

The Treasury

Submissions on a New Independent Infrastructure Body Information Release

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26 October 2018

Infrastructure Body Consultation

The Treasury

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By email to: infrastructure@treasury.govt.nz

A New Independent Infrastructure Body

Submission from the New Zealand Lifelines (Utilities) Council

We would like to make this submission on the Consultation Document "A New Independent Infrastructure Body" issued by New Zealand Treasury and dated October 2018.

Please note that the New Zealand Lifelines Council consists of a range of organisations. Not all of these organisations are fully supportive of this submission and it is understood that where this is the case they will engage directly with The Treasury.

Executive Summary

The New Zealand Lifelines Council:

- Supports the establishment of an Independent Infrastructure Body – infrastructure definitely needs a "voice"
- An "Autonomous Crown Entity" appears to be the most appropriate structural status
- When approximately 70% of local authority expenditure is related to infrastructure, and the private sector play a significant role in infrastructure services including demand, the proposed functions deserve substantial realignment
- Opportunities to substantially enhance the effectiveness of the Independent Infrastructure Body include:
 - o For the most part, the currently Proposed Functions appear to be an extension of existing activities. The Body is not positioned for true success – it lacks the scope, resources and foresight to deliver impact more immediately
 - o The currently Proposed Functions appear to be most focused on new capital infrastructure investments, whereas most infrastructure we will ever deal with already exists (bring existing infrastructure to the picture more strongly and take a holistic view)
 - o Should give more consideration to the substantial infrastructure expenditure by parties at least arms-length from central government. The alignment of their activities with the nation's interests is critical.

- Should recognise that the infrastructure service is more important than the assets deployed and that this service will be increasingly delivered by distributed household, building and clustered means (micro networks have the potential to deliver increased resilience).
- Should give due consideration to the substantial, and immediate, risks and opportunities in recognising that the inter-dependencies between infrastructure types and inter-dependencies of infrastructure with communities are now critical
- Should address the “missing middle”, the gap between policy setting and real-time construction, quality control and operations of infrastructure – this is coordination across infrastructure to achieve significant national improvements in efficiency and effectiveness
- Should consider government priorities across the full spectrum:
 - Budget 2019: Focus on wellbeing
 - National Disaster Resilience Strategy
 - National risk
 - Low carbon
 - Climate adaptation
 - Supporting business
 - “joined-up” government
- Should consider the end-user perspective including the service delivered and supply chain (for example, substantial issues exist with pipes and wires connecting networks to residences and buildings, “the laterals” at the end of the chain)
- Should take the opportunity to address the lack of “joined up government” across infrastructure with; continued dispersed legislative or regulatory responsibilities across DIA for the three waters, MBIE for energy and telecommunications, MHUD for urban development, MfE for land use planning, MCDEM for emergency management, MoT for transport, and EECA for energy efficiency
- Should consider the interface and potential opportunities between this Body, local government, and all-of-government coordination in respect to recovery in the built environment (rebuilding and repairing) following an emergency
- Should articulate if there is interface and engagement between this body and the community
- Should articulate an understanding of the complexity of the current infrastructure arrangements and the space it proposes to fill
- Just as funding is already being deployed to extending the current responsibilities to the Interim Infrastructure Transitions Unit (interim ITU), similar funding could immediately be applied to well overdue investments in improving co-ordination across infrastructure.

In brief, the proposed new Independent Infrastructure Agency needs to be positioned for impact and success, with appropriate resourcing and mandate. It is not yet in that state.

The views expressed in this letter are not necessarily those of individual organisations.

The New Zealand Lifelines (Utilities) Council

The New Zealand Lifelines (Utilities) Council (the "Council") brings together key national utilities (Transpower, Spark, New Zealand Transport Agency, KiwiRail, Vector, First Gas and Water NZ), along with other organisations with an active interest in promoting infrastructure resilience (Ministry of Civil Defence & Emergency Management, the Earthquake Commission, the Ministry of Business Innovation and Employment and GNS Science). This Council is particularly conscious of the dependence of social infrastructure and the community on infrastructure, consistent with the broader objective of developing more resilient communities and The Treasury Living Standards framework. The Council works to support regional lifelines activities, assist national lifelines utilities in their resilience work and is a connector with relevant government agencies in their resilience activities.

