Irrigation New Zealand's Submission on the Draft National Infrastructure Plan

Te Waihanga Infrastructure Commission
Wellington

Submitted through: Have Your Say portal Feedback portal National Infrastructure Plan

6 August 2025

1. Executive Summary

Irrigation New Zealand (IrrigationNZ) welcomes the direction and intent of the Draft National Infrastructure Plan and appreciates the opportunity to contribute to its refinement. We acknowledge the important role Te Waihanga plays in shaping a more coordinated, strategic, and long-term approach to infrastructure planning in New Zealand.

As the organisation representing the country's irrigation sector, we see first-hand how critical water infrastructure is to regional development, food production, climate resilience, and rural community well-being. Irrigation water supply schemes and on-farm irrigation system owners together manage an asset base estimated to exceed $27 billion—largely funded and governed by private or rural community-led entities—and support high-value, export-oriented land use across some of our most productive regions. Many of these schemes also deliver co-benefits, including rural drinking water, flood mitigation, environmental flow management, fire resilience, and biodiversity enhancement.

However, despite the sector's scale and contribution, irrigation infrastructure is not currently well integrated into national infrastructure planning frameworks. It is often excluded from infrastructure pipelines, resilience strategies, spatial planning processes, and strategic funding tools. Regulatory complexity, unclear classification, and inconsistent support for rural water systems can disincentivise investment in upgrades, modernisation, and adaptive infrastructure—at a time when these changes are urgently needed to meet future climate, population, and market demands.

We support the Plan's long-term outlook, its emphasis on value-for-money, and its call to better align national and local infrastructure systems. The sector particularly supports the proposed 30-year strategic framework with rolling reviews, which is well suited to the adaptive, climate-sensitive nature of water infrastructure.

In our submission, we recommend:

- **Recognising rural water infrastructure—including irrigation—as a strategic part of freshwater management and having the equivalent status to other "long-lived infrastructure"** within the Plan and consistently across all related Acts and policy instruments;
- **Aligning investment and planning tools with the multifunctional nature of irrigation systems** that increasingly serve both private and public needs;

- **Developing a sector-specific asset management framework** co-designed with irrigation entities, enabling good decision-making across diverse ownership models;
- **Building rural capability** through targeted training, micro-credentials, and vocational pathways to address critical workforce challenges;
- **Supporting a nationally coordinated approach to water storage development** as a vital part of climate adaptation and water security planning.

We look forward to working alongside Te Waihanga and other stakeholders to ensure that water infrastructure is appropriately recognised and supported as part of a modern, resilient, and inclusive infrastructure system for Aotearoa New Zealand.

2. Key Contact

We would welcome the opportunity to discuss the matters raised in this submission or to provide any additional information that may assist.

Please direct any enquiries to:

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3. Information Sharing Statement

IrrigationNZ and the undersigned parties understand that this submission is subject to the provisions of the Privacy Act 2020 and that names and other identifying information may be included in information Te Waihanga Infrastructure Commission may publish about this submission process.

We acknowledge that:

- The Te Waihanga Infrastructure Commission may publish this submission, or a summary of it, on its website;
- Our submission contains no confidential information that we seek to withhold under section 9 of the Official Information Act 1982;
- This submission will inform Te Waihanga Infrastructure Commission National Infrastructure Plan development process and contribute to the advice provided to Ministers;
- Our submission (including identifying information) may be shared with other government agencies working on related policy areas; and
- Te Waihanga Infrastructure Commission may contact IrrigationNZ directly for clarification or to request further information in relation to this submission.

4. About IrrigationNZ

IrrigationNZ is the national representative body for the irrigation sector, representing nearly 5,000 members, including 45% of irrigated land across New Zealand. Our membership is broad and diverse, covering irrigation schemes, individual irrigators, the irrigation service sector in all regions of the country, a number of research institutions, and some local government agencies.

Our irrigator members include a wide range of farmers and growers — sheep and beef, dairy, arable farmers, horticulturalists, winegrowers — as well as sports and recreational facilities. We also represent over 120 irrigation service industry members, including manufacturers, distributors, irrigation design and install companies, and providers of irrigation decision support services for both freshwater and effluent irrigation.

