



Briefing to the Incoming Minister for Infrastructure

New Zealand Infrastructure Commission

| Te Waihanga

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1. Briefing for the Incoming Minister for Infrastructure

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2. Recommended referrals

Referral	Action Required	Due Date
Minister of Finance, Minister of Transport	For information	29 Nov 2023
Minister of Local Government	For information	29 Nov 2023

3. Contact details

Name	Role	Group	Phone
Alan Bollard	Chair	Board	s9(2)(a) of the OIA
Ross Copland	Chief Executive	Chief Executive's Office	s9(2)(a) of the OIA
Geoff Cooper	General Manager	Strategy	s9(2)(a) of the OIA

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Introduction

Tēnā koe Hon. Chris Bishop

Congratulations on your appointment as the Minister for Infrastructure.

As the Government's primary advisor on infrastructure, we are focused on improving the infrastructure system to help lift the country's productivity and improve social outcomes. We have sight across the whole infrastructure system and are uniquely placed to provide advice to government and work with a range of infrastructure organisations to achieve improvements in infrastructure planning, prioritisation, investment and delivery.

Economic prosperity and the infrastructure portfolio

The infrastructure system is broad; it includes networked assets (roads, telco), social infrastructure (schools, hospitals) and other assets such as flood protection structures and waste management facilities. Infrastructure is vital to all New Zealanders' way of life, supporting almost everything we do. We currently spend approximately 5.5% of GDP on public infrastructure per annum, and 1 in 20 New Zealanders work in the infrastructure sector. This investment is critical to New Zealand's economic prosperity and global competitiveness.

Infrastructure in New Zealand is delivered by both the public and private sector and is funded and regulated through a range of different models. The Infrastructure Commission works across central and local government and the private sector on the challenges and opportunities facing New Zealand's infrastructure. This work includes financing tools (such as Public-Private Partnerships); alternative pricing and revenue models; rigorous cost benefit analysis; approaches to long term city and regional partnerships; planning and consenting processes; building the capability of the infrastructure sector; and monitoring the pipeline of infrastructure project delivery.

Your Housing and Resource Management Ministerial portfolios are an integral part of the infrastructure system, and we look forward to supporting the infrastructure advice for your work in these areas.

The Infrastructure Commission has built the foundations to understand how to improve the infrastructure system

The Infrastructure Commission was established in 2019 to be the Government's primary advisor on infrastructure. In our first 4 years, we have focused on understanding the infrastructure system and building an evidence base to understand where the biggest opportunities for improving the infrastructure system lie.

This foundational work has included building the National Infrastructure Pipeline, which gives visibility to a funded pipeline of work from 139 infrastructure providers, with over 4,500 projects valued at \$95 billion. The pipeline and other foundational work provide good information about infrastructure projects across New Zealand, workforce needs and constraints, barriers to effective and efficient delivery, industry incentives and community expectations. We have also developed the national infrastructure strategy and continue to provide advice on procurement and delivery, as well as supporting major projects.

Our focus over the next period is on accelerating delivery of identified system changes that align with the new Government's priorities.

A focus on improving the effectiveness and efficiency of infrastructure networks

The effective and efficient operation of infrastructure networks is critical for many social and economic outcomes, including productivity and economic growth, housing affordability and resilience.

We have identified the following major opportunities to improve the effectiveness and efficiency of infrastructure systems and look forward to providing advice on key Government priorities in these areas:

- **Reducing infrastructure delivery costs** – through a fast-track consenting regime for infrastructure, improved protection and advance procurement of land for infrastructure, addressing the skills gap, building better project delivery capability and boosting construction sector productivity.
- **Effective and sustainable prioritisation of infrastructure projects** – we have developed a framework for assessing the cost/benefit of projects that will support an Infrastructure Priority List for projects in the planning and problem definition phase. We have also undertaken baseline research in several sectors to support the development of 30-year infrastructure plans and city deals.
- **Ensuring there is sufficient revenue through funding tools** – we have studied infrastructure pricing design and reviewed a significant number of budget bids and infrastructure project business cases. We conclude that revenue (funding) constraints are often more significant than financing constraints and we are well placed to advise on how to overcome the infrastructure funding gap.
- **Getting more from existing infrastructure** – managing demand through pricing, such as, time of use road charging or volumetric water charging, reducing new build requirement by upzoning cities and driving a step-change improvement in asset management across the public sector.

The Commission is part of a broader government infrastructure ecosystem

The Infrastructure Commission is an Autonomous Crown Entity established to provide independent advice to government on the infrastructure system. We give effect to this function by:

- Developing the New Zealand Infrastructure Strategy.
- Providing advice to the Government in relation to infrastructure needs, priorities and matters that prevent, limit, or promote and accelerate the efficient and effective delivery of infrastructure.
- Providing support for infrastructure projects and promoting a strategic and coordinated approach to the delivery of current and proposed infrastructure projects.
- Supporting better decision-making by supplying the market with information about infrastructure market capacity, investment demand (the Pipeline) and performance.

We play our role as part of a broader government infrastructure ecosystem, and our role is often to influence change through other agencies. The broader government ecosystem includes:

- The Treasury.
- *Infrastructure policy agencies* – agencies such as the Ministry of Transport, the Ministry for the Environment, the Department of Corrections and Health New Zealand - Te Whatu Ora.
- *Infrastructure Delivery agencies* – agencies such as KiwiRail, The NZ Transport Agency - Waka Kotahi, the Department of Corrections, Rau Paenga, Health New Zealand - Te Whatu Ora and local and regional councils.
- *Infrastructure regulators* – agencies such as the Commerce Commission, Ministry of Business, Innovation and Employment, the Electricity Authority and the new water services regulator, Taumata Arowai.
- *Special purpose infrastructure entities* – such as City Rail Link Limited, Crown Infrastructure Partners and Crown Irrigation Investments.

