APPENDIX 5.3.4

STRATEGY 4:

Environment

PROTECTING AND ENHANCING OUR NATURAL ENVIRONMENT

We aim to enhance the city's open spaces and protect distinctive plant, bird and animal life. We also aim to provide great outdoor areas for residents and visitors to enjoy. And, by providing well-managed water and waste services, we will protect the city's environment and residents' health.

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CONTENTS

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Introduction

We aim to protect and enhance the city's natural environment — its air, water, land, and plant and animal life. This means ensuring that natural resources are used sustainably, in a way that ensures they can meet our current needs and the needs of future generations. It also means protecting the environment from the negative effects of urban development and economic activity.

Wellington has been shaped by nature. Its hills, harbour, coastline, and parks and reserves together give the city its unique character. Nature is also integral to many of the city's most important visitor attractions, from Te Papa to the Karori Wildlife Sanctuary to the city's world-class botanic gardens. The city's liveability, and residents' future prosperity and social well-being, depend on our ability to protect and enhance the city's natural features.

It's critical that we protect the city from the negative environmental effects of urban development and economic activity. No-one wants to live in a region where the air, land and waterways are polluted. Wellington's record of environmental protection has been reasonably good, and progress is being made in several areas. We're increasing the amount of waste that is re-used and recycled, and our approach to wastewater treatment ensures there are minimal environmental effects.

But we still face several significant environmental challenges. We need to use water and energy more efficiently, to reduce the risk of supplies running out, and — in the case of energy — to reduce our contribution to global climate change. We need to reduce the amount of waste we produce, and ensure that waste is disposed of in ways that cause the least possible harm. And, we need to more effectively protect the region's streams and waterways.

Key facts

Amount of water used in the city per person each day during 2004/05: 453.

Number of square metres of open space for every person in the city: .17.36.

Tonnage of kerbside recycling collected from Wellington households (2004/05): 10,374. Percentage increase since 2002/03: 5.6.

Percentage of residents who visited the Wellington Botanic Garden in 2005: 77.

OUR LONG-TERM OUTCOMES

Our overall goal is to protect and enhance the city's natural environment. This means ensuring that natural resources — air, water, land, and plant and animal life — are managed sustainably, in ways that don't compromise the well-being of current residents or future generations. And it means nurturing the natural environment so it can continue to attract people to the city and provide opportunities for recreation and enjoyment.

Over the next 10 years, we aspire to the following outcomes:

4.1 MORE LIVEABLE: WELLINGTON'S NATURAL ENVIRONMENT WILL BE ACCESSIBLE TO ALL, FOR A WIDE RANGE OF SOCIAL AND RECREATIONAL OPPORTUNITIES THAT DO NOT COMPROMISE ENVIRONMENTAL VALUES.

Much of Wellington's natural environment allows public access for a variety of uses. As owner and/or manager of many open spaces, the Council must balance competing demands for their use so that human activities are allowed without compromising their environmental values. Protecting the natural environment, while making it accessible, will mean:

- providing opportunities for active and passive recreation
- actively managing open space ecosystems and public amenities
- balancing various uses of public open spaces.

4.2 STRONGER SENSE OF PLACE: WELLINGTON WILL RECOGNISE AND PROTECT SIGNIFICANT FEATURES OF ITS COASTAL AND TERRESTRIAL LANDSCAPE AND NATURAL HERITAGE.

Wellington is known for its impressive sense of place that features the harbour and hills prominently in a dramatic coastal setting. The vegetation of Wellington, including street trees and private gardens, is an important element as well. Recognising and protecting landscape and natural heritage will mean:

- identifying those elements of the landscape that most favourably contribute to natural functions and Wellington's sense of place
- using the Council's influence as a land owner and its powers as a land use regulator to protect significant features of the landscape and natural heritage.

4.3 MORE ACTIVELY ENGAGED: WELLINGTON WILL PURSUE A COLLABORATIVE, PARTICIPATORY APPROACH TOWARDS ENVIRONMENTAL KAITIAKITANGA (GUARDIANSHIP), BY SHARING INFORMATION WITHIN THE COMMUNITY AND ESTABLISHING PARTNERSHIPS TO ACHIEVE ENVIRONMENTAL GOALS.

Wellington's natural environment can benefit from the combined strength of community groups, iwi, businesses, households, academic/research institutions, and local and central government agencies. While the roles of some organisations are defined by statute, there is still great potential for collaborative leadership in environmental matters. Promoting a more actively engaged city will mean:

- information sharing among agencies and across the community
- the Council leading by example through development and management of publicly-owned land, buildings and infrastructure
- collaborative decision-making
- community participation in decision-making and achievement of goals.

4.4 BETTER CONNECTED: WELLINGTON WILL HAVE A NETWORK OF GREEN SPACES AND CORRIDORS LINKING THE COASTLINE, TOWN BELT AND OUTER GREEN BELT.

The green open space network is important for ecological, social and non-motorised transportation connections through the city. The Council owns and/or manages much of the publicly accessible open space in the city and therefore has great influence over this valuable network. Providing a green open space network will mean:

- owning and managing local parks, including small urban parks, as well as larger open spaces like those in the Town Belt, Outer Green Belt, Botanic Gardens, and coastal areas
- facilitating and managing public access to privately owned open spaces throughout the city
- developing and maintaining walkways and trails
- monitoring and enhancing the ecological function of the green open space network.

4.5 MORE SUSTAINABLE: WELLINGTON WILL REDUCE ITS ENVIRONMENTAL IMPACT BY MAKING EFFICIENT USE OF ENERGY, WATER, LAND AND OTHER RESOURCES; SHIFTING TOWARDS RENEWABLE ENERGY RESOURCES; CONSERVING RESOURCES; AND MINIMISING WASTE.

Without efficient use of scarce resources and/or increased use of renewable resources, Wellington faces several risks, including: running out of these inputs to its economy; creating more harmful emissions leading to poor local air quality and to climate change; and generating more solid waste which requires costly landfill expansion. Reduction, re-use, recovery, and recycling can help mitigate these risks and create economic opportunities based on waste reduction instead of waste generation. Sustainable resource use will mean:

- monitoring and managing Council's own resource use
- promoting energy efficiency and renewable energy development through the Council's role as facilitator and as land use regulator
- using the Council's control of the water supply system to promote water conservation through appropriate technology such as water meters and rainwater tanks
- promoting greywater re-use, water-saving toilets and rainwater re-use
- gathering more extensive data on waste sources, destinations and composition
- continuing kerbside recycling and encouraging greater re-use, recycling and recovery in the wider community, including businesses
- continuing to implement 'polluter-pays' charges to provide incentives for waste reduction and to fund mitigation efforts
- greater regional collaboration on appropriate matters such as pricing and data collection.

4.6 SAFER: WELLINGTON WILL HAVE ACCESS TO SAFE AND RELIABLE ENERGY AND WATER SUPPLIES, CLEAN AIR, AND WASTE DISPOSAL SYSTEMS THAT PROTECT PUBLIC HEALTH AND ECOSYSTEMS.

Safe and reliable supplies of energy, water and air are the foundations of a healthy and prosperous city. Wellington needs to provide or facilitate these key inputs, including mitigating the negative effects of waste generation on these resources, the public and ecosystems. Reliable supply and safer disposal will mean:

- continued access to quality water supply
- sustainable stormwater management practices to prevent flooding
- greater protection of receiving waters from polluted stormwater
- high-quality treatment of sewage and innovative use of biosolids to protect the marine and terrestrial environment
- continued management of solid waste collections and landfills to protect public health and ecosystems.

4.7 HEALTHIER: WELLINGTON WILL PROTECT AND RESTORE ITS LAND- AND WATER-BASED ECOSYSTEMS TO SUSTAIN THEIR NATURAL PROCESSES, AND TO PROVIDE HABITATS FOR A RANGE OF INDIGENOUS AND NON-INDIGENOUS PLANTS AND ANIMALS.

