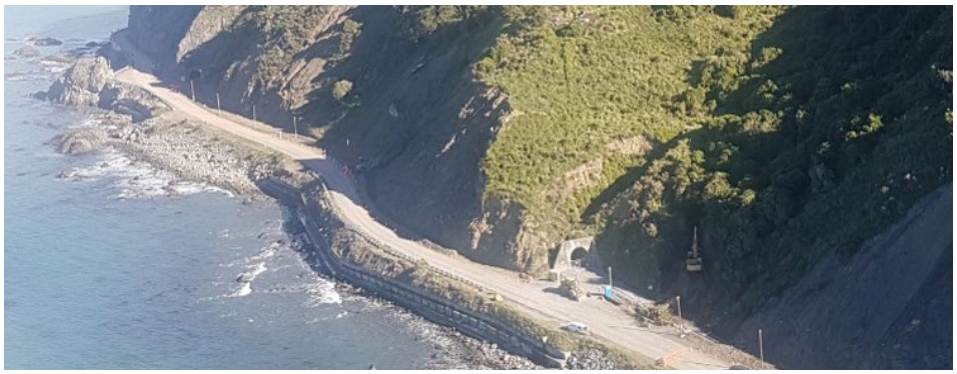
KAIKOURA EARTHQUAKE UPDATE

KAIKOURA EARTHQUAKE UPDATE – no. 17 19 May 2017

This weekly bulletin provides the latest information about the rebuild of road and rail networks damaged by the Hurunui/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: TACKLING THE MOST-BROKEN TUNNELS



Rail Tunnel 13, just south of Kaikoura, is being repaired as a matter of urgency so that work trains can reach the township as soon as possible.

The tunnel suffered significant damage in November's quake. The tunnel passes through an ancient landslide that moved during the earthquake causing a section of the tunnel to deform. Signs of movement during ensuing aftershocks led to a decision to remove and reconstruct the southern part of the tunnel.

In the first instance, temporary works are currently underway to enable work trains to safely pass. Permanent repairs will then be undertaken before freight trains resume. The work trains – which are progressing north from Christchurch and south from Blenheim – are vital tools in the reconstruction of the transport corridor because they can carry machinery and materials to and from work sites, in addition to reinstating the rail line itself.

The tunnel has been propped up from the inside so it can take the weight of an excavator on the slope above. The excavator is digging down to expose the tunnel lining. The plan is to remove the damaged parts of the lining and undertake slope stabilisation works involving rock anchors and mesh. The remaining parts of the tunnel lining will also be repaired.

The recovery alliance's tunnel manager, Rafael Ballen says: "Working together as a team, planning, communicating and coordinating is essential between the different work teams. The staging of the tunnel works will allow other essential works on the network to be completed, plus enable the permanent repairs on Tunnel 13 continue".

There are 20 rail tunnels and two sets of 'twin' road tunnels (north and southbound) between Cheviot and Seddon, and four of these tunnels suffered major earthquake damage in November. Works are proceeding on multiple tunnels simultaneously.

A NEW SLIP CLEARING RECORD WAS SET THIS WEEK

One of the recovery alliance's earthworks teams managed to shift over 5000 cubic metres of material from a landslide north of Kaikoura on Monday this week. That's the equivalent of about 300 truckloads of earth in one day.

It's an especially impressive result given the 'narrow ribbon of coast' on which the earthworks teams are operating – it's a very challenging environment as large trucks must maneuver around slips, road repairs and other construction sites while they load, transport and stockpile material from the monster landslides.

Monday's record may have been beaten already, but this had yet to be verified before this update 'went to press'.

REOPENING SH1 SOUTH OF KAIKOURA

State Highway 1 south of Kaikoura is expected to remain closed till the end of the month to allow the construction of a temporary road and rail alignment around the base of the large landslide that came down during April's cyclones.

Construction crews are working hard to complete the 300-metre road and rail diversion, near Rosy Morn. Crews have been working non-stop during daylight hours to get this job done - they cannot work at night because it's too dark to monitor whether rocks or more slips are starting to fall. Once the diversion is complete, and other slip protection measures are in place, the transport corridor will be safe to resume services.

About 12,000 cubic metres of fill is being used to raise the surface of the rocky beach by 4m to provide 'a shelf' for the new road. The fill – which includes material from the slip that came down as well as recycled railway ballast – will be used to build the surface on which the road is built. A tarmac road designed to normal NZ Transport Agency specifications will be laid, and rock armour placed on the seaward face of the new embankment for protection from coastal erosion. Rail tracks will also be diverted around the toe of the slip, alongside the new road.

