

WHAKATĀNE DISTRICT TREE STRATEGY

Ngā Taonga a Tāne

whakatane.govt.nz



Mihi

E mihi ana ki a Tāne mahuta,
We acknowledge Tāne mahuta,

Ki a Tāne te waiora,
Tāne purveyor of life,

Ki a Tāne nui a Rangi.
Tāne source of all knowledge.

Whakarākeitia mai te rohe nei ki āu nā taonga,
Adorn this district with your treasures,

Hīpokina mai te rohe nei ki tō korowai kākāriki,
Cover this district with your green cloak,

Kia tōnui ai te whenua me te tangata,
So the land and people thrive,

Tihei mauri ora!



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Strategy scope

Hōkaitanga Rautaki

This Strategy provides the framework to manage Council's amenity tree population for improved environmental, social, cultural, and economic outcomes for the Whakatāne District over the next 20 years.

'Amenity trees' are trees that are planted and actively maintained by Council on street berms and Council reserves, that have an environmental, recreational, and aesthetic function or value.

This Strategy does not cover trees on private property or those trees on Council property that are not actively maintained by Council staff. This includes trees along roads and/or unintentional groups of trees, or forests. However, the management of these trees is provided for within the Whakatāne District Tree Policy – Ngā Taonga a Tāne.

Strategy on a page

Te ngako o te rautaki

Purpose

A dynamic diverse and sustainable tree population that enriches our natural environment and in turn the wellbeing of our communities.



Guiding principles

1: Kārurenga | Partnership

Acknowledging the kaitiakitanga of tangata whenua

3. Kaitiakitanga | Guardianship

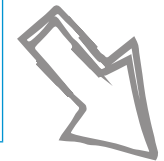
Caring for our urban ngahere

2: Āta Whakamaheretia | Careful Planning

Planting the right tree in the right location

4. Te pae tawhiti | Futureproofing urban areas

Provide green infrastructure



Goals

Whakatōngia | Plant

We will increase our amenity tree population and increase the resilience and diversity of the tree population

Manaakitia | Manage and Protect

We will value and protect our trees and urban forests

Whakamanahia | Empower

We will support and empower our communities to care for the urban forest

Whakamaheretia | Plan

We will plan for a leafier future

Implementation

Ngā Mahi | Actions

Aroturukitanga | Measurement and monitoring



Why do we need a tree strategy?

Te take o tēnei rautaki

The identity of Whakatāne District is centred around its natural environment. Communities are passionate and proud of the beautiful treescapes that contribute to this. Trees are crucial to improving the wellbeing of our people and environment and shaping the fabric of the landscape. For this reason, we have developed this Strategy to guide us as we care for and manage ngā rākau tongarerewa o te whenua (the precious trees of the land).

The current Whakatāne Urban Tree Strategy was written in 2000. Many things have changed in the past 24 years, and as Whakatāne District grows, together with the impacts of climate change, it is important Whakatāne District Council's (Council) tree population is managed well.

Population growth projections estimate that an additional 8,000 people will be living within the district by 2055. This influx will likely see residential, roading and industrial development which will ultimately put further demand on our environment. This means less space on private property for trees to grow as our urban areas intensify, and less space for plantings on roads due to intensified infrastructure. As a result, careful planning is needed to ensure that new plantings on roads do not interfere

with infrastructure, and reserves are planted to provide amenity benefits for our growing population.

Future predictions also indicate that climate change will lead to more extreme temperatures and weather events. This is likely to affect existing trees and new plantings by causing higher temperature and water stress. It will be important to consider climate effects when selecting the locations of future plantings to avoid extreme conditions for trees. Tree planting will also reduce some of the negative effects of climate change by regulating local temperature, absorbing excess water, providing habitat, and absorbing CO₂.

This Strategy provides the framework to manage Council's amenity tree population for improved environmental, social, cultural, and economic outcomes for the Whakatāne District over the next 20 years. This Strategy will be used to lead the district to a future where trees are visible and thriving and to ensure the tree populations within our townships are vast, healthy, diverse and resilient. The Strategy will be implemented across properties owned or cared for by Council, however growing our urban ngahere (forests) will require collective action. The success of

the Whakatāne Tree Strategy relies heavily on community support and involvement. We hope that by leading by example, our communities will continue to maintain and plant trees on private properties, to boost our overall canopy cover.

By meeting the goals within this Strategy we will enhance our urban ngahere by implementing a more proactive approach to tree planning, planting and management. Strategic planning will consider urban development, infrastructure, services and climate change.

Council's strategic context

This Strategy aligns with the following key Council strategies, plans and policies:

- Long Term Plan
- Open Spaces Strategy
- District Plan
- District Reserve Management Plan
- Individual Reserve Management Plans
- District Tree Policy
- Climate Change Strategy and Principles

Our trees are precious

He taonga ngā rākau

The Whakatāne District boasts a rich natural history. Prior to European settlement, the district's natural beauty would have been truly remarkable, from our stunning coastlines to our dense rainforests, the taiao sustained and safeguarded the iwi and hapū of the district. Stretching from Ōhiwa in the East to Ōtamarākau in the West, the coastal vegetation was dominated by Pōhutukawa, Pūriri, Karaka, Rewarewa, and Tawa. The coastal cliffs supported flora such as Mānuka, Wharariki, Kānuka, and Mingimingi. The Rangitāiki Plains, from Matatā inland to Onepū and across to Whakatāne, originally constituted one of New Zealand's largest wetlands. Here, the convergence of the Whakatāne, Rangitāiki, and Tarawera rivers formed a wilderness abundant with Harakeke, Raupō, Mānuka, Waiwai, Tī Kōuka, and swamp vegetation. The area between Urewera, Whirinaki Te Pua a Tāne and Kāingaroa still hosts thriving podocarp forests, featuring Kahikatea, Rimu, Mataī, Tōtara, Miro, and Tānekaha. Previously, the low-lying farmlands and charming settlements were adorned with native forests, boasting flora such as Rata, Koromiko, Toetoe, Hīnau, and Kiokio.

Today, the district's landscape has changed significantly, with less canopy cover and the introduction of exotic species. The ngahere that extends through the district remains an important part of the environment as the trees form part of the interconnected ecosystem of all living things around them. Ecosystems transcend property boundaries, and include the trees, sunlight, water, soil, birds, animals and insects. The mauri of trees is reliant on all of these, as well as how people care and maintain them to support their growth, health and survival. If we want to continue receiving the wide-ranging benefits provided by our trees, it is essential that we better understand their value and plan to protect and enhance our ngahere. Our trees have the mauri to care for us, but they need our help to be sustainable and healthy.



Importance and benefits of trees



Economic *Ōhanga*

- Store carbon and provide shelter from the elements, especially the damaging effects of the sun
- Absorb air pollution and keep cities cooler in summer
- Can increase property values
- Can encourage economic activity in retail and commercial areas



Social *Hapori*

- Can improve mental wellbeing
- Give neighbourhoods character
- Provide shade and shelter
- Provide fun and beauty for tree lovers



Environmental *Taiao*

- Produce oxygen and reduce air pollution and greenhouse gas emissions
- Provide shade to cool hard surfaces and waterways
- Help with stormwater management and erosion control
- Provide habitats, improving ecosystems and increasing biodiversity



Cultural *Ahurea*

- Are repositories for mātauranga
- Provide timber for carving and building
- Are significant for food and rongoā
- Are significant for sustainable cultural harvests
- Are significant for spiritual domains