Biodiversity is important because it represents the complex interplay of biological and physical elements that supports a thriving environment — one that produces the natural resources we use and the natural amenities we experience, view and value. Biodiversity is also a potentially valuable source of genetic material for future medical and technological advances. Beyond its material use to humans, biodiversity and ecosystems have intrinsic value. Protecting ecosystems and biodiversity will mean:

- providing natural habitat for a range of species
- controlling animal pests and invasive pest plants
- planting appropriate species and proactively managing the transition of some areas from exotic to indigenous vegetation

4.8 MORE COMPETITIVE: WELLINGTON'S HIGH-QUALITY NATURAL ENVIRONMENT WILL ATTRACT VISITORS, RESIDENTS AND BUSINESSES.

Wellington has a competitive advantage in the quality of the natural environment that it offers tourists, potential residents, and potential businesses. This advantage is based not on resource extraction, but on the ample opportunities for appreciating and engaging with the natural environment while preserving it for future generations.

High-profile, public facilities that support the eco-tourism industry are particularly important in attracting short-term visitors. Additionally, many other Council activities such as parks and gardens, walkways, and sewage treatment contribute to Wellington's quality natural environment. These basic environmental services, as well as valued amenities like the open space network, are particularly important in attracting and retaining residents and businesses.

Fostering the competitive advantage offered by Wellington's superior and accessible natural environment will mean:

- showcasing biodiversity at public facilities
- marketing Wellington's natural environment to tourists, potential residents, and potential businesses
- continuing to provide an accessible open space network
- continuing to provide the other environmental services that make Wellington's natural environment special.

HOW WE'LL MEASURE OUR PROGRESS TOWARDS THESE OUTCOMES

To assess whether Wellington is becoming more liveable, we'll measure the number of hectares of open space land we own or maintain per capita. We'll also monitor resident usage of the city's open spaces (including parks, Town Belt, reserves etc).

To assess whether Wellington is developing a stronger sense of place, we'll survey residents to find out what percentage think the city's natural environment is appropriately managed and protected.

To assess whether the city's residents and communities are becoming more actively engaged in guardianship of the environment, we'll survey residents to find out what action they're taking to reduce waste from their homes (eg by recycling or composting), and what steps they're taking to reduce pollution of the stormwater network. We'll also measure the number of hours worked by recognised environmental volunteer groups.

To assess whether the city's green spaces are becoming better connected, we'll keep a record of the number of kilometres of tracks we maintain throughout the city.

To judge whether the city is becoming more sustainable, we'll monitor trends in the total amount of waste going to the city's landfill per capita, total water use per capita, total energy use per capita, and total recyclable material Council staff divert from the landfill per capita. We'll also measure the city's ecological footprint.

To judge whether the city is providing a safer environment for residents, we'll monitor trends in air quality (measured in particulate matter), and number of energy supply interruptions.

To judge whether the city's environment is getting healthier, we'll monitor trends in: the number of macroinvertebrates in city streams; water quality; native bird populations; and native vegetation in reserve areas.

To judge whether the city's natural environment is making it more competitive by attracting visitors, residents and businesses, we'll monitor trends in the number of visitors to key environmental attractions (including Wellington Zoo, Karori Wildlife Sanctuary, Wellington Botanic Garden and Otari Wilton's Bush).

OUR THREE-YEAR PRIORITIES

For the period 2006-09, we've identified the following four priorities for our contribution to the city's environmental well-being. These priorities are important stepping stones towards our long-term goals.

- We will increase our promotion of water and energy efficiency and conservation, energy security, and the use of renewable energy sources, and it will take a more active leadership role in these areas.
- We will increase our efforts to improve the protection of streams.
- We will develop a coherent plan to address biodiversity issues, including removing and replacing hazardous trees.
- We will strengthen our partnerships with stakeholders to increase environmental awareness, community participation, and the achievement of environmental goals.

HOW WE PLAN TO ACHIEVE THESE PRIORITIES

We already play a major role in protecting the environment from the negative effects of human activity, by looking after the city's sewage and stormwater networks, and rubbish and recycling

operations, as well as encouraging waste minimisation. These tasks, along with water supply, keep the city liveable. They are among our biggest areas of operation.

We also look after the city's open space areas — beaches and coastline, Town Belt, Outer Green Belt, and parks and reserves. And we work with a wide range of organisations, from volunteer groups to major nature-based attractions, to enhance the city's natural environment and ensure the city offers a wide range of nature-based attractions.

Over the next three years, we're planning several new initiatives to protect and enhance Wellington's environment. We'll be taking steps to encourage water conservation and to promote energy efficiency, both within our own operations and throughout the city. This will include development of sustainable building guidelines aimed at encouraging greater energy efficiency in building projects.

From 2006/07, we're increasing the amount of funding available in our environment grants pool to support community groups and volunteers who do work that benefits the city's environment, and we'll be increasing our support for community planting initiatives. We're also supporting two projects to raise Wellington school students' awareness of and involvement in environmental issues.

We'll be developing a Biodiversity Action Plan to ensure that we're protecting the city's plant and animal life as effectively and strategically as we can. And we'll be working with others to protect and enhance the city's streams, with the top priorities being completing our restoration of the Kaiwharawhara Stream and starting restoration of the Porirua and Owhiro streams.

Detailed information about our proposed activities is provided on the following pages.

HOW WE'LL DEAL WITH NEGATIVE EFFECTS

The wastes a city produces — rubbish, wastewater, stormwater runoff, hazardous wastes etc — are in themselves negative effects on the environment. Many of our activities are aimed at dealing with these negative effects in ways that cause the least possible long-term harm.

Wastewater is treated to make it safe for disposal at sea, and the sludge is combined with green waste to create high-quality compost.

Stormwater is not treated. However, it is monitored to ensure contaminants do not exceed levels allowed under our resource consents. We also work to educate residents about the consequences of disposing of contaminants in the stormwater network.

With these major infrastructure assets, the negative effects from service failure are far more serious than the effects from service provision. We manage our assets to avoid service failures by carrying out a programme of regular monitoring and maintenance, and by prioritising critical work — for more on this, see the commentary on 'how we manage our assets' under each activity on the following pages.

Negative effects from landfills can include leachate and production of gases. We monitor these effects and we manage both open and closed landfills with the aim of reducing or mitigating these effects where possible. Hazardous wastes, for example, are collected and dealt with safely. We regulate trade wastes to ensure they are disposed of safely and do not enter the sewage system. We are taking steps to reduce the amount of waste disposed of at landfills, including education, price signals and sorting of dumped rubbish to remove recyclables and green waste.

Our quarrying operation directly affects the visual environment in a prominent area of the city. To mitigate this effect, we are progressively restoring quarry sites as the useable material is exhausted.

In our management of the city's open spaces, we seek to balance recreation needs against environmental protection. While recreational use can have negative effects on the immediate environment, in most cases these are not significant. We do not anticipate any other negative effects associated with our management of these assets, or from our other environmental well-being programmes.

4.1.1 LOCAL PARKS AND OPEN SPACES

What we do

We manage and maintain the city's parks and other open spaces, along with their buildings, park furniture and other assets. We operate the Berhampore Nursery which grows hundreds of thousands of plants each year — many of them natives — for planting in the city's open spaces. This activity also includes planning for the future of the city's open spaces, and acquiring properties that need protection because of ecological, landscape, recreation or amenity values.

Day to day we carry out horticultural operations such as planting flower beds and maintain our trees – protecting them from disease and damage.

Why it's important

This activity provides recreation opportunities and adds to the city's attractiveness and 'sense of place'. It contributes to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments,' 'Wellington will preserve and improve its parks, trees and open spaces', and 'Wellingtonians will protect and have access to public green open spaces and the coast'.

How we manage our assets

Parks and open spaces are managed under our Park and Garden Open Spaces Asset Management Plan and our Parks Buildings Asset Management Plan, which sets down service level requirements for management of park and reserve assets. For detail, see activity 4.2.3 Town Belts.

