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Te Waihanga, New Zealand Infrastructure Commission
Wellington
Via email info@tewaihanga.govt.nz

Tēnā koutou katoa

Developing an enduring National Infrastructure Plan submission.

Water New Zealand (Water NZ) welcomes the opportunity to submit on the "Testing our thinking - Developing an enduring National Infrastructure Plan (the Plan) consultation".

Water NZ is a national not-for-profit organisation which promotes the sustainable management and development of New Zealand's three waters (drinking water, wastewater and stormwater). Water NZ is the country's largest water industry body, providing leadership and support in the water sector through advocacy, collaboration and professional development. Its ~3,300 members are drawn from all areas of the water management industry including regional councils and territorial authorities, consultants, suppliers, government agencies, academia and scientists.

Approach to our submission

Acknowledging the 17 main questions in the Discussion Document, our submission focuses on the three questions posed at the professional bodies workshop held in Wellington on 2nd December.

- *What infrastructure is needed in the next 30 years?*
- *What investment is planned over next 10 years?*
- *What is the gap between needed and planned infrastructure- how do we address the gap?*

Introduction

Water NZ commends your discussion document for comprehensively bringing together all the issues facing utilities and infrastructure provision in Aotearoa New Zealand. It describes well the problem the National Infrastructure Plan is trying to solve.

We see the NIP being the action plan for delivering Te Waihanga's Rautaki Hanganga o Aotearoa, the New Zealand Infrastructure Strategy. Not identifying a multi-decade list of [pet] projects. Instead, it's an opportunity to give us greater certainty about what should be built and greater consistency when [central and local] governments change, i.e. avoiding significant policy flip-flops. This includes infrastructure policy, specifically water- while a necessity often seems an afterthought when broad infrastructure policy is developed.

Water - essential but often overlooked or an afterthought

The following comments are contextual in nature to help answer the first two question 'what infrastructure is needed in the next 30 years?' and 'what investment is planned over next 10 years?'

- Access to safe water, sanitation and hygiene is the most basic human need for health and well-being.
- Aotearoa New Zealand has a substantial water infrastructure deficit. Significant investment is needed to address deferred renewals and maintenance and to ensure compliance with service, economic and environmental regulation.
- In 2022/23, councils invested more than $2.5 billion in three waters assets. This is 56% of total council spending on infrastructure assets for the year and an increase of $207.7 million (9%) from 2021/22. Many councils, however, are not fully funding depreciation, and typically do not deliver 100% of capital investments included in their Long-term Plans.
- Although councils continue to increase their investment in water infrastructure, it remains low compared to their investment in other types of assets. Investment in stormwater infrastructure is particularly low.
- When dealing with limited funding for capital works, some councils take a prioritised approach to infrastructure investment, for example- (1) regulatory compliance, (2) renewals, (3) resilience, (4) levels of services and (5) growth.
- Currently the availability, capacity and performance of many drinking water and wastewater treatment plants and associated networks do not have ability to support the potential greenfield expansion, urban infill or industrial growth. New housing and or industrial development will impact treatment capacity, and performance.

- New housing development being put on hold or land zoned "limited or no capacity" for development or unable to get resource consent due to capacity constraints in the network or treatment plants is already reality in New Zealand's main centres.
- Spatial planning - the integration and aligning of land use planning and capital investment planning - is important. Three waters major capital works are often linked to housing development and industrial growth, supports our primary and tourism industries, and underpins safe and healthy communities and environments.
- Contamination of waterways, aquatic life killed by pollution, news of discharges of untreated sewage into waterways is reputationally damaging- to a country, for the waterbody and the business involved.
- Frequently shifting goalposts around freshwater limits and targets have led to uncertainty for councils and land and water users. This is driven by changing policies from central government (noting that they are under review once more) and a lack of environmental regulation and enforcement.
- Over the past ten years, successive governments have set increasingly ambitious limits and targets for freshwater quality. Taken seriously, these require considerable infrastructure investments, especially in districts where the waterways are the most degraded.
- Many freshwater bodies across Aotearoa New Zealand, are degraded and have been for some time. 47% of wastewater treatment plants (WWTPs) discharge to freshwater. Many wastewater treatment plants are currently near full operational capacity. During wet weather events, or failures in a network, sewer overflows can occur, resulting in potential environmental or human health risk – and reputational damage.
- There are 321 Council run WWTPs across Aotearoa New Zealand. More than half need to be reconsented before 2030, at an estimated cost of $100 million[3]. This excludes any additional capex required to meet higher environmental compliance standards. Almost a quarter, or 73 plants, are currently operating on expired consents, with the average time operating on an expired consent being four years. A number of (110) wastewater plants and networks are operating on soon-to-be expired consents.
- Many stormwater discharges across the country are not subject to resource consents. This means that the environmental consequences of those discharges are not being addressed, and risk further negative aquatic outcomes for both our fresh and coastal