Lifeline Utilities have status and obligations under section 60 of the Civil Defence Emergency Management Act 2002, including the ability to function to the fullest possible extent (this may be at a reduced level), during and following an emergency. They also have responsibilities in the National Civil Defence Emergency Management Plan 2015 across the 4Rs (reduction, readiness, response, and recovery), including on building operational resilience, developing business continuity plans, response planning, and exercising.

The New Zealand Lifelines (Utilities) Council is one of the few entities that have active insight and engagement across all sectors of energy, transport, telecommunications and water. We annually hold a National Lifelines Utilities Forum, this year attended by around 200 delegates and presenters across a broad range of infrastructure service providers, end-users and researchers. We actively ensure this Forum does not present a financial barrier to participation.

This Submission

The New Zealand Lifelines Council would like to highlight through this submission:

- The currently Proposed Functions appear little different to the capacity and capability that has existed across current arrangements for close to a decade
- Most evidence already exists to support Functions with greater ambition than currently proposed
- There is an apparent focus on new investment rather than improved management of existing infrastructure – both need to be considered to reach optimum outcomes for New Zealand.
- There is an assumption that the physical assets are the most important in delivering efficiencies and effectiveness of infrastructure services. The interdependencies between infrastructure services are now critical
- There is an assumption the sector can "organise itself", but dispersed leadership and commercial objectives are not necessarily conducive to that
- There is no acknowledgement of the "missing middle" (explained below), and in delivery of community outcomes
- Funding for deployment, maintenance and monitoring beyond self-resourcing is a necessity
- A huge opportunity is being missed to meet the needs of the National Disaster Resilience Strategy, the likely risks to be identified by the National Risk Unit and to future think opportunities for improving productivity, efficiency and effectiveness across the built

environment (Reference: Built Environment Leaders Forum Summary of Findings 2017; EQC, MBIE, BRANZ)

The Consultation Document and accompanying cabinet papers have been referred to in preparing this submission.

The New Zealand Lifelines Council considers that the *resilience of infrastructure, including financial and physical outcomes*, be specifically included as a key function and that funding be applied to this.

Context

The New Zealand Lifelines Council's comments contained in this submission are largely based on work with infrastructure service providers, researchers and government agencies, leveraging vulnerability work together with the ground breaking, first ever, "New Zealand Lifelines Infrastructure Vulnerability Assessment: Stage 1 (New Zealand Lifelines Council, September 2017).

The vulnerability of New Zealand's economy, environment and society to adverse events has been well-established through actual events, hazard studies and national simulation exercises. While this work has focused in the main on natural disasters, crises can also develop from equipment failures and malicious intent.

The interconnectivity of all infrastructures now means that the potential for cascading effects of the failure of one sector across other infrastructure sectors is high.

The New Zealand Lifelines (Utilities) Council recognises that many of the infrastructure sectors risks, vulnerabilities and opportunities can be addressed through enhanced "business as usual" capacities and capabilities. New Zealand is currently lacking in mechanisms to mobilise these.

Infrastructure – how is it defined?

In the 15 May 2018 "Briefing for GOV", infrastructure is defined as "..the fixed, long-lived structures that facilitate the production of goods and services and underpin many aspects of quality of life. Infrastructure is made up of physical networks, principally transport, water, energy, communications and social assets." Interestingly by the Cabinet Paper dated 13 August, this has matured slightly to "..Infrastructure includes buildings and physical networks, principally transport, water, energy, social assets and digital infrastructure such as mobile and broadband infrastructure." Comments to be made are:

- Buildings (vertical infrastructure) and (horizontal) infrastructure are indelibly inter-connected and increasingly so as new technologies bring, for example, more communications and vehicle recharging into buildings and also communications assets are often reliant on buildings
- There is no recognised interaction in the documents with the Building System Performance Branch within MBIE either in engagement or consultation
- An external observation is that the Building System Performance Branch within MBIE, though critical to infrastructure delivery, has been progressively withdrawing the ability to engage beyond policy setting

