Project Overview & Timeline

Whangarei

The new Pūhoi to Warkworth project will extend the four-lane Northern Motorway (SH1) 18.5km from the Johnstone's Hill Tunnels to just north of Warkworth. It is the first stage of the Ara Tūhono – Pūhoi to Wellsford Road of National Significance.

Ara Tūhono means a connecting pathway (Ara meaning pathway/ passage and Ara Tūhono means connecting or linking one part to another).

The highway will be built to the west of the existing SH1 and bypass Warkworth on the western side. It will be a four-lane dual carriageway, separated by a central median with a safety barrier.

The Pūhoi to Warkworth project is a PPP (Private Public Partnership) between the Government and a private consortium, the Northern Express Group (NX2). It will be open for traffic by late 2021.

While the NX2 private-sector consortium will be responsible for financing, designing, building, maintaining and operating the motorway for up to 25 years, the motorway will remain a public asset.

Key milestones further into the construction timetable include:





Warkworth

Pūhoi

Who to Contact

NX2 has a team of dedicated professionals experienced in working with communities who will be on hand to work with you and answer any questions you may have.

You can contact us 24/7 in case of emergencies and/or concerns via our freephone number 0508 P2WKINFO (0508 7295 4636), or you can email us at info@nx2group.com. For further information please visit nx2group.com

Auckland



Roads of National Significance (RoNS) and Public Private Partnerships (PPPs)

Pūhoi to Warkworth is an important component of the Government's RoNS programme and will be a major contributor towards achieving a safer, more reliable, more resilient and sustainable roading network across the country.

The seven current RoNS projects are based around New Zealand's five largest population centres: Auckland, Hamilton, Tauranga, Wellington and Christchurch. Other RoNS may be added in future but currently from north to south the seven projects are:



PPPs

The Pūhoi to Warkworth project is being delivered by a Public Private Partnership (PPP) consortium, NX2.

A Public Private Partnership (PPP) is a long-term contract between the public and private sectors covering the financing, construction and operation of public infrastructure and services.

NX2 is made up of companies with considerable experience in the design, construction, finance, maintenance and management of key infrastructure projects in New Zealand and overseas. The consortium partners funding the project are:

- Accident Compensation Corporation (New Zealand).
- HRL Morrison & Co Public Infrastructure Partners (Australasian).
- Acciona Concesiones S.L. (Australia).
- Fletcher Building Ltd (Australasian).

Key Design Benefits

Drivers will enjoy several benefits including:

- You will have an enjoyable driving experience, with a smoother road surface which reduces noise and water spray. The road will follow the contours of the land as closely as possible, and be curved and scenic. It will mean you can be sure of reliable and easy-to-plan journey times.
- Drivers will have a truly scenic trip. Going through the majestic cut slopes of Pakiri sedimentary rock up to 50 metres high will give a sense of penetrating through the rock face.
- The curvilinear design (curved to fit in with the contours of the land) also acts as a safety feature. Because there are no long straights, drivers are discouraged from driving at excessive speeds.
- Another safety feature is having a paved central median strip, so that maintenance workers don't need to mow a grassed area. Wire rope barriers will be positioned in both the central median strip and at the sides of the road. These external barriers are to restrain vehicles that could otherwise run off the road in the event of crash. A three-metre shoulder area will allow ample room for access for emergency vehicles.

Greenroads

NX2 recognises that sustainability is best achieved by collaborating in design, construction and asset management. The international "Greenroads principles" contribute to that approach.

The Greenroads® Design Philosophy is a sustainability certification system that is specific to the design and construction of roading projects.

It requires a project team to achieve 12 mandatory requirements covering sustainable outcomes such as habitat conservation, work zone health and safety, recycled and recovered content.

Project teams progressively upload evidence to show they have achieved project requirements and credits during the detailed design and construction phase.

NX2 is contracted to achieve a Greenroads $^{\circ}$ Silver Rating for the Pūhoi to Warkworth motorway.

Interchanges

When the motorway is complete, there will be new options for drivers at Pūhoi and Warkworth.

At Pūhoi, the ramps on to and off the motorway are both "south-facing". This means if you are heading north, you can exit at Pūhoi. You can also go south by joining the motorway at Pūhoi. For Pūhoi traffic going north to Warkworth, or for traffic from Warkworth going to Pūhoi, drivers will use the current SH1. Access will be at an intersection reached by a road going underneath the new motorway.

At this stage, we do not expect enough demand for north-facing ramps for several years and therefore they are not included in the current project. North-facing ramps also present a number of engineering and environmental challenges and would have a significant cost. The current designation has enough space for future ramps should they be required.

At the "Northern Connection", where the new motorway rejoins the existing SH1 north of Warkworth, a new roundabout will ensure drivers can safely rejoin SH1 and travel south to Warkworth or north to Wellsford. It will also give access to a proposed future link road to Matakana and the coast.



The diagram shows the structure of the NX2 PPP consortium.

NX2 has sub-contracted a Construction Joint Venture (CJV) comprising of Fletcher Construction Company Ltd and Acciona Infrastructure. In turn, the CJV is sub-contracting work to other firms, such as Beca and Tonkin + Taylor for designs.

It is the teams employed by the CJV that you will see in the field and doing the actual work.







