

**BEFORE THE INDEPENDENT HEARINGS PANELS APPOINTED TO HEAR AND MAKE
RECOMMENDATIONS ON SUBMISSIONS AND FURTHER SUBMISSIONS ON PROPOSED CHANGE 1
TO THE REGIONAL POLICY STATEMENT FOR THE WELLINGTON REGION**

UNDER Schedule 1 of the Resource Management
Act 1991 (the Act)

IN THE MATTER OF Hearing Submissions and Further
Submissions on Proposed Change 1 to the
Regional Policy Statement for the
Wellington Region

**REPLY EVIDENCE OF JEROME GEOFFREY WYETH
ON BEHALF OF WELLINGTON REGIONAL COUNCIL**

**HEARING STREAM THREE – CLIMATE CHANGE SUBTOPICS
(GENERAL, AGRICULTURAL EMISSIONS, AND ENERGY, INDUSTRY
AND WASTE)**

21 September 2023

TABLE OF CONTENTS

INTRODUCTION 3

QUALIFICATIONS AND EXPERIENCE 3

HEARING STREAM 3 – COUNCIL’S REPLY: THREE SUBTOPICS..... 3

OTHER MATTERS RAISED DURING THE HEARING 21

APPENDIX 1: RECOMMENDED AMENDMENTS TO HEARING STREAM 3 PROVISIONS (GENERAL,
AGRICULTURAL EMISSIONS, ENERGY, WASTE AND INDUSTRY) 22

INTRODUCTION

1 My full name is Jerome Geoffrey Wyeth. I am a Principal Planning and Policy Consulting at 4Sight Consulting – Part of SLR. I am the section 42A report author for three climate change subtopics in Hearing Stream 3 (general, agricultural emissions, and energy, industry and waste) and attended the hearings for this topic on 28 and 29 August 2023.

QUALIFICATIONS AND EXPERIENCE

2 My qualifications and experience are set out in my section 42A reports¹ for the three subtopics, dated 31 August 2023. I repeat the confirmation given in those reports that I have read and agree to comply with the Code of Conduct for Expert Witnesses.

HEARING STREAM 3 – COUNCIL’S REPLY: THREE SUBTOPICS

3 On 8 September 2023, the Hearing Panels issued Minute 12 which provides direction for reply evidence and expert caucusing for Hearing Stream 3. That minute in paragraph 6 sets out a number of specific questions relating to three climate change subtopics (general provisions, agricultural emissions, and energy, waste and industry. Those questions and my response to each are set out below. I have also provided some additional responses to address matters raised during the hearing in respect of the same three topics. In addition, I note that Mr Roos is providing further technical evidence on climate change targets in response to issues raised at the hearing.

4 Where I recommend further amendments to the provisions, these are shown in green underlined and ~~marked-up~~ text where relevant within this reply evidence. I have also provided the updated recommendations to the provisions in Appendix 1 of this evidence.

Question a: Any recommended changes to the categorisation of provisions between the freshwater and non-freshwater processes

5 I address the categorisation of provisions between the freshwater planning process and standard Resource Management Act 1991 (RMA) Schedule 1 process in my section 42A reports² for these three climate change subtopics and recommend that all provisions be

¹ Paragraph 14-22 in Climate Change – General section 42A report, paragraph 15-22 in Climate Change – Agricultural Emissions section 42A report, paragraph 15-23 in Climate Change – Energy, Industry and Waste section 42A report.

² Paragraph 52-60 in Climate Change – General section 42A report, paragraph 40-49 in Climate Change – Agricultural Emissions section 42A report, paragraph 51-59 in Climate Change – Energy, Industry and Waste section 42A report.

considered under the standard RMA Schedule 1 process. I do not recommend any further changes to the categorisation of provisions as a result of hearing submitters.

Subtopic: general provisions

Question b: In the Introduction (3.1A Climate Change), it is not clear what report is being referred to.

6 The recommended amendments in Appendix 1 of my rebuttal evidence for the Climate Change – General topic unintentionally omitted footnote 1 from the second paragraph in the introduction to Chapter 3.1A in Change 1. The report being referred to is “NIWA, 2017: *Climate change and variability – Wellington Region*” which can be found on-line: [NIWA Client report \(gw.govt.nz\)](https://www.niwa.co.nz/client-reports/2017-climate-change-and-variability-wellington-region). A footnote and reference to the report is included in the provisions in Appendix 1 of this evidence.

Question c: In the paragraph beginning “In 2019, Greater Wellington Regional Council declared a climate emergency”, can the Council please provide more information on the ‘Regional Climate Emergency Response Programme’. What is the current status of this Programme and who are the other parties/agencies involved in it? Does Council know whether the intention is for regional emissions targets to be set through this Programme?

7 As relates to information from the Council, and not my expert opinion, I obtained the following response from Council officers Mr Jake Roos, Manager, Climate Change and Ms Suze Keith, Senior Advisor, Climate Change:

Following the declaration by Greater Wellington Regional Council (the Council) of a climate emergency in 2019, the Council developed a Climate Emergency Response Programme, with two 10-point plans: the Corporate Carbon Neutrality Action Plan and the Regional Climate Emergency Plan (the Plans) that describe the main activities that the Council will take or is taking to address the Climate Emergency.

In 2022, Council officers commenced a review of the Plans to clarify what:

- *The Council is doing now that we need to continue, update, or better define;*
- *New actions are needed to reduce emissions, manage risks or adapt to climate change impacts, and*
- *The highest priorities for action are.*

As a result, the Plans have been redrafted and endorsed by the Council’s Climate Committee. They can be found here: [Greater Wellington — Climate change \(gw.govt.nz\)](https://www.gw.govt.nz). Please note the Corporate Carbon Neutrality Plan has been renamed to the Organisational Climate Emergency Action Plan to encompass organisational adaptation in addition to mitigation.

Note that some of these actions will be achievable within existing budgets and work programmes, however those actions that require further support to proceed will be assessed through the 2024-34 Long-Term Plan process. There are likely to be further updates to the Plans following this and before they are presented to the Council for formal adoption. Some of the actions are fully within the Council’s remit, however others require working with mana whenua/tangata whenua, territorial authorities and central government. There is no action to set emissions reduction targets for the region. There is an action for the Council to support implementation of the Regional Policy Statement climate change policies and targets, whatever the final versions of these are.

The Regional Emissions Reduction Plan being developed by the Wellington Regional Leadership Committee has not set any emissions reduction targets, instead it has referred to those proposed by the Regional Policy Statement and those adopted by central government. This is not specifically a Greater Wellington project, but one in which Greater Wellington is a participating partner.

Question d: Issue 3 – After hearing submitters, can Mr Wyeth please consider whether alternative wording to “traditional approaches” is appropriate given the possible association of ‘traditional’ with Te Āo Māori.

