TREC Pānui

East Coast recovery mahi I Issue 9 - 10 December 2024

Transport Rebuild East Coast

Kia ora koutou

Whānau and friends getting together over the holiday break also means busier roads.

There will be lots of recovery and renewals work happening across Tairāwhiti and Hawke's Bay this summer. To reduce delays to those travelling over the Christmas break, TREC will temporarily close most work sites from Thursday 19 December until Monday 6 January 2025.

In places, there will be traffic management, such as reduced speed limits or one lane sections with traffic lights to keep people safe. Please take care and follow all signs and temporary speed limits.

Be patient and kind with the teams on site – they're working hard to help keep everyone safe on their journey. We want to make sure everyone gets home to their whānau after each shift.

From all of us here at TREC we hope you have a safe and happy holiday season. Meri Kirihimete me te Hape Nū la!



Dillon's Hill Culvert, State Highway 5

"Ehara taku toa i te toa takitahi, engari he toa takitini" Success is not the work of an individual, but the work of many TREC Pānui is a newsletter from the <u>Transport Rebuild East Coast</u> (<u>TREC</u>) Alliance updating communities across Te Tairāwhiti (Gisborne) and Te Matau a Māui (Hawke's Bay) about the recovery work on state highways and rail networks impacted by Cyclone Gabrielle.

Making it happen - progress updates

Thank you for your patience and for helping to keep our people and other road users safe while this essential work is done.

Tairāwhiti

at Mangahauini Gorge, which will be one

of our big recovery projects over 2025-2026

Making it happen - progress updates

Thank you for your patience and for helping to keep our people and other road users safe while this essential work is done.

A wrap up for 2024

As 2024 comes to an end we've completed construction on almost 70% of the projects on Hawke's Bay state highways - a total of 90 to date.

We want to thank communities, freight and all road users for your patience through the year as the team worked on multiple construction sites. Again, a big shout out to the local contractors who have delivered great results across the state highway network.

Most of the Hawke's Bay TREC projects are expected to be completed by mid-2025. Work at Devil's Corner on SH2 is expected to finish at the end of 2025.

Some of our projects in 2025



- Devil's Corner (project I), which is the most complex project at Devil's Elbow
- Mohaka Rail Viaduct repair
- Sandy Creek slip repair and road surface repairs
- Tarawera Culvert
- Three underslips at Māori Gully (see pages 6-7 for more details)
- South of Kaitawa underslip
- Rosie Bay underslip
- Tarapatiki underslip
- Three underslips at Whatapo Bay



Glencoe Gorge underslip



Awatere Gully underslip

Hikuwai Bridge No.1

replacement

recovery works

Rototahe flood

improvements

- Kopuaroa slip 2
- Rotokautuku (Waiapu) Bridge scour repair and revetment
- Te Kura O Torere underslip



Looking ahead

In Tairāwhiti our aim is to complete recovery works on State Highway 2 (SH2) and State Highway 35 (SH35) by mid-2026. We've now completed construction on almost 80% of the projects on Tairawhiti state highways with 140 projects completed. Next year some large projects will get underway.

Thank you to communities, freight and all road users along SH35 and SH2 for your understanding through 2024 as we worked to restore the state highway network. A big shout out to the local contractors who have delivered great results across the region's state highway network.

We are looking forward to working together through 2025 and into 2026.

We have a brochure about summer work happening in the region. It's available in local hubs or email us at info@trec.nz for a digital copy.

Planned work SH2

Projects for 2025 include:

- Otoko Hill remaining sites
- Nesbitt's Dip flood protection
- Matawai Road overslip
- Allen's Existing Wall underslip

Hawke's Bay





Rail recovery ramping up this month in Hawke's Bay



Recovery work on the rail corridor between Palmerston North and Napier began this month. There are 23 sites to be repaired before June 2025.

Rail site repairs are similar to state highway repairs. They include clearing slip material, rock revetments around bridges, bulk earthworks to stabilise slippage, and soil stabilisation using soil nails, shotcrete (sprayed liquid concrete), and geo fabrics.

Freight trains will continue to run during repairs, with nearly half of the work being done by 'HiRails', which are regular road vehicles that have been converted to be able to drive on both the road, and the rail. Some work will also be done on the weekends to minimise the impact for freight.

35 Kahuitara Culvert (Jeru Straight)

Removed silt and regraded stream bed

To allow the river to flow and prevent the culvert from blocking.

Reshaped stream bank

To correct damage and create a natural flow path. This will prevent blockages and erosion in the future.

Temporary drain closure

To prevent groundwater entering the dry streambed during work.

Silt and spoil cleaning

Large piles of silt were cleared away from the stream and three spoil sites nearby.

Traffic management

Stop/go traffic management and temporary speed restrictions were in place for safety.

35

Ōpōtiki

Culvert clearing and improvements

New pipes were added on this side of the culvert.

Rip rap (large stones) To stabilise the area and reduce erosion.

