



The Bulletin Kaikoura earthquake update

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LOOKING OUT FOR THE SEALS

As crews tackle Ohau Point at night, hiding in the shadows of the coast sit small dark rock-like shapes that thousands of seals that call this landmark their home. During the evening night shifts, the challenge to keep them away from the worksite only gets harder as they blend in to the dark surroundings.

As the day works draw to a close at 6pm, night works crews and seal teams head to Ohau to begin their 12hour shift. Since the southern side of the landslide was stabilised, Senior Seal Handler, Tom Burns and his team have been working to keep the protected fur seals away from the worksite. 'Crews are working 24/7 at Ohau Point to have the road open before Christmas, we need to move any seals away from our worksite to keep them out of harm's way.'

The foundations of the new road are dug out at night so concrete trucks can move in to pour the next day. However as every gloomy shadow looks like a seal, Tom's team's spotlights are their greatest tools. 'As our dump trucks are loaded up with material, small seals can dart across the road and hide under a truck. We check underneath the trucks before they leave to make sure the way is clear.'

With a Master's degree in conservation biology and three seasons working on the Auckland Islands with Sea Lions, Tom is here for one big reason. 'I'm here to save seals; that's why we are all here. To keep them safe, away from our machinery and out of harm's way.'

Even before moving machinery to start work, Tom's team will check to make sure the space is clear. 'For a pup, safety is staying put and hiding in a crack of a rock. As we approach, two may run away but there could be more hidden in nearby cracks or under a boulder.'

During the day the seals tend to stay by the shoreline, they will go for a swim and catch fish. At night it's warmer and the seals move inland. 'They want to come over to dry off and find somewhere to sleep. Our challenge is to keep them back on the shoreline.'



FACTS

- Heli-herding has been undertaken twice a day since March 2017 to herd fur seals seaward, away from the slopes.
- The seal team consists of six people on site managing seals 24/7 across the full length of the rebuilding footprint. Generally, the team works two weeks on two weeks off so has a larger team of 18 people on rotation.
- The team has personally moved 11,000+ seals (adults and pups) since February 2017 with some individual seals being moved multiple times. In addition, we have moved more than twice that number during helicopter hazing operations.

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.





PROGRESS BEING MADE IN THE NORTH IN TIME FOR ROAD OPENING

Contractors are hard at work between Blenheim and Clarence to repair critical pieces of earthquake-damaged infrastructure before the road re-opens at Christmas.

At Flaxbourne River Bridge, less than 1km north of Ward, a crew of 25 is crawling over the site. Excavators, a large drill rig and a 100-tonne crane are being used as bridge repairs ramp up.

The bridge connections were left broken following last November's earthquake, the bridge shifting off its abutments, and the connections between the substructure and bridge foundations being badly damaged.

Four holes are being drilled either side of the bridge abutments to enable lateral support piles to be installed which will support the structure in the event of another earthquake. Other piers (bridge columns) are being repaired underneath the bridge.

With the repairs on top of the bridge out of the way, the crew can then move underneath to carry out other repairs, keeping traffic moving on State Highway 1.

When working in the river, a large rig will install sheetpiles around piers to create a cofferdam, a dry space for the crew to work without the river flooding the worksite. To do this, they will need to dig down 2.5 metres into the riverbed.

The bridge diaphragms also require repairs. In order to access them, the crew will need to cut out the existing pier plinths. High-pressure grout injection has already begun on the damaged piers so the crews can safely access the site; one-lane traffic continues across the bridge.

Just south of the site, at the Needles Creek River Bridge, work is also ramping up with similar repairs needed. This bridge was also damaged following the earthquake, the piers of the bridge tilting at different angles, between 5 and 7 degrees.



HARBOUR RE-OPENING INVITATION

Please join us

to celebrate the hard work of so many people to reopen the Harbour to the Kaikoura public.

Tuesday 14 November

6.00am: Dawn ceremony and blessing

12.30pm: Official opening with special guests, harbour and boat tours and displays showing all the hard work and engineering feats.

Fun for everyone - join us for coffee, ice cream and a seafood BBQ!



