SmartGrowth Strategy 2023-2073

ISSUES AND OPTIONS PAPER

Climate Resilience

Author: Manini Abernethy (Bay of Plenty Regional Council)

Topic	Climate resilience
Issues	1. Managed retreat 2. Emissions reductions targets 3. Climate resilient development 4. Climate change action

Staff Narrative

Overview of submissions

19 submitters provided feedback on the climate resilience chapter.

- Linda – submitter 6
- Angela – submitter 7
- Wolf, Eva Maria Lieve – submitter 9
- Van De Weyer, Callum – submitter 22
- Richard – submitter 27
- Thorpe, Andrew – submitter 28
- Mcleod, Whitiora – submitter 32
- Lois – submitter 37
- Sadler, Jon – submitter 46
- Fitter, Julian Richmond – submitter 47
- Lucas, David Thomas – submitter 50
- Bowden, Beth Willard – submitter 53
- Robson, John – submitter 54
- Holyoake, Peter – submitter 55
- Ministry Of Education – submitter 59
- Envirohub – submitter 62
- Zespri International Limited – submitter 71
- New Zealand Kiwifruit Growers – submitter 76
- Ngai Tukairangi Hapu Trust – submitter 86

Seven submitters generally support the Strategy's approach to climate resilience. Two submissions noted climate change and the speed at which it is occurring must be considered in any future decision processes.

The Ministry of Education submission requested the growth directives as notified are retained to address climate resilience.

Submission 50 questioned if climate change was a real issue and if so then NZ would make no difference to the overall world climate problem. Accordingly, they submitted the money could be spent on other projects.

Eight submitters generally oppose the Strategy's approach to climate resilience. Four submissions simply responded "no" to the question on whether the strategy was focusing on the right things (submission 6, 28, 37 and 54).

Issue 1: Managed retreat

Two submitters (submission 7 and 76) queried whether the SmartGrowth strategy considered managed retreat and identified the land areas required to deal with managed retreat as some areas have been identified as potentially affected by coastal/river erosion and inundation.

Submission 55 also noted many marae in the Bay of Plenty were located on land close to sea level and at risk of potential flooding with some marae already experiencing floods. The submitter recommended planning and budgeting to assist the relocation of these marae at risk.

Submission 86 seeks support to develop comprehensive climate adaptation strategies tailored to the unique challenges faced by Ngāi Tukairangi hapū in Matapihi.

Issue 2: Emissions reductions targets

Submission 27 noted climate change needed to be at the centre of all thinking in particular transport and intensification. They stated the importance to move away from a car centric way of thinking and considered the electric car was not the answer, instead people should be sharing their commute. They queried passenger rail as an option, particularly as an interregional mode of transport.

The hearings panel requested further information on how well emissions reductions targets have been integrated into the strategy and what other Tiers One and SG partners are doing in this space.

Issue 3: Climate resilient development

Submission 27 stated that new subdivision development should look to good intensification examples, with multi-storey building and green space. They noted that all communities needed access to green space and large trees. They queried how larger land plots in old neighbourhoods could become opportunities for development. They noted that in many cities, slum neighbourhoods are bought cheaply, and intensification happens. However, that stage would not occur therefore another way was needed around the issue.

Submission 46 stated that more emphasis should be on carbon footprints and encouraging more sustainable building materials. They further stated there should be partnerships between local government and organisations to provide incentives to businesses to be carbon neutral or carbon positive.

Submission 47 wants climate resilience to be the key to everything and noted growth as damaging to the environment and climate. They seek to minimise the impact of growth on the climate and considered the strategy did not take

this into account. They also considered that the strategy does not consider the environmental and climate issues specifically at risk from sea level rise or tsunamis.

Submission 55 raises environmental and social concerns including storm surge, future rainfall, future development locations and location of marae on land close to sea level. They made the following recommendations.

