



The Bulletin Kaikōura earthquake update

SIGN UP

To receive monthly updates online here

bit.ly/NCTIRBulletinSignUp

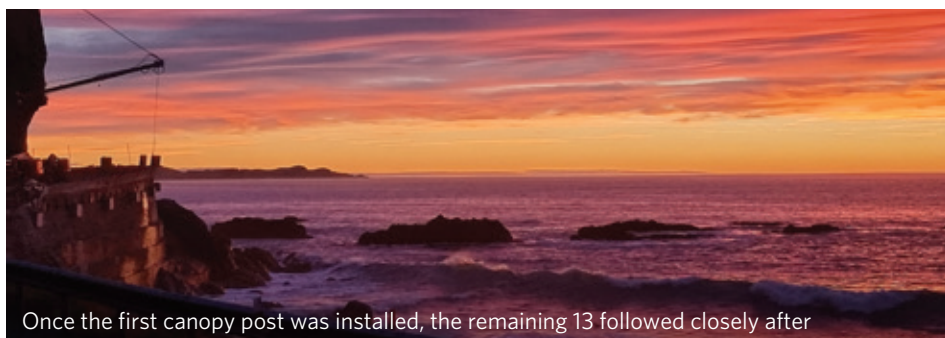
Canopy home stretch



It's been a busy month for the canopy team as they reach the home stretch on the rockfall protection work south of Peketā.

They've installed all of the 14 canopy posts and approximately 40% of the rockfall mesh. They even hosted a television crew from TVNZ who were curious about the night works - which aired last week on 1 News (see clip here: <http://bit.ly/Canopy1News>).

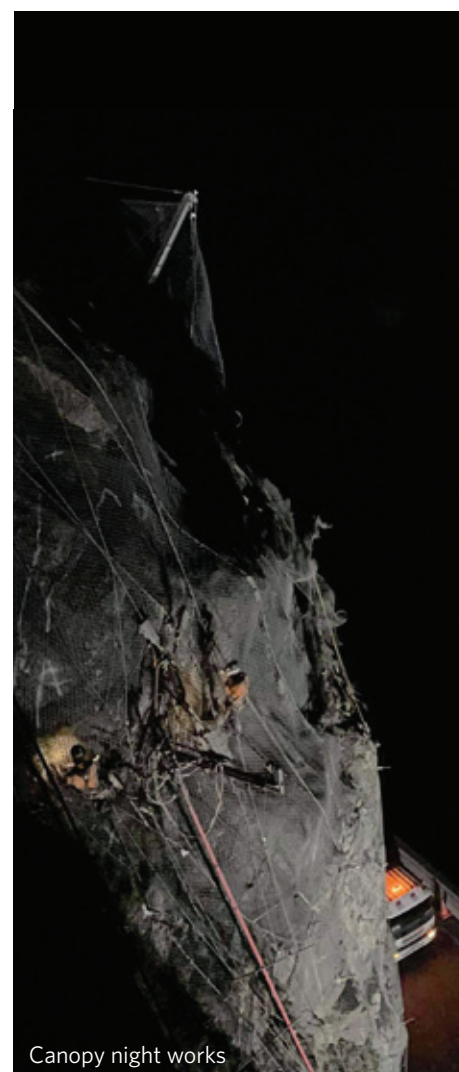
Work is progressing well, with night works due to wrap up in mid-May. For a recent shot of the canopy progress see page 2 - 3.



Once the first canopy post was installed, the remaining 13 followed closely after



TVNZ reporter Thomas Mead speaking with NCTIR abseiler Rob North



Canopy night works

Short daytime delays

From **Monday 19 April** until **Friday 14 May** (four weeks), there will be daytime closures of up to 30 minutes at the canopy site between **9am - 5pm, Monday - Friday**, with traffic being cleared in both directions after each closure.

The abseiling team require these longer working timeframes during the day to complete work on the canopy mesh directly above the roadway. This includes connecting up and tensioning a second, slightly finer, layer of rockfall mesh, and carrying out helicopter operations to remove temporary mesh from the hillside.

