

Transmission Gully Project

A NZ Transport Agency PPP Project



Construction Update

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BUILDING MOMENTUM

Good progress is being made on multiple fronts along the new 27km Transmission Gully motorway. Although many of these works aren't visible to the public, significant earthworks continue in the north through the Te Puka valley (pictured right), multiple structures are now taking shape, and to the south excavation is underway for the project's largest structure, the Cannon's Creek Bridge (pictured left).

Here's the latest from the team on what's been happening across the Transmission Gully project.

Mackays Crossing:

At the northern end of the project we've completed the treatment to dry out and stabilise the large area of land around Mackays Crossing where the Transmission Gully motorway will tie-in to the existing State Highway 1. This geotechnical method called 'preloading' uses heavier material such as sand to compact wetter, less stable material and squeeze out water, which is then channelled up and out of the area through special drains.

Wainui Saddle:

In the Wainui Saddle area, ecologists have now relocated fish from the Horokiri Stream, adopting the same methods used at Te Puka Stream. The fish have been moved to a similar habitat and will be returned once the new stream diversions have been constructed.

Battle Hill Farm Forest Park:

Several culverts and bridges have been constructed, including the underpass that will provide access for Battle Hill Farm Forest Park users under the road. We'll be opening this to the public soon, and the current track that crosses the works will be rerouted through the underpass. We're now starting work on the road that will go over the top of the underpass, with the earth ramps either side being built up to bring the road level up to the right height.

State Highway 58:

Further south in the Lanes Flat area beside State Highway 58, earthworks for the new interchange with State Highway 58 are underway. After a dawn blessing by the local kaitiaki, we also opened the new permanent channel for the Pauatahanui Stream, which has significance for Ngāti Toa. In the area behind Whitby and Cannon's Creek bulk earthworks have now started, with a focus on the

James Cook interchange, which will link the Transmission Gully motorway to the Whitby and Waitangirua Access Roads. Excavation work has also begun on the piers for the project's largest structure, the Cannon's Creek Bridge, with a large crane being brought in to tackle the job.

State Highway 1:

At the southern end of the project, harvesting the Ranui pine plantation continues, and detailed earthworks continue for the bridges that will span State Highway 1. Shortly, we'll be relocating sewer lines and other services in the area to allow for the construction of bridge foundations and the interchange that will link to Kenepuru Drive.

Works have also started to widen the State Highway 1 bridge over Collins Avenue, where the north bound on ramp and south bound off ramp link to the existing State Highway 1. We're also building noise walls along the south bound side of the motorway.

PROTECTING OUR NATURAL ENVIRONMENTS

A big part of the Transmission Gully project is about achieving good environmental outcomes. We know how precious the Pāuatahanui inlet and surrounding streams are - so we're using state-of-the-art techniques to ensure they're protected and continue to thrive.



Often referred to as a 'traditional food-basket' because of its importance to Ngāti Toa and other iwi - with its rich shellfish beds and abundance of fish, the Pāuatahanui inlet is also a unique and special place for the wider community and visitors to the region. Home to around 50 species of birds, the inlet is the only large area of salt marsh and seagrass in the Wellington region and is the largest 'relatively unmodified' estuary in the southern North Island.

"The inlet's long-term health stands to benefit from the project, as riparian planting and revegetation of large previously farmed areas will create a better environment for native fish and birds," says Project Director Boyd Knights.

Among the most important devices being used to prevent dirty water run-off are sediment-retention ponds. These are much more than simple ponds. They use coagulant and 'treatment socks' to aid filtration of run-off and make it settle quickly, trapping it in the ponds. Water gradually becomes almost completely clean before it exits through a floating decant into gullies and streams.

Transmission Gully motorway is the largest project in the country to use these types of ponds, with more than 40 planned in total, each treating up to five hectares of catchment. Boyd says the system, which has been developed in New Zealand and

proven effective in the Auckland region, is a great example of 'Kiwi ingenuity'.

Sediment-retention ponds and decanting earth bunds, which capture and settle out dirty water, will protect around 95 percent of the groundwork in the project. The other five percent of run-off will move through devices such as 'catch drains' and 'super silt fences', which use filter fabric reinforced with wire mesh to contain sediment. As much as possible, rainwater is captured in clean water diversions and channelled away from earthworks.