- Avoid asphalt use
- Extensive use of tree-lined streets and stands of trees.
- Maximise light-coloured parking areas and road surfaces.
- Use white as a roof colour for Council, commercial and residential roofs.
- Avoid high rise building and heat traps.
- Passive cooling features for new developments for older people
- Tree-shaded walkways, especially near retirement villages
- Future use of community halls as "cooling centres"
- Each Connected Centre has a community hall to act as a "cooling centre".
- Avoid development in coastal areas, which could be impacted by storm surge in the future.
- Grant no more building consents in low lying coastal areas of flood zones and consents in flat areas, which have nearby water courses.
- Classify these as "No-Go" areas – i.e., suitable for grazing or short-term crops.
- Oversize all new storm water systems.

The submission further adds that the demand for additional accommodation will increase as other parts of NZ become uninhabitable therefore incorporating climate resilience into future development should be passive and self-sufficient.

Issue 4: Climate change action

Submission 55 is critical of the Strategy not having a plan of action to address the large contribution to climate change from agriculture in the western bay of plenty.

Submission 71 supported the approach noting that it aligns with the Kiwifruit Industry Climate Change Adaptation Plan.

Submission 86 seeks an emergency response plan in event of water supply disruptions for the Whareroa and Matapihi community. The disaster preparedness plan must be culturally sensitive and inclusive of Mātauranga Māori to safeguard the community's water needs in the face of climate related challenges.

Submission 62 seeks to incorporate the 'ecosystems and biodiversity' principle into the Strategy. The submission also mentions there is little mention of mitigation approaches and considers that if these are funded and implemented will save money in adaptation projects over the 50-year period.

The following SmartGrowth background papers should also be referred to:

- SmartGrowth Strategy Climate resilience background paper (September 2023)
- SmartGrowth Strategy Areas to be protected and developed carefully background paper (August 2023)
- SmartGrowth Strategy Infrastructure background paper (August 2023)

There are four key issues set out for the Panel's consideration. The practicable options in relation to these issues are set out below along with the recommended options for the Panel to consider.

Summary of issues and options	
Issue 1: Managed retreat	
Option 1A	Note the submissions and make no changes.
Option 1B (recommended)	Amend paragraph text of *key climate resilience challenge 3* as follows (changes shown in underlined text): "...We do not yet have a good understanding of how these long-term changes will affect people in these exposed locations, and we will need to be proactive in working with exposed communities, anticipate the support that may be required, and offer equitable solutions. We will need to ensure any adaptation options are planned and implemented with meaningful involvement from communities with policy and resourcing from central government to help facilitate this process with clear expectations and outcomes. We can manage further development in high hazard areas to mitigate exposure, while aiming to manage vulnerability".
Issue 2: Emissions reductions targets	
Option 2A	Note the submissions and make no changes.
Option 2B (recommended)	Amend paragraph text of *Principle 1*, as follows (changes shown in underlined text): *"This could happen through designing multi-modal transport into existing, and ahead of, new development. Design and development of new buildings and community centres could facilitate reduced emissions outcomes through energy use, remote working patterns, carpooling, park and ride initiatives, active transport, and accessibility to frequent, reliable and innovative public transport services including along existing and future public transport corridors. Emissions could be captured through*

	enhancing and restoring local ecosystems or establishing new ones". and Amend *growth directive 3* as follows (changes shown in underlined text): *"3. Development and infrastructure are planned to encourage and enable emissions reductions and be resilient and adaptive to climate change and natural hazards".*

Issue 3: Climate resilient development	
Option 3A	Note the submissions and make no changes.
Option 3B (recommended)	Amend paragraph text of *key climate resilience challenge 9* as follows (changes shown in underlined text): "…Resilience must also be considered in the context of long-term sustainability, such that even the most resilient communities may not be sustainable in the long term due to the impact of the rising seas on their communities. In navigating these challenges, it is crucial to incorporate the prioritisation of health, safety and wellbeing of people, particularly for vulnerable populations into climate resilience development strategies".
Issue 4: Climate change action	
Option 4A	Note the submissions and make no changes.
Option 4B (recommended)	For clarity, note SmartGrowth's support for the various climate action plans and initiatives. Amend paragraph text of *regional, sub-regional and district responses* as follows (changes shown in underlined text): "Initiatives and plans are also in place or in development at a regional and district level including the Bay of Plenty Regional Council Climate Change Action Plan 2021, Western Bay of Plenty District Council Climate Change Action Plan 2021 and Tauranga City Council Climate Action and Investment Plan and Nature and Biodiversity Action and Investment Plan. This Strategy supports the implementation of the various climate action plans and initiatives for the western Bay of Plenty…"

Issue 1: Managed retreat

Option 1A: Note the submissions and make no changes.

