



THE THIRTY YEAR NEW ZEALAND INFRASTRUCTURE PLAN

2015

ENRICHING NEW ZEALANDERS' LIVES

“Water makes this town tick”

The North Otago Irrigation Company scheme is helping to rejuvenate the region.

“Businesses moving here is a good sign,” says Fraser McKenzie, who bought an accountancy practice and moved to Oamaru 15 years ago. “Irrigation has taken a lot of the volatility out of the local economy, generated more investment and greater confidence in the whole region.”

Mark Rawson runs Plunket Electrical. He says the business owes a lot to the North Otago Irrigation Company scheme, for which it’s the lead electrical contractor. Mark believes the area has always been special, and now it’s steaming ahead with new levels of productivity and diversity. *“We have nine or ten apprentices on the books and take on two or three new ones each year. Local lads mostly, keen to stay or come back to their roots.”*

Ben Stratford lives and breathes irrigation. He’s the Technical Manager of the North Otago Irrigation Company. *“When stage one of the North Otago Irrigation scheme went in, in 2006, they said the pumps were the biggest in the Southern Hemisphere.”*

Ben says, *“The scheme will have the capacity to pump 8 cumecs of water 160 metres up from the*

Waitaki River and distribute it across the North Otago downlands. According to the North Otago Irrigation Company’s economic and social impact assessment, land use before stage one was mainly for dryland sheep and beef. Now it’s mainly for dairy and dairy run-off.”

It’s estimated that the scheme has contributed \$48 million to the Waitaki District’s GDP and 274 full-time jobs.

Putting the Plan together

The Thirty Year New Zealand Infrastructure Plan 2015 is prepared by the Treasury’s National Infrastructure Unit. The Unit works with local government and private sector infrastructure developers, operators and users throughout New Zealand, while drawing on the advice and perspectives of the National Infrastructure Advisory Board.

To find out more visit
www.infrastructure.govt.nz

“More than bricks and mortar”

Te Kura Whare is helping to bring Tūhoe’s vision to life.

Patrick McGarvey is Chair of Te Komiti o Runga, the tribal authority based around the Rūātoki Valley. There are three other authorities based at Waikaremoana, Ruatāhuna and Waimana. Collectively they represent all the marae which make up Tūhoe. Speaking of Te Kura Whare, a unique building designed to be the home of Te Uru Taumatua, the coordinating body of Ngāi Tūhoe Iwi in Tāneatua, he explains, *“Te Kura Whare is more than bricks and mortar. It’s an inspiration. It has given us the confidence, the knowledge that we can do great things. Because of what we’ve been through, a lot of Tūhoe were dispirited, fearful towards endeavour and didn’t have the hope to aspire.”*

“Before we talked and dreamed. Now we are doing. We are building a nation,” adds Terehia Biddle, General Manager of Te Komiti o Runga.

So Tūhoetanga? Being Tūhoe, what does that mean? Terehia says, *“It means Te Urewera! Our mountains, our rivers, that’s who we are. Being just a part of the bigger being that is Te Urewera.”*

“That’s why,” says Tamati Kruger, Iwi Chair, *“when it comes to our plans, our infrastructure*

spend, applying the Tūhoetanga test means asking – is this good for Te Urewera? What’s the best way to generate energy? Deal with sewage? Telecommunications? Transport? Housing? What approach, what technology will meet the tests from the Living Building Challenge – degrade no ecosystem, deplete no finite resource, emit no toxins? What we learned from Te Kura Whare project is what we will apply across Tūhoe whānui – solar generation, water management, passive heating. We’re also looking at how to build roads that don’t leach stuff into the water table. We will innovate like our tupuna did so we can heal Te Urewera.”

Next steps

Government agencies, peak bodies and local authorities will focus on the delivery of their actions in the Infrastructure Plan’s Action Plan. The National Infrastructure Unit will monitor implementation and report to the infrastructure community through the publication of an annual State of Infrastructure report which will be made available through www.infrastructure.govt.nz

Infrastructure is the foundation on which so much of our economy relies, whether it is reliable electricity, clean drinking water, or transport networks that allow us to safely undertake our work and live our lives every day.

Over the next ten years, approximately \$110 billion is forecast to be spent on infrastructure. The Crown’s infrastructure assets alone are worth more than a full year of total output from the economy.

Alongside assets like roads, phone and water networks, when we think about infrastructure we include social assets – schools, hospitals, prisons, libraries, swimming pools and so on. We include them because like other forms of infrastructure they are fixed, long-lived assets, they are in the government’s domain, and the money spent on them influences the overall performance of our economy, and New Zealanders’ quality of life.

Broadly speaking, New Zealand has a good national infrastructure base bolstered by the expenditure on infrastructure in recent years

to address historic underinvestment. But over the next 30 years we face some big challenges. The purpose of the *Thirty Year New Zealand Infrastructure Plan 2015* is to help navigate our way through these challenges and grasp the opportunities they present. Our vision is that in 2045 New Zealand’s infrastructure will be resilient and coordinated, and contribute to a strong economy and high living standards.

