

# CONSTRUCTION UPDATE



## Intelligent Transport Systems on the project

To help keep the public safe and respond to incidents quickly when Ara Tūhono – Pūhoi to Warkworth opens a comprehensive Intelligent Transport System (ITS) is being installed. The system will monitor the new motorway from ATOC (Auckland Transport Operations Centre) and AM&M.

Key features of the system include:

- Monitoring incidents or events.
- Web cameras to allow the public to watch what's happening on the road in real time.
- An over-height vehicle detection system to alert vehicles before they reach the Johnstones Hill Tunnels, and if necessary to trigger an alarm for the tunnels to be closed.
- Dynamic roadside signage to provide motorists real-time information about road events and journey times.
- An automatic detection system to alert of any cyclist or pedestrian attempting to enter the road, or vehicles driving the wrong way on the motorway.
- A road access control system will allow emergency and maintenance services to access the road at key points, to respond faster and better to any road incident.

Pictured here is the motorway's first gantry, and road users will have seen this structure exiting the Johnstones Hill Tunnels – the project team believes it's a contender for the largest cantilevered gantry in New Zealand, so it's pretty hard to miss! The gantry will host CCTV and signage.



## NEW FLYOVER

[Click here](#) to watch the latest footage of the Ara Tūhono - Pūhoi to Warkworth Motorway project area from November 2021, flying from Warkworth in the North to Pūhoi in the South.

## COVID-19 update

We were lucky to be able to have resumed some construction works during Alert Level 3 restrictions. The teams are now well versed at following the strict COVID-19 health and safety protocols and will continue to do so under the new traffic light framework.

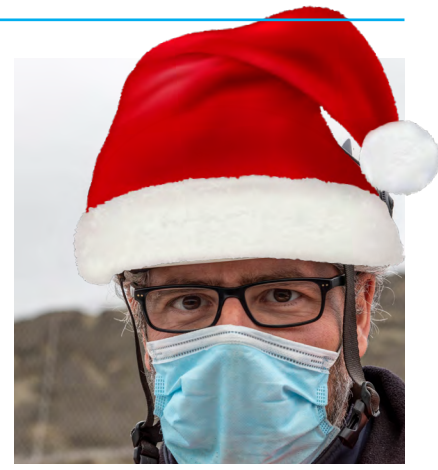
You may have questions about the impact the latest lockdowns will have on the opening of the new motorway. The project team is working through this with Waka Kotahi NZ Transport Agency and will ensure we keep our community informed of developments.

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## Christmas working hours

**The project will close at Christmas and New Year, which will result in the site being closed from Thursday 23 December 2021 to Tuesday 4 January 2022.**

We will have crews on standby to respond to exceptional weather events or any other incidents requiring immediate attention.

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.

Contact us: 0508 7295 4636 [info@nx2group.com](mailto:info@nx2group.com)

## What's coming up?

Some of the work we have planned for early next year once we have returned from the holiday break includes:

- Ongoing works at the Northern Connection, including resurfacing works at the Kaipara Road/Goatley Road/ SH1 intersection and the widening of SH1 through to the new Matakana Link Road.
- Southern Connection traffic switch

## E530 CULVERT

The E530 culvert, across from the Matakana Link Road intersection is special because building it is classed as a tunnelling operation.

Instead of digging up the road in two halves, building the culvert and then burying it again, it is being hydraulically pushed under the road. This is called pipe jacking

The team use a semi-mechanised form of tunnelling using a shield, mechanical and hand excavation to deal with a wide variety of ground conditions and obstacles.

The 2.4 meter diameter culvert is being constructed as part of the widening of State Highway 1 (SH1) between Hudson Road and Pukerito (Northern Connection).







## Kaipara Flats Road/Goatley Road/SH1 intersection

As our team progress works at Pukerito (Northern Connection), temporary changes to the existing road alignment are required. As part of these works, the intersection at Kaipara Flats Road, Goatley Road and State Highway 1 (SH1) is being upgraded.