Advantages	Disadvantages
• The Strategy promotes the achievement of climate-resilient development with three key principles including integrating climate resilience into the Connected Centres programme. • The Strategy notes that Iwi and community members will need to be involved in climate change adaptation processes and to be able to make informed decisions about their future (refer page 75). • The Strategy identifies key climate resilience challenges including the need to involve Iwi and community members in climate change adaptation processes and to be able to make informed decisions about their future (refer page 75), and the costs of adaptation in climate-vulnerable areas and possibly managed retreat from at-risk coastal areas (refer page 76, emphasis added).	• No clear direction is provided in the Strategy to promote the community-led approach and process in preparing a fit for purpose climate adaptation plan. • Does not specifically identify any land areas that may be required to deal with managed retreat (if required) as requested by submitters.

Financial implications

None.

Other considerations

The National Adaptation Plan (NAP) adopted in 2022 is a six-year plan intended to help New Zealand adapt to climate change. It has four key priorities to address including driving climate-resilient development in the right places and laying the foundations for a range of adaptation options including managed retreat. The NAP has had a significant effect on the Strategy (page 29). The Strategy promotes the achievement of climate-resilient development with three key principles including integrating climate resilience into the Connected Centres programme. The Strategy also identifies key climate resilience challenges including costs of adaptation in climate-vulnerable areas where it specifically notes a range of adaptive actions will need consideration, such as strengthening coastal infrastructure, construction of resilient housing, and possibly managed retreat from at-risk coastal areas (page 76, emphasis added).

(Recommended) Option 1B: Amend paragraph text of *key climate resilience challenge 3* as follows (changes shown in underlined text):

"...We do not yet have a good understanding of how these long-term changes will affect people in these exposed locations, and we will need to be proactive in working with exposed communities, anticipate the support that may be required, and offer equitable solutions. We will need to ensure any adaptation options are planned and implemented with meaningful involvement from communities with policy and resourcing support from central government to help facilitate a process with clear expectations and outcomes. We can manage further development in high hazard areas to mitigate exposure, while aiming to manage vulnerability".

Advantages	**Disadvantages**
• Enables the Strategy to provide clear direction in promoting a community-led approach and process when preparing a climate adaptation plan. • There is a case study provided in the Strategy "He Toka Tū Moana Mō Maketū – Maketū Climate Change Adaptation Plan" (page 78) which is exemplar in demonstrating the effectiveness of a community-led process in preparing a climate change adaptation plan.	• Does not specifically identify any land areas that may be required to deal with managed retreat (if required) as requested by submitters.

Financial implications

None.

Other considerations

Managed retreat is one of many adaptation responses to the impacts of climate change. The most appropriate adaptation options will be different for every community. Managed retreat is usually not considered in isolation from other options, especially when planning for future rather than current impacts of climate change. In some cases, retreat may be a last resort, and in all cases the costs and benefits will need to be carefully weighed. A place-based and risk-based approach should ensure the adaptation options adopted will meet the specific needs and circumstances of the community. Working with communities to assess these options means that decisions made as to which options will be adopted for a particular community are robust and well supported and understood by that community. The case study provided in the Strategy "He Toka Tū Moana Mō Maketū – Maketū Climate Change Adaptation Plan" is exemplar in demonstrating the effectiveness of a community-led process in preparing a climate change adaptation plan.