We will continue working under the existing night closure schedule between 8pm - 6:30am (6am Mondays), Sunday - Thursday, (see www.nzta.govt.nz/p2c for current schedule), with the road open to two lanes of traffic over the weekend.

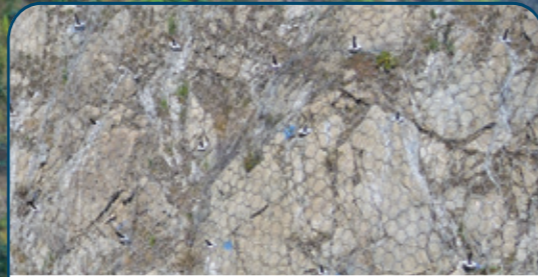
Anzac Weekend

There will be **no closures** from midday **Friday 23 April** until 8pm **Monday 26 April**. On **Monday 26 April** from **8pm - 11.30pm**, there will be closures of 30 minutes maximum with traffic cleared in both directions after each closure. The usual timetable will resume from 11:30pm.

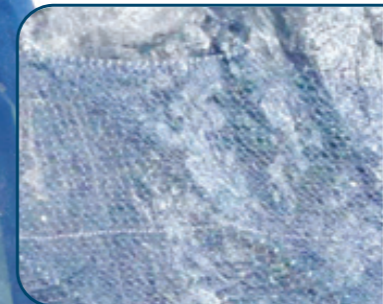


Canopy update

The nuts and bolts of it



The hillside looks like a bit of a pin cushion, with over 625 rock anchors drilled and grouted in place to stabilise the rockface. If all of the drill holes were added together their combined depth would be 3km!



The first layer of rockfall ring mesh (300mm diameter) has been laid on the southern end of the canopy. A second finer layer of mesh (65mm diameter) is to be installed over top.



Temporary mesh to protect crew and motorists while work is underway. With the canopy now in place, this will be re-moved over the next month by helicopter.



Additional shotcreting has been carried out to stabilise this area - which was milled back last year to allow larger vehicles to pass each other safely.

The canopy is a self-cleaning design that will redirect rock-fall to a safe zone away from the road.

All 14 of the canopy posts are now installed

Hidden behind the seawall are 14 concrete plinth structures, which have been linked to the canopy posts by wire ropes and act as the downslope anchor points.



Taonga training tool



Over the course of the project NCTIR's Cultural Monitor and Iwi Advisor

Darran Kerei-Keepa safeguarded a small box full of artefacts belonging to the local Rūnanga, for educational purposes.

Darran compiled the artefacts in April of 2017 to use as a portable training tool for the construction teams – holding briefings with crew to sharpen their eyes to certain shapes in the freshly turned earth.

The earthworks teams were especially well-placed to keep an eye out for artefacts while work was underway, and by the end of the project a number of exciting finds had been made with the help of eagle-eyed crew who attended one of Darran's taonga inductions.



Darran speaking at a special ceremony at the Takahanga Marae held last year to officially repatriate all taonga found during the NCTIR project.



Taonga box

Site crew member Chuck Simiona was one such helper, and managed to spot several artefacts while overseeing works at Rākautara. 'Once you've seen one [type of artefact] and you know what you're looking for, it really tunes your eyes in to spot those shapes.'

Each artefact in the display had to be strategically selected. 'The contents of the box was chosen as a representation of what is likely to be found along the Kaikōura coast,' Darran explains, 'and so there are no repeated artefacts.' He opens the lid to reveal round stone sinks, angular pounamu adzes and shards of bone packed in thick museum-quality material. The bone is moa, he explains, and can be identified by the unique webbed pattern at its core.

The adzes seem unaffected by time – they are shiny and sharp, and look freshly carved. Some of the sinks have been sand blasted by the sea, but a line is still visible around the outside of the stone where a fishing line sat.

'The larger sinks were most likely used for sea fishing,' Darren says, 'and the smaller may have been tied to the corners of nets and cast across a river mouth.'