How we developed this strategy

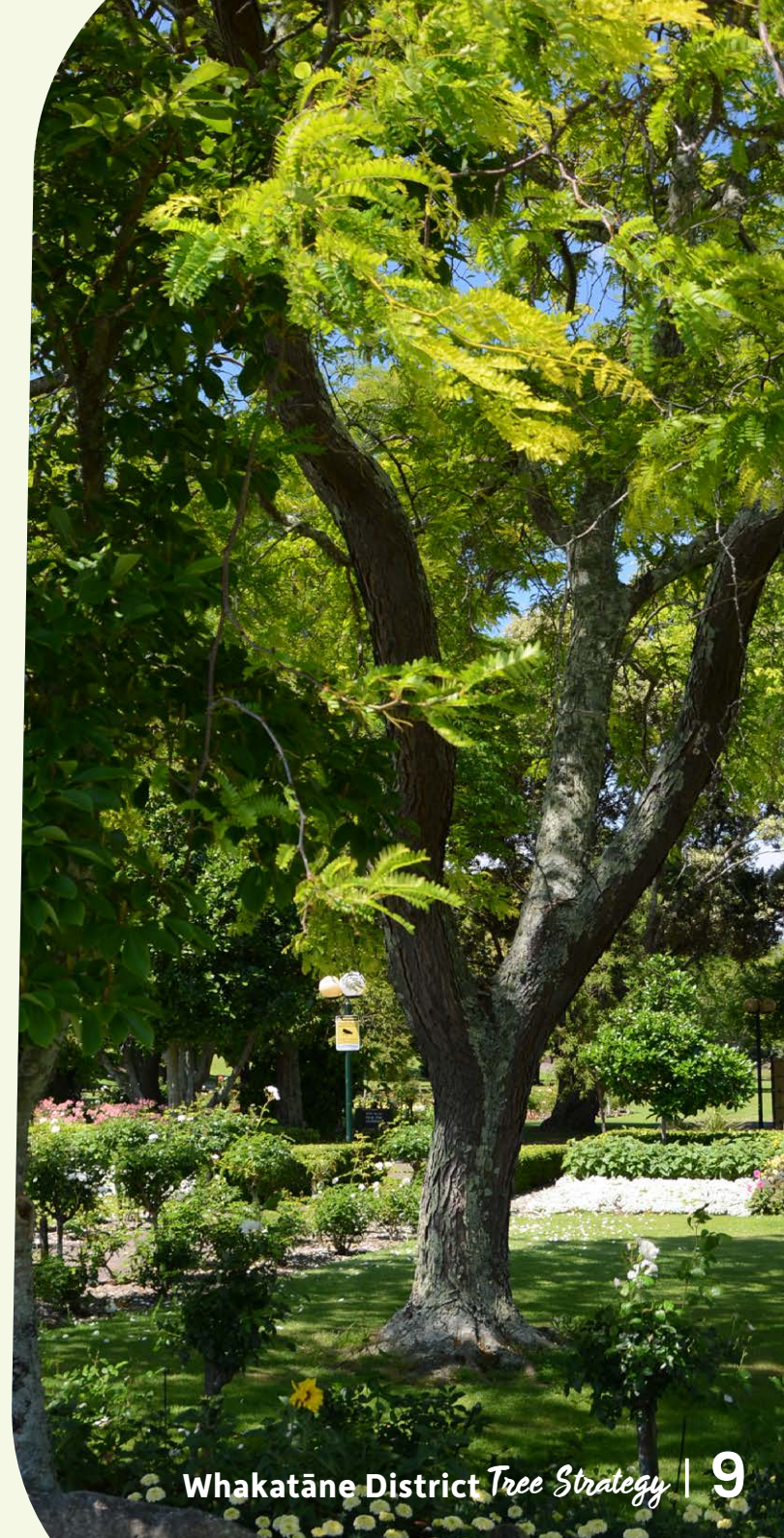
Te whanaketanga o tēnei rautaki

Analysis

Understanding Council's amenity tree population allows us to identify key challenges, our current shortfalls in provision, and new opportunities that will help shape future priorities and plans. In 2018, an audit was undertaken of the amenity tree population managed by Council which found a total of 5,488 trees across the district's streets and reserves. Through this audit, key data including the quantity, quality, condition and diversity of our amenity tree population was recorded. This data only related to Councils street and reserve trees and did not include groups of trees such as forests and revegetation. The results showed some interesting statistics, such as, while there are a significant number of trees throughout the district (averaging one tree for every six people), the distribution is skewed. Whakatāne township currently has around one tree for every four people, compared to Tāneatua and Murupara that are significantly less planted and have one tree for every 13-15 people.

Through the analysis we also identified that nearly 50% of the district's amenity tree population is mature. In particular, Edgcumbe, Murupara, Te Teko and Waimana all have highly mature tree populations. Conversely, only 11% of the Coastlands township tree population is mature.

In addition, a canopy cover assessment was also carried out to understand how much of the district's land is covered by trees. These results showed that the district is predominantly forested, with 75% of land being under canopy, however within the district's townships, canopy cover drops to just over 17%. A strategic planting programme is needed to ensure that the age diversity in these tree populations becomes more diverse. Ideally, the tree population would contain a balanced mix of age ranges to ensure that it is dynamic and resilient. Detailed planting statistics of each township can be found in Appendix 1.

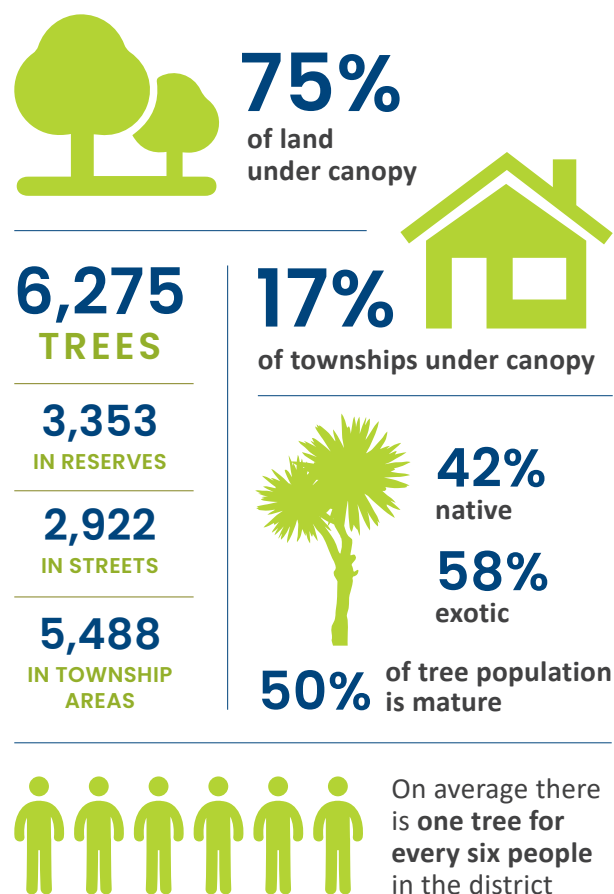


Key themes

The tree audit provided detailed insight into our current amenity tree population, while the canopy cover assessment provided an indicative level of tree cover in our townships. As a result, the below themes have been identified:

- There is insufficient tree canopy cover in the district's townships with more planting needed in both public and private spaces.
- Council is currently delivering an excellent level of service in terms of the total amount of trees provided and the condition that those trees are in.
- The level of service is distributed unequally. Prioritising planting and management in areas with a lower tree provision will go some way in addressing this inequality.

Council receives approximately 230 requests for service relating to trees per year from our communities mostly relating to maintenance, removal and safety.



What we heard

Rangatahi told us:

- 76.5% agreed trees are important to their local area
- 94.2% agreed they would like to see more trees in their local area
- 51.6% wanted to see fruit trees and native trees
- 76% wanted the opportunity to be involved in tree planting
- Local reserves / parks and streets were the most popular places rangitahi would like to see more trees

Our Purpose Te Aronga

A dynamic, diverse and sustainable tree population that enriches our natural environment and in turn the wellbeing of our communities.

Our guiding principles

- **Acknowledging the kaitiakitanga of tangata whenua** – We will uphold Te Tiriti o Waitangi and work in partnership with tangata whenua in relation to their valued landscapes and heritage.
- **Planting the right tree in the right location** – We will ensure new plantings are planned diligently to ensure trees can reach full maturity whilst minimising maintenance time, cost and risk to infrastructure, property and people.
- **Caring for our urban ngahere** – We will provide and protect a diverse and sustainable urban forest.
- **Provide green infrastructure** – We will ensure the built environment benefits from green infrastructure to improve livability within communities and neighbourhoods.

Our goals

Trees are living organisms which grow, age, and eventually die; however, Council has lost many trees before their natural life is due to end. To maintain and grow our tree population, Council will plan plantings for the long-term success of the tree, promote healthy growth, care for the trees we currently have, and compensate for tree loss.

The Strategy has four goals:

1. **Plant** – we will increase our amenity tree population and increase the resilience and diversity of the tree population
2. **Manage and protect** – we will value and protect our trees and in particular our urban forests.
3. **Empower** – we will support and empower our communities to care for the urban forest.
4. **Plan** – we will plan for a leafier future.

Goal 1: Whakatōngia | Plant

Trees are living organisms which grow, age, and eventually die. Council aims to minimise occurrences of trees prematurely dying, being vandalised, or requiring removal. To maintain and grow our tree population, we will plan plantings for the long-term success of the tree, promote healthy growth, care for the trees we currently have, and compensate for tree loss.

We will increase canopy cover

Trees take a significant amount of time to grow and therefore it is important to take steps now to ensure that an increased canopy cover can be enjoyed by our communities in the future. Within 20 years we aim to see the population of Council's amenity trees increase by 20% and to have new plantings distributed fairly amongst the townships.

We will plant with forethought

Currently, the tree planting regime is predominantly reactive, and decisions are often made in isolation. We aim to implement a more proactive and integrated approach to tree management to ensure that **the right tree is planted in the right location**. In the long term, this will allow trees to meet full maturity whilst minimising maintenance time, cost and risk to infrastructure, property and people.

