# Maungakiekie -Tāmaki Climate Action Plan

March 2023, Version 1.0

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# Chair's foreword: A climate action response

Auckland is in a climate emergency. We have less than a decade to make the major changes we need to avoid the worst impacts of climate change. While there are many actions underway at the national and regional level, it is vitally important that we also act at a local level to reduce emissions.

We also need to support those in our communities who will be most impacted by climate change to be resilient to challenges, like extreme weather events and rising food prices. We need a just and fair transition that supports our businesses to shift towards more sustainable practises and our kaimahi into green and sustainable employment.

This plan sets out practical actions that the Maungakiekie-Tāmaki Local Board can take over the next three years to support the transition to a zero carbon and climate resilient future for all our diverse communities.

There are many initiatives already underway in the board area that are contributing to our climate goals. We have a strong network of local community groups, working to strengthen community connections, restore our harbours and estuaries, and promote zero waste and local food production. We have also just celebrated the opening of Aotearoa's first Māori and Pacific-led community recycling centre in Onehunga and are advocating for one in our Tāmaki subdivision.

We will continue to support these valuable community initiatives that contribute to our climate goals and investigate further opportunities for new social enterprises in our board area, to provide green and sustainable employment. We will work with our local community groups to coordinate and amplify efforts to reduce carbon emissions and promote climate resilience.

We will continue our investment into community conservation initiatives that protect areas of valuable ngahere in the board area, and into the Manukau Harbour and Tāmaki Estuary Environmental Forum and support the Tupuna Maunga Authority with their restoration of our maunga. We will increase our canopy cover in areas where this is lacking, through identifying a funded programme of future tree planting.

Most trips in our board area are currently made by private vehicle, with transport being the highest source of emissions. We will work to provide and improve safe walking, cycling connections and roads between our local town centres. Over the next ten years there will also be regional investment into improving bus services to our area and a potential light rail line. We will find opportunities to improve walking and cycling connectivity to these public transport services.

The major redevelopments in our area of Tāmaki, Panmure and Onehunga provide an opportunity for us to work with Eke Panuku Development Auckland, Kāinga Ora and others to champion town centres with more affordable medium and high-density housing, where it is easy for people to live and get around to all the services they need on foot. We will also work with businesses across the board area through a sustainable business programme to help them understand their carbon footprints and find ways to reduce these.

Finally, we will continue to strengthen our relationships with mana whenua and local marae. This will provide the foundation for us to partner with mana whenua in the future on new Māori-led

climate projects that increase the health of te taiao and enhance the resilience of Māori to climate impacts.

Maria Meredith

Chairperson, Maungakiekie-Tāmaki Local Board

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# 1. Introduction

At a global level, through the Paris Agreement, nations have set a goal to ensure temperature rises are below 1.5°C to avoid the most severe consequences of climate change. Maungakiekie-Tāmaki must do our fair share to contribute to reaching these targets and prevent further catastrophic climate impacts.

In Tāmaki Makaurau we are already beginning to experience localised effects like heavy rain events, flooding, storm surges and coastal inundation, extreme heat events and drought. These will increase in frequency and severity in future years.

This plan is based on the strategic principles of The Auckland Plan, and Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan. These lay the foundation for Auckland's transformation into a resilient, zero carbon community which is actively adapting to the impacts of climate change. Te Tāruke-ā-Tāwhiri sets out two core goals:

- to reduce our greenhouse gas emissions by 50 per cent against a 2016 baseline by 2030 and achieve net zero emissions by 2050
- to adapt to the impacts of climate change by ensuring we plan for the changes we face under our current emissions pathway.

This action plan sets out how Maungakiekie-Tāmaki can make this transition a positive pathway, socially, economically, and environmentally, by focusing on the actions we can take now that are good for our communities.

This plan also includes actions to build our resilience and adaptations that we must take to protect against the unavoidable and harmful effects of climate change. It also addresses how the board and community can continue and enhance their valuable work to reduce and capture carbon through community educational initiatives and the restoration of our taiao/environment.

Maungakiekie-Tāmaki Local Board will continue to:

- connect community members and leaders who are working on climate change, particularly where this can help scale up or amplify innovation
- robustly and visibly incorporate climate change considerations into work programmes and decision-making
- advocate strongly for greater Governing Body and central government leadership and effective action on climate change
- increase the visibility of our climate change work
- lead by example in reducing the council's greenhouse gas emissions
- include climate impact statements on all local board reports

- ensure that carbon emission reduction opportunities are identified and achieved, and greater resilience built.

We look forward to working with iwi as partners, government agencies and the community to ensure a collaborative response. This action plan can only be successfully implemented with the support and participation of the Maungakiekie-Tāmaki community. We invite you to join us in continuing to develop and implement this plan, and we encourage all groups and residents to become a part of leading our innovative transition towards a zero carbon future in Maungakiekie-Tāmaki.

With your feedback, as international and local knowledge and learning increases, and as new opportunities are identified, this plan will be reviewed every three years. It will be a living document that informs the local board and community's response to climate change.

We would like to thank community members and council staff for their contribution to this plan. Community organisations who were represented include 312 Hub, EcoMatters Environment Trust, Onehunga District Council of Social Services, Onehunga Community Recycling Centre, Onehunga High School, Rākau Tautoko, Tāmaki Estuary Environmental Forum, Tāmaki Outrigger Canoe Club, Tāmaki Urban Market Garden, The Good Fale, The ReCreators and Tāmaki Regeneration Company.

# 2. Auckland's sources of carbon

### Production emissions

Greenhouse gas emissions produced in Auckland can be broken down into various sectors as shown in Figure 1 below. An understanding of the key sources of carbon helps inform actions that can be taken to reduce these emissions[1].

[1] Auckland's Greenhouse Gas Inventory to 2018

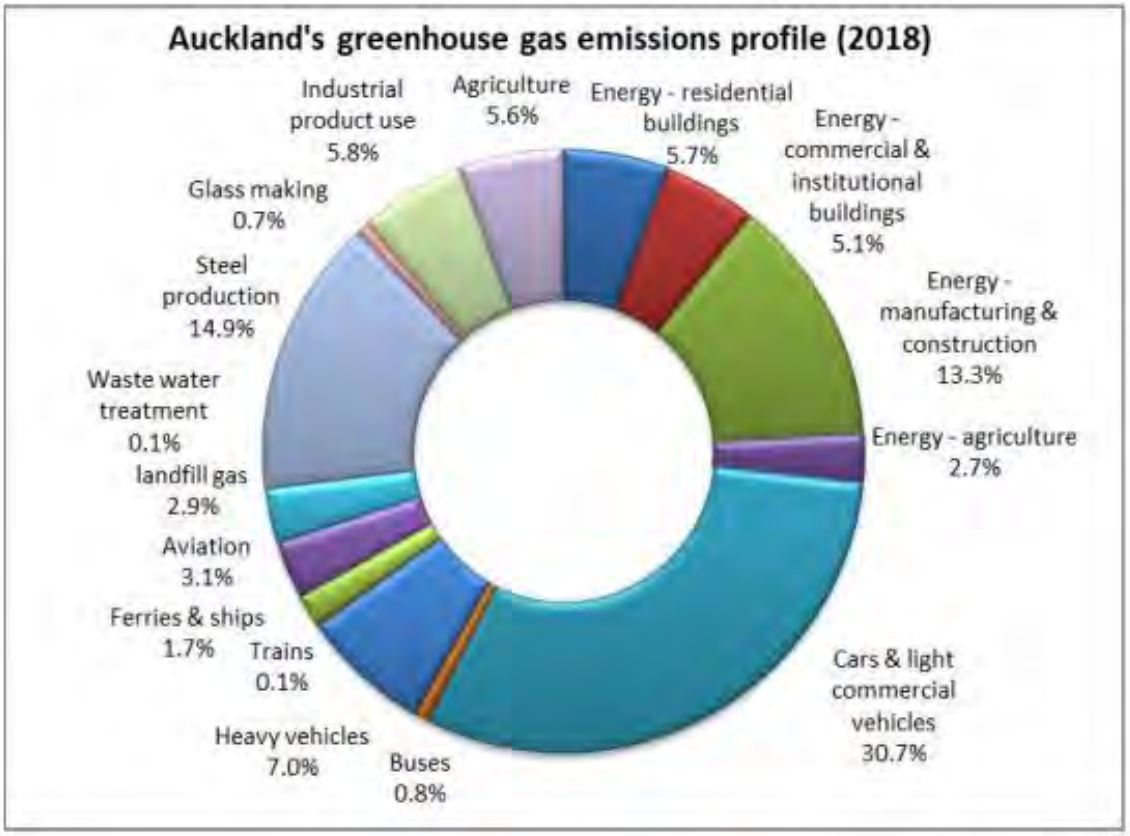



Figure 1 - Auckland's gross greenhouse gas emissions

Overall, the largest source of production emissions in Auckland comes from **transport**, which generates 43.6 per cent of Auckland's emissions, with 86 per cent of this from travel by road. This includes emissions from private and light commercial vehicles, trucks, buses, trains and ferries. The Maungakiekie-Tāmaki Local Board area includes a number of high traffic volume routes. For example, Neilson Street has over 32,000 vehicle movements in a typical working week,with a high proportion (17 per cent) of these vehicles being freight and heavy commercial[2].

The second largest source of emissions is **stationary energy**, which generates 26.6 per cent of Auckland's emissions. This includes emissions from electricity and natural gas consumption in residential and commercial buildings and energy use in manufacturing and construction. This is particularly relevant for our two large industrial areas: Penrose and Mount Wellington.

**Industrial processes and product use** generate around 20.2 per cent of Auckland's emissions, which in Auckland are mainly associated with steel production. Emissions from landfilled waste and wastewater treatment (3.1 per cent) and agriculture (6.4 per cent) are less of a priority for the board area.

Consumption emissions

[2] https://at.govt.nz/about-us/reports-publications/traffic-counts/

Another way to measure emissions and prioritise our actions to reduce them is through considering consumption emissions – emissions from the products and activities that households buy. The chart below shows the carbon footprint of an average New Zealand household (Stats NZ, 2019), with the largest emissions activities marked in bold.