How we will measure our performance

Performance measures	Performance targets	
1. Visitation – how often during the last 12 months have you used a WCC park.	2006/07	90% of residents have used a park at least once.
	2007/08	90% of residents have used a park at least once.

	2008/09	90% of residents have used a park at least once.
	2016/17	90% of residents have used a park at least once.
2. The percentage of users who rate the quality and maintenance of WCC parks as good or very good.	2006/07	80%
	2007/08	80%
	2008/09	80%
	2016/17	80%

Who should pay

User charges	5%
Other revenue	0%
Targeted rate	0%
General rate	95%
TOTAL	100%

What it will cost

(Insert financial table)

4.2.1 BOTANICAL GARDENS

Wellington has four botanical gardens: Wellington Botanic Garden, Otari-Wilton's Bush, Bolton Street Memorial Park and Truby King Park (in Melrose). The gardens have educational and conservation functions, providing sanctuary for threatened plant species and the opportunity to nurture new varieties. Otari-Wilton's Bush is internationally-renowned for its conservation efforts.

The Botanic Garden also provides venues for community events, and is home to several attractions including the Carter Observatory and the Cable Car Museum.

All are popular with residents and visitors alike — the Wellington Botanic Garden alone receives more than 1.3 million visitors a year.

We manage the gardens with assistance from community groups and trusts who help with planning new developments as well as upkeep.

During 2006/07 we plan to appoint an environmental educator, based at the Treehouse Visitor Centre in the Wellington Botanic Garden. The educator will work with school parties, providing programmes that raise awareness of environmental issues.

Other proposed developments include:

- in 2006/07, replacement of the Otari Wilton's Bush picnic area toilets
- in 2007/08, upgrade of the Treehouse and redevelopment of the Botanic Garden nursery
- in 2008/09, development of the walkway between the Treehouse and the Botanic Garden play area, and refurbishment of the Otari information centre.

We will also continue our programme of removing dangerous trees from botanic gardens.

Why it's important

The Botanic Gardens are popular destinations for recreation and relaxation for residents and visitors. They play important conservation and environmental education roles. They are visitor attractions. They provide venues for events. By bringing people together, they enhance social cohesion. And they are important to the city's heritage and 'sense of place'.

The gardens contribute to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments,' 'Wellington will preserve and

improve its parks, trees and open spaces', and Welingtonians will protect and have access to public green open spaces and the coast'.

How we manage our assets

The gardens are managed under our Botanic Gardens Asset Management Plan, which sets down asset performance, condition and service level requirements. The plan covers such assets as horticultural and botanical areas, turf, furniture and buildings, trees, graves and paved/sealed surfaces.

We aim to comply with all relevant legislation at all times, and to maintain all botanic gardens assets in good or fair condition sufficient to meet customer expectations. On average, assets are in good condition.

We carry out regular condition assessments and make decisions about maintenance, upgrades and renewals as needed. We also seek customer feedback through user and resident surveys, and we respond to complaints.

The plan contains specific service level targets for bedding, shrub borders, rose beds, revegetation, trees, mowing, turf renovation, hard surfaces, tracks, furniture and structures, water features, and buildings.

Our plans take into account anticipated future demand levels, which are based on a range of factors including current use and demographic trends.

The Botanic Garden and the Bolton Street Memorial Park are registered with the Historic Places Trust. They and Otari Wilton's Bush are listed as heritage areas in our District Plan. There are also several heritage assets within the gardens. We aim to conserve all heritage features. Any alteration that affects a heritage feature will require resource consent.

The Botanic Garden's play area is managed under our Playgrounds Asset Management Plan (see activity 6.4.4 Playgrounds in the Social and Recreation section of this plan). Botanic gardens sculptures and monuments are managed under our Monuments and Public Artworks Asset Management Plan (see activity 1.5.2 Public Space and Centre Development in the Urban Development section of this plan).

How we will measure our performance

Performance measures	Performance targets

1. Visitation – how often during the last 12 months have you visited WCC's botanic gardens.	2006/07	80% of residents have visited at least once.
	2007/08	80% of residents have visited at least once.
	2008/09	80% of residents have visited at least once.
	2016/17	80% of residents have visited at least once.
2. The percentage of plant collection held by the botanical gardens that meet defined WCC plant 'performance standards'. (Standards measure the health and quality of the plant collection)	2006/07	90%
	2007/08	90%
	2008/09	90%
	2016/17	90%

Who should pay

User charges	10%
Other revenue	0%
Targeted rate	0%
General rate	90%
TOTAL	100%

What it will cost

(Insert financial table)

4.2.2 BEACHES AND COAST OPERATIONS

What we do

Oriental Bay Beach is a jewel in the heart of Wellington. Hugely popular with residents and visitors alike, it is also a beautiful part of the inner city. Having created the new, larger beach, we now maintain it to ensure it continues to offer an ideal sport for relaxation and recreation. This maintenance work includes checking sand levels and periodically shifting sand along the beach to counter storm and tidal effects. The beach may need occasional top-ups of further golden sand.

We also look after many of the city's other beaches and dunes, covering the south coast, eastern bays, Miramar Peninsula, Evans Bay and Makara Beach. This includes erosion control work, cleaning, dealing with spills. It also includes managing assets such as boat ramps, jetties, wharves, piers and slipways, as well as the Carter Fountain in Oriental Bay. The south coast's special character is recognised in our development of a special plan for its management and upgrade — the South Coast Management Plan.

During 2006/07, we plan to:

- upgrade the old Owhiro Quarry site; the upgrade will reflect natural coastal values and provide recreation opportunities; key elements in the upgrade include public toilets, signs, seating, rubbish bins, landscaping, and car parking
- repair the historic Island Bay seawall — the first stage of a possible long-term redevelopment plan for the Shorland Park/Island Bay beach area
- continue our maintenance programme to ensure slipways, jetties and boat ramps are safe to use for recreational purposes.

Why it's important

A well-maintained coast, with strong natural values and secure structures, is important for public safety and enjoyment. Wellington's coastal areas are also important for 'sense of place' reasons. They provide locations for relaxation, enjoyment, and community/entertainment events. As natural gathering places, they are important for social cohesion. Our beach and coastal work contributes to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments,' and 'Wellingtonians will protect and have access to public green open spaces and the coast'.

How we manage our assets

These assets are managed under our Coastal Assets Asset Management Plan, which sets down asset performance, condition and service level requirements.

We aim to comply with all relevant legislation at all times, and to maintain all assets in fair condition sufficient to meet customer expectations. On average, assets are in good to fair condition.

We carry out regular condition assessments and make decisions about maintenance, upgrades and renewals as needed. We also seek customer feedback from community organisations and through resident surveys, and we respond to complaints. The plan also contains targets for cleaning and dealing with spills.

Our plans take into account anticipated future demand levels, which are based on a range of factors including current use and demographic trends. A number of projects are likely to increase usage of coastal areas in coming years — for example the sinking of the F69.

The city's coastal areas include a number of heritage sites which are protected under our District Plan. We aim to conserve all heritage features. Any alteration that affects a heritage feature will require resource consent.

This plan does not cover coastal retaining walls, which are managed under our Transport, Roading and Traffic Asset Management Plan (see Transport). A small number of buildings are managed under this plan. However, most coastal buildings are managed under other asset management plans.

How we will measure our performance

Performance measures	Performance targets	
1. Visitation – how often during the last 12 months have you used the city's wharves, jetties, boat ramps or visited its beaches.	2006/07	75% of residents have visited or used at least once.
	2007/08	75% of residents have visited or used at least once.
	2008/09	75% of residents have visited or used at least once.
	2016/17	75% of residents have visited or used at least once.
2. The percentage of users who rate the cleanliness and maintenance of the	2006/07	85%
	2007/08	85%

city's coastline and beaches as good or very good.	2008/09	85%
	2016/17	85%

Who should pay

User charges	0%
Other revenue	5%
Targeted rate	0%
General rate	95%
TOTAL	100%

What it will cost

(Insert financial table)

4.2.3 TOWN BELTS

The Town Belt and Outer Green Belt are vital features of Wellington's landscape. Few other cities have rugged, bush-covered hills so close to the city centre. We manage these areas for the benefit of all residents, ensuring they continue to provide fantastic outdoor recreation opportunities and contribute to the city's unique identity.