Tairāwhiti

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Gisborne



Dealing with silt

Heavy rainfall and flooding washed huge amounts of silt into waterways and streams around Tairāwhiti after Cyclone Gabrielle, causing flooding and erosion.

The 1.3-metre-high Kahuitara Culvert pipes under State Highway 35 were 80% full of silt.

Silt had also accumulated in the streambed, causing water to back up, erode the riverbank, and flood the highway.

The TREC team, along with H Blackbee Contractors are putting the final touches on this site.

This image, taken in November 2024, shows the project in full swing.

Along with clearing all the silt from the culvert, stream and three surrounding spoil sites, the project included improvements to the culvert pipes.

The stream bank was reshaped, and rip rap (large stones) were placed around the culvert to help stabilise the surrounding area and reduce erosion.

The crew said one of the hardest parts about this project was figuring out what size the culvert pipes were – they were almost completely buried by silt!

Ecology investigation

A thorough ecology investigation was necessary to identify any protected or endangered species. Nothing was discovered and when crews started work in October 2024, the streambed was dry, reducing the need for environmental measures such as a stream diversion.



Hawke's Bay

Limited road width

Limited road width for traffic management. Overhead cables and underground services on both sides of the road need to be worked around.

Napier

Wairoa

One lane traffic

To complete work on the three slips, this section of road will be down to one lane of traffic for about three months.

Slip 2

To repair this approximately 20m tall and 8m wide slip, abseilers will lower themselves down the hillside to put in erosion control matting.

Slip 3

Abseilers will put in erosion control matting to the size of 15m tall and 7m wide.

> The three slips caused by Cyclone Gabrielle have made this section of road, first established in 1938, vulnerable to further erosion and slips, making repairs essential.

Slip 2 and 3 are non-complicated slips to repair, where abseilers will put in erosion control matting. The matting will stop soil underneath washing away.

It will be held in place by soil anchors and plant life will grow through it, adding further protection against erosion.

Slip 1 is more complex as we will be building an approximately 2.5m high and 24m long tied back retaining wall. This will involve digging up the road and putting in ten steel bars which will be anchored to large concrete blocks.

Slip 1

This site is the lowest point on the road with downward slopes on either side, making it a funnelling point for water during the cyclone, which caused the significant 16m tall and 10m wide slip.



Slip 1 Close Up

This close-up shows the posts holding up the guardrails no longer have sufficient support because of the slip.

Mending Māori Gully: Securing State Highway 5 (SH5)

On SH5 between Glengarry and Te Pohue the road runs narrowly along the top of Māori Gully with the Pokopoko stream below. For three months in early 2025 this site will be down to one lane of traffic while critical work to repair three slips is completed.

Steep drops

Steep drops on either side of Slip 1 make it a challenging environment.





These blocks will be put under the far side lane of the road. These will give the retaining wall strong anchorage points protecting the hillside from erosion and the road from potentially slumping or falling away.

This will allow us to bring the edge of the road back out to where it once stood. Once completed we will install new guardrails, and the road will be restored to two lanes.

Digging deeper: TREC 101

Rock revetment

In our recovery work across Hawke's Bay and Tairāwhiti we use rock revetment to protect state highways.

Rock revetement creates a protective layer of large, heavy rocks on slopes to stop erosion caused by water flows.

The intense water flows of Cyclone Gabrielle eroded the land under the state highways in many places as well as river and stream banks under bridges or surrounding culverts. In some spots this led to underslips or the road sagging, and for impacted bridges, it left foundations potentially vulnerable.



Rip rap under Ben Lomond bridge on SH50 in Hawke's Bay preventing erosion of the riverbank and protecting the bridge's foundations

Revetment across the two regions has mostly been done with rip rap – large angular rocks placed on slopes locking together. This acts like a shield absorbing the force of water, protecting soil and keeping slopes intact.

The timeless technique of rip rap

Using large rocks to stop erosion is an ancient method which has developed over the past two centuries as knowledge and technology evolved to further refine and develop it.

Our design engineers use software to model the water intensity of a 100-year flood. This information is then used to work out the type, size, and tonnage of rip rap needed for specific sites.

In some cases, the 100-year flood potential of some rivers, such as Mangahauini River, means rip rap alone is not enough to stop erosion and protect infrastructure. In this case our engineers will look at a combination of methods to provide comprehensive protection e.g. rip rap, concrete blocks and piles.

Protecting what lies beneath

Generally, under the rip rap we use geofabric (the white fabric seen below). This offers another layer of protection, as it stops finer material beneath the rocks, such as soil or sand, being washed through the rock and lost.



at Devil's Elbow





SH35: During and after rock revetment works at Mangakuri

Advantages of rip rap

- Durable solution
- Cost-efficient
- Easy to access
- Repair as required



Excavator moving rip rap at Mangakuri on SH35

Where does the rip rap come from?

Rip rap can come from quarries or riverbeds. Resource consents are needed to acquire the rock. For TREC projects we prefer to use quarry rock as these are more angular and hold in place well.

