I hereby give notice that an ordinary meeting of the Rural Advisory Panel will be held on:

**Date:** Friday, 2 August 2019  
**Time:** 12.30pm  
**Meeting Room:** Room 1, Level 26  
**Venue:** 135 Albert Street, Auckland

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Ngā Hui a te Rōpū Kaitohutohu Take ā-Taiwhenua/
Rural Advisory Panel

**OPEN AGENDA**

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**MEMBERSHIP**

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<tr>
<th>Chairperson</th>
<th>Cr Bill Cashmore</th>
<th>Deputy Mayor and Franklin Ward councillor</th>
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<tr>
<td>Deputy Chairperson</td>
<td>Cr Greg Sayers</td>
<td>Rodney Ward Councillor</td>
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<td>Members</td>
<td>Alan Cole</td>
<td>Franklin Local Board Member</td>
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<td></td>
<td>Trish Fordyce</td>
<td>NZ Forest Owners Association</td>
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<td></td>
<td>Richard Gardner</td>
<td>Federated Farmers</td>
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<td></td>
<td>Neil Henderson</td>
<td>Waitakere Ranges Local Board Member</td>
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<td>Vance Hodgson</td>
<td>Horticulture NZ</td>
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<td>Steve Levet</td>
<td>Rural Contractors NZ</td>
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<td>Craig Maxwell</td>
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<td>Greg McCracken</td>
<td>Fonterra</td>
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<td></td>
<td>Andrew McKenzie</td>
<td>Beef and Lamb NZ</td>
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<td></td>
<td>Helen Moodie</td>
<td>Dairy NZ</td>
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<td></td>
<td>Roger Parton</td>
<td>Rural Contractors NZ</td>
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<td></td>
<td>Wayne Scott</td>
<td>Aggregate &amp; Quarry Association</td>
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<td>Geoff Smith</td>
<td>Equine Industry</td>
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<td>Peter Spencer</td>
<td>NZ Forest Owners Association</td>
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<td>Brenda Steele</td>
<td>Rodney Local Board Member</td>
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<td>Bronwen Turner</td>
<td>Western Rural Property Owners</td>
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<td>Keith Vallabh</td>
<td>Pukekohe Vegetable Growers Association</td>
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<td>Glenn Wilcox</td>
<td>Independent Māori Statutory Board Member</td>
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(Quorum 10 members)

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**Note:** The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
TERMS OF REFERENCE
(Excerpt – full terms of reference available as a separate document)

The terms of reference set out the purpose, role and protocols of the Panel. Panel members abide by the Code of Conduct for members of Auckland Council advisory panels.

Purpose
As one of council’s engagement mechanisms with diverse communities, the demographic advisory panels provide advice to the governing body and council staff within the remit of the Auckland Plan on the following areas:

- Auckland Council’s regional policies, plans and strategies
- Regional and strategic matters including those that Council-Controlled Organisations deal with any matter of particular interest or concern to diverse communities.

Outcomes
The panel’s advice will contribute to improving the outcomes of diverse communities and social cohesion as set out in the Auckland Plan. The panel will advise through their agreed strategic agenda and detailed work programme.

Strategic agenda and work programme
The panel must develop a work programme and set a strategic agenda for the term. The agendas should be focused and integrated across the panels for collaborative input into shared agendas, particularly on the Auckland Plan, the Long-term Plan and annual plans. The panel should advise on council’s organisational strategies relevant to diverse communities.

The governing body and council staff should work with the panel for the development of their strategic agendas and work programme. An appropriate committee will approve the panel’s work programme and any subsequent major changes to it.

Submissions
The panel must not make formal submissions to Auckland Council on council strategies, policies and plans, for example, the annual plan.

In its advisory role to the council, the panel may have input to submissions made by the council to external organisations but do not make independent submissions, except as agreed with the council.

This does not prevent individual members being party to submissions outside their role as panel members.

Review
The form and functioning of the panels may be reviewed prior to or after, the end of the panel’s term in September 2019.
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1 **Apologies**

An apology from Member Wayne Scott has been received.

2 **Declaration of Interest**

Members are reminded of the need to be vigilant to stand aside from decision making when a conflict arises between their role as a member and any private or other external interest they might have.

3 **Confirmation of Minutes**

That the Rural Advisory Panel:

a) confirm the ordinary minutes of its meeting, held on Friday, 7 June 2019, including the confidential section, as a true and correct record.

4 **Extraordinary Business**

Section 46A(7) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"An item that is not on the agenda for a meeting may be dealt with at that meeting if-

(a) The local authority by resolution so decides; and

(b) The presiding member explains at the meeting, at a time when it is open to the public,-

(i) The reason why the item is not on the agenda; and

(ii) The reason why the discussion of the item cannot be delayed until a subsequent meeting."

Section 46A(7A) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"Where an item is not on the agenda for a meeting,-

(a) That item may be discussed at that meeting if-

(i) That item is a minor matter relating to the general business of the local authority; and

(ii) the presiding member explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at the meeting; but

(b) no resolution, decision or recommendation may be made in respect of that item except to refer that item to a subsequent meeting of the local authority for further discussion."
Te take mō te pūrongo / Purpose of the report
1. To provide an update to the panel.

Whakarāpopototanga matua / Executive summary
2. Cr Bill Cashmore, Chair Rural Advisory Panel will provide an update of recent council business.
3. Note this is the final Rural Advisory Panel meeting for the year.

Ngā tūtohunga / Recommendation/s
That the Rural Advisory Panel:
  a) note the update from Cr Bill Cashmore, Chair Rural Advisory Panel.
  b) thank the Rural Advisory Panel members for their hard work and contribution to Auckland Council.

Ngā tāpirihanga / Attachments
There are no attachments for this report.

Ngā kaihaina / Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Sonya Inger - Governance Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoriser</td>
<td>Warren Maclennan - Manager Planning - North/West</td>
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</table>
Te take mō te pūrongo
Purpose of the report
1. To congratulate Ross and Eleanore Webber of the Webber Family Farm, winners of the Auckland Ballance Farm Environment Award 2019, and receive a presentation about their farm.

Whakarāpopototanga matua
Executive summary
2. Attached is an article from the New Zealand Farm Environment Trust which outlines the Webber’s farm environment and their successes. A short drone clip will be provided and a presentation by the Webbers, at the meeting.

Ngā tūtohunga
Recommendation
That the Rural Advisory Panel:
a) congratulate Ross and Eleanore Webber for winning the 2019 Regional Supreme Award and thank them for their presentation.

Ngā tāpirihanga
Attachments

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<tr>
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<td>Warren Maclennan - Manager Planning - North/West</td>
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Communications / Media Releases

Family and environment come first for Regional Supreme Winner of Auckland Ballance Farm Environment Awards

28 March 2019

Webber Family Farm, owned and operated by Ross and Eleanor Webber, was announced the Regional Supreme Winner at this evening's 2019 Auckland Ballance Farm Environment Awards run by the New Zealand Farm Environment Trust.

The Ballance Farm Environment Awards champion sustainable farming and growing through an awards programme which sees one Regional Supreme Winner selected from each of the 11 regions involved. These Regional Supreme Winners will be profiled at the Awards' National Sustainability Showcase in Hamilton, on Thursday 5 June, with each in the running for the Gordon Stephenson Trophy.

Webber Family Farm is the Regional Supreme Winner thanks to the family's hard work and their impressive environmental aspirations. The farm overlooks the Kaipara Harbour, the receiving catchment for all the waterways on the farm. Environmental initiatives include, but are not limited to, protecting waterways and existing native bush blocks; conversion of pine blocks into native bush areas; enhancing natural native tree seed dispersal by birds through planting appropriate trees in specific places to encourage bird life; and continuing to eco-source plants suitable to a challenging natural environment.

The Webbers have traditionally farmed a variety of beef as well as farming deer and mohair goats. They are currently working on establishing Angus-only stock and are particular as to the origin of their breeding bulls and cows.

The farm winters about 149 breeding cows - mostly Angus, equating to 8.8 stock units per hectare, which is in line with local stocking rates. The farm sells most of its weaners in the autumn, keeping approximately 20 to 25 replacements. The team also tries to retain 25 R2 steers each year depending on the season.

The judges said of the Webbers' achievements: "The Webbers are great ambassadors for the region embodying everything the Ballance Farm Environment Awards stand for."

Having been married for nearly four decades, supporting each other on their amazing journey, Eleanor was the one who encouraged Ross to enter the awards.

Eleanor says: "I put his name forward. I could see all of the work he had done. He can see the future for the farm and the environmental side of it. We have raised our three boys here and are very connected to our land and feel fortunate to have what we have."

Ross adds; "I'm not quite there in terms of what I want to achieve, but I'm so close, and we do have a lovely farm. We are excited to give this a crack."

This year, the Webbers are not only the Regional Supreme Winner in Auckland but also the esteemed recipient of the:

- Predator Free NZ Trust Predator Free Farm Award - this recognises the efforts of land managers to successfully control animal predators to achieve native biodiversity outcomes;
water practices;
- Auckland BFEA Farm Stewardship Award - this award is for the creation of special places on farm and may include protection and/or enhancement of cultural, historic, or unique natural or manmade features.

Each year, the Ballance Farm Environment Awards' ceremonies, the National Sustainability Showcase, and winners' field days offer a unique, pan-sector forum for networking and the sharing of ideas and information among farming/growers' peers, agribusiness professionals and the wider community.
Te take mō te pūrongo
Purpose of the report
1. To receive an address and presentation on recent government initiatives by Hon Shane Jones, Minister of Forestry, Regional Economic Development, Infrastructure, Associate Minister of Finance, Transport and State Owned Enterprises together with Julie Collins, Head of Te Uru Rākau & Deputy Director-General Forestry New Zealand.

Whakarāpopototanga matua
Executive summary
2. Minister Shane Jones will, if available, discuss the government’s One Billion Trees Fund and Julie Collins will speak on:
   - the Emissions Trading Scheme and the rural sector’s role
   - timelines for the Climate Change Response Act Bill
   - treatment of indigenous forests in policies and programmes
   - monitoring the Overseas Investment Act as relates to forestry and land use changes.

Ngā tūtohunga
Recommendation
That the Rural Advisory Panel:
a) thank Minister Shane Jones and Head of Te Uru Rākau & Deputy Director-General Forestry New Zealand, Julie Collins for their presentation.

Ngā tāpirihanga
Attachments
There are no attachments for this report.

Ngā kaihaina
Signatories

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<tr>
<th>Author</th>
<th>Sonya Inger - Governance Advisor</th>
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<td>Warren Maclennan - Manager Planning - North/West</td>
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Upcoming National Direction on Highly Productive Land

File No.: CP2019/13085

Te take mō te pūrongo
Purpose of the report
1. To inform the panel of the upcoming National Direction on Highly Productive Land and seek feedback regarding the issues they consider should be covered by an Auckland Council submission on the matter.

Whakarāpopototanga matua
Executive summary
2. This report outlines the information known to date on the upcoming National Direction on Highly Productive Land. There is an opportunity for the Rural Advisory Panel to outline the issues that are most important to them that could feed into the council’s submission on a potential draft National Policy Statement on Highly Productive Land.

Context
3. The Ministry for the Environment (‘MfE’) and with the Ministry for Primary Industry (‘MPI’) are developing some national direction on Highly Productive Land. The driver for national direction on this issue was the Our land 2018 report, released by MfE and Statistics NZ in April 2018.

4. That report found that there had been a ten percent increase in the total size of towns and cities (between 1996 and 2012) while between 2002 and 2016 there had been a seven per cent decrease in the area of land in agricultural production.

5. The Minister for the Environment, David Parker, has responded to the report stating, “I was particularly troubled by how much of our urban growth is occurring in our irreplaceable highly productive land. Even in a country as lucky as New Zealand we only have limited quantities of these high-class soils.”

6. He particularly singled out prime market gardening land around Pukekohe, as Auckland expands, as well as the impact of lifestyle blocks on our most productive land.

7. “Once the land goes into lifestyle blocks it is hard to farm for horticulture efficiently, and some of the people who move into the areas are opposed to their neighbours who are continuing with their horticultural practices, whether it is air guns to scare off birds or truck movements or fertiliser and herbicides and pesticides” he said.

Draft National Policy Statement
8. Minister Parker has asked his officials to prepare a National Policy Statement on Highly Productive Land. MPI have not yet released a draft National Policy Statement but public consultation is anticipated later in August 2019, subject to Cabinet approval. During the consultation period there will be public meetings in most regions, as well as targeted meetings with iwi, local authorities, primary sector groups and other stakeholders.

9. Over the past year Auckland Council (along with other stakeholders) has been involved in early consultation on this matter through workshops, correspondence with MPI, and supplying information around development on highly productive land in Auckland.

10. An example of information supplied to MPI is that across Auckland, the Future Urban zone within the Rural Urban Boundary covers some 10,095ha and around 66% of this Future Urban zoned land is on elite or prime soils (Land Use Capability 1-3). The main areas of Future Urban zoned land on elite and prime soils are around Whenuapai, Kumeu-Huapai, Drury-Opaheke, Takanini and Pukekohe/Paerata.
11. Another example of information requested and provided to MPI is that since 2012 there have been 1,302 residential sections created (118ha) around the existing town of Pukekohe. A further 308 sites (33ha) have been granted resource consents but have not yet had titles created. The vast majority of these new residential sites are located on elite or prime soils.

12. MfE have advised that the proposed National Policy Statement will provide councils with greater clarity on how highly productive land (including versatile soils) should be considered in Resource Management Act decision-making. The National Policy Statement intends to address the gradual reduction in availability of this resource for primary production, as well as to manage fragmentation and reverse sensitivity effects.

13. The National Policy Statement would initially apply to all LUC1-3 land across New Zealand, however regional councils would be required to undertake a process to identify highly productive land in their region based on a set of criteria.

14. The National Policy Statement would provide direction for councils to:
   • recognise and provide for the full range of values and benefits associated with the use of highly productive land for primary production
   • maintain the availability of highly productive land for primary production for future generations
   • protect highly productive land from inappropriate subdivision, use and development.

15. MfE have stated that absolute protection will not always be appropriate but that the National Policy Statement will provide clear direction that urban development should be avoided on highly productive land where better options exist. Councils would be given flexibility to avoid unduly constraining their urban development objectives.

16. It is noted that outside this National Policy Statement further work by central government is expected to progress in 2020 to address declining soil health as a result of past and present agricultural practices. This work is likely to focus on soil contamination, soil compaction, and erosion.

Possible Auckland Council submission and potential issues for feedback from the Rural Advisory Panel

17. Auckland Council will likely make a submission on the draft National Policy Statement on Highly Productive Land. This Rural Advisory Panel meeting is an opportunity for the panel to influence the submission (note that there are no further panel meetings during the submission period).

18. Some possible issues for the panel to provide feedback on are set out below:
   • Is there support in principle from the panel for National Direction on Highly Productive Land?
   • Is a National Policy Statement the best tool?
   • Should any National Policy Statement apply to existing urban zoned land / Future Urban zoned land / Countryside Living zoned land?
   • Is there support for some scope for the council to enable urban/lifestyle development on highly productive land or do you prefer an absolute protection of it?
   • Is there support for the process of Auckland Council identifying highly productive land for Auckland (based on criteria) or do you prefer the approach of using the interim LUC1-3 method being made permanent?
   • What other areas outside LUC1-3 would you consider might be worthy of being covered by the National Policy Statement (i.e. what criteria would you use to define highly productive land)?
   • What sort of buffers might be necessary around identified highly productive land?
Ngā tūtohunga
Recommendation

That the Rural Advisory Panel:

a) provide verbal feedback at the meeting on matters they consider should be covered by an Auckland Council submission on the upcoming national direction on highly productive land.

Ngā tāpirihanga
Attachment

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Ngā kaihaina
Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Ryan Bradley - Planner</th>
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<tr>
<td>Authoriser</td>
<td>Warren Maclennan - Manager Planning - North/West</td>
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Te Tāruke-ā-Tāwhiri: Auckland’s Climate Action Framework

File No.: CP2019/13090

Te take mō te pūrongo
Purpose of the report
1. To provide an overview of the draft Te Tāruke-ā-Tāwhiri: Auckland’s Climate Action Framework for feedback and seek input from the Rural Advisory Panel on the consultation approach with rural representative networks.

Whakarāpopototanga matua
Executive summary
2. In February 2018, the Environment and Community Committee approved the development of an integrated climate change action plan, addressing both the rising emissions in the region and the impacts of our changing climate (ENV/2018/11). The new plan will replace the Low Carbon Auckland plan from 2014.
3. In November 2018, the Environment and Community Committee endorsed Auckland’s reapplication for membership to the C40 Cities Climate Leadership Group, including the requirement to develop a climate plan consistent with the Paris Agreement aspiration of 1.5°C maximum temperature rise (ENV/2018/148).
4. Since February 2018, Auckland Council has led the development of Te Tāruke-ā-Tāwhiri: Auckland’s Climate Action Framework, with extensive cross-sector collaboration. This framework addresses emissions reduction for the region and impacts of our changing climate. The consultation summary is Attachment A and the full framework is Attachment B.
5. The draft framework was developed through strong collaboration with mana whenua, and with extensive consultation and evidence building including Climate Change Risk Assessments (CCRAs), emissions modelling and analysis of other leading cities’ climate action plans. The draft climate action framework has 11 key moves which speak to Auckland’s needs and address the future challenges it will face.
6. The framework relies on collaboration between key stakeholders such as businesses, institutions, industry and community groups to work together to take action to reach our climate targets.

Consideration
7. Climate change impacts, such as increased flooding, sea level rise, drought and temperature rise, will impact different sectors to varying degrees, and it is critical that everyone is adequately supported and prepared for future climate change challenges. In the rural context, increases in extreme weather conditions such as flooding, droughts and high winds, pose significant risks to the agricultural and forestry sectors. This highlights the urgent need to address the future challenges of climate change and ensure sectors, communities and individuals are resilient.
8. The severity of impacts in the future is directly influenced by greenhouse gas emissions and so the framework sets a path aligned with limited warming to 1.5°C.
9. The 11 key moves in the framework address both climate mitigation and adaptation with an aim to deliver the benefits fairly across the region. The key moves address a range of areas, from a resilient and healthy food supply to clean energy solutions and safe mobility options. It is critical that the transition to a net zero future is just and equitable, and all communities and sectors are supported.
Next Steps
11. After public consultation, the feedback will be compiled and presented back to the governing body.

Ngā tūtohunga
Recommendation/s
That the Rural Advisory Panel:

a) provide feedback on the Auckland Climate Action Framework.
b) provide recommendations on how council can best reach out to the rural representative networks during public consultation.

Ngā tāpirihanga
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<td>B</td>
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Ngā kaihaina
Signatories

<table>
<thead>
<tr>
<th>Author</th>
<th>Authorisers</th>
</tr>
</thead>
</table>
| Anita Holmes - Sustainability & Resilience Advisor | Jacques Victor - GM Auckland Plan Strategy and Research
Warren Maclennan - Manager Planning - North/West |
Te Tāruke-ā-Tāwhiri

Auckland’s Climate Action Framework

Overview July 2019
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© 2019 Auckland Council
June 2019
Auckland Plan, Strategy and Research Department
Auckland Council (2019). Draft Te Tāruke-ā-Tāwhiri: Auckland's climate action framework
consultation summary
Draft Te Tāruke-ā-Tāwhiri: Auckland’s climate action framework for consultation was adopted
by the Auckland Council Environment and Community Committee on 11 June 2019.
Mihi

Tuia ki te rangi
Tuia ki te whenua
Tuia ki te moana
Tuia te here tangata
E rongo te pō, e rongo te ao

E whēkite ana, e whēkaro ana i ngā uhitai a Wainuiātea
Tupuna o ngā moana kiriwhaiwai mō Papatūānuku
Ngaki tonu ana a Taitua rāua ko Tairāko
E haehae tonu ana i te uma o Nuku

Pipi tonu mai ana ngā wai o Roi i ngā kamo
Tangi ana mō Moana-tū-ki-te-repo
I kekeria kia rere tōna wairora
ki a Tangaroa-whakamau-tai
Ngaro atu, kāhore he hokinga mai

Kei hea rā he kāinga mō Matuku
He manu o te repo?
Ka ngaro i te aro tirohanga
Kua koroki ki ngā rākau teitei o te wao nui
Waiho ake a Poroka te tangi mokemoke

Ngaoki tonu mai ana te oati a Tangaroa ki a Tāne
Ngaiki ana ki uta
Tāpohutu mai ana ngā uri a Tāne
Ki te whakatutuki i te oati i Te Paerangi

Waiho ake ngā uhitai hei roimata
Whakamākōkō i ngā pāpāringa
Kia tū kau ake ki te wharuhuhuka a Tangaroa
Ki te potatai e tau aī, e tau aī, kua tau
Bind the tapestry of life which affirms humanity’s connection to the natural world. To the celestial realm, to the earthly realm, to water - the sustenance for all life forms, and, to remember to keep everything in ‘balance’.