You may have seen tufts of bright green on banks near the project as you drive past - that's the effects of hydro-seeding, a modern technique used to quickly stabilise earth. A mixture including wood fibre or papier mache, glue and grass seed is sprayed over mounds of dirt, supporting quick seed growth.

Ecologists, and erosion and sediment control experts are vital to the project, ensuring procedures are in place for controlling and monitoring sediment run-off into watercourses and streams and identifying how earthworks will be staged to manage the effects of the project, particularly on the Pāuatahanui Inlet and the Onepoto Arm of the Porirua Harbour. The Greater Wellington Regional Council also independently audits the Transmission Gully project's sediment-retention systems on a weekly basis.



Above: Dirty water makes its way into the sediment-retention pond's first bay, where a coagulant is added to help settle sediment out of the water.



Above: Water then makes its way into the second pond, where sediment continues to settle before water is released into local gullies and streams.



Above: Auto sampling equipment collects water samples from the inlet of the pond, it's then analysed for sediment content.

Find out more

- To read more about the inlet, visit the Department of Conservation's website at www.doc.govt.nz/parks-and-recreation/places-to-go/wellington-kapiti/places/pauatahanui-wildlife-reserve/
- Visit the Guardians of Pāuatahanui Inlet's website at www.gopi.org.nz/the-inlet/natural-history/birds/ to find out more about the local birdlife.
- To find out more about what Greater Wellington Regional Council is doing to protect the inlet and Porirua Harbour check out their website at www.gw.govt.nz/porirua-harbour-and-catchment-programme/

PORIRUA LINK ROADS CONNECTING COMMUNITIES

Construction of the link roads, a Porirua City Council project, is underway, with completion of works set to coincide with the opening of the new Transmission Gully motorway in 2020.



Building these connector roads will be the most significant investment over the coming years for the Porirua community. The Porirua link roads project is an integral part of the whole project and the Council is working closely with the CPB HEB Joint Venture team (who are undertaking design and construction of both the Transmission Gully motorway and the link roads) to ensure consistency and cost effectiveness in their delivery.

“We’ve undertaken collaborative project planning with the CPB HEB team, to ensure construction of our local roads coincides with the completion of the Transmission Gully motorway,” says Chief Operating Officer Tamsin Evans.

“Building the link roads now means that we can make the most of earthworks efficiencies by cutting material from one project to use as fill in the other project. It also means that ratepayers won’t be paying

Left Top: Concept drawing showing the Whitby Link Road from the reservoir above Silverwood Subdivision, looking southwest.

Left Bottom: Concept drawing showing the Waitangirua Link Road, looking south.

for an asset up front, years before it can actually be used.”

The Whitby Link Road will connect to the existing roundabout at the intersection of Navigation Drive and James Cook Drive, while the Waitangirua Link Road will intersect with Warspite Avenue near Waitangirua Mall (opposite Niagara Street) and will be controlled by traffic signals.

The two link roads will form part of the Council’s local road network and are designed for operating speeds of 50km/h.

Once the link roads and the Transmission Gully motorway are operational, motorists will enjoy more efficient, safer and more resilient and reliable access between

Construction update – Porirua link roads project

With the design phase nearing completion, works have started behind the scenes at the Transmission Gully intersection end of the project.

Whitby Link Road:

In February works will start on the Whitby Link Road and crews will be working from the roundabout on Navigation Drive and James Cook Drive heading south towards the Transmission Gully main alignment.

Waitangirua Link Road:

Works on the Waitangirua Link Road will start from the Transmission Gully main alignment, with construction crews expected to be visible from the suburb of Waitangirua in March or April.

Waitangirua Link Road bridge:

Construction on the bridge, the largest link road structure, will start in February. The bridge will carry the Waitangirua Link Road over Duck Creek, close to the connection to Transmission Gully.

eastern Porirua and the Hutt Valley, Wellington, and Kāpiti Coast.

The local Porirua community will also benefit from reduced traffic volumes (especially commercial vehicles) travelling on the existing State Highway 1. Some local roads can also expect reduced traffic volumes, especially around the Pāuatahanui inlet, and Paekakariki Hill Road.

KEEPING THE PUBLIC SAFE

With construction works well underway at a number of areas along the 27km Transmission Gully project, the public is being urged to stay well away from construction areas.

Project Director Boyd Knights says some of these works are highly dangerous and despite the many safety warnings, people are continuing to access construction areas. “This is a huge concern to us. These measures have been put in place for your safety and ours. Please take notice and do not enter.”