We are a voluntary-membership, not-for-profit organisation with a mission to create an environment that supports the responsible use of water for food and fibre production for both local and international consumers, while sustaining the wellbeing of our communities.

As an organisation, we take an active technical leadership role in promoting best practice irrigation and provide training and education in freshwater management including the development and delivery of nationally recognised qualifications via NZQA. Over recent years, we have delivered training to many irrigators on irrigation best practices, aimed at improving water use efficiency (lowering consumption) and better managing environmental effects (through improved soil moisture management).

IrrigationNZ members share many of the same goals as other New Zealanders:

- Reduce their environmental footprints and see improvements in the health of the natural environment,
- Contribute to the wellbeing of their communities through safe and reliable food and fibre production, and
- Provide for a resilient future for New Zealand in the face of climate change.

5. Introduction

IrrigationNZ appreciates the opportunity to provide feedback on the Draft National Infrastructure Plan. We commend Te Waihanga's efforts to foster long-term, intergenerational thinking and support a more stable and adaptive infrastructure system.

As the national representative body for irrigators, irrigation schemes, and the irrigation services sector, we advocate on behalf of members and stakeholder's responsible for the design, operation, funding and governance of rural water infrastructure.

Collectively, our sector manages around $27 billion[1] in water infrastructure assets[2]. These systems are a critical element of regional New Zealand's food and fibre economy and underpin a significant portion of our high-value export capacity. But their value goes beyond production—they offer enduring environmental co-benefits, provide resilience in the face of climate volatility, and support local economic and social wellbeing.

For many decades, irrigation and water storage infrastructure have played—and will continue to play—a crucial role in enabling communities to remain liveable and productive as land use, demographics, and environmental pressures evolve. However, much of this infrastructure has been developed through private and primary sector investment, despite delivering broad public benefits that are not well understood or acknowledged outside these communities. Successive governments have provided inconsistent or inadequate support of these broader societal benefits, instead generating shifting policies and fragmented funding models. This lurching in policies, combined with confusing and uncertain consenting processes under an outdated RMA model, has disincentivised investment in modernisation and adaptation. As a result, the potential to enhance economic productivity, community stability and environmental outcomes is too often compromised rather than realised.

We therefore support the Draft Plan's aims to improve value for money, reduce regulatory complexity, and establish a more durable and forward-looking infrastructure investment system. We believe that water capture, storage and distribution infrastructure—particularly in the context of irrigated food and fibre production—has not yet been sufficiently recognised for the role it plays in delivering long-term national resilience and productivity.

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[1] New Zealand's current national irrigation infrastructure asset base is estimated at approximately $18.6 billion (in 2023 dollars) for the off-farm water storage and distribution infrastructure, based on modelling by Irrigation NZ and MPI. When including on-farm systems—which are estimated at around $9 billion—the total asset base rises to nearly $27 billion. These figures reflect approximately 903,465 hectares of irrigated land in 2020 across the country and a modelled potential expansion of an additional ~400,000 ha to support future demand
Breakdown Summary:

- Off-farm irrigation infrastructure: ≈ $18.6 billion
- On-farm infrastructure (current): ≈ $9 billion
- Total national irrigation infrastructure base: ≈ $27 billion
- Estimated expansion potential: +$6 billion (with future ~400 k ha development at ~$15,000/ha)

[2] Reliable, consistent data is essential for infrastructure planning. In irrigation, persistent discrepancies between datasets are hampering visibility and confidence. StatsNZ irrigated land figures differ significantly from those reported by MPI. While recent clarification on definitions has helped, misalignment remains.
We encourage a cross-agency reconciliation of irrigation-related data. In particular, planning tools should reflect both the current irrigated area (~900,000 ha) and the realistic potential buildout (~450,000 ha) identified in MPI's national water availability study. This is critical to forecasting infrastructure demand and identifying where new storage or conveyance systems are needed.

6. Improving Infrastructure Value

We agree with Te Waihanga's concerns that New Zealand's infrastructure investment—approximately $4,500 per person annually—should be achieving stronger returns. As the Draft Plan rightly notes, infrastructure churn, regulatory friction, and misalignment between national and local priorities are undermining long-term outcomes. These challenges are particularly evident in the irrigation sector, where large, community-led schemes have delivered long-lived infrastructure and strong returns with minimal public investment.

