



The Bulletin Kaikoura earthquake update

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KAIKOURA AND CHRISTCHURCH WELCOME FIRST FREIGHT TRAIN TO TRAVEL THE MAIN NORTH LINE POST EARTHQUAKE

The mammoth task of rebuilding the Main North Line was celebrated today (September 15) when the first freight train to travel the full length of the tracks between Picton and Christchurch since the November 2016 earthquake stopped in Kaikoura for celebrations, and then continued its journey southwards to the Middleton rail yard just after lunchtime.

The freight train was driven by locomotive engineer Paul Foskett as far as Kaikoura and arrived into the station to cheering throngs of well wishes at 8am. He then handed the controls over to Wayne Sullivan who drove the train on to Christchurch for the celebrations.

Both engineers have a strong connection to the night of the earthquake. Paul was driving a train south and had just handed over the locomotive to Wayne a quarter of an hour before the earthquake struck. The pair, in their respective speeches in Kaikoura and Christchurch, said they could not believe how much work has been done. They said it is a tribute to all those who have been involved - the KiwiRail staff and the NCTIR teams who have worked long hours in what were sometimes difficult conditions.

It is also a tribute to the affected communities. From the people who helped on the night, to the people of Kaikoura who are still affected in a major way by the devastation of the earthquake to the New Zealand public who have supported the rebuild.

As part of the celebrations in Kaikoura, a twisted rail sculpture commissioned by KiwiRail was unveiled by the Kaikoura District Mayor Winston Gray. The sculpture, by Kaikoura local artist Ben Foster, 'represents a lasting legacy of the effort of KiwiRail staff and our partners NCTIR have put into getting freight running again,' says Peter Reidy, Chief Executive of KiwiRail.



The train arriving into Kaikoura
Photo credit: Lisa Bond

Margaret Woodill was 15 in 1945 and walked down to the opening of the Main North Line. 72 years later she's back to see the reopening.

'As a kid it was pretty exciting, it's still exciting now seeing trains coming through again. It's pretty emotional.'



Margaret Woodill with her daughter Nikki Woodill



The opening of the Main North Line in Kaikoura in 1945.
Photo credit: Kaikoura Historical Society

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.



The four-metre high sculpture has Kaikoura coastline place names inscribed along the inside of one piece of rail that was recovered from Irongate, north of Kaikoura. Ben was proud to be involved in this occasion and to create a sculpture to honour the November 2016 earthquake and its effects on the wider community.

Following on from the ceremony in Kaikoura the train departed the station at 8.30am ready for the rest of its journey to Christchurch. Freight services will initially run at night so that work on the rail and road networks can continue during the day.



OPEN/CLOSED SH1 SOUTH SCHEDULE EXTENDED TO GET EXTRA WORK DONE FOR END OF YEAR ROAD REOPENING

Last week's five-day closure between Peketa and Goose Bay was a double-edged sword says NCTIR's Earthworks Manager, Gary Ikin. 'Thanks to local support for this closure which gave us much needed space and time, we shot ahead on some of the really tough and high impact stuff.'

However, Gary adds getting right in to some of the more gnarly sites also exposed more critical work that needs to be completed to make the route more resilient. 'It shows how many unknowns there are under the surface, and why we need to be able to sometimes adjust our work programmes to ensure we get the road reopened by the end of year.'

NCTIR will be removing further unstable materials through three extended five-day work weeks within the Peketa-Goose Bay open/closed schedule.

First Extended Five-day Work Week from Monday 25 September:

- **Monday 25 – Friday 29 Sept:**
local drive-throughs at 7am and at 6pm – then closed for the day and overnight
- **Saturday 30 Sept – Monday 2 Oct:**
7am-6pm open all day to public and closed overnight
- **Tuesday 3 – Thursday 5 Oct:**
back to normal closures with local drive-throughs



Dates for the other two proposed extended work weeks are being finalised to have the least impact on community events. At this time these are likely during the weeks of 16 October and 6 November. If further materials still need to be removed beyond then, extra schedule changes will be communicated. Note also that with daylight savings coming, a summer season open/closed schedule will be shortly confirmed.

Gary says balancing local access to drive safely back and forth through a live busy worksite, while delivering on the Government's commitment to reopen SH1 in December is one of the toughest challenges in his career. 'We know how much our work impacts on people, and really appreciate their ongoing patience – particularly when we need to change the schedule for high impact works. While we'd achieve much more in a fully closed work site, we want to support the community as best and as safely as we can through these schedules,' Gary says.

Key facts

100 plus crew members work on the 30 slips, tunnels, rail, road and multiple other challenges between Oaro and Peketa. Last week's five day full closure enabled them to:

- Dislodge around 2000 cubic metres of unstable loose materials from Slip 14 (immediately north of the Paratatahi tunnels)
- Drape more than 4000 square metres of netting across cliff faces to stop loose material dropping down to the road and rail below.
- For abseilers to remove by hand the most unstable vegetation/trees on the cliff faces.



