

Te Waihanganga: Infrastructure Quarterly

A quarterly snapshot of issues and trends for New Zealand's infrastructure sector by the New Zealand Infrastructure Commission, Te Waihanganga.



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Foreword – Geoff Cooper

Welcome to our final Infrastructure Quarterly for 2022.

In this edition, we report on continued growth in the National Infrastructure Pipeline.

We now have 55 organisations contributing, with a value of \$76.9 billion. We welcomed the Department of Internal Affairs, Horowhenua District Council, Hutt City Council, Kānoa Regional Economic Development & Investment Unit, Kāpiti Coast District Council, Porirua City Council, and Whangārei District Council as new contributors.

There is a lot going on in the regions.

For this issue, we speak to Kāpiti Coast District Council on growth in the Wellington region Pipeline. We also speak with Whangārei District Council about the infrastructure work they are undertaking as part of their Blue Green Network Programme.

Lastly, there are some changes coming.

Since we launched the Infrastructure Quarterly in July last year, we've continued to look at how we can best share insights from the Pipeline and our work. We will move away from the Quarterly format to instead sharing Pipeline and Economic Insights, Project and Region Spotlights individually through our website and social media channels as soon as they're available, allowing us to give you more timely updates. We'll still highlight these through our newsletter though, so there's a range of ways to read this information and no risk of missing out!

If you have any feedback on our work or publications, please feel free to get into [contact](#).

The National Infrastructure Pipeline

The National Infrastructure Pipeline (Pipeline) provides a forward view of planned infrastructure projects in New Zealand. It's an important tool to help inform decisions within the sector. The project information is provided directly from government agencies, councils, and private sector entities involved in providing infrastructure services that support the way New Zealanders live, work, and play.

Pipeline snapshot – what's changed in Q3 2022

The total value of infrastructure projects in the Pipeline increased from \$72.2 billion to \$76.9 billion in September, an increase of 6.5% from the June quarter. A good response was received with 89% of contributors providing project updates.

Welcome to the Department of Internal Affairs, Horowhenua District Council, Hutt City Council, Kānoa Regional Development & Investment Unit,

Kāpiti Coast District Council, Porirua City Council, and Whangārei District Council who joined as new contributors in September.

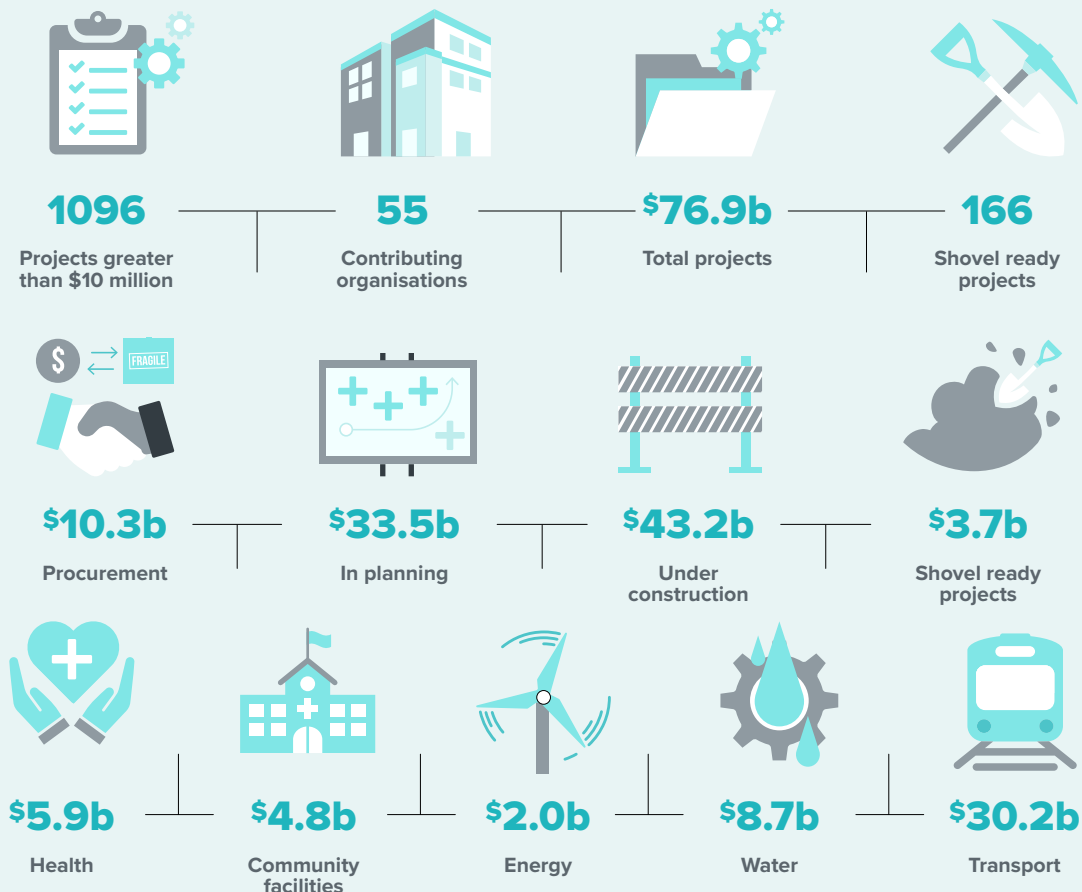
The increase in total value of projects in the Pipeline is:

- \$1.17 billion from new organisations providing project data
- \$4.13 from existing contributors' new projects
- \$1.56 billion from an increase in the value of existing projects.

Less adjustments due to:

- \$950 million from projects completed during the quarter
- \$950 million from a reduction in the value of existing projects
- \$20 million from projects cancelled during the quarter.

Additional projects valued at \$6.74 billion in the June quarter were removed or replaced due to improvements in data quality. The net impact of this reduced Pipeline value by \$0.24 billion. Systematic reviews of the data improves the quality of project information and puts the Pipeline in a stronger position for future updates.



Forecast spend per sector

The forecast annual spend by sector for the projects in the Pipeline has been modelled and is illustrated in Figure 1. The spend on infrastructure projects in 2022 is forecast to reach \$11.6 billion.

The forecast spend in 2023 has increased significantly from the \$10.9 billion in June 2022 to \$12.9 billion in September. This increase is mainly due to the addition of new projects from new contributors, existing contributors, and costs increasing for existing projects.

The significant spend in the social sector is expected to continue in the near term, accounting for \$6.1 billion or 47% of total forecast spend in 2023 (see Figure 1). These social infrastructure projects include 37% on social housing, 23% on education, 20% on health infrastructure, and 19% on community facilities.

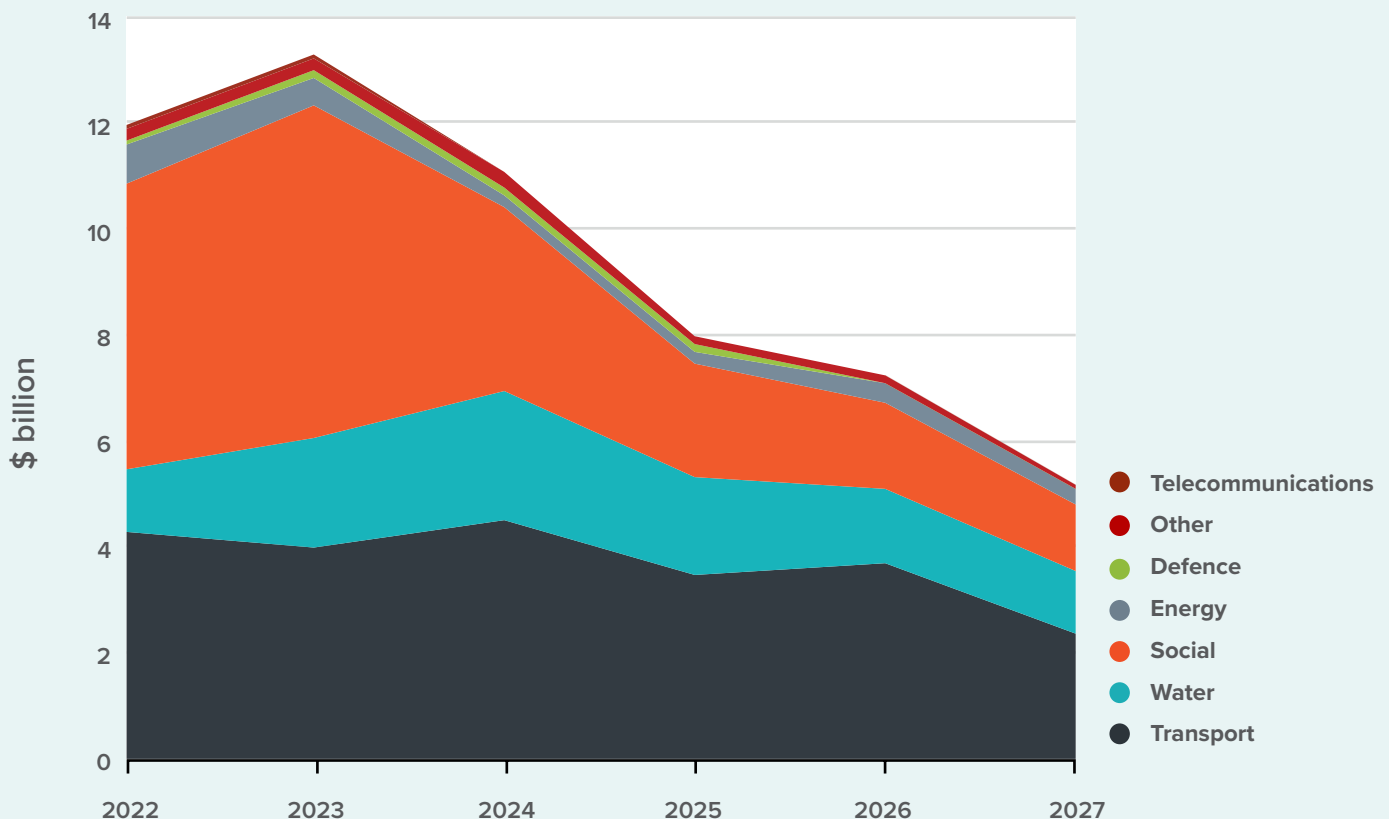
The value of forecast transport project spend is more consistent across the years – and accounts for \$3.9 billion and 30% of the total infrastructure forecast spend in 2023. The value of forecast transport spend currently peaks in 2024 at \$4.4 billion, and in 2026, \$3.6 billion of forecast transport spend represents 51% of total spend across all sectors. In December 2022 we expect to see a change in forecast transport spend as we integrate changes in Waka Kotahi project information.