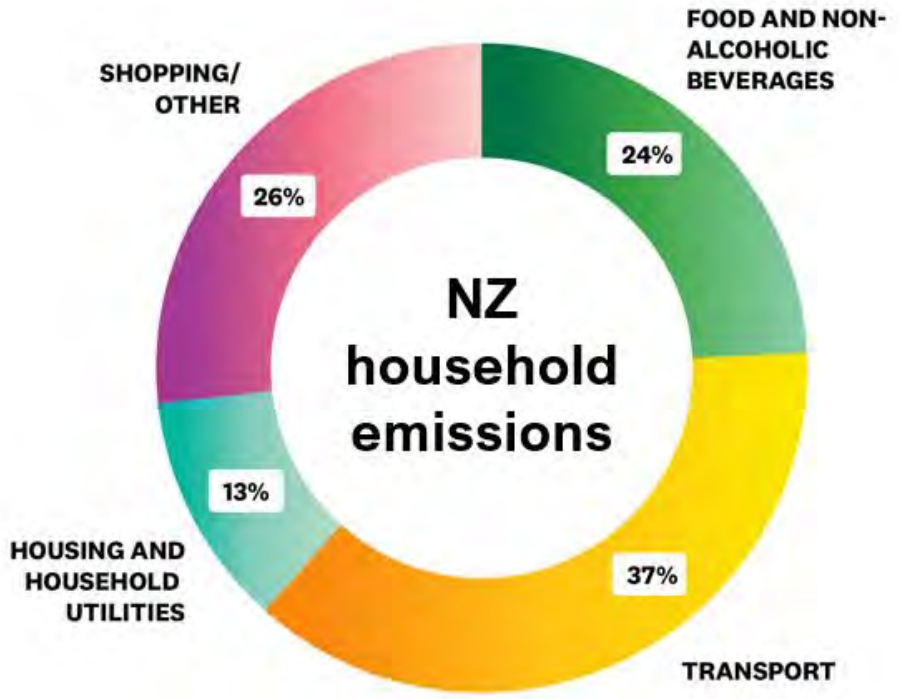



Figure 2 - New Zealand household emissions by category (*Stats NZ consumption emissions 2021 with most recent data from 2019)*

As Figure 2 shows, when considering what households and communities can do to reduce consumption emissions at a local level, transport (37 per cent) is still the largest source of emissions and top priority for action. Maungakiekie-Tāmaki residents can also reduce consumption emissions in other areas. For example, projects that support residents to make sustainable low carbon food choices (26 per cent of footprint), save energy in their homes or purchase recycled clothes, furniture and appliances, can also have an impact.

Some variations in these emissions profiles will be evident across local board areas, but priority areas for action, such as transport, food, and stationary energy use, remain consistent.

# 3. A Te Ao Māori lens

We have used a Te Ao Māori lens to help frame our thinking about, and approaches to, climate change. It helps ensure that taiao/environment, whenua/land, and tangata/people remain the focal point for all climate-related decisions.

The Te Ora ō Tāmaki Makaurau Wellbeing Framework was developed by the Mana Whenua Kaitiaki Forum in response to Te Tāruke-ā-Tāwhiri. These include:

- manaakitanga
- kaitiakitanga/tiakitanga
- whānaungatanga
- rangatiratanga
- mātauranga
- ōritanga
- tōnuitanga.

These principles can be applied as we develop and implement this action plan, remembering the world is a dynamic and complex ecosystem of whakapapa interconnections and interdependencies. All things – people, birds, fish, trees, weather patterns – are members of a cosmic family. It is critical we recognise the rights and interests of nature, place and people using a whole living systems approach.

| | |
|---|---|
| Ngā Aho Taiao | The ability and capacity of ngā taiao/nature anchor to sustain and maintain whole living systems and regenerate its own mauri, while contributing to the mauri of people and land. |
| Ngā Aho Whenua | The ability and capacity of the whenua/land anchor to sustain and maintain whole living systems and regenerate its mauri, while contributing to the mauri of people and nature. |
| Ngā Aho Tangata | The ability and capacity of the tangata/people to sustain and maintain their mauri, while contributing to the mauri of the land and nature. |

# 4. What are climate actions?

Climate actions are projects, initiatives and activities which better connect us to the taiao/environment and whenua/land.

Climate actions aim to reduce our greenhouse gas emissions to achieve a better balance and reciprocity between the carbon we emit and the carbon that our environment can absorb or sequester.

They will:

- result in changes to our lifestyles, businesses, infrastructure, buildings, consumption patterns, behaviour, and environment, which reduce or eliminate greenhouse gas emissions

- help restore the taiao/environment, whenua/land, tangaroa/seas, and awa and puna/waterways
- increase our ability to respond to the climate changes already locked in by helping us prepare, adapt, and become more resilient.

This action plan highlights existing climate action activity in Maungakiekie-Tāmaki and where this activity could be expanded to enhance outcomes. It also identifies new climate actions that could be undertaken to support climate change mitigation and adaptation.

Reflective of the production and consumption emissions profiles described in Section 2 of this action plan, the action areas that will have the most impact in reducing carbon emissions will be Transport, Built environment and Food.

# 5. Developing the plan

The development of this climate action plan included a stocktake of local and Auckland-wide low carbon initiatives that are either making a positive contribution towards reducing the Maungakiekie-Tāmaki Local Board area's carbon footprint, building community resilience, or supporting climate adaptation. Maungakiekie-Tāmaki has strong business, iwi and community organisations that support these climate goals, with over a hundred existing initiatives identified that are already underway. This action plan aims to accelerate or expand these.

Representatives of community organisations involved in existing Maungakiekie-Tāmaki-based climate initiatives were invited to participate in a working group to develop this plan.

Due to the COVID-19 pandemic, community consultation was delivered through online mechanisms. As an alternative to a Climate Action Hui, two online workshops were held with community representatives and leaders to help identify local board area climate priorities and project ideas. Workshops and one-on-one interviews were also held with key community stakeholders, Auckland Council staff, and council-controlled organisations. This action plan also draws strongly on the consultation undertaken for other plans and on insights drawn from community initiatives including:

- Maungakiekie-Tāmaki Local Board Plan 2020
- Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan 2020
- Other existing plans and initiatives highlighted within each section of this action plan.

Several presentations were made to mana whenua through the Infrastructure and Environmental Services Mana Whenua Forum to seek their feedback on development of

local climate action plans. Feedback that mana whenua has provided to Auckland Council on previous consultations, such as the Ten-Year Budget 2021-2031, was also reviewed.

# 6. Adapting to climate change

Auckland Council has produced a Climate Change Risk Assessment (CCRA) technical report series to assess the impacts of climate change on people, environment, and infrastructure[3]. The CCRA takes into consideration climate predictions, our current understanding of climate change impacts, and Auckland's current environment to better understand the key risks and vulnerabilities for Auckland. The CCRA assessed our vulnerability to climate change in Maungakiekie-Tāmaki [4], examining the degree to which our communities are susceptible to, and able to cope with, the impacts of climate change. The assessment identified Onehunga Southeast, Te Papapa, Mount Wellington South, Tāmaki, Point England and Glen Innes East Census Area Units as vulnerability hotspots in Maungakiekie-Tāmaki (see Figure 3). It also identified low adaptive capacity in these areas. These findings highlight the importance of working with these communities to build greater climate resilience.

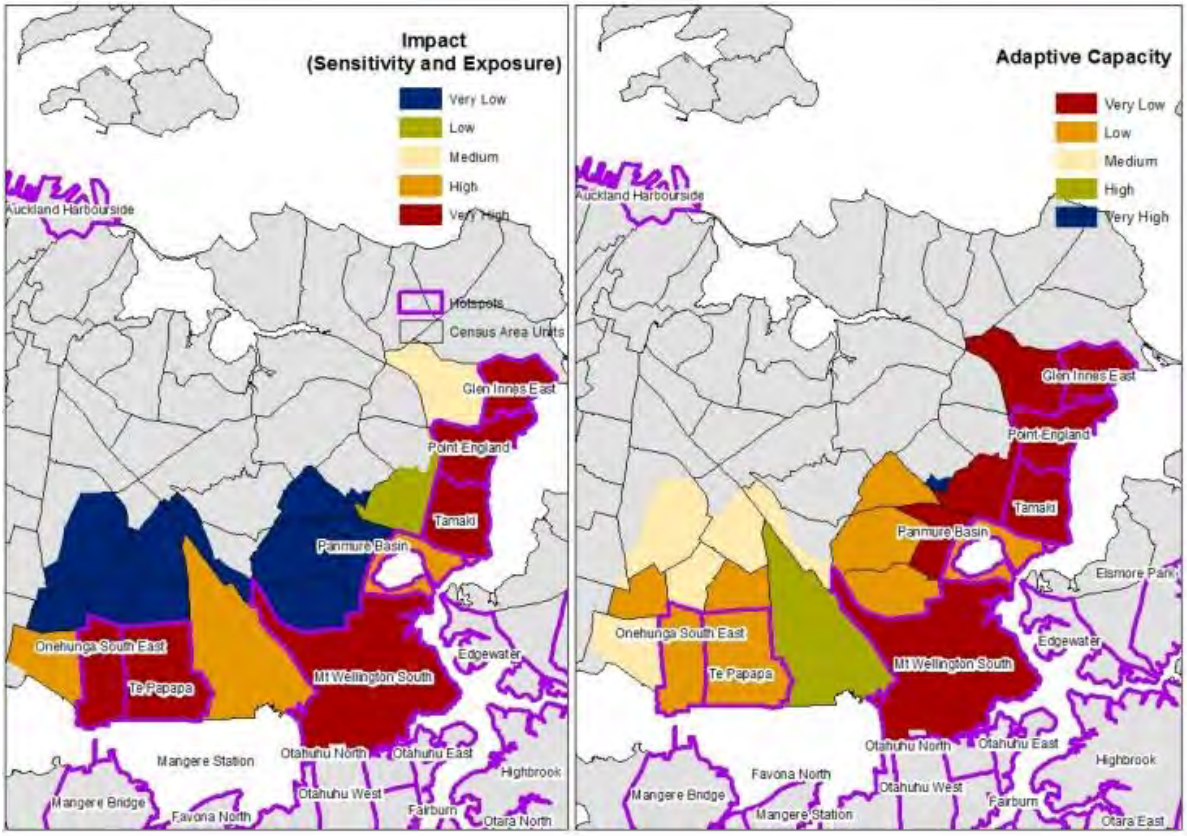



Figure 3 - Vulnerability Assessment in Maungakiekie-Tāmaki

[3] Climate Change Risks in Auckland
[4] An Assessment of Vulnerability to Climate Change in Auckland

Some of the key risks we need to consider and respond to include:

- Sea level rise will put infrastructure and ecosystems at risk while flooding poses direct and indirect risks to people, infrastructure, and services.
- The changing climate will create an environment that allows water and vector-borne diseases to thrive, which will affect people and ecosystems.
- Terrestrial and freshwater ecosystems are at risk and face a combination of stressors.
- Changes to these ecosystems are likely to impact on human wellbeing and the economy.

The ability of people and households to adapt and respond to these risks is dependent on many factors, such as:

- Where people live, their socio-economic circumstances, their support networks, their occupations, and their ability to have options can impact their vulnerability. Areas of the board with higher levels of socio-economic deprivation, like Te Papapa, Mount Wellington South and Glen Innes, will need more support to be resilient to climate risks.
- Children and older people will be more vulnerable to some effects.
- Māori (14 per cent of people living in the board) and Pacific peoples (25.7 per cent) may be more affected than others by some climate effects, due to their generally younger age structure as well as other factors.
- Targeted programmes to support the diverse ethnic groups living in Maungakiekie-Tāmaki to understand and respond to climate impacts will also be needed, particularly for those who do not speak English (around 8 per cent of the board's population).