8 I have discussed this with the section 42A report for the natural hazards and we both consider that “conventional” would be a suitable replacement for “traditional”. This will help avoid the potential ambiguity that the use of the term “traditional” in Climate Change Issue 3 implies an association with Te Ao Māori, which is not the intent. This amendment is shown in the provisions in Appendix 1 of this evidence.

Question e: Issue 5 – Can the relevant section 42A officers consider whether ‘Te Rito o Te Harakeke’ is appropriate in this issue statement given the evidence of submitters on the natural hazards provisions.

9 I have discussed with the relevant section 42A report officers, and we consider that this issue is best addressed in Hearing Stream 6 – Indigenous Ecosystems with consequential amendments to Climate Change Issue 5 either addressed at that hearing or at Hearing Stream 7 – Wrap up and Integration.

10 The reason for this is that the National Policy Statement for Indigenous Biodiversity 2023 (NPSIB) came into force after Change 1 was notified and no longer includes any reference to Te Rito o Te Harakeke. The references to this concept in the relevant Change 1 provisions therefore require more detailed consideration and engagement with mana whenua/tangata whenua which we consider is best addressed in Hearing Stream 6 – Indigenous Ecosystems.

Question f: Objective CC.2 – Given Mr Wyeth’s support for this objective, does he still consider it appropriate to delete Policy IM.2 (part of the Hearing Stream 2 provisions)? This may be a point Mr Wyeth wants to come back to in Hearing Stream 7 – Wrap up and Integration.

11 I address this question in paragraph 37 of my rebuttal evidence for the Climate Change – Energy, Waste and Industry topic in response to comments made by Ms McGruddy on behalf of Wairarapa Federated Farmers. In that evidence, I acknowledge that my recommendation to delete Policy IM.2 (Equity and inclusiveness) in Hearing Stream 2 may appear inconsistent with my recommendation to refer to an equitable transition in Objective CC.2. However, I note that the context and issues associated with the term ‘equity’ is different between Objective CC.2 and Policy IM.2 as:

11.1 Objective CC.2 is specific to the costs and benefits of transitioning to a low-emission and climate-resilient region where there is a high-risk of inequitable outcomes for different sectors and parts of the community.

11.2 Objective CC.2 is specific to climate change where the concept of an equitable transition is well understood and supported by national policy (i.e. Aotearoa’s first Emissions Reduction Plan) and this concept is equally important in a regional context in my opinion.

11.3 Policy IM.2 was broader in scope and had a range of different interpretation and implementation issues in my opinion than Objective CC.2. For example, Policy IM.2 provided another level of assessment that would apply to all relevant planning and consenting processes rather than being specific to

climate change and included a number of subjective, and potentially debatable, terms.

- 12 For these reasons, and the reasons set out in Hearing Stream 2³ to support my recommendation that Policy IM.2 be deleted, I am still of the opinion that Policy IM.2 should be deleted.

Question g: Objective CC.3 – Can Mr Wyeth please review the wording and advise whether he recommends amendments to clarify whether the intention in this objective is to refer to ‘net’ or ‘gross’ greenhouse gas emissions.

- 13 As discussed at the hearing, there are some inconsistencies and potential confusion in relation to use of the term “greenhouse gas emissions” in the relevant Change 1 provisions, in terms of whether this is referring to “net” or “gross” emissions. In this context, it is also important to note that in my section 42A report for the Climate Change – General subtopic, I recommended that the two notified definitions for “emissions” and “greenhouse gases” be replaced with a single definition for “greenhouse gas emissions” in response to submission points from Greater Wellington Regional Council.

- 14 At a general level, the intent is that any reference to greenhouse gas emissions in the relevant Change 1 provisions means “gross” unless expressly stated otherwise. I consider that this could be clarified in the relevant Change 1 provisions by either:

14.1 Stating “gross” or “net” wherever the term “greenhouse gas emissions” is used;
or

14.2 Amending the definition of “greenhouse gas emissions” to state that this means “gross” unless expressly stated as “net-emissions”.

- 15 I recommend the latter with my recommended amendments shown below and also in the provisions set out in Appendix 1 of this evidence.

Greenhouse gas emissions

Atmospheric gases released into the atmosphere that trap or absorb heat and contribute to climate change. These gases covered by the Climate Change Response Act 2002 are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride

³ Refer paragraph 66-68 of my rebuttal evidence for Hearing Stream 2 – Integrated Management.

(SF6) which are all covered by the Climate Change Response Act 2002. A reference to greenhouse gas emissions means “gross” greenhouse gas emissions unless otherwise expressed as “net greenhouse gas emissions” or “net-zero”.

- 16 I have discussed this with the other section 42A report authors for this topic and the use of the terms “greenhouse gas emissions”, “net greenhouse gas emissions” and “gross greenhouse gas emissions” will be reviewed for consistency when providing the Panel’s with a set of consolidated provisions for the entire Climate Change topic.
- 17 The Objective CC.3 targets relate to “net greenhouse gas emissions” and apply to the region as a whole, taking into account sources of greenhouse gas emissions and sinks. This is reflected in the chapeau of Objective CC.3 which states “*net greenhouse gas emissions in the Wellington Region are reduced...*” and in clause (b) of the objective which refers to “*net zero greenhouse gas emissions*”. However, clause (a) also needs to refer to “net greenhouse gas emissions” for clarity and consistency and I recommend this amendment in the provisions in Appendix 1 of this evidence.
- 18 For completeness, I note that the only other Change 1 provision that specifically refers to “net greenhouse gas emissions” is Policy CC.8. The reference to net greenhouse gas emissions within Policy CC.8 is deliberate, as that policy provides overarching direction on the approach to reduce greenhouse gas emissions in the region by prioritising a reduction in gross greenhouse gas emissions over a reduction in net greenhouse gas emissions.

Question h: Objective CC.7 – Can Mr Wyeth provide more information on how this objective would be measured and how Council would know if it was being achieved?

- 19 I address this question in paragraph 230 of my section 42A for the Climate Change – General topic where I state: “*I also consider that Objective CC.7 is measurable as this can be achieved through public surveys on climate change awareness and actions and through measuring community involvement in non-regulatory methods to achieve Objective CC.7*”.
- 20 My understanding is that surveys of public awareness of climate change and environmental issues are relatively common (or certainly not uncommon)⁴. I also understand that Greater Wellington Regional Council has undertaken regular research on public perceptions of

⁴ Refer for example, this National Survey of New Zealander’s attitude to climate change: and a local example of a survey on shifting to low-carbon Kāpiti: [NZ Attitudes and Behaviours towards Climate Change | Ipsos](https://kapiticoast.govt.nz/media/acjlm4j1/shifting-to-a-low-carbon-kapiti.pdf)
<https://kapiticoast.govt.nz/media/acjlm4j1/shifting-to-a-low-carbon-kapiti.pdf>

climate change⁵. Therefore, I remain of the opinion that the “understanding climate change” outcome in Objective CC.7 is measurable through methods such as public surveys and expect that Greater Wellington will undertake a more detailed assessment of public understanding of climate change and its impacts in the future to assess the effectiveness and efficiency of the climate change provisions in Change 1.

