

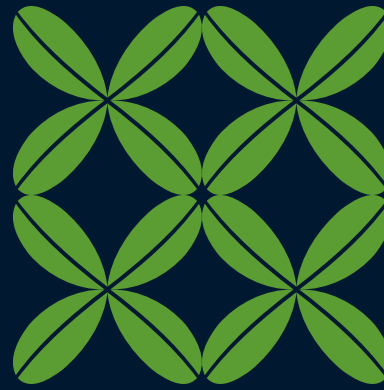
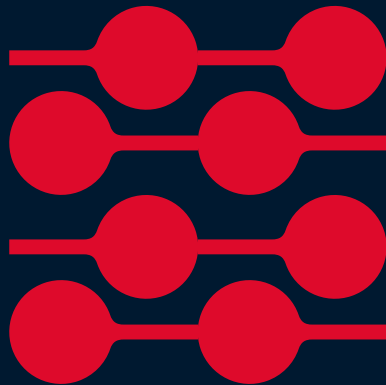


Te Tāruke-ā-Tāwhiri:
Auckland's Climate Plan



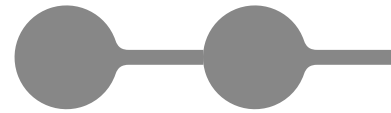
**Progress
report**

November 2021



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Purpose of this report

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan is a long-term approach to climate action for the Auckland region. It sets out eight priority action areas to deliver our goals to reduce emissions and adapt to the impacts of climate change. Key action areas are outlined within these priorities as well as key partners required to deliver on these actions.

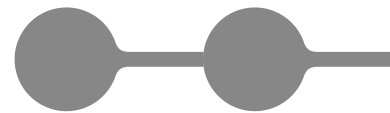
Regular monitoring and reporting are fundamental to understanding progress towards the main goals of reducing emissions and adapting to climate change impacts. The plan states we will report on progress of actions contained within the plan annually and that we will use a series of indicators to identify trends and measure success in delivery against our climate goals.

This report is focused on evaluating progress, summarising successes and challenges, and determining where further focus is required, acknowledging that delivery relies on individual action, collective action, and partnerships across all sectors of the economy and society.

To ensure consistency, the publication of future progress reports will align with our Auckland Plan 2050 and Annual Plan monitoring and reporting cycles. This is the first progress report since the plan was adopted in December 2020.

Figure 1 Reporting cycle (Strategic plans)

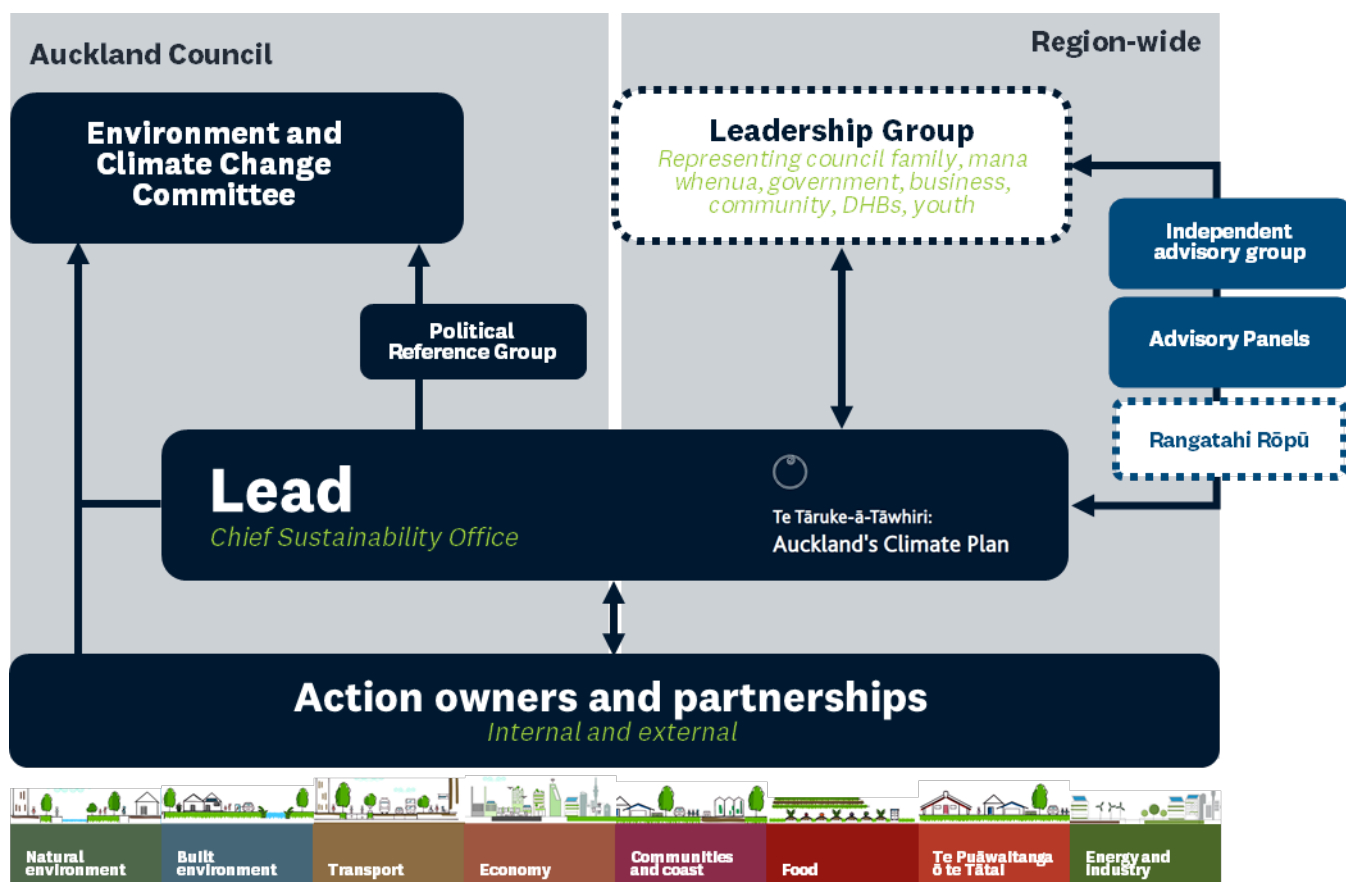




Governance arrangements

In order to achieve the goals in Te Tāruke-ā-Tāwhiri: Auckland’s Climate Plan, a coordinated, cross sectorial approach across the region is required. The Environment and Climate Change Committee agreed to establish two groups to enable effective role out and widespread adoption of Te Tāruke-ā-Tāwhiri: a Regional Leadership Group, and a Climate Political Reference Group.

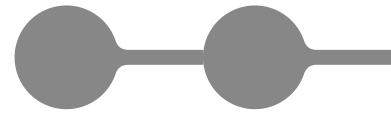
Figure 2 Proposed regional governance and partnership structure



To be established
 Independent

The Climate Political Reference Group has been established and is made up of six councillors (including the Chair and Deputy Chair of the Environment and Climate Change Committee), six local board members and two Independent Māori Statutory Board members. Mana whenua has been invited to propose a format for selecting and appointing representation. The purpose of the Climate Political Reference Group is to provide guidance and oversee the implementation of Te Tāruke-ā-Tāwhiri.

The Regional Leadership Group will be established in 2022 to accelerate the implementation of Te Tāruke-ā-Tāwhiri through cross-sectoral partnerships and climate action.



