

ICNZ's submission on Wellington City Council's public consultation on Planning for Growth

Summary of submission

The Insurance Council of New Zealand (**ICNZ**) is taking this opportunity to submit on the Wellington City Council's public consultation on Planning for Growth. We commend the Council on taking a long view, planning out over several decades and welcome the primary focus on ensuring the built environment is resilient and based on good design.

By way of background, ICNZ represents general insurance and reinsurance companies in New Zealand, that is, we do not represent Life or Health insurers. ICNZ's members collectively write more than 95 percent of all general insurance in New Zealand and protect about \$1 trillion of New Zealanders' assets and liabilities.

Our focus

Our focus in this submission is on natural hazard risks facing Wellington City arising from seismic and climate change impacts. Insurers play many beneficial roles for society. The primary one is to accept the transfer of risk, which in turn supports social and economic activity. So, indirectly by accepting risks, insurance also supports a vibrant and prosperous City. To enable insurance to carry out these important roles, it is critical that risk is managed well. It is fair to say that ICNZ and its members have been seeing the impacts of natural hazard risks and how this affects people, businesses and communities for some time. We also have a keen interest given our knowledge and experience when it comes to identifying and engaging with these risks and risk management, because of the role insurance plays in this context, and our desire to ensure this remains available and affordable (including to support lending).

The importance of risk management

Best practice risk management operates under a widely accepted framework of four ways of treating it. Risks are either *avoided*, *controlled*, *transferred* or *accepted*. *Avoidance* is typically deployed where the frequency or consequences of hazard events makes alternative solutions for managing risk uneconomic. *Control* is applied where there are practical and cost-effective ways of mitigating the impact of a hazard. *Transfer* of the residual risk is typically priced and transferred to insurers who may in turn spread the risk further, where it is large, to global reinsurance markets. Some risk is simply *accepted* where the hazard events are either too frequent or too rare to price efficiently or treat by other means.¹ Further details about the principles of risk management are outlined below.

To treat risks it is essential to understand them through best science knowledge and experience.

¹ Wellington City Council's Mayor's Insurance Taskforce 2019

At the simplest level, for instance, we know that it is not a matter of if, but when, a major earthquake will strike Wellington and cause major damage. This could be triggered by a relatively remote event, such as occurred with the Kaikōura earthquake on 14 November 2016 when well over \$1 billion of insured losses occurred in the city. Alternatively, it could be triggered by any of the major fault lines that crisscross the Wellington region, including the Wellington fault line. Or it could result from a rupture at the northern end of the Alpine fault or in the Hikurangi trench, both of which are capable of unleashing earthquakes in excess of M8.0.

Being careful of where we build

As you know, the Wellington City Council estimates that over the next 30 years, the capital will need to make room for 50,000 to 80,000 more people.² This will have a big impact on where and how people live, with more people expected to living in larger apartment buildings and buildings constructed on land that may not currently be deemed suitable. In working through these matters, careful consideration needs to be given to where these new and larger buildings will be located.

Experience from the Canterbury earthquakes of 2010-12, showed that the liquefaction of soft soils could create extensive damage to buildings. Indeed, decisions were taken to red zone the most vulnerable areas to *avoid* future risks and prohibit building construction on that land. We note that much of the Wellington CBD is constructed on reclaimed land which is subject to liquefaction. The sea level rise associated with climate change exacerbates this issue.³

Experience from Canterbury also provided insights about the challenges posed after an event with properties located on hillsides. Wellington has many more properties on hillsides than Christchurch. Some of the issues that present include the risk of hill-slide slips caused by the earthquake posing safety risks to undamaged structures requiring their evacuation. Insurance responds to physical damage to property. Delays in reinstating uninsured or underinsured retaining-walls, some of which may have shared ownership, affect the ability to consent remediation work of properties beneath for safety reasons.

Experience from the Canterbury earthquakes is informative in other ways. For instance, damage in the Christchurch CBD resulted in a decision to prohibit entry to any buildings within the four avenues area for over two and a half years. This affected access to over 1000 structures. This should be factored into how recovery efforts would cope with many thousands of Wellingtonians made homeless in similar circumstances.

Similarly, consideration must be given to avoid development in areas prone to other climate change impacts such as areas vulnerable to flooding, rising sea levels and coastal erosion. Further details about this issue are set out below.

The alternative (allowing development on such vulnerable land to proceed) will result in, at best, costly property repair costs and potentially uneconomic protection measures needing to be put in place or, at worst, lengthy interruption,⁴ emergency responses costs and an eventual managed retreat and/or claims for compensation by property owners which the Wellington City Council (and ultimately its rate

² <https://planningforgrowth.wellington.govt.nz/your-views/consultations/draft-spatial-plan/info-and-privacy-statement>.

³ For example, in Tonkin and Taylor's June 2013 Report to the Wellington City Council on Sea Level Rise Options Analysis on page 8 indicates that "[a] rise in sea level and an associated rise in groundwater level can result in a reduced depth to the top of liquefiable soils. This reduced depth can result in greater surface damage in the event of liquefaction."

⁴ By way of example, as noted above, the Canterbury earthquakes resulted in decision being made to prohibit entry to any buildings within the four avenues area of the Christchurch CBD for over two and a half years, affecting access to over 1000 structures. This should be factored into how recovery efforts would cope with many thousands of Wellingtonians made homeless in similar circumstances.

payers) will have to meet. There may also be insurance and lending availability and affordability issues to consider amongst other things.

Appropriate building standards

Experience from the Kaikōura earthquake shows that multi-storey structures built within the previous decade became constructive total losses,⁵ even though they were constructed in excess of the New Building Standard (**NBS**). To explain, currently seismic performance for buildings is measured through an engineering assessment that compares the building to the NBS, and then rates it accordingly. However, New Zealand building codes that govern new building standards around seismic performance focusses heavily on life safety, rather than the capability of the building to avoid seismic damage (i.e. building resilience).⁶

Insurers price seismic risk for any given building based upon what they perceive is the likely cost of a claim in any given period informed by previous losses and modelling amongst other things.⁷ From an insurance perspective, the NBS rating is not a helpful reference point as it cannot be meaningfully relied upon to inform decision-making about how likely it is that a particular building will suffer a loss.⁸ The NBS rating is also of marginal utility to people looking to buy properties and property owners looking to undertake resiliency improvements.

For these reasons, it is concerning that NBS rating system is often used to market building resiliency and it should come as no surprise that insurers and reinsurers have little confidence in the NBS in assessing building risk and it is not a primary metric used by modelling companies who assess the probable maximum loss from major seismic events to inform reinsurance sale and purchases decisions. This has contributed to insurers limiting their exposure to commercial and some residential property in Wellington, Hawkes Bay, Marlborough and Canterbury. Insurance premiums for earthquake risk in these regions have also increased significantly since 2016 in part due to the uncertainty of future expected losses.

To address these issues New Zealand needs to adopt a new measure of building seismic performance. This measure should provide the building owner with an expected ratio of damage that could be expected from an earthquake event over a 1 in 250-year period.⁹ This measure would also contain the present threshold measures for life safety. As the seismic performance of a building can be heavily influenced by the type of soil the building sits on, the engineer providing an expected seismic damage ratio would also need to factor soil performance in their assessment.

This new measure will enable insurers to make more accurate acceptance and pricing decisions and lead to the current loading applied due to uncertainty being removed. This will enable purchasers and building owners to better understand the risks and make more informed decisions about

⁵ With damage being so significant that it was not worth repairing them.

⁶ Ideally the building must not collapse but the level of damage sustained by it is not considered important in this regard.

⁷ Other factors influencing pricing include competitive forces, global markets (including the reinsurance market), and insurers' risk appetite.

