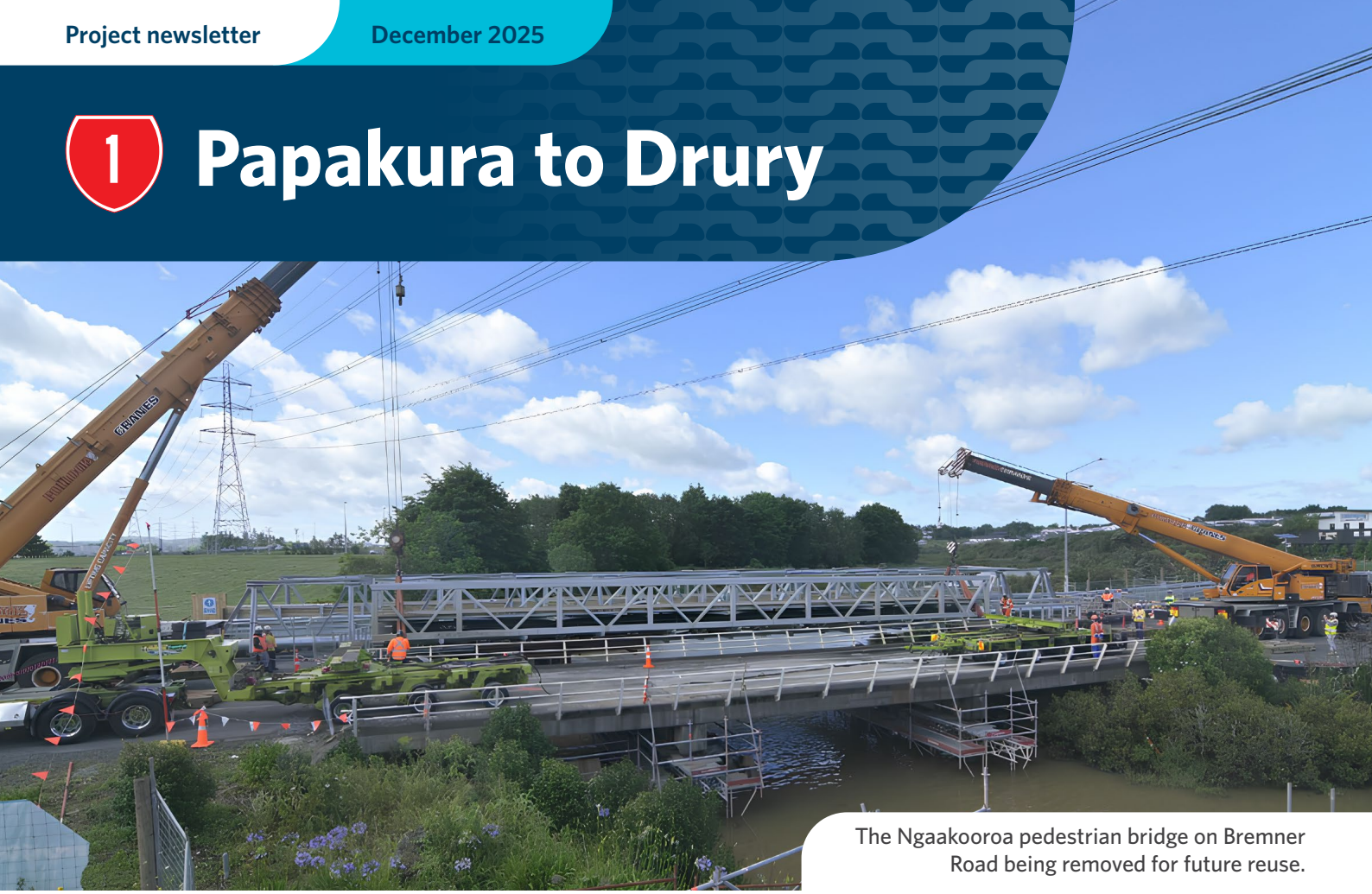
1 Papakura to Drury



The Ngaakooroa pedestrian bridge on Bremner Road being removed for future reuse.

Sustainability | Ngā mahi hangarua
Our commitment to future generations

In construction engineering, working sustainably means designing and building things in ways that minimise negative environmental, economic and social impacts with a focus on considering the health of future generations and the environment.

Stage 1A of the Papakura to Drury project achieved a 'Commendable' Sustainability rating from the Infrastructure Sustainability Council and this final stage of the project (Stage 1B) is committed to building on that achievement.