A recently released report[1] notes that there is a lack of clear direction from the Government on how and when to plan and implement adaptation (particularly managed retreat). The Climate Adaptation Bill which was expected (under previous Government) to address policy issues around managed retreat and to give guidance on local adaptation planning, is still being developed. The report makes a few recommendations including noting the importance of involving and working with local communities on planning and implementing strategic local responses to climate change and, support for community engagement at central government level.

Issue 2: Emissions reductions targets

Option 2A: Note the submissions and make no changes.

Advantages	**Disadvantages**
No changes required and various partner climate action plans and initiatives can proceed as planned.	• Some members of public may not be aware of the targets. • The market is unlikely to deliver housing intensification at the necessary scale and pace required to reduce emissions without stronger strategic direction.

Financial implications

None.

Other considerations

From a climate resilience perspective, the Strategy has identified key climate resilience challenges including requiring transport infrastructure to be planned, designed, built, and operated in a way that anticipates, prepares for, and adapts to changing climate conditions.

In 2022 the Government published its first Emissions Reduction Plan (ERP). The ERP sets out the principles the Government will use, and the actions it will take, to meet New Zealand's domestic greenhouse gas emissions reduction target[2]. New Zealand has several greenhouse gas emissions reduction targets. They include both domestic and international targets up to the year 2050.

The SmartGrowth Strategy transport chapter identifies four sub-targets for reducing transport emissions by approximately 41% from 2019 levels. The Strategy (page 73) refers to the various climate action plans in place at a regional and district level:

[1] Mercier, K. (2023). A Shared Future – Working with communities to adapt to a changing climate. The Helen Clark Foundation. https://helenclark.foundation/publications-and-medias/a-shared-future/

[2] Reduce all greenhouse gases (except biogenic methane) to net zero by 2050 and reduce emissions of biogenic methane within the range of 24–47% below 2017 levels by 2050 including to 10% below 2017 levels by 2030.

- Bay of Plenty Regional Council Climate Change Action Plan 2021,
- Western Bay of Plenty District Council Climate Change Action Plan 2021
- Tauranga City Council Climate Action and Investment Plan

Each of these Climate Action plans have set goals to reduce greenhouse gas emissions at a regional or district level. At a sub-regional level, the Strategy (page 74) influences the growth pattern for the region with a focus on transport and housing following the connected centres program approach. The two challenges in the topic chapter that tackle emissions reduction are noted on page 74 as follows:

1. *Moving to tackle emissions reduction, climate change adaptation, and biodiversity restoration in an integrated and holistic way.*
2. *Providing housing for a growing population while needing to align our urban form and growth areas with emissions reduction target.*

The SmartGrowth Strategy recognises 'Emissions Reduction through Connected Centres' (page 158) as one of its five Transformational Shifts. The above confirms the issue of emissions reductions and targets has been appropriately covered and integrated within the SmartGrowth strategy.

(Recommended) Option 2B: Amend paragraph text of *Principle 1*, as follows (changes shown in underlined text):

"This could happen through designing multi-modal transport into existing, and ahead of, new development. Design and development of new buildings and community centres could facilitate reduced emissions outcomes through energy use, remote working patterns, carpooling, park and ride initiatives, active transport, and accessibility to frequent, reliable and innovative public transport services including along existing and future public transport corridors. Emissions could be captured through enhancing and restoring local ecosystems or establishing new ones".

and

Amend *growth directive 3* as follows (changes shown in underlined text):

"3. Development and infrastructure are planned to encourage and enable emissions reductions and be resilient and adaptive to climate change and natural hazards".

Advantages	**Disadvantages**
• Addresses submitter 27 request to include carpooling and park and ride as examples of facilitating low emissions outcomes.	None

• Captures all new developments rather than just building and community centre design. • Acknowledges importance of the role accessible and frequent PT services play in facilitating low emission outcomes in new developments.	

Financial implications
None.
Other considerations
There are many forms of multi-occupant vehicles, all of which are better for the environment than the same individuals driving alone. Carpooling is a practicable tool for regularly scheduled commutes, especially to lower-density employment centres, such as business and industrial parks, that are not dense enough to attract high-quality transit[3]. Submitter 47 also commented about the housing density being too low in new growth areas to reduce emissions. It is worth noting that a blanket target of 30 DPH "over time" (ie. medium density) is much lower than what has been needed overseas to enable development of low-emissions urban systems. Higher density style housing also provides more flexibility/adaptive capacity as public green space which can accommodate expansion of blue-green infrastructure solutions tends to be maximised.