The mists of Wainuiātea, the mother of all oceans and waterways, rise like tears above the waterways that provide the fluid skin to clothe Papatūānuku. The ancient waterways of Taitua and Taiaro forever eroding and tearing at the breast of Papatūānuku.

The tears (Roimata) continuously flow from the eyes
Mourning the death of Moana-tō-ki-te-repo (swamplands, the youngest child of Wainuiātea)
Killed and drained of her life-giving purpose, to cleanse the waters of Tangaroa Whakamautai.
Lost forever and never to return

Where is home for Matuku now?
The bird of the marshlands and swamps?
He is no longer seen.
His spirit floating on the highest branches of Te Wao Nui a Tāne.
Leaving Poroka to his lonely cry.

The promise Tangaroa made to Tāne is yet to be satisfied.
He continually digs and scrapes at the ramparts of the domain of Tāne.
Fulfilling the promise to take the life of the children of Tāne.
The promise he made to Tāne at Te Paerangi

May the seaspray be evidence of those tears
That continually moisten the cheeks of Papatūānuku
They flow to the foamy domain of Tangaroa
Where in their own time they leave the turbulence of the oceans to come ashore to find peace and rest.
Te Tāruke-ā-Tāwhiri

Tāmaki Makaurau – Tāmaki loved by many,
Tāmaki herenga waka - Tāmaki the converging place of many canoes.
Tāmaki herenga tangata - Tāmaki the converging place of many peoples
Te pai me te whai rawa o Tāmaki - The abundance and prosperity of Auckland

Te Tāruke-ā-Tawhiri takes a deeply cultural narrative that is embedded in this place - Tāmaki Makaurau.

The narrative speaks to the struggles of Tāwhirimatea, the primal ancestor associated with climate and weather. Tied to the Māori creation narratives of the universe and the world, Tāwhirimatea is seen to be influencing our climate and accelerating the change in our climate in response to human induced climate change.

The central theme of the narrative calls for a change in our response to climate change, and a shift from a human-centred approach to an ecological-centred approach given our symbiotic relationships with the natural environment.
The call to action is now.

It’s time for climate action

2019 saw millions of young people around the world take strike action, calling for a safe climate future. People across Aotearoa New Zealand have called for decisions and action to protect our regions – and our planet – from the impacts of climate change.

In June 2019, Auckland Council responded to this call and the irrefutable evidence of climate change by declaring that a climate emergency is facing our region.

Climate change is one of the most significant issues facing Aucklanders. Implications and impacts are broad and varied. It affects us all, but our most vulnerable people and communities are most at risk. The impacts are expected to get worse over time and will persist for decades and beyond.

Auckland has already felt some effects of climate change such as sea level rise and flooding. Even slight changes to temperature, rainfall, and sea level now have serious consequences. Heat stress, severe flooding, and new pests and diseases will have direct impacts here in Auckland and will only get worse unless we take action to adapt and mitigate the effects of climate change.

Having declared a climate emergency, we as Aucklanders need to respond and take the necessary actions to protect our future. We need to reach a target of no more than 1.5 degrees warming. This draft Climate Action Framework outlines ways in which Auckland Council and wider Auckland community can shape how we respond.

The Climate Action Framework will inform detailed costed actions for Auckland Council and our council-controlled organisations. This will feed into the council’s next ten-year budget, which will be finalised in 2021.

We also rely on key stakeholders such as businesses, institutions, industry and community groups to use the Framework to work together to take action. Auckland Council can act as a broker and facilitator, but – given that a wide range of stakeholders must act – many changes need to be made without our direct influence or input.

Please work with us and submit on the draft Framework. We want to test whether we are heading in the right direction to bring about the change that is needed. Have we got it right? Are there areas we need to change, or give more or less focus to? We are genuinely committed to listening and responding to the feedback we receive.

Councillor Penny Hulse
Chair of Environment & Community Committee
A call to every Aucklander

The science is clear: what we are currently doing won’t get us to net zero emissions by 2050. We need to take climate action right now, and we need to do it faster.

In June 2019, Auckland Council declared a climate emergency. We join cities around the world who have recognised the need for urgent action on the climate crisis.

We all know the climate change threats facing Auckland, but new research shows even more change and threat.

- our mean annual temperature is rising.
- rainfall patterns are changing.
- our coastlines are being increasingly damaged by ongoing rises in the sea level.

How do we tackle these problems?

We’re starting with a Climate Action Framework to:

- reduce emissions that cause climate change.
- reduce the negative impacts of that change.

Working with various partners and stakeholders, new research and using evidence and testing ideas and options, we’ve identified 11 key moves - called key moves - and some actions within them.

While Auckland Council facilitated development of the framework, we’re also working alongside central government, other councils, Māori as kaitiaki, the private sector and you. A viable plan needs your input because we’ll be asking every Aucklander and their community to make changes.

Keep in mind that we can only plan on what we know now. As we learn more about climate change and its effects, as we gather new knowledge and technology, we’ll refine the plan.

The best advice we’ve been given is this: we have 10 years to make major changes before climate change takes hold with catastrophic consequences.

We call on every Aucklander – from residents to businesses – to be involved in reducing the negative impacts of climate change. This is how we start that process.
We want your feedback
This plan suggests a number of areas to focus on. What do you think of them?
Please give us your feedback through:
• Have Your Say events
• Written feedback at: akhaveyoursay.nz

Making a submission
Submissions close at 8pm on Friday 6 September. Your name and submission may be included in materials available to the media and the public. All other personal details will remain private.

Getting copies of this document
• online at akhaveyoursay.nz
• Libraries, service centres and local board offices.
The full draft framework with more detail is available online at: akhaveyoursay.nz
Climate change and Māori

Ko te hau o te whenua, ko te hau o te tangata – the essence of the land, the vitality of people.

Māori are inherently connected to the broader natural environment through whakapapa. The impacts of climate change will significantly affect the essence and vitality of these whakapapa relationships.

Mana whenua have specific whakapapa relationships to Tāmaki Makaurau. Collective knowledge or mātauranga, of the land, sky and sea has been developed over the last 1000 years within Tāmaki Makaurau.

We have an opportunity to draw on these knowledge systems, practices and experiences to help navigate our way forward, and to guide our collective response to climate change.

We are driven to reduce the impact of natural and human induced climate chaos on our environment, including the barriers that enable intergenerational resilience of communities across Tāmaki Makaurau.

Mana whenua will continue to support the contribution of Māori to the framework.

The Māori drivers for this framework for action are underpinned by mana whenua and anchored within the specific Māori context of Tāmaki Makaurau. These elements include, but are not limited to:

- whakapapa
- kaitiakitanga
- manaakitanga
- tonuitanga
- mātauranga Māori.
The 11 Key Moves Auckland Needs to Make

Phased delivery
Some will be delivered more quickly and easily; others will require more time and effort. All actions are set within three time periods:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Actions partially underway indicated by 🔄 Pilot actions that test new ideas that show promise if scaled up Actions essential to unlocking system change, better evidence, additional resourcing</td>
<td>Roll out of actions at scale and pace System change for a zero-emissions, climate resilient region</td>
<td></td>
</tr>
</tbody>
</table>

Actions with the 🔄 are partially underway, have been discussed initially with delivery partners or have been through some degree of refinement and development. It does not indicate whether or not funding, deliverables or outcomes have been achieved.
KEY MOVE 1:
Lay the foundation

We make decisions based on sound evidence. We have the capacity, resources and leadership to deliver by working together.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future

All Aucklanders have a voice in our climate future and can make their communities more resilient and emissions-free. Leadership at all levels and from all sectors is cemented, sustained and flourishing. Each decision considers climate change and to Te Tiriti o Waitangi/Treaty of Waitangi. Information is continuously updated and embedded into decision-making processes. Auckland’s local and regional approach is aligned with a supportive and enabling national approach. Conflicts between projects, policies and strategies have dissolved.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Uphold Te Tiriti o Waitangi/Treaty of Waitangi and treaty partnerships in decision-making</td>
<td>2022</td>
</tr>
<tr>
<td>Secure long-term commitment and leadership from across mana whenua and public, private and voluntary sectors</td>
<td>2030</td>
</tr>
<tr>
<td>Engage in a way that enables and empowers Aucklanders to have a say in climate decisions and to act</td>
<td>2050</td>
</tr>
<tr>
<td>Ensure that the custodianship of mātauranga Māori knowledge systems, practices and the teachings inform and underpin climate response, actions and decisions</td>
<td>2022</td>
</tr>
<tr>
<td>Embed climate change assessments into decision-making processes and reporting</td>
<td>2030</td>
</tr>
<tr>
<td>Regularly review and update climate change evidence to inform decisions</td>
<td>2050</td>
</tr>
<tr>
<td>Be transparent and provide data and information to enable citizen science, innovation and research</td>
<td>2022</td>
</tr>
<tr>
<td>Actively develop supportive policy and legislation with central government</td>
<td>2030</td>
</tr>
<tr>
<td>Ensure regional policies and strategies do not conflict with delivery of climate compatible development and infrastructure</td>
<td>2050</td>
</tr>
</tbody>
</table>

What do you think of these ideas?

Please give us your feedback through

- Have Your Say events
- Written feedback at: akhaveyoursay.nz
KEY MOVE 2:
Enhance, restore and connect our natural environments

Oranga taiao, oranga tāngata: a healthy and connected natural environment that restores the mauri (life essence) of Tāmaki Makaurau and benefits every Aucklander.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future
Our natural environment is celebrated, protected and enhanced - and its mauri is flourishing. The physical area and connection between blue (water) and green (land) spaces has increased, and these healthy ecosystems store carbon. Healthy, connected ecosystems also provide climate resilience. We are managing flood risk and reducing urban heat leading to better air and water quality and a more pleasant urban environment. Aucklanders feel a strong connection to, and are kaitiakitanga for, their local natural environment. They value and respect the mental and physical wellbeing benefits it provides. Indigenous biodiversity has access to a seamless network of habitat space and is protected from invasive species. Our taonga species are resilient to a changing climate.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Use a blue-green network approach in growth and regeneration areas</td>
<td></td>
</tr>
<tr>
<td>Grow and protect our urban and rural ngahere/forest to capture emissions and build resilience</td>
<td></td>
</tr>
<tr>
<td>Protect indigenous biodiversity and ecosystems vulnerable to climate change</td>
<td></td>
</tr>
<tr>
<td>Establish a voluntary ecosystem marketplace to generate funding for natural climate solutions</td>
<td></td>
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<tr>
<td>Apply circular economic principles to land use and land use changes.</td>
<td></td>
</tr>
<tr>
<td>Change to a land management approach that creates, preserves and enhances healthy, viable soils</td>
<td></td>
</tr>
<tr>
<td>Protect and enhance coastal and marine ecosystems to maximise carbon capture and resilience</td>
<td></td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through

• Have Your Say events
• Written feedback at: akhaveyoursay.nz
KEY MOVE 3:
Make development and infrastructure climate-compatible

All new development and infrastructure complies with our climate goals and encourages low impact lifestyles.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future
The planning, location and delivery of development and infrastructure helps minimise and reduce emissions and the impacts of climate change.

Australians live low-carbon lifestyles, with healthy and accessible transport choices and energy efficient homes. We use dramatically fewer resources like water and energy without compromising our quality of life.

Australians feel more connected to their communities. They have more time to spend with families and friends due to shorter and easier travel.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Accelerate the uptake of sustainable design and construction</td>
<td></td>
</tr>
<tr>
<td>Build climate resilience and health benefits into all transport</td>
<td>2022</td>
</tr>
<tr>
<td>projects, delivering more than just emissions reductions</td>
<td>2030</td>
</tr>
<tr>
<td>Ensure new infrastructure is climate-proof and resilient</td>
<td>2050</td>
</tr>
<tr>
<td>Make climate compatibility assessments standard for all new</td>
<td></td>
</tr>
<tr>
<td>developments and infrastructure</td>
<td></td>
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<tr>
<td>Plan for a quality compact urban form that supports low</td>
<td></td>
</tr>
<tr>
<td>carbon, resilient development</td>
<td></td>
</tr>
<tr>
<td>Find and deliver alternative water supply options to address</td>
<td></td>
</tr>
<tr>
<td>climate change and population growth</td>
<td></td>
</tr>
<tr>
<td>Establish an integrated, circular water management framework</td>
<td></td>
</tr>
<tr>
<td>to improve efficiency and reduce waste</td>
<td></td>
</tr>
<tr>
<td>Ensure planning controls reflect climate risk and policy interventions are in place to mitigate them.</td>
<td></td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through

- Have Your Say events
- Written feedback at: akhaveyoursay.nz
KEY MOVE 4:
Transform existing buildings and places

Existing buildings and spaces are revitalised to be healthy, low impact and multi-functional. There is more detail in the full draft framework at akhayeysay.nz

What we want for the future
Auckland’s buildings and places are healthy, comfortable and efficient. Diseases like rheumatic fever rapidly decline and we no longer see a difference in related health outcomes across Auckland’s communities. Aucklanders spend less of their income on heating and cooling their homes.

The places in our built environment provide multiple functions, such as energy and food production, flood resilience and opportunities for social and cultural interaction. People spend more time together in quality places and feel better about themselves and about Auckland.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Deliver targeted commercial, industrial and residential building retrofit schemes across Auckland</td>
<td>2022: ● 2030: ● 2050: ●</td>
</tr>
<tr>
<td>Increase the productive potential of new/existing roofs and walls</td>
<td>2022: ● 2030: ● 2050: ●</td>
</tr>
<tr>
<td>Make public spaces multi-functional with broader benefits</td>
<td>2022: ● 2030: ●</td>
</tr>
<tr>
<td>Establish and rapidly scale low carbon, resilient precincts across Auckland</td>
<td>2022: ● 2030: ●</td>
</tr>
<tr>
<td>Ensure existing infrastructure is as climate-proof and resilient as possible</td>
<td>2022: ● 2030: ●</td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through

• Have Your Say events
• Written feedback at: akhayeysay.nz
KEY MOVE 5:
Deliver clean, safe and equitable transport options

Aucklanders have more options for getting around.
There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future
An integrated and resilient transport network works together with climate-compatible development.
The network prioritises, and is built for, active and public transport. This reduces trip distances and the need for travel and provides zero carbon choices.

Our transport options are safe, affordable and healthy. They are powered by resilient and sustainable energy sources, including the widespread use of electric vehicles, bikes, buses and trains. Public transport is fast, clean, safe and accessible for all. The transport system easily connects residents to areas of greatest demand and enables efficient distribution of freight. Zero emission cars outnumber their petrol counterparts. Cars no longer dominate the urban landscape and public spaces are put to better use.

What we need to do

| ACTIONS                                                        | TIMELINE |
|                                                               | 2022  | 2030  | 2050  |
| Encourage large-scale uptake of zero and low emissions vehicles |       |       |       |
| Rapidly increase the frequency, affordability and availability of public transport |       |       |       |
| Rapidly increase safe, high-quality cycling and walking infrastructure |       |       |       |
| Assess road pricing schemes to reduce car travel and vehicle emissions |       |       |       |
| Make freight systems more efficient to reduce emissions       |       |       |       |

What do you think of these ideas?
Please give us your feedback through
• Have Your Say events
• Written feedback at: akhaveyoursay.nz
KEY MOVE 6:
Move to a zero carbon, climate - resilient economy

Auckland leads climate-smart innovation and a fair and just transition to a zero carbon, climate-resilient economy.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future
Auckland’s economy transitions quickly to be clean, prosperous and zero carbon. Our businesses have far greater resilience and agility to a range of infrastructure, workforce and supply chain climate risks and impacts. We are climate-ready and our people thrive in a stabilised climate. New opportunities, collaborations, business models and innovations power a more circular and hyper-efficient economy. This provides a diversity of stable and meaningful career opportunities for our growing population.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Establish a climate innovation system</td>
<td>2022</td>
</tr>
<tr>
<td>Accelerate business transition to zero carbon and build resilience</td>
<td>2030</td>
</tr>
<tr>
<td>Establish sector-based programmes to grow low carbon and climate resilience skills</td>
<td>2050</td>
</tr>
<tr>
<td>Leverage public sector and large business supply chains to deliver on climate outcomes</td>
<td></td>
</tr>
<tr>
<td>Accelerate the transition from waste management to resource recovery and reuse</td>
<td></td>
</tr>
<tr>
<td>Embed circular principles into Auckland’s economy</td>
<td></td>
</tr>
<tr>
<td>Collaborate with central government to reduce process heat emissions</td>
<td></td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through

• Have Your Say events
• Written feedback at: akhaveyoursay.nz
KEY MOVE 7:
Help Aucklanders become more resilient and reduce their carbon footprint

We are all more resilient to climate change and lead Auckland’s transition to net zero emissions. There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future
Aucklanders understand what climate change means for them, their families and their communities – now and into the future. They know how to build climate resilience and reduce emissions. Aucklanders are actively engaged, resourced and informed to act independently, but also empowered to unite through kotahitanga, to act as a collective.

Stronger partnerships develop between communities, and the public and private sector. All Aucklanders are supported to make their own decisions that recognise the values held by the community.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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</thead>
<tbody>
<tr>
<td>Work together to strengthen the resilience of our communities, people and places</td>
<td>2022: *</td>
</tr>
<tr>
<td>Address the implications of climate change on our coastline</td>
<td>2022: *</td>
</tr>
<tr>
<td>Unlock barriers and support community-based initiatives that reduce emissions and build resilience in a fair way</td>
<td>2022: *</td>
</tr>
<tr>
<td>Plan for potential climate-related migration</td>
<td>2022: *</td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through
- Have Your Say events
- Written feedback at: akhaveyoursay.nz
**KEY MOVE 8:**

**Te puawaitanga o te tangata**

Self-sustaining Māori communities and a lift in the well-being of Māori whānau across Tāmaki Makaurau.

There is more detail in the full draft framework at akhaveyoursay.nz

**What we want for the future**

Our tupuna (ancestors) have provided rich legacies of knowledge and practices that nurture whakapapa (genealogy) and reaffirm Māori ways of collective action. These can guide our responses today. Learning from these inter-generational relationships and practices allows us to plan for what our unique places and communities will face over the next few generations and beyond, not just what they need today.

Mana Whenua, as the indigenous people of Tāmaki Makaurau, play a significant role in sustaining the region and the region's identity. The responsibilities and obligations as inherent kaitiaki (caretakers) to manaaki (show generosity to) those communities that reside within their tribal domains must be upheld.

Mataawaka make a significant contribution to the wellbeing of the region and add to the economic, cultural and social richness.

The actions below provide guidance and direction to think in generations, not years, to embrace our responsibilities both to tupuna (past ancestors) and to generations to come.