Because this government ecosystem is complex, there are opportunities to refine roles across the system. The coalition agreements note the opportunity to centralise infrastructure prioritisation, procurement and delivery in a new National Infrastructure Agency. There may also be value in investing further in leadership of infrastructure policy, asset management, financing, specifying and monitoring levels of service, and spatial land use planning of national infrastructure assets and resources.

We look forward to discussing the opportunities for infrastructure

With our deep and broad knowledge of the infrastructure system, our ability to provide independent advice and to bring together people across the system to activate change, we can support you as Minister for Infrastructure to achieve the Government's infrastructure priorities. We look forward to working with you.

Executive Summary

Through our work over the last four years, we have identified a number of opportunities for improving New Zealand's infrastructure services. To capitalise on these opportunities, New Zealand needs a step-change in the way we plan, regulate, fund, manage and deliver infrastructure.

Reducing infrastructure delivery costs

New Zealand is one of the least efficient high-income countries when it comes to infrastructure delivery. There are a number of immediate changes that could be implemented to improve efficiency. These include:

- **Fast-track consenting for infrastructure**, and greater use of national direction for planning purposes will reduce both time for delivery and cost.
- **Improved protection and procurement of land for infrastructure** – purchasing the land needed for infrastructure projects ahead of time keeps options open, is flexible and is easily reversed. Strengthening the spatial planning system will also help identify land use needs and direct development away from higher-risk areas.
- **Building project delivery capability** – our reviews of distressed projects have highlighted the opportunity to build project procurement and delivery capability across government. This will build consistency, but also improve the management of projects.

Getting more from existing infrastructure

One of the most effective ways to improve efficiency in the infrastructure system is to make better use of existing infrastructure. This can include:

- **Managing demand through pricing** – for example congestion charging and water usage charging are both ways to better manage demand across the network.
- **Better asset management** - more consistent and robust asset management across the public sector will help ensure that assets are well maintained. Where asset management reporting is in place (e.g. for regulated utilities), assets are better managed. We have recently undertaken an Asset Management State of Play review and are considering other opportunities for improvement.

Ensuring there is sufficient revenue and optimal funding tools

Increasingly, infrastructure revenue is not sufficient to maintain existing infrastructure and deliver new infrastructure to meet growing demand. We see opportunities in relation to revenue and funding to support an efficient infrastructure system, including:

- **Transport and water revenue reform** – whether this be through tweaks to the system, such as introducing further water use charging, or broader system-wide reform to support longer-term sustainability (e.g. utility-like price/quality regulation and moving to across-the-board road user charging for transport).
- **Funding tools and risk allocation** – our reviews of a number of distressed projects, including Transmission Gully and CRL have provided us with insights into the right tools for the right project, including the importance of risk allocation.

Effective and sustainable prioritisation of infrastructure projects

Countries with certainty of the pipeline of future work achieve greater efficiency in their infrastructure delivery. Some of the immediate opportunities to improve certainty include:

- **An Infrastructure Priority List** – we have developed a framework for assessing the cost/benefit of projects that will support an Infrastructure Priority List for projects in the planning and problem definition phase.
- **30 year infrastructure plans and city deals** – we have undertaken baseline research in several sectors to support the development of longer term plans. For example, we have undertaken an initial needs assessment of infrastructure in the health sector. We are ready to advise on city deals, regional deals, and you may also wish to consider outcomes-based “Green Deals” as a way of accelerating electrification and to enable renewable energy.

Next steps

Many of these opportunities have also been identified by the new Government. We are happy to provide more detailed briefings on any of the opportunities above, and provide some additional detail in the body of this briefing for your early reference.

In the interim, we are continuing our work to convert many of these opportunities into meaningful changes to the system. As a small organisation of 50 people, much of this work is done through working with other lead agencies – which we are well placed to do. As an independent advisor to government, with sight across the system, we can provide robust advice to support change.

Our work to support the infrastructure portfolio

The Commission looks forward to meeting with you to understand how we can best support your work and your priorities for our work.

Supporting immediate priorities for delivery

We can provide evidence-based advice to support your economic and policy discussions and decisions across a range of immediate areas for improvement in the infrastructure system.

Infrastructure planning and consenting processes

We have drafted comprehensive infrastructure planning content (for use in the previous transitional national planning framework) which can readily and quickly be converted to National Direction under the existing Resource Management Act (RMA). Our work with the infrastructure sector has identified opportunities for further national direction, in the form of 'fast-track' consenting pathways for significant infrastructure, new and revised infrastructure and planning standards, and the potential for a comprehensive National Policy Statement and National Environmental Standard for infrastructure. Such new national direction would deliver immediate efficiencies in consenting processes. We can provide detailed advice on these options and opportunities to support lead policy agencies develop fast-track consenting pathways and more enabling national direction for infrastructure provision.

Prioritising infrastructure and 30-year plans

We have several work programmes from which we can advise on longer-term planning and prioritisation of infrastructure investment. We monitor the delivery of current infrastructure projects (the National Infrastructure Pipeline) and have set up an initial assessment framework for constructing an 'Investment Priority List' of robust infrastructure projects. We have also undertaken a range of analyses of the parameters driving infrastructure costs over time, such as: urban land use regulation, consenting costs, asset management practices, procurement and contracting approaches, sector capability and business case processes. We can provide advice on these matters to support your establishment of the National Infrastructure Agency and the delivery of 30-year infrastructure plans.