Mana Whenua

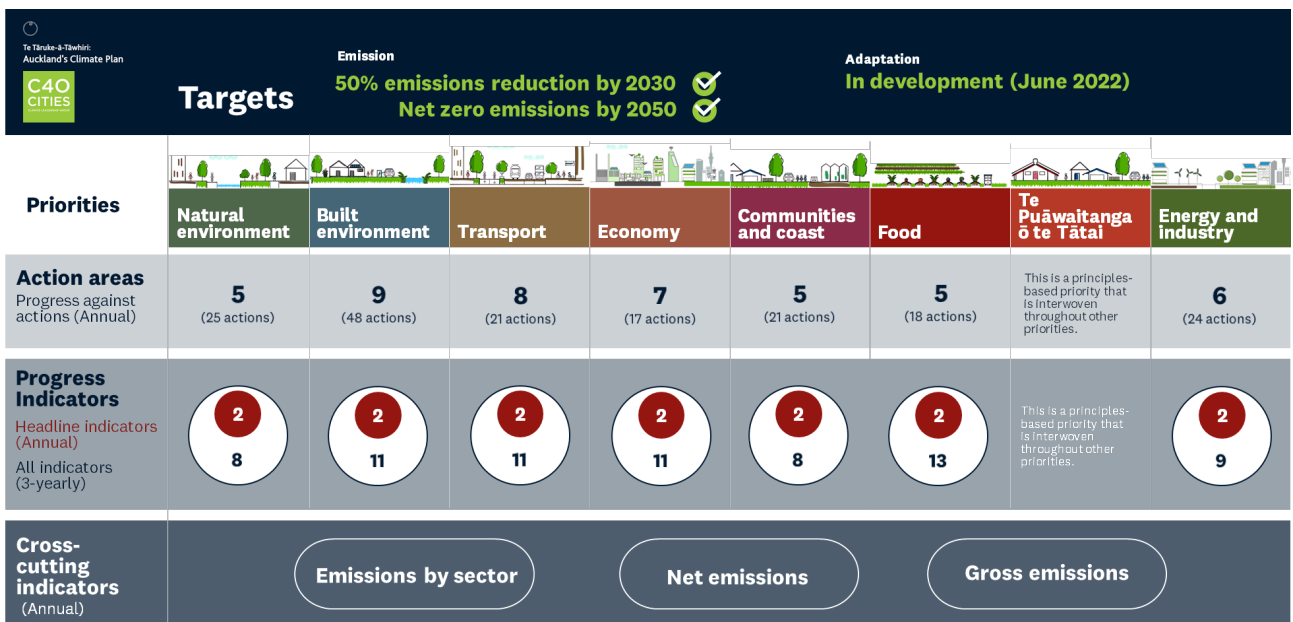
The Mana Whenua Kaitiaki Forum, a collective of the 19 hapū and iwi authorities of Tāmaki Makaurau, worked closely with Auckland Council throughout the development of Te Tāruke-ā-Tāwhiri.

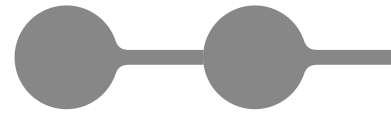
The forum set up a working group with representatives from the forum, council, and Māori subject matter experts to focus on supporting the development of climate actions for Tāmaki Makaurau. This partnership has been instrumental in ensuring the incorporation of kaupapa Māori and mātauranga a-iwi values and principles into the plan from the outset.

Following a climate change hui and wānanga with mana whenua in July 2021, it is understood that the next step in working together is to ensure that mana whenua voices are heard in the implementation of Te Tāruke-ā-Tāwhiri. It is proposed that further engagement with the forum takes place to discuss a proposed approach for ongoing hui that focus on climate change related projects and the delivery of Te Tāruke a Tāwhiri. Recruitment for roles within the Chief Sustainability Office focused on regional leadership and partnerships, engagement and communications, and Māori outcomes will further support partnership with mana whenua and a focus on the delivery of Te Tāruke a Tāwhiri.

Monitoring and reporting framework

Figure 3 Monitoring and reporting framework





The plan is currently guided by two overarching targets, a 50% emissions reduction by 2030 (against a 2016 baseline) and net zero emissions by 2050. Progress towards these targets is monitored through Auckland’s Greenhouse Gas Inventory, which provides annual data on emissions per capita (net and gross) and emissions by sector. The modelled decarbonisation pathway in Te Tāruke-ā-Tāwhiri identifies gross emissions reductions by sector to support a 50 per cent reduction in emissions by 2030:

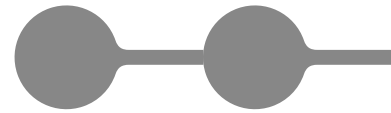
Sector	Gross emissions reduction 2016–2030
Stationary energy	65%
Transport	64%
Waste	0% ¹
Industrial processes and product use	23%
Agriculture	15%

The development of climate change adaptation targets and a monitoring system is ongoing with extensive engagement across Auckland Council, with Council Controlled Organisations (CCOs) and District Health Boards.

A series of progress indicators were detailed when the plan was developed. The baseline trend for each indicator is reported on in the plan and data for the headline indicators will be reported against annually. All indicators will be reported on every three years. The indicators will be reviewed each year to ensure they are fit-for-purpose.

Progress of actions contained within the plan will be reported on annually. This report will provide highlights of progress, alongside the percentage of actions that are completed, on track, partially underway or not in progress, including commentary where necessary.

¹ Modelled emissions for the waste sector remain at around the same level from 2016 to 2030. Compared to the ‘business as usual’ projection for the waste sector this represents a 24% reduction in emissions.



Global update

IPCC report

In August 2021, the Intergovernmental Panel on Climate Change (IPCC) released the first part of its sixth assessment report which provides the most recent scientific evidence on the climate crisis. It gives a detailed description of the current state and provided a stark reminder of the need for urgent climate action to significantly reduce emissions by 2030. The UN Secretary-General António Guterres said the Working Group's report was nothing less than "a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable".

The report sends a clear message that climate change is happening now, and that widespread and rapid changes in the atmosphere, ocean, and land have occurred. The IPCC confirms that the world's atmosphere has increased in temperature by 1.1°C compared to before the industrial revolution. This warming is causing sea-level rise and more precipitation in the air, leading to more severe storms, biodiversity collapse, and coastal retreat.

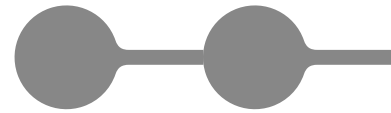
Strong and sustained reductions in greenhouse gas emissions are necessary to meet the Paris Agreement target set in 2015 to keep the rise in global temperatures under 1.5°C. Scientists are hopeful that if we cut our global emissions in half by 2030 and achieve global net zero emissions by 2050, we can stop and possibly reverse the rise in temperature. The only way to prevent exceeding this threshold, is for countries to urgently step up their efforts, and pursue the most ambitious path.

COP26

The United Nations Climate Change Conference 2021 (COP26) was held in Glasgow over November 1st - November 12th. The COP26 summit brought together countries from around the globe to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change. This year, countries were asked to present ambitious 2030 emissions reduction targets to secure global net zero emissions by 2050 and keep 1.5 degrees within reach. Other key goals COP26 was centred around were:

1. **Adapt to protect communities and natural habitats** – protect and restore ecosystems; build defences, warning systems, and resilient infrastructure and agriculture to avoid loss of homes and livelihoods
2. **Mobilise finance** – each country to deliver on their promise to mobilise at least \$100bn in climate finance per year
3. **Work together to deliver** - accelerate action to tackle the climate crisis through collaboration between governments, businesses, and civil society

Auckland was one of 11 cities showcased in the Global Cities Climate Action Exhibition, a partnership project developed by Arup and C40 as part of COP26. Each city had multiple climate action case studies which were unique to them. The Auckland 'virtual city room' showcased 6 case studies including a Ports of Auckland's green hydrogen facility, our innovative green bonds offering, the regeneration of Te Puhinui, zero emission buses, the restoration of Te Auaunga – Oakley Creek, and a kerbside food scraps collection service in Papakura.