**Actions**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whakapapa</td>
<td>Restore, maintain and protect mana whenua whakapapa relationships to tāngata (people), whenua (place), and atua (primal ancestors). This includes whakapapa-centred relationships across Te Moana-nui-a-Kiwa and our tāngata pasifika whanaunga (Pasifika relatives).</td>
</tr>
<tr>
<td>Mātauranga</td>
<td>Develop a mātauranga Māori framework to safeguard taonga knowledge and achieve a balance between western science and indigenous narratives of our changing climate.</td>
</tr>
<tr>
<td>Manaakitanga</td>
<td>Actively manaaki (care for) and protect whānau and communities in a way that raises their mana, especially during periods of change or stress.</td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>Enable the active guardianship of whakapapa in current management and planning practices, but also future innovations and processes of change. Develop and sustain marae, kainga and wahi tapu as the supporting infrastructure for mana whenua.</td>
</tr>
<tr>
<td>Tōnuitanga</td>
<td>Enable sustainable circular Māori economic development and grow and Māori business ecosystems. Lift Māori whānau from poverty.</td>
</tr>
<tr>
<td>Rangatahi</td>
<td>Empower rangatahi to be facilitators of whakaaro (ideas) from ao Māori (Māori world) perspectives.</td>
</tr>
</tbody>
</table>

**What do you think of these ideas?**

Please give us your feedback through

- Have Your Say events
- Written feedback at: akhaveyoursay.nz
KEY MOVE 9:

Youth and intergenerational equity

As rangatahi, we bring our unique perspective on climate change. We are living in uncertain times with responsibilities to te tiaoe (the environment), our tūpuna (ancestors) and those who will follow.

There is more detail in the full draft framework at aksaveyoursay.nz

What we want for the future

Education and kōrero (discussions) connect, and, systems value and awhi (embrace) the mana of rangatahi as a collective. We are engaged with kaupapa (issues) that matter to us. Therefore, the unique visions, approaches, perspectives and voices from rangatahi are recognised in decision-making.

We embrace opportunities for action to address the need to drive change.

The steps that need to be taken sit within an innovative waka guided by the four pou of kai, wai, whenua and whare. These four pou create a framework in which these actions must be delivered.

Our framework to achieve this

- Build whanaungatanga - grow and connect rangatahi networks, voice, behaviour change and action across Tamaki Makaurau, Aotearoa and globally
- Establish a rangatahi governance rōpū (group) to audit the Auckland Climate Action Framework’s progress towards:
  - actions and outcomes impacting rangatahi
  - making recommendations to ensure rangatahi needs and aspirations are fulfilled
- Co-design and implement transformative educational programmes which foster inter-generational knowledge-sharing and kotahitanga (unity)
- Encourage and enable leadership and capability-building opportunities for rangatahi to be confident in decision-making processes
- Enable rangatahi to create innovative pathways for meaningful and sustainable behaviour change
- Empower rangatahi to be facilitators of whakaaro (ideas) from ao Māori (Māori world) perspectives

What do you think of these ideas?

Please give us your feedback through

- Have Your Say events
- Written feedback at: aksaveyoursay.nz
KEY MOVE 10:
Shift to decentralised renewable energy

Energy supply is clean and secure with benefits for every Aucklander.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future

Fossil fuel energy sources have been phased out. They are replaced with feasible and localised renewable energy options, such as hydrogen, wind and solar power.

Uptake of new energy is accelerated by smarter, more efficient and integrated energy generation, storage and management. The transition to renewables supports and enables the electrification of transport, better efficiency and increased productivity through the supply chain. It also supports greater resilience and security of the energy system, and better affordability for both energy generators and energy customers.

What we need to do

<table>
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<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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<tbody>
<tr>
<td>Develop and deliver local and regional decentralised renewable energy solutions</td>
<td>2022</td>
</tr>
<tr>
<td>Use public property to drive innovation in renewable energy development</td>
<td></td>
</tr>
<tr>
<td>Use opportunities from the Ports of Auckland hydrogen project to diversify and scale up</td>
<td></td>
</tr>
<tr>
<td>Establish shore power at Ports of Auckland to reduce emissions from ships at berth</td>
<td></td>
</tr>
</tbody>
</table>

What do you think of these ideas?
Please give us your feedback through

- Have Your Say events
- Written feedback at: akhaveyoursay.nz
KEY MOVE 11: Grow a low-carbon, resilient food system

A strong and resilient food economy provides all Aucklanders with access to low carbon, fresh and healthy food.

There is more detail in the full draft framework at akhaveyoursay.nz

What we want for the future

All Aucklanders have access to low carbon, fresh and healthy food. Auckland’s important and strategic food-producing areas are protected from development. These areas have adapted to a changing climate and sustain production indefinitely. Soils and soil carbon are maintained, helping to offset any residual emissions.

Food waste is minimised – even eliminated. Communities grow closer and healthier in their association with food production, including urban areas. Auckland’s food-producing economy is a model for regenerative, sustainable and affordable food production.

What we need to do

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>TIMELINE</th>
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<tbody>
<tr>
<td>Support primary industries and small businesses to increase food security and build economic and climate resilience</td>
<td></td>
</tr>
<tr>
<td>Protect our productive soils and use regenerative management to increase food security and carbon sequestration</td>
<td></td>
</tr>
<tr>
<td>Reduce wastage, starting with prevention, and maximise the value of surplus food</td>
<td></td>
</tr>
<tr>
<td>Increase demand for local, seasonal and low carbon food</td>
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</tr>
<tr>
<td>Establish a cross-sector sustainable food policy council to advise policy makers on food policy development</td>
<td></td>
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<tr>
<td>Implement kerbside food scraps collection service across urban Auckland</td>
<td></td>
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</tbody>
</table>

What do you think of these ideas?

Please give us your feedback through

- Have Your Say events
- Written feedback at: akhaveyoursay.nz
How does this translate into action?

We’re seeking your feedback on this framework.

Once submissions close in September, we’ll review what you’ve told us. The necessary changes will be agreed by the council. This will become Auckland’s Climate Action Framework.

Different people and organisations will play different roles to turn this framework into action.

Auckland Council will develop detailed costed actions for those things under its direct control. Council will also play a facilitating role where it does not have direct control and where others don’t take the lead. Resourcing will be considered in the council’s next 10-year budget.

Central Government is essential as it has the necessary levers and resources to support climate action. Many of the actions in the framework require Central Government’s support.

Every Aucklander can make daily decisions to reduce emissions and build their resilience to climate change impacts. You can also help change the structures and systems that underpin our economy and society.

Communities are at the forefront of dealing with climate change and acting. To succeed, communities need to add their local knowledge, diversity and ingenuity.

It is critical for private industry and businesses to commit to climate action, particularly reducing emissions. Many already have. They are also vital in developing and delivering the innovations required to meet our goals.

We must work together to avert this climate crisis - we have limited time to make the major changes we need.
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Takutaku

He huarahi ki te ao tūroa
In the beginning there was The Void

I te tīmatanga, ko Te Kore
Within The Void was The Night

Ko Te Pō
From within The Night, seeds were cultivated

Nā Te Pō
It was here that movement began – The Stretching

Ka puta ko Te Kukune
There The Shoots enlarged and swelled

Ko Te Pupuke
Then there was Pure Energy

Ko Te Hiihiri
Then there was The Sub-conscious

Ko Te Mahara
Then The Desire to know

Ko Te Manako
Movement from Darkness to Light, from conception to birth

Ka puta ki Te Whel Ao
From the learning comes Knowing

Ki Te Ao Mārama
I sneeze and there is life

Traditional Māori ways of knowing the world and the genealogy of creation begin with Io Taketake (The Originator) and evolve through different spheres of development until the present day. The recital above is an example of these spheres.
Mihi

Tuia ki te rangi
Tuia ki te whenua
Tuia ki te moana
Tuia ki te here tangata
E rongo te pō, e rongo te ao

E whēkite ana, e whēkaro ana i ngā uhitai a Wainuiātea
Tupuna o ngā moana kiriwaiwai mō Papatūānuku
Ngaki tonu ana a Taitua rāua ko Taiaro
E haehae tonu ana i te urname o Nuku

Pipi tonu mai ana ngā wai o Roi i ngā kamo
Tangi ana mō Moana-tū-ki-te-repo
I kekenia kia rere tōna waiora
ki a Tangaroa-whakamau-tai
Ngaro atu, kāhore he hokinga mai

Kei hea rā he kāinga mō Matuku
He manu o te repo?
Ka ngaro i te aro tirohanga

Kua korokī ki ngā rākau teitei o te wao nui
Waiho ake a Poroka te tangi mokemoke

Ngaokī tonu mai ana te oati a Tangaroa ki a Tāne
Ngaki ana ki uta
Tāpohutu mai ana ngā uri a Tāne
Ki te whakatutuki i te oati i Te Paerangi

Waiho ake ngā uhitai hei roimata
Whakamākōkō i ngā pāpāringa
Kia tū kau ake ki te wharehukahuka a Tangaroa
Ki te patata e tau ai, e tau ai, kua tau
Bind the tapestry of life which affirms humanity's connection to the natural world. To the celestial realm, to the earthly realm, to water - the sustenance for all life forms, and, to remember to keep everything in 'balance'.

The mists of Wainuiātea, the mother of all oceans and waterways, rise like tears above the waterways that provide the fluid skin to clothe Papatūānuku.
The ancient waterways of Taitua and Taiaro forever eroding and tearing at the breast of Papatūānuku.

The tears (Roimata) continuously flow from the eyes
Mourning the death of Moana-tū-ki-te-repo (swamplands, the youngest child of Wainuiātea)
Killed and drained of her life-giving purpose, to cleanse the waters of Tangaroa Whakamautai.
Lost forever and never to return

Where is home for Matuku now?
The bird of the marshlands and swamps?
He is no longer seen.

His spirit floating on the highest branches of Te Wao Nui a Tāne.
Leaving Poroka to his lonely cry.

The promise Tangaroa made to Tāne is yet to be satisfied.
He continuously digs and scrapes at the ramparts of the domain of Tāne. Fulfilling the promise to take the life of the children of Tāne.
The promise he made to Tāne at Te Paerangi

May the seaspray be evidence of those tears
That continually moisten the cheeks of Papatūānuku

They flow to the foamy domain of Tangaroa
Where in their own time they leave the turbulence of the oceans to come ashore to find peace and rest.
Te Tāruke-ā-Tāwhiri

Te Tāruke-ā-Tāwhiri takes a deeply cultural narrative that is embedded in this place - Tāmaki Makaurau / Auckland.

The narrative speaks to the struggles of Tāwhiri-mātea, the primal ancestor associated with climate and weather. Tied to the Māori creation narratives of the universe and the world, Tāwhiri-mātea is seen to be influencing our climate and accelerating the change in our climate in response to human induced climate change.

The central theme of the narrative, calls for a change in our response to climate change, and a shift from a human-centred approach to an ecological-centred approach given our symbiotic relationships with the natural environment.

The call to action is now.

Tāmaki Makaurau - story of place
Tāmaki Makaurau - Tāmaki loved by many
Tāmaki herenga waka - Tāmaki the converging place of many canoes
Tāmaki herenga tangata - Tāmaki the converging place of many peoples
Te pai me te whai rawa o Tāmaki - The abundance and prosperity of Auckland

Blessed with a temperate climate, natural resources and a distinctive coastal isthmus, Tāmaki Makaurau / Auckland has attracted human settlement and commerce for about 1000 years. It is a coastal region, bordered by the Waitematā, Manukau and Kaipara harbours and it is formed by a volcanic landscape, bush clad ranges and fertile plains. Today the number of people that have been attracted to the region has grown exponentially, and with the growth come benefits and issues.
It’s time for climate action

2019 saw millions of young people around the world take strike action, calling for a safe climate future. People across Aotearoa New Zealand have called for decisions and action to protect our regions – and our planet – from the impacts of climate change.

In June 2019, Auckland Council responded to this call and the irrefutable evidence of climate change by declaring that a climate emergency is facing our region.

Climate change is one of the most significant issues facing Aucklanders. Implications and impacts are broad and varied. It affects us all, but our most vulnerable people and communities are most at risk. The impacts are expected to get worse over time and will persist for decades and beyond.

Auckland has already felt some effects of climate change such as sea level rise and flooding. Even slight changes to temperature, rainfall, and sea level now have serious consequences. Heat stress, severe flooding, and new pests and diseases will have direct impacts here in Auckland and will only get worse unless we take action to adapt and mitigate the effects of climate change.

Having declared a climate emergency, we as Aucklanders need to respond and take the necessary actions to protect our future. We need to reach a target of no more than 1.5 degrees warming. This draft Climate Action Framework outlines ways in which Auckland Council and wider Auckland community can shape how we respond.

The Climate Action Framework will inform detailed costed actions for Auckland Council and our council-controlled organisations. This will feed into the council’s next ten-year budget, which will be finalised in 2021.

We also rely on key stakeholders such as businesses, institutions, industry and community groups to use the Framework to work together to take action. Auckland Council can act as a broker and facilitator, but – given that a wide range of stakeholders must act – many changes need to be made without our direct influence or input.

Please work with us and submit on the draft Framework. We want to test whether we are heading in the right direction to bring about the change that is needed. Have we got it right? Are there areas we need to change, or give more or less focus to? We are genuinely committed to listening and responding to the feedback we receive.

Councillor Penny Hulse

Chair of Environment & Community Committee
Executive summary

Auckland has 10 years to make major changes before climate change takes hold with catastrophic consequences.

As no single group can deliver the change needed alone, we have collaborated with stakeholders across Auckland to develop this framework to reduce emissions that cause climate change, like those from transportation and energy generation, and reduce climate impacts like flooding and sea level rise.

The purpose of the framework is to:

- Increase Auckland’s resilience to the impact of climate change
- Reduce emissions that cause climate change

To achieve this we need to:

- Keep temperature rise within 1.5 degrees Celsius and get Auckland to net zero emissions by 2050.

We’ve come up with 11 changes – called key moves – to achieve those goals.

We can only plan on what we know now. As we learn more about climate change and its effects, as we gather new knowledge and technology, we’ll refine the framework.

We need every Aucklander – from residents to businesses – to be involved in reducing the negative impacts of climate change. This is how we start that process.

What do you think?

We want to hear what you think about the draft framework, so that we can improve and finalise it. Give us your feedback through:

- Have Your Say events
- feedback at: akhaveyoursay.nz

This document is available:

- online at akhaveyoursay.nz
- libraries, service centres and local board offices
Making a submission

Submissions close at 8pm on Friday 6 September

Your name and submission may be included in papers made available to the media and the public. All other personal details will remain private.
Climate change and Māori

Ko te hau o te whenua, ko te hau o te tangata

The essence of the land, the vitality of people

Māori are inherently connected to the natural environment through whakapapa. The impacts of climate change will significantly affect the essence and vitality of those whakapapa relationships.

Mana Whenua have specific whakapapa relationships to Tāmaki Makaurau. Mātauranga (knowledge) around the land, sky and sea in the region has been developed over the last 1000 years.

We have an opportunity to draw on those knowledge systems, practices and experiences to help navigate our way forward, and to guide our collective response to climate change.

We are driven to reduce the impact of natural and human induced climate chaos on our environment, including the barriers that enable inter-generational resilience of communities across Tāmaki Makaurau.

Through the Mana Whenua Kaitiaki Forum, Mana Whenua have partnered with the council to develop this framework and support the contribution of Māori subject matter experts and in particular, the role of rangatahi to further contribute to the Framework.

The Māori drivers for this Framework for action are underpinned by Mana Whenua and anchored within the specific Māori context of Tāmaki Makaurau. These elements include, but are not limited to:

- whakapapa
- kaitiakitanga
- manaakitanga
- tōnuitanga
- mātauranga Māori

Find out more about Climate change and Māori in the supporting information section.
Te mana rangatahi

We are the rangatahi (youth) of Tamaki Makaurau and we have mana (power) both now and in the future.

Let us awaken your senses to help you navigate this kaupapa (issue).

Close your eyes.

Take yourself to a place you feel connected to.

Do you feel the winds of Tāwhiri-mātea on your face when you are on your maunga (mountain)?

Can you hear the waves of Hine-moana?

Do you feel the vibration of your ngahere (forest)?

Will your mokopuna (descendants) feel this in the future?

Do they deserve the future we are giving them?

Open your eyes.

Our whakaaro (ideas), our way of living is in the time of darkness, Te Āhuru Mōwai. We are standing here today to help navigate through that time of darkness. Be Tāne-mahuta and push that darkness away.

We are teina (junior) to te tāiao (the environment).

Ka noho teina te tangata. Ka noho tuakana ko te tāiao.

The environment is the mentor to people. We as people are learners to the environment.

In days past, we listened to the trees, we noticed tohu (signs) and we respected those messages because we are te tāiao, we are the environment. We cannot continue talking about te tāiao, rather, we talk with te tāiao, because we are one.

As rangatahi, we are teina to you. You have knowledge and have lived experiences that we will never know.
But you are teina to us because you don’t know what it is like to be rangatahi, right now. We are here, and we are suffering the effects of a system that does not value the voice of future generations or te taiao.

Our mātauranga (knowledge) tells us of Māui-pōtiki, the youngest haututū (trickster) who was bold, creative with change, he was innovative, he was experimental and he got on with it.

As indigenous rangatahi voices we know where we stand. We ask you to trust, tautoko (support) and awhi (embrace) us in the healing of our whenua (land) on behalf of our mokopuna.

We ask you to recognise us in the plan for our future. We are Generation Now. Our voices will be heard.

Whakarongo pikari (listen attentively).

Manaaki whenua
Manaaki tangata
Haere whakamua
Care for the land
Care for people
And go forward
Our commitments and our progress

A global movement
New Zealand is part of the global movement to reduce emissions and prepare for the catastrophic impacts of climate change.

This means keeping the global temperature rise this century well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit warming to 1.5 degrees Celsius. Although it sounds small, half a degree makes a big difference. Take sea level rise: new evidence suggests that half a degree would mean at least 10 million fewer people exposed to risks like flooding and infrastructure damage.

Lining up targets
Confronted with this kind of evidence, the global conversation has shifted to 1.5 degrees Celsius and so has New Zealand. The Government’s Climate Change Response (Zero Carbon Bill) aims to deliver on the 1.5 degrees Celsius target and we have adopted the same target for Auckland. We’re also part of the C40 Cities group of 94 major cities working together to take bold climate action. Most of these cities are pursuing targets in line with the 1.5 degrees Celsius target.

Find out more about C40 Cities in the supporting information section.

Our track record for climate action will help here. Businesses and organisations are reducing energy use in their facilities and offices, testing out new low-emissions technologies and

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1 https://www.ipcc.ch/sr15/
3 https://mfe.govt.nz/have-your-say-zero-carbon
designing out waste from their supply chains. Auckland iwi are showcasing new technologies, climate-smart building design and approaches to food and food waste. The council is investing in public transport and active modes like walking and cycling. We’re committed to ensure the safety of people and infrastructure in the face of sea level rise and more severe flooding.

Find out more about Auckland’s track record in the supporting information section.
**Auckland’s pathway to net zero emissions**

Our regional emissions are rising. Between 2009 and 2016 Auckland’s overall emissions increased by 5.6 per cent. If we continue this trend, Auckland’s emissions will increase by 27 per cent by 2050.

Our current pathway won’t get us to our commitment of dramatically reducing emissions to net zero by 2050.

Our most significant sources of emissions are related to transport, energy use in industry and buildings, and industrial processes. Collectively, they contribute to more than 60 per cent of total emissions in Auckland.

Working backward from the goal of net zero, Auckland’s carbon budget is 164 mega-tonnes of carbon dioxide equivalent (MtCO₂e) over the next 33 years.

We need to rethink how we travel, grow and develop Auckland, how we power our homes and businesses, and how we transition our industry and economy. All of this is in the context of rapid population growth and change, which adds another set of challenges.

Other cities and nations have shown that they can grow in population and Gross Domestic Product (GDP) while dramatically shrinking overall emissions. That challenge is now ours.

To get there, our emissions must decrease rapidly in the next decade. The sooner they decline, the better we can manage the challenges, impacts and costs, and the sooner we’ll see the benefits like cleaner air and better transport choice.

The next few years are critical. Major changes take time to implement and many of the decisions made many years ago have locked us into high emissions.

Actions in this framework are designed to reduce emissions across these major sources and collectively stay within our overall carbon budget.

Find out more about emissions modelling in the supporting information section.
The impacts of climate change for Auckland


This work is a basis for a Climate Change Risk Assessment (CCRA) for Auckland. The CCRA looks at risks to our people, our environment and our infrastructure, should global emissions continue to rise at the current rate. It has been used to help develop the actions of this draft framework.

Find out more about the Climate Change Risk Assessment in the supporting information section.