This stands in contrast to the approach taken by many of our trading partners and competitors—most notably Tasmania—where coordinated Federal and State government funding, supported by a consistent and transparent governance model, underpins strategic freshwater management. Their model delivers an integrated programme of water storage development, distribution infrastructure, and long-term asset management, aligned with national and regional economic goals.

In New Zealand, irrigation schemes frequently deliver multi-functional benefits that extend well beyond food and fibre production. These include environmental flow management, fire resilience, flood mitigation, and rural community drinking water supply. In addition to drought resilience, well-designed water storage can also provide incidental flood attenuation benefits by buffering high-flow events and reducing peak discharge into vulnerable catchments. Yet such public good outcomes remain largely unrecognised and unsupported within national infrastructure planning and funding frameworks. In many cases, these multi-functional uses are subjected to excessive and overlapping layers of regulation, which serve to disincentivise investment and innovation—despite the infrastructure serving demonstrable public interest functions.

Despite these contributions, irrigation infrastructure remains under-supported at the national level. It is largely absent from infrastructure pipelines, climate resilience planning, and strategic funding programmes. This omission reflects not a lack of value, but a lack of visibility. Where national investment strategies fail to align with locally operated systems and new initiatives, we see missed opportunities, delayed progress, and unnecessary duplication of effort.

There is a compelling case to broaden the definition of infrastructure that is strategically important to New Zealand to explicitly include irrigation and rural water systems. Doing so would not only improve returns on existing infrastructure but also unlock the potential to expand capacity in ways that reinforce national goals for food security, climate adaptation, and regional economic development.

The Resource Management (Consenting and Other System Changes) Amendment Bill introduced new classifications such as "long-lived infrastructure", but it did not explicitly recognise water storage for irrigation within this category. This omission created ambiguity for irrigation schemes and related infrastructure projects, despite their clear alignment with national objectives for climate resilience, water security, and food production.

As it stands, multiple infrastructure definitions exist across various Acts and regulations—including terms such as "water utility infrastructure," "critical infrastructure," "lifeline utilities," and "significant community infrastructure"—all of which could reasonably apply to irrigation. However, the Bill's framing limited "long-lived infrastructure" to sectors such as energy, telecommunications, and transport, introducing further inconsistency by excluding irrigation, even though many schemes shared

the characteristics of long-lived assets and similarly had the regional significance of hydro-energy projects.

We maintain that irrigation infrastructure should have been explicitly included within the definition of long-lived infrastructure and granted access to the same 35-year consent duration provisions, to ensure alignment across legislative frameworks. Although the Bill has advanced, the terminology remains unresolved, and our concerns about definitional gaps and their practical consequences remain.

We strongly recommend that government explore the establishment of a dedicated national water coordination function or agency to improve alignment between regional delivery and national priorities for water infrastructure. **This entity could serve as a cross-agency platform—drawing together the expertise and mandates of MPI, MfE, MBIE, LGNZ, and Te Waihanga—to provide cohesive oversight of water storage, distribution, and resilience planning**. A dedicated body would enable more strategic planning, reduce duplication, and support enduring investment partnerships between public and private sectors[3].

7. Regulatory Complexity and Systemic Barriers

We support the Plan's call to reduce consenting complexity and resolve regulatory duplication. Irrigation infrastructure developments routinely encounter overlapping, inconsistent processes that increase cost and risk for the private sector proponents and investors. These challenges are apparently not sector-specific; they seem to mirror systemic inefficiencies that affect all infrastructure development in New Zealand. But their impact on privately driven rural water infrastructure is particularly acute due to the mix of environmental, engineering, and land use regulations involved.

Many irrigation schemes must navigate multiple regional plans, overlapping environmental standards, and unclear expectations from regulatory agencies. Projects may span more than one catchment or territorial authority, each with distinct policy interpretations and procedural requirements[4]. These systemic constraints delay good projects, erode trust, and disincentivise both private and public sector investment in infrastructure renewal or expansion. The cost of consenting a new water storage project can add upwards of 20-30%[5] of the cost of building it, depending on scale.

