

ENVIRONMENTAL STRATEGY AND POLICY

Auckland Council's Indigenous Biodiversity Strategy

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Acknowledgements

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Front Cover: Pateke Brown Teal - *Anas aucklandica*

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Developing a Strategic Approach

While many excellent programmes and approaches to the management of indigenous biodiversity were developed prior to the establishment of the Auckland Council, these have often been poorly coordinated across jurisdictional boundaries. The establishment of the Auckland Council has provided a unique opportunity to achieve an integrated approach to the management of indigenous biodiversity, capitalising and building on the good work done to date while identifying the new opportunities that arise from the establishment of a unitary authority, charged with multiple statutory and landowner responsibilities.

This document has been written by a Technical Advisory Group comprised of staff from teams across the Auckland Council involved in the development and delivery of programmes to manage indigenous biodiversity.

This is the first stage in the development of a long-term biodiversity strategy for Auckland Council that, ultimately, will set out the agreed strategic direction for the Council over the coming years. Implementation plans and projects to give effect to that strategic approach will be developed and measured against the objectives set out in the strategy. Thus, the strategic approach is in two parts – firstly a Biodiversity Strategy with a vision, strategic objectives, measures and principles and secondly the on-going project and programmes which will deliver on these aspirations. It is intended that the Strategy is adopted and reviewed on a five yearly basis, with work required to achieve that identified in a Biodiversity Work Plan, and delivered on an on-going basis.



Shakespear Regional Park, Auckland



Wetland, Auckland

The Importance of Auckland's Biodiversity

Biodiversity can be defined simply as the biological diversity that extends from genes to ecosystem processes. The Auckland region has an instantly recognisable, diverse natural environment made up of volcanic cones and craters, forest, streams, wetlands, estuaries and harbours, an intricate coastline including dunes and offshore islands supporting a rich diversity of plants and animals, some of which are found nowhere else in the world. This is the indigenous biodiversity that people rely on for many different social, cultural and economic reasons.

The State of the Auckland Region report (2010) describes the increasing pressures that a growing population continues to place on the biodiversity of our natural environment including new and existing biosecurity risks, the unsustainable use of natural resources, habitat fragmentation, the increasing demand for infrastructure and climate change. In order to effectively argue the threat that these pressures pose on our own survival we need to know what level of indigenous biodiversity we think is enough to meet our statutory obligations and to provide the ecosystem services that will sustain Auckland's inhabitants. The objectives in this document provide this bottom line. This is what we have decided is essential to achieve in order to fulfil our responsibilities related to indigenous biodiversity.

This document addresses indigenous biodiversity: our native species, their genetic diversity, and the habitats and ecosystems that support them.

Purpose and Scope

Auckland Council has statutory obligations to maintain and sustainably manage biodiversity, for both its intrinsic, and its ecosystem services value (see Figure 1). Under the Resource Management Act 1991 (RMA), the Auckland Council, as a Unitary Authority, has responsibilities as both a Regional Council and Territorial Authority in relation to indigenous biodiversity. Regional Council responsibilities include a direct responsibility for controlling the use of land to maintain and enhance ecosystems in water bodies and in the coastal water. The combined regional and district council responsibilities include: to develop, implement and review policies and methods to maintain indigenous biodiversity. The RMA also requires decision makers to take into account the principles of the Treaty of Waitangi, the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga and particular regard to kaitiakitanga. The Council must also respond to the requirements of the proposed National Policy Statement on Biodiversity, which has guided the development of the approaches set out here.

Biodiversity is everywhere and the Council needs to consider the impact of all its activities and decision making everywhere. This document applies to indigenous biodiversity on both public and private land, including people's backyards in urban areas, parks and schools, farms, industrial sites, and roadsides. It includes aquatic and terrestrial biodiversity from forests, scrubland, streams, wetlands, estuaries to coastal, intertidal, island and marine biodiversity. Particular regard will be given to species and ecosystems that are unique to Auckland. The protection of biodiversity not native to the Auckland region is not addressed in this strategy except where exotic plants or animals are needed to protect indigenous values such as to provide habitat or shelter.



Ship Rat - *Rattus rattus*



Australian Brushtailed Possum - *Trichosurus vulpecula*

It is intended that this strategic approach direct the Council's actions in all areas of its responsibilities, including as the largest single landowner in the region, with direct control over many areas important for biodiversity. It will give guidance in the development and implementation of statutory plans, in the provision and maintenance of infrastructure, and in the provision of advice and resources to the community. It is also hoped that it will give guidance to Local Boards on achieving their identified goals.