IRONGATE BRIDGE ON TRACK TO BE FINISHED BEFORE CHRISTMAS



Work on the Irongate Bridge is well underway to build this new 144m bridge on SH1 north of Kaikoura.

The bridge will stretch from the top of the bluff above the railway tunnel and connect to the seawalls below, more than 500m long and five metres high.

Structures Manager David Wyeth says the bridge will be supported on large bored piles, and the priority now is to get the pile holes drilled as quickly as possible so that the bridge can open before Christmas.

'The 1800mm diameter piles take about three days per pile to drill and we've got 12 piles, with two drill rigs working,' says David.

'We've only just started and our major challenge is time,' says David, but he is confident everything will be done in time for the road opening before Christmas. 'We look forward to keeping you up-to-date on this incredible new build.'



PROGRESS ON THE OARO ROAD OVER RAIL BRIDGE

During the quake, the piers and abutments at Oaro Road Over Rail Bridge were chipped, cracked and in some other places, seriously impacted. The approaches had cracks as wide as one metre and as deep as 1.5 metres.

Repairs have taken place in two stages. First, a team completed structural repairs, including installation of shear keys, crack injections and epoxying.

The second stage, which is now underway, is focused on repairing approaches to the bridge. Site engineer Anil Balgumar says the work involves installing new gabion retaining walls, a King Post retaining wall (made of I-section steel posts driven vertically into the earth), and the road.

As of the end of last month, 9000 cubic metres of imported fill material was laid to strengthen the slopes. For the King Post walls, 14 posts were installed 1m apart and driven 5m into the earth.

Driving the posts into the earth was not easy either. 'There were lots of rocks which prevented piles from being driven in,' Anil says. 'We had to stop, dig, and remove a lot of rocks from underneath.'

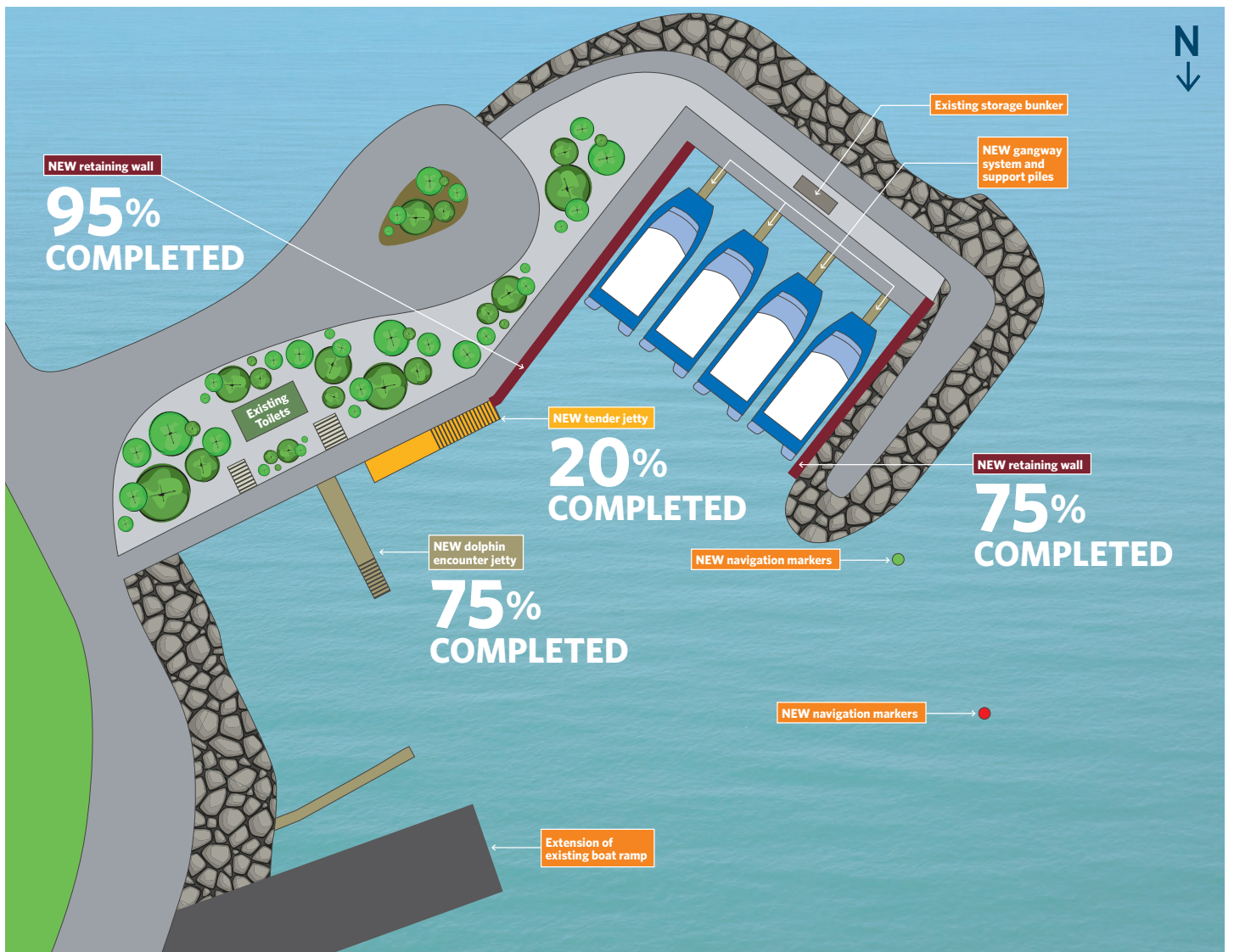
Another obstacle is proximity to the railway line because work has to stop when a train passes by. Anil says the team made full use of the five-day closure of SH1 south of Kaikoura last week and that the team is close to achieving the design finish road level. The bridge is scheduled for completion mid-October.