Our long-term vision is to substantially increase the number and proportion of native plants on Town Belt land, while reducing the number of conifers and exotic trees. A key priority over coming years is the continued removal of trees that may be in danger of falling during storms, and replacing them with native vegetation.

From time to time, we negotiate with other landowners to resolve encroachments on to Town Belt land.

We will continue to maintain the Town Belt and Outer Green to provide high-quality recreation opportunities. Removal of hazardous trees — mainly pines — will continue, along with replanting of the areas where trees have been removed. On Tinakori Hill, several thousand new rata will be planted over the next few years.

In addition, during 2006/07 we plan to carry out a study to assess how well the Outer Green Belt meets the city's recreation needs. Over the following two years we intend to review our Town Belt Management Plan.

Why it's important

The Town Belt and Outer Green Belts provide recreation opportunities, preserve ecosystems, and are important for Wellington's sense of place. This activity contributes to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments,' 'Wellington will preserve and improve its parks, trees and open spaces', and 'Wellingtonians will protect and have access to public green open spaces and the coast'.

How we manage our assets

The Town Belt, Outer Green Belt and park and reserve areas are managed under our Parks and Gardens Open Space Areas Asset Management Plan, which sets down asset performance, condition and service level requirements. The plan covers bush and planted areas, turf, and

assets such as fences and paved/sealed areas. In all, we manage more than 33 square kilometres of reserve land (11.6 percent of the city's total area of 289 square kilometres).

We aim to comply with all relevant legislation at all times, and to maintain all assets in good or fair condition sufficient to meet customer expectations. We carry out regular condition assessments and make decisions about maintenance, upgrades and renewals as needed. We also seek customer feedback through resident surveys, and we respond to complaints. The plan sets down service level requirements for planted areas, trees, revegetation, mowing, turf, paved/sealed surfaces, furniture and structures, and water features.

Our plans aim to take into account anticipated future demand levels, our information about demand which are based on a range of factors including current use and demographic trends.

Weather events can have an unpredictable effect on our budgets. Storms in 2004 damaged or knocked down large numbers of trees. Resources had to be diverted from other areas to deal with the clean-up. We have since increased our budget for tree removal work.

From time to time we acquire land to add to the Town Belt or Outer Green Belt. We have an ongoing programme of fencing 3-4km a year of Outer Green Belt land adjacent to farms.

Buildings on Town Belt and reserve land are managed under our Parks Buildings Asset Management Plan. Buildings range from the Chest Hospital to Berhampore Nursery buildings to picnic shelters. Under this plan, parks buildings must be maintained in good or fair condition. Management principles and methods are similar to those applying to other parks and gardens assets.

Town Belt, park and reserve areas include a number of heritage sites, including Maori heritage sites such as Rangitautau Reserve. There are also five heritage buildings: the Shorland Park bank rotunda, Chest Hospital, Nurses Hostel, 1911 Water Works Building on Wadestown Rd, and the Makara Village schoolboys' lunch shed. These heritage assets are protected under our District Plan. Some are registered with the Historic Places Trust. We aim to conserve all heritage features. Any alteration that affects a heritage feature will require resource consent.

Walkways/tracks and associated assets such as signs, bridges and park furniture are also managed under this asset management plan, but are funded under activity 4.4.1 Walkways. This plan also provides for removal of pests and weeds, which is funded through activity 4.7.2 Pest and Weed Management.

How we will measure our performance

Performance measures	Performance targets	
1. Total area of restorative planting carried-out during the year.	2006/07	4 hectares
	2007/08	4 hectares
	2008/09	4 hectares
	2016/17	4 hectares
2. Visitation – how often during the last 12 months have you visited either the Town Belt or Outer Green Belt.	2006/07	60% at least once
	2007/08	60% at least once
	2008/09	60% at least once
	2016/17	60% at least once
3. The percentage of users who rate the cleanliness and maintenance of the Town Belt and Outer Green Belt as good or very good.	2006/07	85%
	2007/08	85%
	2008/09	85%
	2016/17	85%

Who should pay

User charges	0%
Other revenue	5%
Targeted rate	0%
General rate	95%
TOTAL	100%

What it will cost

(Insert financial table)

4.3.1 COMMUNITY ENVIRONMENTAL INITIATIVES

What we do

We want Wellington residents to be involved in protecting and nurturing the city's environment. Under this activity, we support volunteers from community groups, schools and other organisations who work to maintain and improve the city's parks and open spaces. Each year, these volunteers plant thousands of plants on Town Belt and reserve land. In addition, we provide plants from our Berhampore Nursery, free of charge, to residents each year for them to plant on road reserves.

Also under this activity, we provide grants to fund projects that benefit the city's environment, promote sustainability, raise awareness of environmental issues, or otherwise contribute to our environmental objectives.

From 2006/07 on, we plan to:

- increase our support for community planting initiatives, with the aim of getting more people involved and significantly increasing the number of native plants planted on reserve and road reserve land during each of the next three years. In 2005/06, we expect volunteers will plant about 18,000 plants on reserve and road reserve areas. We aim to increase that to over 25,000 within the next few years.
- expand the amount of Council funding available for environmental grants, from $50,000 a year to $80,000. For the next three years, about half of the grants pool will be allocated to projects that meet our medium-term priorities of promoting water and energy efficiency/conservation, and enhancing stream protection
- support facilitators to implement the national Enviroschools project in Wellington schools.

Why it's important

This activity directly benefits the city's environment (through planting initiatives) and raises awareness of environmental issues. It also enhances social cohesion by bringing people together. It contributes to the following community outcome: 'Wellington will promote the sustainable management of the environment, and support increased opportunities for the exercise of kaitiakitanga or environmental guardianship'.

How we will measure our performance

Performance measures	Performance targets	
1. The number of WCC-supplied native plants that are planted by community groups and residents.	2006/07	24,000
	2007/08	25,000
	2008/09	26,000
	2016/17	27,000
2. Total number of grant applicants Total number of applicants receiving grants Total budget allocated to grants (Note – the above measures reflect monitoring capacity and therefore do not have detailed performance targets)	2006/07	To distribute environmental grants pool budget in accordance with eligibility criteria
	2007/08	To distribute environmental grants pool budget in accordance with eligibility criteria
	2008/09	To distribute environmental grants pool budget in accordance with eligibility criteria
	2016/17	To distribute environmental grants pool budget in accordance with eligibility criteria

Who should pay

User charges	0%
Other revenue	0%
Targeted rate	0%
General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

4.4.1 WALKWAYS

What we do

We encourage public use of the Town Belt and reserve areas. Our aim is to have a network of tracks linking the coastline, Town Belt and Outer Green Belt.

We currently maintain over 100km of walking tracks, and another 100km+ of mountain bike and dual use tracks, on reserve land throughout the city. Our maintenance work includes controlling plants, drainage clearance, and repairing storm damage and vandalism. We have an ongoing programme of upgrading existing tracks and developing new link tracks where needed.

Why it's important

Walkways and tracks provide access to reserve areas, making them available for enjoyment and recreation purposes. This work contributes to the following community outcome: 'Wellingtonians will protect and have access to public green open spaces and the coast'. It also contributes to our long-term goal that Wellington be better connected — that it have a network of green spaces and corridors linking the coastline, Town Belt and Outer Green Belt.

How we manage our assets

Walkways are managed under our Parks and Gardens Open Space Areas Asset Management Plan. Under the plan, we aim to comply with all relevant legislation at all times, and to maintain walkways in good or fair condition sufficient to meet customer expectations. The walkway network has been captured using global positioning system technology, and in recent years the condition of each track has been assessed. The asset management plan contains general service level requirements for walkways, including access and environmental impact. Different service levels are required for different types of walkway (eg paths in city parks, walking tracks, and tramping tracks). During 2005/06 we are finalising an Open Spaces Access Plan which will set future standards for maintenance and upgrade of individual walkways and tracks. Tracks will be classified according to use and condition. Maintenance/upgrades will be scheduled to maintain tracks in appropriate condition relative to expected demand.

How we will measure our performance

Performance measures	Performance targets	
1. The percentage of users who rate the maintenance and quality of open space walkways and track network as good or very good.	2006/07	80%
	2007/08	80%
	2008/09	80%
	2016/17	80%
2. The percentage of WCC open space walkways and track network that meets the required 'quality service standard'.	2006/07	80%
	2007/08	80%
	2008/09	80%
	2016/17	80%

Who should pay

User charges	0%
Other revenue	0%
Targeted rate	0%
General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

4.5.1 ENERGY EFFICIENCY FACILITATION

What we do

One of our key environmental priorities for the period 2006-09 is to encourage greater energy efficiency and conservation and use of renewable energy sources, both within our own operations and throughout the city. In line with this new strategic priority, we plan to initiate the following new projects in 2006/07:

- Set an example by working out ways to reduce our own energy use, then share our experience with others
- Develop guidelines on sustainable building. These guidelines will cover areas such as energy efficiency, water conservation and waste reduction, and will be relevant for:
    - new buildings and renovations in Wellington City
    - new Council buildings and renovations.

Why it's important

Generating energy can have environmental costs. For example, burning fossil fuels for energy generation contributes to climate change through the production of greenhouse gas emissions, which trap heat in the earth's atmosphere. By reducing the amount of energy produced from fossil fuels helps we can minimise our impact on the environment. It is important to consider the environmental impacts as well as the costs and benefits of all forms of energy, whether it is renewable or non-renewable sources.

This activity contributes to the following community outcomes: 'Wellingtonians' use of non-renewable energy resources will decrease', and 'Wellington will promote the sustainable management of the environment, and support increased opportunities for the exercise of kaitiakitanga or environmental guardianship'.

How we will measure our performance

Performance measures	Performance targets	
The tonnage of WCC (corporate) greenhouse gas emissions.	2009/10	To stabilise WCC emissions to 2003 levels
	2019/20	To reduce 2003 WCC emission levels by 20%

Who should pay

User charges	0%
Other revenue	0%
Targeted rate	0%
General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

Note: current staff resources will be used to implement the internal energy efficiency projects.

4.5.2 QUARRY

What we do

We own and operate the Kiwi Point Quarry in Ngauranga Gorge, which provides aggregate to the local construction market. Each year, about 250,000 tonnes of rock are extracted for use on roading and other infrastructure.

In our management of this resource, we aim to minimise environmental impacts while contributing to the city's development needs. The quarry is managed in line with environmental legislation and standards including resource consents and the District Plan.

Over the next three years, the quarry plans to continue to provide efficient management of its resource and to comply at all times with all relevant environmental laws and resource consents. Significant redevelopment and rehabilitation work will be carried out on the quarry's north face, and quarrying will take place on the southern face. The quarry is considering the establishment of operations for green waste recovery, concrete recycling, and cleanfill recycling.

Why it's important

The quarry's output is needed for the region's roads and other infrastructure. It contributes to the following community outcome: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

The quarry is managed in accordance with our Kiwi Point Quarry Asset Management Plan. The quarry site is 27ha. Assets include 5km of sealed roads, 3km of unsealed roads, a weighbridge, three buildings, crushers, and various other plant/equipment. The quarry is operated by contractors, meaning the Council does not need to invest in earthmoving equipment.

We comply with all legislation and regulatory requirements, including resource consents, at all times. Quarry assets are maintained in a condition that allows the quarry to meet customer and stakeholder expectations. Condition assessments were carried out on Council-owned assets in 2005, and maintenance plans were developed. A renewal plan for the crushing plant is under development.

At the current rate of extraction, the quarry has capacity to keep operating until 2050.

How we will measure our performance

Performance measures	Performance targets	
1. To meet all commercial objectives.	2006/07	All commercial objectives are achieved.
	2007/08	All commercial objectives are achieved.
	2008/09	All commercial objectives are achieved.
	2016/17	All commercial objectives are achieved.
2. Compliance with all District Plan, resource consent and quarry licence requirements	2006/07	Compliance requirements are met on all occasions
	2007/08	Compliance requirements are met on all occasions
	2008/09	Compliance requirements are met on all occasions
	2016/17	Compliance requirements are met on all occasions

Who should pay

User charges	0%
Other revenue	125%
Targeted rate	0%
General rate	0%
TOTAL	125%

What it will cost

(Insert financial table)

4.5.3 RECYCLING

What we do

Our aim is to reduce the amount of waste dumped in the city's landfills. To help with this, we provide weekly household recycling collections in suburban areas and the CBD. Residents strongly support this project — the vast majority recycle, and the amount of recycling collected has steadily increased over recent years. In 2004/05, we collected 10,347 tonnes of recycling.

We are reviewing our recycling operations to determine whether the bins and bags used currently are the best options for recycling collections. This is being done in conjunction with a review of rubbish collection (see 4.5.4 Waste Minimisation and Disposal Management). Decisions should be made during 2006/07.

Why is this important

Recycling and re-use is environmentally and economically beneficial, providing business opportunities based on goods that would otherwise be disposed of. Our recycling work contributes to the following community outcome: 'Wellington will move towards a zero-waste policy'.

How we will measure our performance

Performance measures	Performance targets	
1. The quantity of kerbside recycling collected.	2006/07	11,700 tonnes
	2007/08	12,600 tonnes
	2008/09	13,500 tonnes
	2016/17	16,000 tonnes
2. Usage – how often during the last 12 months have you used the WCC kerbside recycling service	2006/07	85% use weekly
	2007/08	85% use weekly
	2008/09	86% use weekly
	2016/17	90% use weekly
3. The percentage of users who rate the WCC kerbside recycling service as good or very good.	2006/07	75%
	2007/08	76%
	2008/09	77%
	2016/17	85%

Who should pay

User charges	100%
Other revenue	0%
Targeted rate	0%
General rate	0%
TOTAL	100%

What it will cost

(Insert financial table)

4.5.4 WASTE MINIMISATION AND DISPOSAL MANAGEMENT

What we do

We aim to protect the city's environment and encourage efficient resource use by reducing the amount of waste the city produces and ensuring that waste is disposed of in ways that don't harm the environment or human health. Under this activity:

- We operate the Southern Landfill. We aim to minimise the amount of waste disposed of and to ensure waste is disposed off safely. The landfill operates a transfer station where domestic waste is dumped and recyclables separated. It operates the Second Treasure Shop where items such as furniture, metals, bikes, books and appliances can be dropped off. It also provides facilities for the collection, sorting, temporary storage and disposal of household hazardous waste such as paints, batteries, gas bottles, garden chemicals, oils and solvents, ensuring these materials do not enter the landfill where they may contaminate leachate and sludge. As well as sorting and dealing with waste and re-useable/recyclable material, management of the landfills involves landscaping, erosion control, resource consent compliance and water quality monitoring. Green waste is combined with sewage sludge to make high-quality compost (this work is carried out by Living Earth Ltd under contract to the Council). Landfill running costs are met from user charges, and from on-selling of recyclable and re-useable items.
- We are working with the Porirua City Council on plans to increase the capacity of the Spicer Landfill to meet increased demand arising from the closure of our Northern Landfill in early 2006.
- We manage closed landfills to reduce any environmental impacts. There are more than 30 closed landfills in the city, most of which are now reserves and parks. We monitor them to ensure they aren't discharging hazardous gas (such as methane and carbon monoxide) or leachate into the environment. We have a gas extraction plant at the Southern Landfill and gas control measures at Preston's Gully and Ian Galloway Park. We work to ensure closed landfills are managed in line with regulatory and legal obligations.
- We provide weekly rubbish collections from households and daily collections in the CBD. The rubbish collected is disposed of at the landfill. The cost of this programme is offset by the sale of Council rubbish bags. Each year, we collect in excess of 11,000 tonnes of rubbish from households. Throughout this decade there has been a steady

decline in sales of rubbish bags as people have switched to wheelie bins and recycled more. This has resulted in our revenue being about short of the amount needed to cover costs. We are investigating options for change and plan to make and implement decisions during 2006/07.

- We provide residents with information about waste reduction, carry out research about the impact of waste on the city, make plans to reduce waste, and enforce waste bylaws (which can include fines for disposing of waste in inappropriate ways).
- Over the next three years, we will be considering the viability of waste-to-energy and solid waste material recovery facilities (which use advanced technology to extract re-useable material such as paper and metals from the waste stream). As part of this review, we will be considering our approach to recycling and to disposal of biosolids (our contract with Living Earth expires in 2008).
- In 2007, we plan to upgrade the Carey's Gully stream diversion and leachate tunnel. These structures exist to prevent contamination of the stream with leachate.

Why is this important

By providing landfills we ensure that waste is disposed of safely and in ways that do not harm human health. While landfills can cause environmental harm, for example through gas emissions and leachate, we monitor these effects and manage open and closed landfills with the aim of minimising and mitigating harm. This activity contributes to the following community outcome: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

The Southern Landfill is managed in accordance with our Operational Landfills Asset Management Plan. The Northern Landfill was also managed under this plan until its closure in 2005/06.

Landfill assets include buildings, stormwater and sewer drainage, leachate network, roading and other sealed surfaces, plants, and other structures such as fences and gates. The plan sets down performance, condition and service level requirements for these assets. We aim to comply

with all relevant legislation and resource consents at all times, and to maintain landfill assets in a condition suitable to meet service level requirements and customer/user expectations.

The Southern Landfill was opened in 1975. Its development was planned for in five stages, covering a total area of 350ha. The landfill is currently in stage three, which is expected to have capacity for another 12-13 years of waste if current demand levels continue. That level of demand will depend on population growth, waste reduction trends, technology, changes in commercial activity, and the future of other landfills in the region — several are due for closure in the next 10-12 years. Preliminary planning for the fourth stage of Southern Landfill development will get under way during 2006/7.

Closed landfill assets are managed as parks and reserves under the relevant asset management plans (see 4.1.1 Local Parks and Open Spaces and 4.2.3 Town Belts).

How we will measure our performance

Performance measures	Performance targets	
1. Total recyclable material diverted from the landfill vs. total waste to the landfill.	2006/07	29,300 tonnes vs. 55,500 tonnes
	2007/08	33,900 tonnes vs. 65,000 tonnes
	2008/09	35,500 tonnes vs. 65,000 tonnes
	2016/17	We will review our long-term target following analysis of our short-term achievement.
2. Domestic waste collection is maintained at once a week, 52 weeks a year (excluding Christmas, New Years and Easter); Inner-city waste collection is maintained at six days a week, 52 weeks a year (excluding Christmas, New Years and Easter).	2006/07	To maintain service levels
	2007/08	To maintain service levels
	2008/09	To maintain service levels
	2016/17	To maintain service levels
3. WCC Landfill and the household hazardous waste facility are open 9.5 hours a day, 7 days a week, 52 weeks a year (excluding Christmas, New Years and Easter);	2006/07	To maintain service levels
	2007/08	To maintain service levels
	2008/09	To maintain service levels
	2016/17	To maintain service levels
4. Landfill resource consent compliance – the number of days on which quality standards as set out in the resource consents are met.	2006/07	Consent conditions are met on all occasions
	2007/08	Consent conditions are met on all occasions
	2008/09	Consent conditions are met on all

		occasions
	2016/17	Consent conditions are met on all occasions
5. The number of known closed landfills that require monitoring systems that have systems in place (measured as a percentage of all known closed landfills requiring such work).	2006/07	52%
	2007/08	76%
	2008/09	94%
	2016/17	100%

Who should pay

User charges	100%
Other revenue	0%
Targeted rate	0%
General rate	0%
TOTAL	100%

What it will cost

(Insert financial table)

4.5.5 WATER NETWORK

We own a water network that includes 75 reservoirs, 34 water pumping stations, more than 7900 hydrants and about 1000km of underground pipes. This network is managed by Capacity (a joint Wellington-Lower Hutt water management company) to ensure both cities have high-quality water available at all times for drinking and other household and business uses, and for emergencies such as firefighting. We aim to ensure this network is managed as efficiently and cost-effectively as possible.

Management of the network includes maintaining, upgrading and replacing pipes and other water infrastructure, responding to faults, fixing leaks and other faults, and regular flushing of the pipes and cleaning of the reservoirs. Water quality is continuously monitored to ensure it meets national standards.

The water network budget also covers resource consents and new water connections.

We also promote water conservation through public education efforts and by installing and reading water meters. Meters allow us to monitor trends in water consumption and more easily detect leaks. Since commercial customers are charged for water used, the meters also provide an incentive for them not to waste water.

One of our top environmental priorities for the next three years is to encourage water conservation and more efficient use of water. This is particularly important in light of Wellington's growing population, which is placing increased pressure on water resources. During 2006/07 we will be working with other councils on a region-wide Wellington Water Management Plan which will suggest targets for water conservation. We will then work with the Wellington community to identify water conservation opportunities, while also looking at ways we can reduce our own water usage. Over the following two years, the plan will be implemented.

Why it's important

This is a fundamental service. A safe, reliable water supply is critical for the health and well-being of Wellington residents. Water supply is also crucial for economic well-being. This activity contributes to the following community outcome: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

The water network is managed in accordance with our Water Asset Management Plan, which ensures detailed service level requirements such as network condition and capacity, water quality standards, continuity of supply, response to complaints, and criteria for upgrades and renewals are met. Under the plan, we detail how we will comply with all relevant legislation and regulatory requirements at all times. Assets that are critical to the system are monitored proactively and decisions made about maintenance, upgrades and renewals as needed. We also respond to information from contractors and customers, as well as resident surveys and inquiries.

Key service level requirements include:

- Storage capacity of 600 litres per person per day
- All parts of the network should have sufficient capacity for water pressure and firefighting requirements. Pipes that do not meet these requirements are upgraded. We replace about 12.5km of pipeline a year. This is about 1 percent of the network
- Drinking water supplied meets relevant New Zealand Standards.

How we will measure our performance

Performance measures	Performance targets	
1. Response time to service requests – to respond to all requests for service within 1 hour of notification. (response includes initial investigation and prioritisation of work)	2006/07	96% of occasions
	2007/08	97% of occasions
	2008/09	97% of occasions
	2016/17	97% of occasions
2. Customer satisfaction – percentage of customers who are satisfied with work carried-out. (Specific to the water network activities)	2006/07	75%
	2007/08	75%
	2008/09	75%
	2016/17	80%
3. Water loss from the network - the estimated percentage of unaccounted for water.	2006/07	20%
	2007/08	19%
	2008/09	18%
	2016/17	We will review our long-term target following analysis of our short-term achievement

Who should pay

User charges 0%
Other revenue 0%
Targeted rate (60% base [residential] 40% commercial) 100%

General rate	0%
TOTAL	100%

What it will cost

(Insert financial table)

4.6.1 WATER COLLECTION AND TREATMENT

What we do

We purchase water in bulk from the Greater Wellington Regional Council and supply it to Wellington properties. In 2004/05, we bought just over 30,000 million litres of water.

As outlined in the previous activity, we plan to work with other councils to develop water conservation targets.

Why it's important

A safe, reliable supply of good-quality water is essential for the health and well-being of residents and the viability of the city as a whole.

This activity contributes to the following community outcomes: 'Wellington's environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

Assets for this activity are managed under 4.5.5 Water Network.