New barriers have been installed and an extra median lane will be introduced as part of the final design, allowing vehicles to safely merge when turning onto SH1 southbound. The road resurfacing will see an increase in the final height of the road in this area.

Night works are ongoing in the area and a temporary speed limit of 60km is in place until the works have been completed. Once the project is back on board after the Christmas break, we intend to start the resurfacing works in mid-January. This will involve the closure of Kaipara Flats Road for around ten days. We will work closely with the project neighbours and there will be early warning signage to advise motorists ahead of the works. If you have any questions or concerns about this work, please contact our stakeholder team.

## Taking a look at what lies beneath

*Many of us don't think about what's happening under the road we're driving on, but beneath the surface are cables and pipes that enable drainage, power, fibre and intelligent transport systems (ITS). As part of the construction of the motorway, the project team needs to dig thousands of metres of trenches ranging in width, depth and length. We asked the alignment team for some trenching highlights:*

- A single trench runs all the way from the tunnel maintenance building at the Southern Connection to the new AM&M building at the Northern Connection. This trench is used for power, fibre and ITS.
- The total length of ducting project-wide is around 67,000 metres – approximately 3.5 times the project length!
- The distance between Arawhiti ki Ōkahu and Arawhiti ki Pūhoi is just 1400 metres but the

total length of ducting installed between these two viaducts, if laid in a straight line, amounts to 16,000 metres – almost the length of the entire motorway.

- The two deepest trenches for longitudinal drainage are 4.5 and 5.1 metres deep.
- The total length of longitudinal drainage trench and pipe installation on the project is 13,300 metres.





# Our latest project photos



Central North cut.



Arawhiti ki Ōkahu looking towards Johnstones Tunnels.



Landscaping on the project.



Pukerito/Northern Connection.



Pavements team



Our gate staff ensuring safe entrance to the site.



The approaches to Mahurangi Bridge freshly paved.



Arawhiti ki Pūhoi and on ramp.



Pavements progress and Arawhiti ki Pūhoi.



AM&M Building and Pukerito/Northern Connection.



Aerial view of the Southern Connection.



Pavements team in project PPE.



Rock mesh installation.



# End of year snapshot

2021 what a year it has been! Unprecedented times yet again. While there has been an impact of the ongoing COVID-19 lockdowns there has been great progress across the project and here are some of the highlights.



## Pavements, Alignment, Finishing and Earthworks

- Finishing the subgrades, ready for asphalt paving
- 3100 m of kerb and channel have been placed
- Placed 1/3 of the total road asphalt pavement
- Handed over the first area to the ITS team



## Intelligent Transport Systems

- Ready for the Southern Connection traffic switch.
- Installation of assets along the motorway corridor.



## Landscaping

- Planting has progressed passed 50% complete – with over 500,000 plants now planted on the project.
- Five stormwater treatment wetlands complete
- The grass planting of slopes is completed and under maintenance
- Over 15,000m<sup>3</sup> of mulch spread on project to date



## Pukerito/Northern Connection

- Asset Management & Maintenance Services (AM&M) building have been completed
- Improvement work between Pukerito roundabout and Kaipara Flats Road are now complete
- E530 culvert tunnelling beneath SH1 is underway



# End of year snapshot



## Structures

- Completion of physical works in Arawhiti ki Ōkahu and Arawhiti ki Pūhoi viaducts.
- Close out of all quality assurance and quality control documentation for Arawhiti ki Ōkahu and Arawhiti ki Pūhoi viaducts



## Southern Connection

- Completion of both the Arawhiti ki Ōkahu and Arawhiti ki Pūhoi
- Completion of Hibiscus Coast widening
- Street light installation completed



## Community

- Hosting a local family on a site visit after they won the One Mahurangi 2020 Christmas Selfie Competition.
- “Turning trees into opportunities” the use of trees removed from site being given to Springboard to assist with their firewood fundraiser project which helps local young people to achieve positive outcomes in their lives. For more information about Springboard see [www.springboard.org.nz](http://www.springboard.org.nz)



***Wishing you all a happy  
holiday season.  
Stay safe on the roads this  
summer.***