Issue 3: Climate resilient development

Option 3A: Note the submissions and make no changes.

Advantages	**Disadvantages**
There are no changes required to the Strategy and *Principle 2* (page 67), refers to climate resilience development.	Does not address the importance of considering the health, safety and wellbeing of people in climate resilience development.

Financial implications
None. No changes are required under this option.
Other considerations
None.

[3] Walker, J. 2012. Human Transit: How clearer thinking about public transit can enrich our communities and our lives.

(Recommended) Option 3B: Amend paragraph text of key climate resilience challenge 9 as follows (changes shown in underlined text): "…Resilience must also be considered in the context of long-term sustainability, such that even the most resilient communities may not be sustainable in the long term due to the impact of the rising seas on their communities. In navigating these challenges, it is crucial to incorporate the prioritisation of health, safety and wellbeing of people, particularly for vulnerable populations into climate resilience development strategies".	
Advantages • The Strategy prioritises the health, safety and wellbeing of people particularly for the vulnerable population when considering climate resilience development. • Addresses the recommendations of the submitter to include consideration of elderly population during extreme heat environments resulting from climate change.	**Disadvantages** None identified.
Financial implications	
None. Minor textual changes are required.	
Other considerations	
The submitter has made recommendations for the Strategy to include design considerations for homes to be safer during extreme heat particularly for the elderly and vulnerable population. The recommendations are specific to building design and development and applicable at a regulatory level such as through resource or building consent matters. However, based on the recommendations from the submitter, there is an opportunity to incorporate the health, safety and wellbeing of people particularly the elderly and vulnerable when developing with climate resilience in mind by including this in the chapter.	

Issue 4: Climate change action	
Option 4A: Note the submissions and make no changes.	
Advantages No changes to be made to the Strategy.	**Disadvantages** There is no clarity in the Strategy around the need for a climate action plan.

Financial implications
None. No changes are required.
Other considerations
The Strategy has tried to highlight the importance of incorporating resilience into development, refer Principle 2, page 67. The Strategy does consider impacts from rising sea levels (page 69) and tsunamis (page 49). Refer to the maps in the strategy that identify areas at risk from climate change (map 5). The Strategy proposes to incorporate the principle of ecosystems and biodiversity as noted in Principle 3 (page 67). Furthermore, the Strategy notes in the growth directives the mitigation approach for coastal, terrestrial and freshwater ecosystems (page 77).

(Recommended) Option 4B: For clarity, note SmartGrowth's support for the various climate action plans and initiatives. Amend paragraph text of *regional, sub-regional and district responses* as follows (changes shown in underlined text):

"Initiatives and plans are also in place or in development at a regional and district level including the Bay of Plenty Regional Council Climate Change Action Plan 2021, Western Bay of Plenty District Council Climate Change Action Plan 2021 and Tauranga City Council Climate Action and Investment Plan and Nature and Biodiversity Action and Investment Plan. This Strategy supports the implementation of the various climate action plans and initiatives for the western Bay of Plenty…"

Advantages	**Disadvantages**
• The climate resilience chapter refers to the climate action plans and initiatives in place or in development at a regional and district level (refer page 73). • Enables the Strategy to provide a strong strategic direction and support for the current and developing climate action plans and initiatives for the western Bay of Plenty. • Avoids duplication of actions and initiatives of various existing climate action plans for the western Bay of Plenty.	None identified.

Financial implications
TBC
Other considerations

The Strategy notes on page 73 that "Initiatives and plans are also in place or in development at a regional and district level including the Bay of Plenty Regional Council Climate Change Action Plan 2021, Western Bay of Plenty District Council Climate Change Action Plan 2021 and Tauranga City Council Climate Action and Investment Plan and Nature and Biodiversity Action and Investment Plan. The effects of climate change on natural hazards are also fully considered in accordance with the natural hazards framework established under the Bay of Plenty Regional Policy Statement (2016) for the planned urban growth area".