⁸ For completeness, in making this assessment insurers may rely upon geocodes (which are sets of longitude and latitude of a physical address), plotting these on soil maps to inform exactly what type of soil a property is located on. They also rely on information about the date of the building's construction (as an estimation of its structural resilience, reflecting building standards operative at the time), as well as the height of a specific building and the material used in its construction amongst other things. Insurers may also take into consideration the state of adjacent properties too as the collapse of less resilient buildings may affect more resilient ones.

⁹ The expected ratio of damage could be expressed as a percentage against the new replacement cost of that building. For example: 10% Expected Seismic Damage Ratio (10% ESDR). Insurers would in turn treat this as an expected 10% Probable Maximum Loss from an earthquake event over a 1 in 250-year period.

whether to buy and/or the merits of undertaking work to improve resiliency (including the impact of this work on their insurance) and tenants in choosing which properties they occupy.

Non-structural seismic restraints

Experience from earthquakes in Seddon, Canterbury in 2013 and in Kaikōura informed insurers about the widespread damage caused by the failure of non-structural seismic restraints. These are installations that typically support all services including ceiling and partition wall fit-outs that can amount to 70 percent of the buildings overall replacement value. Experience points to widespread non-compliance with construction standards for the installation of these restraints.

Multi-unit buildings

Another Christchurch experience was the challenge of settling insurance claims in multi-unit buildings. Where cross-lease situations existed, delays occurred because individual unit owners all had to agree to any remediation solution which was complicated by having some units uninsured and other units covered under different insurance policies. Today, we are seeing developers of terraced houses with shared walls, foundations and rooves selling property under fee simple arrangements. The rise of these developments, which are not subject to the Unit Titles Act, create issues as there is no clear legal framework regulating long-term maintenance and funding, common property and insurance arrangements and owner decision-making. This effectively recreates the same challenging problem from a recovery perspective. Ideally, multi-unit buildings should be insured by one entity much the same as body corporates are.

Fire following earthquakes

The risk of fire following earthquake is a well-known phenomenon where gas reticulation is throughout a city. It is also noteworthy that insurers have encountered many instances where buildings have been constructed either without compliant passive fire structures or have had changes made some time after construction that lead to non-compliance. So, attention to the installation of fire safety measures and linked to seismic risk must be factored into resilience planning.

These matters need to be addressed in the City's long-term planning

The understandings and lessons learned outlined above need to be incorporated into the City's long-term planning for growth, to ensure buildings are constructed in the right places and to resilient specifications. This is critical to enable seismic risks to be controlled and to a level that will enable the transfer and/or the acceptance of risk to occur in a sustainable way.

It is also worth noting that Geological and Nuclear Science (**GNS**) research institute is currently upgrading its Natural Hazard Seismic Model (**NHSM**). This model has not been substantially upgraded for almost two decades and aspects of the model do not conform to best practice. This model performs several functions including informing building standards and insurance risk assessments. The Council should not make critical long-term planning decisions and resilience requirements until this upgrade is completed, which is expected in 2022.

A similar approach should be taken to climate change risks. In this submission, we identify the risk posed by sea-level rise as projected in a study undertaken by the National Institute of Water and Atmospheric (**NIWA**) research institute. We note the Council itself has developed visual scenarios to illustrate the extent of flooding caused by sea level rise in the decades ahead. Sea level rise will continue unabated for some centuries to come. Insurance provides coverage for unforeseen and accidental events. Sea-level itself is foreseeable, so we do not foresee insurance responding to

damage to property caused by sea-level rise alone. This means that unless this risk is avoided or effectively controlled, there will only remain the option to accept the risk. We suggest that the NIWA projections show that the damage due to sea-level rise will be so frequent later this century that it will be unsustainable to accept the risk.

We also note that sea-level rise raises the water table and increases the risk of flooding as well as liquefaction in higher risk areas. We are also mindful of the number of slips that occurred in Wellington during the winter of 2017 following the November 2016 earthquake. There is some evidence to indicate that these slips may have been caused by the earthquake weakening the soil/rock structure making it particularly vulnerable to heavy rain. So, seismic and climate change issues interact with each other in this respect.

The remainder of this submission

The remainder of this submission provides wider context and evidence of the critical need to ensure a robust resilient framework underpins the planning of Wellington's growth in the decades ahead in respect of climate change.

In terms of climate change, in summary, local government need to take a pro-active, co-ordinated, and long-term view when it comes to managing the real and significant impacts putting their people, businesses and communities at the heart of any decision-making. This includes:

- Well thought out and planned action and investments for adaptation and mitigation - reducing the extent of future climate change and its impacts.
- Grappling with the full impacts of climate change despite the uncertainty, noting that the potential impacts stretch across generations, with the economic, social and environmental impacts being too significant to ignore and only increasing if no action is taken.
- Adopt a holistic and flexible approach when working through these matters, leveraging a risk management framework and an adaptive pathways approach.

Local government is well placed to respond to climate change issues because effective responses in this regard are context specific and best addressed at the regional and local level. Additionally, local government has legal duties to act, doing so ensures resources are efficiently used and bypasses avoidable harm. This also aligns with communities increasing expectations for climate change action and ensures that insurance and lending remains available and affordable.

In our view there are five practical ways local government can advance climate change issues in the near term. These include:

- embracing collaboration and co-ordination on climate change issues within regions
- building specific knowledge about climate change and sharing it with the community and current and prospective property owners
- avoid developments in areas vulnerable to flooding, rising sea levels or coastal erosion, prioritising climate change mitigation and adaptation in planning and investment decisions regarding infrastructure, and
- ensuring buildings are resilient to climate change impacts.

Background on climate change

Climate change is here

Without question the full impacts of climate change is coming to bear around the globe and need to be taken extremely seriously. This includes:

- larger, longer and more extreme weather events occurring leading to increasingly frequent and extreme flooding and storm events including hailstorms, tornadoes and cyclones
- sea levels rising leading to issues with coastal flooding, storm surge and king tides, and
- associated increases in landslips and land erosion.

Climate change has also resulted in the increasing likelihood and severity of droughts, heat waves, water shortages and wildfire. Then there are the pest and health effects associated with higher temperatures.

Climate change responds to cumulative emissions, and unless these are close to zero increases over time, it is clear that the associated temperature increases will lead to the sea rising and that this will continue for centuries to come.¹⁰ The same applies to the impact of emissions on weather patterns and increasingly frequent and extreme weather events.

There is clear international scientific consensus about the cause of climate change and its impact. In their special report on global warming of 1.5 °C, the Intergovernmental Panel on Climate Change (IPCC) highlights that:¹¹

- There is a certain level of climate change already locked into the global climate system due to emissions to date.
- Every extra bit of warming matters, with warming of 1.5°C or higher increasing the risk associated with long-lasting or irreversible changes, such as the loss of ecosystems. Conversely, limiting global warming gives people and ecosystems more room to adapt and remain below relevant risk thresholds.

This report highlights several climate change impacts that could be avoided by limiting global warming to 1.5°C compared to 2°C, or more (noting that damage is not linear, with a 2°C or more increase in temperature being significantly worse than 1.5°C). However, this report indicates that even limiting global warming to 1.5 °C would require:

- Global net human-caused emissions of carbon dioxide (CO₂) to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050, with the remaining emissions needing to be balanced by removing CO₂ from the air.
- "Rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities and that.

The report records that even with 1.5°C of warming, there will be more frequent heatwaves and heavy rainfall events, more intense tropical cyclones, losses of some species, spread of diseases, and issues with water and food security.

¹⁰ Choices made now are critical for the future of our ocean and cryosphere (25 September 2019), <https://www.ipcc.ch/2019/09/25/srocc-press-release/> and Preparing New Zealand for rising seas: Certainty and Uncertainty (November 2015) <https://www.pce.parliament.nz/media/1390/preparing-nz-for-rising-seas-web-small.pdf>.

¹¹ Global Warming of 1.5oC (January 2019), https://www.ipcc.ch/site/assets/uploads/2018/10/SR15_SPM_version_stand_alone_LR.pdf. More than 6,000 scientific references are cited in this report with thousands of experts and government reviewers worldwide contributing to it. The report has ninety-one authors and review editors from 40 countries.