This new information and research on how Auckland’s climate will likely change, and the related impacts helps us prepare for those changes and impacts – and to ensure we prioritise our more vulnerable people and communities.

**Temperature**

Over the past century, Auckland’s mean annual temperature has increased by about 1.6 degrees Celsius. It is projected to increase by between 1.5 and 3.75 degrees Celsius, depending on the pace of global emissions reductions.

This means we’re likely to have four times as many hot days per year. That’s 80 days above 25 degrees, equivalent to a whole season. This could be a minor inconvenience to some. To many others it could lead to poorer health, particular in the very young, the elderly, those working outdoors and people with pre-existing illnesses. We however know that glaciers and ice sheet melting is accelerating so the change could be even greater.

**Marine and coastal change**

Sea levels are already rising. If global emissions remain unchecked, they’re projected to rise by up to one metres by the end of this century.

In a region with 3,200 kilometres of coastline, this means serious threats of coastal erosion, storm surges and flooding. Over this century, approximately 1.5 to 2.5 per cent of Auckland’s land area could be exposed to sea level rise. This covers 0.3 per cent of buildings, 80 per cent of coastal ecosystems and six per cent of dairy land.

Marine ecosystems are highly susceptible to climate change, with things like ocean acidification threatening the condition and very survival of some marine species. This will affect both the economy and recreational activities.

**Rainfall**

Seasonal rainfall patterns and extremes are expected to change, with wetter autumns and drier springs. Drier periods could mean water shortage for urban, agricultural and industrial use. Extreme rainfalls could mean more intense flooding, affecting private and public property, health and safety, and local economies.

[^1]: [https://www.niwa.co.nz/](https://www.niwa.co.nz/)
The other factors and combined effects

Climate change doesn’t happen separately from other changes like population growth, changes in land use, changes to food and energy security, and rising inequality. In fact, climate change may make many of these challenges even more difficult to solve or may make related impacts on people and communities even more severe.

Our climate change effects aren’t isolated from other regions and countries. Migration related to climate is already happening across the world. Auckland will need to be part of the solution to support these displaced people.

Impacts of climate change for Māori

Indigenous peoples constitute less than five per cent of the world’s population, but they safeguard 80 per cent of the world’s biodiversity. The global response to climate change requires applying all the best knowledge available, including the perspectives of indigenous peoples. They are not only among the most vulnerable to the impacts of climate change, they also hold many of the solutions to adapting to it.

Te ao Māori (the Māori world) calls for the protection and preservation of all that is culturally significant, to protect and preserve our taonga (resources). The legacy of our ancestors that we in turn leave for future generations, lies in the balance.

Climate change has significant implications for Māori:

- Being predominantly coastal people, mana whenua relationships to ancestral taonga, cultural knowledge and practices are at risk. Sea rise is compromising wāhi tapu (sacred sites), Māori land holdings, marae and other significant sites.
- There will also be potential socio-economic impacts on whanau (families). Proposed responses to climate may present a further disadvantage for Māori.
- Whānau Māori (Māori families) who are already in a precarious financial position, have less access to resources to respond to rapidly worsening conditions.
- Marae, urupā (burial grounds) and wāhi tapu (sacred sites) will be exposed to inundation and flooding.

The indigenous flora and fauna are under threat from a changing environment, particularly where those changes are so fast or significant that species cannot adapt or are overrun by exotic invasive species that can.

Those climate refugees within Tāmaki Makaurau and our Pacific island whānau will require additional support.
How we developed this framework

Auckland Council took the lead in coordinating and developing this framework with others. Private sector organisations, climate change experts, Central Government, young people and community members all helped to get the framework to this point.

Mana whenua partnered with us and contributed Māori subject matter experts. In particular, they support the role of rangatahi Māori to further contribute to the framework.

These groups have had an opportunity to influence the direction and development of this draft framework. It is now time for all Aucklanders to share their thoughts and ideas.

Prioritising

We spent a year collaborating to identify our priorities.

We designed and trialled a new pilot web platform, ClimateAkl.nz, to crowdsource climate action ideas from all Aucklanders and give people an opportunity to engage with the draft framework. We also reviewed previous work and worked with partner cities from the C40 Cities group to gather data, ideas and world best practice. Cross industry experts and communities also informed and prioritised actions.
Testing

We tested our ideas with a cross-sector group of experts. A group of seven experts also assessed and challenged the work. They brought technical expertise ranging from climate adaptation and energy systems, to climate finance, to how climate change affects Māori. All 170 elected members from Auckland Council have been involved in developing the framework. We also used new research to inform and test actions modelling what net zero emissions means for the region and improve our understanding of key climate risks.

Refining

We continued to collaborate with stakeholders and partners as we refined actions. We developed a set 11 key moves to deliver on emissions reduction, resilience and other outcomes. We developed five scenarios to showcase what collaborative and near-term climate action looks like.

These were refined over three days at the Auckland Climate Symposium in March 2019, with participation from over 600 delegates from all sectors. A month later, the rangatahi/youth-led Conscious Climates event led to the development of actions and themes that are integrated into this framework.

Find out more about the Auckland Climate Symposium in the supporting information section.

Find out more about Capturing views on priorities in the supporting information section.
Roles in delivery

**Auckland Council Group**
We’ve taken a leadership role in developing this framework. We’ll continue that by ensuring other strategies, plans and actions support – and do not undermine – delivery of climate actions. The Group will lead many of the actions in the framework and will have an advocacy, partnership, support, delivery or facilitation role in others.

Find out more about the roles of Auckland Council in delivery of the framework in the supporting information section.

**Central government**
Partnership with the government is essential to delivering the framework, with clear national direction providing the necessary levers and resources to support climate action. Government and Auckland will need to work closely to deliver the aspirations of both the Zero Carbon Bill and this framework. Many of the actions in this framework require central government’s support.

Find out more about the roles of central Government in delivery of the framework in the supporting information section.

**Private industry**
Businesses are increasingly committed to climate action, particularly in delivering emissions reductions. Beyond this, they will be vital in developing and delivering the innovations required to meet our climate goals. We must work together to ensure Auckland’s ongoing prosperity.

**Aucklanders**
Everyone can make decisions in daily life to reduce emissions and build resilience to the impacts of climate change. These decisions range from how we get around to what we eat. To deliver real change, we want to harness Aucklanders’ ingenuity and diversity of thought to help change the structures and systems that underpin our economy and society.

**Community groups**
These group are at the forefront of dealing with climate change and taking action to address it. Much of our success will come from those who know their local areas the best and what is needed to make change.

**Research and academia**
We don’t have all the answers. Ongoing research and innovation will be key to delivery. Building capacity and new knowledge will be vital to a just and fair transition.

**Rangatahi**
Ngā rangatahi - as all young people - will hold to account those in power as decision makers for the choices made today will impact on their futures. This requires active participation of rangatahi in decision making in the delivery and monitoring of actions.
The 11 key moves

This draft framework identifies 11 key moves to deliver the zero carbon, climate-resilient future we want.

The 11 key moves have been identified through rigorous research and engagement from across sectors and the region. They will deliver seven climate action outcomes with a range of important benefits like healthier people, cleaner air and water, and stronger communities and economies.

KEY MOVE 1: Lay the foundation
We make decisions based on sound evidence. We have the capacity, resources and leadership to deliver by working together.

KEY MOVE 2: Enhance, restore and connect our natural environments
Oranga tāiao, oranga tāngata: a healthy and connected natural environment that restores the mauri (life essence) of Tāmaki Makaurau and benefits every Aucklander.

KEY MOVE 3: Make development and infrastructure climate-compatible
All new development and infrastructure complies with our climate goals and encourage low impact lifestyles.

KEY MOVE 4: Transform existing buildings and places
Existing buildings and spaces are revitalised to be healthy, low impact and multi-functional.

KEY MOVE 5: Deliver clean, safe and equitable transport options
Aucklanders have more options for getting around.

KEY MOVE 6: Move to a zero carbon, climate-resilient economy
Auckland leads climate-smart innovation and a fair and just transition to a zero carbon, climate-resilient economy.

KEY MOVE 7: Help Aucklanders become more resilient and reduce their carbon footprint
We are all more resilient to climate change and lead Auckland’s transition to net zero emissions.

KEY MOVE 8: Te puawaitanga o te tangata
Self-sustaining Māori communities and a lift in the well-being of Māori whānau (families) across Tāmaki Makaurau.
KEY MOVE 9: Youth and inter-generational equity

As rangatahi, we bring our unique perspective on climate change. We are living in uncertain times with responsibilities to te taiao (the environment), our tūpuna (ancestors) and those who will follow.

KEY MOVE 10: Shift to decentralised renewable energy

Energy supply is clean and secure with benefits for every Aucklander.

KEY MOVE 11: Grow a low-carbon, resilient food system

A strong and resilient food economy provides all Aucklanders with access to low carbon, fresh and healthy food.
Seven climate action outcomes
Our framework will deliver seven climate action outcomes for Aucklanders.

Keeping within 1.5 degrees
Reducing Auckland’s emissions.

Climate resilience
Guarding Auckland against future climate impacts.

A healthy environment
Protecting and enhancing the natural environment.

Healthy, happy people
Improving air quality, mental health and physical wellbeing.

Diversity of response
Drawing on, reflecting and celebrating the unique cultural heritage and diversity of Tāmaki Makaurau.

Equity and a just transition
Ensuring fair and affordable access to opportunities and guarding against inequitable impacts.

Economic prosperity
Building and sustaining a strong and resilient economy that generates quality jobs.
**Phased delivery**

Each key move contains proposed actions. Some will be delivered more quickly and easily; others will require more time and effort. All actions are set within three time periods:

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<td>Roll out of actions at scale and pace</td>
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<td>Pilot actions that test new ideas that show promise if scaled up</td>
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<tr>
<td>Actions essential to unlocking system change, better evidence, additional resourcing</td>
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</tbody>
</table>

Actions with the 🌟 are partially underway, have been discussed initially with delivery partners, or have been through some degree of refinement and development. It does not indicate whether or not funding, deliverables or outcomes have been achieved.
KEY MOVE 1: Lay the foundation

We make decisions based on sound evidence. We have the capacity, resources and leadership to deliver by working together.

The success of this framework and each key move outlined in the following pages requires 4 key elements:

- Actions. To unlock barriers, embed climate change into our decision-making and galvanise support and leadership.
- Voice. To help give a voice to more Aucklanders
- Māori. To uphold Treaty partnerships to better deliver for Māori.
- Research. To generate data and research to have strong and consistent policies and to inform major decisions.

What we want for the future

All Aucklanders have a voice in our climate future and can make their communities more resilient and emissions-free. Leadership at all levels and from all sectors is cemented, sustained and flourishing. Each decision considers climate change and te Tiriti o Waitangi/Treaty of Waitangi. Information is continuously updated and embedded into the decision-making process. Auckland’s local and regional approach is aligned with a supportive and enabling national approach. Conflicts between projects, policies and strategic directions have dissolved.
What we need to do

Our actions to deliver this key move include:

1. Uphold Te Tiriti o Waitangi/Treaty of Waitangi and treaty partnerships in decision-making
2. Secure long-term commitment and leadership from across mana whenua and public, private and voluntary sectors
3. Engage in a way that enables and empowers Aucklanders to have a say in climate decisions and to act
4. Ensure that the custodianship of mātauranga Māori knowledge systems, practices and the teachings inform and underpin climate response, actions and decisions
5. Embed climate change assessments into decision-making processes and reporting
6. Regularly review and update climate change evidence to inform decisions
7. Be transparent and provide data and information to enable citizen science, innovation and research
8. Actively develop supportive policy and legislation with central government
9. Ensure regional policies and strategies do not conflict with delivery of climate compatible development and infrastructure.

Find out more about the actions in the supporting information section.
KEY MOVE 2: Enhance, restore and connect our natural environments

Oranga taiao, oranga tāngata: a healthy and connected natural environment that restores the mauri (life essence) of Tāmaki Makaurau and benefits every Aucklander.

Auckland contains about 20 per cent of the New Zealand threatened birds, reptiles and plants\(^a\). Rapid urbanisation, invasive pests and diseases, pollution and on-going loss of habitat have affected these species. They undermine the natural environment’s ability to ensure our resilience and capture emissions.

Climate change will intensify these problems and affect the way species move and adapt, leading to further threats.

Access to green space is not equal across the region, as shown by tree canopy cover. In the southern suburbs, tree cover dips as low as eight per cent, but in the northern and western suburbs it increases to 30 per cent. This affects air and water quality, safety and mental health.

What we want for the future

Our natural environment is celebrated, protected and enhanced - and its mauri is flourishing. The physical area and connection between blue (water) and green (land) spaces has increased, and these healthy ecosystems store carbon. Healthy, connected ecosystems also provide climate resilience. We are managing flood risk and reducing urban heat to have better air and water quality and a more pleasant urban environment. Aucklanders feel a strong connection to, and are kaitiakitanga for, their local natural environment. They value and respect the mental and physical wellbeing benefits it provides. Indigenous biodiversity has access to a seamless network of habitat space and is protected from invasive species. Our taonga species are resilient to a changing climate.

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\(^a\) (Auckland Council 2015)
What we need to do

Our actions to deliver this key move include:

1. Use a blue-green network approach in growth and regeneration areas
2. Grow and protect our urban and rural ngahere/forest to capture emissions and build resilience
3. Protect indigenous biodiversity and ecosystems vulnerable to climate change
4. Establish a voluntary ecosystem marketplace to generate funding for natural climate solutions
5. Apply circular economic principles to land use and land use changes.
6. Change to a land management approach that creates, preserves and enhances healthy, viable soils
7. Protect and enhance coastal and marine ecosystems to maximise carbon capture and resilience.

Find out more about the actions in the supporting information section.
Flagship action

Regenerate Manukau’s blue (water) and green (land) networks by restoring the Puhinui Stream.

A healthy Puhinui Stream connects ecosystems and neighbourhoods from the Botanic Gardens to the Manukau Harbour. The mauri of the stream is flourishing, and it provides connectivity and climate resilience for local communities and biodiversity.

Manukau is an area of relatively high climate risk. The Puhinui Stream is the last remaining natural asset in the area and an important link to Manukau’s cultural and ecological heritage. A pilot project to restore the stream and connect the green spaces and neighbourhoods along its banks could be the model for ecological, social, cultural and economic transformation.

Building on the existing restoration project, a group including HLC, the University of Auckland, and the Auckland Council Group, are collaborating to develop other climate-ready solutions that can be introduced across Auckland’s growth and regeneration areas.

This project has been developed to:

- Use growth as a lever to deliver improved climate resilience, with better environmental, social and cultural outcomes.
- Understand and overcome the barriers to implementing blue-green networks in Auckland.
- Move away from a capital cost-based analysis for assessing development options, to measuring whole-of-life costs and benefits across environmental, social, economic, and Te Ao Māori value systems.
- Improve Aucklanders’ connection to, and kaitiakitanga over, their local natural environment.
KEY MOVE 3: Make development and infrastructure climate-compatible

All new development and infrastructure complies with our climate goals and encourages low impact lifestyles.

Land use and planning decisions – particularly those around development and infrastructure – are fundamental to climate action. They influence and lock in our emissions trajectory and our ability to deal with the risks and impacts of a changing climate for decades to come.

For instance, greenfield development often results in more car-dependent and carbon-intensive travel patterns, increased social isolation and disconnection. It also affects the ability of natural systems to provide climate resilience. Conversely, quality compact urban development has many benefits. These include better and lower-carbon transport choices, reduced travel times and costs, and fewer impacts on air and water quality.

These decisions are important given Auckland’s rapid growth. In the next few decades, Auckland could grow from a city of 1.66 million to a city of 2.4 million, requiring another 313,000 dwellings and 263,000 jobs. Buildings and infrastructure can last for 50 to 100 years – communities, far longer. Therefore, decisions made today determine which direction we move and what future we lock in. We can move toward emissions reduction and climate-readiness – or to greater emissions and climate risk.

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6 [https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/about-the-auckland-plan/Pages/aucklands-key-challenges.aspx]
What we want for the future
The planning, location and delivery of development and infrastructure helps minimise and reduce emissions and the impacts of climate change.

Australians live low-carbon lifestyles, with healthy and accessible transport choices and energy efficient homes.

We use dramatically fewer resources like water and energy without compromising our quality of life.

Australians feel more connected to their communities. They have more time to spend with families and friends due to shorter and easier travel.

What we need to do
Our actions to deliver this key move include:

1. Accelerate the uptake of sustainable design and construction
2. Build climate resilience and health benefits into all transport projects, delivering more than just emissions reductions
3. Ensure new infrastructure is climate-proof and resilient
4. Make climate compatibility assessments standard for all new developments and infrastructure
5. Plan for a quality compact urban form that supports low carbon, resilient development
6. Find and deliver alternative water supply options to address climate change and population growth
7. Establish an integrated, circular water management framework to improve efficiency and reduce waste
8. Ensure planning controls reflect climate risk and policy interventions are in place to mitigate them.

Find out more about the actions in the supporting information section.
Flagship action
Create a circular construction and demolition sector

The construction and demolition sector is characterised by inefficient operations, wasted materials, embedded carbon, and a high proportion of waste to landfill all with negative impacts to climate and society. The delivery process, from regulation to policy through to contracting and construction, is strongly compartmentalised.

We need to change this by moving from a linear system to a more circular, regenerative one in collaboration with the sector.

We’re proposing three approaches:

- Create an education framework to build capacity across the sector, from designers and engineers to installers, to identify market-leading methods to design out waste, optimise material reuse and ensure efficient use of resources.
- Drive policy changes for innovation in sustainable alternatives, such as certifying recycled materials to meet industry engineering standards.
- Incentivise alternatives to demolition in the market by using public and private sector procurement contracts.
KEY MOVE 4: Transform existing buildings and places

Existing buildings and spaces are revitalised to be healthy, low impact and multi-functional.

Buildings can play a big role in reducing emissions and preparing for a changing climate.

However, New Zealand buildings are generally poor-performing, inefficient and unhealthy. The majority of existing buildings are built to the minimum insulation standard required by law, resulting in significant heat loss and higher energy costs, often for homeowners or renters who can least afford it.

Poor-quality housing has a direct impact on health. Cold and damp houses are linked to higher incidences of asthma, rheumatic fever, cardiovascular disease and respiratory illnesses and infections. The poor design of our houses also increases the risks of overheated living spaces during hotter weather. By 2030, warming temperatures from climate change will increase the overheating problem by an estimated 61 per cent.

The places around buildings are often stark, car-dominated, unsafe and unhealthy. They are often missed opportunities for green space or pedestrianised areas that provide better opportunities for social interaction and economic activity.

Most of the buildings and places that exist today will still be a part of Auckland’s built environment in 2050. Major retrofits are necessary, but the construction industry is currently not geared up to deliver this, and generally lacks the required skills and awareness of technologies.

Retrofitting our existing buildings and places now is essential to make them more resilient to climate change, to reduce their emissions and to deliver better health outcomes. This also opens up an economic opportunity for the industry with the potential development of new skills and new jobs.

What we want for the future

Auckland’s buildings and places are healthy, comfortable and efficient. Diseases like rheumatic fever rapidly decline and we no longer see a difference in related health outcomes across Auckland’s communities. Aucklanders spend less of their income on heating and cooling their homes. The places in our built environment provide multiple functions, such as energy and food production, flood resilience and opportunities for social and cultural interaction. People spend more time together in quality places and feel better about themselves and about Auckland.

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What we need to do

Our actions to deliver this key move include:

1. Deliver targeted commercial, industrial and residential building retrofit schemes across Auckland
2. Increase the productive potential of new/existing roofs and walls
3. Make public spaces multi-functional with broader benefits
4. Establish and rapidly scale low carbon, resilient precincts across Auckland
5. Ensure existing infrastructure is as climate-proof and resilient as possible.

Find out more about the actions in the supporting information section.
Flagship action

Establish a zero carbon, resilient city centre.

A city centre that prioritises active and public modes of transport, clean freight and delivery systems and equitable access for everyone.

