

KAIKOURA EARTHQUAKE UPDATE

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2 June 2017

This weekly bulletin provides the latest information about the rebuild of road and rail networks damaged by the Kaikoura 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. We're keen to hear your questions about our work, or any feedback on this bulletin. Drop us a line via email at info@nctir.com or give us a call on **0800 NCTIREQ** (0800 628 4737) - we'd like to hear from you.

MILESTONE: NIGHT WORKS SPEED THE TRANSPORT REBUILD



At various sites along the Kaikoura coast, transport recovery staff are working nights under lights in order to reinstate State Highway 1 and the Main North Line as quickly as possible. Night works happen for different reasons - for example, to allow crews to work between tides, to minimise disruption to day-time traffic or to meet our own deadlines on key projects. In this picture of Railway Bridge 107, just north of Kaikoura, a concrete pour is taking place under lights.

Originally built in the 1930s this three-span, reinforced concrete bridge with a ballast deck top has received a major repair. Four new 900mm diameter 12m deep piles have been installed and new abutments constructed to replace the original damaged ones. Although the repairs on the bridge started just over eight weeks ago, it is now ready to carry the work trains that are pushing on towards Kaikoura.

Some sites are unsuitable for night works because of safety considerations, such as sites where staff are working under a potentially active slip. Each site is assessed before night works commence. The teams working at night also endeavour to be aware of the effect night works can have on neighbourhoods, particularly when large trucks are moving at night or very early morning. We have appreciated the residents of Oaro and Hapuku's tolerance and understanding in recent weeks as ballast was carted along the coast. If night works are causing problems, please phone or email to let us know - we are committed to resolving issues in our communities whenever possible.

OPERATION ROCK DAISY: RARE RESCUED PLANT HAS 'MADE BABIES'



The future of a rare flower is looking brighter, thanks to the conservation work being carried out after November's earthquake.

Over 200 seedlings of the rare rock daisy found only at Ohau Point on the Kaikoura coast are now growing in a nursery in Nelson.

The seedlings will be used to replenish a small population of rock daisies that were almost wiped out by the earthquake. The unnamed variant of the Marlborough rock daisy (*Pachystegia*) only grows on the rock faces at Ohau, north of Kaikoura.

Following the earthquake, an aerial survey of the bluffs was carried out with an estimated 80 plants spotted. A ground search by DOC rangers confirmed that there were only 80-100 plants remaining, and that around 95% of the population had been destroyed by the landslides that fell during the quake.

NCTIR's ecologists and abseilers worked with DOC to locate the remnant populations and collect seeds.

Seeds were harvested from just six plants on the bluffs. The cultivated seedlings will be grown to a year old. Some will be kept as species insurance and harvested for seeds. Others will be transplanted back onto the Ohau bluffs, wherever there is sufficient soil to do so.

The feasibility of hydroseeding the bluffs by helicopter will be investigated as a means to reintroduce the next generation of rock daisy seed back onto the new Ohau bluff surfaces.

WORK TRAINS ARE ADVANCING TOWARDS KAIKOURA

Work trains are now progressing north of Claverley towards Kaikoura on the Main North Line for the first time since November's earthquake.

'Repair work to allow the 1000-tonne plus work trains to go as far as Oaro has finished, and the trains are now ready to help work on the repairs needed to get the line open and carrying freight again,' says KiwiRail Group General Manager Network Services Todd Moyle. In the north, work trains are moving south towards Wharanui from Marlborough.

Everyone needs to be extremely careful around the rail corridor and when using level crossings as there has been little activity on the line until since the earthquake. 'It is not only work trains and tamper units that are moving on the line, but also hi-rail vehicles - road vehicles that also go on rail. We should all treat the corridor as 'live' at all times,' he said.

The key safety messages are:

- Stay off railway tracks
- Always slow down as you're approaching a level crossing, and be prepared to stop
- Look out for trains, and obey signs and signals.



NEW ROAD AND RAIL BRIDGES NORTH OF KAIKOURA



Six new road and rail bridges are being built near the largest landslides that came down near Ohau Point north of Kaikoura. The bridges are being built to span areas where loose material from slips high in the mountains is being washed down to the coastline.

As construction ramps up, five crews will be working on all six of the bridges. Next week piling cranes, piling hammers and a drill rig will begin arriving on site to install piles for the six bridges. They will be built at road and rail level with crews digging down to between 4m and 6m to create a space under each bridge for the material to flow out under. Each rail bridge will be 12m long and 4.6m wide, while each road bridge will span 18m and be 12m wide.

SEA WALLS UPDATE



Work on sea walls that will protect the road and rail north of Kaikoura is moving along at pace with almost 50% of the pre-casting of foundations for the 700m section near Irongate (Site 2) now complete.

The first of the giant pre-cast concrete blocks made so far, that will be used to build up the sea walls, arrived near the work site this week. The first of these 2m by 1m blocks were made in Christchurch and transported by truck to the rail yard at Hapuku where they are being stored. Once production ramps up, the seawall blocks will be cast in three locations (including Kaikoura).

Work trains will be used to move the concrete blocks to site. The completed seawalls will stretch around two kilometres of the new alignments, the purpose of which is to stop high swells from washing away the new road and rail corridor. The crew working on this project is making great progress in challenging conditions.

SH1 SOUTH OF KAIKOURA RE-OPENS

State Highway 1 south of Kaikoura re-opened during daylight hours on 2 June, in time for Queen's Birthday Weekend.

The highway has been closed since April after a new landslide, triggered by cyclones Debbie and Cook, covered the highway and railway line and presented a new challenge for the crews who are rebuilding the transport network. The team has been flat out constructing a 300m temporary road - with a weather-resistant retaining wall - around the toe of the monster slip that came down at Easter. A temporary rail alignment is also under construction.

'The earthquake has created a new dynamic for this part of SH1,' says NZ Transport Agency Earthquake Recovery Manager Steve Mutton. 'The fragility of the cliffs is part of the 'new normal' - the reality of the rebuild is that we are repairing cliff surfaces as well as roads,' Mr Mutton said.

Traffic management and geotechnical monitoring will be in place to keep the highway maintained and safe. Travellers should build in the possibility of short delays and be aware that safe speed limits of 30kph will apply on the rough patches.

There will be the need for some additional short-term closures in the future as work continues for full reinstatement to take place. The project team thanks the travelling public for their patience - especially the people living between Oaro and Goose Bay, who have been most-affected by the landslide that came down at Easter.

PREPARE FOR WINTER WEATHER – GET A KIT IN YOUR CAR

The NZ Transport Agency is urging drivers – particularly those driving in alpine conditions on state highways between Picton and Christchurch – to keep an emergency kit in their vehicles:

- Water
- Food (ie snacks like chocolate or cereal bars)
- Blanket, rug or sleeping bag
- Shovel
- Ice scraper and de-icer
- Torch and batteries
- Extra screen wash
- Fully charged mobile phone/car charger

Even the most experienced drivers can easily be delayed through an incident on the road (such as a crash) or if bad weather temporarily closes a road.

Lewis Pass will either be 'Open' or 'Closed' this winter: a four-fold increase in traffic on this route, including heavy vehicles and drivers unfamiliar with alpine conditions, make this route more challenging for all. This is a change from the previous restrictions available of 'chains essential' and 'no towing vehicles'.

While each winter is different, it's highly likely that snow, ice or storms will close Lewis Pass a few times this winter. While road crews will be on stand-by to re-open the road as soon as possible, an emergency kit will make any unexpected delay more comfortable.

To prepare for your winter journey visit: www.nzta.govt.nz/winterjourneys

For up-to-date information on road conditions,

- Visit: www.nzta.govt.nz/traffic
- Call **0800 4 HIGHWAYS** (0800 44 44 49) to speak to the call centre team



COWS ON THE MOVE

Drivers using Inland Road (Route 70), as well as any other New Zealand road, need to be extra careful this month as the annual dairy cow migration gets underway.

Sharemilkers relocate themselves and their stock to new farms at the on-set of winter each year. While a lot of stock is moved in trucks, many are herded along roads.

The NZ Transport Agency is asking drivers to be extra careful, and farmers to make safety a top priority for all.

If driving: Build extra time in to your schedule in case you come across a herd on the road. Please be patient and don't beep your horn as this could frighten animals and lead to a longer delay.

If moving stock: Farmers must know their legal obligations and also obtain consent from the Transport Agency before moving animals along or across state highways.

Moving stock on the Kaikoura Inland Road (Route 70)

This is a critical, and at times the only, road in and out of Kaikoura, with significant repair sites. Before herding stock along this road, please contact James Park, Corridor Manager for the Inland Road on 027 434 3255 to help co-ordinate the safe passage of stock, which will also assist other road users and the work site crews.



HANMER SPRINGS ROAD, WAIAU RIVER/FERRY BLUFFS: THREE MONTHS ROCK WALL WORK BEGINS



People who drive to and from Hanmer Springs will need to build in extra time over the coming three months, June to August, as rock stabilisation work gets underway near the Ferry Bridge over the Waiau River.

