

## Strategic Area 2: Environment

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Strategic area 2

## Environment

### Introduction

This provides a succinct outline of the key challenges we face and our long term approach to handling them, the outcomes we seek, the types of things we are doing to address them, and an indication of the measures we use to monitor progress. We also state what we'll focus on for the next three years.

### Strategy tree

The diagram shows the links between the community outcomes, our long-term outcomes and the activities we do towards those.

*Over the next few pages we outline our environmental activities. For each we state what we do, provide context as to why it's important, and outline the budget and performance measures for this area.*

### 2.1 Gardens and beaches

This activity covers our work in relation to local parks and open spaces, botanical gardens, and local beaches.

### 2.2 Green open spaces (Town belts)

This activity covers the town belts, community environmental initiatives, our network of walkways, our stream protection work, and pest plant and animal management.

### 2.3 Water

This activity covers our water network.

### 2.4 Wastewater and stormwater

This activity includes our work to manage the stormwater network, and sewage collection, treatment and disposal.

### 2.5 Waste reduction and energy conservation

This activity includes our work to collect and dispose of the city's waste and recyclables, our landfill operations, and our work to promote energy efficiency and conservation.

### 2.6 Environmental conservation attractions

This activity covers the Wellington Zoo and our funding to Zealandia – the Karori Sanctuary.

### 2.7 Quarry

This activity covers the Kiwi Point Quarry.

## Strategy at a glance

OUR AIM	OUR ACTIVITIES - WHAT WE DO TO SUPPORT OUR AIM	CHALLENGES WE FACE	OUR LONG-TERM APPROACH	OUR FOCUS / PRIORITIES	HOW WE KNOW WHEN WE'VE SUCCEEDED
Protecting and enhancing Wellington's environment	2.1 Gardens and beaches 2.2 Green open spaces 2.3 Water 2.4 Wastewater and stormwater 2.5 Waste reduction and energy conservation 2.6 Environmental conservation attractions 2.7 Quarry	<ul style="list-style-type: none"> <li>▪ Protecting biodiversity and managing pest plants and animals.</li> <li>▪ Reducing or offsetting greenhouse gas emissions.</li> <li>▪ Encouraging efficient use of resources such as water and energy.</li> <li>▪ Continuing to reduce the amount of solid waste the city produces.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Protecting sensitive natural areas and resources.</li> <li>▪ Reducing the city's greenhouse gas emissions; and reducing resource use and converting to renewable energy.</li> <li>▪ Minimising the impact of resource use, including development, on landscapes and ecosystems</li> <li>▪ Disposing of waste in ways that protect the environment and encourage recycling.</li> <li>▪ Providing high quality, accessible green spaces for people to enjoy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Managing demand for potable water and developing a region-wide Wellington water management plan.</li> <li>▪ Taking steps to reduce the organisations – and the city's – greenhouse gas emissions.</li> <li>▪ Encouraging people and businesses to reduce the amount of waste they produce.</li> <li>▪ Developing a strategic framework for green open space and botanic garden services.</li> </ul>	<ul style="list-style-type: none"> <li>▪ When the vast majority of residents continue to be satisfied with the quality and maintenance of the city's green spaces.</li> <li>▪ When residential water consumption reduces to 300 litres/ person/ day.</li> <li>▪ When resource consents for all our environmental activities continue to be achieved.</li> <li>▪ When our waste reduction and recycling targets are met; and when our city and corporate greenhouse gas emissions reduction targets are met.</li> </ul>

## Environment

### Introduction

### Protecting and enhancing Wellington's environment

Wellington has:

- a beautiful and dramatic natural environment, which is a crucial part of the city's identity
- world class botanical gardens and parks
- dozens of beaches and miles of rugged coastline
- natural bush right in the heart of the city
- a safe, high quality water supply, and
- safe, efficient systems for dealing with waste and wastewater.

### The challenges we face

Like all cities, we face significant environmental challenges. One of the most important of these is the need to reduce or offset greenhouse gas emissions, but others include: encouraging efficient use of resources such

as water and energy; managing pests and promoting biodiversity; and continuing to reduce the amount of solid waste the city produces.

We're working hard to respond to these challenges. After all, the environment is the foundation on which Wellington is built.

### The long term approach

Wellington City Council's long term approach to protecting and enhancing the environment is focused on:

- protecting sensitive natural areas and resources
- reducing the city's green-house gas emissions
- reducing resource use and converting to renewable energy
- minimising the impact of resource use, including development, on landscapes and ecosystems
- managing waste in ways that protect the environment and encourage sustainability
- providing high quality, accessible green spaces for people to enjoy.

### Supporting policies

More detailed information about the Council's approach to environmental well-being is available in the District Plan, which guides land use and development in the city, and in the Council's Biodiversity Action Plan, Climate Change Action Plan, Outer Green Belt Management Plan, Pest Management Plan, Solid Waste Management Plan, Town Belt Management Plan, Capital Spaces Policy and asset management plans for water, stormwater and wastewater, all available from [www.Wellington.govt.nz](http://www.Wellington.govt.nz).

### Links with other strategies

The Council's Urban Development and Transport Strategies support environmental well-being by encouraging sustainable land use and transport options. The Environment Strategy supports infrastructure such as water supply and waste management – the city foundations upon which the health, safety, sense of community, and prosperity of Wellington's residents depend.

### Key facts

- litres of water used per day in 2008 per Wellingtonian: 350
- kilograms of kerbside recycling collected in 2008 per Wellingtonian: 62.9
- percentage of residents who visited the Wellington Botanic Garden in 2008: 74%

### Negative effects

The waste a city produces – rubbish, sewage, stormwater runoff, hazardous waste 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 (the sludge is landfilled).

Stormwater is not treated, but 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 rubbish at the landfill 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 significant negative effects associated with our management of these assets, or from our other environmental well-being programmes.

#### **What we want – the outcomes we seek**

We aim to achieve the following long-term goals or ‘outcomes’ for the city. Along with the Council, businesses, community organisations, central and regional government, and individuals all play crucial roles in contributing to these outcomes.

***MORE LIVEABLE** – Wellington will provide a wide range of social and recreation opportunities that don't compromise environmental values.*

We contribute by maintaining more than 35 square kilometres (185.5 m<sup>2</sup> / person) of reserve land, over 365kms of tracks, as well as botanical gardens, beaches and the coastline. They receive high levels of use for leisure activities and recreation.

We measure progress towards this outcome by measuring the percentage of residents that use the city's open space per month.

***MORE COMPETITIVE** – Wellington's high quality natural environment will attract visitors, residents and businesses.*

We contribute by supporting attractions such as Zealandia – the Karori Sanctuary, the Wellington Zoo, Otari Wilton's Bush and the Botanic Gardens, and support the development of others such as the Carter Observatory.

We measure progress towards this outcome by monitoring the number of people visiting key attractions.

***BETTER CONNECTED** – A network of green spaces and corridors will link the coast and bush areas.*

We provide 365km of tracks and walkways throughout the city linking open space and bush areas. In recent years we have taken steps to expand and improve the quality of these walkways – for example, through development of the Skyline Walkway in the Outer Green Belt.

***MORE ACTIVELY ENGAGED** – The community will feel a sense of kaitiakitanga/guardianship over the natural environment.*

We support community groups, schools and organisations that work to maintain and improve the city's natural environment. Volunteer environment

groups work more than 9,000 hours on programmes throughout the city each year. We monitor the number of hours worked by volunteers and this has steadily increased in recent years.

***MORE SUSTAINABLE** – The city will reduce its impact on the environment through more efficient use of energy, water, land and other resources, and by minimising waste.*

We contribute by providing leadership on water and energy efficiency, and by encouraging viable resource recycling and disposal of liquid and solid waste.

We measure progress towards this outcome by monitoring the amount of waste the city deposits in the landfill and the amount of water used per resident each year.

***SAFER** – Wellington's water will be safe to drink, its air safe to breath, and waste will be disposed of in ways that minimise harm.*

We contribute by managing the water network, stormwater and sewage network/treatments plants, provide waste collection, landfill and recycling services, and encourage sustainable forms of transport.

We measure progress towards this outcome by monitoring central city air quality, stormwater quality and regional energy use per resident.

***HEALTHIER** – natural ecosystems will be restored so there are healthy habitats for indigenous and non-indigenous plants and animals.*

We contribute towards this outcome by controlling pest plants and animals, and supporting projects that protect natural ecosystems – including the Karori Sanctuary

We measure progress towards this outcome by monitoring population trends in a variety of native bird species. The number of native birds is generally increasing in reserves we monitor.