How we will measure our performance

Performance measures	Performance targets	
Compliance with the Drinking Water Standards for New Zealand (2005).	2006/07	Compliance achieved
	2007/08	Compliance achieved
	2008/09	Compliance achieved
	2016/17	Compliance achieved

Who should pay

User charges 0%
Other revenue 0%
Targeted rate (60% base [residential] 40% commercial) 100%
General rate 0%
TOTAL 100%

What it will cost

(Insert financial table)

4.6.2 STORMWATER MANAGEMENT

Wellington's stormwater network keeps residents and property safe by protecting the city from flooding. Each year, the network carries about 80 million cubic metres of runoff from kerbs and channels and drains to streams and the harbour. The network is made up of more than 680km of pipes and tunnels.

Capacity (a joint Wellington-Hutt water management company) manages the network.

Our citywide flood protection plan divides the city into 30 catchments. Management plans are systematically being developed for each catchment to ensure the stormwater system has sufficient capacity to cope with heavy rain.

Because stormwater is discharged into the city's streams, harbour and coastal waters, it needs to be as clean as possible. We have resource consents from the Greater Wellington Regional Council for our stormwater discharges, and we are required to meet the standards set out in these consents. While we don't treat stormwater runoff, we monitor stormwater quality at more than 80 sites to ensure it meets the required standards. For several years we have run a Sewage Pollution Elimination Project, under which we have worked to find out where sewage is getting into the stormwater network and put the problem right. We are also monitoring and regulating trade wastes (such as oil, grease, chemicals, and septic tank contents) to ensure that they don't contaminate stormwater.

We work with the Greater Wellington Regional Council to educate residents about the importance of keeping contaminants such as paint and oil out of the stormwater network, and also to quantify the effects of stormwater runoff on the city's waterways.

Why it's important

The stormwater network protects human health and well-being, and makes the city viable, by reducing the risk of flooding. Monitoring of stormwater runoff helps ensure environmental effects are kept within acceptable limits. This activity contributes to the following community outcomes: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

The stormwater network is managed in accordance with our Stormwater Asset Management Plan, which ensures service level requirements such as network condition and capacity, flood risk reduction, response to faults/complaints, and criteria for upgrades and renewals are met. Under the plan, we detail how we will comply with all relevant legislation and regulatory requirements at all times. Overall goals of the plan include: managing the network prudently; minimising flood and public health risks; minimising the risk to marine environments from runoff, and dealing with any stormwater quality issues associated with heavy metals, pathogens or sediment.

Assets that are critical to the system are monitored proactively and decisions made about maintenance, upgrades and renewals as needed. About 16km of pipe is inspected a year. We also respond to public complaints and provide information from contractors and customers, and we receive feedback from resident surveys.

In some areas of the city the network does not have sufficient capacity. We have an ongoing programme of upgrades to deal with these problems and have carried out major upgrades in the central city and Island Bay in recent years. The plan sets out criteria for upgrades for different areas of the network. These are based on flood risk and impact.

With increasing population, and a trend towards smaller housing units and more use of concrete and other sealed surfaces around homes, the amount of stormwater runoff is expected to keep increasing in future. We are also investigating the possible effects of climate change on the network.

In recent years we have completed a major upgrade of the CBD stormwater system and the stormwater system in Island Bay. In 2006/07 we plan to complete the new Te Aro Culvert which is being put in place in conjunction with the new Inner City Bypass. Over the following years we will carry out work in Miramar and may upgrade Taranaki St stormwater pipes to increase flood protection.

How we will measure our performance

Performance measures	Performance targets	
1. Response time to service requests – to respond to all requests for service within 1 hour of notification. (response includes initial investigation and prioritisation of work)	2006/07	96% of occasions
	2007/08	97% of occasions
	2008/09	97% of occasions
	2016/17	97% of occasions
2. Customer satisfaction – percentage	2006/07	75%

of customers who are satisfied with work carried-out. (Specific to the stormwater management activities)	2007/08	75%
	2008/09	75%
	2016/17	80%
3. The percentage of sampling days when the following contaminants are not seen: scums or foams, floating or suspended material, abnormal colour or clarity, fats or gross solids.	2006/07	100%
	2007/08	100%
	2008/09	100%
	2016/17	100%
4. The percentage of monitored freshwater sites where annual median faecal coliform bacteria counts are less than 1000 per 100ml (lower levels of these bacteria mean cleaner water).	2006/07	80%
	2007/08	80%
	2008/09	90%
	2016/17	90%
5. The percentage of sampling days at monitored bathing beaches when water quality complies with Ministry for the Environment guidelines (green status).	2006/07	90%
	2007/08	90%
	2008/09	90%
	2016/17	90%

Who should pay

User charges 0%
Other revenue 0%
Targeted rate (80% residential [all urban properties] 20% commercial) 100%
General rate 0%
TOTAL 100%

What it will cost

(Insert financial table)

4.6.3 SEWAGE COLLECTION AND DISPOSAL NETWORK

What we do

We own more than 1000 kilometres of sewer pipes and tunnels, and more than 60 pumping stations, in a network managed by Capacity (a joint Wellington-Hutt water management company). Each year, the network carries about 29 million cubic metres of wastewater to treatment plants at Karori, Moa Point and Porirua (see 4.7.1 Sewage treatment).

Management and maintenance work includes upgrading sewer pipes that are too small or leak sewage, flushing drains, and finding and fixing leaks, and carrying out works to ensure sewage doesn't contaminate the stormwater network.

We monitor and regulate trade wastes (such as oil, grease, chemicals, and septic tank contents) to ensure that harmful substances don't enter the sewerage system. If they were allowed to enter the system, trade wastes could block sewers, damage treatment plants, pollute waterways, put workers at risk, and contaminate the sewage sludge used for Living Earth Ltd's compost-making operation (see 4.6.4 Sewage Treatment).

We also inspect private properties to find cross-connections between the sewerage and stormwater networks and require landowners to remove those connections.

Why it's important

Management and maintenance of this network is essential for public health, the environment, and the viability of the city as a whole.

This activity contributes to the following community outcomes: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

What we will do

The wastewater network is managed in accordance with our Wastewater Asset Management Plan, which ensures service level requirements such as network condition and capacity, reducing risk of overflows, response to faults/complaints, and criteria for upgrades and renewals are met. Under the plan, we detail how we will comply with all relevant legislation and regulatory requirements at all times. Overall goals of the plan include: safeguarding public health; to ensure that the network has sufficient capacity; and to ensure the network is reliable.

Assets that are critical to the system are monitored proactively and decisions made about maintenance, upgrades and renewals as needed. Renewals of pipes are undertaken when the structural integrity of the pipe is compromised. About 16km of pipe is inspected a year. We also monitor pipe flow continuously, and we respond to public complaints and to information from contractors, and we receive feedback from resident surveys.

In some areas of the city, the network does not have sufficient capacity to deal with peak flows. We have an ongoing programme of upgrades to deal with this. The asset management plan sets out our approach to determining the need for upgrades for different areas of the network.

Wellington's population is growing, and a trend towards smaller housing units is meaning more connections to the wastewater network. The Moa Point wastewater treatment plant has capacity to deal with the expected increase in wastewater flow over the next decade. Development in northern areas of the city will require some new infrastructure.