Investment Assurance

New Zealand requires a greater level of capital investment to start to address long-run infrastructure gaps – the Infrastructure Strategy indicated a public infrastructure gap of approximately \$104 billion. While increased investment is needed, the current portfolio is facing challenges:

- In some sectors, an investment pipeline larger than agencies and the market can deliver, leading to cost increases and project delay; and
- as much of this funding was allocated in pressured timeframes, we do not have full confidence that the highest value for money investments have been prioritised. The ongoing operating costs that will be required to maintain and service the new assets once completed are not sufficiently clear.

To address these issues, increased investment must be sustainable and matched with fiscal capacity, as well as agency and market capacity and capability. In the face of ongoing and increasing cost escalations and delivery risks, we recommend the investment portfolio is reprioritised and sequenced to build a more stable pipeline better aligned with your priorities and with a continued focus on value for money.

We are willing and able to support you in considering the approach and framework for reviewing the investment portfolio.

Housing, transport, and water

Our research and analyses include the costs and benefits of pricing and regulatory tools to mitigate the negative impacts of growth (such as traffic congestion and ‘urban sprawl’). The Commission can support decision making through advice on pricing (e.g. time of use road charging, volumetric water use charges and the application of development contributions and value capture mechanisms). We can also provide advice on infrastructure considerations in planning urban density and form (including the implications of the Medium Density Residential Housing Standard and National Policy Statement on Urban Development). Based on our economic analyses, we can provide advice to support your considerations of price-quality regulation and market form in local government water service delivery, transport revenue and pricing tools and the interactions between planning regulations, infrastructure delivery and land prices in enabling housing development.

Overview of working with you

As the Minister for Infrastructure, your primary statutory lever under the Infrastructure Commission/Te Waihangā Act 2019 lies in the Government’s response to the 30-Year Infrastructure Strategy. The Strategy was first published in May 2022, and is scheduled to be updated before 2026.

You may also direct us to undertake reports under section 20 of the Infrastructure Commission/Te Waihangā Act 2019 on any matters relating to infrastructure. The Commission must publish every report that is provided under this section of the Act as soon as practicable after we have provided it to you¹.

As your primary advisor on infrastructure, we also support you and your office by providing:

- Regular reports (currently quarterly) on progress against our Statement of Performance Expectations and actions under the Infrastructure Strategy.
- Advice to support you to engage in the business of Parliament – written and oral questions in the House, Cabinet papers, committee inquiries etc.
- Responses to day-to-day queries from your office.
- Proactive briefings on our work and the issues on which we are advising.
- Information for responses to requests and correspondence from the public that fall within the Infrastructure Portfolio.
- Ideas and options for your domestic and overseas engagements.

Our Chair and Chief Executive are available to meet regularly with you to discuss key issues. We welcome an early discussion on how you would like to keep in touch on a regular basis.

Our current work programme to support the Infrastructure Portfolio

We can advise you on the insights and outputs from the work outlined below, and, with your formation of the new National Infrastructure Agency, we are ready to support and advise on these functions, roles and responsibilities.

Infrastructure Strategy and planning

Reporting against the **Infrastructure Strategy and the Infrastructure Action Plan**: the Commission’s Infrastructure Strategy identifies the long-term challenges facing the sector and recommends areas of focus for actions that will have the greatest impact. The updated Strategy is due in 2026. The current Infrastructure Action Plan reflects the previous Government’s response to the Strategy, which you may wish to review to reflect your policy priorities. We will report annually on progress against the

¹ Section 20, New Zealand Infrastructure Commission / Te Waihangā Act 2019

Infrastructure Strategy and Action Plan, identifying what is working well, areas of potential risk, and opportunities for improvement, with the first monitoring report due to be published in mid-2024.

The Commission has been tasked with developing an **Infrastructure Priority List**, through a standardised process for assessing infrastructure proposals at set points in the planning process, culminating in a list of vetted proposals available to decision makers and the public. The Infrastructure Priority List will improve the quality of business cases and collate a schedule of viable and beneficial infrastructure projects from which long-term (e.g. 30-year) infrastructure plans can be developed.

The **National Infrastructure Pipeline** (Pipeline) is New Zealand’s dataset of infrastructure project information and spans central government, local government, and the private sector. Quarterly updates, provide a forward view of current and planned infrastructure projects. As of September 2023, the Pipeline included information on over 4500 projects, from 73 contributor organisations, spanning 139 infrastructure providers. The total value of projects in the Pipeline was \$95 billion.

We are expanding the Pipeline coverage with the intent of providing a trusted and complete view of infrastructure activity in New Zealand that is underway or planned and has a high degree of certainty. This information supports both infrastructure providers and the construction industry to improve planning, coordination, and delivery of New Zealand’s infrastructure projects. These improvements mean both working to improve the accuracy of the Pipeline and expanding its scope.

The work compiling the National Infrastructure Pipeline critically relies on receiving standardised information from across our sectors and institutions. A new National Infrastructure Agency is an important opportunity to require and align data standards to better enable visibility and transparency of public infrastructure projects. Doing so will ensure greater certainty for sector participants, enabling better investment in capability, skills, and staff retention.