National update

New Zealand's emissions profile is largely made up of agriculture and transport emissions (48% and 41% of national emissions respectively). New Zealand generates around 80% of its electricity through renewable resources (primarily hydro, geothermal, and wind). Since 2012, CO2 emissions from electricity generation have dropped by 19%.

There have been many notable shifts in the regulatory space this year.

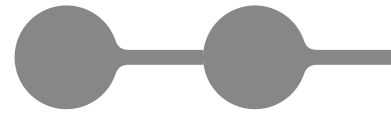
In the mitigation space, the government is currently working on the first Emissions Reduction Plan (ERP). The ERP will provide policies and strategies for specific sectors, and a multi-sector strategy to meet emissions budgets. The government's five principles are well aligned to Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan. These are a just transition; a science-led response; enhancing the role of nature-based solutions; genuine partnership with Māori; and a clear, ambitious, and affordable path.

Upcoming resource management system reform seems likely to implement greater emphasis on climate change mitigation and adaptation across the system. The reform will repeal the Resource Management Act 1991 (RMA) and enact three new acts:

1. **Natural and Built Environments Act.** The replacement for the RMA. The recently consulted on exposure draft of this act set the reduction of greenhouse gas emissions and increased removals, as well as the reduction of significant risks and increased resilience to the effects of climate change as outcomes for the system. It also required specific national direction for these outcomes and required environmental limits for air which could include GHGs.
2. **Spatial Planning Act.** Requiring the development of long-term regional spatial strategies to help coordinate and integrate decisions made under relevant legislation. Based on the Resource Management Reform Panel's Report this is likely to enable greater avoidance of development near areas impacted by climate change effects and support low emission urban form.
3. **Climate Adaptation Act.** This will provide for managed retreat and address associated issues including liability, insurance, compensation, and funding.

The Natural and Built Environments Bill and Spatial Planning Bill are expected to be introduced in early 2022. The Climate Change Adaptation Bill is likely to be introduced in early 2023 and would be carried over to the following parliamentary term.

There are new/revised National Direction under the RMA which are being incorporated into the Unitary Plan. The National Policy Statement for Urban Development (NPS-UD) requires planning decisions contribute to 'well-functioning urban environments' which support reductions in greenhouse gas emissions; and are resilient to the likely current and future effects of climate change. It specifically requires that Auckland Council enables greater density around public transport networks and requires the removal of rules requiring the provision of car parking in developments, both of which could support moves away from car dependent urban development and towards low carbon quality compact urban forms.



Auckland's update

City Rail Link

The City Rail Link (CRL) project has changed beyond recognition in the last 12 months. New Zealand's largest transport infrastructure project is now at peak production with construction forging ahead at pace to build a transformational and world-class rail system for Tāmaki Makaurau.

City Rail Link's contribution to a more vibrant and sustainable Auckland included the delivery of work at the lower end of Albert Street with its people-friendly improvements, the opening of Te Komititanga, the vehicle-free public meeting place in lower Queen Street, and the re-opening of the restored heritage-listed Chief Post Office as part of the Britomart Transport hub.

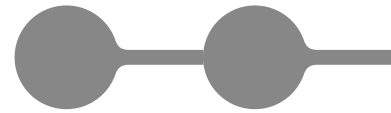
As CRL construction continues at pace, its pledge to be an industry leader for project sustainability is being recognised by the Infrastructure Sustainability Council with Leading Design Ratings for Contracts 1 and 2 and an Excellence As-Built Rating for Contract 2. CRL Ltd is targeting an Excellence rating for CRL Contract 3.

Auckland Climate Festival

This year was the first year of the Auckland Climate Festival. It was a three week-long event of 65+ online events that brought together climate leaders to engage with businesses, government, Māori, and communities across the Auckland region to address the climate emergency. The festival website states that, "Aucklanders are increasingly aware of the need for a 'whole of society response' to take climate action. Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan begins to provide direction on how Tāmaki Makaurau can respond."

The festival honoured Te Tiriti o Waitangi and the voices of our youth with two cross cutting themes of Mātauranga Māori and a youth-led approach. It converged around five focus areas:

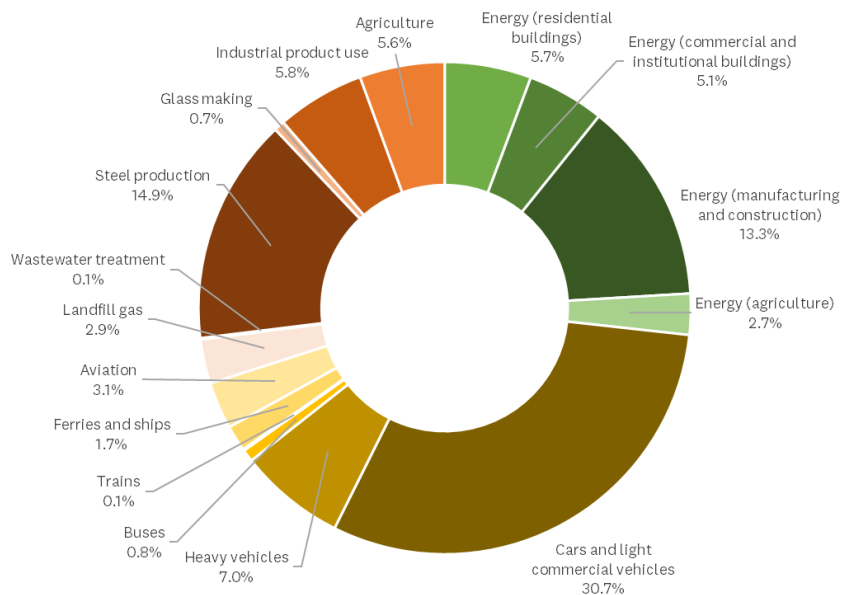
1. **Collective vision:** what is the collective vision/s for the future of Tāmaki Makaurau we want to see?
2. **Change:** how can we shift towards a circular economy, and better understand and harness the co-benefits of action?
3. **Individual action:** how can we be inspired, enabled and empowered through our individual actions so that collectively we can make a bigger difference?
4. **Just transition:** how can we make the transition and adaptation fair, inclusive and equitable for all Aucklanders?
5. **Beyond Tāmaki:** how does climate action in Tāmaki support Aotearoa, our neighbours in the Pacific and the rest of the world?



Auckland's Greenhouse Gas Inventory

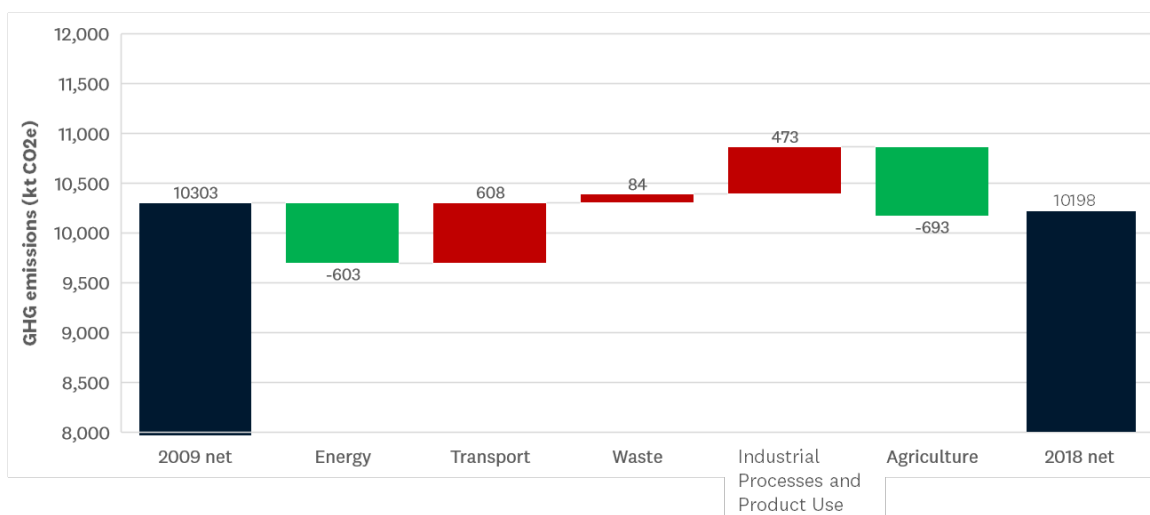
Te-Tāruke-ā-Tāwhiri: Auckland's Climate Plan sets the target of keeping within 1.5 degrees of warming and net zero emissions by 2050 with an interim emissions reduction target of 50 per cent by 2030 (against a 2016 baseline).