KAIKOURA MARINA ON SCHEDULE TO OPEN IN NOVEMBER

Great progress continues to be made at the Kaikoura Marina. Check out the photo and graphic below that shows where we are at. The marina is on track to open in November.





KEEPING KAIKOURA CONNECTED

Work to replace Culvert A58, located three kilometres north of Conway Bluff, is vital.

Existing Infrastructure Project Engineer Reg van der Walt says if this culvert or detour washes away, access to Kaikoura via Inland Road (Route 70) will be severely impacted.

‘It is an essential project for access,’ says Reg.

Work on this project began on 11 September. The existing concrete culvert collapsed during the earthquake, and a multi-plate aluminium culvert it is being installed. ‘The significant risks we have are dealing with water and dewatering the stream bed we are working with, as well as heavy rain and potential flooding, as lots of water comes in with that,’ says Reg.

This project, which will take about three and a half months, requires the replacement of the existing culvert, along with the installation of three new concrete culvert structures for drainage, realignment of the road onto the original alignment, and construction of 250m of new road.



THE FIRST OF 4500 SEAWALL BLOCKS LAID AROUND OHAU POINT

Ohau Point is one of four sections of the road that are being shifted away from dangerous landslides and closer to the sea. Eventually stretching more than a kilometre around the point with nine one-metre high blocks stacked on top of each other, the new road has been carved out of the seabed.

Coastal construction project manager, Hamish Meiklejohn (pictured bottom left) says the work site is only going to get busier between now and December’s road opening.

‘At peak we will be laying 90 blocks over three different sites every day,’ says Hamish.

Hamish is not nervous about the fast approaching date and is quietly confident his team can ‘pull it off’. ‘When you’re surrounded by good people it’s not that much of a challenge.’

Since his first day on the job, helicopter sluicing crews, earthworks teams and abseilers have made the southern side of the landslide safe enough for his team to work.

Over the winter months his crew worked on the concrete footings for the seawall blocks to sit on. Winter challenges meant the crew only had a few of hours of sunlight every day. It was a cold business and they had just a few hours during low tide to pour concrete, otherwise they were busy battling large waves washing into their worksite.

‘As we worked our way north, every metre needed 20 cubic metres of concrete and we were pouring up to three metres deep in freezing conditions,’ says Hamish.

It’s a challenging environment to work in, the landslide could be stable one day and high risk the next after an onslaught of bad weather. As the days get warmer, life gets easier at Ohau Point and the crew is starting to make great progress laying blocks. ‘The speed of this project is astronomical; everyone just gets on and gets it done,’ says Hamish.





PUBLIC APPEAL TO SHED LIGHT ON EQUIPMENT RECOVERED DURING WORK IN THE WAIMA RIVER



An interesting piece of vintage farm equipment was recovered by a digger operator working in the Waima River on 31 August.

It was initially thought to just be 20th century rubbish, but closer inspection suggests it may be much earlier. It appears to be part of a horse drawn cultivator made of wrought iron.

The piece will be transported back to the Kaikoura archaeology lab for a clean down and closer examination in order to determine if there are any maker's marks or diagnostic features that might help identify the age of the piece, and maybe explain why it was found in the river bed.

If it is found to be pre-1900, then this piece would form part of a wider pre-1900 farming landscape along the Kaikoura coast which is not well documented in the archaeology record. Although there are plenty of historic accounts of farming in the district from the early 1840s onwards, little has been documented on the technological development and social history of farming here, particularly in comparison with the development of farming practices in other parts of the country and internationally.