This is an Auckland wide document in that it is the Auckland ratepayer that funds our work, and the approach has a strong focus on directing how Auckland rates are best spent to achieve biodiversity gains. It is noted that successful

implementation of the Biodiversity Strategy will require sufficient resourcing by the Auckland Council and other parties.

While this approach is focussed on the Council's responses, it is also hoped that many programmes developed from this strategy will also change people's behaviour in a way that benefits national and global biodiversity through increased awareness of the values of, and threats to, biodiversity generally.



North Island Kokako - *Callaeas Cinerea Wilsoni*

Statutory Context

This document describes the Council's vision and 8 objectives for biodiversity work, along with a set of performance measures to be used to monitor progress.





Lucas Creek - Albany



Shakespear Regional Park

Biodiversity and the Auckland Plan

The Auckland Plan identifies biodiversity loss as a challenge for Auckland and acknowledges that decisions about growth, and changes in landuse, have significant implications for biodiversity. The Auckland Plan is a tool to ensure that growth and development do not occur at the expense of the very features (such as biodiversity) which make Auckland unique. The plan chooses an eco-city approach to communicate a strong commitment to preserving biodiversity and natural habitats (amongst other things) to support the development of one of the world's most liveable cities. Methods to deliver this include ensuring significant indigenous biodiversity is identified and protected from inappropriate use and development and ecosystems restoration. Maps convey that biodiversity is everywhere in rural and urban places and on both public and private land demonstrating the importance of linkages and showing that all parts of the landscape have a part to play in maintaining Auckland's biodiversity.



Rainforest, Auckland

Vision

He taonga, ka whaihua nga rerenga ke o te Ao Turoa i Tamaki Makaurau Auckland's indigenous biodiversity is flourishing and treasured

This is what we want to see long term. We value and want to see:

Healthy and diverse ecosystems of plants and animals

- ✓ Auckland's ecosystems are functioning and healthy
- ✓ Priority ecosystems and species managed effectively
- ✓ Threatened species flourishing in natural habitats
- ✓ Significant sites of indigenous biodiversity protected
- ✓ Nature connected across Auckland in linkages and sequences

Engagement, understanding and guardianship of Auckland's indigenous biodiversity

- ✓ Responsibility and pride for Auckland's biodiversity is shared by all and actions reflect this
- ✓ People treasure our biodiversity and therefore feel responsible for protecting and enhancing it willingly
- ✓ People feel connected to nature and understand their impact on it
- ✓ Aucklanders are engaged in conserving the natural environment
- ✓ Aucklanders understand ecological connections, e.g.: stream to sea
- ✓ Ecosystem services are widely understood and valued
- ✓ Our ecological and culturally significant treasures and taonga are valued, protected and celebrated



Stitchbird or Hihi - *Notiomystis cincta*



New Zealand Copper Butterfly *Lycaena Salustius* on Pohuehue *Muehlenbeckia complexa*

Ecosystem services provided by indigenous biodiversity

- ✓ Ma te whenua ka ora te tangata, ma te tangata ka ora te whenua – Through the land the people will be nourished, through the people land will be nourished
- ✓ Food, water and fibre are used sustainably
- ✓ Regulating services are functioning to maintain climate, manage floods, pests and wastes and provide good water quality
- ✓ Supporting services are functioning such as soil formation, photosynthesis and nutrient cycling
- ✓ Ecosystem service values are recognised and incorporated in plans and decision making
- ✓ Policies in our plans that recognise the resilience that biodiversity provides to ecosystem services and functions by protecting what we currently have and enabling the uptake of opportunities to better manage and enhance our environments.
- ✓ Biodiversity maintained or enhanced to ensure that future environmental changes will not reduce ecosystem services or functions



Humpback Whale - *Megaptera Novaeangliae*

Ecosystem services provided by indigenous biodiversity (cont...)

- ✓ The spiritual mauri, amenity and recreational value provided by the region's biodiversity attracts people to our region and supports economic opportunities such as ecotourism
- ✓ Biodiversity is maintained in an economically viable way
- ✓ Contribution of biodiversity to ecosystem services including recreation, physical health and wellbeing are recognised and valued.

Integrated management producing biodiversity gains

- ✓ Agencies, whenua and the community share responsibility and work together in effective partnerships
- ✓ Linkages and interactions between biodiversity across terrestrial, freshwater and marine ecosystems are recognised and provided for in planning documents and internal and external programmes
- ✓ Input and support for our biodiversity plans and projects across council and with appropriate external stakeholders
- ✓ Council provides input and submits on external initiatives including legislation and national programmes that affect biodiversity
- ✓ Biodiversity outcomes achieved across neighbouring regions.