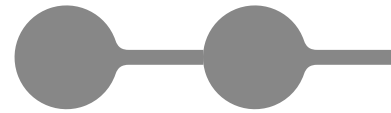
Figure 4 Auckland's greenhouse gas emission profile (2018)



In 2018, Auckland's gross emissions were 11,396 kilo-tonnes of carbon dioxide equivalent (kt CO₂e). This is a 2.5 per cent increase from 2016 levels. This continues a gradual upward trend in gross emissions since 2009, but increased carbon sequestration from forestry resulted in lower net emissions in 2018 than 2009. When carbon sequestration from forestry was included, net emissions were 10,198 kt CO₂e. Transport and stationary energy are the dominant sectors, accounting for 43.4 per cent and 26.7 per cent of gross emissions. Carbon dioxide (CO₂) contributed 82.9 per cent, methane (CH₄) 9.2 per cent, nitrous oxide (N₂O) 2.6 per cent and other GHGs 5.3 per cent.

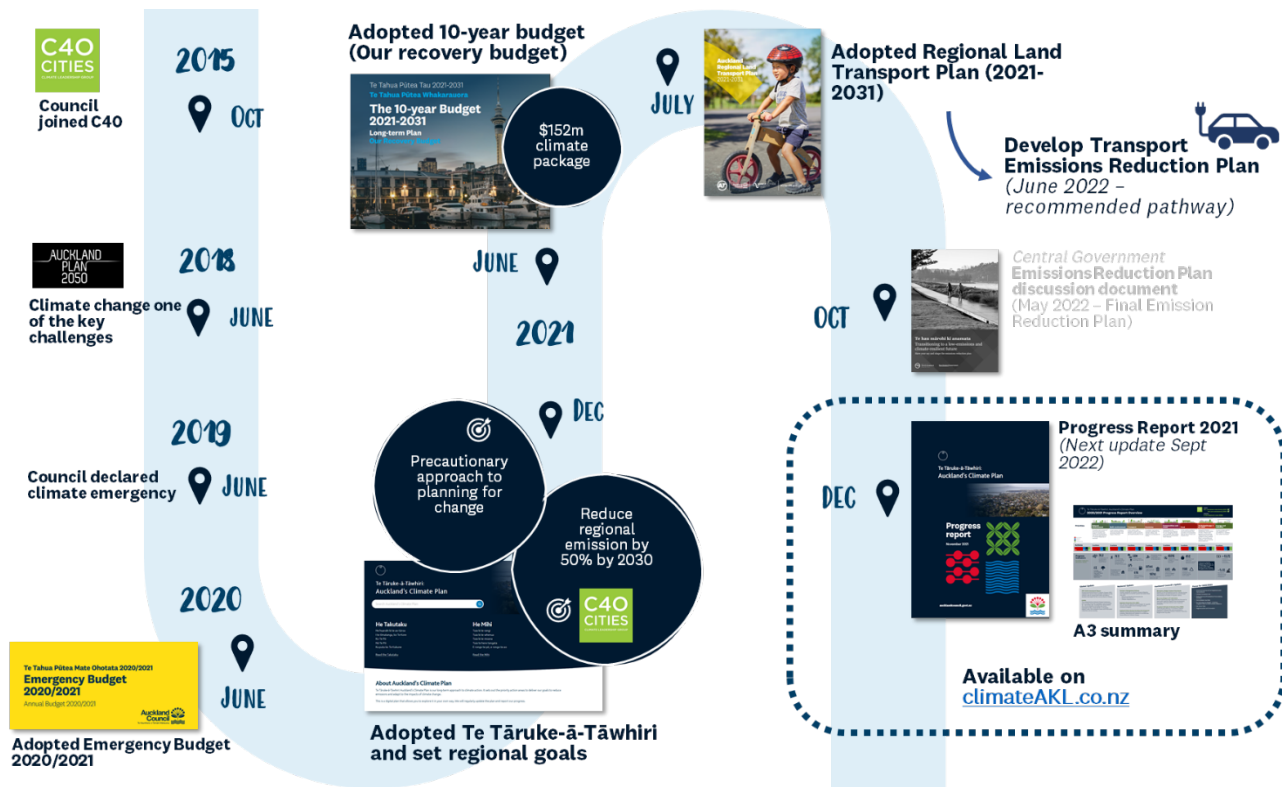
Figure 5 Auckland's GHG emissions (2009 - 2018)





Auckland Council's update

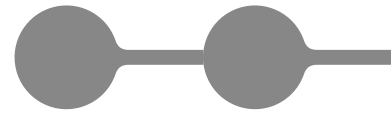
Figure 6 Roadmap on climate action



Emergency Budget (Annual Plan 2020/2021)

Auckland Council declared a climate emergency in June 2019. As part of the Emergency Budget, adopted in July 2020, Auckland Council allocated funding for projects to provide an initial response to our most urgent climate change priorities including foundation work for climate action:

- Development of a climate impact assessment tool to better integrate climate change considerations in Auckland Council's decision-making processes.
- A review of the Auckland Unitary Plan from a climate perspective
- Embedding our natural hazard risk assessment and integrating data - the Natural Hazards Risk Management Action Plan (NHRMAP) has now been adopted
- Understanding the likely economic impacts of climate change - the Tāmaki Makaurau economic climate change risk assessment has now been completed
- Understanding the Māori world view on climate change led by the Mana Whenua Kaitiaki Forum
- Focussing on communications and tools to embed behaviour change - a FutureFit campaign, to embed behaviour change, went live and 16,700 Aucklanders completed their carbon footprint
- Phasing out gas boilers in aquatic centres and replacing with electric heat pumps - suppliers have been appointed for three boiler replacements and options analysis is underway.



- Auckland Council removed 101 petrol vehicles from its fleet with 100 new hybrid vehicles ordered in replacement
- An additional 500,000 trees to be planted as part of the Mayor’s Million Trees project (1.5 million trees and shrubs in total over this three-year term) - around 735,000 trees were planted last planting season.
- Auckland Council’s procurement team has begun capturing emissions data relating to our contracts and are investigating ways to capture data and incentivise carbon reduction in our capex projects.

10-year Budget (LTP 2021-2031)

Climate action was identified as a priority area for investment through the 10-year Budget (LTP 2021-2031). For the first time, the 10-year budget included a dedicated climate action investment package with \$152 million of funding for climate action over the next 10 years. Programmes were prioritised on the basis of achieving the greatest climate outcomes (reducing emissions and/or supporting climate change adaptation) and delivering tangible outcomes for Aucklanders. The package includes funding to enable Auckland Transport to accelerate the transition of the bus fleet from diesel to electric and hydrogen buses, no new diesel buses will be added to the fleet and only zero emission buses will be procured from 1 July 2021.

