

CONSTRUCTION UPDATE



Largest cut complete

1.2 million

cubic metres of rock
and clay removed

45 metre

rock face

55

vertical metres of
material removed

This month we celebrated the completion of our largest cut, CNS. This image shows our huge earthmoving kit, including 125 tonne excavators and 60 tonne trucks, dwarfed by the CNS cut (behind). For more information see page two.

Open Day - Save the date!

Have you ever wanted to get a closer look at the huge viaducts we're building alongside State Highway 1 in Ōkahu and Pūhoi? Or maybe you've got some burning questions about our project that you'd like answered?

We're excited to announce we have set a date for next year's Public Open Day, where visitors will experience a bus tour at the southern end of the project and have the chance to meet our talented team.

The Open Day is scheduled for Saturday 20 February 2021. Registrations will open early next year and demand is expected to be high, so keep an eye on Facebook and our website for information on when the ticketing link will be released.





Our holiday work plans

This holiday season (23 December – 5 January) we'll be taking advantage of the fine weather to continue catching up on the time we lost this year due to the COVID-19 lockdowns.

This is important as we move towards our new planned opening date of mid-May 2022.

As a result we will have earthworks activities underway in select areas of the project throughout the holiday period, with the exception of Christmas Day, Boxing Day and New Year's Day. Christmas Eve and New Year's Eve will be half days, with work stopping at midday.

We'll be reaching out to those of our neighbours who may be directly affected by our Christmas works.

Work we have planned includes:

- Earthworks
- Drainage works

We know Christmas is a busy time on the roads and we won't carry out any physical work on State Highway 1 over the Christmas period.

The new layout north of Johnstones Hill Tunnels will remain in place so please

continue to drive carefully and keep to the temporary speed limit.

We'll be limiting the number of project vehicles on the highway over this time, and there will be no heavy vehicles.

As always, our community helpline will be available over this time 24/7 so please don't hesitate to give us a call or send us an email if you have any questions or concerns.

Above all, we'd like to thank you for your patience and support this year and wish you a safe, happy holiday season.

What's coming up in the New Year?

Some of the work we have planned for early next year once we have returned to normal operating hours includes:

- Pūhoi Road widening works
- Continued work on the Northern and Southern Connections

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Largest cut on the project now complete



CN5 pictured in 2017 when it was still a mountain...



... and in November 2020, shortly before its completion.

What do you do when there's a mountain in the way of your new motorway?

You track down monster machines including 125 tonne excavators and giant 60 tonne rigid dump trucks, hire expert subcontractors/operators, procure some dynamite and start digging.

This month we completed the largest cut on our project – CN5, named for its Central North location.

In total, we've removed 1.2 million cubic metres from CN5 over the last two years. This includes 400,000 cubic metres of rock which was

blasted and then carted away, and 800,000 cubic metres of clay which was dug out and placed in fill or soil disposal sites nearby.

"This is a major milestone for us. There has been some real complexity in this cut and it's taken a huge team effort to resolve some of the challenges we've faced," says Earthworks Manager Alejandro Fernandez.

"I'd like to acknowledge the many members of the project (some that have left or moved to other areas) who have put in massive amounts of effort in to get this cut complete."

End of year snapshot

As we draw to a close on one of the most unusual years many of us have ever experienced, we've been looking back on everything we've achieved so far. It's awesome to see the progress we've made, even while dealing with a global pandemic, and we're well on track towards our new completion date of mid-May 2022. Below is a snapshot of what we've achieved and where we stand at the end of this year:



Earthworks:

- 9.3 million cubic metres of cut complete
- 4.8 million cubic metres of fill complete



Landscaping:

- 42 hectares of planting complete
- 18 hectares of grassing complete



Structures:

- Arawhiti ki Ōkahu, Arawhiti ki Pūhoi and Watson Road Bridge main structures complete
- Carran Road Underpass complete
- Mahurangi Bridge complete



Northern and Southern Connections:

- Southern Connection stage two implemented
- Northern Connection ground works, drainage and trenching underway



Alignment:

- 11 barrel culvert complete
- Longitudinal drainage, swales and utility trenches well underway



Road surfacing:

- Subgrade improvement layer (SIL) and aggregate placement underway



Bidding a fond farewell to the big kit

With our final season of bulk earthworks well underway and much of the major work already complete, we'll start seeing less of the big kit we've enjoyed watching rumble around the countryside.