In order to achieve a more balanced mix of ages, tree planting needs to be a regular practice so that any trees that are removed are replaced. Our analysis showed a balanced tree size distribution across the district and a significant proportion of tall trees, the height of trees correlating with

the high percentage of mature trees across the district. It will be important to monitor how tree size distribution changes as more mature trees die and are replaced through succession planting. Taller and larger canopied trees provide the most environmental and economic benefit by being invaluable habitat for local wildlife, providing more shade, having extensive root systems and have higher carbon sequestration rates.

We will encourage food sovereignty and cultural plantings

The people of Aotearoa, tangata whenua and tangata tiriti have a responsibility around kaitiakitanga for our natural environment including trees. Indigenous biodiversity is valued by tangata whenua for providing kai, rongoā medicines and resources such as berries, bark, feathers, harakeke, kiekie and pīngao for weaving, and tōtara and other native trees for carving and building. The undertaking of cultural harvests remains important for tangata whenua today, and therefore we will consider the cultural impact of plantings when planning for future plantings.

Food sovereignty is the practice of ensuring food-secure futures for whānau in harmony with Te Ao Tūroa (the natural world). It is about whānau having access to sufficient, safe and nutritious food that is produced locally. Harvesting mahinga kai either as a whānau or a community is a way to nurture hauora (wellbeing) at the same time as reconnecting us with the energies of Papatūānuku and Ranginui. The land that is cared for by Council is mostly publicly available and can be a great opportunity to provide food sovereignty. Historically, Council has been hesitant to plant fruit and nut trees as these trees require frequent maintenance and Council does not typically have the staffing to provide appropriate care for these trees. Recently Council has seen fruit and nut trees grow successfully where the community has been involved with the care and upkeep of the tree. This is particularly successful in community gardens, where the community has kaitiakitanga over the plants they harvest.

Goal 2: Manaakitia | Manage and protect

Protecting our existing trees is important for their long-term preservation and safeguarding the values and benefits they provide. Achieving the long-term vision of growing and protecting a sustainable tree population not only depends on planting more trees but also looking after them during their life. This will be achieved through the objectives outlined below.

We will ensure that trees are monitored and maintained effectively

Around 92% of the district's amenity tree population is in at least 'good' condition. Best practice indicates that 90% of trees should be healthy, therefore these figures demonstrate Council is providing an active and effective maintenance program. Trees in 'poor' condition likely only have around 2-3 years of life remaining and replacements will need to be planned through a succession planting program. Only Matatā has a tree population which is less than 90% healthy (87%) and it is expected that by implementing a proactive maintenance program, this number will increase into the 90% range. Only 15% of all trees across the district require non-essential maintenance which is also a good indication of a healthy tree population. Healthy trees grow quicker, defend themselves against abiotic stresses and pest/disease incursions and provide the greatest ecosystem service benefits. Therefore, health information is an

important tool for informing sound proactive management, together with keeping track of trees in fair or poor health for further inspection. This will help determine if any early interventions can be made to improve tree health or planning succession planting early to maintain a diverse tree population.

We will reduce safety hazards relating to trees

Trees may at times present a significant hazard to people or property when a tree becomes unhealthy, is compromised by bad weather or has suffered significant damage. In these instances, trees need to be sufficiently maintained or removed to eliminate the danger or threat posed. If the condition of a tree declines and is flagged by Council staff using the tree inventory, hazards are less likely to occur as the tree can be monitored and maintained to reduce risk. When appropriate, emergency works provisions can be invoked to immediately remove the risk.

Trees also have the ability to compromise road user and pedestrian safety by restricting sightlines along roadways, signs and vehicle crossings, blocking footpaths, interfering with electricity lines, and hindering crime prevention through environmental design principles.

We will increase the resilience and diversity of the tree population

Planting a mixed range of tree species has many environmental and conservation benefits. It can provide a habitat for birds and bees, protect against pests and environmental hazards, improve water quality and protect soil and land from erosion. Diversity among tree species is key to reducing the risk of our tree population being decimated by pests and disease; especially in lieu of the impacts of climate change and the emergence of Myrtle Rust in surrounding areas. All trees are at risk of pest or disease outbreak, some result in life-threatening consequences for the tree, others affect the vigour or aesthetics of the tree, which can result in weakening structural integrity and loss of habitat. Fortunately, we generally have a diverse tree population, however it will be important to continue to plant a variety of tree species to reduce the chances of single-species directed pests or diseases significantly affecting the overall tree population.

The analysis of our tree population showed that although we had a good balance of exotic and native trees, this balance was skewed significantly between townships. Inland towns are dominated by exotic trees, due to colder conditions and nutrient rich soils that suit exotic trees well. Coastal townships have a high percentage of native trees, which is heavily influenced by the presence of Pōhutukawa. It is preferable to have a good diversity of native and exotic trees to provide the most environmental and social benefits.

Goal 3: Whakamanahia | Empower

The success of this Strategy and a thriving urban forest relies on the support and involvement of our community, tangata whenua and key stakeholders. We will achieve this through the objectives outlined below.

We will help increase knowledge and appreciation of trees

Whakatāne District communities have strong connections to the nature that surrounds them. We understand the significance of tangata whenua and our communities relationship to the ngahere and want to help enhance and spread knowledge around our valuable urban forest and its benefits.

We will involve our partners in tree management

Tree management often requires both interdepartmental cooperation and collaborative engagement with tangata whenua, Bay of Plenty Regional Council, Department of Conservation, Forest and Bird, Whakatāne Kiwi Trust and other organisations who have significant interest in tree-related decisions and discussions. We intend to work together to create an environment that acknowledges the natural history of the district and is sustainable, biodiverse and beautiful for our communities to enjoy.

We will facilitate and support community tree planting

Local communities, schools and other community groups play a key role in growing, protecting and enhancing our urban forest through tree planting, tree care and environmental educational activities. Through care groups and other voluntary opportunities, our communities are encouraged to take an active role in their local green spaces and streetscapes, fostering a sense of ownership. These activities promote positive relationships between individuals and their community through social interaction and helps to educate about local flora, fauna and green spaces. Typical activities include tree planting, tree care, engagement and surrounding pest plant control.

The support of key business groups and developers is crucial to protecting and growing our tree population sustainably. The decisions and actions of these stakeholders can significantly influence our trees. Developers often commit to planting trees through the subdivision process, and businesses can get involved by supporting tree initiatives such as the One Billion Trees Program and Trees that Count or helping to deliver initiatives such as education programmes.

We will encourage community involvement and interest in caring for our urban forest.

Goal 4: Whakamaheretia | Plan

This Strategy aims to promote the sustainable growth of the urban forest through the objectives outlined below.

We will plan for a greener future

Many of the tree-related issues that we are experiencing now are a result of decisions made at the time of planting often decades ago. In many cases, planting decisions appear appropriate at the time but become problematic as the urban landscape changes due to development.

The urban growth that we have seen in the past 10 years is expected to continue rising in the future. New housing and infrastructure is required to meet this demand, which in turn increases the demand for quality green spaces. Available space on private property, in reserves and along streets is shrinking, and as a result, finding space to plant appropriate trees becomes increasingly challenging as trees need space above and below ground to thrive and fully extract the benefits they provide. Additionally, urban development often results in the removal of trees to make way for buildings and infrastructure. Many don't perceive trees to be an essential asset which means they are rarely considered in the initial design process when developing hard infrastructure. There is an opportunity to develop a guide for new subdivisions, encouraging developers to accommodate quality tree plantings at the inception of the development process.

A strategic framework is also required to identify planting opportunities, priorities and maintenance issues and to proactively plan for succession plantings. This will be achieved through identifying actions to undertake in the course of this Strategy, and by creating a Policy for tree work that can incorporate the guides, standards and plans required to achieve our goals.

We will be resourceful

Trees incur significant costs through their lifecycle from planting to removal. These costs are often exacerbated in urban settings where trees are often planted close to other infrastructure such as buildings and pavements. Council only has a finite amount of resources committed to the planting, maintenance and removal of trees and must operate with financial prudence, therefore managing trees efficiently is a high priority. While external funding and fundraising opportunities exist, they are often one-off or short-term grants which are not aimed at supporting long-term management costs. Long-term investment planning is required to ensure that maintenance and growth of the tree population is financially sustainable.

We will support biodiversity

Providing a variety of native tree species is key to improving biodiversity as native trees provide native birds and insects with food and shelter. Green corridors are defined as areas of habitat that connects wildlife populations separated by human activities and can be linear strips of native trees, native wildflower or sedge corridors. Whakatāne townships currently lack green corridors, however they should be recognised and planned for to connect our biodiverse spaces. Embracing green corridors is particularly important when planning for new developments, however supporting green corridors can be as simple as planting more trees in and near areas of existing habitat to improve the quality of the habitats.