Figure 7 Climate action investment package

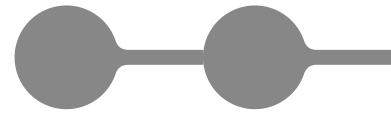


Transport Emissions Reduction Plan

Auckland Council and Auckland Transport are developing a Transport Emissions Reduction Plan (TERP) to give effect to Te Tāruke-ā-Tāwhiri: Auckland’s Climate Plan. Te Tāruke-ā-Tāwhiri commits to halve regional emissions by 2030 and aims for a 64 per cent reduction in transport sector emissions by 2030 (against 2016 levels).

The TERP will deliver a recommended pathway to meet the modelled 64 per cent transport emissions reduction goal by 2030. This requires a clear understanding of the:

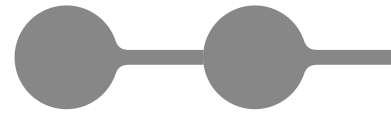
- key interventions required to reduce transport emissions in Auckland and the scale of their potential emissions reduction impacts,
- most appropriate combination of interventions to create pathways (or combinations of interventions) to meet the target,



- impacts (including social, economic, cultural and financial) of pathways and trade-offs that may be required.

Meeting the region's climate goals will require transformational change in how people and goods travel in Tāmaki Makaurau. Local and central government will also need to move away from business-as-usual planning and investment processes.

Reducing Auckland's transport emissions will also bring about dramatic improvement in outcomes valued by Aucklanders. These improvements include cleaner air, fewer traffic-related deaths and serious injuries, improved public health, lower road infrastructure costs, and more equitable access to jobs, schools, health, services, recreation, and other opportunities.

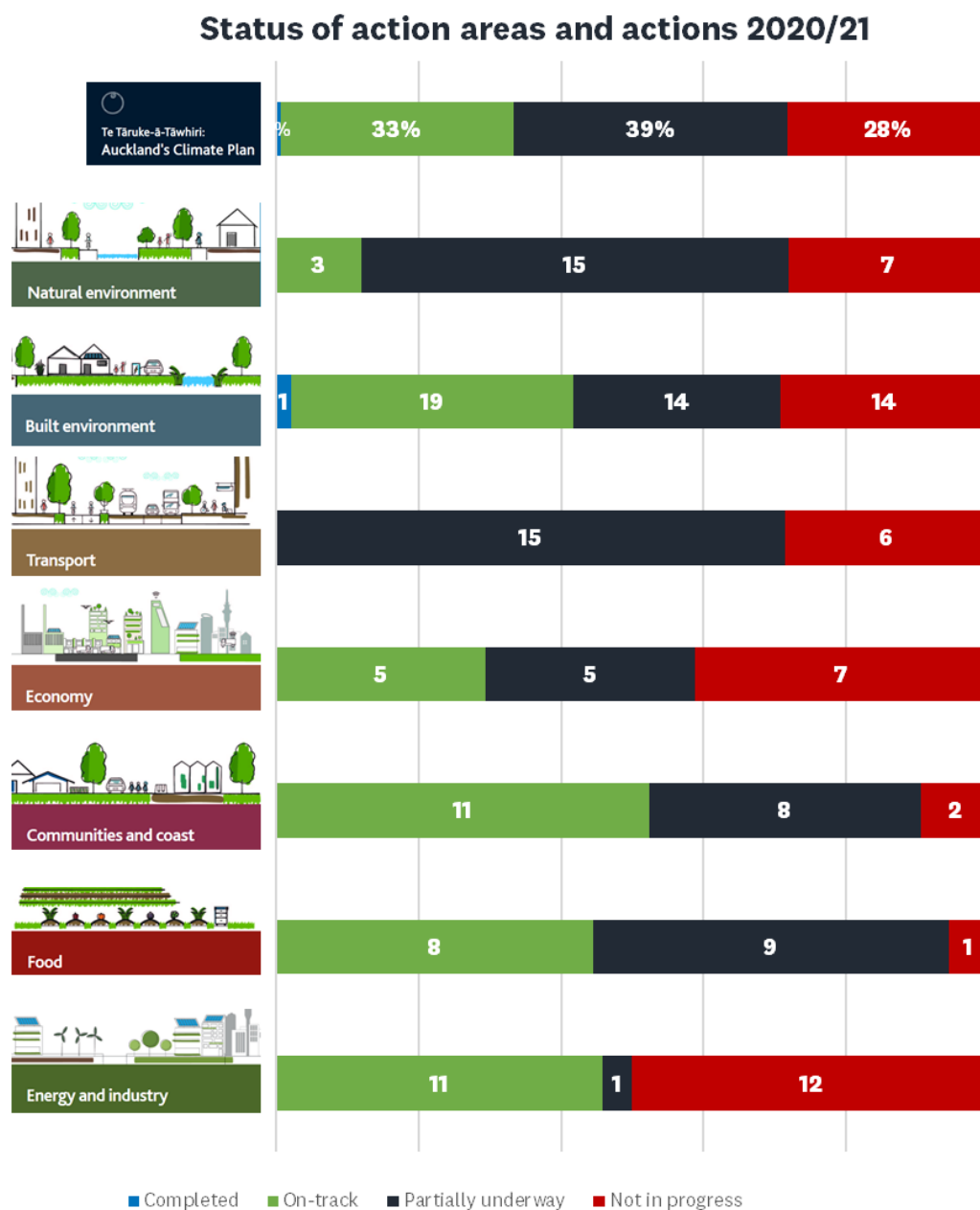


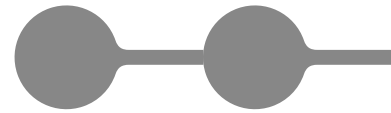
Action Progress overview

There are a total of 58 action areas, and 179 actions, in Te Tāruke-ā-Tāwhiri with Auckland Council having different levels of responsibility and control, reflecting the regional focus of the plan:

- Auckland Council has direct control – 111 actions
- Auckland Council has partial control – 30 actions
- Auckland Council has an influencing role (includes advocacy) – 32 actions
- Māori led – 6 actions

Figure 8 Actions overview by priority

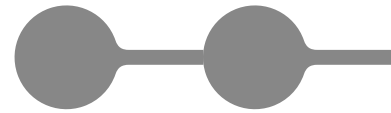




Action highlights and challenges

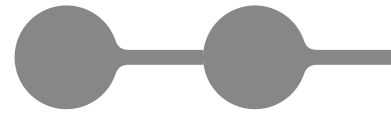
Priority Natural environment	
Goal	A healthy and connected natural environment supports healthy and connected Aucklanders. The mauri (life essence) of Tāmaki Makaurau is restored.
Actions	5 action areas (25 actions)
Highlights	<p>Since 2018, the Natural Environment Targeted Rate has allowed Auckland Council to increase management of key pests and weeds that are expected to benefit from climate change. In 2020/2021, 43km of upgraded tracks reopened across regional and local parkland, and 31 new hygiene stations were installed, to protect our ngahere (forests) from kauri dieback. Pest plant control was delivered across 1,689 ha of regional parks and 12,600 ha of possum control was delivered across the region.</p> <p>The water quality targeted rate (WQTR) has invested in the Freshwater Management Tool (FWMT) – a decision-support tool, to predict water quality across all catchments, regionally (flow, contaminants, sources and grades). Work is ongoing with NIWA to develop future climate information to then model the outcomes of climate change on water quality. Progress has been made identifying which of varied regional climate models and representative concentration pathways will have greatest effect on water quality.</p> <p>A workstream has been allocated for climate change water quality modelling to now progress with the FWMT – delivering information on the types, magnitude, locations and sources of change to water quality (degradation, improvement) expected under existing and future land use affected by future climate. Outcomes will then inform the catchment action planning recommendations the FWMT delivers (e.g., the investment decisions and action plans developed for preventing future degradation and otherwise improving already degraded waterways).</p>
Challenges	<p>The Natural Environment Targeted Rate still only provides for a highly prioritised sub-set of threatened species and indigenous ecosystems to be actively managed. With current funding, by 2028 there will still be over 300 threatened species with no active management in the region.</p> <p>The FWMT is primarily a flow and contaminant accounting tool – developing action plans for the effects of climate and resource use on both. The FWMT is being extended via proof of concept to modelling ecology and coastal health outcomes, but challenges remain in assessing a broader variety of water quality measures and outcomes, including across coastal and freshwater environments.</p>