New Zealand Government



WAIMA RAIL OVERBRIDGE NEARLY COMPLETE



The Waima rail overbridge has truly been a major engineering feat for multiple work streams. But thanks to the cooperation between designers, contractors and the construction team the work is nearly complete.

Following months of structural repairs, earthworks crews have moved into painstakingly rebury the strengthened rail culvert in tonnes and tonnes of sand so the road overbridge can reopen.

Site Engineer Cameron McKie (pictured) says during the earthquake, the southern end of the rail culvert (tunnel) shifted towards the sea and bent out of shape.

‘Crews had to begin the challenging task of digging out the culvert so tunnel teams could bolt together 90 steel plates to strengthen the steel arch around the rail line,’ says Cameron.

After reinforcing the steel arch tunnel and moving it back towards where it used to sit, the next challenge began.

‘For the last eight weeks we have been backfilling this site, dumping tonnes of sand that was pulled out of here when the crews first started repairing the culvert,’ says Site Foreman Moko Tawhi.

It hasn’t been fun for the crew, being repetitive, laborious work. ‘It’s not a glory job’, he explained with a smile.

‘In the first week we backfilled a round 580 tonnes of sand, and you couldn’t even tell. It made no difference at all,’ says Moko.

Three weeks in however, and the crew could start to see the difference their hard work was making.

‘We started reaping the rewards and could start to see the road building up,’ he says.

The worksite is 50 metres long and 40 metres wide. For more than two months the crew has backfilled sand that now sits around eight metres deep in places.

‘It has proven to be a challenging site exposed to the weather, but the team has done a remarkable job and backfilled thousands of tonnes, filling up the site almost to road level,’ says Cameron.

The site was made even more challenging with a restriction on what machinery was allowed to be used. In order to not to damage the freshly repaired culvert, as the team was backfilling they were only able to use three tonne excavators during the initial works. But with the bridge not far off reopening to the public, it won’t be long before SH1 traffic is running back over top.





ONE STEP CLOSER AT TUNNEL 6

As a result of the November 2016 earthquake, Tunnel 6, located between the Goose Bay and Raramai road tunnels, shifted between 50 and 100mm towards the sea. In response to the damage, 127 anchors are being installed, concrete repairs undertaken, and an external buttress built.

There were many challenges the team faced at Tunnel 6, including ground conditions, weather, accessing material supplies, and road closures. The crew met these challenges head on and have completed all of the rock anchors and concrete repairs, and are now removing the scaffolding to reveal the newly completed external buttress.



RAIL SAFETY

With freight trains back on the Main North Line between Christchurch and Blenheim, please remember to stay focused every time you approach a level crossing and to always expect trains at any time, from either direction. Trains are very fast moving, deceptively quiet and they can't stop in a hurry or swerve to avoid anything.

Please stay off the railway tracks, and only cross at level crossings.





KEKERENGU CONSTRUCTION WORKER VILLAGE

With million-dollar seafront views and restaurant-style meals every night, the new temporary Kekerengu construction worker village is ticking all the boxes for its 30 residents. Based at The Store, a family events and restaurant business the new village has been taking shape over the last few weeks.

Sank Macfarlane's family have been running The Store in Kekerengu for 20 years. After the earthquake damage to SH1 last November, he and wife Melissa are pleased to be able to reopen it in the evenings.

'It's nice to have the doors back open, to brush off a few cobwebs and to see the place being used again,' says Sank.

It's a bittersweet opening for Sank (pictured) and Melissa. They used to hold weddings, events, and feed 1000 people every day, now they only open to feed the construction workers staying in Kekerengu and a few locals. 'It has been trying, we've been living in Blenheim and Melissa has been working in Auckland to help make ends meet,' says Sank.

While 30 meals is nothing compared to what they used to make, it's gently easing them back into the life of a restaurateur. 'It's a good number for us to cater for as we get used to it again,' says Sank. As well as feeding mouths, Sank and Melissa are managing the accommodation and servicing rooms at the new temporary village.

Former staff at the Store have already been rehired, however while SH1 north of Kaikoura is expected to reopen at the end of the year, Sank says his business won't be running at full speed until he can hire the extra seasonal staff he usually relies on.