21 In terms of the “active involvement in appropriate adaptation and mitigation responses” outcome in Objective CC.7, I remain of the opinion this can be measured through monitoring community involvement in the non-regulatory climate change policies and methods in Change 1. For example, I expect this would likely involve monitoring community involvement in:

21.1 Strategic adaptation plans under Policy CC.16.

21.2 Climate education and behaviour change programmes under Method CC.1.

21.3 Rural resilience climate change programmes under Method CC.8.

22 It could also involve reviewing uptake of other climate change initiatives in the region such as the uptake of Wellington City Council’s climate and sustainability fund⁶. As such, I consider the achievement of Objective CC.7, within the powers, functions and resources of Greater Wellington Regional Council, can be measured.

Question i: Objective CC.8 – Can Mr Wyeth consider alternative wording to bring in the concept of partnering with mana whenua/tangata whenua (see Method CC.1).

23 I support the intent of amending Objective CC.8 to bring in the concept of partnering with mana whenua/tangata whenua, noting that this is consistent with my recommendations to Method CC.1 (Climate change education and behaviour change programme). However, in my opinion, this may create some confusion between the outcomes sought in Objective CC.8 (i.e. mana whenua/tangata whenua are empowered to achieve climate-resilience in their communities) and the actions to achieve this (i.e. Greater Wellington Regional Council working in partnership with mana whenua/tangata whenua to implement climate-resilience planning and adaptation measures).

⁵ See for example, the slides on “attitudes towards climate change” in the following presentation [PowerPoint Presentation \(gw.govt.nz\)](#).

⁶ Refer: [Community support - Climate and Sustainability Fund - Wellington City Council](#)

- 24 I also consider that this would also slightly change the intent of Objective CC.3 from one of empowering mana whenua/tangata whenua to achieve climate resilience in their own community (i.e. exercising their own autonomy) to more of a partnership approach with Greater Wellington Regional Council to achieve climate resilience in their communities. There may also be instances when a partnership approach with Greater Wellington is not preferred by mana whenua/tangata whenua, such as when they want to make their own decisions about how best to achieve climate-resilience in their communities.
- 25 I therefore consider that the wording for Objective CC.8 as recommended in my section 42A report for the Climate Change – General topic should be retained on the basis this provides more flexibility at the objective level and that Method CC.1 retains the direction to work in partnership with mana whenua/tangata whenua as one method that will help give effect to Objective CC.8.

Question j: Policy CC.8 – various submitters raised concerns about the implementation of this policy. Can the Council provide more information about how it sees this policy being implemented through district and regional plans. How do District Councils implement the policy in advance of Regional Council co-ordination and guidance (as mentioned in the explanatory text).

26 As I understand it, the intent of Policy CC.8 as notified is to set some overarching direction on, and key principles to guide, the overall approach to reduce greenhouse gas emissions in the region. The notified version of Policy CC.8 was focused on providing direction to prioritise reducing gross greenhouse gas emissions over offsetting. In my section 42A report for the Climate Change – General topic, I recommend a number of amendments to Policy CC.8 to have less focus on offsetting and instead provide on overarching hierarchy to:

- 26.1 Prioritise avoiding (new) or reducing (existing) gross greenhouse gas emissions where practicable.
- 26.2 Reducing net greenhouse gas emissions when avoiding or reducing gross greenhouse gas emissions is not practicable. This is coupled with direction that any proposed offsetting is to be undertaken as close to the source as possible.
- 26.3 Avoiding increases in net greenhouse gas emissions when the two steps above are not practicable.

27 I still consider that these guiding principles in Policy CC.8 are sound and important to avoid an overreliance on net emissions and offsetting emissions which, to date, is primarily achieved through planting (primarily exotic) trees. However, I acknowledge that Policy CC.8

still has some implementation issues and questions and that more detailed policy work is required to understand when and how the policy can be effectively and efficiently implemented through regional and district plans and what those provisions may look like. That is the rationale for my recommended amendments to Method CC.2 (Develop guidance on avoiding, reducing and offsetting emissions) to enable guidance to be developed to direct how to implement the policy in a co-ordinated and effective way, as noted in the explanation for Policy CC.8.

28 The issue of timing between the development of guidance under Method CC.2 and giving effect to Policy CC.8 was raised in the evidence Mr Rachlin on behalf of Porirua City Council and addressed in paragraph 104 of my rebuttal evidence. In that evidence I state that it is unnecessary to defer implementation of Policy CC.8 until the guidelines recommended under Method CC.2 are available as:

28.1 There are no prescribed timeframes to implement Policy CC.8; and

28.2 I would naturally expect local authorities to implement Policy CC.8 after the Method CC.2 guidelines are available.

29 However, it is clear that uncertainties remain on exactly how and when Policy CC.8 should be implemented through regional and district plans and what this might involve over and above more specific climate change provisions in Change 1 relating to transport, urban development, agriculture, carbon sequestration etc.

30 To address these concerns and uncertainties while still retaining the overarching direction in Policy CC.8 on how to most effectively reduce greenhouse gas emissions in the region, I consider that there are two main options:

30.1 Option 1 - Amend Policy CC.8 to make it clear that this does not need to be implemented until the guidelines under Method CC.2 are available (without precluding a plan change to give effect to Policy CC.8 being notified in advance of this); and/or

30.2 Option 2 - Amend Policy CC.8 to be reframed as direction to be given effect to where relevant and achievable when implementing the other climate change provisions in Change 1 rather than requiring a plan change in and of itself.

31 On balance, I recommend Option 2 as this retains the overarching direction on how to most effectively reduce greenhouse gas emissions in the region throughout the climate

change provisions in Change 1 without requiring a separate plan change per se. In my opinion, this can be best achieved through amendments to the chapeau of Policy CC.8 as set out below and Appendix 1.

Policy CC.8: Prioritising the reduction of greenhouse gas emissions reduction over offsetting – district and regional plans

When giving effect to the climate change objectives and policies in the RPS, District and regional plans shall, where relevant, include objectives, policies, rules and/or methods to prioritise reducing greenhouse gas emissions in the first instance rather than applying offsetting, and to identify the type and scale of the activities to which this policy should apply. prioritise reducing greenhouse gas emissions by applying the following hierarchy in order ...:

32 I consider that these recommended amendments are an appropriate way to achieve the relevant RPS objectives in terms of section 32AA of the RMA as:

32.1 The amendments retain the direction on how to most effectively reduce greenhouse gas emissions in the region to achieve the climate change objectives in Change 1, in particular Objective CC.1 and Objective CC.3.