Rocks fell in this area during the Kaikoura/Waiau earthquakes and after the recent heavy rain and some emergency remedial work has already taken place to make the road safe in the short term.

A one-lane closure along a section of Hanmer Springs Road, State Highway 7A, will be in place for the three months. Repair work will start on Tuesday, 6 June. Crews will be scaling the rock wall during the first four weeks of June (removing loose rocks using abseilers), followed by rock bolting and finally hanging mesh to contain any future rock falls close to the rock wall, away from the road to protect road users.

Please build in time in case of delays

Work hours are 7am to 6pm, Monday to Saturday. A Stop/Go traffic system will be in place with delays up to 25 minutes, at some times. At night and on Sundays, traffic will be allowed both ways controlled by traffic lights. Crews are working on a long-term solution for this section of Hanmer Springs Road.

30KM/H SPEED LIMIT ON RE-OPENED WYE RIVER BRIDGE

The Wye River bridge in the Wairau Valley on the alternate route between Picton and Christchurch re-opened to traffic last week following urgent work carried out to repair the damage sustained when the bridge was struck by a truck on 21 May.

NZ Transport Agency Earthquake Recovery Manager Steve Mutton said crews worked hard to get the job done, making sure reliable access was available for those using the alternate route.

'We know how crucial this link is, especially with winter on the horizon. Crews built additional foundational support for the bridge deck, which can now safely carry all vehicles although a speed restriction of 30km/h is in place on the bridge,' Mr Mutton said.

'We will be carrying out a permanent repair to the bridge, but in the meantime, our structural engineers have advised that the work done has returned it to a condition where all traffic can safely use the bridge at low speeds.'

He said further investigation is necessary before the final bridge repair plan is completed.



REFLECTIONS FROM OUTGOING PROJECT DIRECTOR DUNCAN GIBB

This week the team said farewell to Project Director Duncan Gibb who has led the efforts to move mountains and reconnect communities affected by the November 2016 Kaikoura earthquake since day one.

Duncan spent time this week in Kaikoura and Christchurch acknowledging the work of the team who operate in often trying conditions, and finalising the handover to new project director David Loe.

Reflecting on his time with the NCTIR, Duncan said building an organisation made up of hundreds of people from across many different organisations (constructors, designers, suppliers and subcontractors) from a standing start has been hectic but looking back at what has been collectively achieved, has been incredibly rewarding.

'We have all had a part to play so far, and we will need to keep focussed on how we can keep the pace up,' Duncan said. He added that at the same time as getting the road and rail open, the team is also designing, constructing and developing a long-term strategy for the resilience of the transport system.

'This will continue to throw up new challenges and we must be flexible to react to these,' Duncan said.

'It may be hard, require long hours and many present challenges, but it is worth the effort when you stand back and look at what you have achieved day-by-day, week-by-week and month-by-month,' he added.

Capturing Duncan's commitment to the project, Kaikoura-based Hamish Meiklejohn said, 'To sum Duncan up, when life puts a mountain in front of you, climb the mountain and enjoy the view.'

WELCOME RELIEF - HELP ON THE FARM AFTER THE QUAKE

A Government programme that supplies skilled workers and volunteers to quake-affected farmers has been of great help to a farming family living within the closed-off section of SH1 south of Clarence.

Part of a wider recovery support package for the primary sector, the Ministry for Primary Industries (MPI) programme has included \$600,000 to mobilise and support skilled volunteers and workers that can help with on-farm recovery work directly associated with November's earthquake.

Farmers Sim and Maryanne Bell have been thankful for the extra help they have received through the programme.

'It's been amazing, a huge help to get us back on our feet,' Maryanne said.

AgStaff has been running the initiative and organising safety inductions and training for volunteers. Four volunteers, including Maureen and Donald Jackson, were at the Bell's farm to help repair fences when NCTIR staff visited recently.

A retired farming couple in their 70s, Maureen and Donald, said they didn't hesitate in taking up the call to help and drove down from the North Island to assist the Bells.

Maureen jokes, 'They probably looked at us and thought wrinkles and grey hair, they won't be of any use.' But with decades of farming experience between them, the Jacksons said they were only too happy to get stuck in where needed.