The family is looking to the future. With a shared access path, including a cycleway being built next year, Sank is excited about what it means for his community and business. 'We're really looking forward to the impact the cycleway will have, it will be great for the area,' he says.



PAUA RELOCATION

Divers were recently able to relocate paua from directly below the large landslide at Ohau Point.



NCTIR is helping to look after the fishery by making sure Paua Management Action Committee 3 (Paua Mac 3) has access to the coast during the transport rebuild.

The Paua Mac 3 dive team was able to safely move more than 300 paua to a reef about 100m further out in Ohau Bay.

The earthquake has had a major impact on the commercial paua industry.

Sections of the seabed rose more than five metres, dramatically altering intertidal zones where paua live. More than 20 per cent of adult paua habitat in the Kaikoura region was lost, and the juvenile population impacted even more.

The uplift also disrupted the reproductive cycle of paua; it will be three to five years before juvenile paua reproduce.

Paua Mac 3 hopes to release millions of baby paua through their reseeded project onto the rocky shores of Kaikoura over the coming months.

Reminder: As part of the Ministry for Primary Industries (MPI) emergency response to the 14 November earthquake, the area between Marfells Beach (west of Cape Campbell) and the Conway River, south of the Kaikoura township, extending four nautical miles offshore, is closed for the collection of shellfish and seaweed. For more information visit their website here <https://www.mpi.govt.nz/>.



STAY ALERT - THERE COULD BE A TRACTOR AROUND THE NEXT CORNER

This time of the year is a busy one on farms with large (and often slower moving) agricultural contracting vehicles a common feature on rural roads as they move from farm-to-farm to complete seasonal work.

When State Highway 1 south of Kaikoura is closed for earthquake recovery work, the predominantly rural Inland Road (Route 70) is extra busy as the only route for freight, construction, local residents, and holidaymakers travelling to and from Kaikoura.

Movement around these agricultural vehicles can increase the risk of incidents. Like all vehicles using public roads, they must comply with strict requirements covering everything from licensing, safety signage, lighting, towing, etc (see the 'Agricultural vehicles guide' on the NZ Transport Agency website: <https://nzta.govt.nz/assets/resources/agri-vehicles-guide/Agricultural-vehicles-guide.pdf>).

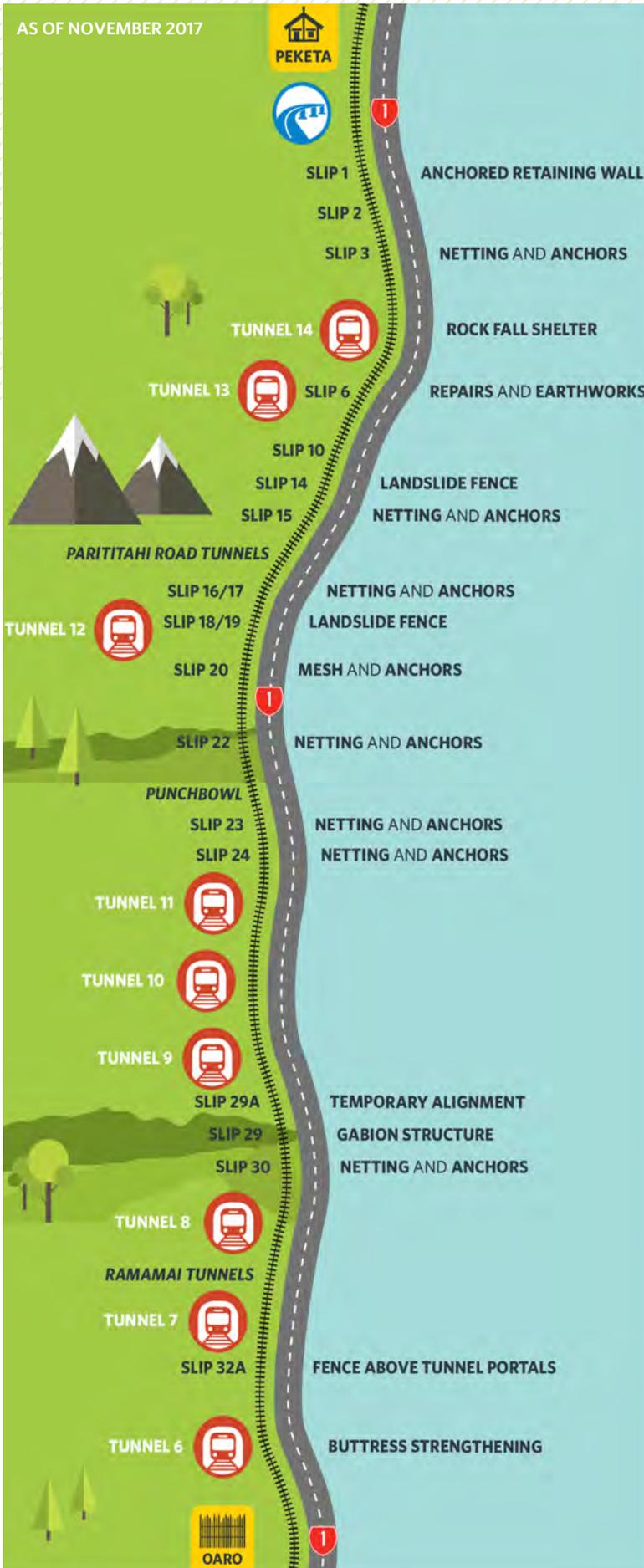
If driving the Inland Road, please be extra alert approaching narrow winding corners, when driving in poor visibility or low light conditions. If you do come across an agricultural contracting vehicle, please be patient as many will only travel short distances between farm gates and you shouldn't be delayed long. Alternatively, wait for a safe place to pass.