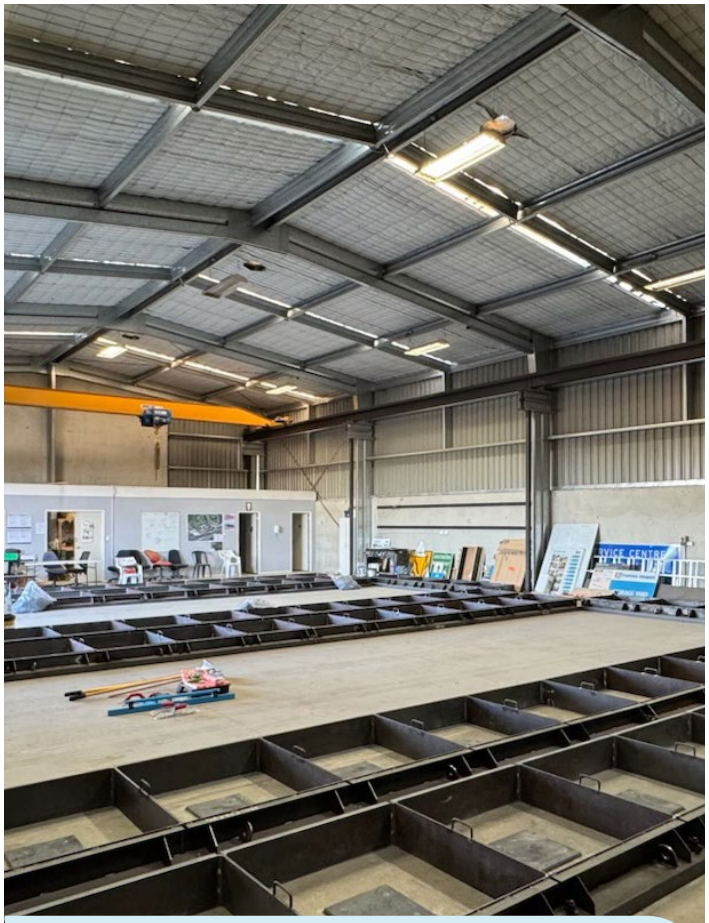
Following are just a few examples of how day to day operations demonstrate the project's commitment to sustainability.

- A hybrid generator operates at our Karaka site compound to provide a more cost-effective and fuel-efficient power source resulting in significant fuel savings.
- Smaller solar-powered portacoms located across the project extent are used as crew huts and for storage, removing the need for generator-power.
- Following a successful trial of using portable solar-powered lighting towers during night works, these have been adopted site wide – reducing the need for traditional battery or generator-powered towers.
- To date, 82% of the project's water demand has been met using non-potable (non-drinkable) sources.

A hybrid generator supplies power to one of the main site compounds.

Biodegradable safety caps for steel posts are used across the project extent, reducing plastic waste.

- The team continues to explore opportunities for water reuse. For example, during the flushing of a 450mm diameter watermain, the flushed water was de-chlorinated and redirected into watercarts for reuse at a site compound water farm. This one initiative conserved approximately 60,000 litres of potable (drinking) water.
- Deconstruction of a sizeable residential building within the project extent resulted in 279 tonnes of concrete and steel being salvaged and recycled, i.e. diverted from landfill, demonstrating the value of careful planning in demolition activities.
- A large industrial shed within the project alignment has so far been used for a range of purposes including as a site compound, storage facility, manufacturing location for pouring around 3,000 concrete pile caps (saving considerable transportation impacts) and as a means to harvest rainwater to fill water tanks with a total capacity of 125,000 litres. While this shed will be dismantled and relocated later in the project, it has generated significant reductions in environmental impacts and resulted in economic savings already.
- Participating in Watercare's hard hat recycling initiative, the project sends all old hard hats to the Critical Recycling Scheme where the hats are repurposed into school desktops, supporting circular economy goals.



Some 3,000 concrete pile caps were poured on site in a large industrial shed that will be unbolted and relocated in the future to clear the way for roading works.

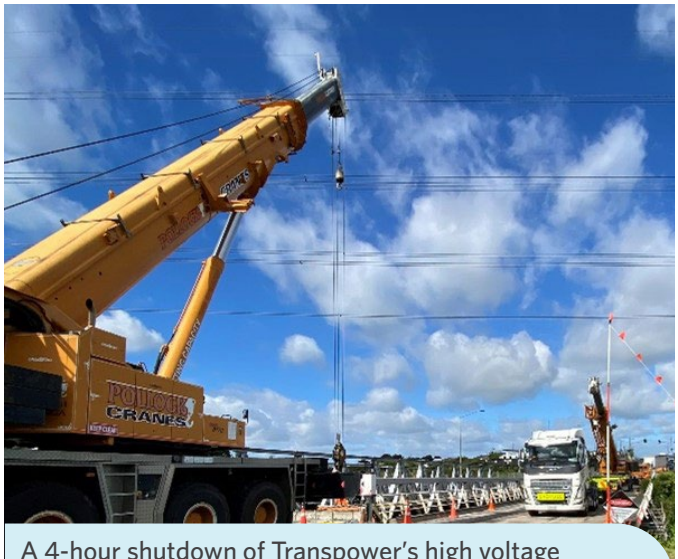
Repurposing an existing bridge | Ngā mea hangarua

Five bridges are being replaced during this stage of the project and one of these is the Bremner Road bridge over Ngaakooroa Stream in Auranga.