Priority Built environment	
Goal	A low carbon, resilient built environment that promotes healthy, low impact lifestyles.
Actions	9 action areas (48 actions)



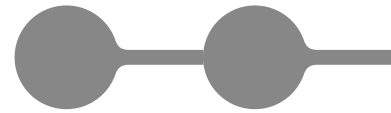
Priority Built environment	
Highlights	<p>Sustainable Asset Policy</p> <p>Auckland Council has adopted a regional Community Facilities - Sustainable Asset Policy, a key step on its journey to reducing operational greenhouse gas emissions. The policy, commits Community Facilities to:</p> <ul style="list-style-type: none"> • Achieve carbon neutrality in operations for new asset development • Achieve a minimum 5-Star Green Star rating (or equivalent certification) on the development of all new assets with a budget over \$10 million • Incorporate decarbonisation principles into guideline documents for renewals and new asset development of all community assets. <p>Ngā Kāinga Anamata - Homes of the Future</p> <p>Ngā Kāinga Anamata - Homes of the Future is a sustainability-innovation public housing pilot project by Kāinga Ora aimed at driving carbon emission reduction in New Zealand's construction industry. The project will deliver 30 new homes within five, three-level apartment buildings in Glendowie. Each near identical building will use a different construction technology, enabling sustainability insights to be gathered on a range of building materials and systems. Each building will achieve significantly reduced carbon and energy outputs; achieving both Passive House standard and net zero energy.</p>
Challenges	<p>Auckland Council has limited opportunity to mandate the changes required in the building and construction sector to support our climate goals. The region is predicted to undergo significant growth, and it is essential that this growth supports a low carbon, resilient future. The current Building Code is underperforming in delivering healthy, efficient buildings and does not align with our climate goals.</p> <p>The government's Building for Climate Change programme seeks to reduce operational emissions and embodied carbon associated with new buildings and we welcome the planned changes to how new buildings are designed and constructed.</p> <p>The Auckland Plan 2050 notes our current housing stock will make up approximately half of all dwellings in Auckland in 2050. The quality of these existing buildings needs to be improved significantly in order to improve energy efficiency and health and wellbeing outcomes. As significant energy efficient retrofit programme is required to support our climate goals.</p>

Priority Transport	
Goal	A low carbon, safe transport system that delivers social, economic and health benefits for all
Actions	8 action areas (21 actions)
Highlights	<p>Tāmaki Makaurau has seen substantial investment in transport over the past two decades. There is continual delivery of the Rapid Transit Network (RTN), including construction of the City Rail Link (CRL), Eastern Busway, Puhinui Interchange, and Northern Busway extensions. The design of the Northwest Bus Improvements along SH16 and electrification of the rail network from Papakura to Pukekohe are also underway.</p> <p>A regionwide new bus network was rolled out in 2018, doubling the number of Aucklanders who have nearby access to frequent bus services. Work is also underway to accelerate the delivery of low emissions buses, with all new buses to be electric or hydrogen from 2021, and 40 to 50 per cent of the total bus fleet being electric or hydrogen by 2030.</p>



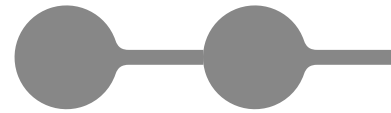
Priority Transport	
	<p>Improvements to the public transport network have led to significant growth in patronage over the last decade, with more than 100 million boardings in 2019 compared to 59 million in 2009.</p> <p>Similarly, take-up of active modes has increased where safe cycling connections have been provided. Since 2016, trips on bikes have increased by 16% overall. Progress is being made on the remaining elements of the Urban Cycleways Programme, such as Te Ara Ki Uta Ki Tai (Glen Innes to Tāmaki Shared Path) and New Lynn to Avondale Shared Path.</p>
Challenges	<p>Despite the recent improvements to the public transport and active modes networks, private vehicles remain the dominant mode in Auckland and transport emissions are still increasing.</p> <p>Motorway and roading-related investments, including maintenance, make up the bulk of Auckland’s transport budget.</p> <p>Planned transport investments and current policy settings are insufficient to meet the scale of emissions reduction required by Te Tāruke-ā-Tāwhiri.</p>

Priority Economy	
Goal	A resilient, low carbon economy, guided by our kaitiaki values, that supports Aucklanders to thrive.
Actions	7 action areas (17 actions)
Highlights	<p>C40 Divest/Invest Declaration</p> <p>Auckland Council endorsed the C40 Divest/Invest Declaration, reaffirming our position to divest any investments in fossil fuel companies and confirming a commitment to increase financial investments in climate solutions that support a just and green economy. Auckland Council. The Auckland Council Group has raised more than \$1 billion in green bonds to finance and refinance projects such as electric trains and cycling infrastructure.</p> <p>Our green bond programme has continued to expand, and we have started looking into new sustainable finance tools such as sustainability linked loans and bonds to fund the group’s activity.</p> <p>Taskforce on Climate-Related Financial Disclosures (TCFD)</p> <p>The group has made a head start on its climate-related disclosure and has been continually advocating for the disclosure of climate-related financial risks and opportunities across the business community.</p> <p>Climate Innovation Hub</p> <p>Auckland Unlimited has begun work to establish Auckland’s first Climate Innovation Hub. The Climate Innovation Hub is part of the 10-year Budget climate action package and aims to activate climate innovation through collaboration with key stakeholders for an equitable, climate-resilient and low-carbon Tamaki Makaurau.</p>
Challenges	<p>Many of the actions within the economy priority require extensive engagement and research. Without the people resource available, we are unable to begin work on many of the actions. This applies to both Auckland Council and Auckland Unlimited, the two entities that will deliver most of the economy actions.</p> <p>Lack of data and expertise in specific areas such as sustainable finance and regenerative economy means it will take a lot of effort and collaboration to mainstream many of the shifts the economy priority aims to achieve.</p>



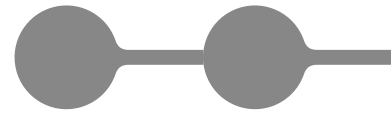
Priority Communities and coast	
Goal	Communities and individuals are prepared for our changing climate and coastline, and carbon footprints of Aucklanders have reduced.
Actions	5 action areas (21 actions)
Highlights	<p>We had 49,000 engagements with Aucklanders to help enable them to live Low Carbon Lifestyles (against a target of 30,000). This was due to more effective use of social media channels and additional investment from the Emergency Budget (Annual Plan 2020/21). 2,700 tonnes of CO₂e were avoided.</p> <p>Several community initiatives were supported such as:</p> <ul style="list-style-type: none"> • Community Bike Hubs (8644 visitors, 2992 bikes fixed and 539 refurbished). • 33 Eco-Neighbourhoods that connect neighbours with projects such as food forests/community gardens and pataka kai food sharing. • Te Aho Tū Roa programme supported 30 rangatahi to attend a 3-day wanānga to develop a strategic approach to regeneration initiatives, for rangatahi by rangatahi. • 310 schools were engaged through various education for sustainability programmes, with over 16,000 children visiting our environmental experience centres. • 17 workshops and 38 localised clusters were delivered online or face to face engaging 2,179 educators. Topics included waste minimisation, stream restoration, food gardens and energy reduction.
Challenges	Covid-19 lockdowns disrupted many of our community and school events and programmes. A flexible response from the team to learn to deliver online overcame some of these challenges and gave us the opportunity to engage with some teachers and students we had not reached previously. We also managed to deliver a larger number of Home Performance consultations due to reduced travel time.