32.2 The amendments will be more efficient through applying the direction throughout the climate change provisions in Change 1 rather than requiring a separate plan change per se.

33 I also recommend consequential amendments to the explanation of Policy CC.8 and Method CC.2 to align with the recommended amendment as set out in Appendix 1. I recommend that Method CC.2 is slightly reframed to focus on how to apply the hierarchy approach to reducing greenhouse gas emissions across all relevant climate change provisions in Change 1 not just Policy CC.8.

34 During the hearing, the Panels also raised a question about the explanation for Policy CC.8 in terms of the opportunities to reduce greenhouse gas emissions from “existing activities” at the time of redevelopment. As discussed at the hearing, the reference to district plans having a limited role in reducing greenhouse gas emissions from existing activities was intended to relate to existing activities operating under an existing consent or existing use rights. There is certainly an opportunity to reduce greenhouse gas emissions from existing activities at the time of redevelopment. I recommend a minor amendment to the Policy CC.8 explanation to make this intent clearer.

Question k: Anticipated Environment Results (AER)– Does the first AER relate to Obj CC.1 and/or Obj CC.3? Can Council please advise whether there is scope within submitter relief to include an AER for Objectives CC.5, CC.7 and CC.8. If so, can the s42A authors please include suggested wording for these AER.

35 Firstly, I note that there is an original submission from Ātiawa [S131.0151] which supports the intent of the Climate Change Anticipated Environment Results (AER) notified in Change 1, but considers it is too narrow and should be expanded. More specifically, the submission states “*Ātiawa is concerned that no other AER have been included under the kaupapa 'climate change' that address the other objectives and the issues they seek to address such as permanent forest cover, use of nature-based solutions, education programmes, and mana whenua climate change planning to better cover the scope of Objective CC.3 and other climate change objectives*”. As such, I consider that there is scope to provide an AER for each of the eight climate change objectives in Change 1. I also consider that this is appropriate to help ensure the climate change objectives in Change 1 are measured, consistent with other RPS objectives.

36 I have discussed this with the relevant section 42A report officers and we have recommended additional AER’s for Objective CC.1 (noting that the climate change AER’s for objectives CC.3-CC.7 are also relevant to achieving this objective), Objective CC.2, Objective CC.5, Objective CC.7 and Objective CC.8. These are provided in the provisions in Appendix 1 of this evidence.

Subtopic: Agricultural Emissions

Question l: Is the intention in Policy CC.5 to refer to net or gross emissions?

37 As per my response to question g. above in relation to Objective CC.3, the intent of Policy CC.5 is to require a reduction in **gross** greenhouse gas emissions from agriculture. This recognises that some level of reduction in gross greenhouse gas emissions from agriculture is needed to achieve the targets in Objective CC.3 without specifying the quantum of what that should be. My recommended amendments to Objective CC.3 also refer to these targets supporting the national emission reduction targets (i.e. those in the Climate Change Response Act 2002) which sets 2030 and 2050 reductions targets for emissions of biogenic methane.

Question m: Can Mr Wyeth explain how Te Mana o te Wai would be given effect to in Policy CC.15 and Method CC.8.

38 Firstly, it is important to recognise the integrated nature of Change 1 which as a whole seeks to give effect to Te Mana o te Wai, while not necessarily achieving this through every provision. The provisions of most relevance to Te Mana o te Wai will be discussed in detail in Hearing Stream 4 and this includes significant amendments to Chapter 3.4: Freshwater of the RPS to give effect to the NPS-FM and Te Mana o te Wai.

39 Secondly, in my opinion, the outcomes sought in Policy CC.15 and Method CC.8 broadly align with Te Mana o te Wai. Policy CC.15 seeks to improve climate change mitigation and adaptation efforts in rural areas through sustainable land-uses and management practices, which is likely to include some transition in land-use to less intensive, lower emission land-uses. Policy CC.15 also gives preference to climate change efforts that also deliver co-benefits, including for freshwater. Similarly, Method CC.8 seeks to undertake actions to support low-emissions and climate-resilient agriculture, which is consistent (or at least not inconsistent) with Te Mana o te Wai.

40 Finally, I note that Policy 1 of the NPS-FM requires that freshwater is managed in a way that gives effect to Te Mana o te Wai. As outlined in paragraph 48-49 of my section 42A report for the Climate Change – Agricultural Emissions topic, I recommend that both Policy CC.15 and Method CC.8 are considered under the standard RMA Schedule 1 process as neither provision has a direct enough association with matters that impact on water quality or quantity to be included in a Freshwater Planning Instrument. It therefore logically follows in my opinion that Policy CC.15 and Method CC.8 do not need to give effect to Te Mana o te Wai in the same way as provisions that directly relate to the management of freshwater.

Subtopic: Energy, Waste and Industry

Question n. Can Council please confirm whether Policy 2(c) and (d) can be deleted in light of national direction (eg NPS or NES on Industrial Process Heat).

41 This is discussed in my section 42A report for the Climate Change – Energy, Waste and Industry topic. The question is whether recently gazetted national direction on industrial

process heat (the 'NPS' and the 'NES')⁷ sufficiently covers the matters referred to Policy 2(c) and (d) notified in Change 1 being:

- 41.1 Reduce greenhouse gas emissions from industrial processes.
- 41.2 Phase out use of coal for fuel source for domestic fires.
- 41.3 Phase out use of coal for fuel source for large-scale generators.

Reduce greenhouse gas emissions from industrial processes

42 To respond to this question, it is necessary to understand the scope of the national direction on greenhouse gas emissions from industrial process heat which I was closely involved in the development of with the Ministry for the Environment. In summary, the scope of this national direction is as follows:

- 42.1 The NPS and NES regulate the discharge of greenhouse gas emissions from a “heat device” that produces “industrial process heat”. Industrial process heat is defined in the NES as “(a) means thermal energy that is used— (i) in industrial processes, including in manufacturing and in the processing of raw materials; or (ii) to grow plants or other photosynthesising organisms indoors (b) does not include thermal energy used in the warming of spaces for people’s comfort (for example, heating of commercial offices)”.
- 42.2 The NPS and NES apply to greenhouse gas emissions from heat devices burning coal and other fossil fuels (including natural gas, diesel, oil etc.).
- 42.3 The NPS and NES do not apply to:
 - 42.3.1 ‘Low-emission sites’ which are sites that, each year, emit less than 500 tonnes of carbon dioxide equivalent of greenhouse gases from heat devices.
 - 42.3.2 Devices used for the primary purpose of generating or transmitting electricity.

⁷ This national direction is a national policy statement and national environmental standards intended to work together. Refer: [National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat-2023.pdf \(environment.govt.nz\)](#) and [Resource Management \(National Environmental Standards for Greenhouse Gas Emissions from Industrial Process Heat\) Regulations 2023 \(SL 2023/165\) 3 Interpretation – New Zealand Legislation](#)

43 In summary, the NPS and NES apply to the discharge of greenhouse gas emissions from the burning of fossil fuels to generate heat for industrial processes with some specific exceptions. Those exceptions were carefully considered by the Government in developing the national direction⁸. I therefore remain of the opinion that Policy 2(c) should be deleted from Change 1 on the basis that greenhouse gas emissions from industrial processes are now comprehensively regulated through this recently gazetted national direction. More specifically, there is no need for the RPS to provide direction for regional plans to manage greenhouse gas emission from industrial process heat as:

43.1 The NPS provides clear policy direction on how to reduce greenhouse gas emissions from industrial process heat and requires certain provisions to be directly inserted into regional plans without going through the RMA Schedule 1 process under section 55(2A) of the RMA.

43.2 The NES provides a comprehensive set of rules and standards to regulate the discharge of greenhouse gas emission from industrial process heat (with different rules for coal and other fossil fuels and for new and existing heat devices). It does not allow regional plan rules to be more stringent or lenient therefore any rule developed under Policy 2(c) to manage these greenhouse gas emissions from industrial process heat would be contrary to section 44A of the RMA⁹.

Phase out use of coal for fuel source for domestic fires

44 Coal use for domestic fires is not regulated though the national direction referred to above. However, in paragraph 79 of my section 42A report for this topic, I note from the Change 1 Section 32 Report that there is only approximately 0.3% of households in the region that use coal and that this represents a fraction of greenhouse gas emissions in the region. From discussions with Council staff, I also understand that coal use is being phased out due to cost and availability of more efficient forms of domestic heating. As such, in my opinion, there is no need for regulatory intervention through Change 1 or regional plans to phase out domestic coal-use and I retain the view this can be deleted from Policy 2(d).

⁸ The section 32 report for the national direction provides more detailed overview of policy intent and options considered: [National-Direction-for-Greenhouse-Gas-Emissions-from-Industrial-Process-Heat-Section-32-Report.pdf \(environment.govt.nz\)](#).

⁹ Section 44A of the RMA relates to where plan rules duplicate or conflict with a provision in a NES.

Phase out use of coal for fuel source for large-scale generators

45 Change 1 as notified included a definition of large-scale generators which is referred to in Policy 2(d) as follows: *“Any boiler, furnace, engine or other device designed to burn for the primary purpose of energy production having a net heat or energy output of more than 40kW, but excluding motor vehicles, trucks, boats and aircraft. This definition excludes domestic fires.”* This definition has a high degree of overlap with the definition of heat device in the NES referred to above which is *“**heat device**— (a) means a device that produces industrial process heat (for example, a boiler, furnace, engine, or other combustion device); but ...”*.

46 Policy 2(d) as notified in Change 1 seeks to phase out coal as a fuel source for large-scale generators by 2030. The NES includes a prohibited activity rule for any new heat device using coal (Regulation 7) that applies now and a prohibited activity rule for existing heat devices which takes effect on 1 January 2037 (Regulation 9). Therefore, in principle, Policy 2(d) would require a regional plan rule that is more stringent than the NES as it sets a phase out date for coal (2030) that is earlier than the NES (2037). As noted above, the NES does not allow plan rules to be more stringent and therefore Policy 2(d) as notified would require a regional rule that conflicts with the NES in accordance with section 44A of the RMA. I am therefore still of the opinion that it is appropriate to delete Policy 2(d) as it relates to large-scale generators on the basis this has been superseded by more comprehensive national direction which does not allow regional plan rules to be more stringent.

Question o: Can Mr Wyeth please consider the chapeau of the policies in this subtopic as there is some inconsistency in drafting eg Policy 2 refers to ‘policies, rules and/or methods’, Policy 7 refers to ‘policies and/or methods’ and Policy 11 refers to ‘policies and/or rules and other methods’. None of these policies refer to objectives but we understand that District Plans could still include these. We note that other provisions in this suite, eg Policy 9 (in the transport subtopic) refers to objectives. We would be grateful if the various reporting officers could confer on this issue and provide further advice.

47 I have discussed this issue with the other climate change reporting officers and advise that:

47.1 We are aware of inconsistencies in the chapeau of the Chapter 4.1 policies that should be addressed where relevant and within the scope of Change 1.

- 47.2 We all support reference to “objectives” in the relevant policies for completeness and for the avoidance of doubt. We note however that this will create some internal inconsistencies with RPS policies that are not subject to Change 1.
- 47.3 There are some technical drafting issues with the wording as rules are a type of method. This is reflected in section 62(1(e) of the RMA which states an RPS can include methods (excluding rules). Therefore, we consider the policies should generally refer to “rules and/or other methods” when the intent is to make clear there is discretion to include rules, non-regulatory methods, or both in regional and district plans.
- 47.4 There may be situations where a different drafting approach is appropriate. For example, Policy 9 is specifically related to the Wellington Regional Land Transport Plan (WRLTP), so it is considered appropriate that Policy 9 refers to objectives and policies as it needs to set the strategic framework within the WRLTP.

48 Based on the above, we recommend that the relevant policies are amended to consistently refer to “objectives, policies, rules and/or other methods” except where a different approach is warranted, such as with Policy 9. These amendments will be included in the consolidated provisions for the Climate Change topic requested by the Panels as part of reply evidence for the other climate change topics. In terms of section 32AA of the RMA, I consider that these minor amendments are appropriate as they will improve clarity in interpretation without changing the underlying intent of the relevant policies.

Question p: Can Mr Wyeth please consider what drafting amendments may be appropriate in Policy 7 (or other policies in this subtopic) to recognise and provide for the generation and transmission of renewable energy.

- 49 As noted during the hearing, in my opinion it is appropriate for the level of policy direction for electricity transmission to be consistent with that for renewable energy generation as:
- 49.1 Electricity transmission is recognised as being of national significance through the National Policy Statement for Electricity Transmission 2008 (NPS-ET).
- 49.2 This will better give effect to NPS-ET.

49.3 The transmission of electricity from the source of renewable energy generation to consumers and end-users is critical to enable the electrification of the economy and meet New Zealand’s emission reduction targets. I note that this is widely recognised in the Government’s strategies and plans¹⁰ and through the Government’s proposals for a new NPS-ET which were recently consulted on¹¹.

50 In my section 42A report and rebuttal evidence for the Climate Change – Energy, Waste and Industry topic I make recommendations to Policy 7 and Policy 39 to “recognise and provide for” the benefits of renewable energy generation. I did not make corresponding changes to “recognise and provide for” the benefits of the electricity transmission network due to the existing distinction in the structure of Policy 7 and Policy 39 between renewable electricity generation and regionally significant infrastructure.

51 However, after further consideration of the submission and evidence of Transpower¹² and for the reasons outlined above, I consider that there is scope in submissions and clear direction in the NPS-ET (existing and proposed) to recommend this change.

52 I consider that this is most easily and efficiently achieved through amendments to Policy 7(b) and Policy 39(a) to refer to recognising and providing for the benefits of renewable energy generation and its transmission through the electricity transmission network which is aligned with terminology in the NPS-ET and that used Natural and Built Environment Act¹³. I also recommend consequential amendments so that the benefits of the electricity transmission network I recommend in Policy 7(a)(iv) are moved under Policy 7(b) and slightly expanded to be better aligned with the NPS-REG and NPS-ET. These amendments are shown below and in Appendix 1.

Policy 7: Recognising the benefits from renewable energy and regionally significant infrastructure – district and regional plans

District and regional plans shall include policies and/or methods that ~~recognise~~:
(a) ~~recognise~~ the social, economic, cultural and environmental benefits of *regionally significant infrastructure*, ~~and in particular low and zero carbon regionally significant infrastructure~~ including:

¹⁰ This includes for example, New Zealand’s First Emission Reduction Plan, Climate Change Commission Reports, New Zealand Infrastructure Strategy.

¹¹ Refer: [Consenting improvements for renewable electricity generation and transmission | Ministry of Business, Innovation & Employment \(mbie.govt.nz\)](https://www.mbie.govt.nz/consenting-improvements-for-renewable-electricity-generation-and-transmission)

¹² In particular submission point S10.001 from Transpower NZ Limited which requests that Policy 7 is amended to recognise and provision for electricity transmission and the hearing statement of Ms Eng on behalf of Transpower which seeks that Policy 39 is amended to “recognise and provide for” the electricity transmission network.

¹³ See 129(e) and 439(4)(e) for example.

- (i) people and goods can travel to, from and around the region efficiently and safely and in ways that support the transitioning to low or zero carbon multi modal transport travel modes;
 - (ii) public health and safety is maintained through the provision of essential services: - supply of potable water, the collection and transfer of sewage and stormwater, and the provision of emergency services;
 - (iii) people have access to energy, and preferably low or zero carbon renewable energy, so as to meet their needs;
 - ~~(iv) the provision of an efficient, effective and resilient electricity transmission network; and~~
 - (iv) people have access to telecommunication services.
- (b) recognise and provide for the social, economic, cultural and environmental benefits of energy generated from renewable energy resources and its transmission through the electricity transmission network, including:
- (i) avoiding, reducing and displacing greenhouse gas emissions⁵;
 - (ii) contributing to the security of supply, resilience, independence and diversification of ~~our~~ energy sources and the transmission of this energy to communities, homes and businesses;
 - (iii) reducing dependency on imported energy resources; ~~and~~
 - ~~(iii) reducing greenhouse gas emissions using renewable resources rather than finite resources; and~~
 - (v) the reversibility of the adverse effects on the environment of some renewable electricity generation technologies;
 - (vi) the provision of an efficient, effective and resilient electricity transmission network; and
 - (vii) providing for the economic, social and cultural well-being of people and communities.
- (c) recognise the benefits of regionally significant infrastructure to support reductions in greenhouse gas emissions.

Policy 39: Recognising the benefits from renewable energy and regionally significant infrastructure – consideration

When considering an application for a resource consent, notice of requirement or a change, variation or review of a district or regional plan; ~~particular regard shall be given to:~~

- (a) recognise and provide for the social, economic, cultural, and environmental benefits of energy generated from renewable energy resources and its transmission through the electricity transmission network;

53 These amendments are also shown in Appendix 1. I consider that these recommended amendments are an appropriate way to achieve the relevant RPS objectives in terms of section 32AA of the RMA as:

- 53.1 The amendments will be more effective in achieving the climate change objectives in Change 1 by better recognising the critical role of the electricity transmission network in transitioning to a low-emissions economy.

53.2 The amendments will better give effect to the NPS-ET (noting that further amendments are likely to be required to give effect to the proposed NPS-ET when this comes into effect).

Other matters raised during the hearing

54 I also recommend the following amendments to the climate change provisions in response to issues and questions from the Panel’s during the hearing:

54.1 Climate Change Issue 5 – replace “fresh waterbodies” with “water bodies” to be more consistent with the RMA and NPS-FM terminology.

54.2 Climate Change Issue 6 – refer to “resources and funding” to remove any doubt a lack funding is clearly covered by the issue statement.

54.3 Policy 65 explanation – minor consequential amendments to note that this policy also seeks to increase the proportion of energy generated and used from renewable sources.

55 These amendments are shown in the provisions in Appendix 1 of this evidence.

Response to statements made in the evidence of Ms McDonald – Mangaroa Peatland Focus Group

56 I have investigated the statements made by Ms McDonald in Hearing Stream 3 with the relevant officer at Greater Wellington Regional Council at that time. It is not accepted by that former officer that the comments made by Ms McDonald accurately reflect what was said at that time, including the comments made by Ms Donald at lines 1080-1083, 1109-1112, 1117-1119, 1126-1127, 1140-1142 and 1147-1151 in the Hearing Stream 3 – Day Three transcript.

57 Regardless of what was said at that time, those statements are not relevant to Change 1, which is about determining the most appropriate provisions for the RPS based on the statutory tests in the RMA.

DATE:

21 September 2023

Jerome Wyeth

**Principal Planning and Policy Consultant,
4Sight Consulting – part of SLR**

APPENDIX 1: RECOMMENDED AMENDMENTS TO HEARING STREAM 3 PROVISIONS (GENERAL, AGRICULTURAL EMISSIONS, ENERGY, WASTE AND INDUSTRY)

Section 42A recommendations in **red**, rebuttal recommendations in **blue**, reply recommendations in **green**)

3.1A Climate change – Introduction

As of 2022, long term weather records show that seven of the past nine years have been amongst New Zealand’s warmest on record, with 2021 and 2016 being the two hottest recorded years. In the Wellington Region, we have one of the highest rates of sea level rise in New Zealand due to the effects of global sea level rise, compounded by a regional trend of tectonic subsidence.

Predictions are for significant climate change impacts in the Wellington Region¹⁴ significant impacts by 2090 if global greenhouse gas emissions are not significantly reduced. The annual regional temperatures, for instance, could increase by up to 3°C. The key highlights from the report include:...