The pedestrian path beside this bridge consisted of two spans which were separated and then lifted out. The longer span has been placed in storage for future use on another project and the shorter span will be used to form part of the new shared use path bridge over Slippery Creek/Otuuwairoa Stream.

Construction on the shared use path along the western side of the motorway between Papakura and Drury Interchanges will begin in the coming year.

Both spans were lifted out using 170 and 130 tonne cranes.



A 4-hour shutdown of Transpower's high voltage power lines directly above the pedestrian bridge was required for this lift.

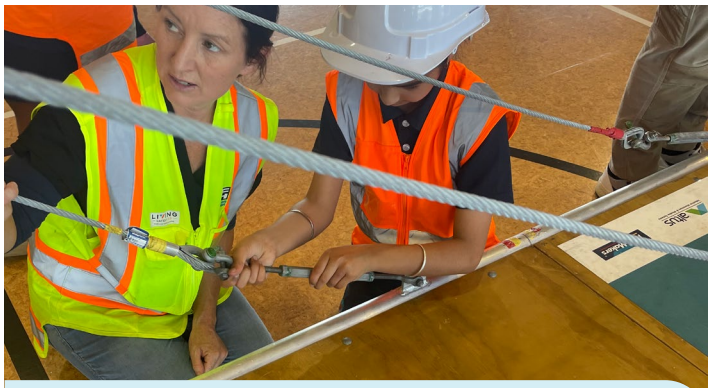
Bridges to Schools

The Papakura to Drury (P2D) project team recently spent a day at Ngākōroa School, building a bridge with 50 students aged between 8 and 10 years old.

The Bridges to Schools programme sees a child-sized suspension bridge broken down into sections and taken to schools across Aotearoa New Zealand. Volunteers explain the bridge and the engineering basics to children and young adults, before helping them to put the bridge together, testing their engineering understanding as they go. It's a fun and engaging way to spark kids' interest in civil engineering and STEM (science, technology, engineering and maths) careers.

Fulton Hogan's Structures Construction Manager Kirsty McVicar said, 'It was great to spend time at a local primary school located in Auranga. A large proportion of this school's community will travel regularly over the temporary bridge we've installed over Ngaakooroa Stream and also along the motorway we're widening. I'm a huge advocate for promoting opportunities that arise out of studying STEM subjects. Spending time with locals is a highlight of any construction job.'

Ngākōroa School Matua (teacher), Chris Appleton said the children 'had a blast' building the suspension bridge and that the school is looking forward to the P2D team returning next year to deliver this practical, relevant, fun activity to more students. Chris mentioned this activity aligned with a measurement learning unit and that building the bridge provided the opportunity to apply learnings.



Structures Construction Manager Kirsty 'mentoring not doing' – hands-on learning is at heart of the programme

Two groups built the bridge from either end. There were cheers and 'high fives' when they met exactly in the middle.

Our team members who delivered two bridge building sessions were buzzing and exhausted; the intensity, curiosity, excitement and energy of 8 to 10 year olds was wonderful to be part of and a marked change from a typical day's work in construction engineering. We definitely walked away with a new level of respect for primary school teachers!

Auranga is a large land and housing development, located on the western side of SH1 just north of the Drury Interchange that will directly benefit from the improvements the project will deliver. P2D's team is building two replacement bridges that provide direct access into this community – in total we are building five new bridges in this final stage of the project. We are also realigning and signalising one of the primary access routes into Auranga – Victoria Street at SH22 – along with upgrading local and arterial services and widening 3.3km of Auckland's Southern Motorway that borders Auranga.

Getting to know the communities we work alongside is something we enjoy and are always looking for more opportunities to do.

Bridges to Schools is an Institution of Civil Engineers (ICE) international programme, brought to New Zealand by the local ICE and a range of sponsors. To learn more about it, please visit **www.fletcherconstruction.co.nz/bts**

More information | Mō ētahi atu korero

Visit **nzta.govt.nz/p2b** to subscribe for our regular e-newsletter project updates (monthly) or traffic notices (a weekly summary of the project's motorway closures at night) to find out more about the project.

Contact us | Whakapā mai

For further information about the project, please contact our team on:

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