Annual spend on water projects is forecast to continue increasing, from just over \$1.2 billion in 2022 to almost \$2.4 billion by 2024.

Figure 1:

Social sector dominates forecast infrastructure spend in the near term

Forecast project spend by sector 2022–2027



We are seeing changes in forecast spend across our main infrastructure sectors compared to the June 2022 quarter (see Figure 2). The main drivers behind the significant increases in the social sector in 2023–2025 are due to project refactoring and addition of new housing projects

from Kāinga Ora. A change in timing and split into sub-projects for the South Island Reliability energy project shifts forecast energy sector spend from 2027 into 2026.

Figure 2:

Forecast project spend has increased across majority of sectors and years

Change in forecast project spend from June 2022 to September 2022 Pipeline updates



Progress towards a complete Pipeline of infrastructure projects

Te Waihanga first published the Pipeline in Q2 2020 (with regular updates since Q4 2020) to support statutory functions required under the New Zealand Infrastructure Commission/Te Waihanga Act 2019.

The continued evolution of the Pipeline provides a more complete picture of planned infrastructure activity in New Zealand – helping to improve the coordination of New Zealand’s infrastructure landscape across our regions, sectors, and within our construction markets.

The number of contributing organisations has grown to 55 (see Figure 3). In the September 2022 update, these contributors provided

project information on 3000 projects covering infrastructure assets for over 150 organisations.