Objectives

These tables show how we are going to structure our work in order to achieve the outcomes stated above. The objectives provide a link whereby, through measuring progress towards achieving them, we can demonstrate how projects contribute to achieving the Council's vision and therefore the Council's legislative obligations. A list of projects will be identified to achieve each one of the objectives and these will be prioritised according to where we can make the greatest gain towards the objective for the greatest likelihood of success. Budget will be assigned to each objective to fund as many projects as we can in priority order. This means we will have a clearer understanding of the resources required to achieve each objective and be able to explain more easily what is not being funded. It is expected that some projects will in fact achieve more than one of the objectives.

The objectives are designed to cover most of the proactive work carried out by the Council to achieve biodiversity gains.



West Coast, Auckland

<p><i>Objective 1: Conserve the greatest number and most diverse range of Auckland's indigenous ecosystems and sequences</i></p>	<p><i>Objectives 1 and 2 are critical components of what we are trying to achieve in terms of indigenous biodiversity and to what condition. These direct us to choose where we are best to manage to ensure we have as many of our different species and ecosystems as possible for a given resource. Measuring these will tell us how many of our species and ecosystems are being protected and enhanced to the level stated in the objective.</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » Manage, including through restoration activities, and sufficient resourcing by the Council and other agencies such as DOC, as much as possible of a full range of Auckland's ecosystems for a given resource including successional stages of ecosystems and the linkages between them. » Reduce the vulnerability of identified ecosystems, including to climate change, by ensuring a 95% probability of each ecosystem type being in a viable state within 30 years through legal protection, restoration actions and effective mitigation through the consent process » Eliminate the risk of regional extinction of ecosystems through managing threats, restoration actions, adaptive management, and improving functionality of eco-system processes » Meet our national obligations to protect nationally threatened ecosystems at identified priority sites for national ecosystem recovery in our region.
<p><i>Objective 2: Achieve long-term recovery of the greatest number of threatened species whose range includes the Auckland Region</i></p>		<p>This means:</p> <ul style="list-style-type: none"> » Manage, including through restoration activities and sufficient resourcing by the Council and other agencies such as DOC, as many indigenous species that require management to prevent regional extinction as possible for a given resource » Reduce the vulnerability of regional species populations, including to climate change, by ensuring a 95% probability of each species being in a viable state within 30 years through legal protection and restoration of indigenous habitats and effective mitigation through the consent process » Eliminate the risk of regional extinction of species through threat management, restoration actions, adaptive management and increasing species populations within their natural range » Protect nationally threatened species where it has been identified that these species are best managed in our region to prevent their national extinction.
<p><i>Objective 3: Maintain and enhance the goods and services provided by our natural environment in a way that supports indigenous biodiversity</i></p>	<p><i>Objective 3 describes what we need to achieve in order to protect indigenous biodiversity through using it sustainably. Measuring this will indicate how well indigenous biodiversity is continuing to sustain us.</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » Protect biodiversity while enabling and balancing the four well beings through provision of a legislative framework » Recognising and promoting the wealth creating value and potential of indigenous biodiversity » Improve protection of systems through improving understanding of tipping points and undertaking monitoring to trigger intervention early enough to prevent the system failing. » Ecosystem services are a core consideration in policies » Ensure the contribution of marginal sites to ecosystem services are recognised, valued and increased » Development of plans takes into account the importance of considering adverse impacts on biodiversity to avoid cumulative effects » Restoration actions undertaken explicitly consider the enhancement of ecosystem service functions » Recognising and promoting the role of indigenous ecosystems in mitigating climate change e.g. through carbon storage, reducing erosion and the effects of stormwater runoff.

<p><i>Objective 4: Sustain and protect the mauri of natural and physical resources in ways which enable provision for the social, economic and cultural wellbeing of Maori</i></p>	<p><i>Objective 4 describes what successful biodiversity management might mean for mana whenua</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » The council will develop and resource effective partnerships with iwi, hapu and whanau, individuals and community groups including carvers and weavers, kura kaupapa, whare wananga, kohanga reo and Maori landowners to enable sustainable use of biodiversity » Enabling the provision of kaitiakitanga and manaakitanga » Increase the appreciation of the Maori perspective on biodiversity through initiatives such as eco and cultural tourism ventures » Enable knowledge sharing between partners » Sites and areas of biodiversity that are significant and sacred to Tangata whenua are protected, restored and nurtured to provide for future generations » Restoration projects include those which address mana whenua aspirations, such as through the use of indigenous species/varieties that are valued for cultural purposes and the provision of cultural harvest of these.
<p><i>Objective 5: Achieve greater understanding, valuing stewardship and guardianship of biodiversity with our community</i></p>	<p><i>Objectives 5-8 describe what we need to do in order to achieve the outcomes embodied in Objectives 1 to 4. Measuring these will tell us if we are working in the right way to achieve these Objectives.</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » Community and council work in partnership to ensure that actions and decisions benefits biodiversity acknowledging much of the potential to affect biodiversity sits with the community » The Council commits to providing sufficient resourcing, including to leverage resources from other sources to support community actions. » The community is engaged with and treasures our biodiversity including through involvement in effective restoration projects. » The community has capacity and is enabled to enhance and protect biodiversity, including in the face of climate change. » Community actions and decisions reflect the value of biodiversity » Council = Auckland Council includes elected members (governing body and local boards), officers and all Council Controlled Organisations. » Community = all who live, visit and impact on the Auckland Region's biodiversity including individuals, organisations, institutions, businesses and industries
<p><i>Objective 6: Improve knowledge and understanding of biodiversity in the region in order to protect and manage it effectively</i></p>		<p>This means:</p> <ul style="list-style-type: none"> » Increase in comprehensive knowledge of the location, state and condition of regional biodiversity to inform where to manage and direct action, including how to mitigate the effects of climate change on indigenous biodiversity. » Obtain trend data of the State of the Region to measure progress towards the Vision and changes in ecological integrity and condition, including changes arising as a result of climate change. » Engage with agencies to develop, test and understand trend measures. » Monitoring the outcomes and effectiveness of protection and restoration actions

<p><i>Objective 7: Achieve increased interagency, cross council, cross boundary and cross discipline integration in biodiversity management</i></p>	<p><i>Objectives 5-8 describe what we need to do in order to achieve the outcomes embodied in Objectives 1 to 4. Measuring these will tell us if we are working in the right way to achieve these Objectives.</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » Increase in comprehensive knowledge of the location, state and condition of regional biodiversity to inform where to manage and direct action, including how to mitigate the effects of climate change on indigenous biodiversity. » Obtain trend data of the State of the Region to measure progress towards the Vision and changes in ecological integrity and condition, including changes arising as a result of climate change. » Engage with agencies to develop, test and understand trend measures. » Monitoring the outcomes and effectiveness of protection and restoration actions
<p><i>Objective 8: Improve implementation of council statutory responsibilities to support our biodiversity mandate</i></p>		<p>This means:</p> <ul style="list-style-type: none"> » The nature of provisions in council statutory documents, e.g.: the unitary plan, reserve management plan, and the degree to which these provisions are implemented in line with the strategy. » The processing of resource consents and the degree to which they implement this strategy. » Ensure that consent conditions requiring remediation, mitigation and offsetting actions contribute to achieving the objectives of the Strategy. » No net loss of ecosystems functions and processes resulting from consented activities



Planting Kauri Seedlings

Performance measures

Measure of how well we are progressing towards achieving the objectives. Note that the indicators below each Measure will be refined through further work, in line with the implementation approaches developed.



Predator proof fence, Tawharanui, Auckland

<p><i>Objective 1: Conserve the greatest number and most diverse range of Auckland's indigenous ecosystems and sequences</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Proportion of the representative range of identified ecosystem types being managed to improve their ecological integrity. <p>Indicators:</p> <ul style="list-style-type: none"> » Increase in number of ecosystems that have increased ecological integrity as a result of management. » Increase in regional biodiversity condition index with ecosystems weighted according to representativeness » No decrease in the condition of important regional ecosystems » Proportion of nationally threatened ecosystems being actively managed for conservation » Extent of ecosystems and their state
<p><i>Objective 2: Achieve long-term recovery of the greatest number of threatened species whose range includes the Auckland Region</i></p>	<ul style="list-style-type: none"> » Increased number of species that have reduced threats due to management and are on track for viability within 30 years. » Decrease in the number of threatened taxa (excluding colonisations and taxonomic revisions) » No regional species extinctions
<p><i>Objective 3: Maintain and enhance the goods and services provided by our natural environment in a way that supports indigenous biodiversity</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » No net loss of ecosystem functions and processes from those providing ecosystem services. » Proportion of the community that is using the environment sustainably. » Proportion of regional GDP generated by sustainable use of biodiversity. » Economic, social and cultural gain through the sustainable use of indigenous biodiversity. <p>Indicators:</p> <ul style="list-style-type: none"> » Increase in ecosystem services protection in policies » Increased recognition for the economic benefits of biodiversity » Extent of ecosystems and their state » Marine and freshwater water quality, contaminant (sediments and nutrients as well) loads in streams and harbours » Evidence of uptake of SOE reporting in plans » Determine how the community is using biodiversity, how much and if it is sustainable » Amount of tourism dollars spent on biodiversity
<p><i>Objective 4: Sustain and protect the mauri of natural and physical resources in ways which enable provision for the social, economic and cultural wellbeing of Maori</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Proportion of indigenous biodiversity sustained and protected through Maori management tools such as rahui. » Economic and cultural gain for Maori through the sustainable use of indigenous biodiversity facilitated by effective partnerships. <p>Indicators:</p> <ul style="list-style-type: none"> » Proportion of milestones within partnership agreements met » Proportion of biodiversity outcomes within partnership projects met » Number of Maori led projects that contribute to biodiversity » Amount of Council resource allocated to Maori specific biodiversity education and partnership arrangements » Increase in number of nga whenua rahui

<p><i>Objective 5: Achieve greater understanding, valuing stewardship and guardianship of biodiversity with our community</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Ratio of council to volunteer resource in biodiversity projects. » Proportion of biodiversity enhancement projects with effective monitoring of biodiversity gains. » Proportion of community projects that are contributing to the achievement of other objectives. » Proportion of the community that have awareness and are involved in protection of biodiversity. <p>Indicators:</p> <p>Understanding and practices</p> <ul style="list-style-type: none"> » Increase in the proportion of community groups using outcome monitoring » Number of publications summarising the biodiversity benefits of community group actions <p>Community value, understanding and guardianship</p> <ul style="list-style-type: none"> » Increased community awareness/value of biodiversity shown through attitudinal surveying » Increased media/community profile <p>Nature and scale of community involvement</p> <ul style="list-style-type: none"> » Increased community commitment » Increased levels of on-going community engagement » Increased community leadership » Increases in area of land and sea actively managed in partnership with the community » Reduction in harm caused by the community » Increase in number of QEII and DOC covenants » Increase in the number of community restoration groups
<p><i>Objective 6: Improve knowledge and understanding of biodiversity in the region in order to protect and manage it effectively</i></p>	<p>This means:</p> <ul style="list-style-type: none"> » Increase in comprehensive knowledge of the location, state and condition of regional biodiversity to inform where to manage and direct action, including how to mitigate the effects of climate change on indigenous biodiversity. » Obtain trend data of the State of the Region to measure progress towards the Vision and changes in ecological integrity and condition, including changes arising as a result of climate change. » Engage with agencies to develop, test and understand trend measures. » Monitoring the outcomes and effectiveness of protection and restoration actions
<p><i>Objective 6: Improve knowledge and understanding of biodiversity in the region in order to protect and manage it effectively</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Proportion of regional ecosystems for which council has current information on their condition and extent. <p>Indicators:</p> <ul style="list-style-type: none"> » Proportion of data layers that are current » Proportion of scheduled sites where their state of health is known » Proportion of national priority ecosystem types and threatened species that are adequately covered by SOE monitoring » Amount of resource allocated to research/data gathering » Proportion of all regional ecosystem types that are adequately covered by regional SOE monitoring

<p><i>Objective 7: Achieve increased interagency, cross council, cross boundary and cross discipline integration in biodiversity management</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Proportion of interagency biodiversity programmes. » Ratio of internal to external funding in interagency biodiversity projects. » Proportion of within Council integrated biodiversity programmes. » Proportion of the Council's budget that is spent on achieving the vision. <p>Indicators:</p> <ul style="list-style-type: none"> » Number of requests for input on external policy » Proportion of interagency projects » Number of cross council jointly funded initiatives » Evidence of uptake of submissions and feedback » Number of inter council projects » Number of cross boundary Local Board projects » Number of Local Board projects that are aligned » Number of Local Board funded priorities that contribute to the vision » Evidence of uptake of submissions and feedback » Evidence of knowledge sharing and uptake within council and between council and other agencies and organisations » Increased awareness by elected members and staff across council organisations of biodiversity » Evidence of improvements to corporate practice » Increased reference and commitment to biodiversity in formal planning documents » Increased investment of resource by Council in targeted programmes that contribute to the vision » Investment by Council in implementing and monitoring the success of this strategy
<p><i>Objective 8: Improve implementation of council statutory responsibilities to support our biodiversity mandate</i></p>	<p>Measure:</p> <ul style="list-style-type: none"> » Degree to which no net loss of ecosystems functions and processes resulting from consented activities. » Degree to which the Council addresses environmental animal and plant pests in the development and implementation of the Regional Pest Management Strategy <p>Indicators:</p> <ul style="list-style-type: none"> » Proportion of decisions where ecological advice was implemented » Incorporation of biodiversity outcomes into statutory documents » Effectiveness of policies in protecting biodiversity » Proportion of resource consents that are monitored » Percentage of resource consents that showed compliance with environmental conditions » Proportion of non-compliant consents that were prosecuted » Measure amount of habitat or number of species lost due to consented activities » Proportion of nationally threatened ecosystems (including Level IV LENZ threat classes 1-4) formally protected



Lowland Nikau/Pohutukawa Forest - Piha



Kaipara Heads, Auckland

Principles

The following principles will guide the way we intend to work to achieve the objectives. The principles are to ensure best practice is followed, that there is a consistent approach to biodiversity management across teams and to provide some guidance on what is essential to ensure success of the objectives. In achieving the objectives, Auckland Council will be seen as a leader in effective biodiversity management on its own land and in guiding others.

The principles set out important underlying values and approaches to guide how the objectives will be implemented.

We will:

- » Follow best practice and seek new solutions if this is not available and is required to achieve the objectives.
- » Prioritise protection of remnant existing ecosystems and habitats
- » Manage the region as a network of protected habitats (including aquatic, terrestrial and marine) which are buffered, and linked to other habitats. Ideally these habitats sit in a matrix of land uses and actions which support the ecological function of these habitats.
- » Take into account climate change and sea level rise when making management decisions
- » Take account of and provide for manaakitanga (ability to provide hospitality), wairua (spiritual connection to nature) and kaitiakitanga (guarding, protecting and nurturing)
- » Work corroboratively and in partnership with other agencies, tangata whenua, and the community
- » Ensure budgets are used efficiently and practically for the greatest benefit
- » Lead by example in the management of our land, development of policy and actions
- » Monitor appropriately and ensure this guides effectiveness of future work
- » Not postpone actions to conserve and protect biodiversity because of a lack of knowledge.

Evaluation

Monitoring and evaluation are essential to the implementation of this approach. Evaluation is required to understand the effectiveness of work to meet Council obligations through measurement of the degree to which it is influencing Council processes such as directing work programmes. This information will be used to revise this document 5 years from its publication. Monitoring is necessary to report on the success of the objectives against the measures stated above. This success will be informed by the results of projects in the Biodiversity Work Plan. Each project in the Biodiversity Work Plan will have a level of monitoring proportional to the project size and scope. Monitoring the progress of the projects will inform the measures in this strategy and will be reported to Council annually. This monitoring will also be used to enable an adaptive way to work with an aim of continual improvement as new knowledge is gained.

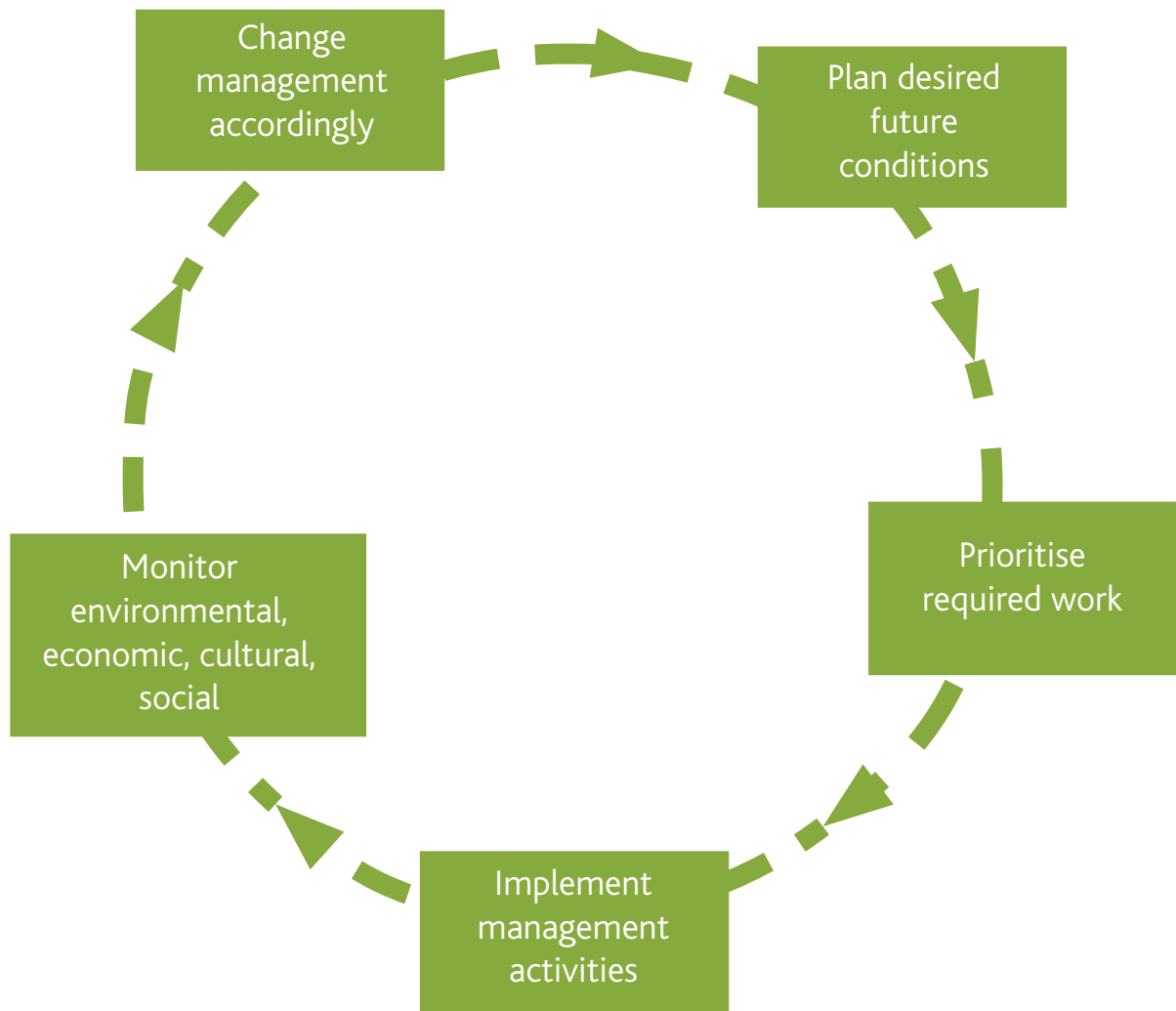


Figure 2: Process for effective biodiversity management.



Appendices

Definition of Biodiversity

Biodiversity is the full range of genes, species and ecosystems that comprise all existing life on Earth, and the ecological and evolutionary processes that sustain it. It can be used in a narrow sense to describe the number and/or proportion of species in a particular area, but more commonly used to describe the full range of genetic, species, and ecosystems in an area (including globally).

Biodiversity forms part of our natural heritage, including natural places, areas or features and indigenous flora and fauna. Species and ecosystems are inextricably linked to physical elements of natural heritage, including geological features and landforms. Our species rely on, respond to, and in some cases alter, physical natural elements of the environment such as soil, rock, microclimate, water and nutrients. Ecosystems are communities of species and the non-living components of the environment with which they interact.

The focus of natural heritage protection is therefore on indigenous species and the ecosystems they form. Indigenous (or native) species are species that evolved in New Zealand or arrived here without human assistance. They include migratory species that regularly travel to and from New Zealand, such as whales, seabirds and wading birds.

Some exotic species that occur in Auckland may be threatened in their natural range. These species are valuable for global biodiversity however management of these are not within the scope of this strategy.



Maintaining biodiversity is about more than simply protecting native species and habitats in reserves. It is also about the sustainable use of all biological resources, minimising adverse effects of activities on native ecosystems and species, and safeguarding the life-support systems on Earth (draft Heritage Strategy 2009).

Maori have a holistic view of the environment and biodiversity that derives from a cosmogony (belief system) that links people and all living and non-living things. Descended from the union of Ranginui (the sky father) and Papatuanuku (the earth mother), and their offspring, the atua kaitiaki (spiritual guardians) — Tane (atua of forests), Tumatauenga (atua of war and ceremony), Rongo (atua of cultivation), Tangaroa (atua of seas), Tawhirimatea (atua of wind and storms) and Haumietiketike (atua of land and forest foods) — humans share a common whakapapa (ancestry) with other animals and plants. People are therefore part of nature and biodiversity.

All components of ecosystems, both living and non-living, possess the spiritual qualities of tapu, mauri, mana, and wairua. Maori, as tangata whenua, are the kaitiaki (guardians) of these ecosystems and have a responsibility to protect and enhance them. This responsibility of people to other living things is expressed in the concept of kaitiakitanga — or guardianship.

As the people are intrinsically linked with the natural world, the mana of the iwi, hapu, or whanau is directly related to the well-being of the natural resources within their rohe, or region.

Understanding and valuing the Maori world-view is an essential step towards a bicultural approach to biodiversity management (NZ Biodiversity Strategy 2000).

Obligations

Several agencies have a role in biodiversity management in the Auckland Region. The Auckland Council is the only agency that has a statutory role for managing the effects of land use and development on indigenous biodiversity on private and public land. We will look to work with other agencies, societies and trusts to achieve this. The Auckland Council has obligations to manage biodiversity under international and national legislation and strategies as well as requirements to meet community expectations.

International Obligations include:

- » The United Nations Convention on Biological Diversity
- » Kyoto protocol
- » International Convention on Trade in Endangered Species
- » International Convention for the Regulation of Whaling
- » Convention for the Prohibition of Fishing with Long Drift Nets in the South Pacific
- » Forest Principles for sustainable forest development
- » The United Nations Educational, Scientific and Cultural Organisation UNESCO World Heritage Convention to protect the world's outstanding heritage sites.
- » Rio Declaration on Environment and Development - 27 guiding principles on sustainable development
- » Agenda 21 - a plan to implement the principle of sustainable development.

- » Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the Ramsar Convention), initiated by the IUCN in 1971 to stem the loss of wetlands worldwide.
- » The International Council for Local Environmental Initiatives ICLEI support and facilitate the Local Action for Biodiversity (LAB) - a global urban biodiversity initiative.

National Obligations and directives include the New Zealand Biodiversity Strategy 2000 (NZBS) and the Statement of National Priorities for protection of biodiversity on private land released by the government in 2007. New Zealand ratified the Convention on Biological Diversity in 1993, and in part fulfilment of its obligations released the New Zealand Biodiversity Strategy in 2000. The strategy sets out the Government's response to declining native biodiversity. It identifies national goals and principles for managing New Zealand's biodiversity, and action plans for achieving the goals.

It establishes national goals to "turn the tide" on biodiversity decline and to maintain and restore a full range of our remaining habitats and ecosystems and viable populations of all species. The NZBS has four goals, three of them relevant to indigenous biodiversity.

The first goal seeks enhanced community and individual action to conserve and sustainably use indigenous biodiversity, based on a well-educated, motivated and co-ordinated community that shares the responsibility for and benefits of our biodiversity. The second goal seeks protection of iwi and hapu interests in indigenous biodiversity. The third goal provides guidance on an appropriate course of direct action for biodiversity and states: "Maintain and restore a full range of remaining natural habitats and ecosystems to a healthy functioning state, enhance critically scarce habitats, and sustain the more modified ecosystems in production and urban environments; and do what else is necessary to maintain and restore viable populations of all indigenous species and subspecies across their natural range and maintain their genetic diversity."



New Zealand Tuatara - *Sphenodon punctatus*



The NZ Biodiversity Strategy requires us to maintain:

- » Pattern - i.e. the range of ecosystems, species occupancy, native species dominance; and
- » Process - i.e. functions such as hydrology, reproduction, seed dispersal

In 2007 the government released a statement of national priorities for protection of indigenous biodiversity on private land, being:

1. Indigenous vegetation on land environments with 20 percent or less remaining in indigenous cover
2. Sand dunes and wetlands
3. Historically rare terrestrial ecosystem types
4. Habitats of acutely and chronically threatened indigenous species

All of these features occur in the Auckland region, with a third of the region's land area containing vegetation that meets criterion 1 alone.



Mangrove Ecosystem

Council Structure

Managing biodiversity is the responsibility of many teams throughout the Council. Some deliver biodiversity gains with the community and landowners, others set policies and rules to protect biodiversity and guide its management. Protecting biodiversity is the responsibility of all teams in the council but this is sometimes not obvious or understood and biodiversity can actually be lost through council activities. To effectively meet our biodiversity mandate, coherent and cooperative ways of working are required across council. This strategy is one tool to help facilitate this by providing an agreed direction and principles that must be followed by all teams.

Parts of Council involved in biodiversity management:

Natural Heritage:

Provide strategic direction and policies for biodiversity management

Environmental Science:

Provision of research and monitoring design to direct and inform biodiversity management

Stormwater:

Provide best practice stormwater management including biodiversity protection and enhancement

Local Boards: Integrate biodiversity management into local board plans and actions

Auckland Transport:

Provision of transport services

Watercare:

Provision of water and waste water services

Air, Land, Water and coastal:

Provide strategic direction and policies for managing ecosystem processes

Regional and Local Parks:

Encourage community ownership, involvement and stewardship, provide linkages and corridors, revegetation and protect and manage key natural areas and areas of high biodiversity

Regional and Local Planning:

Develop Council's planning response

Biosecurity:

Undertake regional weed and animal pest control

Resource Consents:

Implement the statutory documents

Maori Strategy and Relations:

Provide strategic direction and policies ensuring Maori interests and views in biodiversity management

Biodiversity:

Implement biodiversity management

Find out more: phone 09 301 0101
or visit www.aucklandcouncil.govt.nz