# 7. The Action Plan and its implementation

This plan builds on Maungakiekie-Tāmaki's existing environmental and sustainability initiatives, and the commitment in the Maungakiekie-Tāmaki Local Board Plan 2020 to act on climate change and build resilience in the community. It is based on the eight priority areas from Te Tāruke- ā-Tāwhiri, which include Natural environment, Built environment, Transport, Economy, Community and coast, Food, Te Puāwaitanga ō Te Tātai, and Energy and industry. The plan identifies goals for each priority area, and actions that contribute to achieving those goals.

There are a range of different mechanisms the Local Board can take to implement this plan, including:

- Leading – including delivering local board projects within the board area and using powers available to drive change (including landowner approvals). This action area also includes local board members leading by example and includes ensuring that climate actions are considered and emphasised in all local board decision-making.
- Funding – provision of funds through grants and other mechanisms to support delivery of community or Māori-led projects.
- Partnering – including building relationships with key organisations and individuals who can help deliver action.
- Advocacy – including to the Governing Body and other organisations such as Waka Kotahi NZ Transport Agency and Auckland Transport.
- Recognition – including promoting actions and recognising others.
- Supporting – providing assistance for existing or emerging action such as letters of support and staff time.

The local board must ensure it is using all available levers to tackle the climate crisis.

A local climate activation work programme will amplify collective climate action and strengthen relationships between community groups and networks. This work programme will be designed with the local board strategic broker and strategic partnerships broker to complement other community-focused activity within the local board area. This community activation will support the local board to deliver on the actions that relate to leading or funding tangible low carbon activities in Maungakiekie-Tāmaki. The partnering, advocacy, recognition, and support actions in the plan will be undertaken by local board members.

Progress updates will be prepared, setting out progress on each of the eight priorities, and will provide comment in relation to the 'demonstrating progress' column for key actions, as well as any targets and metrics identified for each outcome area. Further detail is contained within Section 9 – Monitoring.

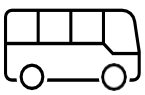
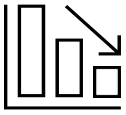
Key partners that will support delivery of this plan include:

- mana whenua and Māori communities
- Auckland Transport
- Tātaki Auckland Unlimited
- Sustainable Business Network
- business associations in Glen Innes, Panmure, Penrose and Onehunga
- private businesses including small and medium-sized enterprises (SMEs) and multi-nationals

- community organisations
- schools and tertiary providers
- central government, including Kāinga Ora (and Tāmaki Regeneration Company, Waka Kotahi NZ Transport Agency)
- Eke Panuku Development Auckland
- utility providers and renewable energy businesses.

# 8. Flagship projects

The plan identifies flagship projects in relation to key priority areas. Flagship projects are particularly impactful in reducing carbon emissions and/or empowering community resilience.

| | | |
|---|---|---|
| 1. Taiao māori<br>Natural environment |  | Develop and deliver a programme of funded tree plantings from the planting opportunities set out in the Maungakiekie-Tāmaki Urban Ngahere Action Plan 2019. |
| 2. Taiao hanga<br>Built environment |  | Investigate installing solar on facilities with significant solar potential, including:<br>• Glen Innes Pool and Leisure Centre<br>• Lagoon Pool and Leisure Centre<br>• Onehunga War Memorial Pool<br>• Panmure Library and Offices<br>• Onehunga Library.<br>Replace natural gas pool heating with electric heat pumps at the Onehunga War Memorial Pool. |
| 3. Ikiiki<br>Transport |  | Fund and implement high and moderate priority projects from the Maungakiekie-Tāmaki Greenways Network Plan. |
| 4. Ōhanga<br>Economy |  | Host a new programme with the Sustainable Business Network and business associations to help businesses measure and reduce climate emissions.<br>Promote community awareness of the Onehunga Community Recycling Centre, to |

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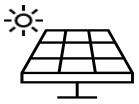
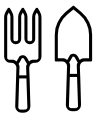
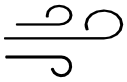
| | | support the transition to a circular economy and plan to open a new recycling centre in Tāmaki. |
| 5. Ngā hapori me te tahatai<br>Community and coast |  | Fund establishment of community climate activation programme to support community activities. |
| 6. Ngā kai<br>Food |  | Support community-led low carbon food initiatives such as community gardens, markets, cooking lessons, plant-based meal choices, community fridges and garden projects, such as those set out in the Maungakiekie-Tāmaki Naturalisation of Parks Assessment. |
| 7. Te puāwaitanga ō Te Tātai |  | Build relationships between local board and interested mana whenua as a foundation for future co-delivery of te taiao projects. |

*Further details of flagship projects are within each section of the action plan and are shown as Year 1 projects.

## 8.1 Taiao māori – Natural environment

*Toitū te marae a Tane-Mahuta, toitū te marae a Tangaroa, Toitū te tangata*
*If the land is well and the sea is well, the people will thrive*

Taiao māori – Natural environment is a priority of Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan because 'the quality of our beaches, harbours, bush, streams and maunga are dependent on how we treat them.' Whilst the natural environment is an interconnected ecosystem, made up of each of these parts, it is the bush, and in particular tree coverage, which is the focus of this section of our Local Climate Action Plan because of the impact trees can make in sequestering carbon. Increased tree cover, planting appropriate tree species in appropriate locations, will help reduce the impact of flooding and slips.

The goals of Te Rautaki Ngahere ā-Tāone o Tāmaki Makaurau, Auckland's Urban Ngahere (Forest) Strategy are to achieve 30 per cent tree coverage throughout Auckland and to address the disproportionately lower tree coverage in some of Auckland's local board areas. Maungakiekie-Tāmaki has the third lowest tree canopy cover of Auckland's local board areas at just 12 per cent.[5] This must be lifted to the minimum of 15 per cent to ensure a fair contribution towards Auckland's carbon sequestration goals and equitable access to urban ngahere. Urban ngahere provide social, environmental, economic, and cultural benefits to the communities of Maungakiekie-Tāmaki, including current and future protection from overheating.

To achieve the vision of Auckland's Urban Ngahere Strategy, a strategic framework is based around the objectives of:

- 'knowing' (understanding the status of our urban ngahere to support better informed, strategic decision-making about its management and growth)
- 'growing' (growing urban ngahere to increase tree cover, multiple benefits and address distributional inequity)
- 'protecting' (to safeguard the added values and benefits both mature trees and saplings provide).

The Maungakiekie-Tāmaki Local Board Ngahere Analysis Update 2021 provides a useful summary of the urban environment in Maungakiekie-Tāmaki:

- the local board area houses approximately 83,000 residents
- only one area, One Tree Hill, has more than 20 per cent canopy cover
- One per cent of canopy cover is more than 30m tall
- 59 per cent of canopy cover has no statutory protection
- 105 parks and 20 playgrounds

[5] 2013 LiDAR survey from UNS

- 780 notable tree records
- more than 45 per cent of total canopy cover is on private land
- 409ha of urban forest in 2013, increasing to 422 ha in 2016/2018
- 1.8 per cent of original indigenous vegetation cover remaining
- 516ha of parks, including: Cornwall Park and the volcanic cones Maungakiekie/One Tree Hill, Maungarei/Mount Wellington and Ōtāhuhu/Mount Richmond
- 51ha of Significant Ecological Area
- average canopy cover of 12 per cent across the local board area, including canopy cover of:
    - 23 per cent on public land
    - 12 per cent on road reserves
    - 11 per cent on other public land
    - 9 per cent on private land.

The variations in tree cover across the local board area present opportunities, both for planting in areas of low cover, and protection in areas of stronger tree cover. Pest control will be critical in managing these spaces to support the health of ngahere and maximise carbon uptake.

There is also concern that while community groups are working hard to plant trees, we are losing more unprotected trees on private property as housing development accelerates. In response to this, Auckland Council is working on a regional level to try and educate communities through implementation of our Urban Ngahere Strategy (2019). Auckland Council is also advocating to central government for the Natural and Built Environment Bill that will replace the Resource Management Act to provide strengthened tree protection.

## Goals

- protect existing ngahere
- increase tree cover in areas of low coverage
- enhance existing open space
- enhance community understanding of the role of trees in sequestering carbon.

## Current council and community activities, actions, programmes and plans

- Te Rautaki Ngahere ā-Tāone o Tāmaki Makaurau, Auckland's Urban Ngahere (Forest) Strategy (2019)
- Onehunga Peoples Garden

- Maungakiekie Songbird
- EcoMatters Environment Trust
- Tāmaki Estuary Environmental Forum
- Te Rūnanga ā-Wahapūo Manukau/Manukau Harbour Forum
- Trees for Survival
- Uru Whakaaro.

### Opportunities and benefits

These actions will have much broader positive impacts:

- Carbon sequestration
- More shelter and sunshade provided
- Less overheating
- Biodiversity increased
- Air quality improved
- Prevention of erosion and improved water quality
- Improved health and wellbeing
- Increased property values
- Reduced flood risk
- Increased resilience
- Sustained and enhanced mauri.

Taiao māori – Natural environment actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Protect existing ngahere | Continue to support community-led pest plant and animal control on public and private land, such as Maungakiekie Songbird | Ongoing | Funded conservation activity |
| | Advocate for the adoption of regional or national mechanisms which introduce greater protection for trees on private land | Year 2 | Evidence of advocacy (submissions, emails, letters) |
| | Work with large-scale developers such as Kāinga Ora and Eke Panuku Development Auckland to encourage retention or replacement of urban ngahere in development proposals | Ongoing | Evidence of advocacy |
| Increase tree cover in areas of low coverage | Develop and fund implementation of annual planting plans in line with the Maungakiekie-Tāmaki Urban Ngahere Action Plan 2021, to increase tree coverage in areas of low cover | Years 1 to 3 | Completed tree planting programme with funding allocated |
| | Offer grants, incentives, education and support to encourage tree planting on residential properties, such as the Local Board community grants programme and Love Your Neighbourhood grants | Ongoing | Evidence of grants, incentives, support provided |
| Enhance community understanding of the role of trees in climate change mitigation | Use planting days and weeding bees as an educational opportunity for local residents and schools to learn about the climate issues we face, current low tree canopy cover and issues this contributes to, goals to | Ongoing | No. of planting and weeding days |

| | | | |
|---|---|---|---|
| | increase tree cover and available solutions | | |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Environmental Services and Community Facilities (Local Parks). The Tupuna Maunga Authority and Cornwall Park Trust are also important to delivery of these goals.

Regular updates setting out progress on this priority and key actions will be prepared. The metrics set out below will also be used to measure progress against the Natural environment outcome area of this plan. Refer to Section 9 – Monitoring Framework for more information.

- Increase in % canopy cover in public open space to 30 per cent
- Increase in % of canopy cover on private land to 30 per cent
- Increase in roadside canopy cover
- Number of trees planted
- Number of community weeding bees.