Since the wind down of NCTIR works Darran's box of taonga has been returned to the Rūnanga. These pieces, as well as the ones discovered during the NCTIR programme, will be on display at the new whare taonga (museum) on the marae grounds when it opens later in 2021.

42 **ARCHAEOLOGISTS**
AGED 23 TO 80 YEARS OLD
WORKING ON
246 IDENTIFIED SITES

Barney's bottles



Glass and ceramic fragments dating to the mid-nineteenth century were discovered at Toka-ānau south of Kaikōura in February 2019. This historical find has the NCTIR Archaeology Team excited, as they attempt to piece together the story behind the fragments.

NCTIR archaeologist Kim Bone says the team believes the material to be refuse from the family of historic Kaikōura whaler, Barney Riley, who used to operate the Rangī-Inu-Wai Whaling Station. Barney is a familiar name among Kaikōura locals – especially being the namesake of Raramai landmark 'Barney's Rock'.

While public records show that the general piece of land where the material was found once belonged to Barney – it was an oil painting, dated to the latter half of the nineteenth century, which really helped to place Barney's small cottage. The likeness of Toka-ānau, looking north towards Kaikōura, was captured by artist Jesse Hollobon and marks not only the location of Barney's whare, but also the grave of his wife Sarah Ann Riley, and his brother, James.

'The [glass and ceramic] material was found in what would have been the rear of the cottage, typical for the disposal of refuse in nineteenth century homes in New Zealand. The crudely made case gin bottles and processed whale bone also lead us to believe the material belongs to this period.'

NCTIR Archaeology Director Jeremy Habberfield-Short says Kim's findings are exciting for a number of reasons – one being the discovery that road and rail works in the 1930s hadn't completely destroyed the remnants of Rangī-Inu-Wai Whaling Station. Plus, it makes for a great tale.

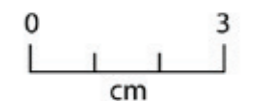
'With all the stories that exist about Barney, it wouldn't be farfetched to imagine him swigging from an old square gin bottle while boiling down whale blubber in the station that occupied the point along the foreshore where the Safe Stopping Area is now. What an arduous and isolated life on the coastal frontier they must have faced!'

Kim says future research in the area may allow archaeologists to date this material more closely to Barney and the period of his occupation.

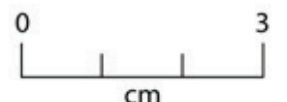
Kim says future research in the area may allow archaeologists to date this material more closely to Barney and the period of his occupation.



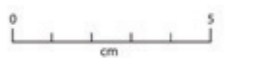
Barney Riley's whare: Image courtesy of Alexander Turnbull Library: <https://natlib.govt.nz/records/22758729> or <https://natlib.govt.nz/records/22758729>



cm



cm



cm

45,000+ **FISHBONES**
STUDIED
ACROSS **21 DIFFERENT**
SPECIES OF FISH

400+ **ARTEFACTS**
STORED **IN THE**
NEW **WHARE TAONGA**

26,500+ **BAGS OF**
MATERIALS
STORED IN THE
COLLECTION ROOM

Digging deeper



A team of up to 42 archaeologists has been responsible within NCTIR, in partnership with Te Rūnanga o Kaikōura, for coordinating archaeological heritage management to ensure that NCTIR works respect, protect, and preserve the area's rich heritage.

For those interested in digging a little deeper, follow the below link to a short documentary, which helps to unpack the past four years of archaeological processes and challenges. This includes interviews with representatives from Heritage New Zealand Pouhere Taonga, the rūnanga, Waka Kotahi NZ Transport Agency, and some of our field and lab-based archaeologists: youtu.be/1BeEGZo9TyY

There will also be a final archaeological report detailing NCTIR's finds and spanning the history of Kaikōura's road and rail works along the coast, which will be available at Kaikōura Museum for any curious minds.