A national strategy for water storage must encompass all scales — from small on-farm ponds to medium-scale community schemes, to large-scale catchment or regional infrastructure. While a National Environmental Standard (NES) for on-farm storage may contribute to this framework, it cannot meet New Zealand's broader water security needs in isolation. Water storage must be treated as a national priority — a critical enabler of climate adaptation, food security, and societal well-being. This requires an integrated approach that considers water resource impacts within a catchment-wide

[3] The Tasmanian Irrigation Ltd model offers a relevant example of a government owned entity, demonstrating how coordinated governance and co-investment between state and federal entities (and private sector buy-in) can deliver long-term, multi-functional water infrastructure that supports both economic development and climate adaptation.

[4] For example, Central Plains Water operates across both Selwyn and Ashburton District Councils within the Canterbury region, while the North Otago Irrigation Company intersects planning frameworks governed by Waitaki District Councils and Canterbury and Otago Regional Councils.

[5] Anecdotal evidence arising from targeted consultation conducted by MfE and MPI in 2025 on proposed RM reforms that traversed infrastructure development barriers for on-farm water storage and constructed wetlands.

management framework, aligned with nationally set objectives that balance economic development, environmental health, and human access to water.

Historically, poorly structured freshwater allocation decisions — made without sufficient regard for storage — have led to critical water availability constraints in many regions. These pressures are only expected to intensify, with climate change leading to more severe weather events including long periods without rainfall. Embedding a long-term, strategic approach to water security — underpinned by adequate storage capacity — in future legislation is essential to support the food and fibre sector, build climate resilience, and safeguard societal well-being.

We are encouraged by proposals to streamline consenting and approval processes through reforms to the Resource Management Act (RMA), access to the Fast-track Approvals Act, and improved spatial planning mechanisms. However, the effectiveness of these reforms will be limited unless rural infrastructure—particularly irrigation and water storage systems—is explicitly recognised and accommodated within them.

In its July 2025 submission on the Resource Management Reforms: National Direction Package, IrrigationNZ supported the proposed development of a National Policy Statement for Infrastructure (NPS-I) as a means of providing consistent national direction for infrastructure planning, consenting, and development. Ensuring that both existing and new infrastructure is clearly recognised, enabled, and managed under a coherent framework is essential—particularly where such infrastructure intersects with productive land use, freshwater outcomes, and climate resilience objectives.

We noted above our concerns that water capture, storage, and distribution infrastructure—particularly when developed for irrigation—was excluded from the proposed definition of "long-lived infrastructure." This exclusion is at odds with how irrigation storage infrastructure is defined under various legislative or regulatory documents, where other water systems have been variously recognised as critical, lifeline and/or regionally significant.

While the question of definition remains important, our core position is this: **regardless of the final outcome of the Amendment Bill, and the scope of the proposed NPS-I, the Draft National Infrastructure Plan must explicitly include and prioritise water capture, storage, and distribution infrastructure**. This is essential to ensure consistency, enable appropriate consent durations, and support the long-term viability of infrastructure that delivers both private and public good outcomes.

Enabling longer consent durations—particularly for assets that are designed to last 80 to 100 years—is essential for aligning infrastructure horizons with the investment risks borne by the community and institutions supporting them.

8. Drivers of the Primary Sector

The infrastructure demands of the primary sector are evolving rapidly, shaped by a combination of global market dynamics, domestic demographic trends, climate pressures, and workforce constraints. These changes are not on the horizon—they are already reshaping how New Zealand's food and fibre sectors must operate.

Internationally, our consumer base is becoming more urbanised, affluent, and health conscious. There is growing demand for safe, nutritious, high-quality food produced with transparent environmental

credentials. At the same time, changing dietary preferences are creating new market niches, requiring flexibility in land use and the ability to pivot production toward premium, differentiated products. These trends present a significant opportunity for New Zealand's irrigated production systems to respond with agility and innovation. To fully realise that opportunity, however, we require infrastructure that can deliver consistency, scale, and resilience under increasing climate and market volatility.

Domestically, population growth—particularly in urban centres—is placing pressure on land and water resources while intensifying the need for reliable, resilient food supply chains. Yet the sector also faces structural workforce challenges. Many irrigation companies report ageing operational teams, with a significant proportion of staff over the age of 40 and limited visibility of new entrants. On-farm, the average age of farmers continues to rise, with succession planning often unclear or absent. This constrains the capacity for innovation and places a greater reliance on automation and technology to sustain performance. Few people entering the workforce currently see long-term, skilled career pathways in the irrigation or rural water sectors—a challenge exacerbated by fragmented vocational training systems and the under-recognition of these roles in national workforce strategies.