waters. Further, Aotearoa New Zealand's stormwater systems have been designed for the climate "we used to have", and are likely to struggle with more frequent and intense storms.

- Aotearoa New Zealand's rivers, lakes, harbours, and marine spaces provide for recreation and wellbeing, support our primary and tourism industries, and allows us to gather kai. However, our waterways and aquifers are under pressure from anthropogenic impacts for example, the taking, using, damming, or diverting of water and the discharge of contaminants or water into water and soil. These pressures will be amplified by the effects of climate change.
- Audit New Zealand have assessed the accuracy, reliability, and ultimately reasonableness of local government's asset management planning[1]. They found a variety of approaches and levels of maturity of asset management planning. For example, renewals forecasts based on the age of the assets, capped by what councillors consider to be affordable. Not using the condition and performance of three water assets to inform investment in the network results in asset failures, reduced levels of service, and greater costs than forecast.

Water New Zealand's high-level comments, answering the question '*how do we address the gap between need and planned infrastructure?*' are as follows.

A National Infrastructure Plan can only endure if there is bipartisan support

A successful infrastructure plan can only be implemented if it has cross party support which is enduring between political cycles. We were heartened by the bilateral direction from the Minister for developing the Plan.

Water services must be considered in national planning and prioritising

To enable housing and industry growth, deliver water quality limits and targets and to protect our clean, pure, green reputation, water supply, drainage, flood control, or sewerage projects should be included in National Infrastructure Pipeline, Infrastructure Priorities Programme (IPP) and the future Plan. Currently, the criteria for the IPP excludes water services from applying, as few projects are regional or national, and few projects are in excess of $50 million. Inclusion of

[1] Audit New Zealand 2023 Asset management and long-term planning

water projects will help facilitate improved project planning, coordination, and delivery across New Zealand's infrastructure system.

New development must contribute to the cost of new infrastructure

Significant investment in water services is needed, without it, service delivery and environmental outcomes will continue to decline. Growth must pay for growth. We must resolve ongoing tensions between developers and councils over financial contributions. We need development charges that are designed and are applied in a way which recovers the cost of growth and are responsive to changes in growth.

Getting the settings right

We believe the "Getting the settings right" chapter is the most important in the discussion document in terms of enabling better outcomes across the broad infrastructure sector.

Aotearoa New Zealand has varied requirements and processes for organisations involved in long-term infrastructure investment. Different infrastructure types are subject to different financial regulation, costing, reporting and planning horizons. The discussion document highlights deficiencies in infrastructure planning, procurement, project management and asset management. Ongoing maintenance of infrastructure is often forgotten when costing projects.

Regulation and scrutiny has ensured asset management is done well in some sectors. Sectors that are regulated under the Commerce Act are more effective and active in their asset management. Sectors with professional governance boards have better discipline in looking after their assets.

We suggest a mandatory requirement, across public (local and central) and private infrastructure providers, for one strong and clear framework. The framework could include rules, planning standards, regulation, accountability, governance, reporting matrices, timeframes, and professional competence. Provided by legislation, professional and industry standards and accompanying guidance a framework would ensure consistency in standards, project planning and management, deliverability and maturity.

Upskill from skilled workers to governance

Water NZ are concerned that within the water- and wider infrastructure - sectors, there is insufficient capacity, capability and availability to deliver all the potential National Infrastructure Plan projects.

It is imperative that Central Government consideration is given to training, accreditation, authorisations and recruiting enough resource for each project in the Plan to occur in the timely manner envisaged. This means immigration settings should include water services operators on the skilled migrant list. Noting this is not enough on its own to bridge the capability and capacity gaps we have identified. Water apprentices should be, once again, included in the Apprentice Boost scheme.