Supporting Infrastructure Delivery

This work is focussed on growing the capability of the infrastructure sector – its leaders and delivery agencies. We also work as part of the Treasury-led investment management system to improve infrastructure planning, decision-making, delivery capability and performance across Government. Our work includes:

- Contributing to **Budget advice** on infrastructure investments and other project assessment processes through the Investment Panel, assessing capital bids and providing advice on value, risks and cost benchmarking.
- Assessing and contributing to Gateway reviews and advising on government infrastructure projects with a whole of life cost greater than \$50m.
- **Major project reviews**, such as the Transmission Gully Public-Private Partnership and City Rail Link, considering whether the projects have achieved value for money, how better value might have been obtained and the effectiveness of management and governance arrangements put in place for the projects. Our focus is on drawing out the important lessons that can be applied to improve infrastructure delivery.
- Establishing a **New Zealand Major Projects Leadership Programme** based on proven international approaches, which make completion a requirement for project leaders. Our work has shown that effective major project leadership is a critical success factor for infrastructure. We have been working with industry partners to identify skill needs and prospective delivery options. We are keen to discuss with you the options and opportunities in this space.
- **Asset management practices** present a significant opportunity to improve infrastructure delivery. Available information suggests that there may be a large gap between what is being spent on renewals and what is needed to maintain assets and service levels. We are undertaking research into asset management performance and will be ready to brief you early in the new year.

- Advice on infrastructure **funding and financing**, including using infrastructure pricing to drive better outcomes such as easing congestion, deferring some capital expenditure and providing much-needed revenue to meet investment needs.

Infrastructure Policy

We develop policy advice on matters that impact the whole infrastructure system, and work with infrastructure sector policy leads (e.g., transport, energy, housing) to inform and advise on their policy development, within the context of the wider infrastructure system.

Our current work programme includes supporting lead agencies with infrastructure advice on significant policy development in:

- **Resource management and planning system** policy reform, including potential changes to national direction under the Resource Management Act, and fast-track consenting for infrastructure projects.
- Sector specific policy advice for major policy change, e.g. **water services** reform policy and the balancing of safety and economic regulation and the potential for a more sustainable funding base through metering, volumetric charging and effective economic regulation.
- **Climate change and resilience** priorities and the role of infrastructure in delivering on these priorities. Areas of whole of system focus include effective adaptation and mitigation investment approaches, building resilience into strategic infrastructure, assessing climate risk and vulnerability to natural hazards and availability of hazard data and information.
- Opportunities for **smarter use of data and information** to inform policy for land use planning and infrastructure investment, e.g. to improve the use of aggregates locally to reduce costs. Smarter approaches to using data and information to inform policy settings could deliver productivity benefits, reduce costs and support processes such as spatial planning and the development of city and regional deals.

We anticipate providing you with advice as needed on whole of system matters where there is value in an all-of-infrastructure perspective to inform your delivery priorities.

Wider Research and Insights

The Infrastructure Commission undertakes a wider research and insights programme into topics that will inform decision making and help drive the effective and efficient delivery of infrastructure. Current research includes:

- Approaches to Infrastructure Pricing: a study to establish best practice pricing principles for infrastructure and an assessment of sector performance against these.
- A study into equity (and perceived fairness) of how infrastructure services are paid for.
- Health infrastructure investment needs over the next 30 years.
- The size, composition and workload of the infrastructure workforce.
- Current approaches to insuring infrastructure assets against natural disasters.
- Using information systems to better plan for infrastructure delivery.

Planned Publications

We plan to publish a number of these reports over the coming months and will brief you on the insights and provide copies ahead of release. The purpose of publishing these reports is to improve the evidence base for public discourse and political decision-making. These are the finalised reports on which we will brief you ahead of their publication in coming months.

- *Who's working in infrastructure? A baseline report* (Research Insight paper)

- *Why do construction input costs change? The role of global and local factors* (Research Insight Paper)
- *Building a Healthy Future* – a report on health infrastructure investment needs
- *Transmission Gully: Post-Construction Review – Megaprojects: Insights for the future* - an executive summary and key findings that can inform other projects. The final review will be completed once construction completion is confirmed.
- *A fair way of paying for infrastructure: Insights from a survey of New Zealanders*

Further topics, with work underway for future publication include work in asset management (maintenance and renewals), modelling of aggregate resources in high-growth urban areas, improvements in contracting approaches and delivery outcomes, and information and transparency regarding infrastructure planning and projects.

The opportunities for step change improvement in infrastructure

New Zealand’s biggest challenge is investment efficiency.

New Zealand has a multi-billion-dollar infrastructure investment challenge. This challenge includes the costs of renewing and replacing existing assets, a growing and changing population, and a need to invest in response to climate change and other hazards. The largest financial issue is not new capital investments, but the cost of maintaining and renewing our existing asset base.

New Zealand currently spends around 5.5% of GDP on public infrastructure. Our investment levels are higher than Australia and the median OECD country (see Figure 1). However, New Zealand ranks near the bottom 10% of high-income countries for the efficiency of that spend (see Figure 2). New Zealand’s biggest infrastructure challenge is one of investment efficiency. Our infrastructure is becoming more expensive to build and maintain, infrastructure prices have risen one-third faster than prices elsewhere in the economy, while infrastructure construction productivity has grown at one-third the rate of the overall economy.