### What you can do as an individual

- Plant trees and plants to support birds, bees, and native wildlife in your garden
- Retain existing trees on your property
- Control pest plants and animals on your property
- Join a local restoration group such as Maungakiekie Songbird or look out for restoration events in your community

### Community groups can seek funding for restoration projects through:

- Local Board community grants
- Community Coordination Facilitation Grant
- Regional Environment and Natural Heritage Fund
- Love your Neighbourhood

Figure 4 – Van Damme's Lagoon, Panmure

## 8.2 Taiao hanga – Built environment

*Ehara tāku toa i te toa takitahi, engari he toa takitini*
*My strength is not as an individual, but as a collective*

Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan defines the built environment as including '*the buildings where we live, work and learn, the infrastructure systems that enable the region to function, and the urban spaces that shape our city*.' The overarching goal for Taiao hanga– Built environment in Te Tāruke-ā-Tāwhiri is to achieve a low carbon, resilient built environment that promotes healthy, low impact lifestyles. Our buildings are responsible for significant climate-changing pollution. Emissions from the construction sector have leaped 66 per cent in a decade. Constructing and renovating New Zealand buildings now produces climate-changing pollution equivalent to the emissions from one million cars on the road every year[6].

While the phrase 'built environment' brings buildings to mind, it should not be forgotten that the built environment also includes the urban spaces that shape our city and the spaces between buildings. Significant carbon reduction can occur through quality urban planning that considers access to sustainable transport and amenities which reduce the need to travel.

Local opportunities: Many building and infrastructure projects and assets are not directly led or controlled by the Maungakiekie-Tāmaki Local Board. The board will continue to work with developers and organisations such as Kāinga Ora, Eke Panuku Development Auckland, Auckland Council, Watercare, Auckland Transport, Waka Kotahi NZ Transport Agency, KiwiRail and Transpower to support carbon reduction actions. There are many current and planned built environment projects underway in our local board area, meaning there is either the potential to add significant carbon to the atmosphere, or to reduce carbon through careful planning, design, and action. New developments that could provide future opportunities for low carbon design and construction in our local board area include:

- The revitalisation of the outdated facilities at Ruapōtaka Marae and redevelopment of Maybury Reserve
- A multipurpose community hub in Mount Wellington
- Major transformation of Glen Innes, Panmure and Point England by Tāmaki Regeneration Company – including upgrading Glen Innes town centre, key infrastructure, and quality housing
- Reinvigoration of Panmure and Onehunga through Eke Panuku Development Auckland Transform and Unlock programmes – including the redevelopment of civic space and community facilities in Panmure town centre as well as the Waiapu precinct and Onehunga Port redevelopments
- Residential development by Kāinga Ora, particularly in Riverside and Oranga which are central hubs for development.

[6] https://www.nzgbc.org.nz/zerocarbon

**Greenhouse gas emissions from local facilities:** Auckland Council has targets in the Long-Term Plan to halve operational greenhouse gas emissions by 2030. Local facilities, including community facilities and local parks, contribute almost half of Auckland Council's operational emissions. This is mostly from the combustion of natural gas for heating aquatic centres and emissions related to electricity consumption.

As local boards have delegated authority for community facilities, libraries and parks, they have direct control over actions to reduce greenhouse gas emissions from these facilities. The local board therefore has a role to play in phasing out fossil fuels, improving energy efficiency and investing in renewable energy.

**Measuring carbon reduction:** At a national level, the Ministry of Business, Innovation and Employment (MBIE) Building for Climate Change programme will set targets around energy use and carbon emissions. To meet the goals, changes will be made to current building laws, both the Building Act and the Building Code. The greatest carbon reductions will be seen when life cycle assessment and carbon reduction is a requirement of the Building Code. Therefore, the Local Board will advocate for changes to the Building Code as soon as possible.

Ahead of life cycle assessment and carbon reduction being a requirement of the Building Code, green building frameworks can be used to help us design and build better. The most commonly used green building frameworks are the IS Rating Schemes by the Infrastructure Sustainability Council and those managed by the New Zealand Green Building Council; the most commonly used being Greenstar (for commercial/community buildings) and Homestar (for homes) and more recently Greenstar Communities (for urban scale developments).

Goals

- Reduce carbon emissions from community facilities by 50 per cent by 2030
- All new buildings operate at carbon neutrality by 2030 and all existing buildings operate at net zero carbon by 20507
- Reduce waste generation through community facility operation and renewals.

**Current council, government and community activities, actions, programmes, and plans**

National frameworks:

- MBIE Building for Climate Change Programme
- A Zero Carbon Road Map for Aotearoa's Buildings
- NZGBC Zero Carbon Certification
- Infrastructure Sustainability Council's Rating Schemes

[7] Auckland Council's Sustainability Asset Policy

- Place-Based Approaches to Net Zero.

Local development:

- Tāmaki Regeneration Programme
- Oranga Development
- Eke Panuku Development Auckland - Panmure
- Eke Panuku  Development Auckland – Onehunga
- TROW Group – building deconstruction.

Residential:

- Warmer Kiwi Homes Grants
- Healthy Homes Standards
- Kāinga Ora Retrofit Programme
- Healthy Homes on a Budget Workshops
- Free Water Checks.

### Opportunities and benefits

These actions will have much broader positive effects including:

- lower power, water and waste bills
- warmer, drier, healthier homes
- healthier, more productive work environments
- cleaner air
- buildings durable and adaptable enough to meet the needs of future generations of occupiers
- reuse of construction materials and a circular economy for construction materials
- employment opportunities for a skilled sustainable construction sector.


Figure 5 - Oranga Community Centre

Taiao hanga – Built environment actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Reduce carbon emissions from community facilities by 50 per cent by 2030 | Assess utilisation of community facilities. For any underutilised facilities, assess required upgrades to make sure buildings are operating sustainably, or consider divestment | Year 2 | Completed assessment |
| | Ensure the planned and regionally funded boiler phase out programme is implemented, to replace pool heating with natural gas with electric heat pumps at the Onehunga War Memorial Pool by 2023 | Year 1 | Project completion by 2023 |
| | Ensure the planned and regionally funded programme to upgrade building management systems that control heating, ventilation, cooling and other mechanical systems takes place by 2027 for local community facilities | Year 5 | Project completion by 2027 |
| | Investigate installing solar on facilities with significant solar potential, including:<br>• Glen Innes Pool and Leisure Centre<br>• Lagoon Pool and Leisure Centre<br>• Onehunga War Memorial Pool and Leisure Centre<br>• Panmure Library and Offices<br>• Onehunga Library and Community Centre | Year 1 | Feasibility assessment completed by end 2023 |
| | Target Greenstar greenhouse gas emissions and life cycle impacts credit for any new community | Ongoing | No. and address of projects targeting Greenstar credits |

| | | | |
|---|---|---|---|
| | facilities under local board delegated authority | | |
| All new buildings operate at net zero carbon by 2030 and all existing buildings operate at net zero carbon by 2050 | Advocate to MBIE for changes to the Building Code to require life cycle assessment as soon as possible | Year 2 | Evidence of advocacy (submission, letter, email) |
| | Advocate for the reduction of embodied and operational carbon in major infrastructure projects, renovations and new developments that the board is consulted on, particularly by large-scale developers such as Eke Panuku Development Auckland, Kāinga Ora and Tāmaki Regeneration Company | Ongoing | No. and address of projects where carbon reduction was advocated for |
| | Support proposals for new developments that contribute to a quality compact urban form through well-designed medium and high-density housing | Ongoing | Evidence of support |
| Divert a minimum of 75 per cent of construction and demolition waste generated through Community Facilities work programme from landfill | Ensure waste minimisation targets are included in contracts for community facility renewals:<br>• For renewals involving capital works and generating construction and demolition waste – 75 per cent diversion rate<br>• For operational waste minimisation – 40 per cent waste reduction by 2040 | Year 2 | No. and % of renewal projects containing stated targets |
| | Require all local facilities to have recycling and food waste collection services | Year 2 | Evidence of contracted recycling and food waste collection |

| | | | |
|---|---|---|---|
| | | | services at all facilities where Local Board has delegated authority |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Parks and Community Facilities, the Chief Sustainability Office, Regulatory Services and Waste Solutions.

Regular updates setting out progress on this priority and key actions will be prepared. The metrics set out below will also be used to measure progress against the Built environment outcome area of this plan. Refer to Section 9 – Monitoring.

- % reduction in community facilities' carbon emissions
- Number of zero carbon developments completed
- Number of community facility renewals projects meeting construction waste diversion targets.

### What you can do at home

- Complete a life cycle assessment to understand the carbon footprint of your development and take steps to reduce embodied and operational carbon when building new or renovating
- Warmer Kiwi Homes Grants. Homeowners can access funding towards the cost of insulation and energy efficient home heating. See more info here
- Borrow a HEAT Kit (Home Energy Audit Toolkit) from an Auckland Library to check your home insulation and find out how to save on your power bill
- Do an online HomeFit assessment to check how easily a home can be kept warm, dry, and safe
- Book a session with Auckland Council's Home Energy Advisor to get advice on how to create a warmer, drier, and more sustainable home
- Building or buying new? Look for Homestar certification

### What you can do at work

- Office space. Assess the energy efficiency of your business with NabersNZ
- Need energy efficiency expertise? EECA's (Energy Efficiency and Conservation Authority) website provides information about products and funding.
- New space? Look for NabersNZ or Greenstar certifications through the NZ Green Building Council

## 8.3 Ikiiki – Transport

*Haere pai atu, hoki pai mai*
*Travel safe*

The ultimate goal of the Ikiiki (Transport) priority within Te Tāruke-ā- Tāwhiri: Auckland's Climate Plan is 'a low carbon, safe transport system that delivers social, economic and health benefits for all.'

Transport accounts for nearly half (43.6 per cent) of Auckland's production greenhouse gas emissions. About 86 per cent of these emissions are related to travel by road. At the time of the last census in 2018, 68.8 per cent of the people living in Maungakiekie-Tāmaki would usually travel to work by private or company vehicle[8]. At this time only 6.2 per cent[9] of people worked from home and this has changed significantly due to Covid-19 encouraging remote working. While this is a positive change, better infrastructure, services and encouragement to walk, cycle, scoot, train, bus, ride share, and use electric vehicles in Maungakiekie-Tāmaki will help further reduce transport emissions.

There are strong links between the built environment and transport in planning for low carbon communities. Maungakiekie-Tāmaki contains a network of large town centres including Sylvia Park, Onehunga, Royal Oak, Glen Innes and Panmure – as well as smaller villages and suburbs. These centres provide goods and services supporting people's day-to-day needs. A strong walking and cycling network providing safe and convenient connections to and between these centres, our parks, schools, and places of work will contribute to reducing transport emissions. The Maungakiekie-Tāmaki Greenways Network Plan outlines a vision for the development of a greenways network and identifies greenway connections across all parks, as well as the on-road connections between areas of open space within Maungakiekie-Tāmaki and neighbouring local board areas. This would also provide increased safety for active transport commuters in the local board area, around key arterial roads, and freight routes, such as Neilson Street. The local board continues to support, invest in and advocate for the priority actions identified in the report.