The big machines that have spent the last few years moving mountains to sculpt our future motorway will be heading to new jobs in the coming weeks and months.

Using these machines was considered a fairly unorthodox approach when it was first proposed, says Senior Supervisor Earthworks

Brett Scott. New Zealand doesn't have a lot of large-scale earthworks projects and the machines are more commonly seen in mining situations such as those in Australia.

"When we brought in the 1250 excavators and 605 rigid dump trucks there were some who doubted they would work in our project's terrain," says Brett.

"We spent many hours planning and gaining an understanding of the machines and how they could operate in the challenging environment.

"The big kit has played a massive role in getting us to where we are. The 1250s and 605s have been the jewels in our crown.

"It's pretty amazing what this team has been doing and still is doing. At our peak, we were moving something like 90,000 cubic metres a week in the Central North.

"The operators are highly skilled but so are the people who are supervising, planning, understanding what the machines and operators are capable of, and how we can safely meet design requirements."



HD605 rigid dump trucks

These 60 tonne rigid dump trucks are capable of carrying up to 45 tonnes and have spent many hours carrying huge loads of dirt and rock to our fill and tip sites.



Komatsu 1250 Excavator

The largest machine on site, we had two of these 125 tonne excavators operating at one stage.



Komatsu 375-8 dozer

The 375 dozer pushes out fill after it's been dumped by one of our trucks. They're also used for ripping rock in sensitive areas.



Cat D10R and D9T dozers

The D10R dozers are also able to rip through rock that we can't blast anymore, such as at Moir Hill and CN1 cut. Smaller than the D10, the D9T is used for pushing dirt and ripping softer rock.



Articulated Dump Trucks (ADTs)

The 50-tonne Bell ADTs are useful on softer ground and can carry considerable loads. The smaller 40-tonne ejectors have a mechanism which sees the dirt ejected rather than tipped out, reducing tipping risk. As well as being safer, the ejectors are more economical as there is no carry-back.



Rematch: NX2 vs Pūhoi

New Zealand's (arguably) most anticipated sporting event of 2020 took place in Pūhoi in November, when the motorway project team once again took on the local community in a nail-biting game of football.

The idea for the match was raised in an early meeting between project staff and the Pūhoi community, with the first match taking place in 2019.

With a high number of football-mad Spanish staff on the project, Pūhoi recognised the opportunity for a competitive match of football for their local teams. It has also been another way for the NX2 project team to engage with the community, which has been incredibly patient and supportive.

The NX2 team was made up of staff from across the project, including engineers, surveyors, environmental advisors and interns, while the Pūhoi team was drawn from the wider football club. It was a close game with both sides taking the match very seriously, according to NX2 team captain (and Pavements Section Manager) Jordan Watson.

NX2 scored the first goal – a header at close range – with Pūhoi quickly evening the score through a converted penalty. Some fancy footwork saw NX2 score their second goal, however Pūhoi squeezed in their equaliser with 10 minutes to go.

“Perhaps taking advantage of some tired legs, perhaps channelling the energy of the late Diego Maradona, a wonderful through ball resulted in a chance for NX2 that just had to be finished – and it was, with a final score of 3 – 2 to NX2,” says Jordan.

Both teams are looking forward to meeting on the pitch again next year.



This little kitten was found by one of our digger operators who heard her meowing while working in the Central North. We've found a few cats in this area lately and as part of our predator control plan our Environmental Team has been re-homing them or searching for their owners (with the help of local charity Julie's Animal Refuge) as the area is close to a section of native bush where we relocate our native geckos. We had planned to take this kitten to a shelter but unsurprisingly she was quickly adopted by a member of our site team who named her Edith. She is settling in well to her new home.



We hosted 18 firefighters from the Warkworth Fire & Emergency team on site recently.

The team visited the Central North where they were able to gain a better understanding of the motorway project and how they will be able to respond in case of any emergency.



We were happy to help out at the Warkworth School's Walkathon fundraising event in November, handing out ice blocks to children who had just completed a 5km walk around town. Well done kids!



We have had some questionable facial hair around the project lately - and all for a great cause! We had nine participants officially partake in the November 2020 challenge, and we raised \$1335 which was donated to Movember. Movember is a community raising money to make a difference in mental health & suicide prevention, prostate cancer and testicular cancer.

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