Climate Change – Regionally Significant Issues

3. The risks associated with natural hazards are exacerbated by climate change

The hazard exposure of our communities, land, mana whenua/tangata whenua sites, wāhi tapu, infrastructure, food security (including mahinga kai), and water security is increasing because of climate change impacts on a range of natural hazards. Traditional Conventional approaches to development that have not fully considered the impacts on natural systems and, and our over-reliance on Hard engineered protection works that have not been designed to withstand the impacts of climate change, which will are likely to inevitably become compromised overwhelmed and uneconomic to sustain, will which can ultimately increase the risk to communities and the environment.

5. Climate change threatens tangible and spiritual components of mana whenua/tangata whenua Māori well-being

Climate change threatens both the tangible and spiritual components of mana whenua/tangata whenua Māori well-being, including Te Mana o Te Wai and Te Rito o Te Harakeke, mahinga kai, and taonga species, and the well-being of future generations. Significant sites for mana whenua/tangata whenua Māori, such as marae, wāhi tapu and urupā, are particularly vulnerable as they are frequently located alongside the coast and fresh water bodies.

6. Social inertia and competing interests need to be overcome to successfully address climate change

Many people and businesses lack the understanding, resources and funding, ability or support to make the changes needed transition to a low-emissions and climate-resilient future. It can be challenging for people and businesses to make the an understanding of the connection between their actions, greenhouse gas emissions and climate change and the ways that climate change it will impact their lives. In turn, this detracts from our ability to

¹⁴ NIWA, 2017: Climate change and variability – Wellington Region.

~~conceive of the changes we can make to help the transition to a low-emissions and climate-resilient future.~~ Social inertia and competing interests are some of the biggest issues to overcome to address climate change.

Climate Change – Objectives

Objective CC.3

To support the global goal of limiting warming to 1.5 degrees Celsius and New Zealand's greenhouse gas emissions reduction targets, net greenhouse gas emissions from transport, agriculture, stationary energy, waste, and industry in the Wellington Region are reduced:

- (a) By 2030, to contribute to a 50 percent reduction in net greenhouse gas emissions from 2019 levels by 2030, including a:
- (i) 35 percent reduction from 2018 levels in land transport-generated greenhouse gas emissions;
 - (ii) 40 percent increase in active travel and public transport mode share from 2018 levels; and
 - (iii) 60 percent reduction in public transport emissions, from 2018 levels; and
- (b) By 2050, to contribute to achieving net-zero greenhouse gas emissions by 2050.

Climate Change – Policies

Policy 7: Recognising the benefits from renewable energy and regionally significant infrastructure – district and regional plans

District and regional plans shall include objectives, policies, rules and/or other methods that recognise:

- (a) recognise the social, economic, cultural and environmental benefits of regionally significant infrastructure, and in particular low and zero carbon regionally significant infrastructure including:
- (i) people and goods can travel to, from and around the region efficiently and safely and in ways that support the transitioning to low or zero carbon multi modal transport travel modes;
 - (ii) public health and safety is maintained through the provision of essential services:
 - supply of potable water, the collection and transfer of sewage and stormwater, and the provision of emergency services;
 - (iii) people have access to energy, and preferably low or zero carbon renewable energy, so as to meet their needs;
 - (iv) the provision of an efficient, effective and resilient electricity transmission network; and
 - (iv) people have access to telecommunication services.
- (b) recognise and provide for the social, economic, cultural and environmental benefits of energy generated from renewable energy resources and its transmission through the electricity transmission network, including:
- (i) avoiding, reducing and displacing greenhouse gas emissions⁵;
 - (ii) contributing to the security of supply, resilience, independence and diversification of our energy sources and the transmission of this energy to communities, homes and businesses;
 - (iii) reducing dependency on imported energy resources; and
 - (iiiiv) reducing greenhouse gas emissions using renewable resources rather than finite resources; and
 - (v) the reversibility of the adverse effects on the environment of some renewable electricity generation technologies;
 - (vi) the provision of an efficient, effective and resilient electricity transmission network; and

(vii) providing for the economic, social and cultural well-being of people and communities.

(c) recognise the benefits of regionally significant infrastructure to support reductions in greenhouse gas emissions.

Policy CC.8: Prioritising the reduction of greenhouse gas emissions reduction over offsetting – district and regional plans

When giving effect to the climate change objectives and policies in the RPS, Ddistrict and regional plans shall where relevant, include objectives, policies, rules and/or methods to prioritise reducing greenhouse gas emissions in the first instance rather than applying offsetting, and to identify the type and scale of the activities to which this policy should apply. prioritise reducing greenhouse gas emissions by applying the following hierarchy in order:

- a. in the first instance, gross greenhouse gas emissions are avoided or reduced where practicable; and
- (a) where gross greenhouse gas emissions cannot be avoided or reduced, a net reduction in greenhouse gas emissions is achieved where practicable, with any offsetting undertaken as close to the source of the greenhouse gas emissions as possible; and
- c. increases in net greenhouse gas emissions are avoided to the extent practicable.

Explanation: This policy recognises the importance of reducing gross greenhouse gas emissions as the first priority, then reducing net greenhouse gas emissions, then avoiding increases in net greenhouse gas emissions to the extent practicable. and only using carbon removals to offset emissions from hard-to-abate sectors. Relying heavily on net-emissions through offsetting will delay people taking actions that reduce gross emissions, lead to higher cumulative emissions and push the burden of addressing gross emissions onto future generations.

The intent is that Wellington Regional Council will work with city and district councils to provide co-ordination and guidance as to how to implement this policy direction. The intent is, to ensure regional and district plan provisions to reduce greenhouse gas emissions from key emitting sectors in the region support this hierarchy approach to reducing emissions where relevant and appropriate, are co-ordinated and also complement national policy and initiatives. This work will recognise the respective RMA functions of the Wellington Regional Council and city and district councils in relation to controlling greenhouse gas emissions from air discharges and land-use activities and the limited role of district plans in reducing greenhouse gas emissions from existing activities except at the time of redevelopment. This work will consider issues such as scale, equity, and the type of activities to which offsetting should apply.

Policy 39: Recognising the benefits from renewable energy and regionally significant infrastructure – consideration

When considering an application for a resource consent, notice of requirement or a change, variation or review of a district or regional plan: ~~particular regard shall be given to:~~

- (a) recognise and provide for the social, economic, cultural, and environmental benefits of energy generated from renewable energy resources and its transmission through the electricity transmission network;
- (b) recognise the social, economic, cultural, and environmental benefits of other and/or regionally significant infrastructure, in particular including where it contributes to reducing greenhouse gas emissions; and

- (bc) have particular regard to protecting regionally significant infrastructure from incompatible subdivision, use and development occurring under, over, or adjacent to the infrastructure; and
- (ed) I recognise and provide for the operational need and functional~~the need for~~ of renewable electricity generation activities to be in particular locations, including the need to facilities to locate where the renewable energy resources exist; and
- (de) recognise the benefits of utilising the significant wind, solar and marine renewable energy resources within the region and the development of the electricity transmission network to connect the renewable energy resource to distribution networks and end-users.