Maungakiekie-Tāmaki has strong public transport links to wider Auckland, with train stations at Glen Innes, Panmure, Sylvia Park, Westfield, Ellerslie, Penrose, Te Pāpapa and Onehunga and good access to the South-Western and Southern motorways. Major infrastructure investment is identified in the Regional Land Transport Plan 2021-2031 to improve Auckland's transport network to accommodate growth and increase travel choice. These changes will also provide better access and connectivity, improve the resilience and sustainability of the transport system, and significantly reduce the greenhouse gas emissions it generates. Key projects that will directly benefit Maungakiekie-Tāmaki include:

[8] https://www.stats.govt.nz/tools/2018-census-place-summaries/maungakiekie-tamaki-local-board-area#transport
[9] Ibid

- Auckland Light Rail: The Government has announced that it is investing in the vision to build a high-capacity, linked-up rapid transit network across the city. It will start with light rail from the City Centre to Māngere – travelling above ground through Maungakiekie-Tāmaki with a station in Onehunga[10]
- Eastern Busway from Panmure to Pakuranga: The first section of the busway from Panmure to Pakuranga opened in 2021. In February 2022, Auckland Transport approved the design of the Eastern Busway between Pakuranga and Ti Rakau Drive Bridge[11]
- Sylvia Park bus improvements
- Urban cycleways programme
- Connected communities (Ellerslie Panmure Highway and Pakuranga Road)
- Climate Action Targeted Rate: Will fund three more frequent bus routes in the local board area (running every 15 minutes from 7 am to 7 pm, 7 days a week) from Glen Innes to the city, Glen Innes to Onehunga and Onehunga to New Lynn. It will provide improved frequency for four other bus services and construction of approximately 3km of safe cycle facilities to connect Cornwall Park and Onehunga
- Glen Innes to Tāmaki Drive shared path.

The Regional Land Transport Plan also includes a $200 million local board initiatives fund to be split between Auckland's 21 local boards, which provides for an ongoing programme of smaller-scale local transport improvements. Each local board decides on its own investment initiatives. Auckland Transport will also be publishing a Regional Public Transport Plan in 2023.

Priority routes for Auckland Transport's Cycle and Micromobility Strategic Network with current funding in the board area include:

- Hendry Ave (Onehunga)
- Mt Smart Road; Station Road (Onehunga)
- Pilkington Road; Queens Road (Panmure)
- Taniwha Street (Glen Innes).

Priority routes that are not currently funded, include:

- Waipuna Road (Mount Wellington)
- Tripoli Road; Queens Road (Panmure)

[10] https://www.lightrail.co.nz/
[11] https://ourauckland.aucklandcouncil.govt.nz/news/2022/06/construction-starting-soon-on-the-eastern-busway-from-pakuranga/

- Morrin Road (Panmure)
- Church Street; Onehunga Mall Road; Princes Street (Onehunga)
- Abbotts Way; Ngahue Drive (Ellerslie).

Equitable access to sustainable travel options is a key issue. Auckland's current car dependent transport systems mean that many Aucklanders who cannot drive or afford to own a private vehicle have limited mobility. More active transport modes like walking and cycling also aren't workable for everyone. Providing convenient, frequent, and affordable public transport services will help address these issues.

Supporting the transition to affordable low emission vehicles is another important part of the transition to a zero carbon transport system. Provision for electric vehicle charging in new developments will also be important.

Developing more housing close to transit hubs will also help reduce our dependence on cars. This is especially relevant in areas such as Oranga where significant residential development is underway.

### Goals

- Improve local infrastructure for active travel
- Support community action on sustainable travel
- Advocate for and champion low carbon transport connections within Maungakiekie-Tāmaki and to wider Auckland.

### Current council, government and community activities, actions, programmes, and plans

- Auckland Regional Land Transport Plan 2021-2031
- Auckland Light Rail
- Maungakiekie-Tāmaki Greenways Network Plan
- Glen Innes Bike Hub ➔ AT bike hub programme
- Auckland's Low Emission Bus Pathway
- Travelwise Programme for Schools
- Walking School Bus
- Bike Safe training
- Safe schools travel plans
- Travelwise Choices Programme for Organisations

### Opportunities and benefits

These actions will have much broader positive effects including:

- Improving air quality
- Improving public health
- Creating more car-free public spaces to enjoy
- Making cycling and active commuting safer and making us healthier
- Making it cheaper and quicker to get around.


Figure 6 – Royal Oak

Ikiiki – Transport actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Improve local infrastructure for active travel | Implement high and moderate priority routes from the Maungakiekie-Tāmaki Greenways Network Plan | Ongoing | Advocacy and funding for projects |
| | Support developments incorporating bike and scooter parking and e-vehicle charging, particularly in medium and high- density residential and town centre regeneration projects and for locals in residential areas undergoing significant growth | Ongoing | List of developments supported |
| | Advocate for easy access to public transport networks, safe cycle paths and walkable catchments alongside new housing developments, particularly Tāmaki Regeneration and Oranga | Ongoing | |
| Support community action on sustainable transport | Board members lead by example, demonstrating use of active transport and public transport modes in movements throughout Maungakiekie-Tāmaki and wider Auckland | Ongoing | Evidence of leading by example, such as social media posts |
| | Support targeted programmes which encourage transport mode choices for journeys, such as Travelwise schools and personal journey planning | Ongoing | Funded projects, increase in number of schools and businesses participating in such programmes |

| | | | |
|---|---|---|---|
| | Update the community grants policy to require applicants to incorporate low carbon transport options at events | Year 2 | Updated grants policy |
| | Support local active transport initiatives such as the Glen Innes Bike Hub, locky dock stations, e-charging stations, e-scooters and the Onehunga Local Rider education programme | Ongoing | Support such as grants for activities or promotion of community events |
| Advocate for and champion low carbon transport connections within Maungakiekie-Tāmaki and to wider Auckland | Advocate to Auckland Transport for delivery of public transport projects in Regional Land Transport Plan | Ongoing | Evidence of advocacy action, such as letters, meetings |
| | Advocate for faster electrification of ferries and buses | Ongoing | |
| | Advocate for an improved public transport network with cheaper ferry and bus fares, and higher frequency of services to make these transport options more attractive to residents | Ongoing | |
| | Support and champion projects enabling low carbon travel, such as the Onehunga transport hub and bus shelter at Penrose Station | Ongoing | |
| | Advocate for the development of transport connections, shared working spaces and other | Ongoing | |

| | | | |
|---|---|---|---|
| | infrastructure improvements to enable residents to live and work locally | | |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Transport Strategy, Sustainability Initiatives and the Chief Sustainability Office. Auckland Transport will deliver most of the actions outlined above.

Regular updates setting out progress on this priority and key actions will be prepared. The metrics set out below will also be used to measure progress against the Transport outcome area of this plan. Refer to Section 9 – Monitoring Framework for more information.

- % of people getting to work by transport mode
- % of people getting to their place of study by transport mode
- Number of trips past cycle counters in the board area
- Number of schools and businesses participating in mode shift programmes such as Travelwise.

What you can do at work

- ☐ Sign your workplace up to the Auckland Transport Travelwise Choices programme
- ☐ Join the Aotearoa Bike Challenge - Love to Ride
- ☐ Join the Walk to Work Challenge
- ☐ Encourage workplaces to choose electric vehicles
- ☐ Join a car share scheme or choose an electric vehicle for your business
- ☐ Access personalised journey planning, cycle and public transport promotions, events, and resources through Auckland Transport

What you can do at home

- ☐ Get engaged in your area – give feedback on local transport plans or projects
- ☐ Walk or cycle more - try out local cycle and walkways
- ☐ Join your local Walking School Bus
- ☐ Join a local bike group
- ☐ Volunteer at a local community bike hub
- ☐ Plan your bus or train trip using Auckland Transport's journey planner
- ☐ Find someone to share a ride with or set up a local carpool
- ☐ Make your next car an electric vehicle
- ☐ Set up a flexi workspace so you can work from home
- ☐ Minimise air travel - have a staycation or holiday in New Zealand rather than overseas
- ☐ Groups can seek funding from the Auckland Transport Community Bike Fund

## 8.4 Ōhanga – Economy

*He aha te kai a te Rangatira? He kōrero, he kōrero, he kōrero*
*What is the food of the leader? It is knowledge, it is communication*

Our economy can currently be described as predominantly linear; where we take materials from the earth, make them into products, and discard them as waste. This drives climate change, biodiversity loss, waste production and pollution.

A circular economy offers an alternative, whereby resources are never abandoned to become waste or pollution. The growing network of Community Recycling Centres in Tāmaki Makaurau contribute towards a more circular economy, providing spaces where residents can drop off unwanted items and materials for reuse and recycling.

The Onehunga Community Recycling Centre opened in mid-2022, and Glen Innes has been identified as a potential future location for a similar facility. The local board will support development of this facility by working with community groups active in the waste reduction and environmental education space, to identify possible synergies, potential sites and potential operators.

There are over 11,100 businesses based in Maungakiekie-Tāmaki[12], with the largest number of local businesses in rental, hiring and real estate services, construction and professional, science and technical services, and construction. These businesses provide over 102,000 jobs, with the highest areas of employment within the wholesale trade, construction, and manufacturing sectors[13].

This highlights an important opportunity for the Maungakiekie-Tāmaki Local Board area to continue finding and supporting innovative solutions and initiatives that create sustainable, circular economy practices in local businesses and organisations.

There is a significant opportunity to measure and reduce the carbon emissions created by our local businesses. There are a range of tools available to help businesses measure their carbon emissions and create an action plan for reduction. The appropriateness of each tool will depend on the sector and size of each business. Carbon certification and offset providers that are generally used by larger businesses include Toitū, Ekos, CarbonClick and COGO.

FutureFit in business, by Auckland Council, is a comprehensive staff engagement programme that equips businesses with a suite of resources to deliver on corporate sustainability objectives, and support staff to take climate action. The Sustainable Business Network also has a Climate Action Toolbox and emissions calculator for businesses that is available online free of charge.

Disruptions such as climate change and the global pandemic have highlighted vulnerabilities in our regional and global economy. These disruptions have demonstrated

[12] https://ecoprofile.infometrics.co.nz/Maungakiekie-Tamaki/Businesses
[13] https://ecoprofile.infometrics.co.nz/Maungakiekie-Tamaki/Employment

the need for a more resilient economy that is local, circular, and regenerative. Maungakiekie-Tāmaki contains a network of large town centres including Sylvia Park, Onehunga, Royal Oak, Glen Innes and Panmure – as well as smaller villages and suburbs. These centres provide goods and services supporting people's day-to-day needs and provide the opportunity for people to shop and live locally.

Pursuing low carbon, resilient process, product, and service innovations means local businesses can create new forms of value, prompt new markets and support sustainable growth. By leveraging knowledge and resources we can create a thriving zero carbon business community.