THE INLAND ROAD'S WANDLE BRIDGE IS TO BE DEMOLISHED

While SH1 south of Kaikoura is closed, travelers should use the scenic inland road to Kaikoura (Route 70, via Waiau/ Mt Lyford). On Monday night, travelers should defer any unnecessary trips on this road, as a bridge is due to demolished overnight and traffic will be diverted though a river ford.

The inland road was damaged in places during the earthquake, particularly bridges and culverts, and these are being repaired. One of these, the Wandle River Bridge near Waiau, is due to be demolished overnight on Monday, if conditions are right for the job.

The temporary bridge that crosses the river will not be useable during the demolition, as it is too close to the site. Traffic will instead need to ford the river, following the existing track that's used by heavy vehicles, between 7pm Monday and 7am Tuesday.

The demolition will allow investigation of the existing foundation and ultimately the design and construction of a new bridge. The bridge is the only one on the inland road that needs to be completely demolished.

Platforms offset from the bridge have been built to enable demolition workers to sit on and munch/jackhammer the bridge from. The bridge will be 'pushed' over during a single night shift.

After the earthquake, strops and anchor blocks were used to stabilise the bridge and a temporary Bailey bridge built to allow traffic to safely continue along the route.

Please check weather reports before travelling. To help plan safe and comfortable travel, check the road conditions:

- On the NZ Transport Agency's website: **www.nzta.govt.nz/traffic**
- By phoning **0800 4 HIGHWAYS** (0800 44 44 49)
- On the Transport Agency's social media: **www.nzta.govt.nz/contact-us/connect-with-us/**

ROAD AND RAIL REPAIRS AT OARO

The railway tracks at Oaro - a small town south of Kaikoura - are ready to be put back into place, having been lifted between 1m and 1.5 metres during November's earthquake. The site has been excavated and backfilled to the required grade, so that ballast and tracks can be laid.

Damage to this section of the Main North Line and SH1 happened after the Hundalee Fault ruptured the ground surface, resulting in vertical and horizontal displacement of the rail line and road.

Meanwhile, road repairs at the Oaro road-over-rail bridge are also progressing well. Strengthening works to the 80–year-old Oaro overpass will be finished soon, allowing work to begin on the approaches to the bridge (pictured). The aim is to have vehicles back on SH1 at Oaro in the a few months' time, as vehicles have had to use to local roads to get around the damaged structures.

The repair and rebuild teams would like to thank local residents for their patience while we get on with these sometimes noisy, bustling works.

THE RAIL WAGONS HAVE ALL BEEN RESCUED

Crews have successfully moved all 23 of the KiwiRail wagons stranded on the coast north of Kaikoura by the November earthquake. The last wagon was moved off site early Tuesday morning this week, right on schedule, and trucked to Christchurch.

The logistically challenging project was a great example of the recovery teams maximising the use of resources – the same trucks used to move accommodation units north from Christchurch to Kaikoura were used to move the rail wagons south. The removal project was also a great collaboration between KiwiRail and the North Canterbury Transport Infrastructure Recovery teams.

BE PREPARED FOR SNOW ON MOUNTAIN ROADS

Before travelling on State Highways between Picton and Christchurch over winter (via St Arnaud, Murchison and Lewis Pass) drivers need to plan ahead and allow plenty of time.

This route can get very treacherous when exposed to extreme weather so drivers need to be prepared. That means knowing how to get your vehicle ready, learning about driving in alpine conditions if you're not experienced, and travelling with a kit of emergency food, water and warm clothing or bedding in case bad weather or an incident causes delays. Find out how to get prepared at **www.nzta.govt.nz/winterjourneys**.

With the four-fold increase in traffic along this route since the Hurunui/Kaikoura earthquake, the NZ Transport Agency has this winter removed the 'chains essential' and 'no towing' restrictions from the Lewis Pass. This means the road will either be 'open' or 'closed' to all rather than 'open with restrictions'. Multiple crews will work along the route 24/7 over winter months to keep it open as much as possible.

Although residents may be used to driving in alpine conditions with chains, given this is now the main route, this winter there will be drivers who are unaccustomed to driving in poor winter weather involving low visibility and slippery roads. The reason the road will either be 'open' or 'closed' is to avoid diverting road crews from urgent snow and ice clearing work to rescuing stranded vehicles. Ultimately this will enable the roads to be opened more rapidly after weather events, to keep the transport system moving.

Important: Drivers should still carry snow chains as there may be roads in nearby areas where chains are required for safe travel.

To help plan safe and comfortable travel for all 'know before you go' by checking the road status:

- On the NZ Transport Agency's website: **www.nzta.govt.nz/traffic**
- By phoning **0800 4 HIGHWAYS** (0800 44 44 49)
- On the Transport Agency's social media: **www.nzta.govt.nz/contact-us/connect-with-us/**

KAIKOURA 'KIT-SET VILLAGE' QUICKLY TAKING SHAPE

Kaikoura's temporary accommodation facility that will house 300 out-of-town people working on the SH1 road and Main North Line Railway rebuild is moving along at pace. By the middle of this week, 39 units had been moved to the Ludstone Road site.

At the same time, site preparations for the village continue, including the connection of sewerage, water and power. Construction started on April 25 and up to 82 staff have been working on site. The aim is for the first of the rebuild team to be moving in next week, with a rolling opening of more rooms over the following two weeks.

The decision to build a temporary accommodation village was made after consultation with local businesses confirmed there would not be enough beds available in Kaikoura throughout the duration of the project – more than 400 people in the rebuild team will eventually be based in the area and all require housing.

Breakfasts will be catered for in the village, local cafes will prepare packed lunches and local restaurants will host workers for dinner. About 20 locals are being hired to staff the facility, running the booking system, maintenance, cleaning and laundry. Management of the village will be done by Compass Group Limited, which has substantial experience in running accommodation facilities in New Zealand.

The 57 remaining units will continue being moved on the back of trucks along the SH1, SH7 and Waiau/Mt Lyford inland road over the next week between midnight and 3am so as to cause minimal disruption to traffic.

More information about the facility can be found in a 'Q and A' on the NZ Transport Agency's website: **www.nzta.govt.nz/assets/projects/kaikoura-earthquake-response/Kaikoura-Earthquake-Response-Accommodation-Village-question-and-answers-20170428.pdf**

EMPLOYMENT OPPORTUNITIES

The North Canterbury Transport Infrastructure Recovery alliance (NCTIR) is committed to hiring locally and right now has two vacancies in Kaikoura: IT desktop support person and an environmental advisor. In Clarence, we are looking for a project administrator/accommodation coordinator. Interested and qualified people can email **movingmountains@nctir.com** for more information.

The recovery alliance is humming with women and men and women brought together to repair transport system damaged in November's 7.8 magnitude earthquake. From December 2016 to date, over 1000 people from 100 organisations have joined the rebuild effort.

REPAIRING KAIKOURA'S MOVIE THEATRE

A Scottish Celebration to raise money for Kaikoura's iconic Mayfair Movie Theatre which was damaged following the November 2016 is being held on Saturday 20 May at 7pm at Donegal House.

The event will run for about two hours and will include - but not be limited to - bagpipes, haggis, highland dancing (which will include one of the recovery team members). Tartan and kilts will abound.

If you would like to go to the Scottish Celebration and show your support, tickets are $20 and are available in store at the Kaikoura i-SITE Visitor Information Centre. All proceeds will be going towards restoring the Mayfair Theatre.

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**

NZ TRANSPORT AGENCY
WAKA KOTAHI

SH1 Kaikōura Coast remedial works

N

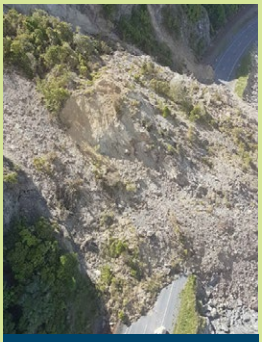
Location of remedial works

TO BLENHEIM

1

SITE 9: 3,000m³ of slip material

Waipapa Bay



SITE 8: 41,000m³ of slip material

Okiwi Bay

SITE 6: 110,000m³ of slip material

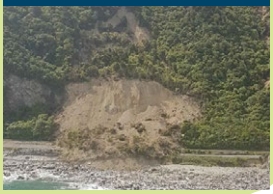
SITE 7: 20,000m³ of slip material

Ohau Point

SITE 5: 6,000m³ of slip material

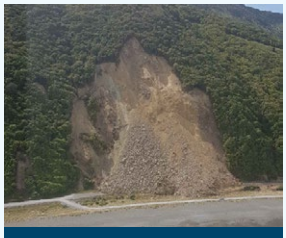
SITE 3: 5,000m³ of slip material

SITE 4: 44,000m³ of slip material



Half Moon Bay

SITE 2: 10,000m³ of slip material



SITE 1B: 112,000m³ of slip material

1

SITE 1A: 23,000m³ of slip material

TO KAIKOURA

Please note: *Map is indicative only*