New Zealand has committed to limit global warming to 1.5 °C and the ‘net zero’ emissions by 2050 target as a signatory of the Paris Agreement and then ratifying this.¹² These obligations are, in turn, reflected in the Zero Carbon legislation domestically.¹³ This legislation provides for a centralised adaptation framework with the newly formed Climate Change Commission responsible for preparing a national climate change risk assessment every six years.¹⁴ In response to this assessment, the Government will prepare a national adaptation plan with progress reports being provided every two years.

New Zealand is significantly impacted by climate change

As well as considering climate change as a general phenomenon and New Zealand’s international commitment to emissions reductions, it is also important to reflect on New Zealand’s vulnerability to climate change impacts. As a nation with a very long coastline and a high proportion of urban development in coastal areas,¹⁵ New Zealand is particularly susceptible to sea levels rising, inundation, coastal erosion and other climate change impacts.

According to a Lloyd’s of London study, New Zealand is the second most vulnerable country in the world to natural disaster (behind Bangladesh).¹⁶ In addition to the risks associated with New Zealand being in a high seismic zone (e.g. earthquakes, tsunamis and volcanoes), this is a reflection of the risk of climate change and weather events (particularly flood).

Looking at sea levels rising, a Parliamentary Commissioner Report for the Environment refers to a projected rise of 30 cm between 2015 and 2065.¹⁷ This report also indicates that:

- By 2065 it is expected that today's 1:100 year flood event will occur annually in Wellington and Christchurch, every two years in Dunedin and every four years in Auckland if sea-levels rose by 30cm. A 40cm rise would see these events occur several times a year in Wellington and Christchurch. This will unlikely be much different for rural and provincial coastal areas.
- The estimated replacement value of buildings within 0.5m of the spring high tide mark is \$3 billion (equating to 9,000 homes). Buildings within 1.5m of the spring high tide mark is estimated at \$20 billion.¹⁸

New Zealand’s first national climate change risk assessment records that an estimated 675,500 New Zealanders live in areas already prone to flooding, and that over 72,000 are potentially impacted due to sea levels rising in the future.¹⁹ It also records that nearly 50,000 buildings are currently exposed

¹² The Paris Agreement is the new global agreement on climate change. It was adopted by Parties under the United Nations Framework Convention on Climate Change (UNFCCC) on 12 December 2015. It commits all countries to act on climate change. In addition to the 2050 target, pursuant to this Agreement, New Zealand has also committed to reducing emissions by 30 per cent below 2005 levels, and 11 per cent below 1990 levels, by 2030.

¹³ Climate Change Response (Zero Carbon) Amendment Act 2019.

¹⁴ Details on the first risk assessment published 2 August 2020 are provided below.

¹⁵ Coastal Hazards and Climate Change: A Guidance Manual for Local Government in New Zealand (July 2008), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/coastal-hazards-guide-final.pdf>

¹⁶ A world at risk: Closing the insurance gap (2018), https://www.lloyds.com/~media/files/news-and-insight/risk-insight/2018/underinsurance/lloyds_underinsurance-report_final.pdf

¹⁷ Preparing New Zealand for rising seas: Certainty and Uncertainty (November 2015), <https://www.pce.parliament.nz/media/1390/preparing-nz-for-rising-seas-web-small.pdf>

¹⁸ We expect that this analysis may understate matters somewhat as it does not consider storm surge, king tides, and heavy rainfall, as well as things like the ability of infrastructure such as stormwater drainage systems to respond.

¹⁹ National climate change risk assessment for New Zealand - Main report (2 August 2020), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-main-report.pdf>

to coastal flooding, and at the highest range of warming scenarios, that could rise to nearly 120,000 this century.

Preliminary research shows we could lose 125,600 buildings, at a replacement cost of \$38 billion, if the sea level rose 1m.²⁰

It is important to reflect on the fact that the above research does not provide a full picture of climate change impacts - focussing only on the consequences of sea levels rising. It also does not consider costs associated with local government owned infrastructure (of which up to \$14 billion is estimated to be at risk from sea level rise),²¹ ongoing development and growth,²² broader economic and social impacts (including impacts to people, businesses and communities) and to the natural environment.

Consideration also needs to be given to the fact that New Zealand's current infrastructure is not well positioned to manage the impact of climate change. Specifically, for the most part our aging storm and wastewater networks are only designed to cope with today's 1:10 year event. Much of this is also gravity dependent and vulnerable if running-off in low lying coastal areas. The quality of some of the older infrastructure is also somewhat unknown.

Consistent with this broad view of climate change impacts, New Zealand's first national climate change risk assessment refers to ten major threats in need of urgent action within the next six years falling under five categories:²³

- **The natural environment**, including coastal ecosystems and indigenous ecosystems. Risks here were described as having major consequences.
- **The human domain**, including social cohesion, displacement of communities and the entrenchment and further opening up of inequalities. These were seen as risks with extreme consequences.
- **The economic domain**, including costs associated with disaster relief and long-term changes, and the risk of instability in the financial sector.
- **The built environment**, including infrastructure and buildings being vulnerable to sea level rise and more extreme weather conditions generally – this was described as being an extreme risk.
- **The governance domain**, in respect of which reference was made to “maladaptation” (actions that may lead to increased risk of adverse climate-related outcomes) and the risk that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for adaptation.

The report also highlights the potential cascading nature of climate change impacts. For example, where an extreme weather event impacts a region's potable water supply which in turn negatively impacts the ability to earn income, quality of life and public health.²⁴

²⁰ From the National Institute of Water and Atmospheric Research (NIWA). 125,000 buildings at risk from first metre of sea level rise (21 November 2018), <https://www.newsroom.co.nz/125000-buildings-worth-38bn-at-risk-from-first-1m-sea-level-rise-draft-report>

²¹ \$14 billion of council infrastructure at risk from sea level rise (31 January 2019), <https://www.lgnz.co.nz/news-and-media/2019-media-releases/14-billion-of-council-infrastructure-at-risk-from-sea-level-rise/>

²² The Productivity Commission projects that over the next 30 years have 28 urban areas in New Zealand experiencing population growth of 20% or more and 61 experiencing depopulation, <http://www.chapmantripp.com/publications/building-resilience-to-climate-change-local-government-the-front-line-in-the-climate-change-response>

²³ National climate change risk assessment for New Zealand - Main report (2 August 2020), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-main-report.pdf>.

²⁴ National climate change risk assessment for New Zealand - Main report (2 August 2020), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-main-report.pdf>, Figure 10.

The fact that New Zealand is in a high seismic zone also increases the impact that climate change will have. For example, analysis of pre- and post-earthquake data from the 2010 and 2011 Christchurch earthquakes revealed that seismic shaking, tectonic movements and/or liquefaction associated with these earthquakes led to land surface and waterway deformation and substantial floodplain subsidence.²⁵ In turn, this greatly enhanced the risk posed by floods, storm surges and the sea-level rising. The likelihood and severity of impact of tsunamis also increases as the sea level rises.

Stepping back, and taking the above into account, it should come as no surprise that the cost to New Zealand of climate change is significant and growing. For example, nationwide insured costs of extreme weather events are as follows (noting that this somewhat understates the issue given other climate change related events and uninsured costs are excluded):²⁶

Year	2013	2014	2015	2016	2017	2018	2019	2020	Average
\$m	175	153	115	52	242	226	166	77.6* estimate to-date	161* 2013- 2019

From 2003-2015 insured costs of floods alone averaged \$75m. However, Water NZ estimates that this is about 40% of the total cost (i.e. \$190m per year).²⁷

The Ministry of the Environment have advised that, in the past 10 years, the cost of weather events to our transport network alone has risen from about \$20 million per year to over \$90 million per year. Additionally, they have advised that the 2012-2013 drought in the North Island cost the economy around \$1.5 billion, with climate change only making droughts more likely.²⁸

The role of local government with climate change

ICNZ considers that local government should take a pro-active, co-ordinated and consistent approach to engage with the clear challenges posed with climate change highlighted above. This involves investigating, analysing and managing risk associated with climate change within your region and taking a long-term view.