How we will measure our performance

Performance measures	Performance targets	
1. Response time to service requests – to respond to all requests for service within 1 hour of notification. (response includes initial investigation and prioritisation of work)	2006/07	96% of occasions
	2007/08	97% of occasions
	2008/09	97% of occasions
	2016/17	97% of occasions
2. Customer satisfaction – percentage of customers who are satisfied with work carried-out. (Specific to the sewage collection and disposal activities)	2006/07	75%
	2007/08	75%
	2008/09	75%
	2016/17	80%
3. The percentage of monitored consented harbour/coastal sites where the median annual level of faecal coliform bacteria counts are less than 2000 per 100ml (lower levels of these bacteria mean the water is cleaner).	2006/07	80%
	2007/08	80%
	2008/09	80%
	2016/17	80%
4. The percentage of businesses producing trade waste that are inspected during the year.	2006/07	100%
	2007/08	100%
	2008/09	100%
	2016/17	100%

Who should pay

User charges	0%
Other revenue	0%
Targeted rate (60% base [residential] 40% commercial)	100%
General rate	0%
TOTAL	100%

What it will cost

(Insert financial table)

4.6.4 SEWAGE TREATMENT

What we do

Sewage from Wellington city is treated at three treatment plants: Moa Point, Karori and Porirua. The plants at Moa Point and Karori are owned and financed by the Council and operated by United Water under a contract that lasts until 2019. Sewage from Wellington's northern suburbs is transferred to the Porirua plant, in which we have a 27.6 percent stake and the Porirua City Council is the other shareholder. All sewage treatment operations comply with environmental standards set down in Greater Wellington Regional Council resource consents. The Moa Point facility is by far the largest, dealing with about 25 million cubic metres of wastewater a year — about 87 percent of the city's total.

Once sewage is treated at Moa Point and Karori, the treated effluent is piped into the Cook Strait and the sludge is pumped to the Southern Landfill, where it is combined with green waste to make high-quality compost (see 4.5.4 Waste Minimisation and Disposal).

Why it's important

Sewage treatment is essential for public health, the environment, and the viability of the city as a whole. This activity contributes to the following community outcomes: 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure'.

How we manage our assets

See 4.6.3 Sewage Collection and Disposal above.

How we will measure our performance

Performance measures	Performance targets	
Resource consent compliance – the number of infringement notices received.	2006/07	No infringement notices are received.
	2007/08	No infringement notices are received.
	2008/09	No infringement notices are received.
	2016/17	No infringement notices are received.

Who should pay

User charges	0%
Other revenue	0%
Targeted rate (60% base [residential] 40% commercial)	100%
General rate	0%
TOTAL	100%

What it will cost

(Insert financial table)

4.7.1 STREAM PROTECTION

What we do

Streams are an important part of Wellington's environment, contributing to the city's sense of place, providing recreation opportunities and supporting ecosystems in which native plants and wildlife live. But maintaining healthy stream ecosystems isn't easy — their water quality and the health of their ecosystems can be threatened, for example, by development and by runoff from roads and farmland.

For the next three years, one of our key environmental priorities is the protection of Wellington's streams. During the next two years, we will continue with Project Kaiwharawhara working with environment groups and volunteers to restore the stream and its environs and to monitor its health. We'll then apply the lessons learned from this project to start restoration of the Porirua and Owhiro streams.

We will also carry out a review to find the most effective regulatory method for protecting streams from the effects of urban development. This will include working with the Greater Wellington Regional Council to clarify who has responsibility for management and restoration of streams within Wellington city boundaries. The review's findings will also influence our approach to the Porirua and Owhiro streams.

Why it's important

As mentioned above, the streams are important for the city's ecology, sense of place, and for recreation reasons. In addition, stream restoration projects are community-based and help to create social cohesion. This activity contributes to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments,' 'Wellington will preserve and improve its parks, trees and open spaces', 'Wellingtonians will protect and have access to public green open spaces and the coast', and 'Wellington will promote the sustainable management of the environment, and support increased opportunities for the exercise of kaitiakitanga or environmental guardianship'.

How we manage our assets

There are no assets directly associated with this activity. Streams that are on Town Belt or reserve land are managed in accordance with our asset management plan for park and garden open spaces (see 4.2.3 Town Belts).

How we will measure our performance

Performance measures and targets for this activity are currently being developed.

Who should pay

User charges	0%
Other revenue	0%
Targeted rate	0%
General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

4.7.2 PEST PLANT AND ANIMAL MANAGEMENT

What we do

We operate programmes to control animal pests and weeds on the 3,300+ hectares of open space land we own and manage. We carry out this work with the aim of protecting the city's natural ecosystems and providing habitats for native plants and animals.

The Wellington Regional Pest Strategy requires control of specific weeds, including old mans beard, cathedral bells, banana passionfruit, and ginger. Among animal pests, much of the focus of our work is on eradicating and controlling possums.

Why it's important

This work helps promote regeneration of native plants and bird life. It also enhances public safety, as weeds can be fire hazards and can interfere with recreational use of open space land. This activity contributes to the following community outcome: 'Pest animals and plants will be eliminated as methods become available, and no new pests will become established'.

How we manage our assets

There are no assets associated with this activity.

How we will measure our performance

Performance measures	Performance targets	
The total number of key native eco-systems with active "Pest Management Plans (animal and plant)" in operation.	2006/07	12 key native eco-systems have plans in place
	2007/08	To continue existing service levels
	2008/09	To continue existing service levels
	2016/17	To continue existing service levels

Who should pay

User charges 0%
Other revenue 0%
Targeted rate 0%

General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

4.8.1 ENVIRONMENTAL AND CONSERVATION FACILITIES

What we do

The Karori Wildlife Sanctuary plays a major role in protecting and nurturing the city's native plant and bird life. Wellington Zoo is a significant contributor to wildlife conservation. Together with Te Papa and the proposed Aquarium of New Zealand: Te Moana Tamariki, these institutions have potential to form a nature tourism cluster that benefits the economy and makes the city more attractive for residents and visitors, while also playing important conservation and education roles. We support all of these projects.

We own the sanctuary's land and have also provided expertise and funding. In 2004/05, we committed to provide an interest-free loan to support further enhancement of its visitor facilities. Plans for this project are under development. The sanctuary has a 500-year vision of restoring its valley site to a pristine environment teeming with native plant and bird life.

The aquarium aims to develop itself as a world-class attraction that educates residents and visitors about Wellington's unique marine life. We have committed to support the aquarium development by providing an interest-free loan.

Both the sanctuary and aquarium loans are subject to conditions being met, including additional funds being raised from other agencies.

We own the Zoo land (it is part of the Town Belt) and provide ongoing funding to allow it to maintain and enhance its visitor experience. The Zoo attracts more than 160,000 visitors each year, including many school groups. It has more than 400 animals living in family groups in habitats designed to be as similar as practicable to their natural environments. It also manages a breeding programme for endangered species.

Why it's important

These facilities play important conservation roles, protecting native and exotic flora and fauna. They inform and educate. They benefit the economy by attracting visitors, and their existence creates economic incentives for the city's environment to be protected and enhanced. This activity contributes to the following community outcome: 'Wellington will protect and showcase its natural landforms and indigenous environments'.

How we manage our assets

Though some of the land and assets involved in this activity are Council-owned, they are managed and maintained by outside organisations. Sanctuary land is managed by the Karori Wildlife Sanctuary Trust under a lease agreement.

Council-owned zoo assets are managed by the Wellington Zoo Trust under the Wellington Zoo Buildings and Infrastructure Asset Management Plan. The plan covers 74 structures including animal enclosures, buildings, water tanks, roads and paths, signs and so on. The Zoo Trust manages these assets with the aim of complying with all relevant legislative requirements at all times. It aims to maintain building assets in good or fair condition. Regular condition assessments are carried out and decisions made on maintenance, renewals and upgrades as needed.

How we will measure our performance

Performance measures	Performance targets	
The number of visitors to the Karori Wildlife Sanctuary.	2006/07	27,698
	2007/08	90,000
	2008/09	180,000
	2016/17	We will review our long-term target following analysis of our short-term achievement.

Activity performance measures for Wellington Zoo are detailed within the Council Controlled Organisations section. Performance measures for the Marine Education Centre will be developed as the project progresses.

Who should pay

User charges	0%
Other revenue	0%
Targeted rate	0%
General rate	100%
TOTAL	100%

What it will cost

(Insert financial table)

10-year financial projections

OPERATIONAL SPENDING

(Insert 10 year financial table (Opex) for Environment chapter)

CAPITAL SPENDING