***STRONGER SENSE OF PLACE** – Wellington will value and protect the city's natural heritage.*

We contribute towards this outcome by managing the Town Belt, Outer Green Belt, the Botanic Gardens, reserves and Wellington's coastline.

We measure progress towards this outcome by monitoring the percentage of residents who think the city's natural environment is appropriately managed and protected.

#### Our focus for the next three years

Overall we'll continue our work to preserve and enhance the city's unique environment. Our key focus will be on:

- Managing demand for potable water. We will be working with other councils on a region-wide Wellington water management plan which will make recommendations on an appropriate mix of water

conservation targets for the region and future capital works to meet the water needs of a growing population.

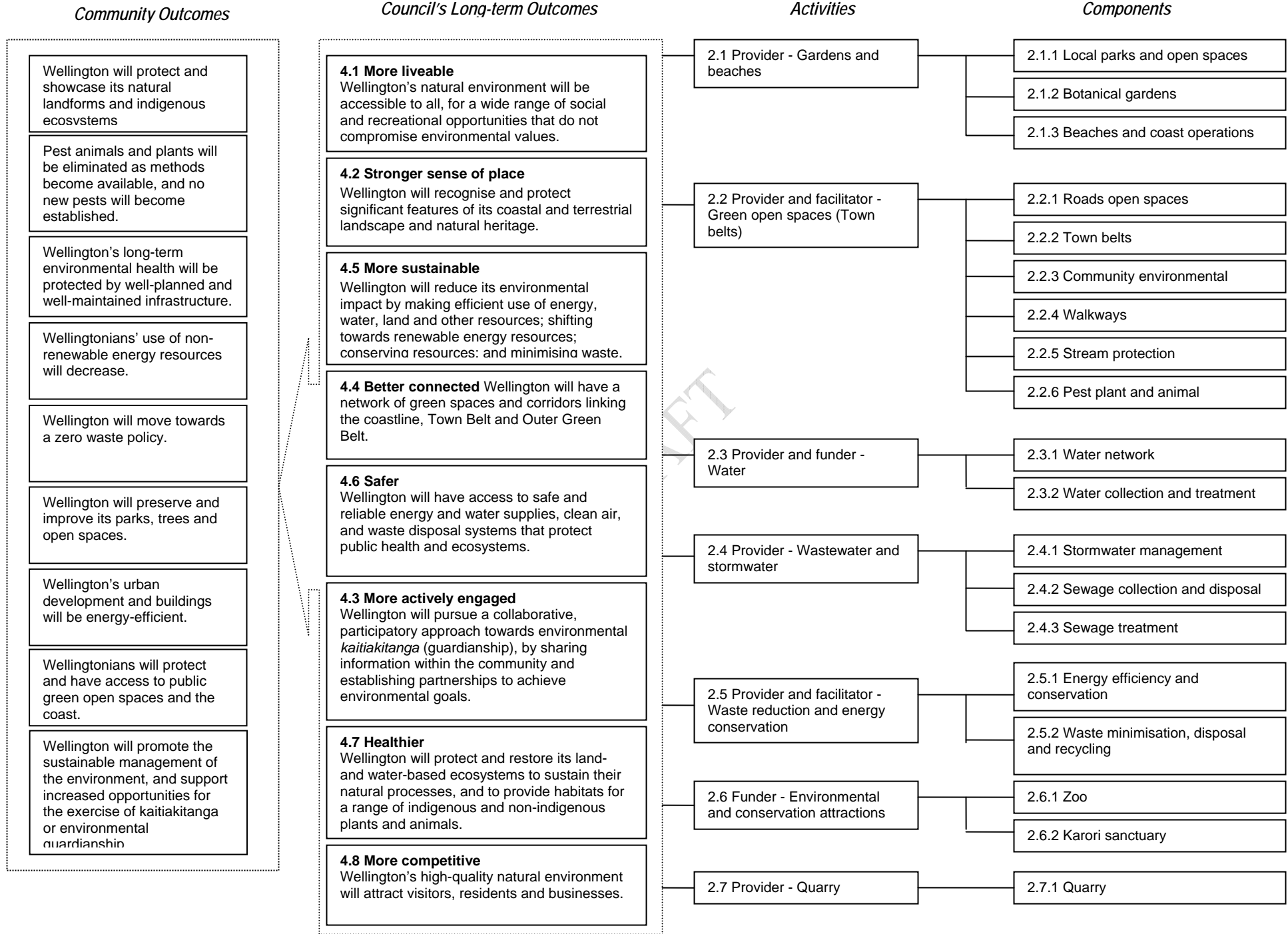
- Taking steps to reduce the organisations – and the city's – carbon emissions by pro-actively auditing Council's high energy-using facilities to inform planned renewals and prioritise building upgrades. We will also take a lead role in facilitating a larger scale insulation and heating retrofit programme to Wellington dwellings.
- Encouraging people and businesses to reduce the amount of waste they produce and to reuse and recycle wherever possible. We'll also be developing stage four (out of five stages) of the landfill to ensure the landfill can meet the needs of the city into the future
- Developing a strategic framework for active and passive open space provision. The strategic framework will guide future decisions around levels of service and investment for this area of activity.

In the environment area we plan to spend \$345.12 million in operating expenditure in the next three years and \$85.25 million on capital works.

Over the next few pages we provide detailed information about our activities in this area, what they cost, who we think should pay, and how we'll measure our performance.



# Strategy tree



## 2.1 GARDENS AND BEACHES

### What's included here

Our aim is to care for the city's gardens and beaches in ways that balance protecting nature with opportunities for enjoyment.

We look after the city's parks and gardens, including the Wellington Botanic Garden, Otari Wilton's Bush, Bolton Street Memorial Park, Truby King Park, and a number of other actively managed reserves.

We also look after many of the city's beaches - covering the rugged south coast, eastern bays, Miramar Peninsula, Evans Bay and Makara Beach – boat ramps, slipways and jetties.

### Why it's important

A high quality natural environment enhances the city's unique 'sense of place' and provides attractive, safe and accessible opportunities for outdoor leisure and recreation for residents and visitors alike. The Wellington Botanic Garden alone is estimated to have more than a million visitors a year.

Parks, gardens and beaches make the city's environment greener and more pleasant for residents and help in the conservation and protection of native

and exotic plants; their vegetation also helps to absorb the city's carbon emissions. They are natural gathering places and, by bringing people together, enhance social cohesion. This not only improves quality of life but adds to people's sense of pride in the city and makes it an attractive place to live, work and visit.

### Contribution to community outcomes

Our gardens and beaches activity contributes primarily to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments', 'Wellingtonians will protect and have access to public green open spaces and the coast' and 'Wellington will preserve and improve its parks, trees and open spaces'.

### What we'll provide - our levels of service

Our work programme over the next three years is based on past demands and set at a level to maintain existing levels of service taking into account projected population growth and other demand factors.

Over the next three years we plan to:

- look after the city's parks and gardens, including the Wellington Botanic Garden, Otari Wilton's Bush, Bolton Street Memorial Park, Truby King Park, and a number of other actively managed reserves
- promote native planting through our work in the city's gardens and at the Berhampore Nursery, which grows around 80,000 plants each year for use in parks, gardens, open spaces and coastal planting
- look after the city's beaches and coastline, from the wild south coast to Oriental Bay beach, including dune protection, planting, erosion control and maintenance of boat ramps, slipways and jetties
- plant flower beds, maintain grass areas, sport pavilions and other buildings on botanic, reserve land and beaches
- undertake arboriculture work to protect trees in public places from disease and damage and to remove those that pose a risk to public safety.

Key projects over the next three years include:

- undertaking restorative planting and access improvements at Te Raekaihau Point on Wellington's South Coast. Work will include making improvements to Te Raekaihau's entry points so people can safely access this special part of the South Coast, more controlled

parking to ensure people do not park on sensitive areas, and restorative coastal planting. Funding for this project will come from the Plimmer Trust.

- renewing the Botanic Garden nursery which provides plant material for curated collections and for the Begonia House displays which is visited and much admired by thousands of people every year. We will continue our programme of installing interpretation panels throughout the gardens (and for the Treehouse) so visitors can understand and appreciate the vast collection of plants and trees at the Botanic Gardens.