Archaeologists at work

7,700+
LITHICS
(STONE ARTEFACTS)
RECORDED

RECORDINGS AT
34 NEW
ARCHAEOLOGICAL
SITES



View of the road north of Kaikōura, 1911

Tail end of Titī season



Hutton's Shearwaters/ Titī are one of many native species threatened by

light pollution. Kaikōura's endemic seabirds fly at night, and can become disorientated by artificial lights and crash-land on the road. Titī have been flying down from their mountain burrows and out to sea over the months of March - April, and while we are reaching the tail end of the fledgling season, there may still be a few stragglers.

If you do find a grounded shearwater, please place the bird in a ventilated box in a quiet, dry and cool place. The bird can be released gently onto the sea at a sheltered location. If the bird is injured/ill, please drop it at the Hutton's Hub on Ludstone Road, next to the Department of Conservation office, or to VetCare Kaikōura.

If you would like to help conservationists learn more, you can record your Hutton's Shearwater sightings by emailing the date, location, and number of birds seen to lorna.deppe@gmail.com.

Find out more information about Titī on www.huttonsshearwater.org.nz



Night skies over Kaikōura



One Saturday morning when Kim Hill was speaking on Radio NZ about Dark Sky Reserves and Matariki celebrations - the penny dropped that Kaikōura, with all its unique offerings and natural advantages, would be ideal.

One of NCTIR's key objectives before departing was to leave a positive legacy for the community by promoting economic growth - and astrotourism would be a step toward filling a gap in the town's winter off-season.

Following on from this initial revelation, NCTIR's contractors were able to fund 'sky quality metres' to help measure and track the brightness of the town's night sky, and have overseen the installation of special low-emission lights down the Racecourse hill.

'What started as a small gesture on NCTIR's part has just taken off from within the community,' says NCTIR Project Director Tony Gallagher. 'We're delighted to see a group of passionate local people drumming up some real momentum.'

A Kaikōura Dark Sky Reserve Working Group has picked up where NCTIR left off, with over 50 people attending a recent presentation at the Kaikōura Museum.

Working group lead Nicky McArthur says the aim of the meeting was to drum up community support, consider funding options, and discuss which regulatory tools are needed to help reduce light pollution.

Dr Lorna Deppe, who chairs the scientific committee of the Hutton's Shearwater Charitable Trust, is all for a dark sky reserve. 'If we get dark sky accreditation that would definitely lead to better outcomes for Hutton's Shearwaters. We've been looking into the research - and it ticks all the boxes to reduce the glow and upward radiation that seems to confuse them when night flying.'

Loyal local reader



Paul Harnett is a 90-year-old Kaikōurian with a thirst for knowledge and a good pair of legs.

‘He’s a fourth generation local,’ explains his daughter, Maureen Hammond ‘and nothing happens around here without him taking an interest.’ After the 2016 earthquake the nonagenarian’s morning routine included breakfast at home followed by a walk down the hill into town – and into the Kaikōura Museum.

‘The museum staff always held a copy of the latest NCTIR Bulletin for him,’ Maureen recalls. ‘They would wave him in to get it because they knew how much he loved it. They were so kind to him.’

Paul would take home a few extra copies so he could post them around the world to his daughter in Illinois and his brothers in Texas and Gisborne.

‘He has a bit of dementia and an event like the Kaikōura earthquake is quite difficult to comprehend for those who have trouble processing – but he just loves getting the information and sharing the happenings.’

During their car rides along the coast Paul regales Maureen with his stories of growing up in Kaikōura in the 1930s and 1940s and watching the workers first lay the railway south of Peketā. Maureen says he is fascinated by the way that the earthquake has changed the coast.

‘We’ve called in to every new pull-in area, and read every information panel,’ Maureen says. ‘He has taken in every detail; he’s so proud of the recovery. It means a lot to him.’



Paul Harnett at a safe stop in Oaro

What village?



The NCTIR Village removal was completed last month, with the land reinstated and returned to its owners

KEEP UP-TO-DATE

Subscribe to updates by emailing info@nctir.com, with ‘Bulletin’ in the subject line.

South Island www.facebook.com/nztasouthisland/

KiwiRail www.facebook.com/kiwirailNewZealand/

CONTACT US

Call our freephone: **0800 NCTIR EQ** (0800 628 4737) or email us: info@nctir.com

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.