We will plan to have an urban forest resilient to climate change

Climate change is the biggest environmental challenge of our time. It is already affecting our climate, agriculture, native ecosystems, infrastructure, health and biosecurity. The Whakatāne Climate Change Strategy (2020) and Whakatāne Draft Climate Pathway (2024-27) provides the roadmap for meeting our climate change targets and the Climate Change Action Plan show the specific steps that we will take to get there.

Predicted increases in temperature associated with climate change can push our existing tree species to the edge of their thermal capacity/limit, with some species unable to adapt and thus survive. Hotter and drier conditions for prolonged spells not only threatens existing tree species (particularly old and young) but also reduces the amount of time in the year for planting. The seasonality of rainfall is expected to change with spring and summer generally becoming drier, and winter and autumn becoming wetter. Some species may not survive the change in conditions. This being said, trees also have considerable potential to help tackle climate change, because of the many climate mitigation and adaptation benefits that they provide. High CO₂ emissions are a key contributor to climate change and trees can sequester carbon dioxide which is widely recognised as a key mitigation measure for climate change. It's important to note that trees are dynamic and can release, as well as capture, CO₂. For example, if a tree dies and the wood decays, or if the tree is burnt, then the CO₂ stored within it is released back into the atmosphere.

Trees also play an important role in climate change adaptation by providing areas of shade in built-up areas as well as providing flood risk management through soil interception and filtration. Trees also improve air temperature, making more sustainable forms of transport such as walking and biking more appealing as well as filtering atmospheric pollutants such as sulphur dioxide thereby improving air quality.

Within this context, trees provide Council with both a mitigation and an adaptation opportunity to respond and plan to challenges presented by climate change.

Trees take decades to establish and reach maturity which means impacts occur slowly, therefore planting now is unlikely to significantly contribute to our short-term (2030) and national long-term emissions targets (2050). However, it can provide substantial long-term benefits for future generations (post 2050). The utilisation of mātauranga from iwi and hapū may assist with planning for climate change, as understanding the historical context of plantings may help guide climate adaption. In the short term, protecting our existing trees from removal is vital in ensuring that we don't exacerbate climate change.

When selecting tree species to plant across the district, we will need to take into account the climatic tolerance range of tree species and assess these against predicted future climate metrics. Some existing trees may need to be replaced earlier than expected if they are unable to adapt. There may also be tree species that aren't currently present in the district which may prove to be well-suited to future predicted local conditions. Fostering a range of healthy, diverse and structurally sound trees across the Whakatāne District will add to the likelihood that these trees will adapt well to the future challenges of climate change.

We will plan for harmonious green infrastructure

Infrastructure and services conflict

Trees have the potential to interfere with infrastructure and services and can result in unnecessary costs. For example, large trees planted under powerlines will cause interference issues if they are not continually maintained, which can result in high costs for pruning, affecting their form and contribution to the enrichment of our spaces.

Tree roots have the ability to spread and break pavement surfaces, crack pipes and interfere with underground services and streetlights. This is especially common where trees are planted within road berms and where power and water services are located. These issues are currently resolved reactively, by removing the roots and fixing broken infrastructure when this happens. This process is costly and compromises the health of the affected tree.

Most conflicts can be avoided by ensuring that new plantings are suitable for the space they are to inhabit. There is an opportunity to develop planting programs that consider and plan for current and future services so that the right tree is planted for now and in the future.

Trees becoming a nuisance

Trees have potential to adversely affect people and properties, and can give rise to a number of operational issues, such as:

- Excessive leaf or fruit drop
- Excessive shading and blocked views on private property
- Root intrusion into private property
- Some trees can trigger allergy symptoms and respiratory ailments
- Trees and vegetation on private property can affect road and footpath users

Trees becoming a nuisance can lead to a negative perception of trees. Encouraging community participation in tree planting and/or maintenance and through education is helpful in raising awareness of the benefits of trees and that a healthy tree population is essential.

Existing trees are likely culprits of nuisance reports due to the changing nature of the urban landscape and historical plantings. We will endeavour to preserve and protect as many trees as possible, and will consider all possible options prior to removal, which is considered the last resort. These trees will be actively managed to reduce nuisance effects wherever possible.

New plantings will be planned to reduce nuisance effects. To reduce shading on residential houses, the location and size of a tree will be considered prior to planting. If possible, trees will be planted on berms on the southern side of residential dwellings, to limit adverse shading. A 'Tree Species List' will be developed to guide planting for different scenarios in order to minimise adverse nuisance effects by ensuring the tree is suitable for the space.

Challenges of planting around hard surfaces

Townships have increasing quantities of hard/impermeable surfaces like roads and concrete that stops the ground from absorbing water. This is a challenge for tree management due to:

- Rain that falls near trees runs off into drains instead of soaking into their rooting medium
- Limiting space to plant new or replacement trees
- Limiting soil volume for existing and new trees

Planting in impermeable locations increases planting costs, as sites may need to be built with imported soil or special structural soils to create soil volume under load bearing hardscape. Water Sensitive Urban Design (WSUD) aims to

improve capture, treatment, storage and re-use of stormwater before it has a chance to pollute our waterways. WSUD principles can be incorporated into urban planning to manage, protect and conserve water in the urban environment, which can then be used to water trees. We have an opportunity to investigate and incorporate WSUD into new developments.

Vandalism

Many trees across the district have suffered damage from vandalism in the past which has been costly for maintenance and replacement. The potential for vandalism has become an obstacle to planting or replacing trees through fear of wasted resources. We endeavour to reduce vandalism through education, community incentives, planting of larger specimens and prosecutions.

Creating character plantings

The visual character of each street and reserve is important to creating identity and a sense of place. When selecting what to plant, we will consider the existing visual character of the area to determine whether new trees should maintain uniformity and consistency with the area, or select a new species to enhance the character of the area. An advantage of maintaining uniform plantings is that maintenance is more efficient when managing single species. However, planting a range of tree species may be more appropriate for the location and can help increase species diversity.

Our actions *Ā mātau mahi*

What we will do to make a difference	Goal alignment	How will we achieve this?	What support is required?	Timing
20% increase in amenity tree population	Plant	Plant at least 50 trees per year	Budget increase to allow for increases in tree cost and staffing over time	Annually
Aim to ensure future plantings are distributed equitably throughout townships	Plant	Use the tree per population base data yearly to help determine planting locations	Community engagement to determine suitable planting locations	Annually
Identify low provision areas for future plantings	Plant	Carry out an annual district-wide assessment to identify amenity planting locations or underutilised land that could be suitable for conversion to high value tree collections, ecological pathways or native re-vegetation	Engagement with community to determine suitable planting locations	Annually
Plant the right tree for the right location	Plant	Create guide to assist decision makers with selecting the right tree to plant in the right location	Engagement with iwi, stakeholders, and arborists	2024
Seek iwi and hapū mātauranga	Plant, manage and protect, empower	Involve iwi and hapū in decision making process	Engagement with iwi and hapū	Ongoing
Establish plantings for cultural harvest purposes	Plant	Support initiatives to create cultural planting sites	Engagement with iwi and hapū	When requested
Support initiatives such as Matariki Tū Rākau and Arbor Day (week) to encourage community plantings	Plant	Support community initiatives through social media platforms	BAU	When requested
Increase public awareness of important trees	Plant, empower	Establish a labelling programme for Notable Trees and trees which are important for food or medicines	Funding for labelling plaques	2024-2030

What we will do to make a difference	Goal alignment	How will we achieve this?	What support is required?	Timing
Support community gardens	Plant	Support community groups by offering advice and providing 'Licenses to Occupy Council Land' for suitable proposals	Community support	When requested
Plant more trees that provide food or medicine	Plant	Support the planting of fruit and nut trees within community gardens or where there is sufficient support to maintain the trees	Community support	When requested
Protect native forest	Manage and protect	<ul style="list-style-type: none"> Support the Whakatāne and Ōhope Sites Environmental Programme through a partnership to protect and enhance several ecologically significant sites including Mokorua Bush and Kōhī Point Scenic reserves Encourage and support community volunteer groups that maintain and protect our forests Protect and enhance remnant patches of native vegetation through appropriate adjacent street and reserve tree plantings 	Partnerships and community support	Ongoing
Ensure that trees are monitored and maintained effectively	Manage and protect	<p>Implement a proactive maintenance program that:</p> <ul style="list-style-type: none"> Actively monitors trees Strives for 90% of trees in 'good' condition Allows staff to flag trees in worsening conditions to assess if they require help or removal 	Budget for software to undertake proactive maintenance	2024-2030
Consider how to use felled trees	Manage and protect	Investigate the opportunity to reuse felled trees for projects	Community, iwi and hapū engagement	When opportunity presents
Reduce safety hazards relating to trees	Manage and protect	Develop a Tree Risk Management Plan to proactively assess and mitigate the risk of tree related hazards	BAU	2024-2030
Prioritise the retention and protection of existing trees	Manage and protect	<ul style="list-style-type: none"> Protect tree retention through measures in a dedicated Tree Policy Ensure that alternative options are fully investigated before considering tree removal 	BAU	Ongoing

What we will do to make a difference	Goal alignment	How will we achieve this?	What support is required?	Timing
Provide a dedicated webpage for tree information	Empower	Develop web content to provide important tree information such as <ul style="list-style-type: none"> • Providing guidance on how to plant and care for trees on private land • Sharing useful Council information • Publicising events and opportunities related to trees such as volunteer planting and Arbor Day 	BAU	2024-2026
Involve our communities with tree care	Empower	Prioritise opportunities to involve our communities in tree planting, care and management	BAU	Ongoing
Develop a policy to assist with tree related maintenance and decision making	Plan	Develop a Tree Policy	Due for completion mid 2024	2024
Plan for future character plantings	Plan	Develop a planting programme identifying planting locations and themes, ensuring a rich diversity of species and ages	Community, iwi and hapū engagement	2030
Assist developers and planners with tree related resource consenting matters	Plan	<ul style="list-style-type: none"> • Develop a subdivision design guide for planting • Propose model resource consent conditions for tree planting and management to act as a guide for Council is considering imposing conditions on development • Develop a comprehensive list of engineering design standards to allow trees to be incorporated into our streets and other infrastructure environments 	BAU	2030
Ensure best practice for tree planting	Plan	Develop a planting guide for street and reserve trees	BAU	2024-2030
Prepare for upcoming projects	Plan	Identify and prepare a pipeline of projects that are ready to go when funding becomes available	BAU	Ongoing

What we will do to make a difference	Goal alignment	How will we achieve this?	What support is required?	Timing
Ensure developments provide appropriate tree cover and maintenance plans	Plan	Maximise investment through resource consenting via financial contributions or commitments from developers to deliver and maintain appropriate trees. This can be incorporated into a subdivision design guide for planting	BAU	Ongoing
Incorporate Water Sensitive Design Principals into planting decisions	Manage and protect, plan	Incorporate WSUD Principles into a subdivision design guide, Council projects and developments	BAU	2024-2030
Reduce tree vandalism	Manage and protect, plan	Include appropriate action within the 'Tree Policy' to inform how to react to the wilful damage of trees including: <ul style="list-style-type: none"> • Prosecutions that may be applied • Replanting of two replacement trees if the tree perishes • Erection of banners or signage showcasing the location where a tree has been vandalised to enhance the views from private property 	BAU	2024
Increase the population of Notable Trees	Plant, manage and protect, plan	Carry out an opportunities assessment to identify potential locations to add further historic and/or culturally significant, unique or other highly valued trees for inclusion in the District Plan's Notable Tree List or into a township planting plan	Community, iwi and hapū engagement	2024-2030
Investment and funding	Plan	Investigate funding options	BAU, community support	Ongoing



Measuring success

Ngā inenga whakatipu

Actions will be monitored to determine if they are meeting the objectives of the key focus areas. The Strategy will be subject to a progress review after two years and then every five years thereafter. A re-prioritisation of remaining actions will be undertaken after each review, in response to any funding opportunities, legislative changes or a change in strategic direction. The key focus areas and the relevant actions will remain flexible to meet the changing needs of the community over the life of the Strategy.

Achieving our goals requires more investment than we currently have available to put towards our urban ngahere. Investment is required through resourcing including staffing to plan and carry out maintenance on an increasing tree stock, and also through funding in order to plant and maintain more trees.

Glossary

Kuputaka

Amenity tree	Trees that are planted and actively maintained by Council, that have an environmental, recreational, and aesthetic function or value.
Approved arborist	A person who has a recognised arboricultural qualification (minimum of NZQA Level 4 Certificate in Arboriculture or equivalent) and five years industry experience.
Arboriculture	The cultivation, management, and study of individual trees, shrubs, vines, and other perennial woody plants. Arboriculture studies how these plants grow and respond to cultural practices and to their environment. The practice of arboriculture includes cultural techniques such as selection, planting, training, fertilisation, pest and pathogen control, pruning, shaping, and removal.
Arterial road	A high main route with an annual average daily traffic count of 5000.
Biodiversity	The wide variety of ecosystems and living organisms from all sources including terrestrial, marine and other aquatic ecosystems, their habitats and their genes, and the ecological complexes which they are part. Biodiversity also refers to the degree of variation of life forms within a given species or ecosystem, and is a measure of the health of ecosystems

Climate change adaptation	Modifying the way we live and do things as a result of the changes we will experience, to reduce the impacts of climate change. While there is uncertainty about exactly how the effects of climate change will play out, it is certain that things will change and that change has already begun. How we are able to plan, respond, adapt and change will affect the level to which climate change poses a risk or an opportunity for our communities.
Climate change mitigation	Reducing the amount of change to our climate that we will experience in the future, through minimising or preventing the emission of greenhouse gases. Although a certain level of climate change is 'locked in' due to greenhouse gases that have already been emitted, we can reduce emissions now so that future impacts from climate change are reduced.
Commemorative trees	Trees planted on public land to commemorate a person or event. Trees are also donated by individuals and organisations.
Council land	Land that is owned or administered by Council, including local road reserves.
Crown lifting	The removal of lower branches of a tree to a given height. Branches are normally not lifted to more than one third of the trees total height.
Crown thinning	The selective removal of branches throughout the canopy of a tree.
Ecological	Modes of life, habits and relationships of living organisms and their environment.
Eco-sourced plant	Locally occurring, natural genetic plants materials.
Encroachment	A situation where the public recreational use or appreciation of a reserve is reduced or obstructed by the private use of a reserve. Alternatively, when public assets, like the roots or branches of a tree grow over or into a private property.
Environment	The physical and biological factors within a given site.
Exotic	Plant or animal introduced from another country.
Green infrastructure	A network of green spaces, wildlife corridors, WSUD, stormwater harvesting systems, reserves and rivers both planned and natural in our environment that provide a range of ecosystem services.
Hapū	A section of an extended kinship group (iwi).
Iwi	An extended kinship group – descended from a common ancestor and associated with a distinct territory
Kai	Food.
Kaitiaki	A guardian of our natural environment.
Large tree	A tree that exceeds 15 metres at full maturity.
Local/Access Roads	A low volume road providing access to many local areas.

Mahinga Kai	Garden, cultivation, food gathering site.
Mana	A supernatural force in a person, place, or object; prestige; spiritual power.
Mātauranga	Knowledge, wisdom and understanding of something which is often intergenerational.
Mature tree	A tree that is close to or has reached their full height and crown size.
Mauri	The life force and vital essence of a being or entity.
Medium tree	A tree that reaches between 8-15 metres at full maturity.
Minor trimming or pruning*	<ul style="list-style-type: none"> • Crown clearing, being the removal of dead, dying, diseased, crowded, weakly attached, low-vigour branches and waterspouts from the tree crown • Canopy lifting • Minor clearing of light branches (less than 50 centimetres in diameter) from proximity to existing power lines <i>*In accordance with accepted arboricultural practices</i>
Mōhiotanga	A sense of knowing.
Native	A plant or animal that is naturally occurring from New Zealand and not introduced.
Natural capital	The stock of natural assets, which includes biodiversity as well as earth, air and water. Urban centres depend on a healthy natural environment that continuously provides a range of benefits known as ‘ecosystem services’.
Natural target pruning	Method of removing branches that preserves the trees natural defences. Only branch tissue is removed, leaving the branch collar intact.
Ngahere	Bush or forest.
Notable Tree	<p>A tree or group of trees that are considered significant for their historical, botanical, landscape, amenity or cultural values and are identified as such in the Whakatāne Operative District Plan and listed in the Schedule of Notable Trees in the Plan.</p> <p>Notable Trees are protected under the Resource Management Act 1991 due to their significance for historic, botanical, landscape, amenity or cultural reasons. Notable Trees can be on public or private property. Rules in the District Plan apply to the maintenance or removal of Notable Trees and activities within the root zone.</p>
Paths	Includes off-road paths, footpaths and cycleways.
Papatūānuku	The Earth Mother, wife of Ranginui – the progenitors of all things.
Pest plant	A plant (many are considered weeds) that represents a threat because of its ability to invade or take over land that is productive or has important ecological or cultural values.
Primary Collector roads	Locally important roads that provide a primary distributor/collector function, linking significant local areas.

Pruning	Reducing the extent or crown of a tree by cutting away dead or overgrown branches or stems.
Rangatahi	Youth, young people.
Ranginui	The Sky Father, husband of Papatūānuku – the progenitors of all things.
Reserve tree	Council owned and managed trees within Council reserves.
Resilience	The capacity to deal with change and continue to develop. Ecological resilience refers to the capacity of an ecosystem or natural population to resist or recover from major changes in structure and function following natural or human-caused disturbances, without undergoing a shift to a vastly different regime but remaining within its natural variability and viability. Social resilience is the ability of human communities to withstand and recover from stresses, such as environmental change or social, economic or political upheaval. Resilience in societies and their life-supporting ecosystems is the key to sustainable development and is crucial in maintaining options for future human development.
Road reserve tree	Situated on road reserves that may not have been formally planted.
Rongoā	Natural Māori remedies and medicine encompassing spiritual elements.
Root zone	The area covered by the full extent to which roots spread from a tree(s).
Senescence	The process of growing old. In biology, senescence is a process by which a cell ages and permanently stops dividing but does not die.
Sequestration	The removal of greenhouse gases from the atmosphere, and absorption and long-term storage of carbon dioxide and other forms of carbon, usually by biomass such as trees, soils and crops, or technological measures over a period of time. It has been proposed as a way to slow down the atmospheric and marine accumulation of greenhouse gases, which are released by burning fossil fuels, to either mitigate or defer global warming and avoid dangerous climate change.
Significant Indigenous Biodiversity Sites	An area of indigenous vegetation or habitat of indigenous fauna that has been identified as significant using criteria in set 3 Indigenous Vegetation and Habitats of Indigenous Fauna in Appendix Criteria F of the Bay of Plenty Regional Policy Statement.
Small tree	A tree under 8 metres in height.
Solar access	The availability or penetration of sunlight.
Special Purpose roads	Waka Kotahi New Zealand Transport Agency roads managed by local councils.
Street tree	Council owned and managed trees along Council road reserves, planted with the intent of creating managed streetscapes that develop the character of the area.
Taiao	The natural environment and contexts within which we live.

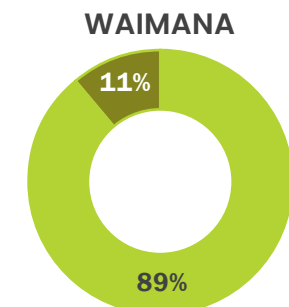
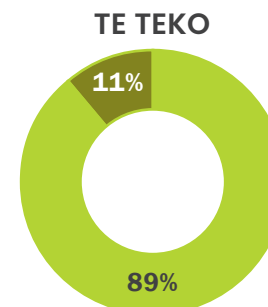
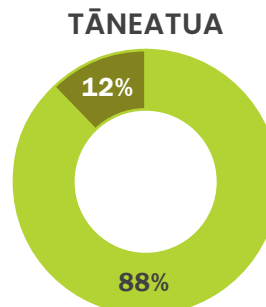
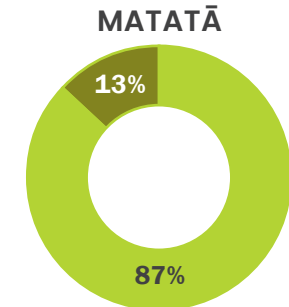
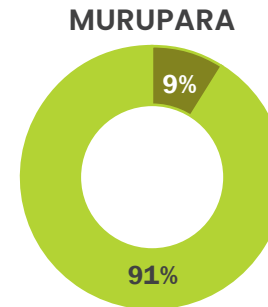
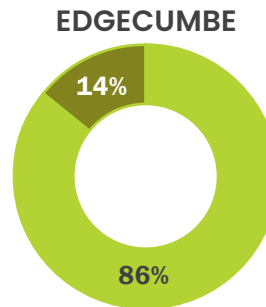
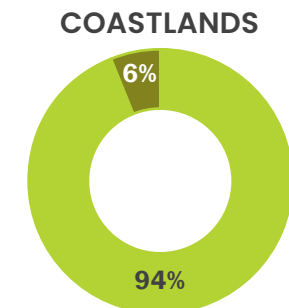
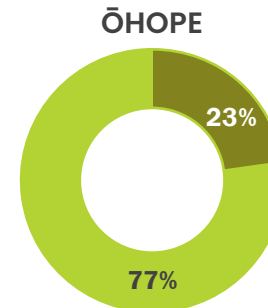
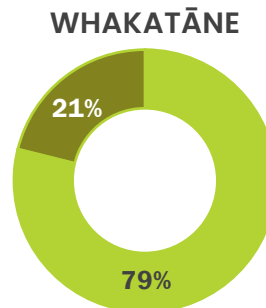
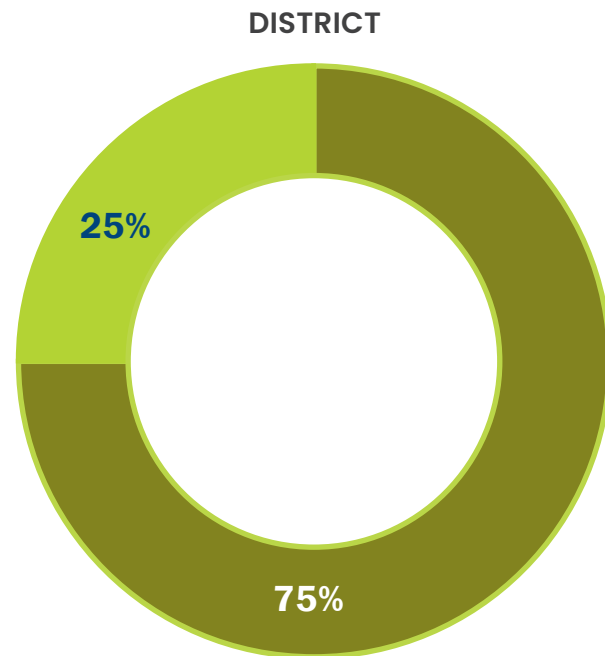
Tāne mahuta	Māori deity of the forests and birds and one of the children of Ranginui and Papatūānuku.
Tangata whenua	Māori, the indigenous peoples of Aotearoa, New Zealand.
Taonga	A treasure.
Tikanga	Customary system of Māori values, practices and protocols.
Topping	Removing whole tops of trees or large branches and/or trunks from the tops of trees, leaving stubs or lateral branches that are too small to assume the role of a terminal leader.
Tree	A perennial woody plant generally at least three metres in height at maturity, having an erect stem/s or trunk/s and a well-developed crown or leaf canopy.
Tree collection	A formal planting of specialised botanical or feature interest. Usually designed, recorded and maintained as a long-term permanent asset.
Tree crown	The top part of the tree, which features branches that grow out from the main trunk and support the various leaves used for photosynthesis.
Whakapapa	Tangata whenua genealogical descent.
Whānau	A term used that encompasses both immediate and extended family members, including sub-tribes and tribes encompassing the living and the dead – distinct from the Pākehā word ‘family’ that refers to a couple and their children as a nuclear social unit.
Wilful damage	The intentional, malicious and unlawful destruction of or damage to the property of another.

Appendix 1: Tree population statistics 2020

Canopy Cover

● Canopy ● Non-canopy

Canopy refers to trees that are at least three metres tall. The average canopy cover across our townships is 17.1 percent.

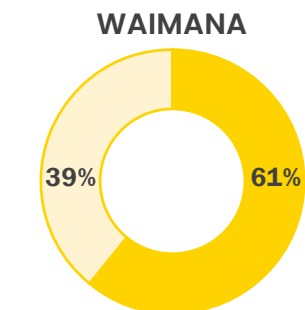
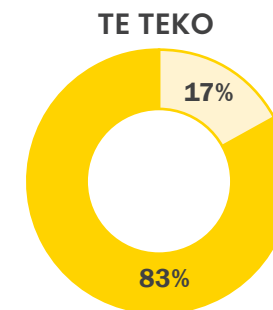
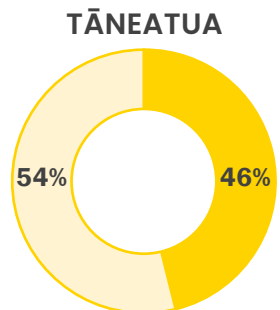
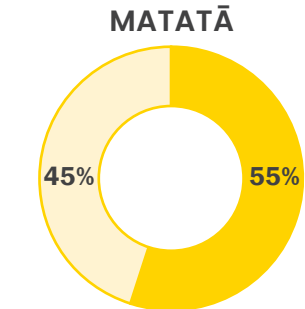
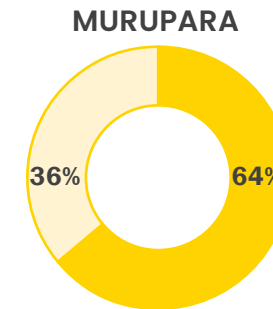
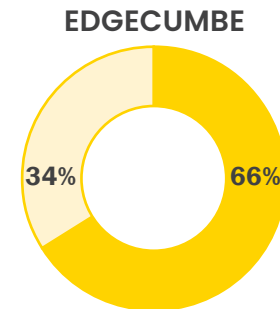
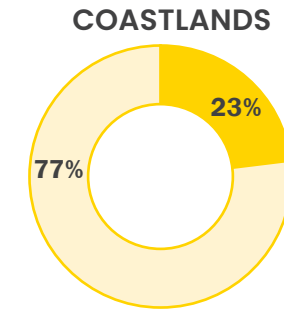
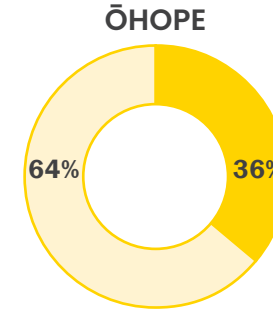
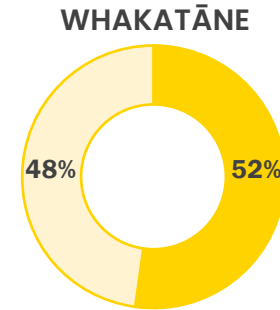
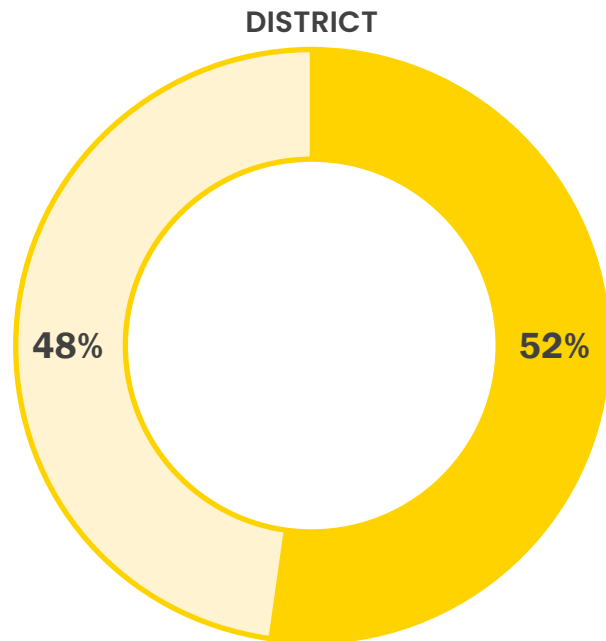


Size distribution of trees

● Small trees (1-10m)
 ● Large trees (10m+)

Large trees are preferable to small trees, however the maturity of a tree population should also be considered when understanding the size of trees.

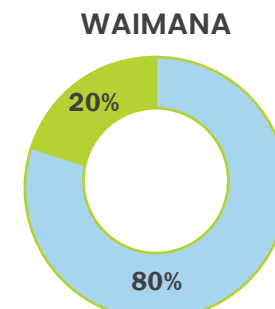
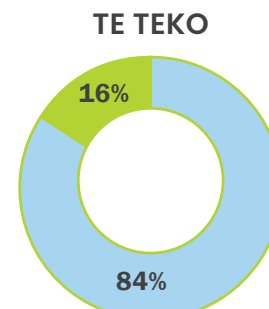
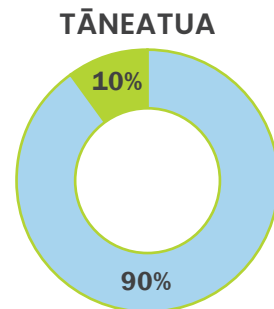
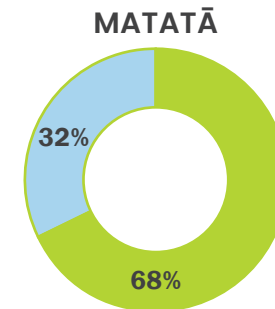
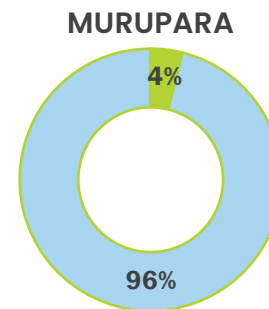
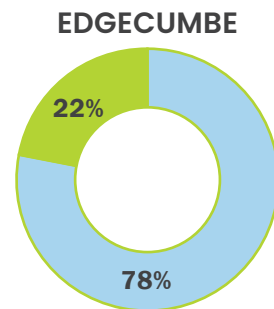
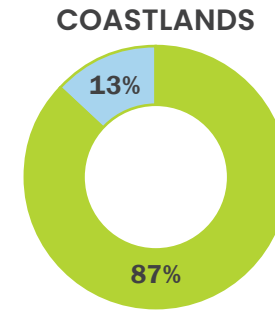
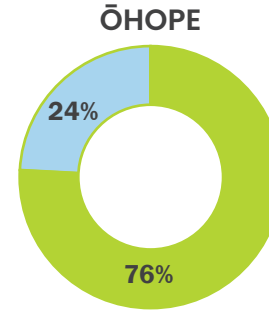
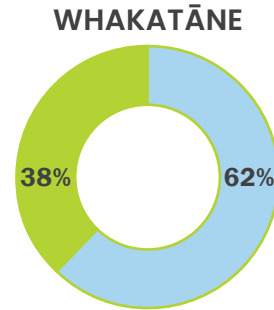
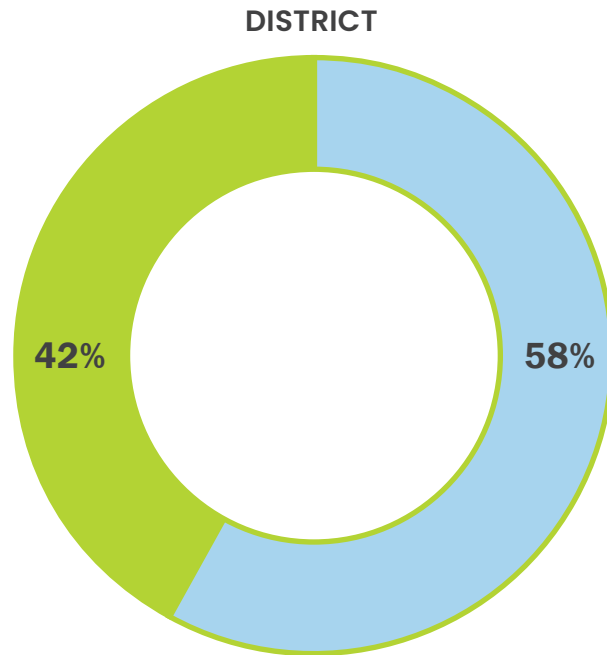
Opportunities should be sought throughout the district for planting of large trees, particularly in reserves which offer a more suitable environment of large trees to grow and thrive.



Exotic and native tree distribution



Exotic trees dominate the population for most of the district's townships. Although there are benefits of both native and exotic trees, native trees should be prioritised to achieve balance for future plantings, especially in Waimana, Te Teko, Tāneatua, Edgecumbe and Murupara.



Diversity of trees

Having a diverse tree population is important for providing an interesting and biodiverse landscape.

Some trees are iconic to our landscape, such as Pōhutukawa that has a powerful presence on our beautiful coastlines.

DISTRICT – TOP 10 SPECIES		
1	Metrosideros excelsa (Pōhutukawa)	23.7%
2	Melia azerdarach	4%
3	Liquidambar spp.	3.6%
4	Prunus spp.	3.5%
5	Alectryon excelsus (Tītoki)	3.3%
6	Dacrycarpus dacrydioides (Kahikatea)	3.3%
7	Betula pendula	3.2%
8	Camelia japonica	3%
9	Podocarpus totara (Tōtara)	2.5%
10	Callistemon viminalis	2.3%

WHAKATĀNE		
1	Metrosideros excelsa (Pōhutukawa)	15.7%
2	Melia azerdarach	5.3%
3	Dacrycarpus dacrydioides (Kahikatea)	4.9%

ŌHOPE		
1	Metrosideros excelsa (Pōhutukawa)	65.8%
2	Araucaria heterophylla	11.9%
3	Rhopalostylis sapida (Nīkau)	4.8%

COASTLANDS		
1	Metrosideros excelsa (Pōhutukawa)	78.9%
2	Corynocarpus laevigatus (karaka)	4.1%
3	Pinus spp.	3.3%

TE TEKŌ		
1	Platanus x acerifolia	24.8%
2	Quercus robur	21.1%
3	Prunus spp.	9.9%

MURUPARA		
1	Betula pendula	29.1%
2	Acer spp.	17.9%
3	Quercus palustris	11.2%

MATATĀ		
1	Metrosideros excelsa (Pōhutukawa)	36.5%
2	Pittosporum spp. (Karo)	22.5%
3	Melia azedarach	15.9%

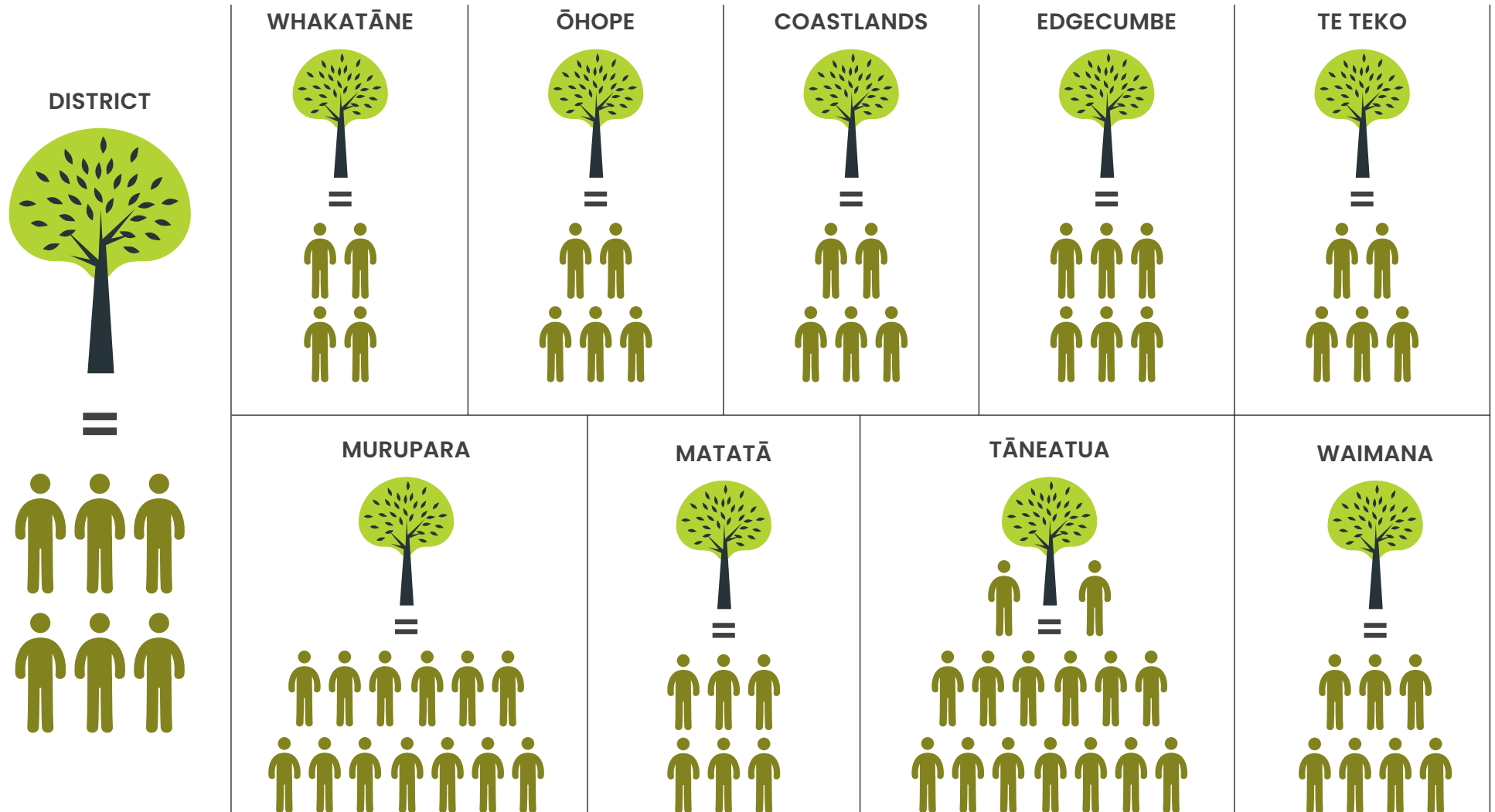
TĀNEATUA		
1	Melia azerdarach	32.8%
2	Magnolia spp.	32.8%
3	Amelanchier arborea	11.5%

EDGE CUMBE		
1	Quercus palustris	9.5%
2	Liquidambar spp.	9.2%
3	Acer spp. Alectryon excelsus (Tītoki)	6.4%

WAIMANA		
1	Acer spp.	23.3%
2	Camelia japonica	20%
3	Dacrycarpus dacrydioides (Kahikatea)	10%

Amenity tree provision per population

We provide around one tree for every six people in the Whakatāne District. Whakatāne has the highest amenity tree provision at one tree per four people. Priority areas for planting to increase the tree population are Tāneatua and Murupara which have comparatively low level of provision per person.



Condition of trees

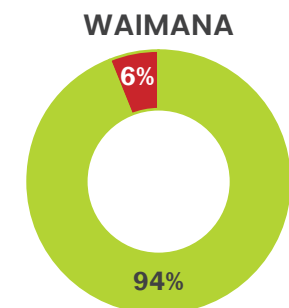
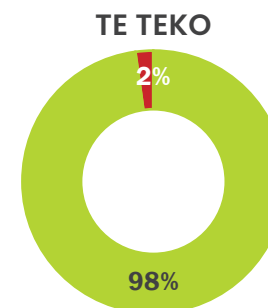
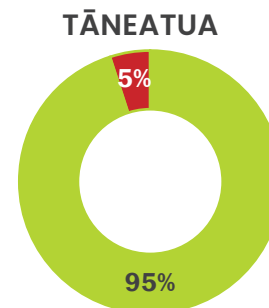
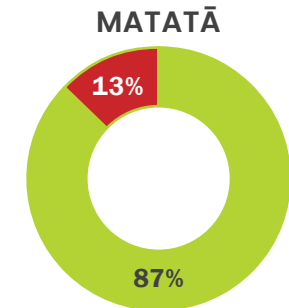
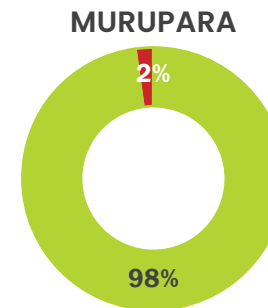
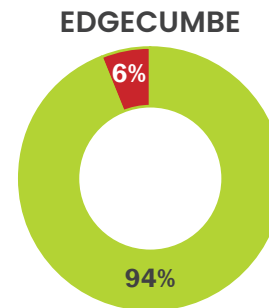
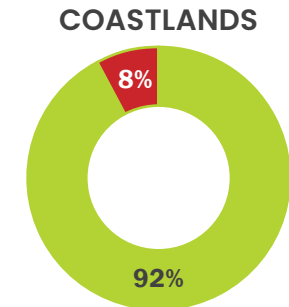
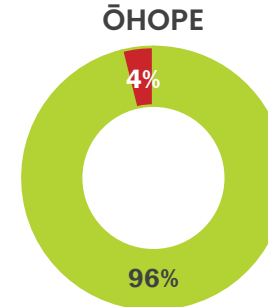
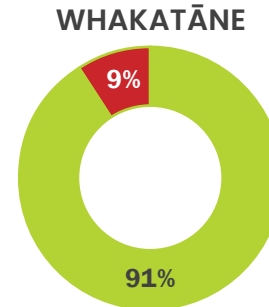
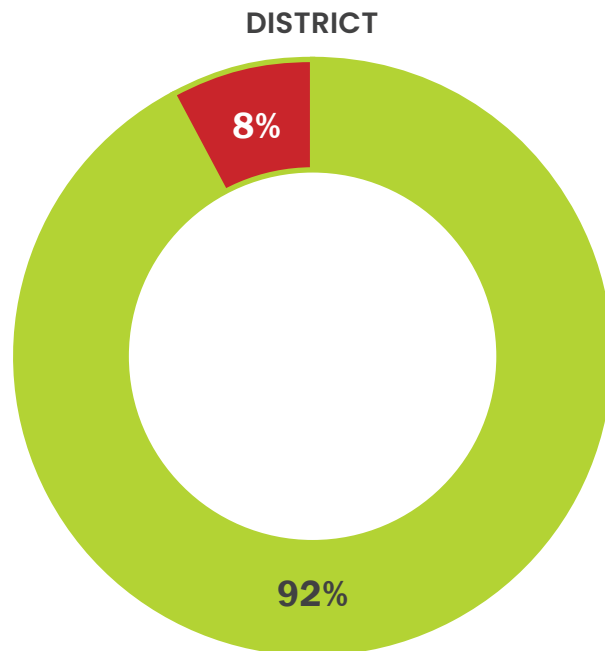
● Good ● Poor

'Healthy' refers to trees that are in at least good condition.
'Poor' trees includes those either dead or dying.

We intend to have a tree population that has at least 90% of trees in healthy condition.

Trees in Matatā will require maintenance/succession planting to reach this goal.

In addition, proactive maintenance will be required to ensure that all trees remain in a healthy condition.



Maturity of trees

● Juvenile
 ● Semi-mature
 ● Mature

Whakatāne, Ōhope, Edgecumbe, Murupara, Matatā, Te Teko and Waimana all have more mature tree populations. Increasing planting in these areas will improve the age distribution so that large groups of trees aren't lost and replaced over a short period.