We are proposing to reprioritise maintenance programmes for gardens and beaches - meaning that less will be spent on mowing, maintenance and garden beds for the next three years. We also plan to decommission - at a cost of \$103,000 - the Patent Slip jetty at Evans Bay which has limited current use and is in poor condition. The alternative is to restore the Patent Slip to a safe standard at a cost of \$1.4 million.

## How we'll measure performance

We'll know we're succeeding when the percentage of residents who are satisfied with the quality and maintenance of gardens and beaches remains high and stable. A full list of our performance measures for this activity is detailed in the table below:

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
<b>MORE LIVEABLE STRONGER SENSE OF PLACE</b>	<ul style="list-style-type: none"> <li>▪ Hectares of open space land owned or maintained by WCC, per capita</li> <li>▪ Resident usage of the city's open spaces</li> <li>▪ Resident perceptions that the natural environment is appropriately managed and protected</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We manage the city's parks and gardens and beaches and coastline with an aim to make these areas attractive and accessible while balancing ecological needs.	Resident satisfaction (%) with the quality and maintenance of gardens and beaches:					
	▪ Local parks	91%	91%	91%	91%	91%
	▪ Botanic gardens	New measure	90%	90%	90%	90%
	▪ Beaches and coastal areas	80%	80%	80%	80%	80%
	City mowing sites (%) compliance with quality performance standards (i.e. grass length and health)	88%	90% of sites comply	90% of sites comply	90% of sites comply	90% of sites comply
	Beach areas (%) compliance with quality performance standards (i.e. maintenance)	New measure	90% of sites comply	90% of sites comply	90% of sites comply	90% of sites comply
	Botanic gardens plant collection (%) compliance with quality performance standards (i.e. plant health)	90%	90% of collection complies	90% of collection complies	90% of collection complies	90% of collection complies
	Reported hazards (%) that are made safe (or secured) within 24 hours	New measure	100%	100%	100%	100%
Resident frequency (%) of usage of gardens and beaches:						

	<ul style="list-style-type: none"> <li>▪ Local parks</li> </ul>	Weekly 25% At least once in last 12 months 74%	Weekly 25% At least once in last 12 months 75%	Weekly 25% At least once in last 12 months 75%	Weekly 25% At least once in last 12 months 75%	Weekly 25% At least once in last 12 months 75%
	<ul style="list-style-type: none"> <li>▪ Botanic gardens</li> </ul>	Weekly 7% / At least once in last 12 months 74%	Weekly 7% / At least once in last 12 months 74%	Weekly 7% / At least once in last 12 months 74%	Weekly 7% / At least once in last 12 months 74%	Weekly 7% / At least once in last 12 months 74%
	<ul style="list-style-type: none"> <li>▪ Beaches and coastal areas</li> </ul>	Weekly 32% / At least once in last 12 months 88%	Weekly 32% / At least once in last 12 months 88%	Weekly 32% / At least once in last 12 months 88%	Weekly 32% / At least once in last 12 months 88%	Weekly 32% / At least once in last 12 months 88%
	Resident (%) rating their ease (easy or very easy) to access their local gardens and beach areas	New measure	90%	90%	90%	90%
	Residents (%) who agree that gardens and beach services provide good value for money.	New measure	90%	90%	90%	90%

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.1.1 Local parks and open spaces	5%	-	95%	95%	-	-	-
2.1.2 Botanical gardens	10%	-	90%	90%	-	-	-
2.1.3 Beaches and coast operations	-	5%	95%	95%	-	-	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

## What it will cost

2.1 Gardens and Beaches	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.1.1 Local parks and open spaces	(424)	7,863	7,439	638
2.1.2 Botanical gardens	(415)	4,193	3,778	1,047
2.1.3 Beaches and coast operations	(51)	1,139	1,088	456
<b>2009/10 2.1 Total</b>	<b>(890)</b>	<b>13,195</b>	<b>12,305</b>	<b>2,141</b>
<b>2010/11 2.1 Total</b>	<b>(1,030)</b>	<b>13,940</b>	<b>12,910</b>	<b>1,986</b>
<b>2011/12 2.1 Total</b>	<b>(1,061)</b>	<b>14,265</b>	<b>13,204</b>	<b>1,645</b>

### How we manage our assets that support this activity

Assets under this activity are managed under a number of asset management plans. Parks and open spaces are managed under our Park and Garden Open Spaces Asset Management Plan, the Botanic Gardens are managed under our Botanic Gardens Asset Management Plan, and coastal assets (e.g. jetties, boat ramps) are managed under our Coastal Assets Asset Management Plan. The Botanic Garden's play area is managed under our Playgrounds Asset Management Plan, and monuments and sculptures in the Botanic Gardens are managed under our Monuments and Public Artworks Asset Management Plan

The asset management plans set down asset performance, asset condition and asset service level requirements. Decisions about maintenance, renewal and upgrade programmes are informed through regular 'asset condition assessments', demand forecasting, and agreements made with

the community on levels of service through annual and long-term planning processes and other community engagement exercises. We also respond to complaints.

We ensure our assets are managed to comply with legislative requirements at all times, and maintenance, renewal and upgrade programmes are set to maintain assets in appropriate condition relative to the agreed level of service and expected demand.

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 and along Wellington's coastline. We aim to conserve all heritage features. Any alteration that affects a heritage feature will require resource consent.

## 2.2 GREEN OPEN SPACES

### What's included here

Wellington is literally surrounded by nature. The Town Belt and other natural areas give the city a distinct character, and we aim to protect - and over time - enhance our green open spaces through the regeneration of native bush.

Our work in this activity includes: looking after the Town Belt, the Outer Green Belt and other reserve land, maintaining the city's walkways and tracks to provide safe public access to outdoor recreation and leisure opportunities; carry out stream and riparian strip protection works and control plant and animal pests.

We also manage roadside vegetation and provide financial and other assistance to community groups and volunteers for projects having environmental objectives consistent with those of the Council.

### Why it's important

One-eighth of Wellington's area is reserve land, much of it rugged and covered in native bush. It is a key feature of the Wellington landscape, which contributes to the city's unique identity and helps set it apart from other cities not only in New Zealand but around the world.

This uniqueness benefits the economic well-being of the city in terms of the role it plays in attracting tourists and encouraging prospective citizens. It also provides unrivalled opportunities, within minutes of downtown, for outdoor recreation and leisure activities that provide enjoyment and health benefits.

Our work in this area helps sustain the city's biodiversity by conserving and protecting natural ecosystems and providing a habitat for native plants, birds and animals. This helps ensure the enjoyment of the city's natural environment for future Wellingtonians.

Assisting the community to engage in environmental initiatives, even as basic as providing native plants for residents to plant on road reserve, raises awareness of the need to take responsibility for protecting and enhancing the natural environment and promotes more social cohesion through the development of greater neighbourhood "community spirit".

The vegetation on our reserve land also acts as a carbon "sink", helping to remove some of the city's harmful greenhouse gas emissions from the atmosphere and reducing the impacts of predicted climate change.



## Contribution to community outcomes

This activity contributes to the following community outcomes: 'Wellington will protect and showcase its natural landforms and indigenous environments', 'Wellingtonians will protect and have access to public green open spaces and the coast', 'Wellington will preserve and improve its parks, trees and open spaces', 'Pest animals and plants will be eliminated as methods become available, and no new pests will become established', and 'Wellington will promote the sustainable management of the environment, and support increased opportunities for the exercise of kaitiakitanga or environmental guardianship'.

## What we'll provide – our levels of service

We will:

- look after the more than 35 square kilometres of Town Belt, Outer Green Belt and other reserve land in the city, not only for the benefit of current city residents, but also the generations to come. To secure this benefit, we will plan for how we can best maintain the integrity of the resource (including removing unsafe or at risk trees, replacing exotic

with indigenous species and encouraging regeneration of existing native bush).

- maintain the city's 365km of walkways and tracks to provide safe public access to the city's natural environment for outdoor recreation and leisure opportunities
- carry out stream and riparian strip protection works, and protect native ecosystems by controlling weeds at 23 priority sites (increasing to 33 over the ten year period) and eradicating pest animals such as possums and goats on open space and reserve land
- manage roadside vegetation to ensure it is not creating a hazard (for example, impairing motorists' line of sight, contributing to bank erosion or blocking natural run-off channels), mow roadside berms and provide assistance to volunteer groups and individuals wishing to beautify their local road reserves by providing free plants and advice on how to best plant them.