NORTHER EXPRESS GROUP





The role of Hōkai Nuku and the Ara Tūhono name

Hōkai Nuku is the name of the alliance formed between mana whenua of the project area traversed by the RoNS. Hōkai Nuku is the alliance of mana whenua being Ngāti Manuhiri, Ngāti Mauku/Ngāti Kauae of Te Uri o Hau, Ngāti Rango of Kaipara and Ngāti Whātua.

NX2 recognises the relationship between the NZ Transport Agency and Hōkai Nuku as Treaty partners.

The adoption by the Transport Agency of the dual Māori and European naming of the RoNS as, Ara Tūhono – Pūhoi to Wellsford Road of National Significance, is symbolic of the collaborative relationship between Hōkai Nuku and the Transport Agency.

Ara Tūhono means a connecting pathway (Ara meaning pathway/passage and Ara Tūhono means connecting or linking one part to another).

 $\mathsf{NX2}$ acknowledges the special relationship and will work in close partnership with Hōkai Nuku as the project progresses.

The Environmental Story

The motorway has also been designed to high environmental standards including careful design to minimise the impact on kauri and other native forests. A significant ecological restoration and enhancement programme is being adopted.

Over the route as a whole, the Urban Landscape Design Framework (ULDF) has three high-level outcomes for the project, which influence our Environmental Management Strategy:

- A 'clean, uncluttered' highway with gentle slopes to blend with the contours of the land and extensive plantings that carry on the natural patterns of vegetation.
- A 'stitched-together' landscape, bringing together streams and landscapes on either side of the motorway, and linking ecological corridors.
- A celebration of the cultural footprint of mana whenua, minimising disruption to natural watercourses, vegetation and landforms.

Our Construction Environmental Management Plan (CEMP) sets out the methods for how NX2 will manage and mitigate potential effects on the environment during the construction work period.

These methods specify outcomes such as erosion and sediment control at work sites; ecological monitoring and mitigation; a plan to prevent the introduction of kauri dieback (a deadly fungus-like disease spread via spores in the soil, which can kill kauri trees of all ages); management of construction traffic; management of dust, noise and vibration; a plan for preserving sites of cultural and archaeological significance; and the urban landscape design plan.







The Ecology Story



NX2 will identify ways to avoid, minimise or mitigate potential ecological impacts from the road project on, for example, native trees; native bats; freshwater fish; reptiles and amphibians, snails and insects; significant vegetation; wetlands and streams.

We have positioned the new road so it has the least-possible effect in the most ecologically-sensitive areas, principally the kauri forest alongside the Kauri Eco-viaduct located to the west of Perry Road, south of Warkworth.

The road design reduces adverse effects on the landscape and its plants and animals by being built at a low elevation, minimising excavation. Natural hill and stream contours will be retained as much as possible.

Where habitats of native species will be affected, the strategy outlines measures to relocate threatened plants and animals into suitable habitats and to undertake extensive mitigation enhancement with native plantings to make up for what is lost.

The planting of natural vegetation to replace indigenous vegetation lost during the project will be at a ratio of 10 (gain)-to-1 (lost) – one of the largest ratios for any New Zealand roading project.

In total, over 100 hectares of mitigation plantings will be undertaken in forests, wetlands, alongside steams, on fill sites and on newly-landscaped areas.





Managing Construction Effects

The project's consent conditions, set by the Board of Inquiry, outline the outcomes to be achieved for noise and other construction and operating environmental impacts. The conditions require the project to measure and report those impacts to demonstrate that NX2 complies.

Activities that may generate noise and vibration during the building of the motorway include felling trees, excavating, transporting and compacting soil, drilling, demolishing and removing buildings, constructing bridges, and blasting and crushing rock.

Our Construction and Noise Vibration Management Plan (CNVMP) identifies what typical construction activities will be undertaken, what typical equipment will be used and the best options for managing noise and vibration resulting from those activities. In particular, we will:

- Thoroughly assess the potential noise and vibration impacts of the project.
- Have plans to minimise them.
- Monitor effects on an ongoing basis.

• Ensure residents are kept fully informed of what's happening and when. For each planned activity an assessment will be carried out to find out how much noise and vibration is likely to be generated and who may be affected. These assessments will guide the project's response to managing the impacts.

We take these obligations very seriously and will consistently do our utmost to reduce any impacts on individuals and local communities.









Traffic Management

Road construction generates a lot of activity, including the coming and going of heavy machinery, temporary road closures and speed restrictions. Our Construction Traffic Management Plan (CTMP) outlines what NX2 will do during the project to minimise disruption, keep the public informed and ensure consent conditions are complied with.

We will proactively manage traffic through the planning and delivery of Site-Specific Temporary Traffic Management (SSTTM) plans at individual sites and during construction activities and aim to:

- Minimise disruption to travel flows and times on SH1 and local roads.
- Keep traffic flowing as smoothly as possible.
- Protect public safety including pedestrians and cyclists.
- Enable continuous access to properties.
- Inform the public about any potential impacts.
- Protect the workforce and travelling public by providing protected construction work areas.







Normal working hours will be 7am to 6.30pm weekdays and some Saturday mornings. Some night work may be needed but affected residents will be fully informed in advance if this is the case.

We will do all we can to ensure people are not inconvenienced. We will aim to keep delays to a minimum. This will apply to stop/ go points and other traffic management measures on both SH1 and local roads. If our work is likely to create delays of more than five minutes, we will warn road users in advance to give them choices about how they travel.