The revitalisation of the city centre provides an opportunity to address transport-related emissions and deliver on Auckland’s existing commitment to the C40 Fossil Fuel Free Streets Declaration. We will:

- Create a zero-emissions zone in the city centre, favouring public transport, walking, cycling and zero-emissions vehicles.
- Use clean energy and low emission initiatives in the ports of Auckland and Wynyard quarter areas including hydrogen production, solar power generation, shore power connections at cruise and freight shipping terminals, electrified port logistics, and low emissions zones.
- Improve health outcomes for residents and visitors by providing the cleanest air of any city in the world of a million-plus people.
KEY MOVE 5: Deliver clean, safe and equitable transport options

Aucklanders have more options for getting around.

Transport-related emissions account for around 40 per cent of Auckland’s total emissions – and 90 per cent of these are related to travel by road.

Traffic congestion affects our economy, environment and quality of life. Past land-use planning has also led to longer trip distances and travel times between home, work and leisure. People are also concerned about the rising cost of travel and access to frequent and affordable transport choices. It costs around $12,000 a year to own and operate a car and too many Aucklanders spend a high percentage of household income on travel. While the price of electric cars continues to drop, not everyone can afford them.

The safety of our networks is a key concern. Our rate of serious and fatal crashes is the highest in New Zealand for a decade.

Transport-related emissions beyond greenhouse gases also affect our health. Across key arterial routes, air quality currently exceeds the annual safe limit for human health due to the large amount of heavy traffic. This includes freight and shipping.

Our research shows that parts of our transport network will be affected by climate change such as sea level rise and increased flooding.
What we want for the future
An integrated and resilient transport network works together with climate-compatible development.

The network prioritises, and is built for active and public transport. This reduces trip distances and the need for travel, and provides zero carbon choices.

Our transport options are safe, affordable and healthy. They are powered by resilient and sustainable energy sources, including the widespread use of electric vehicles, bikes, buses and trains. Public transport is fast, clean, safe and accessible for all. The transport system easily connects residents to areas of greatest demand and enables efficient distribution of freight. Zero emission cars outnumber their petrol counterparts. Cars no longer dominate the urban landscape and public spaces are put to better use.

What we need to do
Our actions to deliver this key move include:

1. Encourage large-scale uptake of zero and low emissions vehicles
2. Rapidly increase the frequency, affordability and availability of public transport
3. Rapidly increase safe, high-quality cycling and walking infrastructure
4. Assess road pricing schemes to reduce car travel and vehicle emissions
5. Make freight systems more efficient to reduce emissions.

Find out more about the actions in the supporting information section.
KEY MOVE 6: Move to a zero carbon, climate-resilient economy

Auckland leads climate-smart innovation and a fair and just transition to a zero carbon, climate-resilient economy

Our business community is made up of large businesses and many small and medium-sized businesses (SMEs). Many large businesses measure their emissions and may have reduction targets. All businesses are integral to reducing emissions and climate risks.

However, most still need to identify the impacts, risks and opportunities of climate change to their businesses and business models. How large businesses perform will flow through to small and medium-sized businesses. They may need more transition support to ease the impacts and risks – but also to seize opportunities.

Businesses like manufacturing and retail will be affected by changes to consumer behaviour, and disruption to supply of products and services. There will also be greater demand for low carbon goods and services and possible damage to commercial assets.

But climate change can also present new opportunities. For example, some regions may grow crops not possible before. New technologies and materials for energy distribution, mobility or food production may be discovered.

It is important for businesses to understand and prepare for a fair and just transition, including changes in their workforce, as some skills will become irrelevant and others will be reinvented for the zero-carbon economy. Businesses and governments would be well-served by co-investing in and retraining their workforces, with likely benefits beyond those preparing for climate change. Broader social impacts, like the effect of rising temperatures on health, will also affect workforce productivity. Transiting the economy needs to be done in a fair way, we call this Just Transition.

Find out more about the Just Transition in the supporting information section.

What we want for the future

Auckland's economy transitions quickly to be clean, prosperous and zero carbon. Our businesses have far greater resilience and agility to a range of infrastructure, workforce and supply chain climate risks and impacts. We are climate-ready and our people thrive in a stabilised climate. New opportunities, collaborations, business models and innovations power a more circular and hyper-efficient economy. This provides a diversity of stable and meaningful career opportunities for our growing population.

Find out more about the Circular Economy the supporting information section.

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**What we need to do**

Our actions to deliver this key move include:

1. Establish a climate innovation system
2. Accelerate business transition to zero carbon and build resilience
3. Establish sector-based programmes to grow low carbon and climate resilience skills
4. Leverage public sector and large business supply chains to deliver on climate outcomes
5. Change our waste management to a circular system, prioritising efficient use, recovery and reuse
6. Embed circular principles into Auckland’s economy
7. Collaborate with central government to reduce process heat emissions.

Find out more about the actions in the supporting information section.
Flagship action

Establish a climate innovation system

An Auckland-led innovation system fostering world-class climate solutions from within New Zealand.

This will establish a climate innovation ecosystem that focuses on solutions unique to Auckland’s challenges in both urban and rural areas. It will connect and use funding, expertise and technology to foster world-class climate solutions across Tāmaki Makaurau and wider New Zealand.

This project has been developed to:

- Provide a flexible system model that can grow and evolve.
- Enable opportunities for start-ups to scale-up through support networks, identification of long-term income streams, advocacy for policy changes and enabling access to technology.
- Provide a platform to support, enable and foster Māori initiatives, and remove current barriers to indigenous start-ups.
- Support the development of targeted proposals to solve specific climate-related challenges to Auckland and New Zealand.
KEY MOVE 7: Help Aucklanders become more resilient and reduce their carbon footprint

We are all more resilient to climate change and lead Auckland’s transition to net zero emissions.

Preparing for climate change and reducing emissions to net zero requires major, structural changes. Yet without individual and community action and leadership, our targets will not be reached.

The carbon footprint of the average Aucklander must reduce to meet our emission targets. This means rethinking how each of us lives and the choices we all make, including how we travel, what we buy and how we eat.

We also need to use local skills, knowledge and energy to build community resilience to climate change. Then we need to work together to craft solutions tailored for each community and place. Climate change will affect everyone differently and the ability to adapt depends on their circumstances.

Every Aucklander’s choices and behaviours have wider impacts – and those impacts can be positive. Your decisions can influence those around you and resonate more widely in society. However, there are significant barriers to individual and coordinated climate action. Many people are unaware of the key issues and their opportunities to develop skills, access funding and influence decision makers and wider structural change.
What we want for the future
Aucklanders understand what climate change means for them, their families and their communities – now and into the future. They know how to build climate resilience and reduce emissions. Aucklanders are actively engaged, resourced and informed to act independently, but also empowered to unite through kotahitanga, to act as a collective. Stronger partnerships develop between communities, and the public and private sector. All Aucklanders are supported to make their own decisions that recognise the values held by the community.

Find out more about the Climate resilience in the supporting information section.

What we need to do
Our actions to deliver this key move include:

1. Work together to strengthen the resilience of our communities, people and places
2. Address the implications of climate change on our coastline
3. Unlock barriers and support community-based initiatives that reduce emissions and build resilience in a fair way
4. Plan for potential climate-related migration.

Find out more about the actions in the supporting information section.
KEY MOVE 8: Te puawaitanga o te tangata

Self-sustaining Māori communities and a lift in the well-being of Māori whānau across Tāmaki Makaurau.

What we want for the future

Our tūpuna (ancestors) have provided rich legacies of knowledge and practices that nurture whakapapa (genealogy) and reaffirm Māori ways of collective action. These can guide our responses today. Learning from these inter-generational relationships and practices allows us to plan for what our unique places and communities will face over the next few generations and beyond, not just what they need today.

Mana Whenua, as the indigenous people of Tāmaki Makaurau, play a significant role in sustaining the region and the region’s identity. The responsibilities and obligations as inherent kaitiaki (caretakers) to manaaki (show generosity to) those communities that reside within their tribal domains must be upheld.

Mataawaka make a significant contribution to the wellbeing of the region and add to the economic, cultural and social richness.

The actions below provide guidance and direction to think in generations, not years; to embrace our responsibilities both to tūpuna (past ancestors) and to generations to come.

Actions

<table>
<thead>
<tr>
<th>Whakapapa</th>
<th>Restore, maintain and protect mana whenua whakapapa relationships to tāngata (people), whenua (place), and atua (primal ancestors). This includes whakapapa-centred relationships across Te Moana-nui-a-Kiwa and our tāngata pasifika whanaunga (Pasifika relatives).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mātauranga</td>
<td>Develop a mātauranga Māori framework to safeguard taonga knowledge and achieve a balance between western science and indigenous narratives of our changing climate.</td>
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<tr>
<td>Manaakitanga</td>
<td>Actively manaaki (care for) and protect whānau and communities in a way that raises their mana, especially during periods of change or stress.</td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>Enable the active guardianship of whakapapa in current management and planning practices, but also future innovations and processes of change. Develop and sustain marae, kāinga (settlements) and wāhi tapu (sacred sites) as the supporting infrastructure for mana whenua.</td>
</tr>
<tr>
<td>Tōnuitanga</td>
<td>Enable sustainable circular Māori economic development and grow and Māori business ecosystems. Lift Māori whānau from poverty.</td>
</tr>
<tr>
<td>Rangatahi</td>
<td>Empower rangatahi to be facilitators of whakaaro (ideas) from ao Māori (Māori world) perspectives.</td>
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</tbody>
</table>
KEY MOVE 9: Youth and inter-generational equity

As rangatahi, we bring our unique perspective on climate change. We are living in uncertain times with responsibilities to te taiao (the environment), our tūpuna (ancestors) and those who will follow.

What we want for the future
Education and kōrero (discussions) connect, and, systems value and awhi (embrace) the mana of rangatahi as a collective. We are engaged with kaupapa (issues) that matter to us. Therefore, the unique visions, approaches, perspectives and voices from rangatahi are recognised in decision-making.

We embrace opportunities for action to address the need to drive change.

What we experience today as rangatahi:

- Lack of seats at the decision-making table
- Lack of cultural support and tautoko for rangatahi when arriving at the decision-making table
- Lack of platforms that tautoko and awhi the mana of rangatahi
- No unified network for connecting rangatahi
- Lack of resources
- Apathy and lack of engagement
- Uncertain future
- Disproportionately disadvantaged and structurally disadvantaged

With these challenges come opportunities for action to address the need to drive change.

Our framework to achieve this
The steps that need to be taken sit within an innovative waka guided by the four pou of kai, wai, whenua and whare. These four pou create a framework in which these actions must be delivered.

Build whanaungatanga - grow and connect rangatahi networks, voice, behaviour change and action across Tāmaki Makaurau, Aotearoa and globally

Establish a rangatahi governance rōpū (group) to audit the Auckland Climate Action Framework’s progress towards:

- actions and outcomes impacting rangatahi
- making recommendations to ensure rangatahi needs and aspirations are fulfilled

Co-design and implement transformative educational programmes which foster inter-generational knowledge-sharing and kotahitanga (unity)
Encourage and enable leadership and capability-building opportunities for rangatahi to be confident in decision-making processes.

Enable rangatahi to create innovative pathways for meaningful and sustainable behaviour change.

Empower rangatahi to be facilitators of whakaaro (ideas) from ao Māori (Māori world) perspectives.

We will know we’re on the right track when:

- Rangatahi are leaders in decision-making around kaupapa (issues) that matter to them.
- Rangatahi have safe and supportive spaces which awhi (embrace) their voice and mana.
- Rangatahi are connected and support kotahitanga (unity).
- Rangatahi support each other in upholding their tuakana and teina roles.
- To have whakawhanaungatanga as an overarching way of connecting with rangatahi Māori and Pasifika.
- The resources that are essential for rangatahi-determined and rangatahi-led action programmes are provided.
- Rangatahi are informed, care about, demand and drive bold action for the change they feel is necessary.
- To benefit from an understanding of how rangatahi are connected with te taiao in order to become kaitiaki.
- Rangatahi co-create inclusive and adaptable pathways for a just transition.
- Rangatahi are safeguarded against disadvantages that are amplified by climate change.
KEY MOVE 10: Shift to decentralised renewable energy

Energy supply is clean and secure with benefits for every Aucklander.

New Zealand has a head-start on its zero-carbon journey due to an abundance of renewable electricity in the national grid – around 80 per cent. Most of this comes from hydropower from the South Island. Geothermal and wind also play a role.

However, about 25 per cent of electricity generation comes from fossil fuel sources like coal, oil and gas in the North Island. This means that while Auckland does have some degree of installed renewable solar capacity, grid electricity in Auckland currently has a relatively lower level of renewables than the overall national grid. From an emissions standpoint, it’s considered ‘dirtier’.

The Government set a national target to transition to 100 per cent renewable electricity by 2035. As electricity demand increases\(^\text{a}\), Auckland will need to play a major role in delivering this transition.

There is also the issue of the growing impacts of climate change on electricity sources and supply. To build better climate resilience, other cities and countries have been decentralising supply and distribution. This includes solar and wind generation on buildings and using microgrids.

This becomes more important when thinking beyond a particular building’s electricity requirements to decarbonising other energy needs. For instance, many current uses of energy like petrol for cars, diesel for buses and natural gas for industry are likely to transition to electricity.

This is likely to increase our overall electricity demand on top of the increasing energy requirements from our growing population. Add to that Auckland’s lower level of renewables and increasing climate risks, and it is even more critical for Auckland to drive the solutions to decarbonise and decentralise our energy system.

\(^{a}\) Largely due to population growth and electrification.
What we want for the future

Fossil fuel energy sources have been phased out. They are replaced with feasible and localised renewable energy options, such as hydrogen, wind and solar power. Uptake of new energy is accelerated by smarter, more efficient and integrated energy generation, storage and management. The transition to renewables supports and enables the electrification of transport, better efficiency and increased productivity through the supply chain. It also supports greater resilience and security of the energy system, and better affordability for both energy generators and energy customers.

What we need to do

Our actions to deliver this key move include:

1. Develop and deliver local and regional decentralised renewable energy solutions
2. Use public property to drive innovation in renewable energy development
3. Use opportunities from the Ports of Auckland hydrogen project to diversify and scale up
4. Establish shore power at Ports of Auckland to reduce emissions from ships at berth.

Find out more about the actions in the supporting information section.
Flagship Action:

Accelerate the uptake of decentralised renewable energy solutions

Delivering ultra-low carbon and resilient energy solutions at scale in Auckland

This is about a new model for decentralised renewable energy that delivers cheaper, cleaner and smarter energy.

It focuses on the planned development of 10,000 homes in Māngere. It’s a collaborative project between key industry stakeholders including Vector, HLC, Housing New Zealand, Ministry of Business Innovation and Employment, solarcity, Vodafone and Trustpower. The idea is to challenge current assumptions and business models and deliver decentralised renewable energy for the site and its future residents.

This project will also:

- establish a collaborative partnership model to support the uptake of localised renewable energy solutions
- deliver low/zero carbon community energy solutions that can be scaled up across Auckland.

Find out more about the Circular economy in the supporting information section.
KEY MOVE 11: Grow a low-carbon, resilient food system

A strong and resilient food economy provides all Aucklanders with access to low carbon, fresh and healthy food.

The food system is responsible for 32 per cent of emissions in New Zealand, in line with a global estimate of 30 per cent. Food makes up 18 per cent of our emissions, primarily from production, transport, processing and disposal to landfill.

Climate change will affect food production with longer periods of drought, more intense storms and flooding, and more favourable conditions for pests and disease. This global trend has already affected the availability and affordability of imports.

Local production is not only important for security of our food supply, but also contributes to reducing emissions by lowering transport requirements and increasing more sustainable farming practices.

However, our ability to meet future demand locally faces many pressures. These include rapid population growth, a changing climate, and loss of productive soils to unsustainable farming methods and land development.

Only one per cent of Auckland’s soils are considered Class 1 (elite) and suitable for vegetable production. This land is under pressure from urban development. The more soil we lose, the less chance we have of meeting our emissions targets, as carbon is stored in soils.

Find out more about the Preserving the Pukekohe Hub in the supporting information section.

Wasted food accounts for 45 per cent of household kerbside collection. While some food waste is prevented, redistributed or composted, much of it still ends up in landfill which contributes to emissions.

What we want for the future

All Aucklanders have access to low carbon, fresh and healthy food. Auckland’s important and strategic food-producing areas are protected from development. These areas have adapted to a changing climate and sustain production indefinitely. Soils and soil carbon are maintained, helping to offset any residual emissions. Food waste is minimised – even eliminated. Communities grow closer and healthier in their association with food production, including urban areas. Auckland’s food-producing economy is a model for regenerative, sustainable and affordable food production.
What we need to do

Our actions to deliver this key move include:

1. Support primary industries and small businesses to increase food security and build economic and climate resilience
2. Protect our productive soils and use regenerative management to increase food security and carbon sequestration
3. Reduce wastage, starting with prevention, and maximise the value of surplus food
4. Increase demand for local, seasonal and low carbon food
5. Establish a cross-sector sustainable food policy council to advise policy makers on food policy development
6. Implement kerbside food scraps collection service across urban Auckland.

Find out more about the actions in the supporting information section.
Measuring progress and indicators

We have identified a set of indicators to monitor the impact of the framework and its delivery against outcomes. Some indicators already exist, and some will be developed. Together, they'll ensure we track progress and can change course where needed to deliver a net zero emissions, climate resilient Auckland.

Over the coming weeks we will also set detailed targets and indicators against each of the 11 key moves, informed by the consultation feedback.

<table>
<thead>
<tr>
<th>What are we measuring</th>
<th>Indicator</th>
<th>Source</th>
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<tbody>
<tr>
<td>Emissions reduction</td>
<td>Emissions by sector</td>
<td>GHG inventory</td>
</tr>
<tr>
<td></td>
<td>Net emissions per capita</td>
<td>GHG inventory</td>
</tr>
<tr>
<td></td>
<td>Gross emissions per capita</td>
<td>GHG inventory</td>
</tr>
<tr>
<td></td>
<td>Consumption based emissions</td>
<td>Not currently measured, proposed future indicator</td>
</tr>
<tr>
<td>Climate resilience</td>
<td>Impact Index (exposure and sensitivity)</td>
<td>Auckland’s Climate Change Risk Assessment (CCRA)</td>
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<td>Adaptive Capacity Index</td>
<td>Auckland’s CCRA</td>
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<td>Auckland Heat Vulnerability Index</td>
<td>Auckland’s CCRA</td>
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<td></td>
<td>Impacts and costs of severe weather events</td>
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<td>Climate parameters (e.g. precipitation, heat)</td>
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<td>Source</td>
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<td></td>
<td>Various across terrestrial, freshwater, coastal and marine ecosystems</td>
<td>State of the Environment Report</td>
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<td>Land cover change</td>
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<td>Concentration of particulate matter (PM$^{2.5}$, PM$^{10}$)</td>
<td>State of the Environment Report</td>
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<td>Healthy, happy people</td>
<td>The New Zealand Health Survey (NZHS): Auckland data</td>
<td>Ministry of Health</td>
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<td>Index of Multiple Deprivation (IMD)</td>
<td>University of Auckland</td>
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<td></td>
<td>National wellbeing Indicators (in development)</td>
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<td>Diversity of</td>
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<td>responsiveness</td>
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<td>Regional GDP</td>
<td>Statistics NZ</td>
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<td>tCO$_2$ per million $NZ$ GDP</td>
<td>GHG Inventory</td>
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<td>Employment in low carbon and climate innovation as a share of employment and GDP in Auckland’s economy</td>
<td>New measure needed</td>
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<tr>
<td></td>
<td>Loss of GDP per year associated with climate related extreme events</td>
<td>New measure needed</td>
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Supporting information

The following information supports what is referenced in the framework, above.

- Climate ready
- Climate change risk assessment
- Whakapapa
- Kaitiakitanga
- Manaakitanga
- Tonuitanga
- Mātauranga Māori
- C40 Cities
- The global movement
- Track record
- The challenge of reducing emissions
- Emissions modelling
- Capturing views on priorities
- Auckland Council’s roles in delivery
- Central government’s roles in delivery
- Auckland Climate Symposium
- What is climate resilience?
- What is a Just Transition and how do we achieve it?
- What is the circular economy?
- Preserving the Pukekohe Hub
- Full actions list
Climate ready

Being climate ready means anticipating, absorbing, accommodating or recovering from the impacts of climate change. Done well, it means more than “bouncing back” – it means “bouncing forward.”