- provide grants for projects that benefit the city's environment, promote sustainability, raise awareness of environmental issues, promote community involvement and volunteerism or otherwise contribute to our environmental objectives.

Key projects over the next three years include:

- implementing the Tinakori Hill landscape development plan. The plan focuses on managing the needs of competing users, improving access points, rationalising the track network, and improving connections with other walking routes. Key viewing spots with information panels will also be created to assist in telling the story of the geology, ecology, and Maori and European history of Tinakori Hill
- implementing the Northern Reserves Management Plan. Key elements of this plan include: continuing to establish the Harbour escarpment walkway from Waihinahina Park to Ngauranga, facilitating the establishment of the Porirua Stream walkway and cycleway in Tawa, and completing a review of reserve land requirements in light of planned further development in the northern suburbs around Grenada North, Lincolnshire Farm and Stebbings Valley

- implementing the Biodiversity Action and Pest Management Plans. The focus over the next three years will be to establish weed control programmes at three new sites (total of 23 for 2009/10 and growing to 35 over ten years) and targeting specific threats such as Darwin's Barberry, Old Man's Beard, Climbing Asparagus, and other weeds.
- undertaking renewal work on the following walking tracks: Te Kopahau, Berhampore golf course to Quebec Street, and the Northern Ridgeline track above Khandallah Park.

We've considered what we can do **to reduce our costs to rate payers** from this activity. We are proposing to defer our programme to upgrade and extend the track network on Town Belt and reserve land for the time being. We currently have 365km of walkways and tracks extending throughout the city's open space areas, and while we're proposing to not add new tracks, we will continue to ensure existing tracks are maintained to high standards and work towards promoting greater use of them in the coming years.

## How we'll measure performance

We'll know when we are succeeding when residents are satisfied with the quality and maintenance of green open spaces; and when 4.5 hectares of restorative planting is undertaken each year on Wellington's town belts. A full list of our performance measures for this activity is detailed in the table below:

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
BETTER CONNECTED MORE ACTIVELY ENGAGED HEALTHIER	<ul style="list-style-type: none"> <li>▪ Kilometres of managed tracks and walkways</li> <li>▪ Hours worked by recognised environmental volunteer groups</li> <li>▪ Bird counts (in selected city areas)</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
<p>We clean city and residential streets, and maintain roadside verges keeping them safe and attractive, through litter collection, planting and mowing.</p> <p>We manage green open spaces throughout the city, including Town Belt, Green Outer Belt, other reserve land and an extensive network of tracks and walkways with an aim to make these areas attractive and accessible while balancing ecological needs.</p> <p>We also provide grants for projects and initiatives that benefit the city's environment, and support volunteers who help look after the city's green</p>	Resident satisfaction (%) with the quality and maintenance of green open spaces:					
	▪ Roadside vegetation	78%	80%	80%	80%	At least 80%
	▪ Street cleaning	80%	80%	80%	80%	At least 80%
	▪ Town belts	83%	83%	83%	83%	At least 83%
	▪ Walkways	87%	87%	87%	87%	At least 87%
	Street cleaning (%) compliance with quality performance standards	97% of sites comply	97% of sites comply	97% of sites comply	97% of sites comply	97% of sites comply
	Town belts - total area of town belts restorative planting (hectares)	4.3 hectares	4.5 hectares	4.5 hectares	4.5 hectares	4.5 hectares
	Key native eco-systems with operational 'pest management plan'	15	23	26	29	35
Walkways - primary walkways and tracks (%) compliant with national standards (i.e. assessing integrity of structures, track maintenance, etc)	New measure	100%	100%	100%	100%	

open spaces.	Reported hazards (%) that are made safe (or secured) within 24 hours	New measure	100%	100%	100%	100%
	Resident (%) rating their ease (easy or very easy) to access green open spaces	New measure	90%	90%	90%	90%
	Resident frequency of usage (%) of green open spaces :					
	▪ Town belts	Weekly 13% / At least once in last 12 months 53%	Weekly 13% / At least once in last 12 months 53%	Weekly 13% / At least once in last 12 months 53%	Weekly 13% / At least once in last 12 months 53%	Weekly 13% / At least once in last 12 months 53%
	▪ Walkways	Weekly 20% / At least once in last 12 months 67%	Weekly 25% / At least once in last 12 months 70%	Weekly 25% / At least once in last 12 months 70%	Weekly 25% / At least once in last 12 months 70%	Weekly 25% / At least once in last 12 months 70%
	Community groups that participate in WCC supported planting activities and the number of plantings	37 groups / 27,000 plantings	37 groups / 27,000 plantings	37 groups / 27,000 plantings	37 groups / 27,000 plantings	37 groups / 27,000 plantings
	Environmental grants - number of applicants; number of successful applicants; total budget allocated to grants	Total applicants 33 / Successful applicants 9	No target – monitoring capacity only We aim to support initiatives that contribute to the environmental well-being of Wellington city and its people in accordance with eligibility criteria.			
Residents (%) who agree that green open spaces services provide good value for money.	New measure	90%	90%	90%	90%	

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.2.1 Roads open spaces	-	10%	90%	90%	-	-	-
2.2.2 Town belts	-	5%	95%	95%	-	-	-
2.2.3 Community environmental initiatives	-	-	100%	-	100%	-	-
2.2.4 Walkways	-	-	100%	100%	-	-	-
2.2.5 Stream protection	-	-	100%	100%	-	-	-
2.2.6 Pest plant and animal management	-	-	100%	100%	-	-	-

For more information on how we fund our activities see the Revenue and Financing Polices in volume two.

## What it will cost

2.2 Green Open Spaces (Town Belts)	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.2.1 Road open spaces	(577)	8,106	7,529	-
2.2.2 Town belts	(221)	4,365	4,144	276
2.2.3 Community environmental initiatives	-	422	422	-
2.2.4 Walkways	-	422	422	327
2.2.5 Stream protection	-	-	-	-
2.2.6 Pest plant and animal management	-	971	971	-
<b>2009/10 2.2 Total</b>	<b>(798)</b>	<b>14,286</b>	<b>13,488</b>	<b>603</b>
<b>2010/11 2.2 Total</b>	<b>(822)</b>	<b>14,993</b>	<b>14,171</b>	<b>658</b>
<b>2011/12 2.2 Total</b>	<b>(847)</b>	<b>15,315</b>	<b>14,468</b>	<b>672</b>

Note that our stream protection is done with the support of volunteers and community groups.

Funding is drawn from 2.2.3 community environmental initiatives

### How we manage our assets that support this activity

The Town Belt, Outer Green Belt and park and reserve areas are managed under our Parks and Gardens Open Space Areas Asset Management Plan, and the city's roadside reserve is managed in line with our Transportation, Traffic and Rooding Asset Management Plan.

The asset management plans set down asset performance, asset condition and asset service level requirements. Decisions about maintenance, renewal and upgrade programmes are informed through regular 'asset condition assessments', demand forecasting, and agreements made with the community on levels of service through annual and long-term planning processes and other community engagement exercises. We also respond to complaints.

We ensure our assets are managed to comply with legislative requirements at all times, and maintenance, renewal and upgrade programmes are set to maintain assets in appropriate condition relative to the agreed level of service and expected demand.

The 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 would require resource consent.

## 2.3 WATER

### What's included here

Water is a fundamental need and we ensure a steady supply of clean, safe, drinkable water is available to Wellingtonians at all times. We own the city's water network and contract Capacity (a company we jointly own with Hutt City Council) to manage, maintain and operate the network. We purchase water in bulk from the Greater Wellington Regional Council and supply it to Wellington properties.

### Why it's important

A city cannot function without a safe, reliable water supply – it is a fundamental need. Water is critical for the health, well-being and prosperity of Wellington residents.

### Contribution to community outcomes

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

### What we'll provide – our levels of service

We buy about 30 billion litres of water each year from the Greater Wellington Regional Council to supply the city's residents and businesses – that's equivalent to about 350 litres per person each day. In Wellington the network that delivers this water includes 81 reservoirs, 34 water pumping stations, more than 7300 hydrants and about 1000km of underground pipes.