These combined factors—shifting global demand, urban growth, evolving consumer expectations, and domestic capability constraints—point to a clear need for a forward-looking infrastructure strategy that integrates water availability, land-use flexibility, workforce development, and economic resilience.

At the same time, climate resilience is becoming an increasingly central concern—not only in relation to flood events, but also with respect to prolonged droughts, heat stress on crops, and the long-term variability of water availability. The interaction between water security, food production, and rural viability is no longer a future concern—it is a pressing and growing challenge. Irrigation systems already serve a dual role: they stabilise production during increasingly erratic growing seasons and help mitigate the economic impacts of climate-induced yield volatility.

Looking ahead, the sector must adapt to new crop profiles, altered seasonal growth patterns, and rising expectations for environmental performance. Water storage will become more critical than ever—not only for drought resilience, but for its incidental capacity to buffer flood flows in certain catchments, support fire suppression, and maintain environmental flows.

To meet these needs, infrastructure must not only be robust but inherently adaptive. The Draft Plan's proposal of a 30-year strategic planning horizon, supported by rolling five-year reviews, is well suited to irrigation and rural water infrastructure. Rather than locking in rigid assumptions, it offers a framework for ongoing, evidence-based decision-making—responsive to climate feedback, emerging land-use demands, and evolving community expectations.

A key enabler of this adaptability is access to reliable, high-quality data. Many irrigation schemes—particularly smaller, farmer-governed entities—lack the technical capacity and systems needed to collect, manage, and analyse environmental and asset-level data. This limits their ability to undertake robust performance assessments, assess climate risks, or make confident investment decisions. Improved access to high-resolution climate projections, hydrological models, and land use datasets is essential for building resilience at both scheme and catchment levels. National leadership is needed to improve data interoperability, standardise key infrastructure datasets, and support the development of accessible decision-support tools that can be used by schemes of all sizes.

We see strong alignment between the objectives of the Draft National Infrastructure Plan and those of the National Adaptation Plan (MfE, 2022), particularly in recognising the critical role of climate-resilient water infrastructure in supporting land use transitions, rural economic security, and community well-being. Integrating the infrastructure planning direction of Te Waihanga with the climate adaptation priorities of MfE would enable a more coherent national approach to long-term resilience—particularly in rural and water-dependent regions.

Finally, irrigation infrastructure must be recognised not only as an enabler of land productivity, but as a vital component of New Zealand's export infrastructure system. The reliability, timing, and quality of irrigated production influence the flow of goods into national and international markets. Irrigation supports high-value, export-oriented production that underpins regional economies and contributes to New Zealand's global competitiveness. Its integration with broader trade and port infrastructure is essential for maintaining supply chain resilience, responding to global market signals, and managing shocks—from biosecurity disruptions to extreme weather events. Infrastructure planning must reflect these interdependencies and ensure rural production systems are supported as critical components of our national infrastructure landscape.

9. Asset Management Versus New Build

The irrigation sector has a dual asset profile. On one hand, there are long-established schemes—some originating as far back as the 1930s—that deliver water through open-race or gravity-fed canal systems. These assets are mature and, in many cases, operate with somewhat variable efficiency due to decades of incremental upgrades and hands-on problem-solving. However, many are now reaching the end of their original design lives and lack formal asset depreciation or renewal planning processes. Significant reinvestment and modernisation will be required to maintain service levels and ensure compliance with evolving environmental and safety standards.

On the other hand, newer schemes—or those that have undergone recent upgrades—often incorporate improved flexibility, energy efficiency, and real-time performance monitoring. However, these modern systems come with significantly higher capital costs and more complex operational requirements. Making effective investment decisions—whether to refurbish, replace, or redesign—requires accurate asset data, performance tracking, and the ability to evaluate trade-offs between long-term cost and benefit. Many small- to medium-sized schemes—particularly those governed by farmer cooperatives—would benefit significantly from access to external technical and financial expertise to support robust asset analysis and investment decision-making.