Please contact NCTIR if you are able to shed light on this interesting find. We would love to know exactly how old this piece is, who it belonged to, and how it came to be buried in the river bed. **0800 628 4737** or info@nctir.com



WINTER STING AND SPRING SURPRISE - CREW WORK 24/7 TO KEEP EVERYONE SAFE

A tireless 24/7 effort by many crews battling to overcome the harshest weather event so far this year saw the alpine Lewis Pass on the alternate Christchurch to Picton route close, then reopen multiple times last week.

From the initial snow, ice, and white-out conditions, the sub-zero temperatures then saw trees collapsing dangerously onto roads under the weight of snow, while slips from sodden cliffs also came down. And then there were the long lines of traffic waiting at the closure points - many with goods on tight freight delivery deadlines.

Working closely with the crews on the ground, NCTIR Journey Manager, Tresca Forrester says that once it started, the snow 'just kept coming across in waves. At one point we had 40cm on the summit and snow right through to Springs Junction.' The number one priority was keeping everyone safe and informed so they could make good travel decisions.

Despite the 'event that just kept on giving' Tresca gave full praise to the dedicated crew who never took their foot off the pedal. 'We know road closures are frustrating for drivers, but most are really supportive of these tough decisions the crews have to make to keep everyone safe. They work in extreme and dangerous conditions day and night to do everything they can to keep the roads open and safe for everyone.'

Anything can happen, so 'know before you go.'

Before you travel get the latest 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





LINES AND CATS' EYES - GETTING BACK INTO SHAPE POST-WINTER

Winter is not only harsh on the road surface, but also on painted lines and reflective cats' eyes designed to help with safe travel.

As soon as snow or ice arrives on the alternate Picton to Christchurch route, the 24/7 crew load and send out the grit spreading trucks (pictured) to keep the road open as long as possible while providing safe surfaces for vehicles to travel on.

However, thousands of tyres driving over grit quickly turns it into an abrasive 'sandpaper' on painted road markings. And any grader scraping snow and ice off roads can also catch and remove the cats' eyes.

Repainting lines and replacing cats' eyes are high on the post-winter highway rehabilitation list. But like many of these tasks, the crews need weather to get warm and dry enough so the paint sticks to the surface and dries quickly after being sprayed on. You'll shortly see the paint spray trucks up and down the route, but if you're in an area where the markings are not as clear as usual, please take extra care and drive to the conditions.



NEW APP TO HELP TRUCK DRIVERS NAVIGATE ALTERNATE PICTON TO CHRISTCHURCH ROUTE

Truck drivers travelling on the alternate Picton to Christchurch route via Lewis Pass can plan where to stop for rest breaks and fuel, identify trailer swap areas and get information on road conditions, thanks to a new app rolled out by the NZ Transport Agency and Road Transport Association NZ (RTANZ).

'TruckR' is a planning tool that has been designed to improve safety and provide journey information for truck drivers using the alternate route, which has become the main highway since the November 2016 Kaikoura earthquake closed State Highway 1 through Kaikoura.

The app highlights stopping areas suitable for 20-metre trucks, passing lanes, trailer swap areas, one lane bridges, and places with limited cellular coverage along the route, along with petrol stations, food outlets and public toilets.

It also connects to the Transport Agency's road alert system, giving users up-to-date information on road works, crashes and road closures.



EXPECT TRAINS AT ANY TIME, FROM EITHER DIRECTION



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Call our freephone: 0800 NCTIR EQ (0800 628 4737)
Email us if you have a question: info@nctir.com



SAFETY MAN SAFETY TRUCK BUILDING FANS ON THE ROAD

Safety MAN, the Road Safety Truck (www.roadsafetytruck.co.nz) is in hot demand and getting the full thumbs up wherever it goes.

The fully customised truck and classroom trailer is the brainchild of the heavy trucking industry, NZ Transport Agency, NCTIR, and emergency services working in partnership on a Truck Crash/Rollover Prevention Programme to keep the busy alternate Picton to Christchurch route open and operating, and get everyone home safe at night.

Since its public launch early August, the bookings calendar has been filling up for both the 'Healthy Truck Driver' programme to help drivers with wellbeing and fatigue, and the 'Share the Road with Big Trucks' programme to keep communities safe around big moving trucks.

Freight Lines and Streamline were the latest to host Safety MAN at their Christchurch depot. Group Health & Safety, Environment and Risk Manager, Ilze-Michelle Botha says 40 drivers and senior members of their executive team (pictured) took part in the programme. 'The wellbeing of our team is really important to us and we see this as a great way to support our drivers' health, fatigue management/awareness as well as ongoing education/communication on looking out for one another. We received great feedback from both drivers and the executive team and we encourage the industry to really get behind and support this awesome programme.'



KEEP UP-TO-DATE

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- 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 meeting - keep an eye on 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

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