The network is operated and maintained under contract by Capacity who are tasked with ensuring Wellingtonians have high-quality water available at all times for drinking and other household and business uses. This means it is responsible for all new connections to the network and for ensuring all statutory requirements and environmental standards are met. The work includes:

- detecting and fixing leaks, installing water meters, undertaking meter reading for billing purposes, and promoting water conservation.
- undertaking forward planning to ensure anticipated future demand can be met, particularly taking into account predicted climate change impacts

- managing and maintaining all parts of the network so water is constantly available on demand and is delivered at an appropriate pressure (in part to meet fire fighting requirements)
- monitoring water quality to ensure it meets national standards and is not contaminated or presenting a health risk
- responding promptly to, and fix, all faults and leaks
- promoting and, where necessary, implementing water conservation measures (including applying water restrictions during summer).
- enhancing our 'leak detection programme' to reduce the amount of water that leaks from the network through the installation of district water meters that will help to identify the potential sources of water loss
- upgrading reservoir capacity within the water network in Karori and Seatoun Heights. The Messines Road reservoir upgrade is currently in its design phase with construction planned for 2009/2010. The Seatoun Heights reservoir upgrade is the subject of investigation with design work expected to start towards the end of 2009
- undertaking renewals to the reticulation network on Tawa's water main and adding a bypass to the Tawa reservoir.

Key projects over the next three years include:

- working with all Councils in the region including Greater Wellington Regional Council on a strategy for how we can best provide for the regions water needs in the future. The region-wide Wellington water management plan will suggest targets for water conservation and will address the issue of reducing consumer demand for water versus investing at this time in expensive and, from an environmental perspective, potentially invasive new storage capacity. We will work with the Wellington community to identify water conservation opportunities, while also looking at ways we can reduce our own water usage. The plan will be developed over the next two years.



## How we'll measure performance

We'll know when we are succeeding when our water complies with the NZ Water Drinking Standard 100% of the time; and when 90% of residents agree that water services provide good value for money. Our performance measures for this activity are detailed in the table below.

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
MORE SUSTAINABLE SAFER	<ul style="list-style-type: none"> <li>Water consumption (commercial and residential combined)</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We provide a safe reliable drinkable water supply for the city, while seeking more sustainable approaches towards water use.	Water compliance (%) with Drinking Water Standards for NZ (2005)	100% compliance	100% compliance	100% compliance	100% compliance	100% compliance
	Water distribution network - quality grading (Ministry of Health)*	Graded "a" to "b"	Graded "a" to "b"	Graded "a" to "b"	Graded "a" to "b"	Graded "a" to "b"
	Customer network complaints regarding water quality (taste and odour)	82 complaints	Less than 80 complaints	Less than 80 complaints	Less than 80 complaints	Less than 80 complaints
	Customer satisfaction (%) with water network service	New measure	85%	85%	85%	95%
	Properties (%) with appropriate water pressure (a minimum of 250kPa)	98%	98%	98%	98%	98%
	Fire hydrants (%) tested that meet NZFS Code of Practice fire fighting water supply requirements	95%	95%	95%	95%	95%
	Response time to service requests (%) - to respond to all requests for service within 1 hour of notification**	97%	97%	97%	97%	97%
	Unaccounted for water (%) from the network	21%	20%	19.5%	18%	15%
	Residential water consumption***	350 litres/person/day	345 litres/person/day	345 litres/person/day	340 litres/person/day	300 litres/person/day

	Residents (%) who agree that water services provide good value for money.	New measure	90%	90%	90%	90%
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\* Distribution network grading: a1 = completely satisfactory, negligible level of risk, demonstrably high quality; a = completely satisfactory, extremely low level of risk; b = satisfactory, very low level of risk; c = marginally satisfactory, moderate low risk; d = unsatisfactory level of risk; e = unacceptable level of risk; u = not yet graded.

\*\* Response includes initial investigation and prioritisation of work

\*\*\* Residential water consumption is based on total bulk water supplied less the metered commercial consumption divided by resident population.

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.3.1 Water network	-	-	100%	-	60%	40%	-
2.3.2 Water collection and treatment	-	-	100%	-	60%	40%	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

## What it will cost

2.3 Water	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.3.1 Water network	(31)	20,591	20,560	10,762
2.3.2 Water collection and treatment	-	12,858	12,858	-
2009/10 2.3 Total	(31)	33,449	33,418	10,762
2010/11 2.3 Total	(31)	34,205	34,174	11,121
2011/12 2.3 Total	(33)	35,559	35,526	10,156

### How we manage our assets that support this activity

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 maintenance, renewals and upgrades 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 enquiries.

Our work programme over the next three years is based on past workloads and set at a level to maintain existing levels of service taking into account projected population growth and other demand factors. The region-wide Wellington water management plan is due to be completed in the next two years and the results of this work will inform demand management and asset based solutions to meet Wellington's and the region's growing need for potable water.

## 2.4 WASTEWATER AND STORMWATER

### What's included here

Our key aim for this area is safety and sustainability. Wastewater and stormwater need to be disposed of in ways that protect public health and don't compromise the environment.

We own the city's stormwater, and sewage collection and disposal networks and contract Capacity (a company we jointly own with Hutt City Council) to manage, maintain and operate the networks. We own Karori and Moa Point treatment plants, and co-own the Porirua treatment plant with Porirua City Council. The Karori and Moa Point plants are managed under contract by United Water.

### Why it's important

Management and maintenance of these networks and the treatment of sewage before disposal are essential for public health and wellbeing, for protection of property from flooding and for protecting the environment. Without these services, Wellington could not operate as a modern, efficient city.

### Contribution to community outcomes

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

### What we'll provide – our levels of service

Our work programme over the next three years is based on past demands and set at a level to maintain existing levels of service taking into account projected population growth and other demand factors. We will:

- manage and maintain the more than 649km of pipes and tunnels that make up the city's stormwater network, which each year carries about 80 million cubic metres of run-off from kerbs, channels and household drains to local streams and to the harbour.
- maintain the more than 970 kilometres of sewer pipes and tunnels, and more than 60 pumping stations that make up the city's wastewater network, which each year carries about 29 million cubic metres of sewage effluent to the Council's treatment plants at Moa Point and Karori and to Porirua City Council's treatment plant (in which the Council has a minority ownership stake) where it is treated before being disposed of.

We will ensure that both networks are managed effectively and comply with all statutory requirements so that public health and safety risks are minimised. The work includes:

- upgrading sewer pipes that are too small, flushing drains, finding and fixing leaks, and carrying out works to ensure sewage doesn't contaminate groundwater, fresh or marine waters
- monitoring and regulating trade wastes (such as oil, grease, chemicals, and septic tank contents) to ensure that harmful substances don't enter the wastewater network, block sewers, damage treatment plants, pollute waterways, and put workers at risk
- working with private property owners to find and remove cross-connections between the wastewater and stormwater networks
- ensuring that sewage is treated and disposed of in compliance with environmental standards set down in Greater Wellington Regional Council resource consents, which govern the discharge of treated effluent to sea and the landfilling/composting of biosolids.

Over the next three years we plan to:

- commence an extensive monitoring programme that will allow the impact of stormwater on the aquatic ecologies of Wellington Harbour and the Taputeranga Marine Reserve to be better understood. With increased knowledge of the effects, relevant and effective stormwater management programmes can be developed
- upgrade the Moa Point inlet pump station in 2009/2010 to better manage the flows of wastewater into the plant and reduce the opportunity for surges to create unwanted overflows. The introduction of a pilot ultraviolet treatment facility into the bypass operation will reduce the impact of wastewater on the environment when use of the bypass facilities is necessary
- upgrade the stormwater network by introducing grit traps within the CBD stormwater culverts in order to minimise the effect of stormwater on the environment.

## How we'll measure performance

We'll know we're succeeding when flooding events are confined to 1: 50 year storms and when any interruptions to the networks are responded to within an hour of notification. Our full range of performance measures for this activity are detailed in the table below.