The preferred rock to use is hard durable rock such as greywacke or granite. But if this kind of rock isn't available locally, we permit the use of other local rock in low-risk applications to avoid bringing it from elsewhere.



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Contractor profile: H Blackbee Contractors

"It's a family - it's like going to a second home each day," is how Prashant Prakash, Project Manager, describes working for Ruatoria based H Blackbee Contractors.

Supported by Boss's parents Heke and Jackie Blackbee, Boss Blackbee and nephew Wereta Kake formed H Blackbee Contractors Ltd in 2014. The company has grown to a team of 35 and expanded to include a local quarry and crushing plant. They have been working for TREC on State Highway 35 (SH35) on sites including Kopuaroa, Ihungia, Mangahauini Gorge and Kahuitara Culvert (Jeru Straight). Read more on pages 4 and 5.

All their employees are local to Ruatoria and in acquiring the local quarry they now rely less on construction materials from outside the region.

Boss and Wereta started off their careers with Fulton Hogan, working there for nearly two decades before branching out on their own. Boss is a local legend and role model having built and developed such a successful company by his midthirties with a practice of 'by locals for locals' and never compromising on quality. He's known for his down-to-earth, hands-on approach, happy to get on a shovel and lead by example.

Along with undertaking work for TREC, H Blackbee Contractors Ltd has worked on Gisborne District Council projects, for NZ Transport Agency Waka Kotahi (NZTA), with the forestry industry as well as private local jobs. One of their biggest wins was being awarded the Hikurangi Maintenance Contract from Gisborne District Council in 2022.





A massive shout out to the construction teams who were celebrated and recognised at the Civil Contractors New Zealand Hawke's Bay East Coast awards on 22 November. We are committed to working alongside local contractors in Hawke's Bay and Tairāwhiti and it's wonderful to see that work, along with other local work undertaken by contractors, acknowledged. Especially as the regions continue to recover and rebuild.

At the event in the Toitoi Events Centre in Hastings, Galbraith Earthmovers won a prize for constructing a challenging block wall to repair an underslip on a SH2 TREC site near White Pine Bush Scenic Reserve. A well-deserved prize for excellent work from the Galbraith crew.

The project was north of the White Pine Bush carpark entrance where Cyclone Gabrielle floodwaters had scoured away the ground under the edge of the state highway, leaving the land below the outside lane unstable. To repair this, the crews built a retaining wall and put in rock rip rap (large rock placed together to prevent erosion). The wall and rip rap stabilised the ground and restored this section of the road back to two lanes.

It was a team effort with all those involved working days and nights to speed up the recovery of the two lanes, which was a great outcome for communities.

You can learn more about the White Pine Bush project here: bit.ly/3XGoLE6

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"We are proud

of what we were

able to do for our

people in such a

time of duress"

In the initial aftermath

with communication and

of Cyclone Gabrielle

transport routes non-

existence, the company

mobilised its workforce

for their communities.

and machinery to get roads

open as quickly as possible

"We were completely cut

off. We started making our

way down towards Gisborne

on SH35 but once we heard

Hikuwai Bridge was gone we went back up north via

Hicks Bay to **Öp**ōtiki and

manged to get the state

highway cleared so food

"We are proud of what

duress," says Prashant.

After that immediate

we were able to do for our people in such a time of

response H Blackbee crews

were flat out getting local

roads cleared and opened

The company also offers

support to the northern

SH35 communities through helping on community

projects and many kaupapa

including sponsoring the

on behalf of Gisborne

District Council.

local rugby club.

and fuel were able to reach

our communities on SH35."





Think community



Connecting with communities

Thank you to those who joined us and NZ Transport Agency Waka Kotahi (NZTA) at the community meeting held on 20 November in Pūtōrino.

We were really pleased to share that the lower section of Devil's Elbow is now back to two lanes. The temporary 50km/h will return to the posted speed limit after safety checks are completed and signage is installed.

Please always follow all speed limits to stay safe and keep other road users and our hardworking crew safe too.

Community get togethers are a great chance to connect, share information about local TREC projects, answer questions and listen to feedback. They allow us to hear from locals and understand what information you need to stay informed and up to date with what is happening on the state highways.

Feedback helps us improve our work and deliver better results for everyone. Please get in touch via info@trec.nz if you have any feedback you want to share.

Whakapā mai • Get in touch

Visit our website nzta.govt.nz/trec Email us info@trec.nz

Stay up to date with our monthly newsletter Scan the QR code or go to <u>bit.ly/3WI4kaQ</u>

Call us 0800 80 TREC (0800 80 8732) Connect with us on LinkedIn

linkedin.com/company/east-coast-trec



This newsletter provides the latest information about the recovery work on state highways and rail networks damaged by Cyclone Gabrielle in 2023. TREC Pānui is produced by the Transport Rebuild East Coast (TREC) Alliance.

We value your feedback. Please get in touch if you have any questions or thoughts for the team.