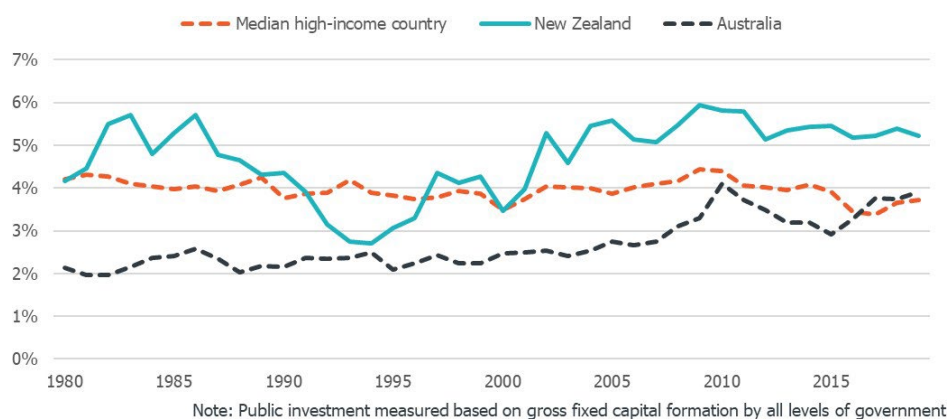
The combination of demand for new infrastructure, increasing costs and declining productivity risks creates a growing financial burden, requiring further debt, taxation, or user charges. We estimate that attempting to fund or finance the predicted demands (which total 9.6% of GDP) of all publicly provided infrastructure would require:

- A 98% increase in debt-to-GDP ratio by 2051; or
- A 3% increase in the tax-to-GDP ratio (equivalent to increasing GST from 15% to 21%, or a 21% increase in the average income tax paid per taxpayer); or
- A 38% increase in household spending on infrastructure services (about \$5,200 extra per household per year).

These scenarios illustrate significant affordability constraints associated with building our way out of our infrastructure problems. Instead, a focus on greater efficiency can deliver more for less.

New Zealand’s investment levels are in line with other developed countries

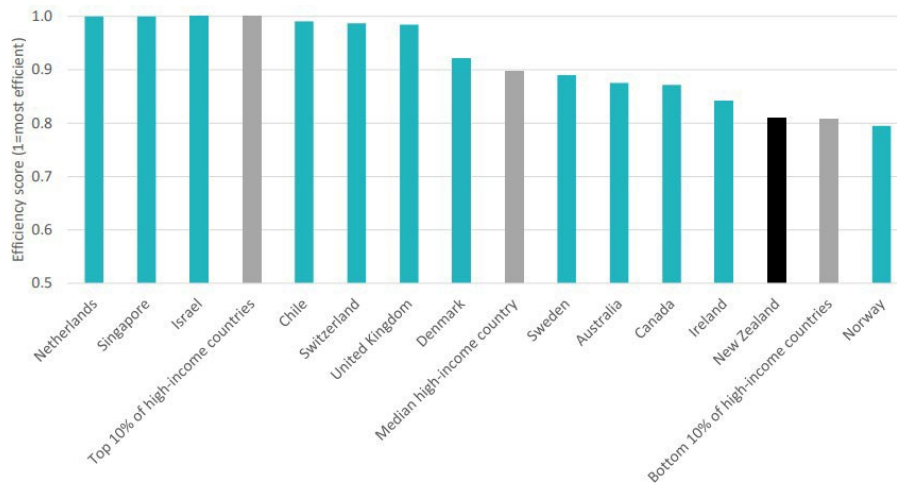
Figure 1: Public investment as a share of GDP, 1980-2019



Source: New Zealand Infrastructure Commission, 2021

New Zealand is among the least efficient high-income countries at delivering infrastructure

Figure 2: Efficiency of public capital investment for high-income countries



Source: New Zealand Infrastructure Commission, 2021

Driving efficiency into the infrastructure system

Significant opportunities to increase the value from New Zealand’s infrastructure spend include:

- Reforming the land transport revenue system
- More effective pricing of infrastructure services to improve demand management, financing options and incentives for maintenance.
- A greater focus on asset management
- Designing megaprojects to better manage risks.
- Earlier action to protect land to cut infrastructure costs
- Enabling competitive urban land markets to lower land costs for infrastructure
- Improving the speed and certainty of land use planning regulation and legislation
- Placing water services on a sustainable footing through reform
- Improving long-term infrastructure planning to increase certainty for the sector.
- Creating economic opportunity from leveraging our low-emissions energy resources

Reforming the land transport revenue system

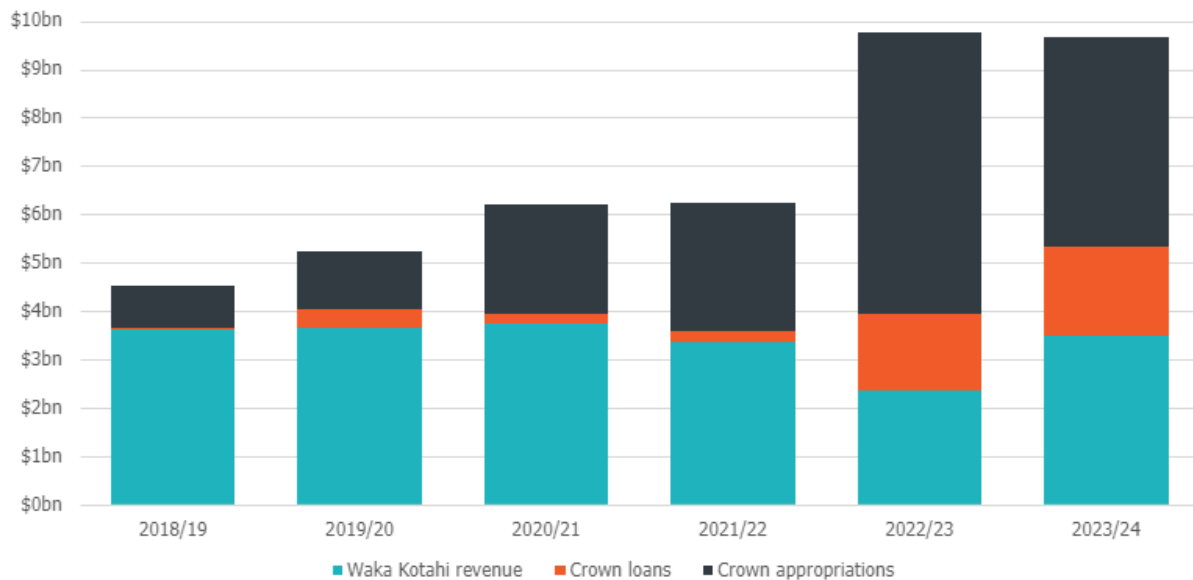
Many of New Zealand’s existing transport funding tools have been world leading, but they are increasingly in need of change. The existing transport funding system is a source of inequity between road users, provides few demand management signals to resolve congestion issues or contribute to emissions reduction, and faces long-term sustainability challenges as vehicles become more efficient or as modal shift increases.