- Returning to the definition of infrastructure, despite mentioning “underpinning quality of life”, there is no mention of it actually being the delivery of services that is most important rather than the physical assets themselves
- In delivering services, the service can actually be delivered in multiple ways, and could be distributed to the extent, for example, of solar battery configurations, or “water bladders” in times of emergency
- In referring to “service”, this automatically is inclusive of quality, timeliness and quantity, for example including matters such as Havelock North’s water quality
- Service delivery is most often dependent on contractors and sub-contractors, and opportunities exist to substantially improve contractor and engagement contracts to deliver broader cross infrastructure evidence and improved outcomes
- Flooding is a significant hazard and stopbanks represent a substantial vulnerability nationally – they have little oversight or national consistency in approach (for example Edgecumbe). Should stopbanks be included?
- There is no doubt that infrastructure services should be underpinned by good data and evidence in order to make good end-user oriented decisions – should the user data be included in “infrastructure”?
- Should geospatial data/information be considered as “nationally significant infrastructure”?

The definition of “Infrastructure” needs refinement to reflect the current and future state characteristic as well as other high level ambitions of government.

Independent Infrastructure Body (fully supported)

The proposal as reflected in Ministerial papers and the Consultation Document includes the **high level initiatives of “Independent Infrastructure Body” and additional resourcing – these are fully supported largely on the basis that infrastructure needs a “voice”**.

With reference to additional resourcing, the ~35 FTE’s assumed very much resembles the initial intent when establishing the Canterbury Earthquake Recovery Authority. With reference to a subsequent Office of Auditor General report “When CERA was established in March 2011, it was forecast to require 55 FTEs in total, including administrative and support services staff. In June 2013, CERA had 233 FTEs, and by June 2015 there were 331 FTEs.” External resourcing and advisors could be engaged to meet these requirements but would need funding.

Proposed Functions (require significant realignment)

The above discussion is not to suggest the same growth will happen but scale up should be envisaged based on the following reflections on Proposed Functions (as in the Consultation Document) and the following propositions as to what should be prioritised:

Proposed Function 1 – Assess the condition of New Zealand’s Infrastructure Assets

Refer National Infrastructure Plan 2010

Proposed Function 2 – Develop a shared understanding of New Zealand’s long-term infrastructure strategy

Refer Infrastructure Plans 2011, and 2015

Priority Function 3 – Identify New Zealand’s Priority Infrastructure Needs

This appears to remain focused on new capital investment with no recognition of well-being outcomes and that non-physical solutions may in fact deliver better outcomes faster. These could include improved governance and leadership or organisational resilience or addressing of systemic issues across provision of infrastructure services. Improved resilience and damage mitigation strategies could also be part of this. Existing infrastructure and understanding the quality of it and the services delivered is critical.

Proposed Function 4 – Identify and publicly comment on the barriers to delivering good infrastructure outcomes

This is a new mandate and is highly supported. The infrastructure system currently does not have a “voice”.

Proposed Function 5 – Publish Long-Term Capital Intentions

Refer Infrastructure Evidence Base, Ten-Year Capital Intentions Plan 21 October 2016

Proposed Function 6 – Act as a shop front for the market and publish a pipeline of infrastructure projects

Refer Infrastructure Evidence Base, Ten-Year Capital Intentions Plan 21 October 2016

Proposed Function 7 – Provide best practice guidance on infrastructure procurement and delivery

Refer existing New Zealand Government Procurement and Property, MBIE

Refer existing IMAP (Investment Performance and Asset Management) team within Treasury.

Could be extended to more specifically leverage learnings from NZTA, Defence, Education, and elsewhere to better target infrastructure provision and operation.

Needs to address contractual risk and long term liability aspects, as well as risk more generally. There are opportunities to impose greater requirements on BIM methodologies and delivery of “as-builts” to add to the evidence base over time.

Proposed Function 8 – Provide project procurement and delivery support

Presumably helps support smaller local authorities and includes securing land, consenting, design, construction and operation?

In large part most of the Proposed Functions have been undertaken for close to a decade.