Planning to respond to the risks created by climate change is an essential part of continuity planning and risk management. Auckland Council, Tātaki Auckland Unlimited and EECA have many existing resources and programmes which can support our businesses.

### Goals

- Creation of a local, circular economy and opportunities for local employment in green jobs
- Businesses in Maungakiekie-Tāmaki have risk management and continuity plans in place
- Businesses are incentivised to strive for net zero emissions and supported to implement sustainable culture and practices into the core internal business.

### Current council, government, business and community activities, programmes and plans

- Onehunga Community Recycling Centre
- FutureFit in business
- Sustainable Business Network Climate Action Toolbox
- EECA Energy Efficiency Technical and Funding Support
- Climate Leaders Coalition
- Work Ready – Business Continuity Planning
- Auckland Hazard Viewer
- Mandatory Climate Related Financial Disclosure
- ReStore Panmure, Habitat for Humanity.

### Opportunities and benefits

These actions will have much broader positive effects including:

- Increased profitability
- Improved efficiency
- Greater levels of innovation
- Greater access to capital

- Lower operating costs
- Better air quality

- Higher sales
- More productive workforce
- Better work-life balance
- Less risk for businesses
- Businesses better prepared for emergencies.

Ōhanga – Economy actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| **Business decarbonisation and business resilience** | Host a new programme for local businesses in partnership with the Sustainable Business Network, Business Associations in Glen Innes, Panmure, Penrose and Onehunga, and businesses in Panmure and One Tree Hill to support local businesses in:<br>• understanding climate change<br>• preparing to measure, reduce, certify, and offset emissions<br>• planning for climate risk and a just transition<br>• developing risk management and continuity plans in response to climate change and extreme weather events<br>• using tools such as FutureFit | Year 1 | No. of businesses involved in programme and measuring/reducing carbon and developing risk management and continuity plans |
| | Explore incentives that make carbon-zero more attractive to businesses, e.g. host a local Sustainable Business Awards to promote and reward sustainability practices, innovation, and culture within businesses | Ongoing | |

| | | | |
|---|---|---|---|
| Creating a local, circular economy, with opportunities for employment in green jobs | Promoting the use of local businesses for goods and services | Ongoing | Evidence of promotion |
| | Support community organisations working to create a circular economy, such as The ReCreators, Fair Food and ReStore Panmure | Ongoing | Evidence of support provided to such groups |
| | Promote community awareness of the Onehunga Community Recycling Centre, to support the transition to a circular economy | Year 1 | Communications, increased community uptake |
| | Support the establishment of the Glen Innes Community Recycling Centre, by working with community groups active in the waste reduction and environmental education space, to identify possible synergies, potential sites, and potential operators. Identify and support other opportunities for social enterprises to provide local green employment | Year 3 | Identification of potential sites, operators, and community partners |
| | Advocate for local shared office spaces that encourage residents to live locally and travel reduced distances from home for work or study | Ongoing | |

## Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Waste Solutions and Sustainability Initiatives. Tātaki Auckland

Unlimited provides regional economic programmes that the board can access to support their local businesses.

Regular updates setting out progress on this priority and key actions will be prepared. The metrics set out below will be used to measure progress against the Economy outcome area of this plan. Refer to Section 9 – Monitoring Framework for more information.

- Number of businesses in the board area that have measured their carbon footprints and set reduction targets
- Number of businesses in the board area that have developed business continuity plans
- Number of people employed through community recycling centres.

## What you can do at work

Climate change will affect every aspect of our society and economy. You can make a difference by asking about, and planning for, climate change in your workplace.

- Measure your businesses' carbon footprint
- Create and implement a plan to reduce emissions
- Certify your footprint
- Offset the hard-to-reduce parts of your footprint

Tools, resources, and carbon certification bodies you can use:

- Climate Action Toolbox
- Carbon Neutral Trust
- Toitū
- Ekos

Be a voice for change – here are some questions to ask your employer or any businesses that you purchase products from:

- Have you measured your carbon emissions as a business?
- Do you have a science-based target to reduce your carbon emissions?
- What are you doing to achieve these reductions?
- How are you celebrating and using your successes to encourage others?
- How are you supporting government policies that cut carbon emissions?
- How does your company empower employees to fight climate change?
- Have we identified climate change risks for the business and created a business continuity plan?

## What you can do at home

- Support local businesses that are part of the circular economy, such as second-hand clothes shops and the Onehunga Community Recycling Centre
- Avoid buying disposable products or fast fashion – buy fewer items that will last longer
- Share equipment and tools with family and friends
- Volunteer at a repair café or Men's Shed

## 8.5 Ngā hapori me te tahatai – Community and coast

*He waka eke noa*
*We are all in this together*

Figure 7 – Tāmaki Path

Maungakiekie-Tāmaki Local Board area is bounded by coast to the south by the Māngere Inlet and to the east by the Tāmaki Inlet, so it is particularly susceptible to inundation, flooding, coastal erosion, and slips. Sea level rise, caused by climate change, increases the risk of coastal inundation.

Sea level rise of up to one to two metres[14] is predicted over the next 100 years, based on the projections by the Intergovernmental Panel on Climate Change. Auckland Council has identified coastal and major waterway sites within the Maungakiekie-Tāmaki Local Board area that are vulnerable to coastal inundation. Residents can see a coastal inundation map, showing which places are at risk, on the Auckland Hazard Viewer[15].

The council is developing shoreline adaptation plans to address these impacts within the coastal marine area. The local board will support development of Shoreline Adaptation Plans for the Tāmaki River Inlet and eastern Manukau Harbour that assess coastal hazards and the

[14] One-metre sea-level rise is representative of the upper bound scenario to 2115. Two-metre sea-level rise is representative of potential, longer term sea-level rise (2120 to approximately 2200).

[15] https://www.arcgis.com/apps/MapSeries/index.html?appid=81aa3de13b114be9b529018ee3c649c8

impacts of climate change on the coast, discussing adaptation options for the future with mana whenua, communities, and asset owners.

Preparing for the impacts of climate change and reducing emissions requires major system changes. Community connectedness or high social capital is a key factor which enables communities to support each other and respond to natural disasters, such as major storms and floods. For this action area, programmes and policies that focus on building social capital – the relationships, connections, and community participation that occurs on the ground between individuals and groups – will also improve resilience to climate impacts. Targeted programmes to help residents understand climate risks and prepare for them will also be valuable.

The local board is already funding several valuable initiatives that support local residents to reduce their carbon footprints and live sustainably. This includes Low Carbon Lifestyles, a behavioural intervention targeted at changes individual households can make to energy consumption and Ope and Tiakina te Taiao, Sustainable Schools programmes.

The local board will also fund local climate activation to bring together and support the various community groups and businesses working to reduce emissions in the board area. Individual, rangatahi/youth and community action is vital in influencing our everyday choices and driving the changes we need. Our formal education sector and community groups play an important role in enabling climate awareness and action.

### Goals

- Educate and empower our community to reduce emissions
- Increase our communities' understanding of and capacity to respond to climate change
- Strengthen the resilience of our communities, people and places
- Reduce the risk of flooding and hazards to properties and infrastructure.

### Current council and community activities, programmes and plans

- Low Carbon Lifestyles
- Community Resilience Plan – Auckland Emergency Management
- Auckland Hazard Viewer
- Live Lightly
- FutureFit
- Ope and Tiakina te Taiao - Sustainable Schools programmes
- Love Your Neighbourhood
- Enviroschools and Te Aho Tū Roa

- Mad Ave, The River Talks
- King Tides Auckland
- Faith Family Community
- Tāmaki Estuary Protection Society
- Tāmaki WRAP

### Opportunities and benefits

These actions will have much broader positive effects including:

- Understanding current and future impacts of extreme weather events and climate change
- Creating resilience in communities and business
- Reducing negative social and financial effects of climate change
- Protection of culture, taonga and sacred sites that may be affected.

Ngā hapori me te tahatai – Community and coast actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Educate and empower our community to reduce emissions<br><br>Increase our communities' understanding of climate change | Resource and support climate activation to amplify community initiatives to implement parts of the board's Local Climate Action Plan. Create opportunities for the community to learn about climate change and reduce their carbon footprints. Examples of opportunities include:<br>• Using FutureFit to help people understand their climate impact and ways to reduce it and supporting people to share their learnings with others in the community<br>• Working with Enviroschools and King Tides Auckland to grow the capacity of school staff, students, and teachers to reduce emissions and increase resilience | Year 1 | Local climate activation work programme is agreed and delivered |
| Strengthen the resilience of our communities, people and places | Support the delivery of disaster preparedness workshops with interested communities in the board area to support them to become more resilient to climate-induced hazards such as flooding, | Year 2 | Completed workshops |
| | Support networks and initiatives that strengthen strong, positive, and cooperative community connections which help in | Ongoing | Evidence of support provided to such networks |

| | | | |
|---|---|---|---|
| | a response to climate impacts, such as Love Your Neighbourhoods or the Ope programme in schools | | |
| | Advocate for space not currently open for community gardens such as berms to be made accessible | Year 1 | Evidence of support |
| **Reduce the risk of flooding and hazards to properties and infrastructure** | Support regional actions to inform property owners and occupiers of potential climate change hazards, particularly those within identified climate vulnerability hotspots and those impacted by the changing coastline | Year 2 | Evidence of communications regarding climate change hazards |
| | Create Shoreline Adaption Plans for the Tāmaki River Inlet and eastern Manukau Harbour that assess coastal hazards and the impacts of climate change on the coast, discussing adaptation options for the future with mana whenua, communities, and asset owners | Years 2-3 | Completed plan |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Sustainability Initiatives, Resilient Lands and Coasts and Auckland Emergency Management.

Regular updates, setting out progress on this priority and key actions will be prepared. The number of schools engaged in Sustainability Education programmes will also be monitored over time. Refer to Section 9 – Monitoring Framework for more information.

What you can do at work

- ☐ Hold a FutureFit corporate challenge
- ☐ Create a climate risk management plan and a business continuity plan

What you can do at home

- ☐ Visit Live Lightly to find out more about climate change and sign up for our newsletter for updates on how to get active in your community to reduce emissions
- ☐ Measure your carbon footprint at FutureFit and make pledges to reduce it
- ☐ Check the Auckland Hazard Viewer
- ☐ Create a household emergency plan
- ☐ Give feedback on Auckland Council and central government plans, policies and projects

## 8.6 Ngā kai – Food

*Nau te rourou, naku te rourou, ka ora te manuhiri*
*With your food basket and my food basket, together we will feed the people*

Our kai/food is central to life, the health of our taiao/environment, our bodies, our cultural traditions, and our resilience. In Tāmaki Makaurau, food and non-alcoholic beverages make up 26 per cent of Aucklanders' consumption emissions, second only to transport. To reduce these emissions, we need to make more sustainable choices around the foods that we consume. By creating a more sustainable and regenerative food system, we can reduce the emissions we create through food production, distribution, processing, and disposal.