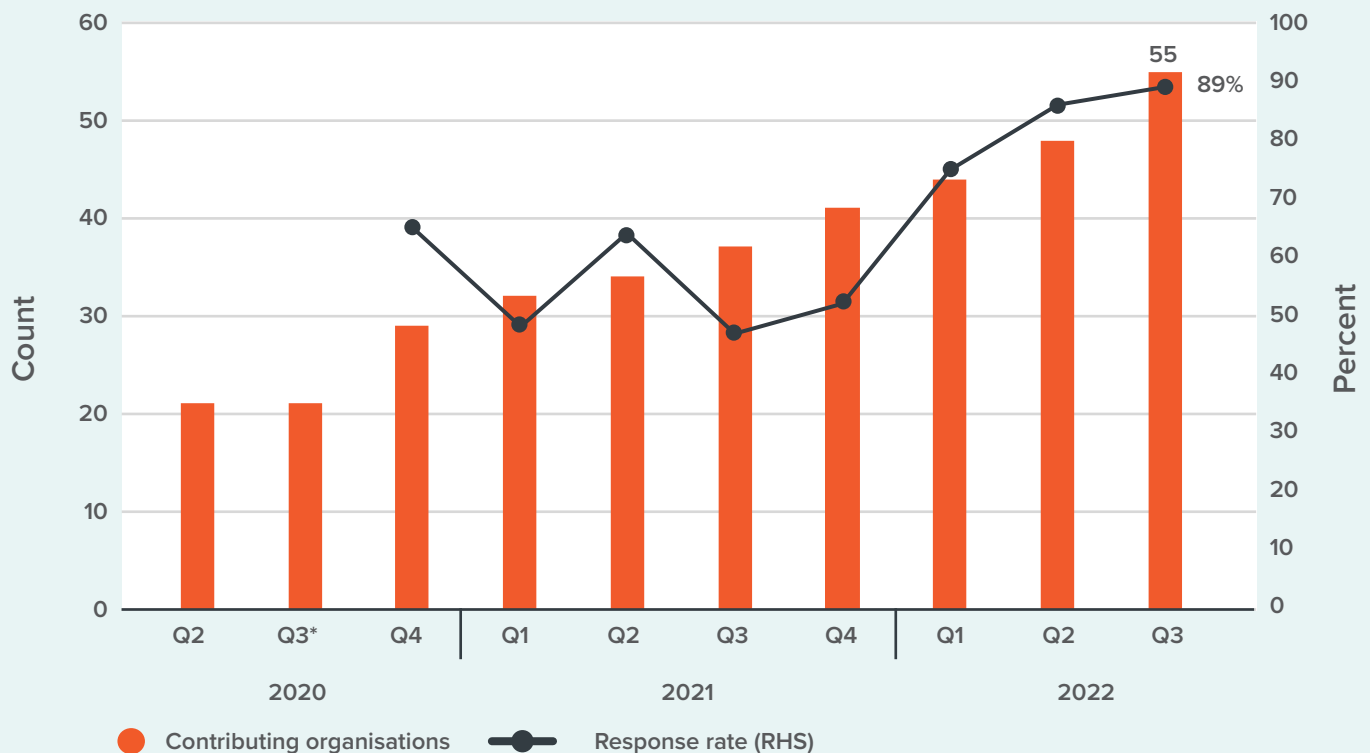
Each quarter new contributors are invited to submit project data to continue to increase the breadth and depth of infrastructure projects in the Pipeline.

Organisations do not need to be invited to submit their data; if your organisation has project information that is not included in the Pipeline, please contact the Pipeline team on pipeline@tewaihanga.govt.nz. View the Pipeline at www.tewaihanga.govt.nz/pipeline

Figure 3:

Pipeline contribution rates continue to grow

Quarterly count of Pipeline contributors and response rates, June 2020 to September 2022



* Pipeline project information was not updated in the 2020 Q3 quarter

Regional spotlight – Kāpiti Coast District Council

In the September quarter, all remaining local councils in the Wellington region west of the Tararua became contributors to the Pipeline. Over time, growing Pipeline contributor groupings of this nature will support more insights relevant to regional capacity, supply chains, and labour markets.

Te Waihanga spoke with Sean Mallon, Group Manager Infrastructure Services, Kāpiti Coast District Council (KCDC) to learn about their overall work programme with particular emphasis on their Stormwater Framework and the Takutai Kāpiti coastal adaptation project.

Can you provide an overview of the Council's capital expenditure programme?

Following central government's lead and advice, we adopted a COVID-19 stimulus plan. We have trebled our capital expenditure programme and kept our focus on our core infrastructure role which makes up 71 percent of our \$1.4 billion spend over the course of our Long-Term Plan. Our expanded capital works programme will deliver projects that support the ongoing COVID-19 recovery and provide the infrastructure renewals and upgrades we need to maintain core services and prepare for our district's expected growth.

