

# Part One: Strategy

## 2. Introduction

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This plan supports Wellington’s wider vision to be the “Smart Capital”, and be internationally recognised for its connection with and love of nature. Wellington’s open spaces and natural areas are part of what make Wellington an exciting and vibrant city in which to live, work and visit. Our physical proximity to nature plays a key role in our excellent quality of life, which as a city is our greatest strength. Wellington City Council is also unique in that we manage most of the publically owned open space land (around 4500 hectares).

The purpose of this plan is about ensuring Wellington indigenous biodiversity is protected and restored. Part of ensuring the ongoing protection and restoration of our biodiversity is to get people to value and respect it. We can achieve this through allowing people to form a connection with the natural world. To ensure the best outcome for our biodiversity, we also need to carry out research to create and refine innovative biodiversity management practices.

The protection of biodiversity not native to Wellington is not addressed in this strategy except where exotic species are currently protecting indigenous values such as providing habitat or shelter or can be used as a mechanism to connect people with nature.

Some of the aspects in this plan are aspirational, whereas others are easily achievable. Our community has told us they desire both as part of a comprehensive strategy, provided Council reports back regularly on what has been accomplished. Some actions depend on our partners to implement, and Council will have a facilitation role. Some actions are dependent on future funding decisions, planning decisions, and open to statutory changes.

### 2.2 What is natural capital?

We are a “Natural Capital” due to our natural environment and our nature-driven attractions. It is part of what makes us the “coolest little capital in the world”. It is an important part of what makes people want to live and work here, and helps to attract visitors.

Natural capital is our stock of natural assets, which includes biodiversity as well as earth, air and water. Cities depend on a healthy natural environment that continuously provides a range of benefits, known as ‘ecosystem services’. Healthy ecosystems are the foundation for sustainable cities, influencing and affecting human well-being and most economic activity.

Biodiversity is an integral part of this range of services. The cost to replace, replicate or restore these ecosystem services far outweighs the cost of maintaining and protecting these functions today. The biodiversity that contributes to these services exists in our reserves, parks, urban gardens, waterways, wetlands and coast.

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### 2.3 What is biodiversity?

Biological diversity - or biodiversity - is the complete variety of life on earth, and people are an integral part of this. Biodiversity is easiest to understand when you think of the different kinds of plants and animals around us and all the species that support and link them. “High biodiversity” can mean that there are a lot of different species, while “biodiversity loss” means that these species become extinct. Biodiversity is more than plants and animals, however.

Biodiversity also includes:

- genetic diversity, which is the variability in the genetic make-up amongst individuals of the same species
- species diversity, which is the variety of species within a particular area
- ecosystem diversity, which is the variety of ecosystem types and associated biological communities or habitats (eg scrubland, forest, sand dunes, wetlands, streams).

“Biodiversity incorporates all biological life, including fungi and micro-organisms, the genes they contain and the ecosystems of which they form a part. These life forms contribute to essential ecological processes.

#### Global biodiversity

The protection of biodiversity is a global issue and is an essential ingredient of sustainable development. The Convention on Biological Diversity (CBD) recognises that biodiversity is about plants and animals as well as people and our need for food, medicines, fresh air and water, shelter, and a clean and healthy environment. The CBD was reviewed at the 11th Conference of Parties (COP11) in Aichi, Japan in 2011 and a new strategic plan *Living in Harmony with Nature* was developed.

New Zealand is a signatory to the CBD and is bound by the Aichi agreement. *New Zealand Biodiversity Strategy* (2000) was prepared as part of New Zealand’s commitment to biodiversity protection, and established national goals to “turn the tide” on biodiversity decline and included action points for local authorities. Retaining a high level of indigenous biodiversity will result in a high level of global biodiversity. The New Zealand Government is in the process of updating the *New Zealand Biodiversity Strategy* to incorporate the Aichi Targets.

Globally, biodiversity is in decline and the rate of biodiversity loss is accelerating.