Many of our residents may also struggle to access food due to affordability challenges. Initiatives that are good for the climate can also help people to grow their own food or access more affordable food.

Eating local and growing your own food: Eating food that is grown and consumed in season and locally helps to avoids the use of energy-intensive hothouse growing and freight. Supporting community gardens and enabling people to grow their own food can contribute to this goal. These actions also have many other sustainability benefits, in terms of community connectedness, wellbeing, and resilience. The local board can provide space for these projects and support them to build their capacity through grants.

Sustainable food choices: A key action for the local board will be showcasing sustainable food choices at events and through communications, as well as supporting community initiatives which encourage and enable people to make these choices, such as vegetarian cooking classes. One of the most effective ways of reducing our carbon emissions from food is shifting to a plant rich diet.

Reducing food waste and promoting food security: Encouraging 'food rescue' and reducing food wastage, at household, community, and business level, helps to reduce emissions. These initiatives can also help to improve food security and give local residents access to affordable food. Key actions the local board could support include working with producers and distributors to redirect unsaleable food via a network of charities, community groups, and Pātaka Kai. At a household level, key actions are only buying what you need (for example, through meal planning and using shopping lists) and eating what you buy, to avoid wasting food.

Composting and promoting our food-scraps collection: When disposing of unused food and garden waste, composting will generate less carbon emissions than sending these items to landfill. Programmes should be supported which encourage households to compost food scraps at home, or to use community compost hubs if the space is not available at home. In addition to encouraging local composting, Auckland Council is also

introducing a food scraps collection. The local board can support this service by spreading the word about it and helping residents understand how to use it.

### Goals

- Support and enable our residents to make sustainable food choices and have food security
- Increase the ability of residents to enjoy seasonal, affordable, and locally produced food with a low carbon footprint
- 100 per cent of Maungakiekie-Tāmaki food waste composted by 2030 including:
    - composting facilities or services at all community facilities, local food markets and schools by 2023
    - food waste collections for all homes by 2023.

### Current council and community activities, programmes, and gardens

- Aotearoa Kai Journey – Kai Collective
- Oak and Thistle Urban Farming
- Tāmaki Urban Market Garden
- Garden to Table
- Fair Food
- Aotearoa Food Rescue
- Love Food Hate Waste
- Food Scraps Collection
- The Compost Collective

### Opportunities and benefits

These actions will have much broader positive effects including:

- Developing a vibrant and diverse sustainable food economy
- Nurturing skills and awareness that build greater self-sufficiency
- Reviving Māori food practices
- Self-determining and mana enhancing community participation in local food systems
- Building community knowledge, sharing skills and resources
- Reducing hunger and food poverty
- Reducing the costs of living

- Improving access to healthy, affordable food
- Improving health
- Improving soil health
- Reducing food waste.

Ngā kai – Food actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Support and enable our residents to have food security | Support initiatives that address food insecurity and reduce waste to landfill, such as food rescue and food banks | Annual | Evidence of support – e.g. funding |
| Increase the ability of residents to make sustainable food choices, enjoy seasonal, affordable, and locally produced food with a low carbon footprint | Support community-led low carbon food initiatives such as community gardens, markets, community fridges and garden projects that help residents to grow their own food or access affordable low carbon food | Ongoing | Evidence of support – e.g. funding |
| | Support community initiatives that encourage residents to adopt a low carbon diet and reduce food waste, such as cooking lessons and information on sustainable food choices | Year 1 | Evidence of support – e.g. funding |
| | Update and consolidate existing maps of current urban agriculture (e.g. community gardens) adding detail on land available/potentially available for future urban agriculture | Year 1 | Completed map |
| | Provide subsidies for rainwater tank installation to allow sufficient water storage for food production in times of drought | Ongoing | Evidence of subsidies provided |
| A hundred per cent of Maungakiekie-Tāmaki food waste composted by 2030 | Support the sharing of surplus or waste food through the network of charities and community groups | Ongoing | Evidence of support – e.g. funding |
| | Support residents to use the new regional kerbside food scraps collection when this is rolled out to all Maungakiekie-Tāmaki households | Years 2-4 | Kerbside collection operational |

| | | | |
|---|---|---|---|
| | Advocate for the introduction of composting services at all community facilities | Year 2 | Community Facility composting operational |
| | Promote the Love Food Hate Waste Fund, and supplement with additional local board grants for local food waste prevention projects | Ongoing | Evidence of promotion – e.g. social media, and support, e.g. grants |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board are Sustainability Initiatives, Community Facilities and Waste Solutions.

Regular updates, setting out progress on this priority and key actions will be prepared. The metrics set out below will be used to measure progress against the Food outcome area of this plan. Refer to Section 9 – Monitoring Framework for more information.

- Number of urban agriculture areas
- No. and % of community facilities composting food waste.

### What you can do at work

- Choose organic, local, seasonal drinks and food for kitchen and catering
- Share food and host a low carbon cooking demonstration
- Set up a compost collection for coffee grounds and food waste

### What you can do at home

- Plan meals and choose local seasonal food
- Join a community garden and learn how to grow your own vegetables
- Try a healthier, more plant-based diet, eating less meat and dairy for some meals
- Use up leftovers and reduce food waste
- Learn to compost at a free workshop
- Volunteer for a food bank or food rescue operation, donate to a Pātaka Kai

Figure 8 – Local Community Garden

## 8.7 Te Puāwaitanga ō Te Tātai

*Te puawaitanga o te tangata*
*If Māori are flourishing, we are all flourishing*

Māori, the indigenous people of Aotearoa New Zealand, have lived in Tāmaki Makaurau for over 1000 years. Te Tiriti o Waitangi recognises the rangatiratanga of Auckland's mana whenua and the inseparable bond between Tāmaki Makaurau the people and Tāmaki Makaurau the place. Tāmaki Makaurau embraces its uniqueness sourced in the cosmological traditions and guardianship of mana whenua. The establishment of Auckland is founded on Te Tiriti o Waitangi and is shaped by its Māori history and presence.

Our tūpuna have provided rich legacies of knowledge and practices that nurture whakapapa and reaffirm Māori ways of collective action. These can guide our responses today. Learning from these intergenerational relationships and practices allows us to plan for what our unique places and communities will face over the next few generations and beyond.

Mana whenua play a significant role in sustaining the region and the region's identity. Their responsibilities and obligations as kaitiaki of te taiao, our precious natural environment, must be upheld. Mataawaka make a significant contribution to the wellbeing of the region and add to the economic, cultural, and social richness. The strengths and contributions Māori bring to Auckland will advance cultural, social, economic, and environmental wellbeing for all Aucklanders.

Te Tāruke-ā-Tāwhiri is a narrative of climate change that speaks to the struggles of the ātua (primordial ancestors) as a result of human behaviour that is out of balance with the world around us. Climate change is a threat to the whakapapa connections of nature, people, and place.

Māori exercise tino rangatiratanga and kaitiakitanga through Te Tiriti-based relationships with Auckland Council to enhance the mauri of te taiao. Projects which enable mana whenua to enact kaitiakitanga responsibilities to enhance the mauri of te taiao o Tāmaki Makaurau – waterways and treasured environments – are an important goal to work towards.

The Maungakiekie-Tāmaki Local Board area is home to over 10,000 Māori, making up 13.9 per cent of the population (compared to 11.5 per cent in Auckland)[16]. The following iwi whakapapa to the Maungakiekie-Tāmaki Local Board area:

- Ngāti Whātua – Te Rūnanga o Ngāti Whātua, Ngāti Whātua Ōrākei
- Waiohua-Tāmaki – Te Kawerau ā Maki, Ngāi Tai Ki Tāmaki, Ngāti Tamaoho, Ngāti Te Ata Waiohua
- Marutūāhu – Ngāti Paoa, Ngaati Whanaunga, Ngāti Maru, Ngāti Tamaterā, Te Patukirikiri.
- Waikato-Tainui

[16] https://stats.govt.nz/tools/2018-census-place-summaries/maungakiekie-tamaki-local-board-area

Marae within the board area include Ruapōtaka Marae and Te Tira Hou Marae. The local board's role for this priority is to build relationships with local iwi and marae in the first instance. This step of making connections through kanohi ki te kanohi (face-to-face) hui is a critical foundation for future projects. This will help build an understanding of mātauranga Māori as well as sites of significance and historical cultural land uses. Once connections are built, co-designed projects can be developed which deliver kaitiakitanga outcomes.

The key characteristics of these projects would be:

- co-designed with mana whenua
- design uses mātauranga Māori
- provides training and employment opportunities for rangatahi Māori
- promotes kaitiakitanga and incorporates te reo Māori.

It is critical to ensure projects are properly resourced where engagement or partnership with Māori is within the project scope.

### Goals

- Māori culture informs our climate actions and is accessible and visible in these
- Rangatahi are leaders in climate solutions
- Māori, taiao (the natural environment), whenua (land), and tangaroa (sea) are flourishing and able to support people for generations to come (intergenerational equity).

### Current council and community activities, actions, programmes and plans

- Toitū Waitākere Report 2017
- Waitākere ki tua 2019
- Mana Whenua Kaitiaki Forum
- Te Ora ō Tāmaki Makarau
- Youth Taiao Monitoring Programme
- Rakau Tautoko

### Opportunities and benefits

These actions will have much broader positive impacts:

- Wellbeing enhanced
- Kaitiakitanga obligations are met
- Mauri of taiao, whenua and tangata is enhanced
- Better health, housing, employment, career, and business opportunities

Figure 9 – Te Tira Hou Marae

Te Puāwaitanga ō Te Tātai actions

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| **Māori culture informs our climate actions** | Build relationships between local board and interested mana whenua as a foundation for future co-designed te taiao projects | Year 1-2 | New and enhanced relationships are built |
| | Look for opportunities to partner with mana whenua on new climate action and environmental projects | Years 2-3 | Partnerships formed |
| | Support mana whenua to tell stories of Māori cultural heritage and knowledge in public spaces through climate projects, reflecting tikanga and mātauranga Māori | Ongoing | Māori culture is visible |
| **Rangatahi are leaders in climate solutions** | Identify and invest in rangatahi Māori climate-related representation and development opportunities, including supporting rangatahi Māori-led projects in the board area, by connecting with local te kura kaupapa Māori and local schools | Years 2-4 | Rangatahi-led projects |
| **Taiao is flourishing** | Continue support for projects outlined in the Natural environment section of this plan which increase the health of te taiao and restore significant ecological areas | Ongoing | Supported projects |

What you can do

- Learn te reo Māori, tikanga and Māori culture
- Learn about the maramataka calendar and its role in our wellbeing
- Check out the EcoMatters website and local marae for Te Ao Māori events e.g. rongoā, weaving

## 8.8 Te ngao me te ahumahi – Energy and industry

*Hurihia tō aroaro ki te rā tukuna tō ātārangi kia taka ki muri i a koe*
*Turn your face to the sun and the shadows fall behind*

Energy provides the electricity in our homes, fuel for our transport system and the heat that manufactures the products we need[17].