In addition, a greater proportion of transport funding is now coming from outside the National Land Transport Fund as central government has committed to more new infrastructure without raising user charges proportionately (see Figure 3). How New Zealand pays for large-scale transport projects is a difficult issue, particularly when these projects are intended to enable greater housing and urban renewal, because the users and the beneficiaries of the projects may not be the same. At the same time, local government’s contribution to land transport projects are constrained by competing pressures such as water infrastructure renewal.

Unlike other categories of infrastructure, transport funding is complicated by the fact that transport assets generally don't generate revenue once built.

General Crown finances are bearing a growing share of land transport costs

Figure 3: National land transport funding by source, 2018/19 - 2023/24



Source: New Zealand Infrastructure Commission

More effective pricing of infrastructure services can improve demand management, financing options, revenue generation, and incentives for maintenance.

Charging people directly for the services they get from the infrastructure they use has a range of benefits. Charging those who benefit gives infrastructure providers direct information on how many people are using the service and a revenue stream to fund upgrades where they're needed. This information and revenue help providers better plan for service improvements to manage periods of high demand. It might mean planning to build new infrastructure, but it also encourages innovation. If the cost of providing infrastructure increases and users aren't prepared to pay the higher price, providers have an incentive to find alternative ways to provide quality services at a lower cost.

Charging also encourages people to think about when they use infrastructure or whether they need to use it at all. This approach is already used in sectors such as electricity. Prices are often higher during the business day than overnight or in the weekends, encouraging users to charge their electric vehicles and run other appliances overnight when there is spare capacity.

Improved pricing is pertinent in water (through water metering and volumetric charging), in transport (through time-of-day congestion and road use pricing) and in local government (through improvements to development contributions and value capture), where such pricing can generate revenue streams to pay for project financing. Importantly, any value capture approach needs to be announced at the same time as the project, as this is when infrastructure-induced land value appreciation first occurs.

For example, land transport projects regularly create large private gains in land value that can be levied to fund part of the project cost. The announcement of the City Rail Link caused an increase in land values for properties near existing and future stations, with properties within a 10-minute walk to the stations increasing in value between 65-75%. In monetary terms, the estimated appreciation of land close to western line rail stations amounted to more than \$3 billion.

Implement time of use road charging in urban areas

Time of use road charging (congestion charging) is a proven intervention to reduce demand for road space at peak times. The building blocks for the implementation of congestion charging in New Zealand are already in place. There is broad Parliamentary support, legislation has been drafted that could be introduced quickly with suitable amendments to reflect Government priorities, and several councils are ready and willing to implement a scheme. Time of use road charging pilots could be introduced on their own (e.g., in Tauranga and Auckland), or as part of a 'City Deal' suite of reforms aimed at improving regional outcomes, such as housing affordability and improved asset management.

A greater focus on asset management

Asset management is a significant opportunity to improve the efficiency of our existing asset base. One way to drive such improvement is to require public reporting from government agencies on the state of their assets and on their activities to maintain and improve those assets. Such reporting requirements in other jurisdictions have been shown to encourage higher, and more consistent, asset management performance by government agencies. To support your consideration of reporting requirements or other aspects of the management of public infrastructure, the Infrastructure Commission has been investigating asset management in public agencies and can brief you on our findings and recommendations.

Designing megaprojects to better manage risks

Megaprojects can be high risk, with a significant share experiencing cost overruns, delays and protracted legal disputes. Many factors contribute to these problems, including project complexity, long planning horizons and staff turnover, non-standard technologies, and premature commitment to specific delivery models. Robust planning, development processes and investment decision-making can reduce these risks, including greater independent scrutiny of each stage of the planning process and business case development. The Commission is also working across the infrastructure sector to build the capability of agencies and project leaders to deliver major projects.

Earlier action to protect land will cut infrastructure costs

The need for many infrastructure projects can be foreseen years in advance but infrastructure providers are generally unable to take steps to secure the land needed beforehand. A combination of legislative and regulatory settings and revenue availability mean land purchase is often deferred until a project is close to being built, with large financial costs. For example, the cost of purchasing the land for the North-South Opaheke rapid transport arterial today is \$78 million, but Auckland Council anticipates this will rise 13 times, to \$1.0 billion at the expected time of purchase. Land costs can also accelerate faster than expected, as population growth is difficult to forecast accurately.