The Tauranga City Council's Climate Action and Investment Plan (Climate AIP) includes a plan of actions and investments over the short, medium, and long term which will aim to achieve the goals in Tauranga Taurikura Environment Strategy for a 'low emissions and climate resilient city'.

Recommended Decision
Issue 1: Managed retreat
Option 1B: Amend paragraph text of *key climate resilience challenge 3* as follows (changes shown in underlined text): "...We do not yet have a good understanding of how these long-term changes will affect people in these exposed locations, and we will need to be proactive in working with exposed communities, anticipate the support that may be required, and offer equitable solutions. We will need to ensure any adaptation options are planned and implemented with meaningful involvement from communities with policy and resourcing support from central government to help facilitate a process with clear expectations and outcomes. We can manage further development in high hazard areas to mitigate exposure, while aiming to manage vulnerability". **Reasons for recommendations:** • Enables the strategy to provide clear direction in promoting a community-led approach and process when preparing for climate adaptation. This is consistent with best-practice. • There is an existing case study in the Strategy (page 78) that demonstrates the effectiveness of a community-led process in preparing a climate change adaptation plan.
Issue 2: Emissions reductions targets
Option 2B: Amend paragraph text of *Principle 1*, as follows (changes shown in underlined text): "This could happen through designing multi-modal transport into existing, and ahead of, new development. Design and development of new buildings and community centres could facilitate reduced emissions outcomes through energy use, remote working patterns, carpooling, park and ride initiatives, active transport, and accessibility to frequent, reliable and innovative public transport services including along existing and future public transport corridors. Emissions could be captured through enhancing and restoring local ecosystems or establishing new ones". **and** Amend *growth directive 3* as follows (changes shown in underlined text): "3. Development and infrastructure are planned to encourage and enable emissions reductions and be resilient and adaptive to climate change and natural hazards". **Reasons for recommendation:**

- There are many forms of multi-occupant vehicles, all of which are better for the environment than the same individuals driving alone. Carpooling is one such tool for regularly scheduled commutes.
- This principle should be applied to all new development and public transport must also be considered in these new developments to reduce carbon emissions.

Issue 3: Climate resilient development

Option 3B: Amend paragraph text of *key climate resilience challenge 9* as follows (changes shown in underlined text):

"…Resilience must also be considered in the context of long-term sustainability, such that even the most resilient communities may not be sustainable in the long term due to the impact of the rising seas on their communities. In navigating these challenges, it is crucial to incorporate the prioritisation of health, safety and wellbeing of people, particularly for vulnerable populations into climate resilience development strategies".

Reasons for recommendation:

- Health, safety and wellbeing of all people is an important consideration when designing homes to be safer during extreme weather-related events.
- Considering the needs of the most vulnerable population in climate resilient development strategies ensures the benefits of meeting their needs extends to the health, safety and wellbeing of the whole population.

Issue 4: Climate change action

Option 4B: For clarity, note SmartGrowth's support for the various climate action plans and initiatives. Amend paragraph text of *regional, sub-regional and district responses* as follows (changes shown in underlined text):

"Initiatives and plans are also in place or in development at a regional and district level including the Bay of Plenty Regional Council Climate Change Action Plan 2021, Western Bay of Plenty District Council Climate Change Action Plan 2021 and Tauranga City Council Climate Action and Investment Plan and Nature and Biodiversity Action and Investment Plan. This Strategy supports the implementation of the various climate action plans and initiatives for the western Bay of Plenty…"

Reasons for recommendation:

• Enables the Strategy to provide a strong strategic direction and support for the current and developing climate action plans and initiatives for the western Bay of Plenty. • Avoids duplication of actions and initiatives of various existing climate action plans for the western Bay of Plenty.

Decision
(To be completed in the decision-making meeting)
Reason
(To be completed in the decision-making meeting)

Date approved:

Approved by: