



BIODIVERSITY STRATEGY

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Ko te pūawaitanga harakeke, he rito whakakīnga whāruarua
When the flax blossoms, its many offspring begin their journey

Mayor's Message

Kōrero nā te Koromatua

Hauraki Ki Uta Hauraki ki Tai – From the maunga to the moana (mountains to the sea).

In a naturally beautiful part of the country like the Hauraki district, it would be easy to take nature for granted and think that it's looking after itself.

But that would be wrong. Intentionally looking after our environment is essential and we must all play a part.

Luckily, we live in a district where many residents, community groups and Iwi are passionate about caring for Papatūānuku, with people and schools involved in initiatives like riparian planting; pest trapping and sustainable living. Ka pai! We're keen to encourage more of this!

We also acknowledge the relationship mana whenua have with Te Taiao and the work they're already doing, using the generations of knowledge they hold for caring for the whenua.

Building whakawhanaungatanga (relationships) and understanding with Hauraki Iwi and our communities is a key part of this strategy. We know that to achieve wide-scale, meaningful and lasting change, we need to work together.

So, at Hauraki District Council, we're starting with our own backyard to make sure our decisions across all our activities take a holistic view of Te Taiao, including the management of our buildings, parks and reserves. Then we'll look further afield to our communities and landowners.

We've got the opportunity to make the district a place where thriving ecosystems and communities go hand in hand. We need your help to do it, so let's get started!

Toby Adams
Mayor
Hauraki District



Executive Summary

Whakarāpopoto matua

This strategy is about actively enhancing and connecting with biodiversity in the Hauraki District. It is also about whakawhanaungatanga (relationships), and building our relationship with Papatūānuku, alongside Council's relationship with Hauraki Iwi and the community.

The vision 'Whakamana te Taiao o Hauraki' (to actively restore the mana of the environment within Hauraki) represents the driving force and goal behind the strategy. A vision where biodiversity in the district is flourishing with no net loss, and we are reaping the associated benefits of this, such as improved water quality and flood mitigation.

The focus of this strategy is on supporting indigenous biodiversity back to levels it has been previously – a state where indigenous fauna is present in such abundance it can be a kai source again. However, the value that introduced species can bring is acknowledged. This strategy also covers those aspects of biodiversity not expressly protected in legislation.

The current state of biodiversity in the Hauraki District is very different to what it was historically. There has been significant land use change across the district since European arrival, including mining and land drainage schemes. There are, however, also areas of high biodiversity value within the Hauraki District, such as the Kōpū-ā-tai peat dome, the shelly beaches along the Wharekawa Coast, and the sandy beach at Whiritoa.

The strategy identifies 3 main goals – enhancement and protection of biodiversity, and that Hauraki's biodiversity is resilient in the face of a changing climate and human interactions. Objectives under each of these goals provide us with further direction on how we will achieve these goals, in line with the Biodiversity Strategy Action Plans.



Above: Whiritoa Beach



Above: Kōpū-ā-tai peat dome



Above: Wharekawa Coast



VISION



GOALS
Objectives



ACTIONS

- Kaitiakitanga
- Whakawhanaungatanga

Introduction

Kupu Whakataki

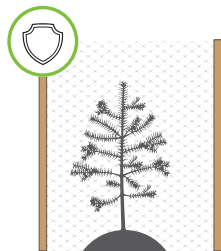
This strategy is about enhancing and protecting Hauraki's biodiversity, and working in partnership with Hauraki Iwi and the community. The strategy is focused on whanaungatanga (relationships), with emphasis on Council building relationships with Hauraki Iwi, key stakeholder groups and the wider community to achieve better biodiversity outcomes.

The strategy is centred around Hauraki Ki Uta Hauraki ki Tai – from the maunga to the moana (mountains to the sea). Biodiversity is interconnected, and flow on effects are everywhere. The guiding concept of ki uta ki tai will ensure that all biodiversity actions speak to each other and are mindful of flow on effects.

Three goals and their supporting objectives provide the basis for working towards achieving biodiversity outcomes:



ENHANCEMENT
of Hauraki's
biodiversity



PROTECTION
of Hauraki's
biodiversity



RESILIENT
Hauraki
biodiversity

This strategy will have an initial focus on land managed by Hauraki District Council, such as reserves, wastewater treatment plants, or pine plantations. This is purely for the initial stages of the strategy's life, with the aim being to lead by example. In the future, the strategy is envisioned to have a broader reach and actions encompassing more than just Council land. The foundations need to be laid first, by Council focusing on its own land, and extending the invitation to work with iwi, community groups, regional council, and private landowners going forward to achieve wider results. Council acknowledges that there are many other special places in the community, such as sites of significance to iwi, and part of the strategy's success will involve identifying and including these areas going forward, with community support.

While the area of focus for the strategy is the Hauraki District, we understand the importance of the interconnections across ecological and cultural landscapes. Our focus is on playing our part to join up the nature-based stepping stones (ecological corridors) within the Hauraki District, starting with our Council reserves. In doing so, this mahi (work) will contribute to creating ecological pathways from the maunga to the moana. When biodiversity is flourishing, so are we.

Whakamana te
Taiao o Hauraki



To actively restore the
mana of the environment
within Hauraki.



Hauraki District

Our district sits at the southern end of the Coromandel Peninsula or Te Tara o te Ika a Māui – the barb of the fish of Māui. It is geographically diverse and stretches from the Wharekawa Coast (Kaiaua and Pūkoro/Miranda) along the Firth of Thames in Tīkapa Moana (the Hauraki Gulf) to the east coast beaches at Whiritoa. Between lies the dairy farms and peat wetlands of the Hauraki Plains, the rugged Karangahake Gorge and Kaimai/Coromandel ranges, and the farmlands of the Golden Valley, Waihi.

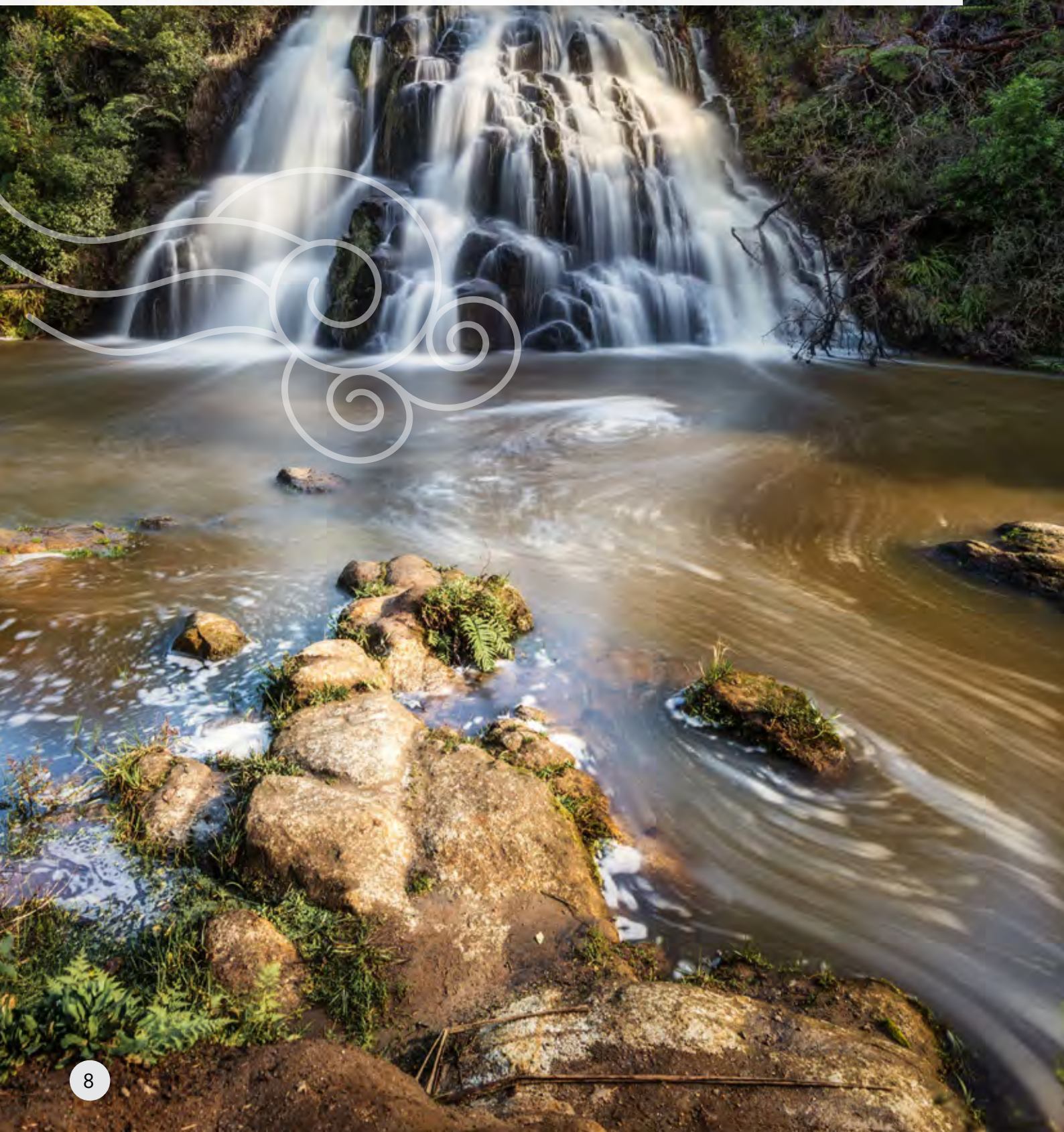
The district is made up of three main town centres – Waihi, Paeroa, and Ngātea. There are a number of smaller settlements in the district, including Kerepēhi, Tūrua, Waitakaruru, Kaiaua, Karangahake, Waikino, and the coastal settlement of Whiritoa.

Our district is overseen by beautiful maunga (mountains) including Taumaharua (418m) and Karangahake (555m), and the neighbouring Te Aroha (952m) and Moehau (892m), also called Te Moenga i haui a Poutama and Te Moengahau-o-Tamatekapua (the windy sleeping place of Tamatekapua). We sit within the rohe (area) of the Iwi of Hauraki, which stretches from Mahurangi in the north to Ngā Kuri a Whārei (south of Waihi Beach) in the south.

Hauraki is home to a wide variety of biodiversity, both indigenous and introduced, some of which has significance on an international scale (the Kōpū-ā-tai peat dome was established as a Ramsar site in 1989, alongside the Firth of Thames wetlands in 1990). Two significant awa, the Waihou and the Piako, flow through the district and into Tīkapa Moana (the Firth of Thames). The Waihou Awa is joined by the Ōhinemuri Awa, another significant awa in the district, near the town of Paeroa. There are a number of smaller streams, equally of value, running through our townships – such as the Hape Stream in Paeroa and the Waitete Stream in Waihi.



Why create a Biodiversity Strategy?



Key legislative and strategic drivers

Council has a number of legal imperatives to enhance and protect nature and biodiversity, and provide for people's wellbeing, alongside other non-statutory strategies and plans.

NATIONAL

- Resource Management Act 1991
- National Policy Statement on Indigenous Biodiversity 2023
- Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020
- Local Government Act 2002
- Predator Free 2050
- National Policy Statement for Freshwater Management

REGIONAL

- Waikato Regional Policy Statement 2016
- Waikato Regional Pest Management Plan 2022-2032
- Waikato Biodiversity Accord
- Waikato Regional Biodiversity Strategy (under development)

LOCAL

- Community Outcomes; Healthy environment | Te Mauri o te Taiao, Connected people | Tūhono, Vibrant and safe communities | Te Oranga pai o te Hapori, Strong economy | Oranga Ōhanga
- Hauraki District Council Long Term Plan
- Hauraki District Plan
- Paeroa, Ngātea and Kerepēhi Placemaking Plans
- Hauraki District Council Reserve Management Plan
- Wharekawa Coast 2120 Community Plan

What is biodiversity?

Biodiversity is a shortened term for 'biological diversity', referring to the level of diversity present in the natural world.

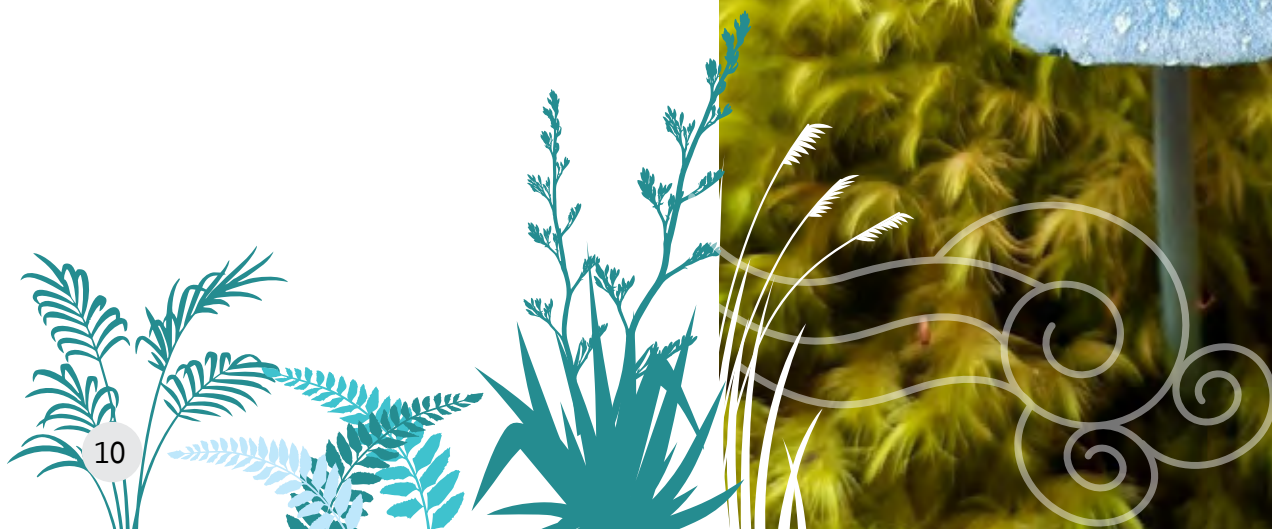
Biodiversity is the part of nature that is alive, and includes every living thing on earth. It is the variety and variability of life on earth, including plants, animals, bacteria, and fungi. All of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life. Biodiversity supports everything in nature that we need to survive, such as food, clean water, medicine, and shelter. A common way to measure biodiversity is to count the total number of species living within a particular area.

Indigenous biodiversity means the living species that occur naturally in Aotearoa New Zealand. This includes all forms of indigenous flora, fauna, fungi, and their habitats, and the ecosystems they are a part of. The Hauraki District is home to indigenous plant and animal species, as well as rare ecosystems such as the peat domes on the Hauraki Plains and the chenier plains and intertidal mudflats on the Wharekawa Coast.

This strategy has a focus on the indigenous species present in the Hauraki District, but also acknowledges other non-indigenous species, habitats and systems that support indigenous biodiversity and our communities.



An ecosystem is a geographic area in which plants, animals and other living species (such as fungi) work together alongside weather and landscape to form a bubble of life. They can also be thought of as a community of living species.



What is nature?

Nature and biodiversity are very closely linked, but are different things. Nature is all around us, and is essential for our livelihoods, health, economic wellbeing and food security. Te Mana o Te Taiao, Aotearoa New Zealand’s National Biodiversity Strategy, states *‘Clean air and water, the food we farm, catch or hunt, and our tourism and primary industry-based economy all depend on nature.’*

Nature is all the existing systems created at the same time as the earth – all the features and processes, such as the weather, sea and mountains. Nature plays an essential role in environmental, social, cultural and economic wellbeing. In Māori culture, Papatūānuku, Earth Mother, represents nature and the birthplace of all things. Te Ao Māori emphasises

the importance of relationships between nature and people.

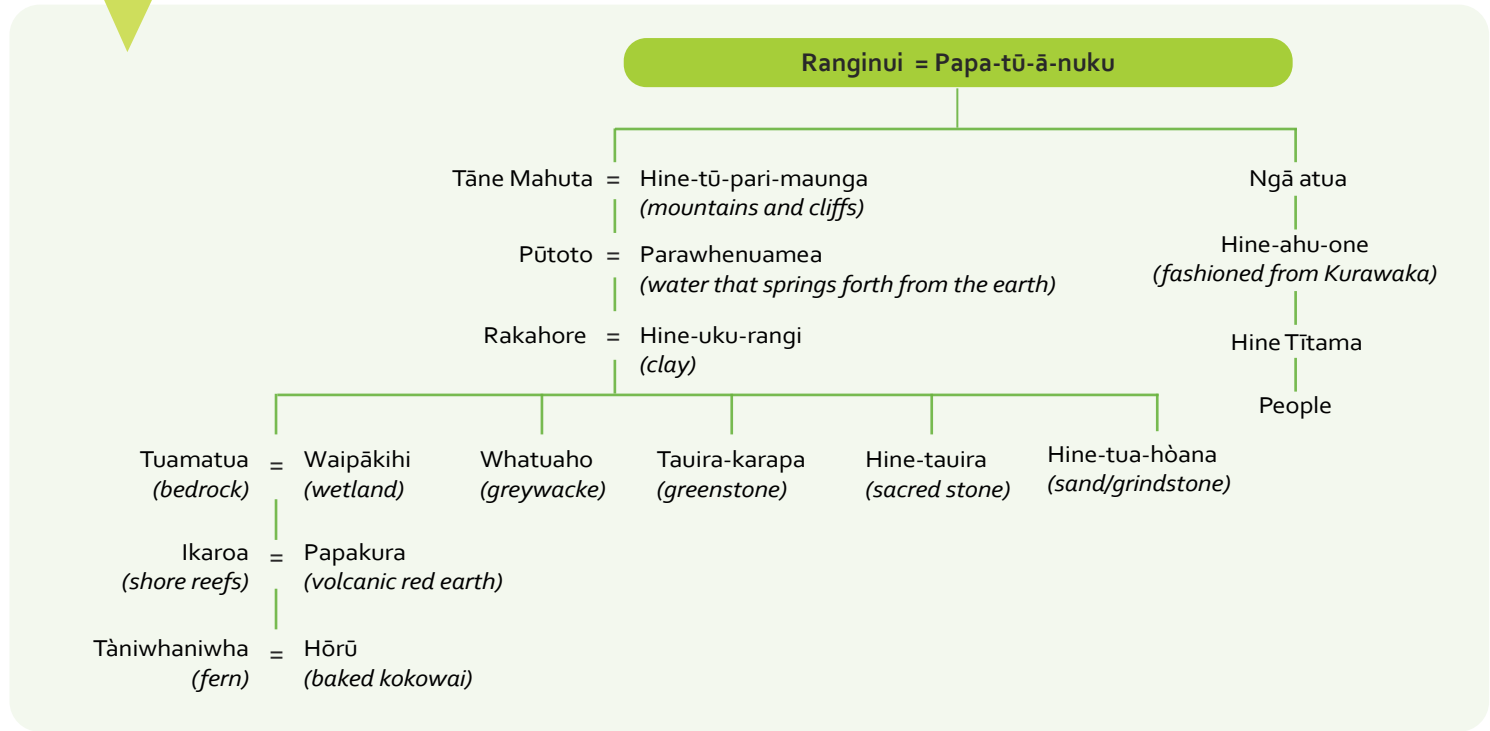
The bonds with Papatūānuku in Te Ao Māori extend from past generations to future generations. It is like a taura (rope), that joins Te Ao Māori all the way back to the beginning of time when Papatūānuku first came into the world of light. This taura extends forward, to the generations that have not yet been born, and ensures the legacy of protecting Earth Mother and her environments continues long after current generations are gone.

Atua Māori are a significant and vital part of being Māori, for it is from the whakapapa to Atua that everything within the realms of Ranginui and Papatūānuku is derived from. It is an unbroken connection that goes back thousands of years, to the beginning of time.

Everything is connected and has its own mauri (life force). Everything has its own whakapapa, connected back through different Atua who are responsible for ensuring each aspect of nature is well established and working as one with all around it. Whakapapa keeps us grounded, and ensures we are always connected to the whenua.

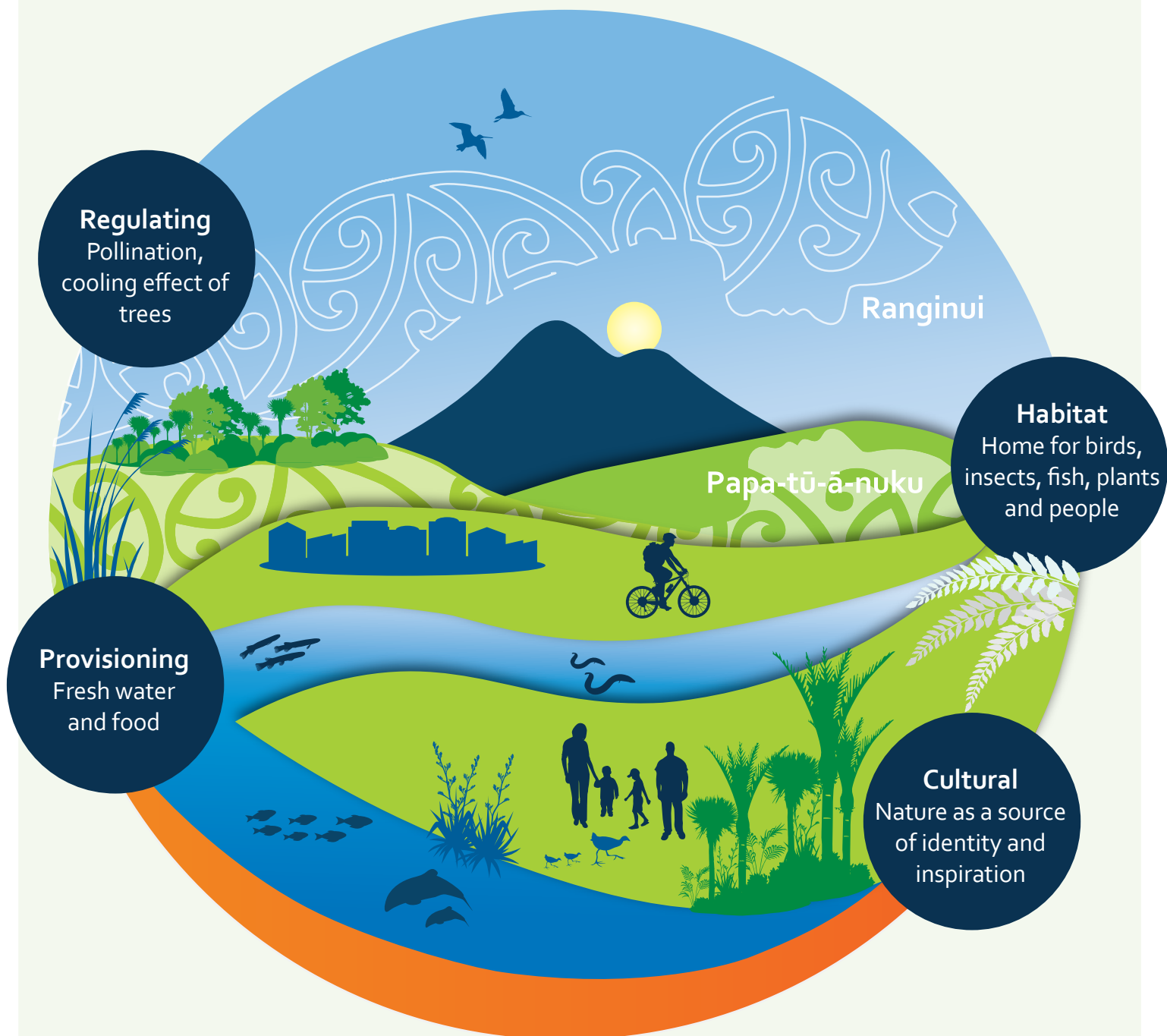
Atua Māori are responsible for ensuring that different domains are cared for, and that all within them are under their protection whilst in their domain. Like Tāne Mahuta - he is responsible for the forests and all that is within the forests. Māori acknowledge Tāne Mahuta whenever entering his domain, by following practices that uphold his mana, and behaving in a manner that ensures the forests are looked after whilst present in that domain.





Nature does a lot to sustain living things – these are called ecosystem services. People’s health and wellbeing are directly impacted by the ecosystem services nature provides. This includes provisioning services (such as fresh water and food), regulating services (pollination and the cooling effect of trees), habitat or supporting services (suitable places for plants, animals, insects, birds and fish to live) and cultural services (spiritual experience and inspiration for culture, art and design)¹. Having rich, healthy biodiversity plays an essential role in how well nature is able to provide these ecosystem services.

Nature also provides habitat (a home) for all living things. Habitat is the right conditions, food and ecological processes for living beings to flourish.



Aotearoa New Zealand's Biodiversity

Aotearoa New Zealand has very high levels of species endemism (this means that many of our species are only found in Aotearoa, and nowhere else in the world). Our indigenous species are of high value due to their irreplaceable nature, as they are only found here in Aotearoa.

New Zealand has a wide range of unique ecosystems, including land-based ecosystems (kauri, kahikatea, pōhutukawa, mixed broadleaved and red beech forests, or tussock grasslands and shrubs), freshwater ecosystems and marine ecosystems like estuaries and coral reefs. These ecosystems contribute to the four ecosystem services.



PERCENTAGE OF SPECIES UNIQUE TO NEW ZEALAND



100%

OF BATS, NATIVE
AMPHIBIANS AND
REPTILES



84%

OF VASCULAR
PLANTS (LAND AND
FRESHWATER)



7%

OF MARINE
MAMMALS



72%

OF ALL NATIVE
TERRESTRIAL
FRESHWATER AND
MARINE BIRDS



88%

OF FRESHWATER
FISHES

NOTE: This data does not include extinct or non-resident native (Coloniser, Migrant or Vagrant) species.

Source: Biodiversity in Aotearoa.

New Zealand's unique environment means that we qualify as a biodiversity hotspot. Biodiversity hotspots are places on Earth that are biologically rich, but highly threatened. Biodiversity hotspot must have at least 1,500 endemic plants (i.e., a very high percentage of plant species found nowhere else on the planet), and only have 30% or less of its original natural vegetation (i.e., vegetation is highly threatened). A hotspot, in other words, is irreplaceable.

Only a tiny portion of the Earth's land area is classified as a biodiversity hotspot: 2.5%². This provides an indication of just how important it is to preserve New Zealand's biodiversity, and this applies to right here in the Hauraki District too. We have a duty of care to ensure all the unique animals, plants, fungi and microbes in Aotearoa are healthy and thriving.

What are the threats to biodiversity?

Biodiversity is rapidly declining around the world, with an estimated total of one million plant and animal species currently facing extinction, more than ever seen before in human history³. Over the last 40 years, the rate of extinction has been speeding up and as of yet shows no signs of stopping. This leads to extreme levels of damage to ecosystems, and in some cases the loss of these ecosystems and their services entirely.

Five key threats have been identified as leading causes for the declining biodiversity levels across the globe: introduced invasive species, climate change, changes in land and sea use, direct exploitation of organisms (harvesting), and pollution⁴.

Climate change is a driver that has had a large impact thus far and is likely to get worse. Biodiversity is affected by every aspect that comes with climate change – such as more intense and frequent storms and droughts, heatwaves, changes in ocean currents and water temperatures, and sea level rise.

Biodiversity is a key natural defence against climate change. It acts as a natural carbon sink, sequestering carbon from the atmosphere and acting as a nature-based solution to global warming. For example, wetlands are excellent carbon sinks, acting as natural sponges that are able to absorb and store substantial amounts of carbon and water. Biodiversity can help us adapt to the effects of climate change too – for example, increased permeable surfaces and green spaces in our urban areas can help with floodwater management in times of extreme rainfall and flooding events. Biodiversity, when in a healthy

state, helps provide stability and resilience to our environment as we adapt to the fluctuations and disturbances brought about by extreme weather events.

With current and future climate predictions for the district, these changes will continue. Further research is needed to see what this means for biodiversity in Hauraki, and what actions we need to take. One of the goals of this strategy is that our biodiversity is resilient in the face of these changes, and this may involve taking new management approaches or encouraging different species more adept at surviving in that climate to flourish here.

This strategy recognises balance when it comes to introduced species. Whilst this Biodiversity Strategy prioritises the duty we have towards our indigenous species, it also recognises that some introduced species come with benefits, such as recreational and economic.

Human activity also has large impacts on biodiversity. Human activity has reshaped natural habitats to make way for farmland/food production, or to obtain natural resources (e.g. mining). As climate change worsens, this change will have a growing impact on ecosystems.

In the Hauraki District, climate change will lead to hotter and drier summers, less frequent rainfall (but at a higher intensity when it does occur) and increased storm intensity .

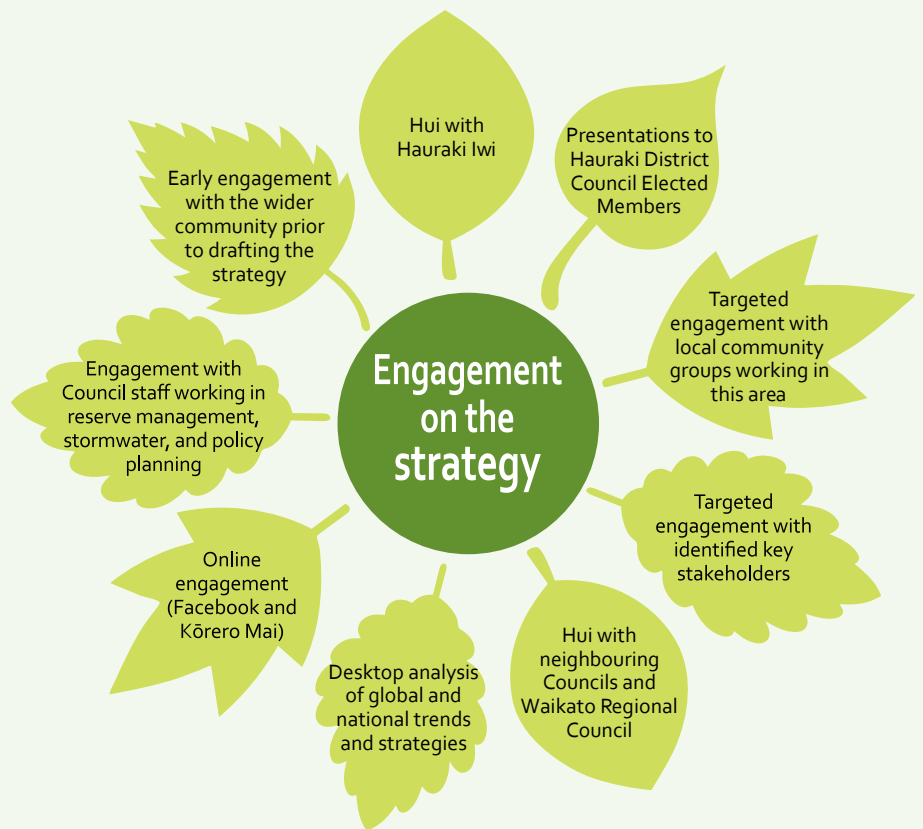


How we developed this strategy

Engagement

We wanted to develop a strategy that acknowledges the wide range of environments within Hauraki, with input from our community. The strategy was co-designed with iwi, where iwi and Council staff had multiple hui to workshop what direction the strategy should take. Key stakeholders, such as our neighbouring Councils, were also involved in these hui. We met with those community groups and organisations doing the mahi in our community to hear about areas of priority for them and what they thought a strategy should include.

During the early engagement phase of the strategy, we asked the community what they thought could be included in the strategy. We have used the feedback to shape and inform the vision and actions of this strategy.

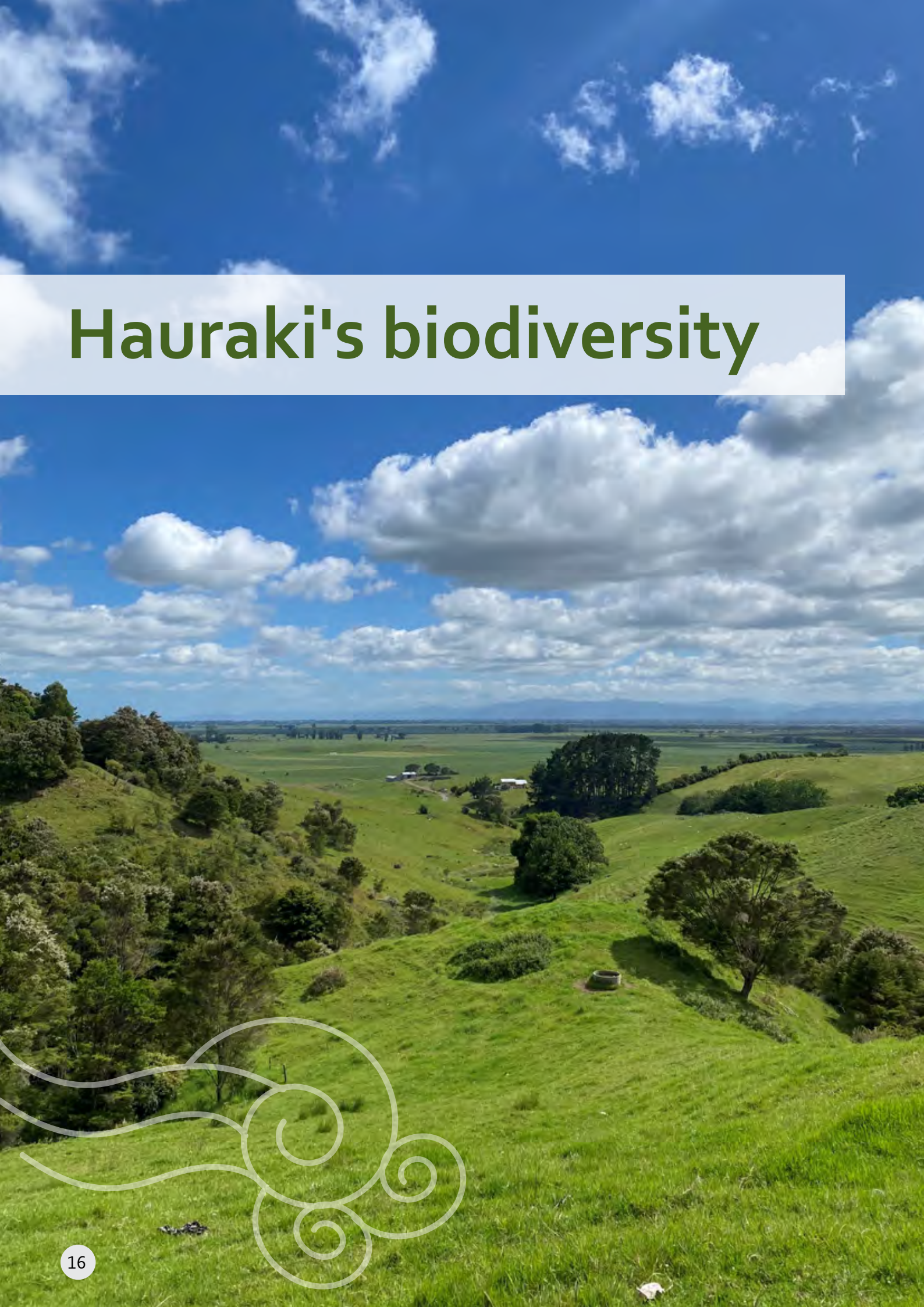


The 'word chart' shows what the community and our key stakeholders place high value on.

Overall we received positive feedback in favour of increasing Council's work in the biodiversity space, and strong feedback from community groups that they would be interested in working with Council to create better biodiversity outcomes. An action in this strategy is to continue creating and building whanaungatanga with these community groups.



Hauraki's biodiversity



Historically

In the past, parts of the Hauraki District would have looked very different to today. The district would have been home to rich biodiversity, from the thriving forests and wetlands of the Hauraki Plains to the coastlines at Wharekawa and Whiritoa.

The Hauraki Plains are a key example of a highly modified environment– the Plains in the past were home to a mix of podocarp-dominant forests and extensive wetlands. The forested sites would have been dominated by kāhikatea and totara trees, with the kāhikatea thriving in lesser-drained soils and the totara dominating on better drained soils.

Early Polynesian settlers, followed by the early Hauraki Iwi, lived on the Plains and in nearby Kerepēhi, maintaining an interconnected relationship with Te Taiao and developing understanding of the whenua (such as when and where the Plains often flooded). The Waihou and Piako awa were key modes of transport for Māori, as well as later transporting settlers upstream to Ōhinemuri and Te Aroha. Hauraki Iwi used the Plains seasonally for kai, thanks to their knowledge of flooding seasons and when best to grow crops.

When Captain Cook was undertaking his initial exploration of Aotearoa New Zealand, he had botanist Joseph Banks on board, who documented all of the unique species he encountered. When they sailed up the Waihou Awa in 1769, the visitors and particularly the botanist were overwhelmed by the dense kāhikatea forests on both sides. Banks documented this in his notes, and so Europeans were first attracted to the Hauraki Plains by the rich kāhikatea forests⁵. Thus commenced an era of deforestation, with the majority of these forests logged for timber.

Another significant historical environmental change, with impacts on Hauraki's biodiversity and particularly on the Hauraki Plains, was a major drainage scheme. The 1908 Drainage Act set up a colossal drainage project involving stopbanks, canals, drains, and pumping stations along with roads, bridges and wharves on the Plains. This was in order to drain the land for agricultural purposes, which was done so extensively that it set the Hauraki Plains up to become one of Aotearoa New Zealand's largest dairy farming regions. The environmental implications have been significant with very little left of the previous land cover and natural habitats.



Kāhikatea Bush at Sunset (1901) Source: Auckland Libraries Heritage Collections AWNS-19011024-02-04



A section of swamp land on the banks of the Piako River awaiting drainage (1922) Source: Auckland Libraries Heritage Collections AWNS-19221026-38-08



A modern draining machines at work: the rood dredge operating at Kerepehi (1922) Source: Auckland Libraries Heritage Collections AWNS-19221026-38-06



Farm lands on the Hauraki Plains already developed by the drainage scheme (1922) Source: Auckland Libraries Heritage Collections AWNS-19221026-38-03

The environmental history of the areas of Paeroa, the Karangahake Gorge, and Waihi has been heavily impacted by the gold mining industry. Gold was discovered in the 1800s and mined underground in the first half of the 1900s. The late 1880s saw the invention of the cyanide process, which made mining profitable and greatly increased operations in the area, alongside the size of the towns. For a period, tailings were disposed of directly into the Ōhinemuri Awa, alongside untreated wastewater⁶. The Ōhinemuri Awa was in fact declared as a sludge channel in the 1890s, into which tailings, mining debris and wastewater could be disposed.

As a result of historical land use, and land management decisions, the state of the environment and biodiversity in Hauraki has been significantly altered from its pre-human state. For Hauraki Iwi the degraded state of nature and associated issues such as habitat loss in the Hauraki District is unacceptable, and restoration efforts need to look at Hauraki as a whole. Hauraki Iwi believe that to achieve generational change, attitudes and values towards biodiversity need to be more aligned. This strategy aims to increase the kōrero about biodiversity, and bring it to the forefront, with a goal of creating resilient biodiversity that is cared for by all.



Above: Victoria Battery, Waikino



Above: Waihi Pumphouse

Below: Waihi Martha mine pit



Currently

Nowadays, despite considerable change, the Hauraki District is home to a range of unique and important natural areas and species that live in them. These range from the vast Kōpū-ā-tai and Torehape peat domes dominating the central Hauraki Plains, the scattered kāhikatea stands, the tidal mud flats and mangrove forests of the Wharekawa Coast, to the pohutukawa coastal forests by Whiritoa.

The Hauraki District Plan identifies Significant Natural Areas (SNAs), which are areas of significant indigenous vegetation and habitats of indigenous fauna (in both public and private ownership) and places protections around them. There are other avenues for protecting biodiversity in place in the Hauraki District – including public conservation land and land protected under a QEII covenant (the QEII National Trust partners with private landowners to protect natural and cultural heritage sites on their land with covenants). The Hauraki Gulf Marine Park Act 2000 also includes objectives around protecting and enhancing the Hauraki Gulf.

The Waihou and Piako Awa that run through the district drain into Tīkapa Moana (the Firth of Thames). Biodiversity in Tīkapa Moana is decreasing, and the way we manage the rivers in our district has a role to play.



Above: Stand of kāhikatea trees



Above: Pohutukawa flower

Below: Mangroves, Firth of Thames



Awa

The Piako and Waihou Awa are two of the main river systems that flow through the district. The Piako Awa's source is in the ranges west of Matamata, and it flows into the Firth of Thames. The predominant vegetation of the Piako catchment as a whole is pasture used for intensive dairy farming.

The Waihou Awa arises on the western side of the Mamaku plateau and is fed by numerous tributaries arising in the Kaimai Ranges and flowing through the Kaimai Mamaku Forest Park. The river flows through the Hauraki Plains and into Tīkapa Moana. The Waihou Awa passes through predominantly pasture, with areas of indigenous and plantation forest in the upper reaches.

The Ōhinemuri Awa, the third main river system in the Hauraki District, joins the Waihou Awa at Paeroa. The Ōhinemuri Awa flows through Waihi and the Karangahake Gorge, and is joined by several tributaries on the way.

All of these awa have significant value to Hauraki Iwi, and iwi have a lengthy relationship with the awa stretching back to when they first arrived in the area.



Above: Ōhinemuri Awa - Karangahake Gorge



Above: Piako Awa - Ngātea



Below: Waihou Awa - Puke Jetty

Vegetation Cover

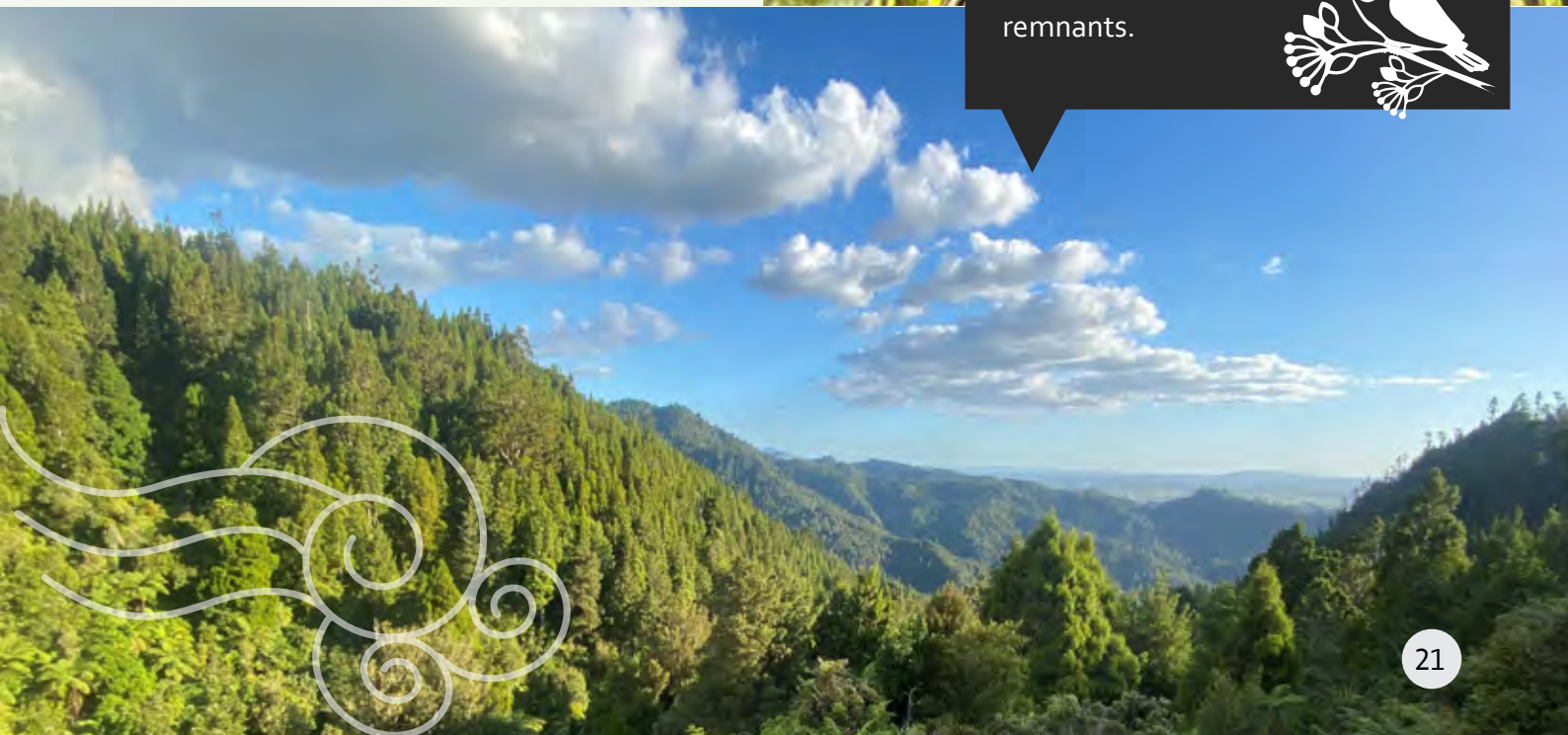
The Hauraki District Plan states that approximately 35,454 hectares (ha) (or 30%) of the District can be considered as being covered with indigenous vegetation and habitats of one form or another. Indigenous forest and broadleaved indigenous hardwood species (such as rimu-tawa forest) make up the largest percentage of this (or approximately 24,788ha). These are primarily found in the Coromandel and Hapuakohe Ranges. Manuka and kanuka, found primarily on the Kōpū-ā-tai and Torehape peat domes, is the next largest indigenous vegetation group (8,827ha).⁷

Rimu-tawa forest within the Coromandel Ranges and Hapuakohe Ranges is the most well represented indigenous forest type in the district.⁸ Secondary growth kanuka forest and logged kauri and tawa forest are also well represented, with much of this forest type being present along the eastern flanks of the Hapuakohe Range and in the north-eastern hill country forests north and south of Waihī. Some forest types are under-represented within the Hauraki District (such as coastal, Kauri and conifer forests). This is expected due to the makeup of the district – large sections of flat and easy hill country, with fertile soils, which have been developed for agriculture.⁹

Below: Coromandel Ranges



These areas are home to many species, 49 of which are nationally threatened (such as the long-tailed bat, and native frogs such as the Hochstetter's). Kererū, Kāhu (New Zealand falcon), geckos and skinks plus other threatened invertebrates are also found in Hauraki's forest remnants.



Wetlands

Wetlands, whilst dramatically reduced in size, are well represented within the Hauraki District. This is especially true for the nationally rare Restiad peat wetlands, largely found within the Kōpū-ā-tai and Torehape Peat Domes. The freshwater wetlands provide abundant habitat for a number of threatened and uncommon bird species (including the spotless and marsh crake), native fish and plants including threatened endemic orchids, sundews and *Sporodanthus ferrugineus*.¹⁰

The coastal wetland along Tīkapa Moana (Firth of Thames) is internationally recognised as a Ramsar site, due to the globally rare land formation of shell beach ridges (known as chenier plains). It also consists of mud and grass flats, mangrove swamp, saltmarsh, and swampland, and is a crucial site for wading birds in Aotearoa. The Ramsar site supports nationally critical species including the Matuku/Australasian bittern (*Botaurus poiciloptilus*), Tarāpuka/black-billed gull (*Larus bulleri*) and kāki/black stilt (*Himantopus novaezelandiae*) and is an important wintering site for national migrants including Poaka/pied stilts (*Himantopus himantopus*), the declining Tōrea/pied oystercatcher and the nationally vulnerable Ngutuparore/wrybill (*Anarhynchus frontalis*).¹¹ Other nationally vulnerable species present include tūturiwhatu/banded dotterel (*Charadrius bicinctus*), and Taranui/Caspian tern (*Hydroprogne caspia*).¹²



Top right: Chenier plains

Below: Kōpū-ā-tai peat dome



Coastal

The Hauraki District is also home to another coastal environment – the white sandy Whiritoa Beach and surrounds. The coastline here was once dominated by pōhutukawa-puriri forests. Today, there remain some reasonably intact representations of original pōhutukawa forest and coastal shrublands along the coastline north of Waihi Beach. Within the Hauraki District, Whiritoa settlement is the only residential settlement in this area. The remainder of the land is dominated by grazing farmland on the plains and rolling foothills with the steeper slopes dominated by productive forestry.¹³ Overall, this area is largely modified by human land use change and recreational activity.¹⁴ Parts of Whiritoa Beach are a significant NZ Dotterel breeding site.

Right: Pōhutukawa - Whiritoa Estuary

Below Whiritoa Beach



Ranges

The Hauraki District is also home to the higher-elevation hill and mountain environments of the Hapuakohe, Coromandel and Kaimai Ranges and the Karangahake Gorge. The Hapuakohe Range is a mix of pasture, bush, pine plantations, and other introduced tree species. There are three important hill features in the range – Otane (432m), Maungakawa (535m) and Pukeitonga (512m), which are significant landscape features.

The Coromandel and Kaimai Ranges vary through the Hauraki District, from rolling hills to steep hill country. With the exception of some of the lower slopes, which are used for sheep and cattle grazing, the majority of the land is in native forest with some areas of pine plantation.

The Karangahake Gorge is home to both regenerating indigenous vegetation and introduced vegetation. The landscape includes steep rock cliffs, the Ōhinemuri Awa, Mt Karangahake, historic examples of gold mining activity and is a popular hiking area. The vegetation present here today serves as an ecological stepping stone between the Coromandel and Kaimai-Mamaku Forest Parks. The landscape has been significantly modified over the years, but the combination of the dramatic physical geography, regenerating indigenous vegetation, cultural heritage of significance to tangata whenua and historic heritage makes the area outstanding within Hauraki District.

While there is cause for concern for the current fragmented state of biodiversity in the Hauraki District, there is a wealth of community action taking place. Iwi, community groups, schools, and landowners are carrying out a variety of ecological restoration activities, such as pest control (backyard trapping and trap libraries), and planting initiatives (such as Coastcare dune planting working bees).

Engagement that Council did with the public during the creation of this Biodiversity Strategy also indicated that there is a strong community desire to increase biodiversity work programmes, and work collaboratively to do so.

Right: Karangahake Gorge





Goal 1: Enhancement of Hauraki's biodiversity

Objectives:

1. To improve the water quality of rivers and streams in our district.
2. To increase the area and improve the quality of indigenous vegetation cover within the district.
3. To connect biodiversity and nature in the district through ecological corridors, which ensure safe species passage and prevent further fragmentation.
4. Taonga species and ecological sites of significance to Māori are thriving.
5. To connect our communities with nature, and recognise the value it brings to our wellbeing, caring for biodiversity as a result.

This goal encompasses an overall increase in biodiversity in Hauraki, with a focus on increasing indigenous species. It aims for an improvement in water quality in the rivers and streams in our towns – with an initial focus on local waterways that we have direct influence over.

The actions in the Biodiversity Strategy Action Plans identify what needs to be done, by who, and when to achieve this goal – they focus heavily on riparian planting of waterways, creation of ecological stepping stones and increased indigenous planting in Council reserves. It is acknowledged that the word 'enhanced' implies there is already something there to work with, and that in some cases, it will be about establishing habitats and plantings from scratch.

Ecological connection will be important here, but this goal is also about creating buffers around existing vegetation and habitats to prevent further fragmentation and loss – not just for species movement. Halting of indigenous vegetation clearance (unless approved) is equally important.

Actions will focus on Council owned land, with the intention that Council will set an example, and other landowners will come on board as actions progress.

Below: A vision of the future - riparian planting and indigenous species along our waterways.





Goal 2: Protection of Hauraki's biodiversity

Objectives:

1. To protect taonga species and ecological sites of significance to Māori.
2. To identify and protect areas of biodiversity value not currently protected by legislation, through education and community support.
3. To encourage the community to participate in and support enhancement and protection of biodiversity in Hauraki.
4. To ensure impacts of development and human activity on biodiversity are properly managed.
5. To prevent further loss of biodiversity by effective pest and weed control measures on a community-wide scale.

We already know that Hauraki is home to some unique, special environments that we have a duty of care to look after. These special environments, such as the Kōpū-ā-tai wetland and the popular shorebird sites in Pūkorokoro-Miranda, are often protected under legislation. SNAs in the district are protected under strict rules in our District Plan. The entire Kōpū-ā-tai wetland, for example, was established as a Ramsar site in 1989, and will be returned to Ngāti Hako in Treaty Settlements.

There are other areas of our district, just as in need of protection, that don't receive any legislative protection. This is where the Biodiversity Strategy and the everyday actions of those living, working and playing in our district can come in.

There are many everyday actions that people can take in their day to day lives that help protect biodiversity.

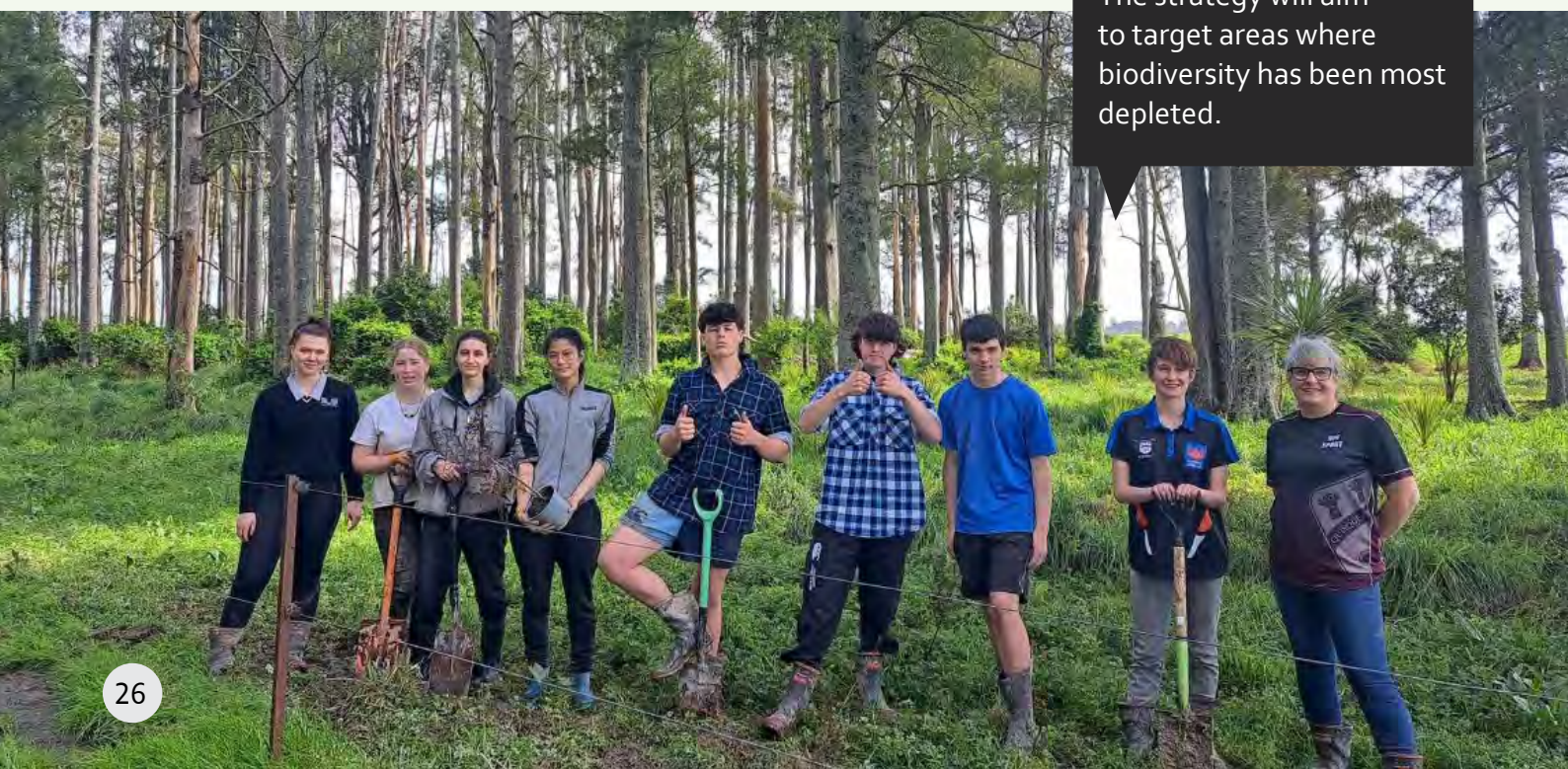
Examples include:

- Help control pests (such as rats and possums) by implementing traps in your backyard.
- Get involved in a local community group helping out with planting, pest control or rubbish clean ups.
- Help educate the people in your life (friends, family, neighbours, coworkers) to spread awareness of Hauraki's biodiversity, and encourage them to take everyday actions.

The Action Plans contain further information on what will be done to achieve this goal.

Below: Hauraki Plains Enviro Students planted native trees in a kahikatea grove.

The strategy will aim to target areas where biodiversity has been most depleted.





Goal 3: Hauraki's biodiversity is resilient

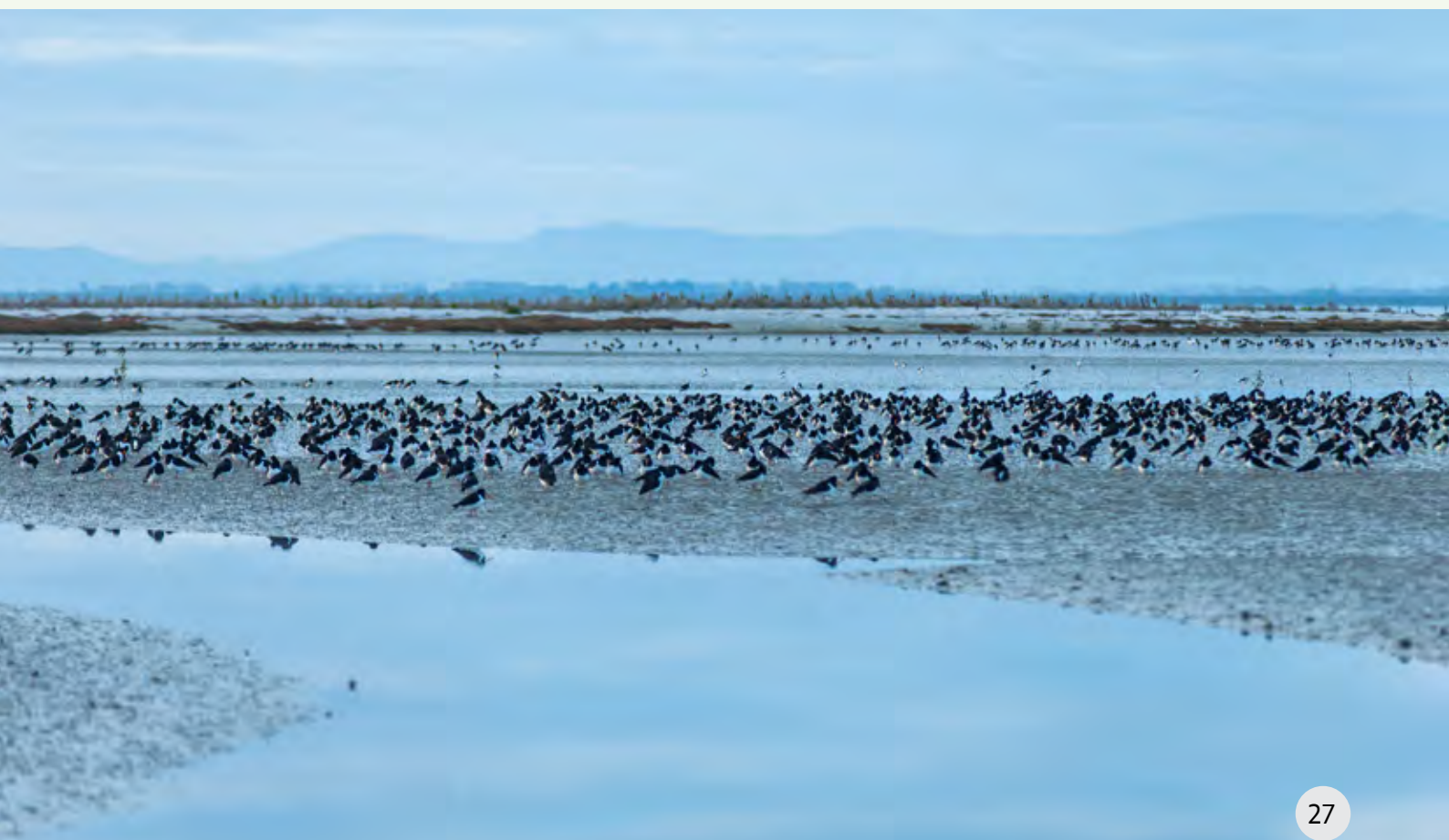
Objectives:

1. To support the ability of Hauraki's biodiversity to withstand a changing climate and more extreme weather events.
2. To support biodiversity to be resilient to the impacts of human activity.
3. To ensure biodiversity is able to mitigate climate change impacts and can support the Hauraki District in adapting to climate change.
4. Biodiversity is present and thriving in urban areas to help them withstand and recover from a changing climate and extreme weather events.
5. To increase the capability of biodiversity to withstand pests, diseases and transformative weeds.

This goal encompasses Hauraki's biodiversity being resilient in the face of climate change and human interactions. A key measure of success here is that our biodiversity is established, thriving and able to stand the test of time, in a changing climate and human-modified landscape. This goal is about our great, great grandkids – the generations to come – and ensuring we leave behind a healthy, resilient environment for them to continue caring for.

The actions in this strategy are intended to be long lasting, and input and buy in from the community will help ensure this.

Below: Thousands of shorebirds can be seen on the shellbanks and tidal flats at Pūkoro, on the Firth of Thames.



References

- 1 [Ecosystem services - Climate Change & Nature: New Zealand \(climateandnature.org.nz\)](https://climateandnature.org.nz/)
- 2 Biodiversity Hotspots (conservation.org)
- 3 [Te Mana o te Taiao – Aotearoa New Zealand 2020 Biodiversity Strategy](#)
- 4 [Te Mana o te Taiao - Aotearoa New Zealand Biodiversity Strategy 2020 \(doc.govt.nz\)](#)
- 5 [Joseph Banks | New Zealand Geographic \(nzgeo.com\)](https://nzgeo.com/)
- 6 [Considerations | OceanaGold - Waihi Operation \(waihigold.co.nz\)](https://waihigold.co.nz/)
- 7 [Sect-6.2-Indigenous-Biodiversity-SNA-161120.pdf \(hauraki-dc.govt.nz\)](#)
- 8 Hauraki District Plan
- 9 Hauraki District Plan
- 10 Hauraki District Plan
- 11 [Ecological-Values-Impact-Assessment.pdf](#)
- 12 [Ecological-Values-Impact-Assessment.pdf](#)
- 13 Natural character of the Waikato Coastal Environment
- 14 Natural character of the Waikato Coastal Environment