This is particularly true in Battle Hill Farm Forest Park he says, where, despite the fact significant works are underway, people are still wandering through the construction area.

“There are big machines at work in this area, and the operator’s vision is very limited. They’re concentrating on their job, and not expecting, or looking out for people. The last thing we want is anyone getting hurt.”

An underpass is being built in Battle Hill Farm Forest Park and will be open to the public soon. In the meantime, a right-of-way allows park users to safely cross the road alignment. Everywhere else there is strictly no public access.

Once the Transmission Gully motorway construction is complete, the surrounding area is set to become one of the most

Below: A Battle Hill Farm Forest Park safety sign shows visitors where to safely cross the road alignment.



significant lowland bush in the Wellington region, with improved access for walkers and cyclists. About 534 hectares of farmland will be planted, with some two million native trees and shrubs, including seedlings of long-living tree giants like totara, matai and rimu.

MOBILE VISITOR CENTRE ARRIVES IN PORIRUA

With a large community spanning the length of the 27km Transmission Gully project, we needed to create a visitor centre with a difference.

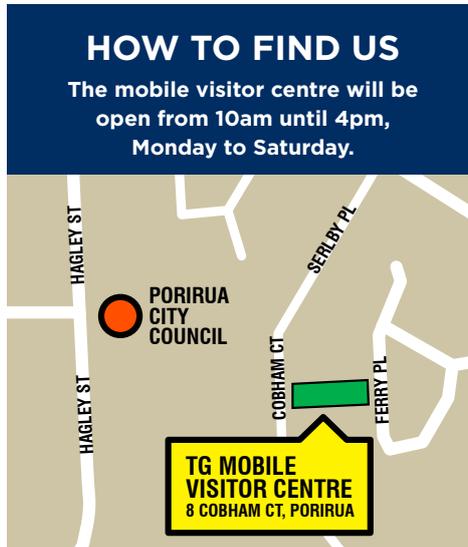
Housed in a transportable 20ft container, the new mobile visitor centre will travel around the region to give as many people as possible an opportunity to learn more about the project.

Through February and March, the Porirua City Council is hosting the mobile visitor centre in the new green area at 8 Cobham Court, Porirua.

Come along and watch the project flyover animation on our interactive touch screen TV. You can also read about the history of the project and how we're building it, what we're doing to protect wildlife and the environment, and what we're discovering about our culture and heritage.

Check out the map that shows the 27km project from one end to the other. See the artist's impressions showing how the bridges and interchanges will look once they're complete.

If you'd like information to take away, pick up a copy of our latest newsletter, grab one of our fact sheets, or you can sign up to receive our online newsletter by email. Want to know more? We'll have staff on hand to answer any questions, or you can email us at info@tg.co.nz.



We're going digital

Sign up to our new online newsletter for the latest Transmission Gully project news, delivered to your email inbox.

In April 2017, we're moving from a printed quarterly newsletter to an online one, delivered by email. The online version will include links to the latest project photos and information. That's another great reason to sign up online.

To sign up for our online newsletter, simply email us at info@tg.co.nz with 'subscribe' in the subject line.

YOUNG RECRUITS EXCEL



"I actually love the job," new trainee Amelia Sina (picture above) says about her labouring work. "I want to keep building up skills, to see how high I can get in this industry."

The former Upper Hutt College student, who started with us in September 2016, is one of a number of young recruits who supervisors believe have a bright future in construction. Her foreman Frank Kotua says "Amelia is going to be a great asset. She's working mainly in trenching, roading, drainage and environmental protection. She's very conscientious and learns quickly."

Amelia first learnt of Transmission Gully opportunities at a public 'JOBfest' event where CPB HEB Joint Venture staff sought to inspire local youth with career ideas.

Anthony Graff, a recruit who featured in our October Project Newsletter, is also achieving in the Youth2Work programme and working towards an Infrastructure Works Level 2 qualification. In November, Jordan Mawson, another highly-regarded member of the project's labour crew, won one of two 'young employee of the year' awards presented at the 2016 Westpac Porirua Business Awards, jointly run by Partners Porirua and the Porirua Chamber of Commerce.

"JOBfest and other youth employment schemes have proved very successful," Stakeholder and Community Relations Manager Belinda Mackenzie-Dodds says. "These young local people are doing really well. We're providing equal employment opportunities, we're opening up careers, and it's good for us too. They bring an energy and enthusiasm that's a boost for the project."