Can you give an update on the Council's Stormwater Framework?

Kāpiti Coast District Council is reviewing our existing stormwater strategy. There have been many changes at a national, regional, and district level since the current strategy was developed in 2008. Managing growth and responding to climate change and Te Mana o te Wai in partnership with iwi are at the heart of the revised stormwater framework. Essentially, we need to find a way to live better with more. More water. More urban development. More growth.

Working together with partners Te Ātiawa ki Whakarongotai, Ngā Hapū o Ōtaki and Ngāti Toa, and supported by technical experts, a vision, values and outcomes for managing stormwater in our district was developed. These were adopted by Council following community consultation in July 2022.

We are committed to working with our community as we continue to develop the Framework. Specifically, we aim to

work with the community regarding the determination of acceptable risk levels for planning, floodplain management and safety purposes; a review of Council's hydraulic neutrality policy and low-impact urban design principles; and catchment-based objectives for water quality and action plans, including programmes of work.

What are some of the stormwater projects identified in the Pipeline?

We reviewed our stormwater capital works programme in 2015, after a series of severe weather events, to help us improve our community's safety and resilience to flood hazards. After investigating more than 800 flooded locations in the district, we developed a large capital work programme of 240 projects, to be delivered in 45 years. Council approved this programme as part of the Long-Term Plan. We completed about 15 projects by June 2021, and the efficiencies gained, as well as securing more funding for stormwater activity, means the projects will now be delivered over 37 years.

We have recently completed a major stormwater upgrade in Ōtaki Beach and contractors have just started a \$1.48 million 12-month upgrade of the stormwater system in Waikanae Beach. These projects are a combination of creating new assets and upgrading or renewing current assets to address flooding in homes, commercial buildings, garages, streets and properties.

How is the Takutai Kāpiti coastal adaptation project influencing project decisions like the seawall replacements in Raumati South and Paekākāriki?

Our Takutai Kāpiti coastal adaptation project was set up to get community input into how our district should adapt to coastal changes resulting from climate change. The panel appointed to represent community views is still in the early stages of its work and has not yet reported back to Council. However, we fully expect that their future recommendations will inform management strategies for Council coastal infrastructure and property (like the seawalls) and future District Plan changes.



Stormwater pipelaying in Tasman Rd, Ōtaki. Courtesy Kāpiti Coast District Council.

Project spotlight – Whangārei District Council’s Blue Green Network Programme

Whangārei District Council’s (WDC) Blue Green Network Strategy aims to create an attractive and environmentally sustainable urban environment that also restores waterways, addresses threats from flooding and the impacts of climate change. In this Long-Term Plan, WDC identified an initial \$20 million for the Blue Green Network Programme.

We asked Shelley Wharton, WDC Manager – Infrastructure Programmes, to discuss the programme.

Can you explain the history of the Blue Green Network Strategy and its overarching aim?

Whangārei is fortunate to have retained natural open waterways throughout the urban area, although there have been modifications over the years and these natural assets have been neglected. The overarching aim of the Blue Green Network Strategy is to reconnect people with nature through better use and restoration of our waterways (blue) and open spaces (green). It is a wide-reaching strategy touching on all four well-beings, that will ultimately take decades to implement.

The programme includes:

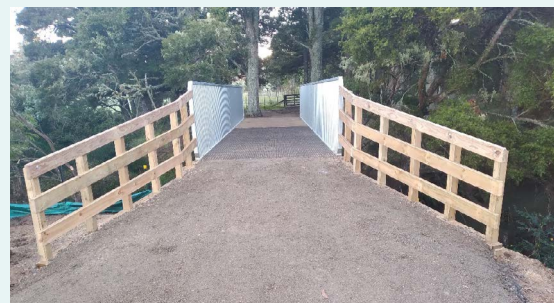
- enabling active recreation by introducing shared paths and trails alongside waterways
- undertaking ecological restoration
- fixing infrastructure problems such as fish passage barriers
- treating stormwater discharges to improve water quality
- undertaking flood mitigation projects
- identifying recreation and economic development opportunities adjacent to waterways
- revealing the culture and history of these areas in engaging ways that create a unique identity for Whangārei.