Priority Food	
Goal	A low-carbon, resilient, local food system that provides all Aucklanders with access to fresh and healthy food.
Actions	5 action areas (18 actions)
Highlights	<p>Papatoetoe Food Hub</p> <p>The Papatoetoe Food Hub was established in 2018 and piloted a community-led enterprise concept in which surplus food is rescued and turned into good, affordable food for the community. It employs 12 people, hosts 6 learning programmes, and diverted 18.6 tonnes of food waste from landfill, and avoided 35 tonnes of CO₂ emissions (May 2020 - May 2021). A second food hub has been established in Papakura and opened in July 2021.</p> <p>Eat Sustainably, Live Lightly</p> <p>An Eat Sustainably, Live Lightly media campaign ran May-Jun 2021, encouraging people to eat seasonally, buy locally, eat more plant-based meals, and plant fruit and vegetables in their backyards. The Eat Sustainably social media post had 228,000 impressions and the Live lightly programme overall reached 700,000 Aucklanders and generated 16,000 visits to the Live Lightly website.</p>



Priority Food	
	<p>Compost Collective</p> <p>The Compost Collective is a council funded programme run collaboratively with the Kaipatiki Project and EcoMatters. In 2020/21, a team of 14 facilitators from different cultural and regional communities delivered 436 composting workshops to 6,081 Aucklanders resulting in an estimated 419 tonnes of food scraps being diverted from landfill. Six months after attending a workshop 63% of attendees composted three quarters of all of their food scraps.</p>
Challenges	<p>A lack of government mandate, decentralised responsibility for delivering action across the food system, and high numbers of stakeholders make coordinating and resourcing this action challenging.</p> <p>COVID-19 has had adverse impacts on the food system, breaking distribution chains between smaller producers and customers, increasing financial strain on food businesses, making it more difficult for families in need to access affordable food through sharing and gathering, and significantly increasing dependence on food parcel distribution services.</p>

Priority Te Puāwaitanga ō te Tātai	
Goal	intergenerational whakapapa relationships of taiao, whenua and tāngata are flourishing. The potential and value of Māori is fully realised. Māori communities are resilient, self-sustaining and prosperous.
Actions	None (Te Puāwaitanga ō te Tātai is a principle-based priority that is interwoven across other priorities)
Highlights	<p>Related highlights from other priorities are provided below.</p> <p>Shoreline Adaptation Plans</p> <p>Significant mana whenua engagement has been undertaken to support the development of the Shoreline Adaptation Plans work programme in the spirit of partnership with mana whenua. This includes 9 updates to the Infrastructure and Environmental Services (I&ES) Operational Forum, 2 mana whenua wananga, and 7 hui with local iwi in support of the Whangaparāoa Pilot. As part of the engagement process, mana whenua gifted guiding principles for all future shoreline adaptation plans. Ngāti Manuhiri and Ngāi Tai ki Tāmaki also gifted area specific values and objectives for the Whangaparāoa Peninsula, which have been embedded throughout the pilot report.</p> <p>Exotic weed eradication on Aotea Great Barrier Island</p> <p>Auckland Council has been collaborating with mana whenua and others on Aotea Great Barrier Island in relation to a recent incursion of <i>Caulerpa brachypus</i>, an invasive exotic seaweed which has not previously been detected in Aotearoa. Mana whenua have four out of ten seats on the governance group for this response, which is the first time in the Auckland region that mana whenua has been so substantively involved in an incursion response.</p> <p>Young Leaders Sustainability programme</p> <p>Young Leaders Sustainability Program is a programme designed for students from all secondary schools in Tāmaki Makaurau. It involves attending a 3-day hui to explore the Manukau Harbour and collaborate and learn from educators at Makaurau marae where the principal hapū are Te Ahi Waru and Te Akitai of the Waiohūa iwi.</p>



Priority | Te Puāwaitanga ō te Tātai

Challenges	There is a limited number of staff with specialist skills relating to understanding of Te Ao Māori, fluency in te reo Māori and mātauranga Māori in Tāmaki Makaurau. There is also significant competition for Māori specialist staff among Auckland Council, central government agencies, and the private sector. Therefore, our recruitment for these roles is much slower and more challenging than other positions, which means the projects are slower to start up since we have limited staff capacity to progress them.
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Priority | Energy and industry

Goal	A clean energy system that supports and provides for a resilient, low carbon Auckland.
Actions	6 action areas (24 actions)
Highlights	<p>Watercare’s Floating Solar Array</p> <p>In October 2020, Watercare unveiled New Zealand’s first ever floating solar array. The one-megawatt array built by Vector Powersmart floats on a treated wastewater pond next to the Northern motorway at the Rosedale Wastewater Treatment Plant. It covers one hectare and consists of more than 2,700 solar panels and 4,000 floating pontoons and will generate 1,486MWh per year. This is enough electricity to power a quarter of the total energy needed at the treatment plant and will reduce carbon emissions by 145 tonnes each year.</p> <p>Green Hydrogen Production</p> <p>Ports of Auckland has committed to build a hydrogen production and refuelling facility at its Waitematā port. The company, and project partners Auckland Council, Auckland Transport and KiwiRail, are investing in hydrogen fuel cell vehicles including port equipment, buses and cars as part of the project. The first phase, installation of the Gateway Refueller, a hydrogen fuelling station that dispenses green hydrogen produced at BOC’s green hydrogen plant at Glenbrook is now complete.</p> <p>Project Gigawatt</p> <p>Project Gigawatt is an initiative to develop solar power and other renewable energy initiatives on properties owned and managed by Auckland Council. The project will form a panel of suppliers to co-develop projects across the property portfolio over a period of ten years with the goal of deploying up to 2MW of renewable energy projects. A market brief for Project Gigawatt suppliers has been completed and a Request for Tender (RfT) will be issued for supply of a solar PV system at Albany Stadium Pool.</p>
Challenges	<p>Some projects have either been scaled back or delayed due to financial and logistical constraints associated with the COVID -19 outbreak and subsequent lockdowns.</p> <p>Delivering first of a kind technical projects can present unique challenges in relation to safety, design and legislative requirements among others. All of which can and do lead to delays.</p>



Case Study – Te Whakaoranga o te Puhinui / The Regeneration of the Puhinui

Te Puhinui is a catchment in Manukau with a 12.5-kilometre-long degraded waterway nested within Te Maanuka/Manukau Harbour with a rich geological, ecological and human history.

Poor water quality, litter, industrial run-off and outdated engineering have plagued the modern history of this ancient stream and its fragile ecosystem. Led by Eke Panuku, a wide range of partners, including Te Waiohū iwi (Ngāti Te Ata, Ngāti Tamaoho and Te Ākitai Waiohū), Kāinga Ora, local boards and Auckland Council, sought to work with the community to create a strategy to ensure their investment in the catchment was strategically aligned, holistic and would create transformational change for the wellbeing of the people, place, and nature of Te Puhinui.

The Puhinui Regeneration Strategy is ratified through Te Whakaoranga o Te Puhinui Charter - a potential world first agreement and acknowledgement of the collaboration and mutual respect between all signatories, including Te Waiohū iwi, local communities, council and the government towards the regeneration of Te Puhinui. The project team are working to ensure the wider delivery partners and South Auckland community have an active role in the realisation of the strategy and resulting charter.

The project was recently recognised with an ‘Outstanding Award’ in the Unbuilt Parks and Environment category of the International Federation of Landscape Architects (IFLA) and has been showcased as part a virtual Climate Change exhibition as part of the COP26 proceedings in Glasgow.

We believe this award and exhibition gives international recognition to the benefit of working in partnership with indigenous people to respond to the challenges of climate change. The visual below explains how the regeneration of Te Puhinui addresses climate change across a range of different areas.