- 84 per cent of New Zealand's energy is currently produced from renewable energy sources
- current national energy targets aim for 90 per cent renewables by 2025 and 100 per cent renewable energy by 2035
- 66 per cent of Auckland's energy emissions are from primary fuel combustion within the region from fuels including natural gas, coal and liquid petroleum gas (LPG).

This section of the plan focuses on identifying opportunities to increase the proportion of renewable energy used and reduce energy consumption. The focus is on switching energy sources, such as from coal to biomass or natural gas to electricity, while we continue to improve energy efficiency and ensure a just transition for affected businesses and organisations.

Process heat is the steam, hot water or hot gases used in industrial processing, manufacturing and space heating. Process heat has been identified by EECA as New Zealand's second biggest opportunity after transport to reduce energy-related carbon emissions. Half of New Zealand's process heat demand comes from burning coal or natural gas. Businesses can reduce their energy costs and carbon footprint by running boilers and process heat systems efficiently or switching to innovative new heating technology.

The council has already begun phasing out gas boilers and improving energy efficiency in its community facilities. Further information is contained within the Built Environment section of this plan.

Many of the steps that can be taken to change our levels of energy consumption or proportion of renewable energy require action at the national or regional level. Within Maungakiekie-Tāmaki, there are opportunities to work with businesses and EECA to identify and accelerate opportunities for businesses that use coal or natural gas in their industrial processes to reduce emissions.

As well as improving the energy efficiency of their own buildings, the local board has also invested in Low Carbon Lifestyles. This is an educational initiative which helps local residents to save energy and keeps their homes warmer and drier. The local board can also

[17] Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan

support the community to reduce energy consumption in their homes through other initiatives, for example by promoting the FutureFit carbon footprint calculator, Auckland Council's home performance advice service, Home Energy Audit Toolkits (HEAT kits) available through libraries and the Live Lightly resources.

### Goals

- Renewable energy generation
- Developing decentralised renewable energy
- Reducing natural gas, coal, and liquid petroleum gas (LPG) use and emissions
- Reducing non-renewable process heat and industrial process heat emissions and reducing refrigerant related emissions

### Current council, government and community activities, actions, programmes and plans

- Co-funding for Process Heat Projects
- Low Emission Vehicles Contestable Fund
- New Zealand's Energy Strategy 2011-2021
- Industrial Pollution Prevention Programme
- Low Carbon Lifestyles
- Refer to Built environment section of the action plan (pg. 23-30) for other building related initiatives

### Opportunities and benefits

These actions will have much broader positive effects including:

- Growing a reputation as a leading sustainable community or eco-city
- Attracting investment into sustainable infrastructure
- Improving indoor air quality as unflued gas heating is removed
- Reducing energy costs for local businesses and residents
- Increasing energy security through local low carbon energy generation

**Te ngao me te ahumahi – Energy and industry actions**

| Goal | Action | Timescale | Demonstrating progress |
|---|---|---|---|
| Renewable energy generation | Advocate to central government for the acceleration of renewable energy as a percentage of grid supply | Ongoing | Evidence of advocacy – submissions, emails, letters |
| Decentralised renewable energy | Support community-led initiatives to implement sustainable energy solutions and advocate for public private partnerships to support these | Ongoing | Evidence of support (submissions, letters, funding) |
| Reduction in natural gas emissions | Support programmes targeting the uptake of heat pump water and space heating (e.g. through grants) | Ongoing | Evidence of support |
| Reduction in process heat, industrial process, and refrigerant emissions | Work with businesses in Maungakiekie-Tāmaki and EECA to:<br>• Identify and accelerate the uptake of support for industrial processors or users of process heat derived from coal or natural gas to reduce emissions<br>• Reduce emissions from refrigerants<br>• Support the installation of distributed renewable energy generation including solar PV generation | Year 2 | Establishment of local EECA working group<br>Identification of participating businesses<br>Identification of opportunities to reduce emissions |
| Support homeowners and communities to reduce | Continue support for educational programmes such as Low Carbon Lifestyles to help residents understand their home energy usage and give them | Ongoing | Services such as Low Carbon Lifestyles and the regional Home Energy Advice programme |

| | | | |
|---|---|---|---|
| energy consumption | tools and advice to reduce it | | promoted to residents |

### Delivering on the actions and monitoring progress

The key internal Auckland Council departments involved in delivering these actions with the Local Board will be the Chief Sustainability Office and Sustainability Initiatives.

Regular updates, setting out progress on this priority and key actions will be prepared. The percentage of renewable energy generation nationally and number of households reached through Low Carbon Lifestyles in the board area will also be monitored.

**What you can do at work**

- ☐ Find out more about the support available from EECA for reducing emissions from process heat, industrial processes, refrigerants and vehicles
- ☐ Purchase electricity that is certified as zero carbon
- ☐ Get quotes to check the return on investment of solar or wind generation for your business

**What you can do at home**

- ☐ Book in a home energy advice visit with Auckland Council
- ☐ Purchase electricity that is certified as zero carbon
- ☐ Choose heat pump solutions for water and space heating
- ☐ Get a quote to check the feasibility of solar for your home
- ☐ Ensure your next vehicle is electric or has a five-star fuel efficiency rating

Figure 10 - Residential solar

# 9. Monitoring framework

We will monitor progress against this action plan regularly using the 'demonstrating progress' column of each action table within the plan, and the climate monitoring framework below.

| Theme | Target/metric | Monitoring method | Baseline | Frequency |
|---|---|---|---|---|
| Natural environment | Increase in % canopy cover in public open space to 30 per cent | LiDAR survey - parks | 23 per cent (2021) | Once every 3 years |
| | Increase in % of canopy cover on private land to 30 per cent | LiDAR survey - parks | 9 per cent (2021) | Once every 3 years |
| | Increase in roadside canopy cover to 30 per cent | LiDAR survey - parks | 12 per cent (2021) | Once every 3 years |
| | Number of trees planted annually | Urban Ngahere (Parks, Sports, Recreation) | NA | Annual |
| | Number of community weeding bees annually | Parks, Sports and Recreation | NA | Annual |
| Built environment | % reduction in community facilities' carbon emissions | Carbon monitoring – community facilities | Unknown | Annual |
| | No. zero carbon developments completed | New Zealand Green Building Council | To be determined by activator | Annual |

| | | | | |
|---|---|---|---|---|
| | Number of community facility renewals projects meeting construction waste diversion targets | Community facilities | NA | Annual |
| Transport | % of people getting to work by transport mode | Census | Private vehicle 60.7 per cent<br>Company vehicle 8.7 per cent (2018) | Once every 5 years |
| | % of people getting to their place of study by transport mode | Census | Passenger in a car, truck or van (39.8 per cent)<br>Drive private vehicle (11.9 per cent) (2018) | Once every 5 years |
| | Number of schools and businesses participating in mode shift programmes | Auckland Transport | Establish baseline | Annual |
| | Number of movements on cycle counters in board area | Auckland Transport | Lagoon Drive - 22,486 (Jan to Mar 22)<br>GI to Tāmaki path section 1 – baseline TBC | Quarterly |
| Economy | No. businesses in the board area | Toitū/Ekos/Local Board data | Unknown | Annual |

| | | | | |
|---|---|---|---|---|
| | that have measured their carbon footprints and set reductions targets | | | |
| | No. businesses in the board area that have developed business continuity plans | Local Board data | Unknown | Annual |
| | Number of people employed in community recycling centres | Waste solutions | Unknown | Annual |
| Community and coast | No. of schools engaged in Sustainability Education programmes | Sustainable Schools | | Annual |
| Food | No. of community gardens or other urban agriculture areas | Survey of community groups | To be established by activator | Annual |
| | Name of community facilities composting food waste | Local board information and Community Facilities | NA | Annual |
| Te Puāwaitanga ō Te Tātai | No numeric metrics for this outcome area. Action table identifies how progress against actions can be demonstrated over time. | | | |
| Energy and industry | 100 per cent renewable generation by 2035 | Central government | 84 per cent | Annual |

| | | | | |
|---|---|---|---|---|
| | No. of households reached through Low Carbon Lifestyles | Sustainability Initiatives | 251 in 2020/2021 | Annual |

# 10. Definitions

| Definitions of some common climate terms | |
|---|---|
| Active transport | Relates to physical activity undertaken as a means of transport and not purely as a form of recreation, e.g. commuting to work by bike or walking to school. |
| Adaptation | Actions taken to help communities and ecosystems cope with changing climate conditions. |
| Adaptive capacity | The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. |
| Carbon sequestration | A natural or artificial process by which carbon dioxide is removed from the atmosphere by the activities of people, organisations, and communities e.g. tree planting, regenerative farming. |
| Embodied and operational carbon | The total carbon footprint of the built environment is made up of two categories of carbon: embodied and operational.<br>Embodied carbon is essentially the sum of the carbon in all the materials and products used in the creation or renovation of a built asset.<br>Operational carbon is the carbon emissions attributable to the operation of buildings, meaning the carbon emitted through the use of energy for things like lighting, heating, cooling, ventilation and water systems. In the case of buildings, those which are designed to be naturally thermally comfortable, dry and with sustainable water systems are likely to require less carbon to operate. |
| Mitigation | A reduction in greenhouse gas emissions which reduces the severity of climate change. |
| Net zero | Where the amount of greenhouse gases emitted into the atmosphere equals the amount sequestered or offset (e.g. by forestry). |
| Resilience | The ability of a system, community or society exposed to the effects of climate change to resist, absorb, accommodate, adapt to, transform, and recover. Including preserving and restoring essential basic structures, services, and functions. |

| | |
|---|---|
| Universal design | The process of creating buildings and products accessible to people with a wide range of abilities, disabilities, and other characteristics. For example, hallways and doors in homes wide enough for wheelchair access. |
| Vulnerable communities | Communities at higher risk for poor health because they face barriers to social, economic, political, and environmental resources, as well as limitations due to illness or disability. Children, pregnant women, elderly, malnourished people, and those who are ill or immunocompromised are particularly vulnerable when a disaster strikes and take a relatively high share of the disease burden associated with emergencies. Poverty and its common consequences such as malnutrition, homelessness, poor housing, and destitution are a major contributor to vulnerability. |

## 11. Appendices

### Appendix 1: Contributors to this Action Plan

We would like to thank community members and council staff for their contribution to this plan. Community organisations who were represented include

- 312 Hub
- EcoMatters Environment Trust
- Onehunga District Council of Social Services
- Onehunga Community Recycling Centre
- Onehunga High School
- Rākau Tautoko
- Tāmaki Estuary Environmental Forum
- Tāmaki Outrigger Canoe Club
- Tāmaki Urban Market Garden
- The Good Fale
- The ReCreators
- Tāmaki Regeneration Company

Find out more: **phone 09 3010101**

or visit **aucklandcouncil.govt.nz**