We undertook a process to prioritise and define a holistic and practical programme for the first three to five years with enough detail and confidence that work could commence without delay, such as projects already underway or funded, or ones that could be brought forward to complete larger pieces of work.

What are some of the projects that are currently in the Blue Green Network Programme?

Current work is focused on the Lower Waiarohia Stream and the Raumanga Stream. The Lower Waiarohia Stream Loop project is at concept design and investigation stages. A new shared path will be created along with stormwater upgrades, quality treatment and spaces to relax in that also reflect the rich cultural history of the area. We are working closely with Te Parawhau Hapū from the earliest stages, where representatives are also included in the project steering group. Early engagement with adjacent landowners, lessees, and occupants of the coastal marine area was undertaken before any design work to identify critical issues.

On the Lower Waiarohia and Raumanga Streams we have recently undertaken a stream survey alongside a hapū representative where 360-degree video footage was captured on a stream walk to gauge the current state of the waterways, as well as identify priority areas for restoration work or infrastructure upgrades. This provided a fantastic opportunity for all involved to learn from each other, particularly for hapū to share the cultural history of the waterways along the journey, giving us a completely new perspective of our city. This has also prompted discussions on how Te Parawhau could take a lead role where they can exercise their kaitiakitanga responsibilities over waterways within their rohe (area).



Tikipunga Waitaua Bridge after the improvement project. Courtesy Whangārei District Council.

The Raumanga shared path project has experienced delays in design, tendering and construction stages due to COVID-19; however, it has also received funding from the government's Shovel Ready fund which was a response to COVID-19 impacts on the construction sector. Whangārei is dependent on many specialists and equipment from Auckland so the long lockdowns in Auckland impacted our projects too.

You've already had some exciting successes with Blue Green projects. Can you share what's worked and some of the lessons learned from a project perspective?

A huge success within the city is that new private developments have turned to face the waterways, seeing the benefits from cleaner water, attractive spaces and the pedestrian and cycle traffic that the Hātea Loop has brought past their doors. Working in the city centre

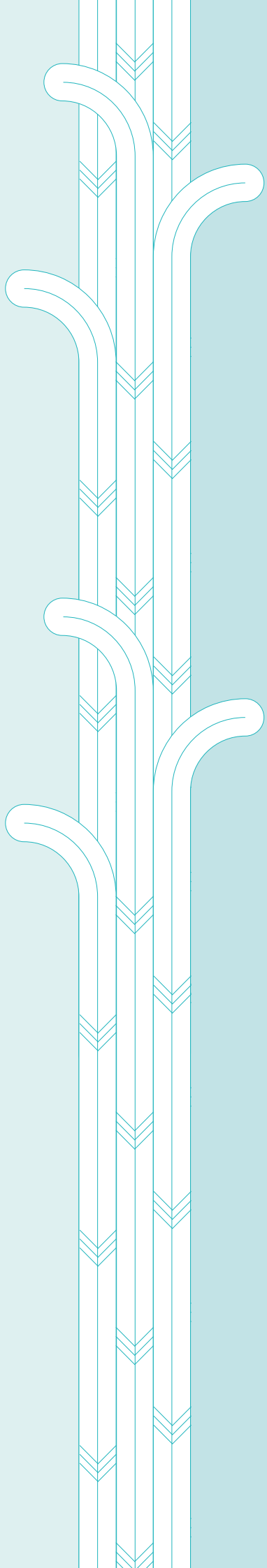
areas requires an understanding of business and commercial property owners' needs, clear planning of works to minimise disruption, and people from everywhere are interested in what's happening there, so communication is key.

WDC are moving into a new phase of upholding Te Tiriti o Waitangi/The Treaty of Waitangi responsibilities, and giving effect to Te Mana o te Wai, so we are exploring new ways of working to enable a partnership with Te Parawhau Hapū where the Blue Green Network Programme can enable and assist them to build capacity, reconnect with important cultural environments, and practice kaitiakitanga once again.

Due to the success of the Blue Green Network Programme in Whangārei, discussion has begun on how a Blue Green Strategy could benefit all of Te Taitokerau Northland.



School and community groups have participated in riparian plantings on several Blue Green projects. Courtesy Whangārei District Council.



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