

### Expect delays SH1 south of Kaikōura

#### Monday 10 September to Friday 14 September

Please allow up to 5-5.5hours for travel between Christchurch to Picton via SH1. Remember to check www.nzta.govt.nz/p2c or phone 0800 4 HIGHWAYS (0800 44 44 49)) for travel information.

Thank you for your on-going patience.

If you have any questions or wish to raise any safety issues with us, we would really like to hear from you as part of our commitment to keeping everyone safe in the community. Please contact us on **0800 NCTIREQ** (0800 628 4737) or email **info@nctir.com**.



KiwiRail 🚅

#### New Zealand Government



North Canterbury Transport Infrastructure Recovery

### Take your breath away

Kaikōura's views are world famous. And this picture adds to the region's catalogue of great shots and also provides a unique perspective on one of the region's biggest projects. NCTIR took to the air to capture this image of the new safe stopping area at Ōhau Point. The project is 50% finished and the image provides a bird's eye view of the shared path which will open up the coast to walkers and cyclists. The viewing platform that overlooks Ōhau point and Ōhau's famous fur seals is due to be completed by 18 October. The seawall at Ōhau Point is a maximum of 9 metres high to protect the new road from extreme coastal weather.

# **NCTIR** innovation goes global

NCTIR is taking one of its most innovative designs international. NCTIR Geological Engineer Rori Green will present a paper she co-authored to some of the best minds in highway geo-engineering. She's been given a presentation slot at the Highway Geology Symposium in Portland, Maine, USA. The paper is titled the Development of a Modular Rockfall Protection Wall to Mitigate Earthquake-Induced Slope Hazards.

The co-authors include Cedric Lambert, Charlie Watts, Daniel Kennett (Stahlton Engineered Concrete) and Emerson Ryder (Holmes Solutions). Geofabrics and Eliot Sinclair also made some key contributions to the work. Giving a presentation at a gathering of engineers from all over the world is a daunting task. Rori's task has been made doubly difficult by the already considerable interest in the innovation and the fact she has just 20 minutes (including questions) to describe it and the context in which it was designed and tested.

To the uninitiated the wall looks like many others. However, Rori and her team are understandably proud of it. It is made up of interconnected concrete blocks with an energy-absorbing layer of sand-filled and rock-filled gabions to take the initial brunt of the rock impact.

The key advantages of the wall are its versatility due to its narrow footprint, low deflection and a relatively fast installation time, the latter an important health and safety construction feature given these walls are to be built in rock falls zones. Two versions of the wall – one 40 metres long, the other 70m - are currently planned just south of Ōhau Point and south of Blue Duck Creek.

The design was tested at a vehicle impact facility at Ruapuna Raceway on the outskirts of Christchurch. Holmes Solutions designed a 'rolling bogie' which is effectively a vehicle chassis with a spherical impacting head that serves as a battering ram and mimics the impact of a rock hitting the wall at different loads and impact energy levels.

The footage of the experiment is spectacular. Suffice to say the wall passed with flying colours and was approved for use on site. In its development, the design team took some recent research on the use of gabions and concrete for rockfall protection, combined them, added some Kiwi ingenuity (and a few big smashes) to come up with a solution that can be used in tight spaces where other protection methods like nets not so practical.

Green said early feedback from colleagues going to the conference was positive. She added: 'Lots of people have been looking for low-deflection solutions for some time. It'd be a great legacy for NCTIR to contribute a new rockfall protection solution to the international community'.





### ] Road rebuilding at Whale's Back underway



Since geotechnical work was completed and given the all clear back in May this year it's been all systems go at Whale's Back on the Inland Road (Route 70). Work to stabilise 900 metres of the road at Whale's Back hill is now halfway through cement stabilising. The road stabilising process involves milling out the existing road surface, cement stabilising and the final resurfacing.

Site Engineer Jordan Smith says other work that is also near completion is the installation of 280 metres of 100 kJ rockfall catchment fences and 280 metres of gabion baskets (cages filled with rocks used in road building). The fences require installing four metre anchors for the fence posts then netting and cable. The rockfall catchment low energy fence is capable of stopping approximately 500 kg at 100 km/h. 'We are expecting by the end of October traffic will no longer need to travel the diversion road along this section and can return to the pre-earthquake route,' he says.

## Your Kaikoura questions answered

We take down the questions you ask us at information events and our helpline, if you have a question or want to see other answers, visit **www.nzta.govt.nz/projects/kaikoura-earthquake-response/frequently-asked-questions/** 

#### Q: Why do I have to wait at a stop/go when it looks like there's no cars coming?

There are many reasons we set up stop/go controls at work sites although they may not always be obvious to drivers. It could be that we're moving large construction vehicles within the work site, using a helicopter or that crew are working on a rock face. We know it can be frustrating when you can't see what's happening but we try to keep stoppages to a minimum.

#### Q: What is that ute with the flashing light that leads cars through some stop/go locations?

Pilot vehicles are used to keep traffic moving at a safe and appropriate speed through the site. They're used at locations where additional support is needed such as if crew are working close to the road and excessive speed could pose a safety risk.

#### Q: Are you planning to close State Highway 1 again?

There are no planned closures at the moment as our work can currently be safely progressed while the road is open. Closure dates are publicised as soon as they are confirmed to give as much notice as possible to drivers and the community. We also post information about planned closures here: **www.nzta.govt.nz/projects/kaikoura-earthquake-response/planned-closures/** 

Sometimes the road needs to close unexpectedly such as in adverse weather or following a crash. Visit **www.nzta.govt.nz/p2c** to stay up-to-date with realtime travel information.

#### Q: Will the roads be busier over summer?

Yes. Traffic volumes increase over summer as people head off on holidays and we have more international visitors. Summer is also the season when we get the best results from maintenance and repairs because the weather is warmer and the air temperature is drier, so the seal sticks more effectively to the road surface. There is also a range of work that NCTIR will need to complete while the weather is fine.

#### Q: Are the trains back during the day?

Yes, work trains and high rail vehicles are running during the day so you must slow down as you're approaching a level crossing and be prepared to stop. Trains can come at any time, from either direction. Freight trains will also start running every day from 7 October, the day after the clocks go forward for daylight saving.



Contact Kd on 03 319 5026 ext 237 or kd.scattergood@kaikoura.govt.nz for more info

#### Rob's head for PEOPLE

# high places

Rob Roche is many things. NCTIR Wellness and Rehab advisor. Dad. Kaikoura institution. General all round good bloke. Others will add to the list. But no one could call him a guitter. Rob recently returned from a fund-raising climb of Mt Kilimaniaro which turned into a test of his determination.

Unfortunately, he got sick two days into the six-day climb and could not eat. Rob likes to eat so that was a problem. 'I could drink water though,' he explained. 'But to not be able to eat made it tough... but there was no way I was going to chuck it in.'

Rob's mission to the 5895 metre summit of Kilimaniaro was for a good cause: the restoration of the Kaikōura Scout Hall (also known as Drill Hall). The hall, near and dear to Rob's heart, is an important community asset but has seen better days so he set up a Givealittle page to collect funds to go towards a restoration. To prove his commitment to the cause he climbed Kilimanjaro with his now Dubai-based daughter Kimberley. Rob's back in Kaikoura a few pounds lighter and yes, the page is still open to anyone wanting to donate to the cause (see link below). Despite getting crook Rob said the experience was 'amazing' and well worth the months of planning, preparation and training.

'And my thanks goes to all my NCTIR workmates and Kaikōura locals who supported me. It was a really rewarding experience.' A committee has been set up to restore the hall and they will decide how the funds are spent. It will probably go towards cladding and wiring,' he said.

givealittle.co.nz/cause/kaikoura-drill-hall-akascout-hall-upgrade



#### **RUGBY FEAST**

There was plenty of sizzle at Kaikoura Rugby Club recently. The NCTIR team and our trusty community BBQ was pressed into action to feed the masses at a representative rugby match. Graeme Tiltman, northern zone design lead, was an interested spectator. His son played in the match which, for the record, the Canterbury Country U48kg team won, beating Marlborough U48kg 40-10. NCTIR's Lisa Branton and Leah Te Moananui fed the boys and their supporters. Well done team.

#### **VOTE NOW**

NCTIR has been shortlisted in a People's Choice Awards run by the international Institution of Civil Engineers. Hundreds of different projects from across the globe were whittled down to 10 with the full list of finalists to be revealed on September 10. The awards are prestigious and you can help our 'moving mountains' entry by visiting and voting at **ice.org.uk**. Voting closes on September 28.

#### WALES ARE WATCHING

The Bulletin's international appeals shows no signs of abating. A story in our last edition about our large international readership triggered this message from Mandy Broadbent in Wales. 'Many thanks once again for producing such a useful, informative newsletter that allows us to keep up to date with what is happening. Hopefully we will be visiting again and will enjoy driving down SH1. What you have achieved is nothing short of amazing, or as you might say - awesome!' Nice one Mandy.

#### **CRAY CRAY**

A Kaikoura icon has gained some priceless publicity. Nin's Bin was recently named one of the world's top food experiences by Lonely Planet. The Kaikoura fresh crayfish eatery was ranked seventh out of 500 in the travel guide's Ultimate Eatlist. Nin's Bin, an iconic blue and white caravan parked 20 kilometres north of Kaikoura, has been serving crayfish along the rugged South Island coastline since 1977. Johnny Clark, who took the company reins from his father Rodney after the 2016 earthquake, said he was blown away with the top 10 placing.

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