This is where the role of national leadership, guidance, and capability support becomes critical. Te Waihanga's 2024 report *Taking Care of Tomorrow Today* made a valuable contribution by highlighting the gap between operational reliability and formal asset maturity in sectors like irrigation. Building on that insight, we support the development of a tailored irrigation asset management framework, but co-designed with the sector. This could include templated tools, performance-linked investment pathways, and flexible models that reflect the mixed-use nature of many schemes—particularly where infrastructure serves both private and public interests.

As irrigation schemes increasingly deliver services beyond the farm gate, asset management systems must evolve to reflect *hybrid* ownership and accountability structures. Such an approach would give confidence that merging private and public asset management practices can improve outcomes for

both, supporting better performance, investment transparency, and shared responsibility. At the same time, care must be taken to avoid imposing full statutory reporting requirements on small, privately governed entities, where the compliance burden could outweigh the benefits of a shared approach.

10. Workforce Capability

Workforce availability and capability are growing concerns across the infrastructure sector, and irrigation is no exception. The sector relies on technicians skilled in pump and pipeline systems, telemetry, automation, environmental compliance, civil engineering, and performance evaluation. These roles are in increasing demand, yet they remain largely invisible within national workforce strategies and are poorly supported by existing vocational training frameworks. As a result, few people—particularly younger workers—see viable, long-term career pathways or formal qualification opportunities within the irrigation or rural water infrastructure sectors.

There is a significant opportunity to strengthen rural employment and resilience by focusing on capability-building through infrastructure performance. Upskilling asset owners, operators, and technicians to maintain, manage, and upgrade their systems not only enhances service delivery, but also boosts local economic participation and builds long-term regional resilience.

We support targeted investment in micro-credentials, modular qualifications, and flexible training models tailored to the irrigation and rural water infrastructure sector. These should recognise existing on-the-job experience, provide clear progression pathways from technical roles to governance, and encourage stronger integration between asset management, infrastructure planning, and regulatory monitoring. In addition, public sector secondments into irrigation schemes—particularly in areas such as asset planning and climate adaptation—could provide valuable opportunities for cross-sector learning, trust-building, and practical alignment between policy and operations.

11. Conclusion and Final Recommendations

The Draft National Infrastructure Plan represents a welcome opportunity to bring greater coherence, foresight, and resilience to New Zealand's infrastructure system. We commend Te Waihanga for acknowledging systemic inefficiencies and for promoting risk-based, adaptive planning approaches that look out over a 30-year horizon. These frameworks are particularly well suited to the irrigation sector, which faces long investment cycles, high upfront capital costs, and fast-evolving climate and regulatory risks.

To ensure the Plan fully supports national outcomes, we make the following recommendations:

1. **Explicitly recognise rural water infrastructure—including irrigation systems—as infrastructure that is strategically important**
   This includes capture, storage, and distribution infrastructure that supports food production, biodiversity, fire resilience, and drinking water.
2. **Ensure terminology alignment between the Plan, Resource Management reform and other definitions**
   Particularly through determining a consistent definition of "long-lived infrastructure" across all

Acts and regulatory tools, and the full inclusion of water storage and irrigation systems within spatial planning, the proposed NPS-I, and consenting frameworks.

3. **Support development of an irrigation-specific asset management framework**
   Co-designed with industry, this should include investment pathways, performance monitoring tools, and governance models that reflect mixed-use, public–private ownership.
4. **Prioritise a national water storage strategy**
   That reflects all scales of storage—from on-farm ponds to large regional schemes—and integrates catchment-wide planning for climate adaptation and water security.
5. **Invest in rural workforce capability and career pathways**
   Through micro-credentials, vocational education reform, and greater visibility of water infrastructure roles in national workforce strategies.
6. **Encourage cross-sector collaboration and secondments**
   To build trust, improve regulatory understanding, and integrate infrastructure planning with environmental outcomes and regional development goals.

We appreciate the constructive and forward-looking approach of the Te Waihanga team. We are committed to working in partnership to improve national infrastructure planning and investment and ensure New Zealand's future infrastructure systems are robust, adaptable, and inclusive of all sectors contributing to national well-being.

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Irrigation New Zealand Inc.

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