If driving a slower vehicle, please pull over in a safe area so any vehicles backed up behind you can pass. All drivers need to share the road to help keep everyone safe.



OPEN/CLOSED SCHEDULE FOR SH1 SOUTH OF KAIKOURA

SH1 SOUTH - WORK IN PROGRESS



Reminder - next upcoming closure between Peketa and Goose Bay:

- Monday 20 November to Friday 24 November 2017.

There will be local drive-throughs each day, at 7am and between 6pm to 8pm.

The Inland Road (Route 70) is available for travel 24/7.

The 'normal' open/closed schedule:

- Friday to Monday - open 7am to 8pm to the public (closed overnight).
- Tuesday to Thursday - open at 7am, and then again for two hours between 6pm to 8pm for the local drive-throughs (closed the rest of the day and overnight).

CANTERBURY ANNIVERSARY WEEKEND - PLAN YOUR JOURNEY

Canterbury Anniversary this year is on Friday 17 November. If travelling in the area that weekend, expect more traffic on the roads with Cantabrians taking advantage of the holiday on Friday to enjoy a long weekend break.

Travelling between Kaikoura and Christchurch?

Depending on your travel plans, there are two routes. Allow around three hours for each route:

DATE	SH1 SOUTH OF KAIKOURA
Thursday 16 November	CLOSED to public travel between Peketa and Goose Bay (local residents' convoys only)
Friday 17 to Sunday 19 November	OPEN for public travel 7am to 8pm (CLOSED overnight)
Monday 20 to Friday 24 November	CLOSED to public travel between Peketa and Goose Bay (local residents' convoys only)

Inland Road (Route 70) OPEN 24/7 for public travel

Travelling to and from Hanmer Springs?

One lane only past the work site at Waiiau Ferry Bluffs, please allow extra time for travelling.

Thursday 16 to Sunday 19 November	One lane OPEN controlled by either manual stop/go traffic system or traffic light system
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REMINDER: BRIDGE CLOSURE OVERNIGHT - 40 MINUTE DETOUR

The NZ Transport Agency is closing Williscroft (Maruia River) Bridge between Springs Junction and Maruia for one night this weekend to complete repairs. The detour will add an extra 40 minutes to your journey.

