Infrastructure New Zealand

Infrastructure New Zealand Position Paper: ***Climate Resilient Infrastructure***

Current problem

New Zealand's infrastructure is susceptible to the effects of climate change

Our existing infrastructure is no longer fit for purpose. The impacts of recent weather events have exposed the fact that the majority of New Zealand's infrastructure is old and ageing and is ill-equipped to handle New Zealand's changing climate and more frequent extreme weather events. Most of the infrastructure in our cities, and that making up our critical lifeline connections, was constructed to handle the more benign weather conditions and volumes of rain that exist fifty or more years ago. It is evident that extreme weather events, once considered a one-in-one-hundred-year or more occurrence, will now continue to strike with greater frequency and ferocity.

Climate mitigation action is still key

Addressing the risk of climate change effects, also means we need to continue with our efforts to mitigate climate change by reducing our carbon emissions and achieving the targets that New Zealand has signed up to. Actions in our first Emission Reduction Plan (ERP) need to be supported and fully funded. Critical monitoring and reporting of the ERP's implementation progress needs to be considered as part of the development of the second ERP and ERP actions need to be fully funded and prioritised as we head into the critical second emissions budget period.

Infrastructure New Zealand's Position

We need to plan for and fund actions to address our climate-related infrastructure risk

New Zealand was already ranked by Lloyd's of London as second only to Bangladesh for its vulnerability to natural hazards in terms of average annual losses in relation to the size of the economy. The impact of climate change is exacerbating these existing vulnerabilities. Planning and building new infrastructure must now be done with climate resilience and sustainable development front of mind.

New Zealand also needs to take a proactive risk management approach to our existing infrastructure networks and facilities also by assessing the risk of climate-related flooding, slips, erosion, and coastal inundation. Based on these assessments, sector plans need to be developed (where they do not already exist) and a long-term funding plan to build more resilience into our infrastructure needs to start now. Opportunities to leverage private funding and financing options should be provided for too. This challenge to too big for the government to undertake by itself.

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We need to build back better and design infrastructure with climate change and sustainability as the top priority. Planned renewals and upgrades programmes need to incorporate climate resilient design and increase system capacity to deal with higher volumes of drainage water. We also need to incorporate greener, more permeable environments with porous surfaces in our urban areas. This may include, for instance, using designs like grass swales that manage water runoff, filter pollutants, and increase rainwater infiltration.

We need the right legislation and organisations in place

We also need to have an honest conversation about building residential housing, business, and public infrastructure in areas that are at risk of extreme weather now and in the future. There are existing settlements where weather could compromise transport and infrastructure connectivity in the long term. Constructing new developments and infrastructure with climate change-friendly design will often be easier than retrofitting ageing infrastructure in existing communities. Relocation of some critical infrastructure links or facilities and some communities may be required.

New Zealand needs legislative provisions to enable communities to address the complex issues associated with climate change and managed retreat. We urgently need the Climate Adaptation legislation to provide the foundations for us to change our planning policies to match today's weather patterns, or we put the future of our communities at risk. A framework to address the inevitable funding question is a key component of this.

There also needs to be clear accountability and oversight by government to assist with future recoveries and rebuilds, particularly given the ongoing nature of climate-related events and the geographic spread of these. The systems established to facilitate, and fund recover efforts, and the lessons learnt need to be harnessed and we need to ensure they contribute to future recovery efforts. Our current emergency works budget provided through the National Land Transport Fund will also need to increase significantly to keep up with the rising frequency of these climate change related events.

Key Recommendations

- The Government needs to commit to fully fund New Zealand's Emission Reduction Plans
- Develop infrastructure resilience plans for all sector plans and established funding for these, including private funding opportunities
- Government should progress Climate Adaption legislation as soon as possible to enable communities to address the complex issues associated with managed retreat
- Establish a new central government organisation to oversee climate change event recovery and rebuilds and ensure there is ongoing adequately funding available