#### Indigenous Biodiversity

New Zealand is an internationally recognised ‘hotspot’ for biodiversity. This is because we have exceptionally high numbers of endemic species (species found

nowhere else in the world). This high endemism is largely the result of our long isolation from other land masses and diverse habitat and climate, which has allowed unique flora and fauna to develop. Around

90 percent of New Zealand's insects and marine molluscs are endemic. This is also true for 80 percent of our vascular plants (which includes trees, ferns and flowering plants); 25 percent of bird species; all of our

60 reptiles; our four remaining species of frog and all our species of bat. In comparison, Britain which is a similar size to New Zealand has only two endemic species.

## Biodiversity conservation is about ensuring the:

- viability of naturally occurring local populations of species
- resilience of the range of habitats and ecosystems that makes Wellington unique

### 2.4 Why is this important?

All Wellingtonians (including the Council) have a positive or negative effect on biodiversity, both global and local. This comes through political choices, jobs, economic activities, and daily actions. There is a huge opportunity for all of us to become more aware and more responsible; to enhance biodiversity generally through positive actions, small and large. Perhaps the greatest challenge is to make everyone realise that they have an impact on biodiversity and can play a part in its conservation.

Humans depend on our natural capital (including biodiversity) for a wide range of services, often called ecosystem services, which make life possible. Resilient and stable ecosystems are essential to sustain all of our activities in a functioning environment. The most obvious ecosystem services include the food we eat, the water we drink, the air we breathe, and the plant materials we use for fuel, fibre, building materials and medicines.

There are also many less visible ecosystem services, such as water management, the millions of tonnes of carbon stored by our forests, natural storm defences provided by sand dunes, or the pollination of plants by insects. Without healthy biological resources and ecosystem processes, we would be without basic services such as the production of raw materials, clean water, waste decomposition, soil conservation and climate regulation.

Even less visible are cultural ecosystem services such as the inspiration we take from wildlife and the natural environment, which influences our health and wellbeing. Much of Wellington's distinctive identity, its sense of place, is bound in its natural areas. Ecotourism is important in attracting national and international visitors who visit areas such as Makara Peak Mountain Bike Park, Otari-Wilton's Bush, Zealandia and Taputeranga Marine Reserve. This brings business arising from recreation in our open spaces. There is also intrinsic value in biodiversity and for many, particularly Māori; it is an essential part of their world view.

All life on earth - humans included - depends on a varied and diverse natural environment.

Wellington's natural capital gives us the following services:

- **Freshwater** - Wellington is reliant on drinking water from outside the city boundaries, but this freshwater is reliant on healthy forest catchments and healthy groundwater supplies from artesian wells in the Hutt City area
- **Local climate and air quality regulation** - natural vegetation helps to moderate extremes, and plays a role in improving air quality and reducing pollution
- **Energy** - much our energy comes from solar and wind power



**Above:** Yellow admiral butterflies can be seen throughout urban areas. They pollinate a range of native species, including hebe at Otari-Wilton's Bush. Photo: Galen Eakins.

- **Carbon sequestration and storage** - the City's native bush and exotic forestry is an important part of Wellington's climate change strategy and helps Wellington move towards being carbon neutral
- **Moderation of extreme events due to climate change** - natural ecosystems have an important role in protecting infrastructure and housing from increasingly frequent and severe weather events.
- **Waste-water treatment** - at present streams and the coastal environment are a vital part of our waste-water network. Ecosystems such as wetlands also filter waste and act as a natural buffer to the surrounding environment
- **Pollination services** - healthy ecosystems and a diverse range of pollinators will pollinate many plants, including edibles and ornamentals
- **Recreation and mental and physical health benefits** - recreating in green space is not only a good form of physical exercise but also lets people relax
- **Tourism and economics** - Wellington's natural environment is increasingly one of our selling points for domestic and international tourists, which in turn provides considerable economic benefits.
- **Cultural and spiritual wellbeing and sense of identity** - language, knowledge and the natural environment have been intimately related throughout human history. Biodiversity, ecosystems and natural landscapes have been the source of inspiration for much of our art, culture and increasingly for science. Nature is a common element of all traditional knowledge, and associated customs are important for creating a sense of belonging
- **Soil formation and stabilisation** - soil filters our wastewater, provides essential nutrients to our forests and crops, helps regulate temperature and is the foundation for our cities and towns

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natural environment.**

**Opposite:** Intensifying southerly swells, as seen by the Karori Rock Light, have led to an increased focus on the resilience of our coast.