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
SAFER	<ul style="list-style-type: none"> <li>▪ Freshwater biological health (macro invertebrates)</li> <li>▪ Freshwater quality</li> <li>▪ Resident actions to reduce stormwater pollution</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We manage the stormwater and wastewater network with an aim to protect public health and property without compromising the environment.	Bathing beaches (%) - compliance with Ministry of Environment guidelines (green status)	93% of sampling occasions	90% of sampling occasions	90% of sampling occasions	90% of sampling occasions	90% of sampling occasions
	Freshwater – sites (%) within acceptable faecal coliform counts	89% of sites	90% of sites	90% of sites	90% of sites	90% of sites
	Customer satisfaction (%) with wastewater and stormwater network service (calling cards)	New measure	85%	85%	85%	95%
	Response time to service requests (%) - to respond to all requests for service within one hour of notification*	100%	97%	97%	97%	97%
	Properties flooded (buildings) as a result of a one in 50 year rain event (reported only)	5 properties**	No properties are flooded	No properties are flooded	No properties are flooded	No properties are flooded
	Stormwater network - resource consent compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance
	Sewage network - resource consent compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance
	Residents (%) who agree that wastewater and stormwater services provide good value for money.	New measure	90%	90%	90%	90%

\* Response includes initial investigation and prioritisation of work

\*\* Note: a total of 5 properties were flooded during the year despite the 50 year threshold not being reached

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.4.1 Stormwater management	-	-	100%	-	80%	20%	-
2.4.2 Sewage collection and disposal network	5%	-	95%	-	60%	35%	-
2.4.3 Sewage treatment	5%	-	95%	-	60%	35%	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

## What it will cost

2.4 Wastewater and stormwater	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.4.1 Stormwater management	(8)	14,008	14,000	4,989
2.4.2 Sewage collection and disposal network	(668)	15,249	14,581	7,874
2.4.3 Sewage treatment	(730)	19,365	18,635	-
2009/10 2.4 Total	(1,406)	48,622	47,216	12,863
2010/11 2.4 Total	(1,449)	49,843	48,394	12,120
2011/12 2.4 Total	(1,492)	51,713	50,221	12,207

## How we manage our assets that support this activity

The stormwater network is managed in accordance with our Stormwater Asset Management Plan, and wastewater assets are managed under the Wastewater Asset Management Plan. The plans set service level requirements such as network condition and capacity, response to faults/complaints, and criteria for upgrades and renewals are met. Under the plans, we detail how we will comply with all relevant legislation and regulatory requirements at all times.

*Stormwater:* Our overall goal is to manage the network prudently; minimise flood and public health risks; minimise the risk to marine environments from runoff, and deal effectively with any stormwater quality issues associated with heavy metals, pathogens or sediment.

We have an ongoing programme of work to deal with parts of the network that we already know lack sufficient capacity, and major network upgrades in the central city and Island Bay in recent years have been a response to this. Assets that are critical to the network are monitored on a regular basis and, under a prioritised inspection programme, we physically inspect about 12kms of pipe every year. We also receive and respond to public complaints and feedback from resident surveys. The results of this

monitoring and inspection together with the public feedback are factored into decisions about the level of maintenance required and the need for renewals and upgrades so that the programme of work remains properly focussed.

With an increasing population comes more dwellings and the use of concrete and other sealed surfaces around homes, this increases the amount of stormwater runoff expected in the foreseeable future. We are also assessing the possible effects of climate change on the network, in terms of the predicted increase in the incidence of intense periods of rainfall in winter months. These factors too may result in a shift in future work programme priorities.

### *Wastewater:*

Our goal is to safeguard public health; to ensure that the network has sufficient capacity; and 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 and the performance is inadequate. About 18km 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 sewage network. However, the Mōa Point and Western sewage treatment plants have capacity to deal with the expected increase in sewage flow in dry weather over the next decade. We are experiencing issues with wet weather flows which has prompted investigation into how the city can decrease the amount of stormwater that enters the wastewater network. Options will be considered and implementation will be investigated over the next few years.

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## 2.5 WASTE REDUCTION AND ENERGY CONSERVATION

### What's included here

We want Wellington to be a sustainable city, which means meeting today's needs in ways that don't cause future harm.

Our work in this area includes collecting and disposing of the city's waste in the city's landfills and providing a partial recycling collection service to households and businesses. We monitor closed landfill sites, encourage greater energy efficiency, conservation and use of renewable energy sources in the city, and work to reduce carbon emissions.

### Why it's important

We want Wellington to be a sustainable city. A sustainable city uses resources efficiently, and finds ways to reuse or recycle resources instead of adding to the amount of waste sent to landfills. It is also about reducing the amount of energy used in our operations to minimise the impact on the environment, and about promoting more sustainable behaviour on the part of the city's residents.

We operate landfills and waste collection service to ensure that residents dispose of waste safely and in ways that do not harm human health.

Landfills (including closed landfills) come with environmental impacts of their own that need to be carefully managed. These impacts come in the form of production of harmful by-products come in the form of greenhouse gas emissions, specifically methane, and leachate, a liquid run-off formed during waste decomposition that often contains hazardous chemicals, and heavy metals that can pollute local waterways. From an asset management as well as an environmental sustainability perspective, it is therefore in our and the community's interest to minimise the amount of waste the city produces.

### Contribution to community outcomes

This activity contributes to the following community outcomes: 'Wellington will promote the sustainable management of the environment, and support increased opportunities for the exercise of kaitiakitanga or environmental guardianship', 'Wellington will move towards a zero-waste policy', 'Wellington's long-term environmental health will be protected by well-planned and well-maintained infrastructure' and 'Wellingtonians' use of non-renewable energy resources will decrease'.

### What we'll provide - our levels of service

Our work programme over the next three years is based on past demands and set at a level to maintain existing levels of service taking into account projected population growth and other demand factors. We will:

- provide a service for the collection of the approximately 11,000 tonnes of non-recycled rubbish produced by Wellington residents each year - this service will be weekly for the vast majority of households but daily within the CBD – and for its transportation for disposal either to the wholly owned Southern Landfill or to the Spicer Landfill, which is operated by Porirua City Council but in which the Wellington City Council has a minority ownership stake
- provide a similar service to households for the collection and disposal of paper, glass and aluminium that is sorted by residents for recycling
- provide a similar service to restaurants, hotels, catering establishments and other food related businesses for the collection of food scraps to make compost under the “Kai to Compost” programme
- operate the Southern Landfill, including the transfer station where domestic waste is dumped and recyclables separated and the Second Treasure Shop where items such as furniture, metals, bikes, books and appliances can be dropped off
- manage the Southern Landfill by undertaking proper landscaping, erosion control, resource consent compliance, water quality monitoring and handling of hazardous waste such as paints, batteries, gas bottles, garden chemicals, oils and solvents that might otherwise contaminate leachate and sludge
- monitor and manage the 30 closed landfills (most have been converted to reserves and parks) that are located around the city to ensure they aren't discharging hazardous gases such as methane and carbon monoxide or leachate into the environment
- 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
- license the operation of the landfill gas capture plant by a third party for the generation of electricity
- encourage efficient energy use by delivering on our energy management programme for internal operations, advocate for initiatives that aim to reduce energy use in the Wellington community, and advocate for initiatives by third parties that aim to increase the amount of energy generated locally from renewable sources such as solar, wind and tidal energy.

Over the next three years we plan to:

- carry out detailed planning work, obtain the necessary consents and develop stage four of the Southern Landfill, which will require making appropriate preparations of the area to be used including creating new roads and installing water diversion controls so water runoff is not affected by the operations of the landfill
- undertake a series of energy audits in Council buildings and facilities, timed to coincide with the identification of work to be included in our planned upgrade programme
- install improved heating insulation as part of the upgrade of the Council's social housing stock
- enter into a partnership with the Energy Efficiency and Conservation Authority and service providers to stimulate uptake of healthy homes retrofits. Healthy homes retrofits involve improving the warmth, comfort and energy efficiency of Wellington's older homes by installing insulation and in some cases, energy efficient heating. These retrofits improve the health of occupants and reduce household energy consumption as well. The government provides subsidies for some households to complete the retrofits and there are existing providers in Wellington that help households access these subsidised retrofits.

These service providers also provide general home assessments giving advice on ways to reduce energy and water consumption.

Our contribution will be \$35k per year for the next three years to raise awareness in the community of the opportunities that exists for households to access government subsidies to retrofit their homes.

In the coming year we will continue to work with the Energy Efficiency and Conservation Authority to identify the most effective way to deliver retrofits to the Wellington homes.

- implement an organisational sustainability plan that addresses and attempts to minimise the organisation's waste production and its water, energy and transport use, and that incorporates a procurement policy that delivers more sustainable outcomes from the Council's many suppliers.
- focus on reducing our own carbon emissions. We have previously talked about achieving carbon neutrality for our own *corporate emissions* but there are a range of practical issues associated with the achievement of carbon neutrality. These include lack of defined international standards and significant costs to Council. These costs arise from the requirement to purchase carbon credits which do not

provide a financial return (whereas investing in energy efficiency projects would result in both environmental and financial benefits).