Policy 65: Supporting and encouraging ~~Promoting~~ efficient use and conservation of resources – non-regulatory

~~To promote~~ Support and encourage the conservation and efficient use of resources by:

- (a) applying the 5 Rs (~~3~~Reduceing, Reuseing, Recycleing, Recover, reycling and Residual waste management);
- (b) reducing organic waste at source from households and commercial premises;
- (c) increasing the diversion of wastewater sludge from wastewater treatment plants before deposition to municipal landfills;
- (d) requiring encourage efficient municipal landfill gas systems;
- (e) increasing the proportion of energy generated and used from renewable sources;
- (ef) using water and energy efficiently; and
- (fg) conserving water and energy.

Explanation: Policy 65 supports and encourages ~~promotes~~ the efficient use of resources to waste and to reduce greenhouse gas emissions. The policy endorses the waste hierarchy, supports increasing generation and use of renewable energy, and also promotes similar principles for efficient water and energy use.

Climate Change – Methods

Method CC.2: Develop carbon emissions offsetting guidance on avoiding, reducing and offsetting greenhouse gas emissions

Greater Wellington will work with city and district councils and mana whenua/tangata whenua to develop guidelines to implement the hierarchy approach to reducing greenhouse gas emissions in Policy CC.8 by the end of 2024, including how to prioritise avoiding and reducing gross greenhouse gas emissions and when and how to allow for greenhouse gas emissions to be offset Develop offset guidelines to assist with achieving the regional target for greenhouse emissions where reduction cannot be achieved at the source.

Implementation: Wellington Regional Council.

Climate Change – Anticipated Environment Results

Objective	Anticipated environmental result
<p><u>Objective CC.1</u> <u>By 2050, the Wellington Region is a low-emission and climate-resilient region, where climate change mitigation and adaptation are an integral part of:</u> <u>(a) sustainable air, land, freshwater, and coastal management,</u></p>	<p><u>All AERs for Objectives CC.3-CC.7 are relevant.</u></p> <p><u>By 2030, all new development (both greenfield and brownfield) and infrastructure is located, designed and constructed in ways that support reduction in greenhouse gas emissions</u></p>

<p>(b) well-functioning urban <u>areas environments</u> and rural areas, and <u>the well-planning ed and delivery of infrastructure.</u></p>	<p><u>and provides for climate-resilience, including features as described by Policies CC.4 and CC.4A.</u></p>
<p>Objective CC.2 The costs and benefits of transitioning to a low-emission and climate-resilient region are <u>shared fairly to achieve social, cultural, and economic well-being across our equitable between sectors and communities.</u></p>	<p><u>By 2030, all sectors and parts of the communities are realising the benefits of transitioning to a low-emission and climate-resilient region.</u></p>
<p>Objective CC.3 To support the global goal of limiting warming to 1.5 degrees Celsius <u>and New Zealand's greenhouse gas emissions reduction targets, net greenhouse gas emissions from transport, agriculture, stationary energy, waste, and industry</u> in the Wellington Region are reduced: (a) <u>By 2030, to contribute to a 50 percent reduction in greenhouse gas emissions from 2019 levels by 2030, including a:</u> <u>(i) 35 percent reduction from 2018 levels in land transport generated greenhouse gas emissions,</u> <u>(ii) 40 percent increase in active travel and public transport mode share from 2018 levels, and</u> <u>(iii) 60 percent reduction in public transport emissions, from 2018 levels, and</u> (b) <u>By 2050, to contribute 26chievinging net-zero greenhouse gas emissions by 2050.</u></p>	<p><u>Net greenhouse gas Carbon emissions are reduced to contribute to a by 50 percent reduction from 2019 levels by 2030 across the Wellington Region and to achieve net-zero greenhouse gas emissions by 2050.</u></p>
<p>Objective CC.4: <u>Nature-based solutions are an integral part of climate change mitigation and climate change adaptation, improving the health, well-being and resilience of people, indigenous biodiversity, and the natural and physical resources environment.</u></p>	<p><u>By 2030, nature-based solutions are provided for as standard good practice in new development and infrastructure.</u></p> <p><u>By 2030, ecosystems that provide nature-based solutions to climate change in the Wellington Region have been identified and work is underway with supportive landowners, mana whenua/tangata whenua and other key stakeholders to protect, enhance, and restore them.</u></p>
<p>Objective CC.5: <u>By 2030, there is an increase in the area and health of permanent forest, preferably indigenous forest, in the Wellington Region, maximising benefits for carbon sequestration, indigenous biodiversity, land stability, water quality, and social, cultural and economic well-being.</u></p>	<p><u>The regional forest spatial plan, as described in Method CC.4, has been developed and there is an increase in the area of permanent forest in priority areas identified in this plan.</u></p>

<p>Objective CC.6: Resource management and adaptation planning increases the resilience of communities, <u>infrastructure</u> and the natural environment to the short, medium, and long-term effects of climate change.</p>	<p><u>By 2030, community-based adaptation plans have been developed for areas assessed as facing high risks from natural hazards and climate change.</u></p>
<p>Objective CC.7 <u>People and businesses understand what the current and predicted future effects of climate change, and how these may impact them, means for their future how to respond to the challenges of climate change, and are actively involved in planning and implementing appropriate mitigation and adaptation responses.</u></p>	<p><u>Public surveys show an increased public awareness of the effects of climate change in the Wellington Region and support for, and uptake of, appropriate mitigation and adaptation responses.</u></p> <p><u>5% of businesses have prepared and are implementing climate change mitigation and adaptation plans.</u></p>
<p>Objective CC.8 <u>Iwi and hapū Mana whenua/tangata whenua are empowered to make decisions to achieve climate-resilience in their communities.</u></p>	<p><u>Greater Wellington has partnered with mana whenua/tangata whenua to prepare climate change adaptation plans, focusing on the most at risk areas within their rohe.</u></p>

Climate Change - Definitions

Greenhouse gas emissions

Atmospheric gases released into the atmosphere that trap or absorb heat and contribute to climate change. These gases covered by the Climate Change Response Act 2002 are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆) which are all covered by the Climate Change Response Act 2002. A reference to greenhouse gas emissions means “gross” greenhouse gas emissions unless otherwise expressed as “net greenhouse gas emissions” or “net-zero”.