How does the regeneration of Te Puhinui address climate change?

Working in partnership with Waiohau iwi¹ to embed indigenous knowledge, the regeneration of Te Puhinui utilizes a 'whakapapa'² based approach to ensure the whole living system of Te Puhinui is considered and reflected in the strategy. A whakapapa approach to climate action is holistic, taking into account both climate mitigation and adaptation strategies.

WAI - WATER

Use natural systems and water sensitive design to improve water quality and mitigate against the effects of flooding and erosion.

KĀINGA - HABITAT

Develop urban ngahere/forest to create habitat for native plants, birds, fish and other creatures, and to reduce carbon and heat island effect.

TAIAO HANGA - BUILT ENVIRONMENT

Restructure Te Puhinui's built environment to reconnect nature, people and place and foster vibrant, safe and accessible communities.

PŪNGAO - ENERGY

Promote and support Te Puhinui's energy transition from a non-renewable carbon intensive energy network towards a renewable energy network.

KAI - FOOD

Develop and support local and traditional food initiatives within Te Puhinui to provide local, affordable, healthy and cultural food for people and whānau³ to enhance community well-being and resilience.

IKIKI - TRANSPORT

Improve walking and cycling networks and re-imagine streets as places for people of all ages and abilities to support walkable and liveable neighbourhoods and encourage active and low-carbon modes of transport.

PARA KORE - ZERO WASTE

Support initiatives that reduce material use and the ecological footprint of the local economy.

WHAKAKETANGA ŌHANGA - ECONOMIC DEVELOPMENT

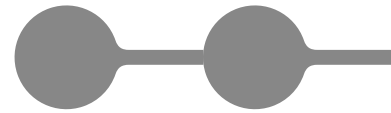
Economic development that focuses on the well-being of the communities of Te Puhinui, place-based livelihoods and long-term local careers by supporting social and economic development and innovation for Te Waiohua, local businesses and organisations as well as the wider community with skills training and employment and business development opportunities.

TANGATA HERENGA KI TE WHENUA - PEOPLE CONNECTION TO PLACE

Connecting people to Te Puhinui and support people to play an active role in the care, protection, restoration and regeneration of their environment, fostering a sense of meaning, belonging, connection and pride of place.

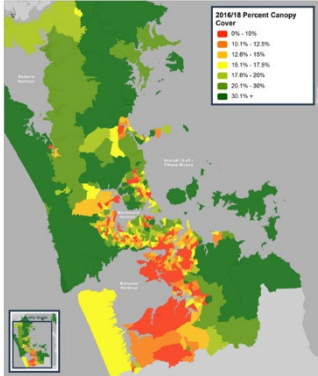


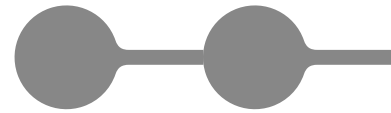
Footnotes
¹ Indigenous peoples with customary territorial rights and authority, jurisdiction over land in and around the Puhinui catchment derived through the occupation of ancestral lands and the knowledge, traditions, practices and historical, physical and spiritual relationships sustained over many generations.
² Whakapapa – intergenerational symbiotic relationships between people, places and nature.
³ Families and close kinship networks.



Headline Progress indicators

Te Tāruke-ā-Tāwhiri included 71 progress indicators against the 8 priorities. On an annual basis, the following headline indicators (by priority) will be reported against in the progress report and all indicators will be reported against every three years (where data is available).

Priority Natural Environment	
Air quality (Baseline 2020)	Tree canopy (Baseline 2018)
Concentration of air pollutants (NO ₂ µg/m ³) <ul style="list-style-type: none"> Glen Eden (4) Henderson (7.4) Patumahoe – 2.3 Penrose – 15.2 Queen Street – 36.8 Takapuna – 12.4 	 <p>Average percentage canopy cover of urban ngahere (3m+ height)</p>
Priority Built environment	
Access to public transport (Baseline 2020)	Sustainable buildings (to be established)
26% of annual dwellings consented within 1km of a train or busway station (rapid transit network stations)	Percentage of new buildings built to a sustainable design standard per annum
Priority Transport	
Use of public transport (Baseline 2020)	Use of cars, light and heavy vehicles (Baseline 2020)
64 million public transport boardings per annum	874.5m litres of petrol sales and 615.9m litres of diesel sales
Priority Economy	
Transition to low carbon economy (to be established)	Waste to landfill (Baseline 2020)
Percentage change in tCO ₂ e per million \$NZ GDP	<ul style="list-style-type: none"> 885kg of total solid waste per capita per year 147kg of domestic waste per capita per year

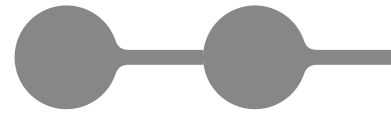


Priority Food	
Percentage of domestic food waste as a proportion of total domestic waste collected at kerbside	Tonnes of domestic food scraps diverted from landfill by the Auckland Council kerbside collection service *does not include private volumes of domestic and commercial food waste
45%	1,144 tonnes

Priority Communities and coast	
Low carbon lifestyles (Baseline 2020)	Education (Baseline 2020)
48,816 Aucklanders engaged in living low carbon lifestyles	60% of Auckland's schools engaged in sustainability education

Priority Energy and industry	
Percentage change in emissions from electricity consumption (Scope 2 emissions between 2016-2018)	Percentage change in emissions from stationary fuel combustion (e.g. process heat) (Scope 1 emissions between 2016-2018)
13.7% (increase)	-5.3% (decrease)

There are no specific progress indicators for Te Puāwaitanga ō te Tātai as it is a principles-based priority that is interwoven throughout other priorities.



What's next?

A Regional Leadership Group will be established in 2022 to accelerate the implementation of Te Tāruke-ā-Tāwhiri through cross-sectoral partnerships and climate action. The Regional Leadership Group will consist of key stakeholders including leaders from the Auckland Council, mana whenua, central government, business, community, district health boards and youth.

The Transport Emissions Reduction Plan (TERP) recommended decarbonisation pathway is due to go to Auckland Council's Environment and Climate Change Committee and the Auckland Transport Board for endorsement by mid-2022. Following endorsement, the pathway will inform future transport planning and funding.

Auckland Council will be finalising a Climate Impact Assessment Tool to further enable the integration of climate change considerations in Auckland Council's decision-making processes. The tool will integrate with existing processes to ensure that climate change considerations are embedded from the inception of projects and will enable decision-makers to make more informed decisions.

Climate change adaptation targets for the region and a climate change adaptation monitoring and evaluation plan are currently being developed and will be completed in 2022.

Many of the programmes funded through the \$152 million climate action package in the 10-year Budget 2021-2031 will be established or implemented further in 2022, including:

- Auckland Unlimited will be establishing a Climate Innovation Hub to activate climate innovation through collaboration and partnerships across sectors. The Climate Innovation Hub will focus on the thematic areas of energy, transport, built environment and food to develop solutions that support the transition to a low carbon, climate resilient region.
- A rangatahi (Māori youth) programme will support the development of Māori-led climate action to deliver on rangatahi priorities including restoring te mauri of te wai (the life-supporting capacity of water), connecting to whenua (land) and promoting indigenous food sovereignty.
- Projects that enable Aucklanders to take climate action and support communities in need including a Community Climate Action Fund, community climate activator network, online engagement tools and an energy hardship project to deliver energy efficient retrofits to homes.
- Kia ora te Tātai - this programme will assist Māori communities to reconnect with, regenerate and reimagine their heritage systems and practices to strengthen the ability of these communities to be resilient, self-sustaining, and prosperous. This includes a focus on strengthening marae and kura functions as self-sustaining hubs of community resilience.
- Deliver projects that will contribute to Auckland Council and Auckland Unlimited reducing organisational emissions from existing facilities by 50 per cent.

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