Given the issues, we believe it is appropriate to place the emphasis on reducing emissions and focusing on existing emissions reduction targets.

Year	Corporate Target: Wellington City Council Emissions	Community Target: City Emissions
2010	Stabilise (best efforts)	Stabilise (best efforts)
2020	40% reduction	30% reduction
2050	80% reduction	80% reduction

We are also currently reviewing our kerbside recycling operations and are interested in your views. For the time being we are proposing to continue with our current practice and to undertake an intensive public education campaign to encourage residents to sort and bag their recycling in the existing green bins. These steps should reduce the amount of litter that can be blown out of bins and the associated stormwater blockages. They will also reduce the likelihood of injuries during collection. We also plan to encourage local industries to invest in the processing of glass, plastic and paper.

The other options we have considered include:

- ceasing to collect recycling

- introducing recycling bags
- introducing prepaid stickers for residents to place on their bags of recyclable material (for instance in used supermarket bags)
- introducing drop off facilities
- introducing wheelie bins where practicable.

We also need to think about how we might fund recycling in the future. Kerbside recycling is not currently paid for through rates – it is funded from a levy at the landfill. This means that over time, as recycling increases and the amount of waste decreases, there will be less money to cover the cost of recycling.

In terms of funding we've considered: no longer collecting some types of recyclables (i.e. glass); paying for recycling operations directly from rates; increasing the levy on the landfill; putting a user charge on the recycling service - either through prepaid stickers or plastic bags; or using the surplus income that we get from the yellow rubbish bags and from our other landfill activities to offset the cost of recycling. We propose to do the last of these options but are keen to know your views on how we should manage our recycling operations. For more information on the options visit [www.Wellington.govt.nz](http://www.Wellington.govt.nz).

## How we'll measure performance

We'll know when we are succeeding when high numbers of residents are satisfied with waste and recycling collection services and agree that waste management services provide good value for money. Our performance measures for this activity are listed in the table below.

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
MORE SUSTAINABLE	<ul style="list-style-type: none"> <li>▪ Total waste to landfill per capita</li> <li>▪ Resident actions to reduce waste</li> <li>▪ Energy-use per capita</li> <li>▪ Energy supply interruptions</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We provide recycling and waste collections across the city.	Resident (%) satisfaction with waste management services – specifically: <ul style="list-style-type: none"> <li>▪ Recycling collection</li> </ul>	86%	85%	85%	85%	85%
We operate the Southern Landfill, with aims of minimising the amount of waste disposed of and ensuring waste is disposed of safely.	<ul style="list-style-type: none"> <li>▪ Waste collection</li> </ul> City and WCC corporate green house gas emissions	New measure	85%	85%	85%	85%
We are working to encourage energy efficiency in the city and also by looking for ways to reduce our own energy use.	Resident (%) weekly usage of waste collection services: <ul style="list-style-type: none"> <li>▪ Recycling collection</li> <li>▪ Waste collection</li> </ul>	86%	85%	85%	85%	85%
	Kerbside recycling collected (tonnes)	11,989 tonnes	12,500 tonnes	12,500 tonnes	12,500 tonnes	12,500 tonnes
	Kerbside waste collected (tonnes)	11,900 tonnes	12,000 tonnes	12,000 tonnes	12,000 tonnes	12,000 tonnes
	Landfill - Resource consent compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance
	Total waste to the landfill and total recyclable material diverted from the landfill	Waste 88,000 tonnes / Recyclables 16,500 tonnes	Waste 84,000 tonnes / Recyclables 16,500 tonnes	Waste 84,000 tonnes / Recyclables 16,500 tonnes	Waste 84,000 tonnes / Recyclables 16,500 tonnes	Waste 84,000 tonnes / Recyclables 16,500 tonnes
	Energy sourced from the Southern Landfill (GWh)	New measure	8 GWh	8 GWh	8 GWh	8 GWh

	WCC corporate energy use (electricity and natural gas combined):					
	▪ Civic complex	7,990,400 kWh**	7,543,300 kWh	7,319,700 kWh	7,096,200 kWh	Not available
	▪ Pools and recreation facilities	15,382,600 kWh**	14,735,500 kWh	15,858,500 kWh	16,017,200 kWh	Not available
	▪ Convention Centre	3,900,800 kWh**	4,110,900 kWh	4,110,900 kWh	4,110,900 kWh	Not available
	Residents (%) who agree that waste management services provide good value for money.	New measure	90%	90%	90%	90%

\* Note: Excludes emissions from Council Controlled Organisations and joint ventures, Northern Landfill, compost, small electricity accounts, water treatment and bulk water deliver, and taxi use.

\*\* Baseline data provided is for 2007/08.

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.5.1 Energy efficiency and conservation	-	-	100%	100%	-	-	-
2.5.2 Waste minimisation, disposal and recycling management	90%	-	10%	10%	-	-	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

## What it will cost

2.5 Waste Reduction and Energy Conservation	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.5.1 Energy efficiency and conservation	-	167	167	131
2.5.2 Waste minimisation, disposal and recycling management	(9,238)	9,490	252	381
2009/10 2.5 Total	(9,238)	9,657	419	512
2010/11 2.5 Total	(9,516)	9,944	428	615
2011/12 2.5 Total	(9,802)	9,900	98	269

### How we manage our assets that support this activity

The Southern Landfill is managed in accordance with our Operational Landfills Asset Management Plan.

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, and we will be preparing stage four over the next three years. The 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 decade.



## 2.6 ENVIRONMENTAL CONSERVATION ATTRACTIONS

### What's included here

Nature is one of Wellington's biggest attractions. In Zealandia – the Karori Sanctuary and the Wellington Zoo, the city has two facilities that play an important part in wildlife conservation, educating people about nature and attracting visitors to the city.

### Why it's important

These facilities play important conservation roles, protecting native and exotic flora and fauna. They inform and educate, attract visitors, and their existence creates economic incentives for the city's environment to be protected and enhanced.

### Contribution to community outcomes

This activity contributes to the following community outcome: 'Wellington will protect and showcase its natural landforms and indigenous environments'.

### What we'll provide - our levels of service

We will provide funding support to the Zoo and the Karori Sanctuary in their role of protecting and nurturing the city's native plant and bird life and making significant contributions to wildlife conservation.

The Sanctuary has a 500-year vision of restoring pristine native forest and bird life in a valley just minutes from the city and telling the history of this land through interactive displays at the visitor centre.

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 180,000 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.

Over the next three years:

- the interactive visitor centre will open at the Karori Sanctuary. We support the Sanctuary by providing land, contributed funding to support daily operations as well as a \$9.9 million loan for the development of the new interactive visitor facility. It is expected that with the completion of the visitor centre, visitor numbers will grow and the Sanctuary's operations will become self funding. The visitor centre is expected to open in 2010.

- we will continue to redevelop the Wellington Zoo into an interactive, unique, dynamic, and accessible visitor experience. In 2007 we agreed a ten year capital upgrade programme to modernise facilities at the zoo and provide visitors with a place to connect with wildlife through interactive experiences. Upgrades planned to be completed for the coming three years include completing the animal hospital, upgrading the 'monkey island' and Sunbear enclosure, making alterations to the lions den to allow greater interaction between male and female lions, and building a native precinct titled 'Meet the locals,' and several other smaller projects. All buildings and precincts constructed as part of the upgrade programme will be future proofed and built in line with sustainable building practises.

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## How we'll measure our level of service and performance

We'll know we are succeeding when annual visitor numbers for the Karori Sanctuary (68,500) and Wellington Zoo (182,000) are achieved.