The ability of people and households to prepare, adapt and respond to the effects of climate change depends on where people live, their health and income, and their support networks.

New information and research on how Auckland’s climate will likely change, and the related impacts helps us prepare for those changes and impacts – and to make sure we prioritise our more vulnerable people and communities.

This information was specifically prepared to ensure the actions in this draft framework make Auckland and its communities more resilient. It also serves as a baseline for future research that may increase our ability to effectively prepare and respond to climate change.

Climate change risk assessment

As part of developing the evidence-base for this framework, Auckland Council produced a Climate Change Risk Assessment technical report series. This assessment provides information about the climate risks we may face and their impacts on people, society and the environment. This research is underpinned by the *Auckland Region climate change projections and impacts* research undertaken by the National Institute of Water and Atmospheric Research (Pearce et al., 2018).

The Climate Change Risk Assessment technical report series used the Intergovernmental Panel on Climate Change methodology (IPCC, 2014) to assess impacts on people, the environment and infrastructure. It identifies the parts of Auckland most susceptible to impacts of climate change and also the social and environmental vulnerability. This is understood by evaluating the adaptive capacity of areas to impacts of climate change.

This document summarises risks identified within the technical report series to understand how Auckland will be affected by climate change. The research specifically covers:

- health effects of extreme heat
- climate change, air quality and health impacts
- creating conditions for disease vectors
- social vulnerability
- flooding risk in the built environment
- climate change impacts and risks for terrestrial ecosystems
- climate change impacts and risks for marine and freshwater ecosystems
- effects of sea level rise on Auckland.

To both mitigate and adapt to climate change and to inform planning and decision-making, we must understand the climate change risks and impacts on vulnerability. This research will help Aucklanders understand the impacts of climate change on their health, the health of our ecosystems and the impact on the natural and built environment. The technical report series will be expanded and built on as new data and other resources become available.
Whakapapa

Mai i te rangi, ki te whenua, ko tātou,
tē ira tangata kei waenga

From the heavens, to the earth, and then, there we are,
the human element in the middle

We, the human element, te tangata inhabit the space between Rangi-nui (Sky Father, father of all things) and Papatūānuku (Earth Mother, mother of all things). Our space was created by their children. They form the natural realms and the life-forms that inhabit them. These elements are connected by whakapapa (genealogical lineage) that weaves through their wairua (spirit). These connections and whakapapa surround, extend and give rise to tangata whenua, the human element, and our individual experience in the world.

Ira is the word representing these connections that link toward an element and the identity that comes into existence through this whakapapa. Ira tangata is the life principle of the human element, our genetic code, our genes and the spiritual flow of energy and matter from which our individual consciousness emerges. Each of these connections and patterns are unique, they are the products of the place from which they emerge and remain closely connected. They become the people of the place and the connections that ground them to the whenua. These individuals act in a social, political, economic and spiritual environment, behaving in predictable ways. They have a personality and their character is known to others. However, individuals can also make decisions. They have space for free-will, to develop their own preferences and act upon them. These decisions and actions are not always consistent with the whakapapa from which they are born, or their kaitiaki (guardian).

As kaitiaki, the human element in the world is an active guardian. It is our obligation and whakapapa that we should nurture and protect the physical and spiritual wellbeing of the natural systems that gave birth to us and supports us. We are charged with this responsibility until future generations can carry it forward. To care, nurture, connect and safeguard the natural world, the human element must understand our lineage from the natural world, our position within the natural world, and the relationships that weave us into it.

This is a deliberate positioning of the human element as being interrelated with everything within the cosmos. It recognises that the human element has a role within the cosmos, but it is not beyond reproach. The human element has a role as kaitiaki, but if we do not perform that role, the mauri (life essence) of the spiritual and physical relationships they were born to will dissipate along with its mana (authority). We are subject to the mauri and mana of our kaitiakitanga in the cosmos, and we are mortal. If our kaitiaki has insufficient mauri and mana, our role in the cosmos will fade and vanish. Our whakapapa will be broken and lost. The cosmos will continue and the relationships amongst the natural realms will adjust in our absence.

Whakapapa connects all of us, tying us all together. It reminds us of our mortal position in the natural world and how its relationships constitute and sustain us. This reminder needs to be acted upon if we are to continue to have our tūrangawaewae (place to stand) and for humanity to thrive. Our environmental and sustainability challenges in our ever-changing world, specifically climate change, tell how our behaviour is inconsistent with our kaitiaki responsibilities. The whakapapa and mauri that hold us and our shared ecology together is...
being degraded. This risks our existence as we have known it. We must remember what is important and we must change our behaviour, or we and the world we know will be lost.

The tools to help us change our behaviour are where we left them. They are in our pūrākau (stories) and whakatauki (proverbs). The stories and legends about the relationships that bind us to the natural world, of our dependencies and vulnerabilities, our position and role as caretakers and kaitiaki. The language we use and what we tell ourselves and others is important. The stories and narratives we share with each other and the values and meanings they carry weigh on us and shape us. They shape who we are, what we value, and the choices we make. This behaviour then influences the behaviour of those near to us, and those near to them. These values ricochet about people, evolving and creating a culture and humanity that individuals identify with and feel they belong to. These are paradigms and epistemologies become mātauranga and become the whakapapa of a people. They are taonga.

Importantly, how this ancestral knowledge becomes interpreted in each valley, coastline and community is specific to the whakapapa of that place. Mana whenua share high-level whakapapa, but how this relates and connects to their own identity and place is unique and shared through their own pūrākau (stories) and whakatauki (proverb). This grounding is important as the connections and whakapapa that weave each community and whānau into the natural world are unique, and so must be their pūrākau.

Ira tangata offers modern humanity a paradigm through which it might rediscover itself, its position, its role and the relationships that weave it into the natural world. Ira tangata is ancient mātauranga and wisdom. It complements modern philosophies and evidence-based forms of knowing that have dominated the last few centuries of humanity’s industrialisation and its subsequent discovery of environmental disaster and the emergency of our rapidly changing global and local climates.

Ira tangata is an important part of our change, but it needs governing support. Our tikanga and whakataunga, our rules, regulations and legislation needs to support the framework. They need to facilitate its proliferation while consolidating the progress our people and culture make within it. As our kaitiaki strengthens, our rules need to ensure that this strength is the new normal and the benchmark from which further mauri is fostered. There will be times when our leaders need to decide and act to protect and enhance mauri before everybody is ready. Actions to keep climate change below 1.5°C of warming and to adapt to its impacts may be one of these times.

Kaitiakitanga
Kaitiakitanga for mana whenua is centred on the symbiotic whakapapa relationship with the natural environment. As tangata (people) our responsibilities to tupuna, atua and mokopuna as kaitiaki in the ira tangata context, we become the human voice to the atua through the tohu (signs).

Kaitiakitanga is the ethics and practice of protection and conservation of the natural environment and the resources within it, on which people depend. It is considered an obligation of mana whenua to care for their lands and waters to which they whakapapa (have a genealogical relationship). For this reason, kaitiakitanga is concerned with maintaining a natural and appropriate balance.
We need to understand the role of people in the world within the balanced frame of both ira atua (immortal element) and ira tangata (mankind) and the significance of the practice of kaitiakitanga for everyone.

Stories, traditions, philosophies and values passed down from generation to generation underpin this as Māori view. Māori do not see themselves as separate from the natural world, rather that they are related through whakapapa, whereby all elements, living or otherwise descend from Papatūānuku (Earth Mother), Rangi-nui (Sky Father) and their children. Accordingly, the Māori worldview is distinct from a Western one, in which mankind has dominion over the world. For Māori, the use of natural resources is subject to kinship obligations and thus a symbiotic and reciprocal relationship exists.

**Manaakitanga**

Reciprocal relationships include mana whenua, mataawaka and all people in the context of Tāmaki Makaurau. Whakapapa relations of ira atua, whakapapa rights of mana whenua, and customary rights to Tāmaki. The point of difference is the mana whenua relationship to the natural environment that gives mana whenua the obligation.

The Mana Whenua Kaitiaki Forum takes the view that our rapidly changing climate and its impacts tell us that we need to approach the issues in a fundamentally different way. The Forum calls for the acknowledgement of a worldview that places the environment before people, to coalesce in harmony, in and of service to one another.

The Forum recognises the danger and challenges of climate change and is committed to working with iwi, hapū and marae, central and local government, and other agencies and stakeholders to keep warming below 1.5 degrees. In particular, the Forum is concerned for:

- The responsibility of mana whenua to care for the large and growing population of Tāmaki Makaurau
- The specific policy focus that such a large population requires
- Rapid population growth
- The vulnerability of human and ecological systems as climate change impacts increase.

Besides these concerns the Forum sees the opportunity for Māori to participate in the move to a blue-green economy and will actively pursue these opportunities.

**Tōnuitanga**

Māori have had to bear the negative impacts of colonisation, westernisation and urbanisation for over 160 years within Tāmaki Makaurau. Any response to climate change needs to consider the impacts on Māori and, in particular, mana whenua.

Our collective response to climate change needs to enable sustainable circular Māori economic development and growth and encourage innovation across Māori business ecosystems. A key outcome is to focus on lifting whānau Māori (Māori populations) from poverty and transform the conditions of well-being with whānau.
Mātauranga Māori

Mātauranga Māori – Māori knowledge systems and practices hold a key to climate change response.

Mātauranga Māori is community-based and collective knowledge that offers valuable insights that complement western scientific data with chronological and landscape specific precision and detail. This is critical to verifying climate models and evaluating change scenarios.

Māori knowledge systems and practice provide a strong foundation for community-based adaption and mitigation actions. Mana whenua have been able to observe and interpret change through the environment within Tāmaki Makaurau over many generations.

C40 Cities

The C40 Cities Climate Leadership Group represents over 700 million people and 25 per cent of the global economy. Member cities like Tokyo, New York, Paris, Mexico City and Rio have committed to ambitious actions to reduce emissions and prepare for the impacts of climate change. Auckland earned C40 Innovator City status for its ambitious targets and leadership in tackling climate change. Learn more on the C40 Cities website. https://www.c40.org/

The global movement

Under the 2015 Paris Agreement, New Zealand has agreed to reduce its emissions by 30 per cent below 2005 levels by 2030.

Paris Agreement

The Paris Agreement brings all nations to a common cause to combat climate change and adapt to its effects. It charts a new course in the global climate effort.

The Agreement’s aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise below 2 degrees Celsius. It also further aspires to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the Agreement aims to strengthen the ability of countries to deal with the impacts of climate change. Its framework makes global effort and action more transparent.

Nationally determined contributions

The Agreement requires all signatory nations (Parties) to put forward their best emissions-reduction efforts through nationally determined contributions (NDCs) and to strengthen these efforts in the years ahead. This includes requirements to report regularly on emissions and implementation efforts.

In 2018, Parties reviewed their collective efforts and progress towards the goal set in the Paris Agreement. This review was used to inform the preparation of NDCs.

There will be a global stocktake every 5 years to assess progress and to inform further individual actions by Parties.
### Status of ratification

As of July 2018, 195 Parties have signed the Agreement and 179 have ratified. Ratification is a formal step that countries must take to become full participants and to ensure the deal takes effect.

### Track record

**REGIONAL CASE STUDIES UNDER DEVELOPMENT**

#### Auckland Council’s track record

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Auckland commits to 40 by 40</td>
<td>Our first emissions reduction target is set in the Auckland Plan at 40 per cent reduction by 2040. Auckland’s vision is established for a prosperous city with a thriving green economy, powered by efficient, affordable and clean energy, using sustainable resources.</td>
</tr>
<tr>
<td>2014</td>
<td>Launch of low carbon Auckland</td>
<td>The action plan outlines five key transformation areas required for Auckland to achieve the 40 by 40 target and sets an interim goal of 10-20 per cent reduction by 2020. It provides a 30-year pathway and a 10-year plan to guide Auckland’s transformation.</td>
</tr>
<tr>
<td>2015</td>
<td>Membership to the global covenant of mayors for climate action</td>
<td>Auckland’s Mayor commits to the Global Covenant of Mayors, and pledges to reduce Auckland’s greenhouse gas emissions, track progress and prepare for the impacts of climate through a climate change adaptation action plan.</td>
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<tr>
<td></td>
<td>Auckland joins the C40 cities climate leadership group</td>
<td>Auckland joins the global network of over 90 cities committed to tackling climate change while at COP21, where the Paris Agreement was negotiated. C40 membership enhances and resources Auckland’s ability to work with and learn from leading global cities facing similar climate challenges.</td>
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<tr>
<td></td>
<td>Auckland transport alignment project</td>
<td>The council and central government agree a strategic approach to guide the development of Auckland’s transport system over the next 30 years and reduce transport-related greenhouse gas emissions.</td>
</tr>
<tr>
<td>2016</td>
<td>Global Paris agreement comes into force</td>
<td>The Paris Agreement between 196 countries signals a concerted global effort to limit global temperature increase by reducing emissions. The aim is to keep global temperature rise well below 2 degrees Celsius, whilst pursuing efforts to limit the rise to 1.5 degrees Celsius.</td>
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### Attachment B

<table>
<thead>
<tr>
<th>Item 9</th>
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</table>
| **Auckland signs C40 Paris pledge for action**  
Auckland signs the C40 Paris Pledge for Action in support of the objectives in the Paris Agreement to limit global temperature rise to less than 2 degrees Celsius and raise ambition before the agreement takes effect in 2020. |
| **Unitary Plan becomes operative in part**  
The Unitary Plan sets policy for a quality compact urban form which can enable low carbon growth. It also sets the objective to ensure communities are more resilient to natural hazards and the effects of climate change. |
| **2017**  
Council commissions research to understand climate change effects in Auckland  
National Institute for Water and Atmospheric research is commissioned to model the impacts of climate change on Auckland to 2110. This research allows us to better understand the risks, vulnerabilities and opportunities associated with our changing climate, so we can better plan, invest and build for the future.  
Mayor signs C40 declaration for fossil fuel free streets  
The Mayor signs a declaration to transform Auckland’s streets into greener, healthier, and more prosperous places to live. Making our streets safe and accessible for everybody and improving our air quality will improve the quality of life for all citizens and help tackle climate change. Auckland has pledged to transition to fossil fuel free streets by:  
  * procuring only zero-emission buses from 2025  
  * ensuring a major area of our city is zero carbon by 2030. |
| **2018**  
Prepare for an integrated approach to climate change  
A cohesive approach to emissions reduction and building resilience to climate change will allow us to maximise the benefits of a low carbon transition for all Aucklanders. |

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**The challenge of reducing emissions**

Between 2009 and 2016, Auckland’s overall emissions increased by 5.6 per cent. If we continue this trend, Auckland’s emissions will increase by 27 per cent by 2050.

We have worked with C40 Cities and others to assess carbon budgets and trajectories for groups of actions. To reach net zero by 2050, Auckland needs to sharply decrease emissions over the next 10 years.

Transport is the largest source of emissions. But, we can significantly reduce this if we switch to:

- electric and zero emissions vehicles (passenger, commercial and freight) would have a major benefit in reducing emissions. A shift to

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10 [https://www.c40.org/other/deadline_2020](https://www.c40.org/other/deadline_2020)
- public and active transport
- increased fuel efficiency
- transit-oriented development.

The industrial sector – including both process emissions and energy used in industry – is another significant source of emissions. Reducing these emissions through efficiencies and switching fuel sources requires the adoption of new technologies.

Emissions reductions from the building sector appears limited, largely due to a relatively high reliance on electricity for energy and the relatively low emissions factor of grid electricity. However, reducing emissions from buildings often provides a range of other desired benefits set out in this framework.

There is more reduction potential from residential than commercial buildings. New home can meet zero carbon standards with emissions reductions possible through retrofitting existing inefficient homes.

Agriculture, forestry and land use emissions are relatively small in our current emissions profile but we believe future opportunities will be far greater.

Emissions modelling
Emissions modelling predicts the impact that climate actions can have on future emissions. Modelling can be used to test actions and targets across different timescales to realise a future scenario, such as net zero emissions.

In developing this framework, we appointed independent consultants to model different actions and emissions reduction scenarios. This showed how this framework could reduce Auckland’s emissions to net zero by 2050 compared to a business-as-usual scenario. The modelling helped us understand what actions need to be taken across which sectors and the emissions reduction potential of individual actions.

Transport is the largest source of emissions. The switch to electric and zero emissions vehicles (passenger, commercial and freight) would have a major effect in reducing emissions. A shift to public and active transport, increased fuel efficiency and transit-oriented development would also have major impacts – and would likely deliver other benefits like greater health and equity.
Industry – including both process emissions and energy used in industry – is another significant source of emissions. Reducing industrial emissions through efficiencies and switching fuel sources requires the adoption of new technologies. This would contribute substantially to reducing emissions.

Emissions reductions from the building sector appears limited, largely due to a relatively high reliance on electricity for energy and the relatively low emissions factor of grid electricity. However, reducing emissions from buildings often provides a range of other desired benefits set out in this framework.

The modelling identifies more reduction potential from residential than commercial buildings. This is likely due to strong population growth and the resulting need for new homes that meet zero carbon standards, as well as emissions reductions through retrofitting existing inefficient homes.

Agriculture, forestry and land use emissions are relatively small in our current emissions profile, but the opportunities to reduce emissions into the future will be far greater. Like the building sector, actions need to be considered alongside the range of other desired benefits.

**Capturing views on priorities**

We captured views through six activities.

1. Seeking views on current activities and priorities relating to climate change and past experience in climate action planning.
2. Gathering insights on climate impacts and other issues already affecting Aucklanders.
3. Recording the outcomes requested by various groups and stakeholders.
4. Establishing an internal working group to provide expert input, guaranteeing ongoing collaboration and engagement across the council and CCOs. We also included representatives from the district health board and the Ministry for the Environment.
5. Initial discussions with the Mana Whenua Kaitiaki Forum, the Independent Maori Statutory Board, a range of advisory panels, youth groups and subject matter experts across sectors.

6. Engaging with all 21 local boards through workshops.

We continued building our evidence base, including detailed emissions modelling and a suite of Climate Change Risk Assessment reports.

The draft framework has also been discussed at a range of public events, such as Auckland Conversations.

**Testing initial actions and priorities**

Key representatives from business, central government, mana whenua and communities assessed the actions and identified priorities and considered implementation pathways. We also tested ideas in workshops with the Independent Advisory Group, our internal cross-council working group and with executive leaders. A set of priority actions and areas of focus began to emerge.

**Refining actions and scoping implementation**

A set of 11 changes began to take shape, each with actions that would deliver emissions reduction, resilience and a range of other desired outcomes.

Ideas, actions and themes were informed by and refined over three days at the Auckland Climate Symposium in March 2019 with participation from over 600 delegates from all sectors.

The symposium included a community hui, and sessions led by youth and the Ministry for the Environment. We also launched Auckland’s Climate Change Risk Assessment report series.

During the symposium, the delegates helped develop five flagship actions to demonstrate what collaborative climate action looks like.

A month later, the rangatahi/youth-led Conscious Climates event led to the development of actions and themes that inform and are integrated into this action framework.

**Auckland Climate Independent Advisory Group**

A key part of developing the draft framework process is establishment of an Auckland Climate Independent Advisory Group (ACIAG) to provide expert insight, and to check and challenge the framework’s development, targets and implementation.

ACIAG will exist beyond political timescales to provide an ongoing independent review of successes, challenges and barriers to framework development and implementation. An annual fit-for-purpose review will be done, starting with completion of the climate action framework.
Membership

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Organisation</th>
<th>Expertise</th>
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<tbody>
<tr>
<td>Dr Maria Bargh</td>
<td>Senior Research Fellow</td>
<td>Victoria University of Wellington</td>
<td>Māori engagement on climate change</td>
</tr>
<tr>
<td>Prof Bruce Glavovic</td>
<td>Professor and EQC Chair In Natural Hazards Planning</td>
<td>Massey University</td>
<td>Climate change, natural hazards and governance</td>
</tr>
<tr>
<td>Dr David Hall</td>
<td>Senior Researcher</td>
<td>The Policy Observatory, AUT</td>
<td>Ethics, public and environmental policy. Climate action financing</td>
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<tr>
<td></td>
<td>(Co-Chair)</td>
<td></td>
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<tr>
<td>Dr Rhys Jones</td>
<td>Co-convener</td>
<td>OraTaiao</td>
<td>Health and Māori</td>
</tr>
<tr>
<td></td>
<td>(Co-Chair)</td>
<td></td>
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<tr>
<td>Dr Judy Lawrence</td>
<td>Senior Research Fellow, Climate Change Research Institute, Co-Chair of the Adaptation Technical Working Group</td>
<td>Victoria University of Wellington</td>
<td>Climate change financing and adaptation</td>
</tr>
<tr>
<td>Dr Malcolm Shield</td>
<td>Head, Climate Action Planning, North America &amp; Europe</td>
<td>C40 Cities</td>
<td>Carbon reduction pathways</td>
</tr>
<tr>
<td>Prof Ralph Sims</td>
<td>Professor School of Engineering</td>
<td>Massey University</td>
<td>Mitigation</td>
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</table>

Auckland Council's roles in delivery

Advocacy

The Auckland Council group advocates to the New Zealand Government on a range of policies and issues to ensure the most benefit to Aucklanders. Many of these issues deal directly or indirectly with climate change. Council’s advocacy to Government helps ensure that the policy settings, frameworks and funding are aligned and give effect to our needs related to climate change. Without strong alignment, the delivery of this framework and its ambitious targets will be difficult if not impossible.

Council’s advocacy to the New Zealand Government spans across a wide range of issues, even in relation to climate change. Examples include:
• Submission on the Productivity Commission’s Inquiry into a Low-Emissions Economy
• Submission on the Zero Carbon Bill
• Submission on the Emissions Trading Scheme

Partnership

The complexity of climate change requires action from all sectors. Partnerships are one way to bring sectors and actions together to make greater impact. The Auckland Council group partners with a range of organisations and businesses to achieve beneficial outcomes for Aucklanders. Some of these partnerships deal directly with climate change.

Support

Auckland Council provides targeted resources to support important community outcomes, including climate action. Support from Auckland Council helps build on local talents and expertise to benefit communities across Auckland. Examples include community grants and the Retrofit your Home programme.

Planning and Delivery

Auckland Council and CCOs play a major role in planning for and delivering transport, infrastructure, and urban regeneration.

Regulation

Auckland Council plays a key role in regulation to ensure the health, safety and wellbeing of current and future Aucklanders. Regulation ranges from dog registration to alcohol licensing. Some regulatory functions relate directly or indirectly to climate change, such as coastal management and building control.

Leadership

Auckland Council influences others and affects change beyond its direct roles and responsibilities by leading by example. This is visible in the buildings and facilities we operate, the materials and services we procure and the public spaces that we shape and build.

Facilitation

Auckland Council plays a role in bringing people, communities and organisations together to agree and achieve common outcomes for Aucklanders. This framework is one example, with broad engagement and facilitation along each step of its development.

Central government’s roles in delivery

The government’s main framework for action on climate change is the Climate Change Response (Zero Carbon) Amendment Bill. It aims to set long-term national direction on emissions reduction and climate resilience with direct implications for Auckland and Auckland Council. Beyond this Bill, there is other supporting and related legislation, policy and investment. Below are examples only and not a comprehensive list of government roles related to climate change.

Legislation and regulation

- The NZ Emissions Trading Scheme (NZETS) is a market-based tool that puts a price on emissions to help incentivise emissions reduction. It has been ineffective at reducing our emissions. In light of new international obligations under the Paris Agreement, improvements have and will continue to be made to make the scheme effective. Ultimately, these will be folded into the Zero Carbon Bill.

- The Resource Management Act 1991 (RMA) helps sustainably manage resource use and environmental impacts of activities into the future. Climate change is included in the principles of the RMA and it touches upon related issues like renewable energy. The current climate-related focus of the RMA is on adapting to the impacts of climate change instead of emissions reduction. A package of RMA reforms is expected to be considered by the government and this may change, particularly in its consistency with the Zero Carbon Bill.

- The Local Government Act 2002 (LGA) makes Auckland Council responsible for actions directly related to climate change, such as flood control, air and water quality, public transport and regional parks.

- The Building Act 2004 sets out rules and guidance for building, altering, maintaining and demolishing buildings. It focuses on health, safety, and wellbeing. All building work must meet performance standards set by the Building Code including more climate change-related elements of energy efficiency, moisture control and access. Many of the code’s provisions aren’t up-to-date with climate change. It has been council’s long-standing position that changes are needed.

Policy

- National Policy Statements (NPS) are instruments of the RMA, setting out broad policy direction on a variety of topics of national significance. Current NPSs in place include:
  - National Policy Statement on Urban Development Capacity
  - National Policy Statement for Freshwater Management
  - National Policy Statement for Renewable Electricity Generation

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15. [https://www.mfe.govt.nz/node/16338](https://www.mfe.govt.nz/node/16338)
- National Policy Statement for Electricity Transmission
- New Zealand Coastal Policy Statement

A Government Policy Statement (GPS) on Land Transport identifies funding priorities under the National Land Transport Fund over 10 years. It includes road safety, highway improvements, local and regional roads and public transport and also notes factors like emissions reductions.

Investment

- The New Zealand Wellbeing Budget is the overarching investment framework for all programmes, services and infrastructure. The current budget references climate change as a complex problem requiring new ways of thinking more broadly about budgets and integrated outcomes. The budget allocates funding for research on agricultural emissions and development of new energy technologies to support the low emissions transition, among other things.
- The $100 million Green Investment Fund (Gif) was launched as part of Budget 2018. Independent from Government, it operates as a company in order to be flexible and responsive to the market. The Gif aims to accelerate investment to reduce emissions.
- The National Science Challenges (NSC) were launched in 2014 to tackle significant national issues. Top scientists across disciplines and cross-sector collaborators compete for over $680 million in funding over the 10-year term of the NSC. Climate change is related to most challenges. Auckland Council has had direct involvement with the following national challenges:
  - Our Land and Water,
  - Resilience to Nature’s Challenges and
  - The Deep South.

What is climate resilience?
Climate resilience is being climate-ready.

It means anticipating, absorbing, accommodating or recovering from the impacts of climate change. It means that our people, infrastructure, places and economy are prepared.

Done well, it means more than “bouncing back” – it means “bouncing forward.”

The ability of people and households to prepare, adapt and respond to the effects of climate change depends on where people live, their health and income, and their support networks and occupations.

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New information and research on how Auckland’s climate will likely change, and the related impacts helps us prepare for those changes and impacts – and to make sure we prioritise our more vulnerable people and communities.

This information was specifically prepared to ensure the actions in this draft framework make Auckland and its communities more resilient. It also serves as a baseline for future research that may increase our abilities to effectively prepare and respond to climate change.

What is a just transition and how do we achieve it?
A just transition is one that is fair, equitable and inclusive. It requires local and central government to carefully plan and cooperate with iwi, communities, regions and sectors to manage impacts and maximise opportunities from changes brought about by the transition to a low emissions economy.22 Businesses also play a key role in ensuring that their staff, supply chains and business models are prepared for the transition to a zero carbon economy and society.

What is the circular economy?
A circular economy designs out waste and inefficiencies. By taking fewer resources, using resources well and regenerating what we use, we close the loop in the lifecycle of products and services. This concept contrasts with the more linear “take-make-dispose” economy, where value is created by maximising the products produced and sold, generating a great deal of waste.

Preserving the Pukekohe Hub
The Pukekohe Hub comprises 4,359 hectares of some of New Zealand’s most fertile and productive soils. Fruit and vegetable production contribute $1.2 billion to Auckland’s economy. The hub generates $327 million, which is 26 per cent of New Zealand’s total domestic value of vegetable production.

From 2002-2016, vegetable-growing land across New Zealand was reduced by 30 per cent. Land like the Pukekohe Hub faces increasing threats like urban sprawl.

The future of the hub is important for Auckland with its temperate climate. Its proximity to essential transport routes makes it well-positioned to supply year-round vegetables to help feed Auckland’s growing demand for fresh food.

### Full Action List

#### Benefits Key

- ![Benefits Key Icon](image)
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#### Key Move 1: Lay the foundation

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<tr>
<th>ACTION</th>
<th>WHO NEEDS TO BE INVOLVED</th>
<th>DELIVERY TIMEFRAME</th>
<th>RESOURCING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uphold Te Tiriti o Waitangi/Treaty of Waitangi and treaty partnerships</td>
<td>Mana Whenua, Auckland Council, Council Controlled Organisations (CCOs)</td>
<td>2022 2030 2050</td>
<td>$</td>
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<tr>
<td>in decision-making</td>
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<tr>
<td>Secure long-term commitment and leadership from across mana whensa</td>
<td>Auckland Council, Local boards, Ministry for the Environment (MfE), Communities</td>
<td></td>
<td>$</td>
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<tr>
<td>and public, private and voluntary sectors</td>
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<tr>
<td>Engage in a way that enables and empowers Aucklanders to have a say</td>
<td>Climate Leaders Coalition, Rangatahi, Mana Whenua, Community leaders, Advisory panels</td>
<td></td>
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<tr>
<td>in climate decisions and to act</td>
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</tr>
<tr>
<td>Ensure that the custodianship of mātauranga Māori knowledge systems,</td>
<td>Auckland Council, MfE, CCOS, District Health Boards (DHBs), Creative Sector, Ministry of</td>
<td></td>
<td>$$</td>
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<tr>
<td>practices and the teachings inform and underpin climate response,</td>
<td>Education</td>
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<td>actions and decisions</td>
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</tr>
<tr>
<td>Embed climate change assessments into decision-making processes and</td>
<td>Auckland Council, Mana Whenua, Mataawaka, Te Puni Kōkiri, Deep South Science Challenge</td>
<td></td>
<td>$</td>
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<td>reporting</td>
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</tr>
<tr>
<td>Regularly review and update climate change evidence to inform</td>
<td>Auckland Council, Climate Leaders Coalition</td>
<td></td>
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<td>decisions</td>
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### Item 9

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<tr>
<th>ACTION</th>
<th>WHO NEEDS TO BE INVOLVED</th>
<th>DELIVERY TIMEFRAME</th>
<th>RESOURCING</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>2030</td>
</tr>
</tbody>
</table>

**Benefits**

- **Be transparent and provide data and information to enable citizen science, innovation and research**
  - Auckland Council, Academia, Ministry of Business, Innovation and Employment (MBIE), National Science Challenges
  - $  

- **Actively develop supportive policy and legislation with central government**
  - Academia, Auckland CCOs, DHBs, Government
  - $  

- **Ensure regional policies and strategies do not conflict with delivery of climate compatible development and infrastructure**
  - Auckland Council, CCOs, MFE
  - $  

### KEY MOVE 2: Enhance, restore and connect our natural environments

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<tr>
<th>ACTION</th>
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<td>2022</td>
<td>2030</td>
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</table>

**Benefits**

- **Use a blue-green network approach in growth and regeneration areas**
  - Auckland Council, Government, Landowners, Private Developers, CCOs, Non-Governmental Organisations (NGOs)
  - $$  

- **Grow and protect our urban and rural ngāhe to capture emissions and build resilience**
  - Auckland Council, Local Boards, CCOs, Communities
  - $$  

- **Protect indigenous biodiversity and ecosystems vulnerable to climate change**
  - Auckland Council, CCOs, Crown Research Institutes, Ministry for Primary Industries (MPI), Department of Conservation National Science Challenges
  - $$  

- **Establish a voluntary ecosystem marketplace to generate funding for natural climate solutions**
  - Auckland Council, Academia, Business, NGOs, Government
  - $  

- **Apply circular economic principles to land use and land use changes**
  - Auckland Council, MBIE, Community groups, NGOs, Private Landowners
  - $
### Item 9

#### Action 1:

**Action:** Change to a land management approach that creates, preserves and enhances healthy, viable soils

**WHO NEEDS TO BE INVOLVED:** University of Auckland, Auckland Council, MBIE, NIWA, CCOs, Crown Research Institutes, Mana Whenua

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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#### Action 2:

**Action:** Protect and enhance coastal and marine ecosystems to maximise carbon capture and resilience

**WHO NEEDS TO BE INVOLVED:**

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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#### Key Move 3: Make development and infrastructure climate-compatible

**Action 3:** Accelerate the uptake of sustainable design and construction

**WHO NEEDS TO BE INVOLVED:** Auckland Council, Mana Whenua, MFE, MBIE, New Zealand Green Building Council (NZGBC), Private Developers

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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**Action 4:** Build climate resilience and health benefits into all transport projects, delivering more than just emissions reductions

**WHO NEEDS TO BE INVOLVED:** New Zealand Transport Agency (NZTA), Auckland Transport (AT), DHBs, Mana Whenua, Auckland Council

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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**Action 5:** Ensure new infrastructure is climate-proof and resilient

**WHO NEEDS TO BE INVOLVED:** Auckland Council, MFE, CCOs, DHBs, NZTA, Infrastructure Lifelines Group, Mana Whenua, Private Developers

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
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**BENEFITS:**
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**Action 6:** Make climate compatibility assessments standard for all new developments and infrastructure

**WHO NEEDS TO BE INVOLVED:** Auckland Council, CCOs, Government, Private Developers

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
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**BENEFITS:**
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**Action 7:** Plan for a quality compact urban form that supports low carbon, resilient development

**WHO NEEDS TO BE INVOLVED:** Auckland Council, Mana Whenua, Government, Private Developers

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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**Action 8:** Find and deliver alternative water supply options to address climate change and population growth

**WHO NEEDS TO BE INVOLVED:** Auckland Council, Watercare, Mana Whenua

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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**Action 9:** Establish an integrated, circular water management framework to improve efficiency and reduce waste

**WHO NEEDS TO BE INVOLVED:** Auckland Council, CCOs, Mana Whenua

**DELIVERY TIMEFRAME:**
- 2022: $\bullet$
- 2030: $\bullet$
- 2050: $\bullet$

**RESOURCING:**
- $ = LOW
- $$ = MEDIUM
- $$$ = HIGH

**BENEFITS:**
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### KEY MOVE 4: Transform existing buildings and places

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<td>2022</td>
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<td>2050</td>
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<tr>
<td>Deliver targeted commercial, industrial and residential building retrofit schemes across Auckland</td>
<td>Energy Efficiency &amp; Conservation Authority (EECA), Ministry of Health, Panuku, Auckland Council Green Building Working Group, DHBs, Mana Whenua, Housing NZ, Commercial building owners</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Increase the productive potential of new/existing roofs and walls</td>
<td>BECA, BRANZ, Auckland Council, NZGBC, Commercial building owners, Mana Whenua</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Make public spaces multi-functional with broader benefits</td>
<td>Community groups, Mana Whenua, Auckland Council, CCOs, DHBs</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Establish and rapidly scale low carbon, resilient precincts across Auckland</td>
<td>Panuku</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Ensure existing infrastructure is as climate-proof and resilient as possible</td>
<td>Auckland Council, CCOs, Infrastructure Lifelines Group</td>
<td>✔</td>
<td>✔</td>
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### KEY MOVE 5: Deliver clean, safe and equitable transport options

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<th>DELIVERY TIMEFRAME</th>
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<td>2022</td>
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<td>2050</td>
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<tr>
<td>Encourage large-scale uptake of zero and low emissions vehicles</td>
<td>AT, Ministry of Transport (MoT), NZTA, Auckland Council</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Rapidly increase the frequency, affordability and availability of public transport</td>
<td>AT, Auckland Council, Mana Whenua</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Rapidly increase safe, high-quality cycling and walking infrastructure</td>
<td>AT, Auckland Council, Mana Whenua</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Assess road pricing schemes to reduce car travel and vehicle emissions</td>
<td>Auckland Council, Mana Whenua</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Make freight systems more efficient to reduce emissions</td>
<td>Sustainable Business Council Freight Working Group, AT, Auckland Council</td>
<td>✔</td>
<td>✔</td>
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### KEY MOVE 6: Move to a zero carbon, climate - resilient economy

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<td>2022</td>
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<tr>
<td>Establish a climate innovation system</td>
<td>Auckland Tourism, Events &amp; Economic Development (ATEED), Academy, Scion, Callaghan Innovation, MBIE</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Accelerate business transition to zero carbon and build resilience</td>
<td>ATEED, Sustainable Business Council, Sustainable Business Network, Auckland Council, Te Puni Kokiri, Whariki</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>Establish sector-based programmes to grow low carbon and climate resilience skills</td>
<td>ATED, Auckland Council, Ministry for Education, NZ Council for Trade Unions, Mana Whenua, Matawhaio</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Leverage public sector and large business supply chains to deliver on climate outcomes</td>
<td>Climate Leaders Coalition, Auckland Council, CCOs</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Accelerate the transition from waste management to resource recovery and reuse.</td>
<td>Auckland Council</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Embed circular principles into Auckland’s economy</td>
<td>ATEED, Sustainable Business Network, MFE, Auckland Council</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>Collaborate with central government to reduce process heat emissions</td>
<td>Government, Private Industry, Auckland Council</td>
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### KEY MOVE 7: Help Aucklanders become more resilient and reduce their carbon footprint

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<th>DELIVERY TIMEFRAME</th>
<th>RESOURCING</th>
<th>BENEFITS</th>
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<tbody>
<tr>
<td>Work together to strengthen the resilience of our communities, people and places</td>
<td>Community Groups, Auckland Council, DHBs, Mana Whenua, Local Government, New Zealand (LGNZ), Government, Insurers, Private Business</td>
<td>2022-2050</td>
<td>$$$</td>
<td></td>
</tr>
<tr>
<td>Address the implications of climate change on our coastline</td>
<td>Community Groups, Auckland Council, DHBs, Mana Whenua, LGNZ, Government, Private business</td>
<td>2022-2050</td>
<td>$$$</td>
<td></td>
</tr>
<tr>
<td>Unlock barriers and support community-based initiatives that reduce emissions and build resilience in a fair way</td>
<td>Community Groups, Auckland Council, Mana Whenua</td>
<td>2022-2050</td>
<td>$$</td>
<td></td>
</tr>
<tr>
<td>Plan for potential climate-related migration</td>
<td>The Ministry of Foreign Affairs and Trade (MFAT), Immigration New Zealand, Ministry for Pacific Peoples, Auckland Council, The Southern Initiative</td>
<td>2022-2050</td>
<td>$$</td>
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### KEY MOVE 10: Shift to decentralised renewable energy/carbon footprint

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<th>DELIVERY TIMEFRAME</th>
<th>RESOURCING</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and deliver local and regional decentralised renewable energy solutions</td>
<td>Vector, Transpower, solarcity, Auckland Council, CCOs, MBIE, Ministry of Energy and Resources, Mana Whenua</td>
<td>2022-2050</td>
<td>$$$</td>
<td></td>
</tr>
<tr>
<td>Use public property to drive innovation in renewable energy development</td>
<td>Auckland Council, CCOs, DHBs, Government</td>
<td>2022-2050</td>
<td>$$</td>
<td></td>
</tr>
<tr>
<td>Use opportunities from the Ports of Auckland hydrogen project to diversify and scale up</td>
<td>Ports of Auckland Limited (POAL), Auckland Council, Commercial businesses, MTE, MBIE</td>
<td>2022-2050</td>
<td>$$</td>
<td></td>
</tr>
<tr>
<td>Establish shore power at Ports of Auckland to reduce emissions from ships at berth</td>
<td>POAL</td>
<td>2022-2050</td>
<td>$$</td>
<td></td>
</tr>
</tbody>
</table>
## KEY MOVE 11: Grow a low-carbon, resilient food system
carbon footprint

<table>
<thead>
<tr>
<th>ACTION</th>
<th>WHO NEEDS TO BE INVOLVED</th>
<th>DELIVERY TIMEFRAME</th>
<th>RESOURCING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>2030</td>
</tr>
<tr>
<td>Support primary industries and small businesses to increase food</td>
<td>Auckland Council, Mana Whenua, MBIE, MPI, primary sector representatives, University of</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>security and build economic and climate resilience</td>
<td>Auckland,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protect our productive soils and use regenerative management to</td>
<td>Auckland Council, Mana Whenua, MPI, primary sector representatives, urban food producers,</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>increase food security and carbon sequestration</td>
<td>NGOs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce wastage, starting with prevention, and maximise the value of</td>
<td>Auckland Council, Mana Whenua WasteMinz, Food rescue organisations, urban food producers,</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>surplus food</td>
<td>private business,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase demand for local, seasonal and low carbon food</td>
<td>Auckland Council, Mana Whenua, The Southern Initiative, Healthy Families, DHBs, primary</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>industry, primary sector representatives, NGOs, urban food producers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establish a cross-sector sustainable food policy council to advise</td>
<td>Auckland Council</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>policy makers on food policy development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement kerbside food scraps collection service across urban</td>
<td>Auckland Council</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>Auckland</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### BENEFITS

- Food Security
- Economic Growth
- Climate Resilience
- Health and Wellbeing
- Community Engagement
- Environmental Impact
- Economic Impact
- Health Impact
- Social Impact
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active modes</td>
<td>Walking and cycling.</td>
</tr>
<tr>
<td>Active transport</td>
<td>Relates to physical activity undertaken as a means of transport and not purely as a form of recreation.</td>
</tr>
<tr>
<td>Adaptation</td>
<td>Actions taken to help communities and ecosystems cope with changing climate condition (United Nations Framework Convention on Climate Change) OR Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC).</td>
</tr>
<tr>
<td>Asset</td>
<td>An item of value owned by a person or company.</td>
</tr>
<tr>
<td>Awhi</td>
<td>The Māori word for surround or embrace.</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>The natural environment and encompasses native plants and animals (flora and fauna), ecology, natural heritage, ecological restoration and revegetation, landforms, geology.</td>
</tr>
<tr>
<td>Blue-green economy</td>
<td>This concept ensures the maintenance of biodiversity and its values in relation to economic and social development.</td>
</tr>
<tr>
<td>Canopy cover</td>
<td>The percentage of urban land covered by a layer of trees or vegetation (3m or taller) when viewed from above.</td>
</tr>
<tr>
<td>Carbon budgets</td>
<td>A tolerable quantity of greenhouse gas emissions that is emitted in total over a specified time. The budget needs to be in line with what is scientifically required to keep global warming within our target and thus climate change &quot;tolerable.&quot;</td>
</tr>
<tr>
<td>Carbon footprint</td>
<td>The amount of carbon dioxide released into the atmosphere by the activities of a people, organisations and communities.</td>
</tr>
<tr>
<td>Carbon sequestration</td>
<td>A natural or artificial process by which carbon dioxide is removed from the atmosphere and held in solid or liquid form.</td>
</tr>
<tr>
<td>Circular economy</td>
<td>A circular economy is characterised as one which is regenerative by design. It aims to retain as much value as possible of products, parts and materials. This should create a system that allows for the long life, optimal reuse, refurbishment, remanufacturing and recycling of products and materials.</td>
</tr>
<tr>
<td>Circular principles</td>
<td>The three key principles of circular economy are:</td>
</tr>
<tr>
<td></td>
<td>• design out waste and pollution</td>
</tr>
<tr>
<td></td>
<td>• keep products and materials in use</td>
</tr>
<tr>
<td></td>
<td>• regenerate natural systems.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Climate impacts</td>
<td>A marked effect or influence of climate change.</td>
</tr>
<tr>
<td>Climate refugees</td>
<td>Persons displaced in the context of disasters and climate change.</td>
</tr>
<tr>
<td>Climate resilience</td>
<td>The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in timely and efficient manner. This includes ensuring the preservation, restoration, or improvement of its essential basic structures and functions.</td>
</tr>
<tr>
<td>Climate risks</td>
<td>The exposure to climate related danger, harm or loss.</td>
</tr>
<tr>
<td>Climate-compatible development</td>
<td>A form of building that integrates climate risk management, adaptation and mitigation.</td>
</tr>
<tr>
<td>Climate-proof</td>
<td>The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.</td>
</tr>
<tr>
<td>Coastal and marine ecosystems</td>
<td>The natural environment, habitats and species located in open ocean areas, nearshore coastal areas, areas where freshwater and saltwater mix, and certain terrestrial ecosystems near the coast, such as sand dunes (United Nations Environment Programme).</td>
</tr>
<tr>
<td>Coastal erosion</td>
<td>The loss of coastal lands due to the net removal of sediments or bedrock from the shoreline.</td>
</tr>
<tr>
<td>Decarbonise</td>
<td>Reduce the amount of gaseous carbon compounds released in or as a result of (an environment or process).</td>
</tr>
<tr>
<td>Decentralised energy</td>
<td>Energy generated off the main grid, including micro-renewables, heating and cooling.</td>
</tr>
<tr>
<td>Ecosystem</td>
<td>A community of plants, animals and other organisms that function together as a unit along with their environment.</td>
</tr>
<tr>
<td>Electric and zero emissions vehicles</td>
<td>Transportation options that do not result in any harmful emissions (have a negative impact on the environment or human health) during vehicle operation.</td>
</tr>
<tr>
<td>Electrification</td>
<td>The process of making something operate using electricity where it did not before, e.g. converting the current train tracks so that electric trains can operate on them.</td>
</tr>
<tr>
<td>Emissions</td>
<td>The production and discharge of something e.g. the production and discharge of greenhouse gases into the atmosphere.</td>
</tr>
<tr>
<td>Emissions modelling</td>
<td>An annual estimate of emission for a wide range of important pollutants, including air quality pollutants and greenhouse gases.</td>
</tr>
<tr>
<td>Equitable</td>
<td>Actions and decisions that are fair and just.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Equity</td>
<td>The quality of being fair.</td>
</tr>
<tr>
<td>Flood risk</td>
<td>Storms were in the past generally modelled as 2, 5 and 100-year events to give an idea of the magnitude of each. These are now called 50 per cent, 20 per cent and 1 per cent respectively. They refer to the likelihood of the storm happening in any one year.</td>
</tr>
<tr>
<td>Food security</td>
<td>A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.</td>
</tr>
<tr>
<td>Freight systems</td>
<td>The network of goods transported by truck, train, ship or plane.</td>
</tr>
<tr>
<td>Geothermal energy</td>
<td>Clean and sustainable energy sourced from beneath the earth’s surface.</td>
</tr>
<tr>
<td>Green space</td>
<td>An area of undeveloped land, partly or completely covered with grass, trees or vegetation.</td>
</tr>
<tr>
<td>Greenhouse gas emissions (GHG)</td>
<td>Gases emitted to the atmosphere which contribute to the greenhouse gas effect where more than the normal amount of atmospheric heat is retained in the atmosphere. These emissions include water vapour, carbon dioxide, nitrous oxide, methane, ozone, halocarbons and other chlorine and bromine-containing substances.</td>
</tr>
<tr>
<td>Gross Domestic Product (GDP)</td>
<td>The monetary value of all goods and services produced within a nation’s geographic borders over a specified period of time.</td>
</tr>
<tr>
<td>Gross emissions</td>
<td>The total discharges of greenhouse gases from human activity into the atmosphere (e.g. from energy, industrial processes, agriculture, and waste activities) and is usually expressed as CO2 equivalence per year.</td>
</tr>
<tr>
<td>Hapū</td>
<td>A number of whānau sharing descent from a common ancestor, kinship group, sub-tribe.</td>
</tr>
<tr>
<td>Hinemoana</td>
<td>The female ancestor with continuing influence over the sea.</td>
</tr>
<tr>
<td>Hui</td>
<td>Social gathering or meeting.</td>
</tr>
<tr>
<td>Inequitable</td>
<td>Unfair or unjust.</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>The structures, systems and facilities that support daily life such as water supply, roads and communications, including social infrastructure.</td>
</tr>
<tr>
<td>Intergenerational</td>
<td>Relating to, involving, or affecting several generations.</td>
</tr>
<tr>
<td>Intergenerational equity</td>
<td>Ensuring that future generations are not unfairly disadvantaged (or burdened) with the impacts and costs of previous decision making</td>
</tr>
<tr>
<td>Invasive species</td>
<td>An introduced species that is believed to spread and cause damage to the environment, human economy or human health.</td>
</tr>
<tr>
<td>Iwi</td>
<td>A number of hapū (section of a tribe) related through a common ancestor.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------</td>
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</tr>
<tr>
<td>Just Transition</td>
<td>Place-based set of principles, processes, and practices used to secure workers’ jobs and livelihoods when economies are shifting to sustainable production.</td>
</tr>
<tr>
<td>Kai</td>
<td>Sustenance such as food or water.</td>
</tr>
<tr>
<td>Kaitiaki</td>
<td>Trustee, custodian, guardian.</td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>Guardianship, including stewardship; the processes and practices of looking after the environment.</td>
</tr>
<tr>
<td>Kaupapa</td>
<td>Topic, subject or issue.</td>
</tr>
<tr>
<td>Low carbon food</td>
<td>Low carbon food refers to foods that produce less carbon emissions during production, processing, distribution, preparation and disposal. Includes foods produced using low carbon farming technologies and organic fertilisers, food that is locally produced and therefore has lower food miles, and food with intrinsically lower biological emissions such as plants.</td>
</tr>
<tr>
<td>Low emissions zones</td>
<td>A defined area where access by some polluting vehicles is restricted or deterred with the aim of improving the air quality.</td>
</tr>
<tr>
<td>Low impact lifestyles</td>
<td>Having less impact on the environment and society by reducing an individual’s carbon footprint.</td>
</tr>
<tr>
<td>Mana</td>
<td>Authority, status, prestige.</td>
</tr>
<tr>
<td>Mana Whenua</td>
<td>Hapū and iwi with ancestral relationships to certain areas in Tāmaki Makaurau where they exercise customary authority.</td>
</tr>
<tr>
<td>Manaaki</td>
<td>Generosity; support, provide hospitality and care of others.</td>
</tr>
<tr>
<td>Manaakitanga</td>
<td>The process of showing respect, hospitality, generosity and care for others.</td>
</tr>
<tr>
<td>Marae</td>
<td>The enclosed space in front of a wharenui (meeting house) where people gather.</td>
</tr>
<tr>
<td>Marine ecosystems</td>
<td>Living organisms and non-living structures in the ocean environment, and their complex relationships to each other.</td>
</tr>
<tr>
<td>Mataawaka</td>
<td>Māori who live in Auckland and are not within a Mana Whenua group.</td>
</tr>
<tr>
<td>Mātauranga</td>
<td>Māori knowledge and expertise.</td>
</tr>
<tr>
<td>Mataranganga</td>
<td>Māori knowledge – sciences.</td>
</tr>
<tr>
<td>Māori</td>
<td>Life principle, life force, vital essence. The essential quality and vitality of a being or entity.</td>
</tr>
<tr>
<td>Maunga</td>
<td>Mountain, mount or peak. Also refers to volcanic cones.</td>
</tr>
<tr>
<td>Māori</td>
<td>Life principle, life force, vital essence. The essential quality and vitality of a being or entity.</td>
</tr>
<tr>
<td>Mega-tonnes</td>
<td>A million tons.</td>
</tr>
<tr>
<td><strong>Mitigation</strong></td>
<td>The action of reducing the severity, harm and seriousness of climate change through emissions reduction.</td>
</tr>
<tr>
<td>----------------</td>
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</tr>
<tr>
<td><strong>Natural asset</strong></td>
<td>Things of value in the natural environment including land and water areas with their ecosystems, subsoil assets and air.</td>
</tr>
<tr>
<td><strong>Natural carbon assets</strong></td>
<td>Natural features, e.g. wetlands and shrublands, that actively remove carbon dioxide from the atmosphere through photosynthesis, a process called carbon sequestration.</td>
</tr>
</tbody>
</table>
| **Net emissions** | 1. Net- The expression 'net of' represents the exclusion of something. Emissions- The production and discharge of something, especially gas or radiation.  
2. "Net emissions" means gross emissions (including all industrial activities, mostly fossil fuel combustion) minus carbon sinks from forestry activities and agricultural soils. The emissions may include carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, and perfluorocarbons.  
3. Net emissions include emissions and removals from land-use change and forestry (LU CF). |
| **Net zero** | Net-zero emissions describes a situation whereby the amount of greenhouse gases emitted into the atmosphere is equal to the amount sequestered or offset (e.g. by forestry). |
| **Net zero emissions** | The total of a country’s/city’s emissions across all sources, minus offsets from land use, land-use change and forestry. |
| **Ngahere** | Forest. |
| **Ocean acidification** | The absorption of carbon dioxide by seawater ultimately reducing its pH. |
| **Papatūānuku** | Mother Earth. |
| **Pre-industrial levels** | The global average CO2 levels before the Industrial Revolution (1750). |
| **Primary industries** | A mix of businesses who produce, process and move goods around New Zealand and export to countries around the world. Primary industries of importance to New Zealand include agriculture, forestry, horticulture and seafood. |
| **Process emissions** | The greenhouse gas emissions produced from a variety of industrial activities which are not related to energy. |
| **Process heat emissions** | Greenhouse gas emissions from systems to produce thermal energy, in the form of steam, hot water and direct heat systems, that is used in organisations. |
| **Prosperity** | Being successful or thriving, particularly referring to economic and cultural wellbeing. |
Pūrākau | Traditional stories, history and narratives.
---|---
Quality compact urban form | Future development that is focused in existing and new urban areas within Auckland’s urban footprint, limiting expansion into the rural hinterland. This future development maximises efficient use of land and delivers necessary infrastructure.
Rangatahi | Youth, younger generation.
Renewable energy | Renewable energy comes from sources that are naturally replenished in a relatively short timeframe. Sunlight, wind, water and geothermal heat are all renewable energy sources.
Resilience | The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.
Retrofit | Add components or accessories to something that did not have it when first made.
Retrofitting | The action of retrofit.
Road pricing schemes | An arrangement to introduce a price to enter one particular part of the city during the day.
Sequestration | The net removal and storage of carbon from the atmosphere in ‘carbon sinks’ (e.g. plants, oceans, soils).
Storm surges | An abnormal rise in seawater level during a storm caused by winds pushing water onshore.
Supply chains | The sequence of processes involved in the production and distribution of a commodity.
Sustainable design | Sustainable design seeks to reduce negative impacts on the environment, and the health of communities, thereby improving product performance. The basic objectives of sustainability are to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments.
Taiaroa | Natural resources.
Tāmaki Makaurau | The Māori name for Auckland. Translates to Tāmaki desired by many.
Taonga | A treasured item, tangible or intangible.
Te ao Māori | The Māori world, or the Māori world view.
Te Tiriti o Waitangi | The Treaty of Waitangi which is the document upon which the British and Māori agreed to found a nation state and build a government.
Tohu | Sign.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit-oriented development</td>
<td>A type of development that maximises the amount of residential, business and leisure space within walking distance of public transport.</td>
</tr>
<tr>
<td>Tūrangawaewae</td>
<td>Ancestral standing place.</td>
</tr>
<tr>
<td>Urupā</td>
<td>Burial ground, cemetery, graveyard.</td>
</tr>
<tr>
<td>Viable soils</td>
<td>Soils that are fertile.</td>
</tr>
<tr>
<td>Waahi tapu</td>
<td>A place, site or object which is sacred to Māori in the traditional, spiritual, religious, ritual or mythological sense.</td>
</tr>
<tr>
<td>Wai</td>
<td>Water.</td>
</tr>
<tr>
<td>Whakapapa</td>
<td>Genealogy that links Māori to their ancestors.</td>
</tr>
<tr>
<td>Whānau</td>
<td>Extended family, family group, a familiar term of address to a number of people. Also the primary economic unit of traditional Māori society.</td>
</tr>
<tr>
<td>Whanaungatanga</td>
<td>Relationship, kinship, sense of family connection. A relationship through shared experiences and working together which provides people with a sense of belonging.</td>
</tr>
<tr>
<td>Whenua</td>
<td>Land, country, earth or ground.</td>
</tr>
<tr>
<td>Zero and low emissions vehicles</td>
<td>Vehicles that emit no emissions or relatively low emissions. For example, electric vehicles and hydrogen-fuelled vehicles.</td>
</tr>
<tr>
<td>Zero carbon</td>
<td>Not releasing carbon dioxide into the atmosphere or removing the same amount of carbon dioxide from the atmosphere as produced e.g. by an activity, building or organisation.</td>
</tr>
<tr>
<td>Zero emissions vehicles</td>
<td>A vehicle that emits no chemical substances into the atmosphere from the onboard source of power.</td>
</tr>
</tbody>
</table>
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June 2019
Auckland Plan, Strategy and Research Department
Auckland Council (2019). Draft Te Tāruke-ā-Tāwhiri: Auckland’s climate action framework for consultation
Draft Te Tāruke-ā-Tāwhiri: Auckland’s climate action framework for consultation was adopted by the Auckland Council Environment and Community Committee on 11 June 2019.
Te take mō te pūrongo
Purpose of the report
1. To provide an update on draft content for the end of term reporting and feedback received so far from panel members to inform future operations of the panel.

Ngā tūtohunga
Recommendation/s
That the Rural Advisory Panel:
   a) receive the initial findings of the survey
   b) provide additional feedback to confirm the panel’s overall recommendations.

Horopaki
Context
2. The council’s sector and demographic advisory panels are a Mayoral appointment and their term therefore ends one month before the council elections. The purpose of the Rural Advisory Panel has been to provide advice to the council within the remit of the Auckland Plan on the following areas:
   • council policies, plans and strategies relevant to rural issues
   • regional and strategic matters relevant to rural issues
   • any matter of particular interest or concern to rural communities.

3. A survey has been distributed to panel members by email to capture views on the key achievements of the Rural Advisory Panel over the 2016-2019 term as well as feedback on what improvements could be made to the way the panel operates. This feedback will be used to develop an end of term report to the current council and recommendations to the incoming Mayor to inform future arrangements.

4. Initial feedback from the survey will be shared at the meeting.


Ngā koringa ā-muri
Next steps
6. A report will be presented to the governing body that incorporates panel members’ views on key achievements of the panel during the 2016-2019 term.

7. Recommendations for changes to the Rural Advisory Panel will be developed in response to survey feedback and will be presented to the incoming Mayor later this year.
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Review of Rural Advisory Panel 2017 - 2019</td>
<td>141</td>
</tr>
</tbody>
</table>

**Signatories**

<table>
<thead>
<tr>
<th>Author</th>
<th>Carol Hayward - Principal Advisor Panels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorisers</td>
<td>Marguerite Delbet - General Manager Democracy Services</td>
</tr>
<tr>
<td></td>
<td>Warren Maclennan - Manager Planning - North/West</td>
</tr>
</tbody>
</table>
Summary of Topics at Meetings

- 52 presentations for discussion
- Auckland Plan refresh and Long-term Plan
- 10 Reports
- National Policy statement on freshwater management
- 6 Reports
## Other Topics

- Auckland Ballance Farm Environment Award Winners 5
- Emergency Management 3
- Structure Planning 3
- Climate change impacts 3
- Forestry 2
- Maori cultural sites of significance 2
- Regional Pest Management Plan 2
- Auckland Unitary Plan 2
- Auckland Transport 2
- Coastal 2
Attachment A

Item 10

Other Topics

Mayor’s Address
Public Nuisance Bylaw
NZ food story – Pukekohe
Resource Consent
Compliance
Fonterra presentation
What would you like to see more of?

What would you like to see less of?
Purpose

As one of council’s engagement mechanisms with the rural sector in Auckland, the Rural Advisory Panel provides advice to the council within the remit of the Auckland Plan on the following areas:

- Council policies, plans and strategies relevant to rural issues
- Regional and strategic matters relevant to rural issues
- Any matter of particular interest or concern to rural communities
Selection process

The mayor appoints panel members in consultation with the chair of the panel and council staff.

Panel members are selected on the basis of their:

1. Association with a rural sector group or organisation
2. Ability to provide expert advice on rural issues
3. Understanding of the rural sector of Auckland