“Missing Middle” (Refer Attachment 1)

The “missing middle” refers to the substantial and widening gap between policy settings and ability to implement as well as the lack of coordinating capacity and capability to materialise substantial efficiency and effectiveness gains in the sector. Implementation and coordination is generally not funded and supported. The evidence base has been rapidly expanding to demonstrate this point.

The following projects and initiatives have effectively stalled, or are progressing with difficulty, due to no central party willing to support, champion and lead them (more detail in Attachment 1):

- Metadata Standards
- National Forward Works Viewer
- ENGAGE, infrastructure recovery following events
- Stopbanks Inventory
- Smart Cities
- Systemic Threat Assessment
- New Zealand Geotech Database
- Inconsistent standards across Local Authorities
- Rainfall/Runoff Guidelines
- District and Regional Planning processes (infrastructure participation)
- Geospatial

The evidence is overwhelming. There is no capability and capacity to implement improved delivery and therefore outcomes across the built environment in New Zealand.

The Rockefeller Foundation and the 100 Resilient Cities initiative (which both Christchurch and Wellington are part of) offer strong guidance on best practice through the “City Resilience Framework”:

Item 10 Effective leadership and management

Involving government, business and civil society, and indicated by trusted individuals; multi-stakeholder consultation; and evidence-based decision-making.

Item 11 Empowered stakeholders

Indicated by education for all, and access to up-to-date information and knowledge to enable people and organisations to take appropriate action.

12. Integrated development planning

Indicated by the pressure of a city vision; and integrated development strategy; and plans that are regularly reviewed and updated by cross-departmental working groups.

It is highly recommended that further reference be made to this work, including the specific Infrastructure and Environment provisions of “Reduced exposure and fragility”, “Effective provision of critical services” and “Reliable mobility and communications”.

Risk Management

There are very real economic impacts of infrastructure failures whether from natural hazard events or other causes. The evidence is clear with the:

- Wellington Resilience Project
- Assessment of economic effects following the Kaikoura event
- Assessment of economic effects of a moderate size volcanic eruption in the Auckland Volcanic Field (needs updating)
- AF8 (Alpine Fault Magnitude 8) project
- Numerous others

Investment and support for regional infrastructure vulnerability studies should be “in scope” to help inform infrastructure investment priorities over time. This must cover both private and public sector investment, and be across all utilities.

Vision

The concept of the New Infrastructure Body is supported but it currently lacks a 2020-2050 reflection of what infrastructure service embodies, and end-user requirements.

It needs to appreciate the substantive changes coming from new technologies and the rapidly changing business models that some utility providers such as electricity distributors are considering. Interdependency across our entire infrastructure including with banking, finance, insurance, and consumer goods are critical as New Zealand advances forward.

Visionary efforts like the Built Environment Leaders Forum 2017, the Industry Transformation Agenda led by BRANZ and the Building Innovation Partnership, funded by industry and MBIE Science Investments, enable cohesive built environment thinking that delivers positive Living Standards outcomes.

There is a need to ensure that infrastructure developments contribute towards reducing vulnerabilities, increasing resilience and managing risks.

Response to Questions

Overall – what do you think?

The independent infrastructure body ***must be at least arms length*** and not under the wing of any particular central government agency or Local Government New Zealand. It could be an Autonomous Crown Entity (ACE) including Strategy & Planning as well as Transactions Unit. At times it may need the clout of Ministers at least as a threat to achieve outcomes.

It ***must have scale and scalability***. It must have capacity and capability to deliver a real presence and voice in the New Zealand Infrastructure System and service delivery for positive human, social, financial, environmental and cultural outcomes.

It ***must have deployable funding*** beyond self-resourcing and ***be empowered***.

Possible Functions – what do you think?

The functions promulgated in the Discussion Document are all required but are remarkably similar to existing capabilities and past deliverables.

They ***lack ambition, vision and appreciation*** of what is happening systemically with existing infrastructure services. There is a permeating flavour related to big new capital investments when in fact most of our infrastructure we will ever have exists already and immediate opportunities exist for improved efficiencies and effectiveness of services.