In practical terms the key principle here is, while we cannot control the forces of nature associated with climate change, we can reduce their impact significantly through well thought out and planned action and investments for mitigation and adaptation. Expanding upon these concepts:

- **Mitigation** involves action to reduce emissions and modify conduct, with a view to reduce the likelihood of further climate change which may have more severe, damaging and costly impacts.
- **Adaptation** involves action to address unavoidable climate change, minimising risk and disruption and strengthening resilience and preparedness in the face of inevitable climate change impacts.

Both matters should have a balanced and equal focus. Failure to sufficiently focus on adaptation could lead to significant economic loss or disruption which in turn could undermine efforts to reduce

²⁵The sinking city: Earthquakes increase flood hazard in Christchurch, New Zealand (April 2015), <https://www.geosociety.org/gsatoday/archive/25/3/pdf/gt1503-04.pdf>. See also Report of the Public Inquiry into EQC (March 2020), <https://eqcinquiry.govt.nz/assets/Inquiry-Reports/Report-of-the-Public-Inquiry-into-EQC.pdf>.

²⁶ Cost of natural disasters, <https://www.icnz.org.nz/natural-disasters/cost-of-natural-disasters/>

²⁷ Water NZ (October 2015), https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=235

²⁸ Adapting to Climate Change in New Zealand (31 May 2017), <https://www.mfe.govt.nz/sites/default/files/media/adapting-to-climate-change-stocktake-tag-report-final.pdf>

emissions. Conversely, failure to sufficiently focus on mitigation may necessitate more urgent and extreme adaptation measures. Local and central government need to work together here. While central government has the central role to play with mitigation, local government is well placed to contribute as both a provider of infrastructure and service by virtue of its influence over activities.

One of the challenges of implementing adaptation in this context is the complexity of climate change and the uncertainty about what its full impacts will be and when they will occur over a long time frame. However, this uncertainty and long horizon is not something to shy away from or ignore. To the contrary, in our view this is something that should be grappled with now head on, the sooner the process begins the better, noting that extreme events can and do happen now. Also, ongoing potential impacts will stretch across generations, with the economic, social and environmental impacts being too significant to ignore. These risks only increase if no action is taken and become more costly to address later.

In investigating climate change matters reliance should be placed on the best available science and scenario planning, to understand the widest possible range of what could happen, being explicit with others about what assumptions have been made and being prepared for debate and discussion. The position should also be regularly monitored and reviewed.

In our view it is also important to take a holistic position – having regard to how individuals, businesses and communities are likely to behave. With that in mind, it is critical that you bring people on the climate change journey, sharing what is known about the impact of climate change in your region based on evidence and getting them to meaningfully contribute to the solution, putting all options on the table, noting that initiatives on the ground are the most effective when they are driven by motivated and engaged people who can see a way forward and do not consider that their interests are threatened.²⁹ Planning and investments should also involve consideration of what must be protected and what is a tolerable level of loss. Again, this requires community conversations (factoring in human, social, natural, physical and financial capital).

In considering climate change issues it may be helpful to analyse and prioritise matters using a risk management framework,³⁰ including an assessment of the likelihood and consequence of each risk with reference to the following treatment options:

Avoid	Changing plans to circumvent the problem. This may involve developing an alternative strategy that is more likely to succeed but have a higher cost. This may require a judgement call weighing the cost of avoidance against the cost of impact if not treated. In a climate change context, this could involve relocating or abandoning areas as retreat is virtually inevitable.
Control	Taking steps to reduce the impact and /or likelihood of impact. Elements of this option relate to mitigation or adaptation referred to above, noting whereas mitigation relates to reducing the likelihood of something occurring (i.e. by reducing emissions leading to further climate change) adaptation relates to reducing the inevitable impact of climate change. In a climate change context, this may involve better protecting assets or modifying them so they are more resilient to the impacts of climate change.
Accept	Assuming the chance of the negative impact and taking this into account.

²⁹ See How to Talk About Climate Change: A Toolkit for Encouraging Collective Action (31 July 2019), <https://www.oxfam.org.nz/news-media/reports/talking-about-climate-change/> for more details in this regard.

³⁰ See for sample risk management framework produced by Massey University available here: <https://www.massey.ac.nz/massey/fms/PolicyGuide/Documents/Risk%20Management/Risk%20Management%20Framework.pdf>. Also see, by way of example, the Risk Management Framework, Policy and Guidelines put together by the Thames Coromandel District Council available here: https://docs.tcdc.govt.nz/store/default/2914590?fbclid=IwAR0cHOJtQK9I5bNZDTPkHr8AmLNwefAzPVx44SnnwHowq_0F3bM-TqsHfA

Transfer	Outsourcing the risk (or a portion of it) to a third party to manage (e.g. via insurance). Simply put, this involves paying someone else (e.g. an insurer) to accept the risk. However, risks will not be transferable if they are not sufficiently managed.
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In planning for climate change local governments should also consider adopting an adaptive pathways approach.³¹ This involves testing a range of responses to climate change against possible future scenarios and then mapping pathways that will best manage, reduce or avoid risk. Under this approach a plan is subsequently developed with short-term actions and long-term options with pre-defined trigger points when decisions can be revisited. Ways forward can then be identified despite uncertainty, with flexibility provided should the agreed course of action need to change (e.g. because more scientific information or new technology becomes available). By foreshadowing future change at the outset without committing to a particular course of action long-term, this approach helps avoid locking in investments early that may be later rendered obsolete or which make future adjustments difficult and/or costly.

Why it is important for local government to act on climate change

Drawing upon the call for action outlined above, it is also important to reflect on the reasons why local government should act on climate change. The most obvious reason being effective responses to climate change are context specific and accordingly best addressed at a regional level. Other reasons are outlined below.

Local government has a legal requirement to do so

Local government has a number of statutory duties related to climate change. This includes:

- Under the Local Government Act 2002:
 - Meeting the current and future needs of communities for ‘good-quality’ local infrastructure, public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses.³² ‘Good quality’ in this context means infrastructure, services and performance that is efficient, effective and appropriate to meet present and anticipated future circumstances.³³
 - Avoiding or mitigating natural hazards, which include subsidence, sedimentation, wind, drought, fire and flooding.³⁴
 - Taking into account the interests of future as well as current communities, and diversity within such communities in decision making.³⁵
- Under the Resource Management Act:
 - Having regard to the maintenance and enhancement of the quality of the environment, and to the effects of climate change.³⁶

³¹ Preparing for coastal change: A summary of coastal hazards and climate change guidance for local government (December 2017), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/coastal-hazards-summary.pdf>. See also Supporting decision making through adaptive tools in a changing climate: Practice guidance on signals and triggers (2020), <https://www.deepsouthchallenge.co.nz/sites/default/files/2020-03/Supporting%20decision%20making%20through%20adaptive%20tools%20in%20a%20changing%20climate%20Practice%20guidance%20on%20signals%20and%20triggers.pdf>

³² Section 10(1).

³³ Section 10(2).

³⁴ Section 11A.

³⁵ Section 14.

³⁶ Section 7.

- Controlling the effects of the use or development of land, including avoiding or mitigating natural hazards.³⁷
- Considering the effects of a changing climate on communities and incorporating climate change into existing frameworks, plans, projects and standard decision-making procedures including activities such as flood management, water resources, planning, building regulations and transport.³⁸

Additionally, under the New Zealand Coastal Policy Statement 2010, local government is required to ensure that coastal hazard risks are managed and identified for a period of at least 100 years, taking account of climate change, and applying a precautionary approach.³⁹

The aforementioned Zero Carbon legislation also contains obligation for local government. Specifically, under this legislation the Minister or Commission have the power to require local government organisations, and “lifeline utility providers” to provide information including the organisations’ assessments of the risks climate change poses to their functions, the organisations’ proposals and policies for adapting to climate change, and their progress towards implementing these.

There has also been recent commentary about the responsibility of company directors, investment managers, professional trustees and other professionals with fiduciary obligations to consider climate change risk in their decision making and take appropriate action.⁴⁰ This includes officers, trustees or directors of council controlled organisations (CCOs).

One of the challenges local governments need to work through for planning and investment purposes is the different and sometimes short timeframes set out in the applicable legislation.⁴¹ As outlined above, the ICNZ’s view is that a co-ordinated, consistent and holistic approach should be taken looking at climate change issues with a long-term perspective in mind. This includes land-use decisions, district plans, urban development, energy use, infrastructure and waste and transport management.

Doing so ensures the efficient use of resources and reduces harm

Another key reason for action is that adapting to climate change is efficient and reduces avoidable harm. Numerous studies have shown that investment before disaster strikes is substantially more cost effective than only responding afterwards.⁴² Specifically, it is estimated that every \$1 invested in pre-

³⁷ Section 31.

³⁸ Climate change adaptation and local government, <https://www.mfe.govt.nz/climate-change/climate-change-and-government/adapting-climate-change/adaptation-and-local-government>. Also see section 30 and 62.

³⁹ New Zealand Coastal Policy Statement 2010, <https://www.doc.govt.nz/about-us/science-publications/conservation-publications/marine-and-coastal/new-zealand-coastal-policy-statement/new-zealand-coastal-policy-statement-2010/>. Specific requirements of note include policies 3 (precautionary approach), 7 (strategic planning), 24 (identification of coastal hazards), 25 (subdivision, use, and development in areas of coastal hazard risk), 26 (natural defences against coastal hazards) and 27 (strategies for protecting significant existing development from coastal hazard risk). This statement is to be applied as required by the Resource Management Act 1991 by persons exercising functions and powers under that legislation.

⁴⁰ Chapman Tripp’s 2019 legal opinion to The Aotearoa Circle https://static1.squarespace.com/static/5bb6cb19c2ff61422a0d7b17/t/5db95b00780a6c1bc1af5743/1572428552373/SFF_Climate+Change+Risk+Legal+Opinion_301019.pdf. See also MinterEllisonRuddWatts Litigation Forecast for 2020 <https://www.minterellison.co.nz/our-view/2020-litigation-forecast-climate-change-risks-for-companies-and-directors>

⁴¹ For example, the Local Government Act 2002 refers to a Long-term Council Community Plan with an anticipated 10 year minimum timeframe. The Resource Management Act 1991 provides for Regional Policy Statement and Regional and District plans referring to 10 year timeframes. This contrasts with requirement under the Local Government Act 2002 to produce an Infrastructure Strategy identifying significant infrastructure issues (including ones related to flooding) over at least a 30 year period. Also, there is the former Building Act 1991, which was based on an assumed building life of 50 years. While the current Building Act 2004 does not include an assumed building life many structures are intended to, or do, last a century or more.

⁴² For example see Building our nation’s resilience to natural disasters (June 2013), https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/dttl_crs_humanitarian_australia_resilience.pdf. See also 34 below.

event prevention will save \$5 in post-event costs and avoid the wider social and economic disruption.⁴³ It is important to reiterate in this context that when a natural disaster strikes, in addition to costs associated with at-risk local government owned infrastructure and the emergency response, there is a significant wider economic, social and community impact that it is difficult to put a price on. Lives can be lost, homes destroyed, utility systems wrecked, business insolvency and jobs lost. Then there is the mental trauma and stress families suffer as they try and pull their lives back together and the impact to the natural environment. The more that can be done to avoid or control the risks associated with climate change upfront and reduce these economic and social impacts the better.

Fortunately, the long horizon of some climate change impacts means that, in conjunction with an adaptative pathways approach, in some cases an incremental investment strategy can be deployed with costs allocated over the timeframe of potential climate change impacts. As highlighted above, the earlier this planning occurs, the less costly it will be later on.

Communities are increasingly demanding action

Property owners and communities are already facing the impacts of climate change and it should come as no surprise that there is also strong and growing public consensus within New Zealand for action on climate change including action by local government. An insurance company's recent climate poll indicates that:⁴⁴

- 79% of respondents consider that climate change is important to them personally (consistent with the 2019 result and up from 72% in 2018).
- 68% of respondents have become more concerned about climate change over the past few years (down slightly from 69% in 2018 but up from 60% in 2018).
- 68% of respondents consider that local councils are responsible for taking action on climate change (which is consistent with the 2019 result but up from 48% in 2018).

This poll also indicates that 79% of respondents believe that local councils should take a long-term view on climate change, with 80% indicating that local councils should provide information on the local impacts of climate change.

Doing so ensures insurances remains available and affordable

Another key reason for pro-active action by local government on climate change is that this ensures the associated risks are well managed so they remain partly transferrable to insurers. In turn this will:

- Ensure that insurance remains available and affordable for people and businesses within your community.
- Avoid a situation where climate change related risks become too great to be transferred to insurers and must be self-insured instead. This would put considerable strain on people, businesses and/or local and central government, particularly when financial resources are already stretched. This may also involve situations when the burden of covering losses falls with local and

⁴³ Flood Resilience in Numbers: 1-5-13-87-88 The Zurich Flood Resilience Alliance as a mode presentation, Berlin (May 2017). In this presentation it is also commented that they see only 13% going into pre-event resilience & risk reduction, 87% go to post-event relief.

⁴⁴ Adapting to climate change July 2020, <https://www.iag.co.nz/content/dam/iag-nz-main/corporate-documents/Climate%20Change%20Survey%20Detailed%20Results%202018-2020.pdf>. This survey was of 1,000 people and ran between 18 and 24 June 2020. It has a margin of error of 3.1%.

central government (and in turn ratepayers and taxpayers generally) because the specific people and businesses impacted lack sufficient resources to cover these themselves.⁴⁵

The importance of keeping insurance available and affordable is well demonstrated by research,⁴⁶ with well insured countries spending less on emergencies which frees up capital for investment and growth.

To understand the connection between climate change and the availability and affordability of insurance in more detail it is helpful to consider how an insurer looks at risk. In particular:

- Insurance only transfers risk, it does not manage or reduce it. An insurer business will not take on a risk that it is not sustainable for it to do so in the longer term. In so far as a risk is taken on by an insurer, the higher the risk the higher the premium charged. If over time risks are not addressed and allowed to get worse, to ensure risks taken on remain sustainable, higher premiums or excesses are applied. In extreme cases cover for some risks may be removed entirely, on the basis that it is not viable at all.
- While traditionally insurers assessed risk looking backwards (based on claims received), their decision making today also increasingly involves forward looking predictive models leveraging technology and the latest scientific insights, including ones related to climate change (for example, flood and weather pattern modelling). Insurers are also increasingly using more sophisticated and granular data to form a much more specific picture about a particular risk and then underwrite it accordingly (either by imposed specific terms or conditions and/or via risk-based pricing).⁴⁷
- From a first principles perspective, insurance follows the pooling principle ‘the many paying for the unfortunate few’. While this works well for a diverse range of accidental (i.e. sudden, unintended and unforeseen) events where the numbers suffering losses at any one time is small (e.g. a vehicle crash or house fire), this does not work well for wide scale and predictable climate change events. For example, coastal properties in a certain area known to be at risk of coastal erosion and/or tidal inundation. Additionally, arguably losses connected with the sea level rising or coastal erosion are not sufficiently accidental because they are neither sudden or unforeseen. Insurers also generally exclude cover for land damage.⁴⁸
- Lastly, whereas insurance responses to climate change operate on short annual renewal cycles, as outlined above, local government planning for climate change operates on very long timeframes, with potential impacts stretching across generations.

In light of the above, it should come as no surprise that in other countries where flooding has been an issue it has been removed from standard insurance offerings because doing so has not been sustainable, being removed entirely or offered instead as an optional extension for additional

⁴⁵ In this regard also see comments from the New Zealand Productivity Commission in their report Local government funding and financing (November 2019), https://www.productivity.govt.nz/assets/Documents/a40d80048d/Final-report_Local-government-funding-and-financing.pdf.

⁴⁶ Lloyd’s Underinsurance Report 2018, prepared by the Centre For Business and Economic Research, https://www.lloyds.com/~/_media/files/news-and-insight/risk-insight/2018/underinsurance/lloyds_underinsurance-report_final.pdf. This report reinforces the correlation between low insurance penetration and taxpayers required contribution post-disaster.

⁴⁷ Risk-based pricing results in increased premiums for high-risks and promotes low risk behaviour. This contrasts with a community-based pricing approach where everyone pays the same rate regardless of the varying risk, with people in low risk areas effectively paying higher premiums to subsidise people in high risk areas who have no premium incentive to reduce their risk.

⁴⁸ Land is insured by EQC provided this is within the residential property boundary and either: (1) under the relevant home and outbuildings, (2) within 8ms of these buildings; or (3) under or supporting your main accessway up to 60ms from the home. <https://www.eqc.govt.nz/what-we-do/land-cover>.

premium.⁴⁹ Consistent with this, property damage from coastal erosion and “actions by the sea” is excluded from the majority of home insurance policies in Australia.⁵⁰ Local government action to manage the impact of climate change risks is critical to ensuring the same thing does not happen in New Zealand.

Ensuring lending remains available

Another reason for action connected with the availability of insurance is property lending. Generally, banks and other lenders require insurance to be in place for property that secures the lending. The banking sector alone lends over \$280 million in residential mortgage lending in total.⁵¹ Substantial lending is also secured against commercial properties.

If insurance and therefore lending is reduced in an area within your region due to climate change risks, this will restrict growth, deflate people and business’ property values (and in turn rateable income).

Another issue is the asymmetry of the term of lending and insurance. Unlike mortgage lending, which is generally structured over several decades, insurance is generally renewed annually and can be withdrawn if risk gets too high. Accordingly, the risk that lenders are left with an uninsured secured asset in the future due to evolving climate change risks is likely to flow through to higher deposit requirements and lending rates and short loan terms, restricting growth, deflating property values and rateable income.⁵²

Action is required to manage local government liability exposures

Another important reason for action is local government’s potential liability exposures related to climate change. For example, the risk of an allegation being made that a local authority failed to have sufficient regard to known climate change issues in decision making or planning and this led to a third party suffering third party property damage or financial loss. This could lead to substantial defences costs being incurred, and liability payments being made, from ratepayer funds.

To this end, a recent presentation by a Queens Counsel to a local government audience records that:⁵³

- In addition to issues associated with breaching statutory duties as outlined above, common law is changing and the Judiciary appears to have an increasing appetite to entertain arguments about climate change in common law.⁵⁴
- While current local government litigation mostly relates to decisions to limit development (short-term judicial review), in the future it seems likely to extend to the consequences of allowing development and failing to implement adaptation measures (e.g. from

⁴⁹ For example, until the 1960s US had all risks house policies as we have in New Zealand to <https://www.rbnz.govt.nz/statistics/c31> day. However, frequent flooding events drove the predictable premium response until insurance became unaffordable.

⁵⁰ Beachfront homeowners at risk of losing millions as properties uninsurable against the sea (28 July 2020), <https://www.news.com.au/finance/business/beachfront-homeowners-at-risk-of-losing-millions-as-properties-uninsurable-against-the-sea/news-story/2d9d3f73f7a03f248448f62731800a12>.

⁵¹ New and existing residential mortgage lending by payment type - C32 (24 July 2020), https://www.rbnz.govt.nz/statistics/c32?fbclid=IwAR2lu_C8v_i3h94bdudJo2RMDQahFI07N9QbAjTDTToShI_I8I42MjD0yE5Y.

⁵² Also in this regard see comments from the New Zealand Productivity Commission in their report Local government funding and financing (November 2019), https://www.productivity.govt.nz/assets/Documents/a40d80048d/Final-report_Local-government-funding-and-financing.pdf.

⁵³ “Climate Change Adaptation” session of the Local Government New Zealand Rural and Provincial Sector Meeting, Wellington (7 March 2019) <https://www.lgnz.co.nz/assets/Uploads/f488365773/Climate-change-litigation-Whos-afraid-of-creative-judges.pdf>.

⁵⁴ See also the paper ‘Climate Change and the Law’ produced by three justices of the Supreme Court available here: <https://www.courtsofz.govt.nz/assets/speechpapers/ccw.pdf>.

homeowners suffering physical and economic consequences of climate change in the longer term).

- While there has not been any large damages claims in relation to failure to implement adaptation measures in New Zealand to date, this may be only a matter of time.

Insurance may also have a role to play here and to that extent the same principles as outlined in the insurance section outlined above apply equally here. Namely, if local government's liability exposures associated with climate change are not sufficiently managed this may lead to liability insurance becoming unaffordable or unavailable. Liability insurance also commonly excludes reckless or intentional conduct, which may be an issue if the climate change impacts are known but ignored.

If the relevant liability insurance is not in place and a large climate change related event occur, this could put extreme pressure on local governments already strained resources – diverting ratepayer funds to fight litigation that otherwise could be used to repair local government infrastructure and fund the emergency response.

Specific areas for local government action on climate change

Reflecting on the above, we consider there are five practical ways local government can advance climate change issues in the near term, focusing on matters directly within their control. We acknowledge that in some regions the matters referred to may be already well advanced, while others may be just at the start of their climate change journey.

Embracing collaboration and co-ordination

A key area of action by local government in our view is leading and embracing collaboration and co-ordination on climate change within the region. While local government has a great deal of autonomy in deciding what to do regarding climate change, unfortunately this means there is a lack of consistency across the country in terms of the approaches being adopted. Things may be further complicated by different bodies (i.e. regional/unitary, district or city councils) having different but overlapping roles and responsibilities.⁵⁵ An added complication is that climate change and its impacts do not respect local government boundaries.

To combat this, all elements of local government within a region need to collectively work together – having regard to their specific functions/roles whilst leveraging their combined leadership, resources, knowledge and expertise. This collective work should include:

- Establishing a consistent understanding of how to identify climate change risks, undertake risk modelling, planning and the appropriate terminology and methodologies, drawing upon approaches set out by Local Government New Zealand, other local and central government (including the Ministry for the Environment and the Climate Change Commission).
- Developing a shared understanding of overarching climate changes issues in the region and what should be done to address them, with co-ordinated roles and accountabilities for the various organisations, noting that all of local government is charged with meeting the current and future needs of communities.⁵⁶

It is important that mitigation and adaptation measures are considered together in a co-ordinated fashion that involves all relevant stakeholders, noting that while mitigation on climate change (reducing emissions) is principally being progressed at a national and central government level much

⁵⁵ For example, while regional councils focus on decisions that relate to resource use and hazard management, district or city councils focus may focus on core services that can impact on resources including land, water and coastal areas.

⁵⁶ Local Government Act 2002, section 10(1)(b).

of the decision making and implementation around adaptation occurs at the local government level. Working together enables a full picture of climate change to be formed and a balanced approach to be taken when prioritising responses and allocating responsibilities and accountabilities.

For efficiency and economies of scale, local government should also look for opportunities to partner up or draw upon insights from other regions grappling with similar issues or who have done so in the past.

If good collaboration and co-ordination is already occurring within your region (along the lines described above), now is a good opportunity to 'take this to the next level' by formalising these arrangements.

Building knowledge about climate change and sharing it

Local government also needs to focus on identifying and filling gaps in regional knowledge about climate change,⁵⁷ investing in specialist personnel, training and additional research (leveraging the latest scientific insights and technology) to gain a better understanding in this regard. Improving the information available will enhance the efficacy of the actions local government will be able to take. In undertaking this work, again regard should be had to successful approaches others have adopted so as to co-ordinate and ensure consistency and efficiency as much as possible.⁵⁸

Local government should also champion public education on climate change within their regions. This involves actively looking for opportunities to share what it knows about climate change risks within the region to individuals, businesses and communities in a form they can easily engage with – bringing them on the climate change journey and giving them better information to make decisions and take personal action. While there has been going growing awareness of climate change issues, many within the community still do not fully understand the specific risks climate change poses to them.⁵⁹ Simply put, people cannot be expected to manage and reduce their climate change risks if they do not know what these risks are.

From specific property information perspective, the goal should be for all current and potential property owners to have easy access to good quality, transparent and consistent information about all-natural disaster risks a particular property faces including the climate change related ones.

While we acknowledge providing more information about property related natural disaster risks may result in challenges, in our view, local governments should not shy away from doing so. Providing this information enables individuals and businesses to make more decisions and the market (including insurers⁶⁰ and lenders) to price for this risk signal. Just like other natural hazard risks, climate change

⁵⁷ This issue is compounded by the fact that there is currently no national public database of natural hazard risks. While this work has recently stalled due to a lack of government funding, ICNZ has been advocating for work to be undertaken in this regard through the ReZealiance project. The intention of this project is to use publicly funded research undertaken by GNS, NIWA and LINZ to produce a natural risk database that many stakeholders including homeowners, businesses and central and local government can use. Another challenge is that there is no consistent hazard information for assessing the exposure of the built environment at a national scale, <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-new-zealand-snapshot.pdf>.

⁵⁸ As outlined by the Productivity Commission, specific consideration could be given to developing regional spatial plans which will assist with efficient use of resources and aid in coordinating efforts across councils and with central government. These plans can also draw upon insights from the Climate Change Commission's national climate change risk assessments so that responses to climate change occur in a co-ordinated fashion, https://www.productivity.govt.nz/assets/Documents/a40d80048d/Final-report_Local-government-funding-and-financing.pdf.

⁵⁹ For example, IAG's climate poll 2020 records that only 34% of individuals indicated they had all the information they needed to make decisions to reduce the impact of climate change on themselves.

⁶⁰ Property owners are generally required to disclose to their insurer if their property has been identified as being at risk from any natural hazard by their local Council, through information being placed on the properties LIM or by way of a notice on the property title under section 74 of the Building Act 2004. This notice alerts prospective purchasers and others with an interest in the property (such as

impacts are likely to have an impact at some future point, if they have not done so already. The alternative is that the added costs associated with the property due to climate change risk remain hidden and ignored, with local government and ratepayers ultimately subsidising arrangements (via future infrastructure costs, protection measures, emergency response costs etc). Providing this information also incentivises people to act in a more resilient manner (e.g. to undertake the appropriate protection measures or factoring these before making decisions).

In the property information context, how things are framed can be very important. For example, a '1:100-year event' may mislead people into thinking it will not happen in their lifetime when it could happen tomorrow. Consider framing things as 'a 1 in 4 chance of an event over the term of a 25 year mortgage' or 'if there are 100 locations that face 1:100 year events in New Zealand, then one will almost certainly happen in the next 12 months'. Another obvious consideration is that, due to climate change, these low probability events are becoming increasingly common and the associated probability may need to be re-assessed.

Avoid development in areas vulnerable to flooding, rising sea levels or coastal erosion

Wherever possible local governments should avoid development in areas vulnerable to flooding, rising sea levels or erosion. This should be a fundamental element of a local government's adaptation framework to bypass costly and avoidable climate change risk which otherwise local governments (and ultimately ratepayers) will have to meet. There is growing public awareness and recognition of this issue.⁶¹

The alternative (allowing development in such areas to proceed) will result in, at best, costly and potentially uneconomic protection measures needing to be put in place or, at worst, interruption, emergency responses costs and an eventual managed retreat and/or claims for compensation by property owners which local governments (and ultimately rate payers) have to meet. There may also be insurance and lending availability and affordability issues to consider amongst other things. If developments in areas vulnerable to flooding, rising sea levels or coastal erosion are being considered, the full cost implications of doing so should be factored into the decision making and appropriate protection measure requirements imposed (such as lifting floor-levels, raising land or other inundation or erosion protection measures).

Local government should also consider undertaking managed retreats of existing developments in areas vulnerable to flooding or rising sea levels in circumstances where either the avoidable risk of loss is calculated as being too high and/or it is uneconomic to protect them (with reference to the cost of future interruptions, emergency response costs, protection measures and potential property damage etc). Again, the future availability and affordability of insurance and lending should be considered in decision making here. Consideration should be given to adopting an adaptive pathway in this context, noting that under it, the specific process to retreat may vary. In some cases, this may involve less disruptive and expensive interim measures being put in place before a decision is ultimately made to retreat or move onto some other pathway, once more is known.

lenders and insurers) that the land is subject to a natural hazard and specifies what the natural hazard (or hazards) are. Failing to disclose this information may lead to a claim being declined.

⁶¹ For example, the aforementioned IAG's climate poll 2020 records that 72% of respondents considered that local councils should zone land specifically to reduce the impacts of climate change, while 65% considered that local councils should only consent development that reduces or avoids the impact of climate change. See also Just how safe from the rising sea level are our beach houses? (12 July 2020), <https://www.stuff.co.nz/life-style/homed/latest/300050107/just-how-safe-from-the-rising-sea-level-are-our-beach-houses> and Climate change may soon render beach houses uninsurable (15 July 2020), <https://www.insurancebusinessmag.com/nz/news/breaking-news/climate-change-may-soon-render-beach-houses-uninsurable-227816.aspx>.

Climate change should be prioritised in planning and investment decisions

Climate change risks should be prioritised in local government's planning and investment decisions about infrastructure.⁶² Specifically, local government should incorporate emissions reduction targets into investment decisions on transport, fleet procurement and waste management.

Planning and investment decisions should also have specific regard to managing or reducing natural disaster risk and protecting assets casting a broad net that includes both built infrastructure (such as stormwater drains, culverts, stock banks, seawalls and transport and waste management), natural infrastructure (such as dunes, wetlands, rain gardens, swales) and potential changes to land use, and with regard to potential:

- **direct costs**, such as the cost of remediating public infrastructure, privately owned assets, emergency response costs and damage to regional ecosystems, flora and fauna
- **broader economic, social and natural environment impacts**, such as business interruption, prevention of access and loss of supply chains, depopulation, displacement, entrenchment or the further opening up of inequalities, loss of habitats
- **downstream impacts**, such as contamination to potable water supply that in turn negatively impacts the ability to earn income, quality of life and public health, and
- **impacts to resiliency**, such as the impact of an essential road, public facility or utilities being cut off or out of operation for a number of months or years.

In considering these issues, a consistent and co-ordinated approach needs to be taken looking at the total pool of infrastructure assets in the region, potential climate change impacts and avoidable losses over the long-term. This will invariably involve liaising with central government, other public agencies and private utility companies (e.g. electricity, gas and telecommunications network operators and suppliers). Regard should be had to making decisions that maximize co-benefits.

In evaluating these matters local government should also consider adopting an adaptive pathways approach. Rather than committing to substantial investments upfront (which may be subsequently rendered obsolete or make further adjustments difficult or costly), focussing on short-term actions and long-term options that provide flexibility to make the right decision later once more is known.

Ensuring buildings are resilient to climate change impacts

In conjunction with the above, it is also important that any new building work approved (including design, construction and materials used) contributes to reducing emissions (in both its construction and operation),⁶³ and is more resilient to climate change impacts alongside other natural hazard risks (e.g. earthquakes) with a view to bolstering longevity and avoiding inefficient redundancy or obsolescence.⁶⁴

Again, this is all about bypassing avoidable climate change risk. This approach also reflects that ensuring building resiliency at the outset is much more cost efficient than waiting until a climate change related event occurs and addressing it at that point. Consideration could also be given to

⁶² This is reinforced by insights from the IAG's climate poll 2020 where 72% of respondents indicated that local councils should use funds to help build infrastructure that reduces the impact of climate change.

⁶³ To this end, the Government recently announced a Building for Climate change programme focussing on finding ways to reduce emissions from buildings during their construction and operation, while also preparing buildings to withstand changes in the climate, <https://www.building.govt.nz/about-building-performance/news-and-updates/all-news-and-updates/building-for-climate-change-programme-gets-underway/>.

⁶⁴ The Building Research Association of New Zealand (BRANZ) have some useful resources in this regard, <https://www.branz.co.nz/>

subsidising resiliency improvements for homes or managed retreat in low income areas with a high risk to climate change impacts, noting that climate change has the potential to exacerbate existing inequalities.⁶⁵

If owners are rebuilding following a climate change related event, local government should encourage them to make changes to improve resiliency in their rebuild, rather than simply reinstating things as they were (as if nothing had happened). If these risks are not appropriately addressed, future avoidable property damage and interruption is likely inevitable. Failing to adequately address these issues is likely to impact insurance availability and affordability too.⁶⁶

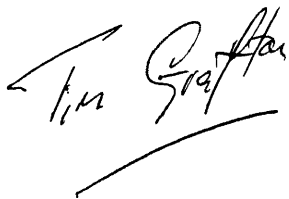
Conclusion

Thank you again for the opportunity to submit on the Wellington City Council's public consultation on Planning for Growth. If you have any questions, please contact our Regulatory Affairs Manager, Nick Whalley on (04) 914 2224 or by emailing nickw@icnz.co.nz.

The issues posed by climate change are confronting. However, local governments are well placed in many respects to address these issues. Good progress can be made in this regard by acting proactively and in a consistent and co-ordinated manner, and by taking a long-term view that focusses on both climate change mitigation and adaptation.

It is truly positive that some local councils have already made great strides to engage with and progress climate change issues - some of this work is outlined in appendix 1. There are also some helpful resources local governments can leverage in this regard - as outlined in appendix 2.

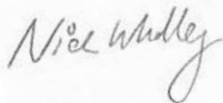
Yours sincerely,



Tim Grafton
Chief Executive



John Lucas
Insurance Manager



Nick Whalley
Regulatory Affairs Manager

⁶⁵ National climate change risk assessment for New Zealand - Main report (2 August 2020), <https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/national-climate-change-risk-assessment-main-report.pdf>

⁶⁶ In general terms insurers may be able to work their customers to factor in adjustments in the rebuild to better protect it from future losses in the future as doing so is to their mutual benefit. However, the particular claim response will depend on the specific insurance policy in force and circumstances, sum insured and betterment limitations may apply and generally insurers do not contribute to additional costs to comply with changes required by the Government or a local authority unless the relevant building complied with all relevant legislation and regulations at the time it was built or altered.

**APPENDIX 1:
EXAMPLES OF LOCAL GOVERNMENT PROGRESS ON CLIMATE CHANGE**

- Whangarei District Council’s draft Natural Hazard Plan Change for their District Plan (which includes a review of flooding and coastal hazards). More information is available [here](#).
- Waikato District Council’s Stage 2 of the Waikato District Plan Review (which focusses on Natural hazards and the effects of climate change). More information on this available [here](#). *Waikato Regional Council also recently secured \$23.8 million from the Government for 10 flood protection and catchment projects (4 August 2020). More information on this is available [here](#).*
- The Bay of Plenty’s Rangitāiki River Scheme Review – April 2017 Flood Event (18 September 2017). More information on this is available [here](#).
- Whakatane District Council’s Awatarariki Managed Retreat Programme. More information of this is available [here](#).
- The Hawkes Bay’s Coastal Hazard Committee’s⁶⁷ Clifton to Tangoio Coastal Hazard Management Strategy 2120 (August 2016). More information of this is available [here](#).
- Tasman District Council’s community centric coastal management work. More information on this is available [here](#).
- Christchurch City Council’s flood intervention policy (including investigation and mitigation of the Flockton area). More information on this is available [here](#).
- Queenstown Lakes District Council’s flood management work (including a joint flood mitigation strategy). More information on this is available [here](#).

⁶⁷ This is a joint committee, bringing together elected representatives from Hastings District Council, Napier City Council and Hawke’s Bay Regional Council.

**APPENDIX 2:
HELPFUL RESOURCES FOR LOCAL GOVERNMENT ON CLIMATE CHANGE**

Author	Title and hyperlinks for access	Date
Ministry for the Environment	Coastal Hazards and Climate Change: A Guidance Manual for Local Government in New Zealand available here	July 2008
Department of Conservation	New Zealand Coastal Policy Statement 2010 available here	2010
Judy Lawrence, Frances Sullivan, Alison Lash, Gavin Ide, Chris Cameron & Lisa McGlinchey	Adapting to changing climate risk by local government in New Zealand: institutional practice barriers and enablers available here	2015
Parliamentary Commissioner for the Environment	Preparing New Zealand for rising seas: Certainty and Uncertainty available here	November 2015
Tonkin+Taylor	Risk based approach to natural hazards under the RMA available here	September 2016
Climate Change Adaptation Technical Working Group	Adapting to Climate Change in New Zealand available here	31 May 2017
Ministry for the Environment	Preparing for coastal change: A summary of coastal hazards and climate change guidance for local government available here .	December 2017
Jack Hodder QC	Climate Change Adaptation: session of the Local Government New Zealand Rural and Provincial Sector Meeting, Wellington available here	7 March 2019
Oxfam NZ	How to Talk About Climate Change: A Toolkit for Encouraging Collective Action available here	31 July 2019
Deep South Challenge: Changing our climate	Supporting decision making through adaptive tools in a changing climate: Practice guidance on signals and triggers available here	2020
Local Government New Zealand	Various resources for local governments on climate change available on their Climate Change Project page here and case studies regarding community engagement on climate change adaptation here	Various
Ministry for the Environment	Climate change adaptation and local government available here	
Massey University	Sample risk management framework produced by available here . <i>Also see, by way of example, the Risk Management Framework, Policy and Guidelines put together by the Thames Coromandel District Council available here</i>	

APPENDIX 3:

ICNZ's view of the role of local government on climate change

What (the problem: climate change is here)

Larger and more extreme weather events

Sea levels rising, coastal erosion and flooding

Droughts, water shortages and wildfire

Flow on impacts to:

- Natural and built environments
- human, economic and governance

The potential impacts stretch across generations, with the economic, social and environmental impacts being too significant to ignore and only increasing if no action is taken

Why (local government need to act)

The best responses are context specific (addressing matters at a local level)

Ensuring resources are efficiently used

Communities are increasingly demanding action

Ensuring insurance and therefore lending remains available and affordable

There is a legal duty to do so

Bypassing avoidable harm

How (local government can act)

Grapple with the full impacts of climate change (taking your community on the journey, leveraging the best available science and regional capability)

Thorough planned action and investments for adaptation and mitigation (reducing the extent of future climate change and its impacts)

Take a holistic, long term and flexible approach (using a risk management framework to prioritise and an adaptive pathways approach)

Practical actions includes:

- ✓ collaboration and co-ordination
- ✓ building and sharing knowledge
- ✓ embedding mitigation and adaptation in investment and planning decisions
- ✓ declining development in areas vulnerable to flooding or rising sea levels
- ✓ ensuring buildings are resilient

A pro-active, co-ordinated, and long-term view should be taken to managing the real and significant impacts of climate change, putting people, businesses and communities at the heart of decision-making