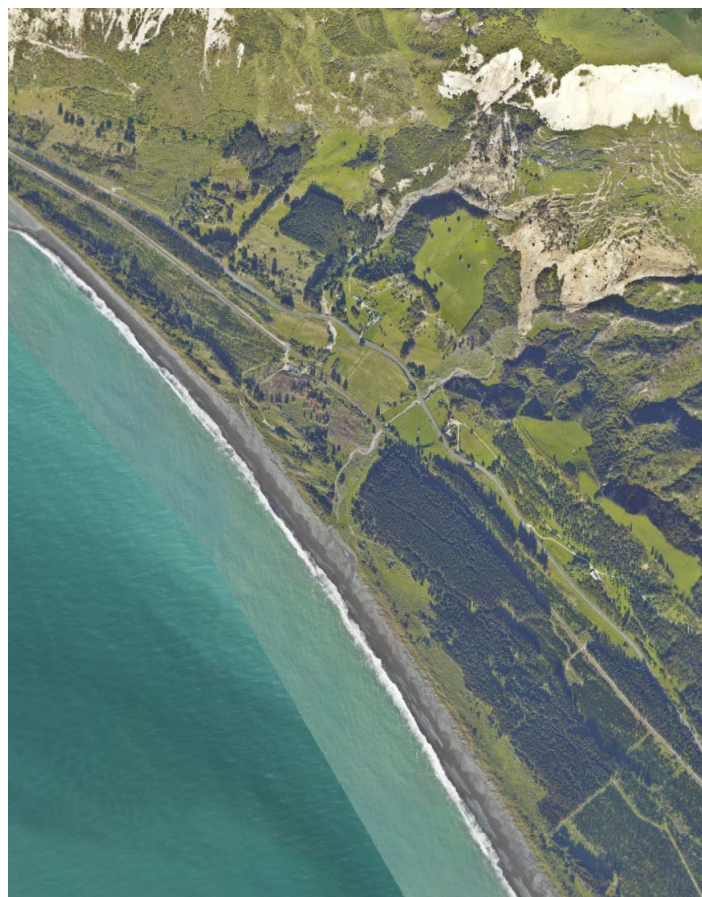
Experienced labour has been needed to get farm infrastructure like fences and water reticulation systems back up and running.

Maureen was shocked to see the damage to the close-knit Clarence farming community and says the earthquake has had a horrific impact.

'It's devastating, so much hard work was undone in a few minutes,' Maureen said.

Maureen has been helping Maryanne to clean out an earthquake-damaged cottage and Donald's been up the back of the farm helping Sim repair fences.

While the MPI programme wraps up in June, Maureen and Donald are planning to come back for another spot of work in spring.



EMPLOYMENT OPPORTUNITIES

The North Canterbury Transport Infrastructure Recovery alliance (NCTIR) is committed to hiring locally and right now is looking for a Kaikoura-based storeperson and part-time, Clarence-based cleaners. Interested and qualified people can email movingmountains@nctir.com for more information.

KEEP UP-TO-DATE

How to contact us and keep up to date with our road and rail projects:

- Subscribe to our weekly bulletin by emailing info@nctir.com, with 'Bulletin' in the subject line.
- Visit our website: www.nzta.govt.nz/kaikoura-earthquake-response/
- Call our freephone: **0800 NCTIR EQ** (0800 628 4737)
- Email us if you have a question: info@nctir.com
- Attend a community meetings - keep an eye on your local newspapers for details.
- Follow us on Facebook, see: NZ Transport Agency - South Island www.facebook.com/nztasouthisland/ and KiwiRail www.facebook.com/kiwirailNewZealand/
- For travel information about road conditions, see: www.nzta.govt.nz/traffic/regions/11



TO BLENHEIM ↗



Waipapa Bay



SITE 9: 3,000m³ of slip material

Okiwi Bay



SITE 8: 41,000m³ of slip material



SITE 7: 20,000m³ of slip material

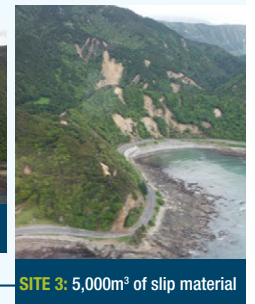
Ohau Point



SITE 6: 110,000m³ of slip material



SITE 5: 6,000m³ of slip material

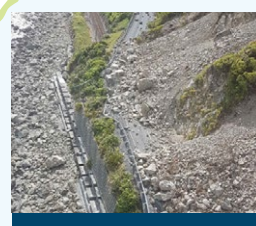


SITE 3: 5,000m³ of slip material

Half Moon Bay



SITE 4: 44,000m³ of slip material



SITE 2: 10,000m³ of slip material



SITE 1B: 112,000m³ of slip material



SITE 1A: 23,000m³ of slip material

↙ **TO KAIKOURA**

Please note: Map is indicative only