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
MORE COMPETITIVE	<ul style="list-style-type: none"> <li>Key Wellington natural environment visitor attractions (including Zoo and Karori Sanctuary)</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We support high quality environmental conservation attractions.	Karori Sanctuary - visitors	68,500	To be provided within the Wellington Zoo and Karori Wildlife Sanctuary statements of intent			
	Karori Sanctuary - education programme attendees	5,750				
	Wellington Zoo - visitors	182,500				
	Wellington Zoo - education programme attendees	14,900				
	Karori Sanctuary - Visitor & Education Centre Project construction programme	New measure	Project completion	N/A	N/A	N/A
	Wellington Zoo capital programme	New measure	Animal Hospital completion	'Meet the Locals' - Phase 1 Project completion	Monkey Islands refurbishment and new Sun Bear enclosure	'Meet the Locals' - Phase 2 and new catering facilities completed
	Wellington Zoo - ratio of generated Trust income as a % of WCC grant	69%	To be provided within the Wellington Zoo Statements of Intent			
	Wellington Zoo - average WCC subsidy per visitor.	\$14.72				

### Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.6.1 Wellington Zoo	-	-	100%	100%	-	-	-
2.6.2 Karori Sanctuary	-	-	100%	100%	-	-	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

### What it will cost

2.6 Environmental Conservation Attractions	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.6.1 Zoo	-	3,661	3,661	2,809
2.6.2 Karori Sanctuary	-	1,605	1,605	-
2009/10 2.6 Total	-	5,266	5,266	2,809
2010/11 2.6 Total	-	5,148	5,148	1,707
2011/12 2.6 Total	-	4,626	4,626	2,404

### How we manage our assets that support this activity

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.

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## 2.7 QUARRY

### What's included here

Our aim is to manage this valuable resource well and minimise its environmental impact by restoring and developing the Ngauranga Gorge area. We own the Kiwi Point Quarry, located in Ngauranga Gorge, which every year provides hundreds of thousands of tonnes of aggregate to the local construction market for use on roading and other infrastructure projects. Quarry operations – rock extraction, crushing and processing - are contracted out.

### Why it's important

Growing cities need a reliable source of reasonably priced aggregate to meet their infrastructure needs. In this context, we consider the Quarry to be a strategically important asset.

Ownership serves two useful purposes. It secures our direct access to a constant supply of product and it enables us to retain a degree of influence over the price of that product in the local market. It also means that on completion we can control the most appropriate use of the site.

### Contribution to community outcomes

Our work in this activity contributes towards the following community outcome: 'Wellington's long term environmental health will be protected by well planned and well maintained infrastructure'.

### What we'll provide - our levels of service

Our work programme over the next three years is based on past workloads and set at a level sufficient to continue to meet the demands of the market and the city's infrastructure needs. The vast majority of aggregate produced by the Kiwi Point Quarry (90-95%) is used to build and maintain the city's drainage and roading networks. 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.

Kiwi Point Quarry operates in a competitive environment. Efficient management means Kiwi Point is able to generate revenue in excess of the operating expenditure while maintaining competitive pricing.

## How we'll measure performance

We measure our performance in this activity by monitoring the quarry's compliance with its resource consent, and district plan and quarry license requirements.

OUTCOMES WE SEEK	MEASURING PROGRESS TOWARDS OUR OUTCOMES					
MORE SUSTAINABLE	<ul style="list-style-type: none"> <li>▪ Ecological footprint</li> <li>▪ Air quality (particulate matter)</li> </ul>					
COUNCIL ACTIVITY LEVELS OF SERVICE	MEASURING OUR PERFORMANCE	PERFORMANCE TARGETS				
		BASELINE 2008	2009/10	2010/11	2011/12	2012/13 – 2018/19
We provide a high quality quarry service and aim to minimise the environmental impacts while contributing to the city's development needs.	Aggregate (tonnes) produced from the Quarry	292,258 tonnes	No target – aggregate produced is driven by market demand therefore we use this information for monitoring purposes only			
	Resource consent compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance
	District Plan requirement compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance
	Quarry license compliance	Compliance achieved	To meet compliance	To meet compliance	To meet compliance	To meet compliance

## Who should pay

Activity component	User fees	Other income	Rates	General rate	Residential target	Commercial target	Downtown/other
2.7.1 Quarry operations	125%	-	-	-	-	-	-

For more information on how we fund our activities see the Revenue and Financing Policies in volume two.

## What it will cost

2.7 Quarry	Operating expenditure 2009-2012			Capital expenditure 2009-2012
	Income (\$000)	Expenditure (\$000)	Net expenditure (\$000)	Total (\$000)
2.7.1 Quarry operations	(398)	285	(113)	-
2009/10 2.7 Total	(398)	285	(113)	-
2010/11 2.7 Total	(410)	292	(118)	-
2011/12 2.7 Total	(422)	290	(132)	-

## How we manage our assets that support this activity

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, which has the advantage of the Council not having 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.

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



## 10-YEAR FINANCIAL PROJECTIONS

<i>Operational Expenditure (\$000)</i>		Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Activity	Activity Name	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
2.1	Gardens and beaches	13,195	13,940	14,265	14,691	15,212	15,657	15,935	16,312	16,735
2.2	Green open spaces (Town belts)	14,286	14,993	15,315	15,850	16,235	16,701	17,091	17,511	18,175
2.3	Water	33,449	34,205	35,559	36,643	37,717	39,946	41,123	42,309	44,902
2.4	Wastewater and stormwater	48,622	49,843	51,713	52,452	52,955	55,319	55,986	56,590	59,180
2.5	Waste reduction and energy conservation	9,657	9,944	9,900	10,338	10,718	10,877	11,331	12,366	13,450
2.6	Environmental conservation attractions	5,266	5,148	4,626	4,746	4,833	4,911	4,965	5,038	5,113
2.7	Quarry	285	292	290	303	313	319	335	325	332
<b>Total Operating Expenditure</b>		<b>124,760</b>	<b>128,365</b>	<b>131,668</b>	<b>135,023</b>	<b>137,983</b>	<b>143,730</b>	<b>146,766</b>	<b>150,451</b>	<b>157,887</b>
Less: Non-funded Depreciation		2,965	2,955	3,192	3,188	3,188	3,459	3,459	3,459	3,696
<b>Net Operating Expenditure</b>		<b>121,795</b>	<b>125,410</b>	<b>128,476</b>	<b>131,835</b>	<b>134,795</b>	<b>140,271</b>	<b>143,307</b>	<b>146,992</b>	<b>154,191</b>
<i>Net operating expenditure funded by:</i>										
Direct activity income		11,731	12,196	12,563	13,149	13,698	14,099	14,599	15,039	15,491
General Rates		30,940	32,107	31,853	32,802	33,641	34,402	35,098	36,560	38,363
Targeted Rates		78,092	80,045	82,966	84,757	86,295	90,575	92,379	94,125	99,030
Grants & Subsidies		563	579	597	615	633	652	672	692	713
Other Income		469	483	497	512	528	543	560	576	594
<b>Net Operational Expenditure Funding</b>		<b>121,795</b>	<b>125,410</b>	<b>128,476</b>	<b>131,835</b>	<b>134,795</b>	<b>140,271</b>	<b>143,307</b>	<b>146,992</b>	<b>154,191</b>

<i>Capital Expenditure (\$000)</i>		Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Activity	Activity Name	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
2.1	Gardens and beaches	2,141	1,986	1,645	3,067	2,239	4,605	2,348	2,084	3,569
2.2	Green open spaces (Town belts)	603	658	672	904	923	1,442	964	988	1,939
2.3	Water	10,762	11,121	10,156	13,446	14,550	15,641	13,304	13,962	15,922
2.4	Wastewater and stormwater	12,863	12,120	12,207	12,429	16,242	16,925	13,853	14,796	16,126
2.5	Waste reduction and energy conservation	512	615	269	196	753	1,840	1,652	806	9,062
2.6	Environmental conservation attractions	2,809	1,707	2,404	1,734	988	1,702	1,358	243	249
<b>Total Capital Expenditure</b>		<b>29,690</b>	<b>28,207</b>	<b>27,353</b>	<b>31,776</b>	<b>35,695</b>	<b>42,155</b>	<b>33,479</b>	<b>32,879</b>	<b>46,867</b>
<i>Capital expenditure funded by:</i>										
Depreciation		30,657	30,900	33,030	33,234	33,359	35,956	36,148	36,814	40,290
Bequests		345	-	-	-	-	-	-	-	-
Development Contributions		2,589	4,043	5,496	6,061	6,278	6,304	6,330	6,330	6,330
Borrowings and working capital*		(3,901)	(6,736)	(11,173)	(7,519)	(3,942)	(105)	(8,999)	(10,265)	247
<b>Capital Expenditure Funding</b>		<b>29,690</b>	<b>28,207</b>	<b>27,353</b>	<b>31,776</b>	<b>35,695</b>	<b>42,155</b>	<b>33,479</b>	<b>32,879</b>	<b>46,867</b>

\* a debit balance indicates increased borrowings, while a (credit) balance indicates a funding surplus in that year which offsets borrowings and working capital.