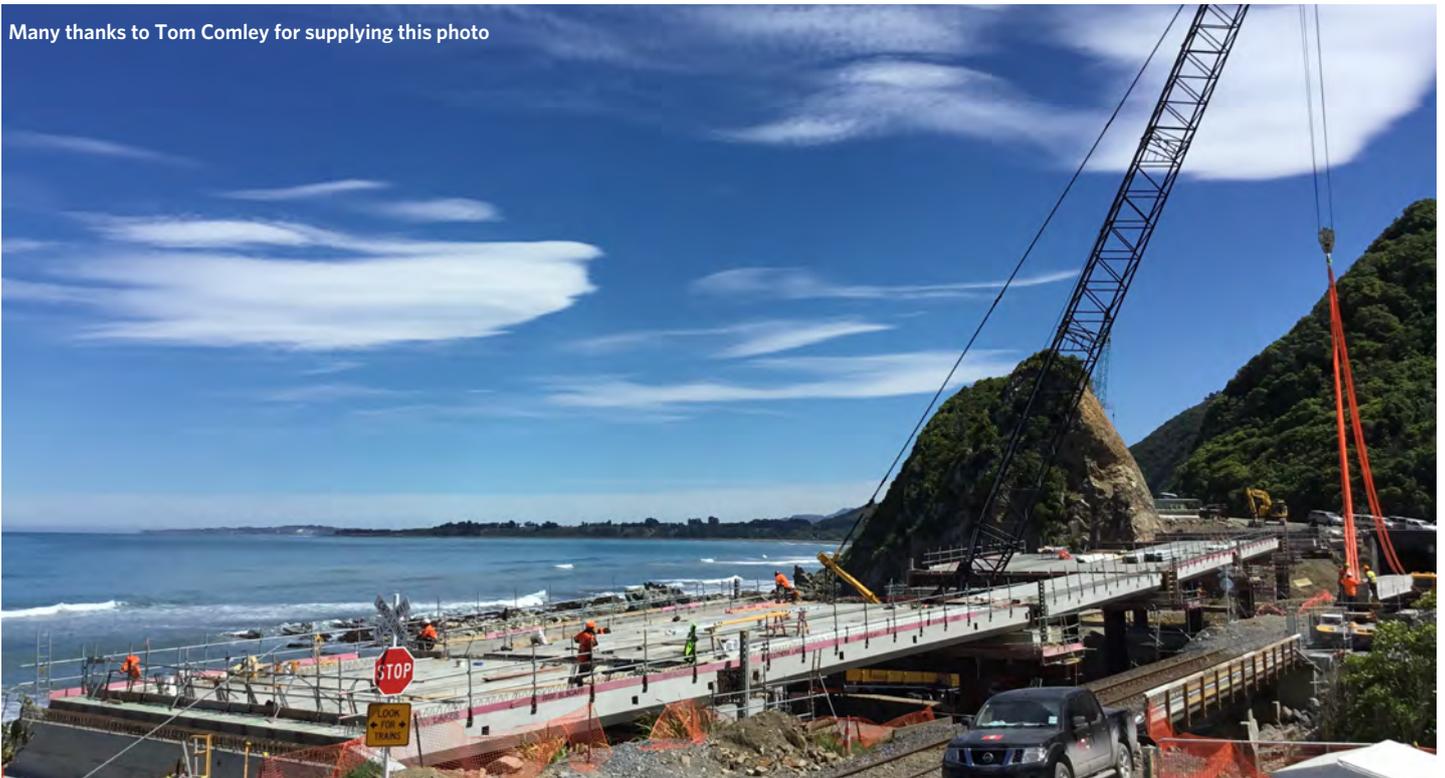
The bridge is scheduled to be closed from 8pm Sunday 12 until 6am Monday 13 November. Northbound traffic will be detoured at Springs Junction on SH7 to Reefton, then SH69 to Inangahua before rejoining SH6 to the turnoff just south of Murchison (O'Sullivan's Bridge). Southbound traffic will be detoured in the opposite direction.



IRONGATE BRIDGE UPDATE

The challenges of a congested work site. The team at Irongate are carefully working the logistics of landing the bridge deck beams with limited room to manoeuvre. On track for road opening!

Many thanks to Tom Comley for supplying this photo



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 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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On the Transport Agency's social media: www.nzta.govt.nz/contact-us/connect-with-us/