One benefit of having bipartisan support for the Plan is that it will help to give businesses the confidence to invest in developing the infrastructure workforce.

Spatial planning - the integration of land use planning and capital investment planning

The physical shape and form of cities is not directly covered in the discussion document. Urban form has wide-ranging impacts on different types of infrastructure – and the cost of providing it.

In Water NZ's view, a requirement for spatial plans- integrated planning of public infrastructure provision and land development- would provide sequence and certainty to infrastructure construction and funding. Without it, development projects could happen out of sequence with essential utilities such as wastewater disposal, and internet access and, in the case of flood protection infrastructure, exposing communities to unacceptable risk. Integrated catchment management plans for all three waters, but stormwater in particular, are a vital foundation of spatial plans.

Water NZ supports the various calls for the provision of a National Spatial Strategy. Ideally this would be underpinned by a national population strategy, informed through conversations about population size that Aotearoa New Zealand Inc. believes is desirable and sustainable. Knowing the size of population and rate of growth we are building for will direct infrastructure provision and planning.

There are interdependencies between critical infrastructure

One important aspect missing in the discussion document is taking any account of the interconnectedness and interdependencies of infrastructure services.

The provision of three water services, has dependencies and interdependencies within and between other critical infrastructure providers ability to operate. As we saw during Cyclone Gabrielle, flooding, subsidence, fallen trees and downed power lines left utilities and people without power, communications and access, leading to extreme isolation and vulnerability.

Washout of the roading network affected transporting material and responders into an area. Power outages resulted in no communication to many areas and telemetry systems inoperable for some.

Resilience isn't just about natural hazard risk

Infrastructure is subject to a range of vulnerabilities – hazards, attacks, human error and disruptions which have economic, operational, and security consequences. The scale of resilience takes many forms; knowledge, asset, process, individual, organisational, and community. Reaching a common understanding of what is meant by resilience and consistent measures of resilience across infrastructure is sensible.

The New Zealand Lifelines Council 2023 National Vulnerability Assessment[2] should inform the National Infrastructure Plan.

The Plan must ensure future-proofed decision-making and resilient infrastructure.

Nature-based solutions are preferred over hard-engineering solutions

Green infrastructure (systems of natural and built components designed to provide a range of ecosystem services- for example water quality, biodiversity, urban cooling) is not always well captured by business case process or plans focused on conventional, grey utilities. Green infrastructure delivers multiple, non-monetary benefits.

Prescribing green infrastructure is a shift in the traditional way water is managed and requires a change of mindset beyond conventional drainage management to a multi-disciplinary approach; forming alliances to facilitate and implement a range of green infrastructure concepts and projects that will release multiple benefits. Nature-based solutions and taking a more integrated approach to infrastructure planning is very much in line with te ao Māori perspectives and principles.

Climate budgeting and infrastructure investment

The New Zealand Government is a signatory to the Paris Agreement and is committed to net zero emissions by 2050 and a 50% reduction of gross emissions by 2030. Green budgeting is used in assessing the environmental effects of policy, incorporating environmental impacts and encourages standardised data monitoring and reporting. Climate budgeting and green

[2] https://www.civildefence.govt.nz/cdem-sector/lifeline-utilities/lifelines-reports-and-resources

budgeting allows countries to identify, monitor and report on expenditures that are specifically related to climate change adaptation and mitigation.

Water NZ members believe that all infrastructure projects should be assessed against a benchmark derived from the Government's climate change and biodiversity outcomes the United Nations benchmarks.

Require infrastructure planners to give consideration and effect to intergenerational outcomes

Conclusion

We commend the New Zealand Infrastructure Commission for producing the Discussion Document.

The proposed plan needs to pragmatically and prudently balance the protection of the environment, anticipated and planned growth and the ongoing operation of assets whilst meeting legislation, expanding community expectations, and political and financial challenges.

Our overarching point is the availability, capacity and performance of drinking water and wastewater plants and associated networks must be considered as part of any holistic national infrastructure plan. Aligning development and growth with our infrastructure investment programme, through spatial planning, is essential.

We look forward to continuing to work with the Commissions to refine and contribute to the wider infrastructure planning programme.

Ngā mihi nui

[redacted]
Technical Lead Regulatory