

# WORK WE'VE DONE ON THE SITE



## PRE-CONSTRUCTION WORK

There are many things we must do before we start construction – and a lot of this work won't be seen. Some of this work is so we can understand what the ground is like beneath the grass, so we know how to build the road.

Other investigations tell us what we need to do to help preserve and enhance the surrounding environment.

Read more to find out what work we've been undertaking and why.

## GROUND INVESTIGATIONS

Geotech investigations have been underway on the preferred route for the new State Highway over the Ruahine Ranges.

Bore holes are drilled up to 50 meters deep along the proposed route (pictured) and soil samples are sent for laboratory testing. This provides essential information on underground conditions.



We have also been doing geophysical works to help us determine the structure of the underground materials.

Geophysical investigations are non-intrusive and can cover large areas. Our geophysical surveys involve scientists using a large sledgehammer to hit an aluminium plate, creating an impulse of seismic energy.

Sensors record the tremors felt a distance away, and the data allows experts to analyse the existing ground conditions and seismic fault locations.

The results will inform the project design and construction methods and processes used during construction.



The geophysics crew on site at the western end of the proposed new corridor near Ashhurst.

## SEED COLLECTION

Seed collection is an important element of the project as it allows us to use genuine locally sourced native plants to replace any native vegetation that is lost as part of the project's construction.

There are around 40 native tree species found in and around the road corridor, for example Totara and Rōhutu.

We started collecting seeds this year in anticipation of the project proceeding and will continue collecting seeds throughout the construction period.

The seeds are propagated and the seedlings will be used in plantings for landscaping and ecological mitigation around the new road.



Ecologists Don Ravine and Zoe Matthews collect seeds from a Rōhutu tree.

## STREAM TESTING

On the Ruahine Ranges, nine separate stream catchments have been identified in the proposed road corridor.

In each catchment water clarity, fine sediment and the presence of invertebrates and fish are being measured so we can work out what we need to do to manage effects on the streams during construction and to keep them clean and healthy in the long term.



Senior Freshwater Ecology Scientist Alex James and Field Assistant Sara Alchin-Grey gather information on streams.

## BAT MONITORING

As part of our pre-construction works, we are undertaking various surveys to look for certain species of animals – including bats.

Our native long-tailed bat is classed as 'nationally critical'. These species are a high priority for conservation, so we're working to ensure we won't be damaging any of their habitat with the new road.

Many bats use a form of sonar known as echolocation to navigate, orientate and forage. The frequency of bat echolocation calls is generally much higher than humans can hear (ultrasonic).

We use ultrasound triggered bat detectors to listen for and record these calls, as we unobtrusively survey, monitor and identify any bat species found.

We haven't found evidence of any bats being within the vicinity of the project so far.

## THE PAPERWORK

The design of the project (including how it will be constructed) will be developed over the coming months as required by the recent Notice of Requirement (NoR) designation.

Our pre-construction work will support the project in many ways and includes:

- Resource Management Act (RMA) consent applications to Horizons Regional Council to authorise earthworks, works in streams and rivers and discharges to air, water and ground (it is anticipated these applications will be notified and subject to a hearing).
- Design drawings to be provided to Palmerston North City Council, Manawatū District and Tararua District Councils for their comment.
- Final plans to manage construction effects including traffic, noise and vibration effects.
- An ecological mitigation plan to be developed with the Department of Conservation, iwi partners and the Te Āpiti Governance Group - supplied to the Palmerston North City Council, Manawatū District and Tararua District Councils for certification.
- Wildlife Act approvals and consents needed to manage effects on lizards, birds and insects.
- National Environmental Standards approvals in respect of any work on transmission lines or which affect existing contaminated land areas.
- Heritage Act consents and approvals in case of any accidental discoveries of sites and objects that date from before 1900.



## CONTACT US ON

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