Advance land protection comes with short-term fiscal costs, but it keeps options open, is flexible (land can be used for different types of projects if requirements change) and is easily reversed. There is the opportunity for the government to reduce infrastructure costs by changing legislative and planning settings and making suitable fiscal provisions so public agencies protect and purchase the land needed for future projects.

Enabling competitive urban land markets to lower land costs for infrastructure provision

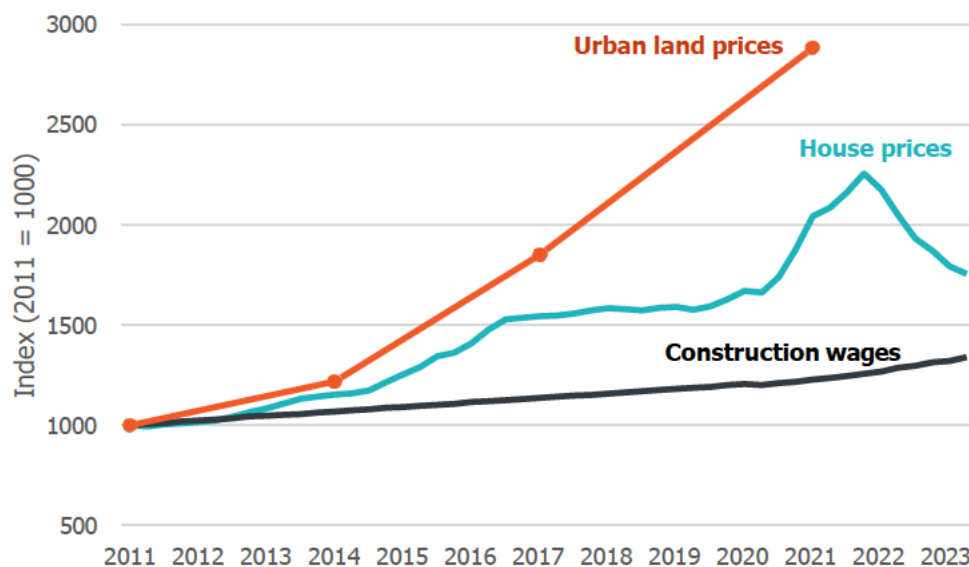
Local government land use regulations are one factor driving up land prices in most cities, escalating costs for infrastructure. Cost escalation is caused by both the purchase price of the land and by council decisions that drive lower density and greater dispersion of households and businesses, which increases the relative cost of infrastructure provision. The affordability of infrastructure is an important consideration in urban intensification, with denser urban areas providing a deeper revenue base, which can support more infrastructure. On average, infrastructure costs are more affordable in high density

areas. For example, recent research by Infrastructure Victoria in Australia found that a more compact form for could save up to A\$59,000 in infrastructure expenses for every new home.

Councils seeking opt-outs from the Medium Density Residential Standards could be required to introduce cost-reflective infrastructure pricing, to encourage efficient investment and an equitable allocation of costs. The development contributions policies set by Hamilton City Council and by Auckland Council for Drury are examples of such pricing schemes. Under these schemes, where there is available capacity in existing assets (i.e., in developed areas), charges should generally be lower. Where new infrastructure must be built to service housing, these costs are borne by the new developments. There is an immediate opportunity to broaden these approaches across the urban landscape and extended to other cities. Based on the work we have done in this area, the Commission is ready to advise on standardising development contribution methods, to provide more granular and efficient infrastructure pricing signals.

Rising land prices threaten infrastructure delivery

Figure 4: Real house price index, 1990-2023



Source: Corelogic, Statistics New Zealand, RBNZ

Improving the speed and certainty of land use planning laws

Infrastructure providers collectively spend \$1.29 billion a year on consenting costs, such as council fees and expert and legal expenses. On average, consenting expenses consume 5.5% of the total budget of an infrastructure project, well above similar costs in other countries. Between 2010-14 and 2015-19, decision-making timeframes for infrastructure consents grew by 150%, further increasing project costs.

Consenting delays frustrate economic development and may prevent New Zealand from achieving environmental objectives. For example, our research shows that that consent processing times must be halved by 2028 if New Zealand is to build enough energy and transport assets to deliver on its net zero emissions targets. A planning system that properly enables the provision of infrastructure would provide greater certainty over decision-making timeframes and processes.

Greater use of well-integrated national direction could result in different outcomes and treat infrastructure coherently across, the land use planning system. The Commission recently developed national direction content for infrastructure, which could easily be amended to become national direction under the Resource Management Act (RMA), delivering immediate efficiencies for infrastructure consenting processes. Other immediate changes that would improve the efficiency of

consenting processes for infrastructure include updating the 2019 National Planning Standards with standardised terminology and more consistent use of zoning; increasing the breadth of infrastructure consented as 'controlled activities' under the RMA; and the introduction of a fast-track consenting regime for significant infrastructure projects (e.g. the COVID-19 fast-track pathway increased consenting certainty for major projects and saved an average 18 months per project).

Based on our work to date the Commission is ready to brief you and advise on options for infrastructure national direction, fast-track consenting pathways and a range of other matters to improve consenting processes for infrastructure delivery.

Place water services on a sustainable footing through reform

There is broad agreement that historic under-investment in water infrastructure has resulted in deteriorating assets and poor levels of service. Our analysis shows that both quality and economic regulation are essential for efficient delivery of water services, and that pricing of water services increases efficiency. Specifically, volumetric charging for water use reduces demand, conserves resources, defers new investment, lowers production costs over the long term, and is generally cheaper for water consumers. There is an immediate opportunity for councils to introduce volumetric charging within their financial sustainability proposals, and such an approach is likely to be perceived as being more equitable. For instance, in a recent representative survey of 3000 New Zealanders, 70% considered that it was fair that households should pay for the water they use.