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This document is a summary of the Thirty Year New Zealand Infrastructure Plan 2015.
To view the full plan, go to www.infrastructure.govt.nz



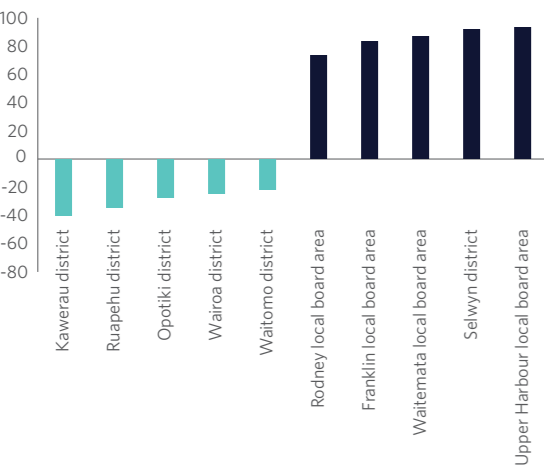
THE CHALLENGES

We have a number of aging infrastructure networks that will need renewing. This is a simple consequence of when they were built; they are nearing the end of their life. For example, the schooling estate has an average age of 42 years and parts of our water network are now over 100 years old. Meeting the cost of infrastructure renewal and maintenance is even more challenging in areas with smaller rating and economic bases.

Some of our regions will grow and others will shrink. By 2045 we expect another 1.2 million people to live in New Zealand. This increase will not be evenly spread across our country: 92 percent of this growth will be across just five regions, and over 60 percent is likely to be in just one region: Auckland.

Projected population growth (five fastest and five slowest local authorities)

% change in projected population 2013 versus 2043



Our population is also aging. In 1996 no Territorial Local Authority had more elderly people than children, but by 2031, it is projected that there will be a 91 percent change to that ratio. The median age is projected to increase from 32.8 years in 1996 to 42.7 years in 2043. This has implications for the types of services New Zealanders will want, the infrastructure required to deliver those services, and available funding.

At the same time, our lifestyles are changing. While responding to the demands of growth we need to consider that the way we live and interact in 2045 – the time horizon of this plan – will be very different from today. As a consequence, the infrastructure we use, and what people expect of it, will also be different.

Technology is driving change everywhere. It is behind many of the changes to our lifestyles, and is also transforming the way infrastructure providers deliver services. This provides exciting opportunities, but also brings challenges in the form of cyber-security risks, and the need to make sure our networks are flexible enough to adapt to new technological developments.

We also face economic challenges. At home, we need to address a persistent productivity gap to make sure our businesses remain competitive on the world stage. Infrastructure will play a key role in lifting productivity, and ensuring we can take advantage of opportunities in the global economy, including the ongoing growth in developing countries, and Asia in particular.

On top of these challenges, our climate is changing, and our natural resources are under pressure. Rainfall patterns are changing, and sea levels are expected to rise by 30 centimetres by 2050. Flooding is our most frequent natural disaster with an average annual cost of approximately \$51 million. As a country we have a wealth of natural resources, but we are beginning to reach the limits on some of the crucial inputs such as land and fresh water. These issues raise questions around how we develop and manage our infrastructure – it needs to be resilient to changes over time, and use resources efficiently.

These challenges need to be met at a time when central and local government face financial constraints. Local Authorities are responding to community calls to manage debt and reduce rate rises, and central government is focussed on returning to surplus, and reducing net debt to 20 percent of GDP by 2020.

NEW ZEALAND'S INFRASTRUCTURE TODAY

10,886km State Highway network	83,703km of local roads	721,700 hectares of total irrigated land	42,312 GWh electricity produced
12,000km of national transmission grid	75-80percent of electricity from renewable sources	35,500 barrels of oil produced per day in 2013	724,253 end users able to connect to Ultra-Fast Broadband
239,150 rural households with access to wireless broadband	4,000km of rail corridor	\$45.2billion total replacement value of the three waters assets	19 prisons
2,532 schools	38 public hospitals	16 sea ports that export 37.7million tonnes a year	308 public libraries
52 municipal landfills	371 community based police stations	471 public museums	

THE RESPONSE

In light of the challenges, we need to make a step-change in our approach to infrastructure planning and management. Simply building things to address our problems is no longer sustainable. There are three main elements to our response.



The Infrastructure Plan features an Action Plan intended to help us make this shift, with a particular focus on:

- > developing national, shared data standards for infrastructure;
- > establishing regional centres of excellence or similar arrangements to support decision-making;
- > investigating options to support long-term, integrated regional infrastructure plans;
- > more transparent infrastructure pipeline data;
- > investigating options for enhanced procurement governance for larger procurements;
- > a longer-term review of planning legislation and alignment;
- > updating the Resource Management Act to improve the national planning framework; and
- > developing a trans-Tasman procurement market with Australia.

This shift will drive the two outcomes sought from the Plan – better use of existing infrastructure and better allocation of new investment.