Summary

The New Zealand Lifelines (Utilities) Council supports the establishment of the Independent Infrastructure Body but believe the current proposal is neither well co-aligned with need nor articulates what gap it proposes to fill alongside current regulatory and legislative agencies.

We would appreciate the opportunity to meet with you to brief you in more detail on matters we believe should be addressed and immediate opportunities to improve productivity and outcomes.

Yours sincerely,

[1]

Roger Fairclough

Chair

New Zealand Lifelines (Utilities) Council

[1]

ATTACHMENT 1

"Missing Middle"

The "missing middle" refers to the substantial and widening gap between policy settings and ability to implement. Implementation is generally not funded and supported. The evidence base has been rapidly expanding to demonstrate this point:

- Metadata Standards
 - o The ambition is cross sector common metadata standards including road systems, buildings and three waters. This presents significant opportunities to build infrastructure information and common understanding to deliver an improved evidence base.
 - o Development initially recognised and supported by Land Information New Zealand and now struggling to find support
- National Forward Works Viewer
 - o Developed through the Canterbury Earthquake recovery phase to co-ordinate cross utility reinstatement of services (essentially prevent roads being dug up more than once")
 - o Highly applicable nationally and in "business as usual". Overall efficiency, effectiveness and community benefits.
 - o Struggling to find support.
- ENGAGE
 - o Capability to be prepared for and immediately scale up systems and processes to effect recovery following events
 - o Concept at this stage requiring more work to identify and explain the gap to fill and the how it would fit with existing local government/central government arrangements
 - o Potential to apply in "business as usual" across Councils and elsewhere
 - o As ENGAGE is maturing through a stage gate process from concept definition, confirmation of value proposition, to development of key features, it would need financial support
- Stopbanks Inventory
 - o Until recently New Zealand had no inventory of stopbanks
 - o Researchers recognised the need and an inventory now exists
 - o There is no body at this stage standing up to maintain and leverage the value from this priceless initiative
- Smart Cities
 - o Potential for delivering an improved built environment for improved well-being
 - o Initiative across Auckland, Christchurch and Wellington started demonstrating value but on-going funding and support missing
- Systematic Threat Assessment
 - o There is some work on this in the "New Zealand Lifelines Infrastructure Vulnerability Assessment: Stage 1 September 2017" document but at a generic high level
 - o While there is talk of "cascading" and "compounding" risks, these concepts lack real examples or scenarios

- The OECD are very big now on what they call hybrid threats and lack of redundancy in networks
- New Zealand Geotech Database
 - Developed following the Canterbury Earthquakes and being extended throughout New Zealand
 - Relies on collaborative model and recognised value from sharing information
 - Business case fully developed and currently managed by MBIE and EQC. Has been an on-going struggle to maintain small investment.
 - Value proposition extends nationally particularly as water resources become an increasing issue.
- Inconsistent standards across Local Authorities
 - Many infrastructure contractors, consultants, owners and operators work across local authority boundaries.
 - Different systems and processes and contract conditions and resource consent requirements are applied
 - Most contractors complain about these issues
 - To emphasise the point KiwiRail must paint bridges in one local authority but not in the next
 - No effort is being applied to address this
- Rainfall/Runoff Guidelines
 - New Zealand had the opportunity to leverage A\$50million of investment by Australian agencies, and at costs around NZ\$1million deliver rainfall/runoff guidelines for New Zealand.
 - Despite numerous approaches to different central agencies no support could be carolled to fund the initiative
 - These guidelines will be crucial to achieve national consistency and prepare in advance for climate changes.
- District and Regional Planning
 - For infrastructure owners and operators, \$10's of millions of dollars are being spent annually retaining infrastructure capability in each council's District Planning processes with substantial duplication, inconsistent outcomes, lack of central support and lack of coordination
 - Inability to address systemic inconsistencies across the planning environment
- Geospatial
 - Geospatial opportunities abound to improve effectiveness and efficiencies across infrastructure and delivery of services
 - In the emergency management area funds are being deployed to create a "Common Operating Picture" with little ability for a coordinated cross infrastructure view on how business as usual capabilities could be integrated with emergency management needs.
- Others?