Our analysis confirms that stormwater management is very different from the provision of drinking water and wastewater services. Stormwater is interdependent with the roading, land management and flood control responsibilities held by local and regional councils and is not suited to being included in policy reforms targeted at drinking water and wastewater services.

Improve long-term infrastructure planning to increase certainty for the sector.

One frequent plea from the infrastructure industry is for central government to provide greater certainty over the pipeline of future work, so they can better train and retain skilled workers and invest in new technology. Countries that experience year-to-year swings in public investment are less efficient in delivering infrastructure. However, this is unlikely to be the primary reason for New Zealand's low efficiency in delivering infrastructure, as public investment has been steady as a share of GDP in recent decades.

Providing greater certainty requires a careful and conscious set of decisions about the types of projects that are being proposed, how they are funded, their scale and complexity, and the surrounding institutional settings. There are a range of factors that contribute to greater pipeline certainty. These factors include broad consensus on the problem definition and preferred solution, project announcements that occur after business case processes are complete, funding sources that are secure and reliable (e.g., user charges), smaller works that are modular and can be standardised, and delivery by regulated entities rather than the government.

The factors the Commission has identified as contributing to project certainty are summarised in the table overleaf (Table 1). The Commission can provide advice on these factors and how the government could use its proposed long-term infrastructure plans to deliver greater certainty for industry.

Table 1: The characteristics of project certainty

	Factors that contribute to more certainty	Factors that contribute to less certainty
Planning and location	Broad consensus on problem definition, preferred option and need. Announcement after business case High growth locations	Contestability on problem definition, preferred option and need. Announcement before business case Low growth, declining locations
Funding	User charges Asset owner has pricing autonomy	Fixed or centralised funding Asset owner faces rigid/political price setting
Complexity	Small works Modular, standardised Ability to import knowledge	Megaprojects Bespoke design, site-specific Requirement to develop local knowledge
Workforce	Requires a relatively small workforce from a large labour market	Requires a relatively large workforce from a small labour market
Institutions	Regulated entities	Government
Land	Land protection undertaken	Land acquisition required
Approvals and consenting	Predictable and time-bound; more likely for maintenance, reinstatement and resilience	Discretionary decision-making; more likely for new capital assets

Creating economic opportunity from leveraging our low-emissions energy resources

In line with your priorities for increasing renewable generation, there is significant opportunity to create economic growth through fast and effective development of low-emissions energy generation. This opportunity could include national ‘green deals’, alongside city and regional deals, focussed on creating economic export opportunities and high-paying jobs.

New Zealand has an abundance of low-emission energy potential. We have two to three times more commercially viable wind, solar, hydro and geothermal resources than the Climate Change Commission estimates will be needed to meet our net-zero carbon emissions commitment. Beyond meeting these commitments, unlocking a low-emissions economy could also provide greater economic benefits for New Zealand, including through the net export of ‘green’ energy.

To leverage our low-emissions energy resources we need:

- *The right regulatory settings* to enable the development of large-scale clean onshore and offshore energy resources and the networks to connect them. As signalled in your coalition agreements, the planning and consenting system needs to enable the timely development of clean energy generation and the required supporting infrastructure, such as new grid connections and transmission capacity.
- *Reliable supporting infrastructure*: This requires an efficient expansion of supporting electricity and telecommunications networks and an efficient use of our gas and fuel networks.
- *A skilled workforce*: We need more scientists and researchers helping to improve energy conversion technology, particularly for our dairy-processing activities. We also need to retain our skilled oil and gas workers to make the most of gas (and its specialist infrastructure) as we begin to transition to cleaner alternatives, including offshore alternatives.

Appendix: Governance and resourcing

Infrastructure Commission governance

The Commission was established by the New Zealand Infrastructure Commission/Te Waihanga Act 2019. We are an autonomous Crown entity under the Crown Entities Act 2004, governed by a Board of Directors.

The Board is appointed by you and is responsible for our strategy, operations and organisational performance.

Our Board combines significant economic expertise with legal, financial, regulatory and on-the-ground construction experience, spanning private and public sectors. The terms of current Board members are as follows:

Role	Term
Dr Alan Bollard – Chair	to 30 September 2024
Suzanne Tindall – Deputy Chair and Chair of the Risk and Assurance Committee	to 30 April 2024
Maurice Davis – Director	to 30 September 2026
Raveen Jaduram - Director	to 30 April 2025
Sina Cotter Tait - Director	to 30 September 2024
Sarah Sinclair - Director	to 30 April 2025
Geoff Hunt – Director	to 30 September 2025



Dr Alan Bollard

Board Chair



Sue Tindal

Deputy Chair/Chair of Audit and Risk Committee



Raveen Jaduram

Director



Sarah Sinclair

Director



Maurice Davis

Director



Sina Cotter Tait

Director



Geoff Hunt

Director

Infrastructure Commission resourcing

The Infrastructure Commission is a small organisation of just under 50 people and baseline annual funding of \$13.8 million. The organisation employs experienced and senior specialists in infrastructure planning, information and delivery, economists, researchers and policy advisors to deliver high impact and strategic advice. The Commission is led by CEO Ross Copland and comprises four teams responsible for delivering strategic and evidence-based advice: Infrastructure Delivery, Strategy, Policy and Operations.

The Commission’s leadership structure is shown below:

