

draft environmental sustainability strategy 2009-2014



Hutt City Council

Draft Environmental Sustainability Strategy 2009-2014

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1 Introduction

This document is the Draft Environmental Sustainability Strategy 2009-2014 (the strategy) that has been developed by Hutt City Council with the purpose of:

- Identifying major environmental sustainability issues for Hutt City and developing actions for responding to these; and
- Positioning Hutt City Council as a leader in environmental sustainability within the community.

The intent of the strategy is to deliver increased clarity, not proliferate or duplicate existing documents. It is an overview document with fundamental statements on the rationale for involvement in key environmental areas.

It enables flexibility and discretion in actions and decisions and is inclusive of the key areas of environmental concern.

The strategy recognises that environmental sustainability is not something that can be achieved overnight, or by the Council alone. This strategy will not make Hutt City environmentally sustainable within its five year life, but it takes important steps towards achieving this.

It will take many years of hard work at Council level, central government level, community level, and most importantly, at an individual level for environmental sustainability to be achieved.

This theme of continual progress has been carried through into the strategy's vision.



NZ vehicles are becoming less fuel efficient per km travelled

2 Scope

The strategy is primarily focused on how Hutt City Council will contribute towards improving the city's environmental sustainability over the next five years. In the strategy, environmental sustainability means the sustainability of the natural physical environment and the use of natural resources. In dealing with these issues, the primary areas of focus for the strategy are the following:

- Waste (solid waste)
- Transport
- Energy
- Water (potable, wastewater, and stormwater)
- Urban Form
- Biodiversity
- Council Operations

Climate change concerns are related to each of these areas either through contributing to greenhouses gas emissions, or by being affected by it. Consequently, it has not been dealt with as a separate issue. Within these areas, the focus of the strategy is not on adapting to climate change, but on mitigation.¹

The strategy does not deal with environmental effects under the Resource Management Act 1991, such as shade or noise nuisance. While the strategy considers aspects of the built environment under urban form, such as the intensity of buildings, its primary focus in this area is on impacts on the natural physical environment and the use of natural resources.

3 Policy Context

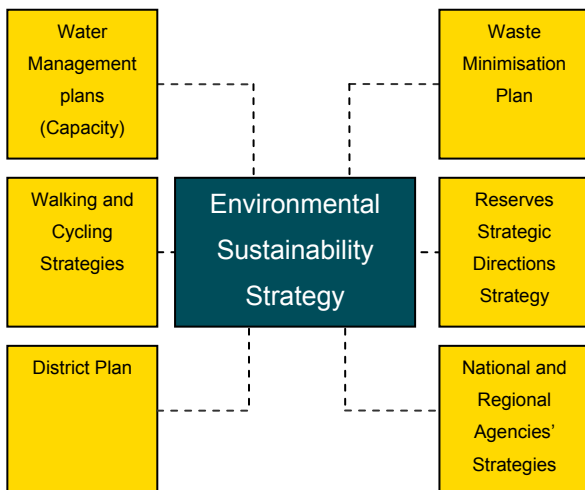
In the Community Plan 2006-2017 the vision for Hutt City is '*a great place to live, work and play*'. The sustainability and quality of the environment is a key element to ensuring this vision is achieved. The link between this vision and the environment is reflected in several of the

¹ Council recognises that adaption to climate change is an important issue that both Council and the community will need to address. It is not, however, the focus of this strategy.

community outcomes contained within the Hutt City Council Community Plan 2006-2017.

This strategy is an important element in directing Council’s approach to achieving some of the environmental elements of this vision and related community outcomes. In particular, it will guide Council’s contribution to improving the sustainability of the natural physical environment and use of natural resources.

This strategy is one of several that Council has in place that have environmental “elements”. In addition, other agencies have, or are developing strategies that Council will have a role in delivering and that contribute to improving our environmental sustainability. These links are illustrated below.



4 Rationale for Involvement and Investment in Environmental Sustainability

Investment in environmental sustainability is anchored in the recognition that ultimately, it is natural resources, natural services, and the environment that underpins our standard of living and wellbeing over the long term. Some studies have suggested that the value of these “environmental resources and services” per year could be at least twice as high as counted gross domestic product globally.

Few of these resources or services are paid for directly, and only some are protected from longer term degradation. Globally, nationally and

regionally, evidence overwhelmingly suggests we are running down these resources – akin to drawing on capital assets to use as income. Unless we act to stem this trend, it will have long term social, health, and economic consequences.

Other reasons for action are also highly valued by the community:

- Protection of the environment - as a thing to value in itself, and a sense that our impact on the environment is currently too high.
- Intergeneration equity – knowing that we have not left future generations worse off.

In addition to these long term reasons, advancing environmental sustainability can also have a material affect on today’s standard of living through:

- Economic advantages: Directly through cost savings and indirectly by remaining attractive as a place to live, play, work, and invest. In addition, the more our transport system is able to cope with fuel price increases, the more disposable income households will have to spend on other goods and services.
- Health advantages: Through more active transport, improved water and air quality, atmospheric protection (e.g. ozone), and avoiding food contamination.
- Social and cultural advantages: Through the enjoyment, use, and celebration of unique habitat and biodiversity. Affordable and sustainable transport options will also help lower income households to deal with increasing fuel costs and budget stress.



135,000 tonnes of material enters Hutt Valley landfills every year

4.1 Why Is Council Involved?

The Local Government Act 2002 requires territorial authorities (Council) to promote the social, economic, **environmental** and cultural well-being of the community through contributing towards outcomes desired by their communities, and to identify the outputs Council will manage to help secure those outcomes.

For this strategy, the relevant community outcomes in the Community Plan 2006-2017 are:

- Outcome 8: A diverse natural environment that is accessible, enjoyable and safe
- Outcome 9: A healthy balance between natural and built environments
- Outcome 10: A built environment that is attractive, safe and healthy

The increasing importance of the environmental sustainability to the community's economic, physical, social, cultural, and mental well-being has been highlighted in recent consultation with the community.

In February 2007, Hutt City Council held a community engagement workshop attended by over 200 people to try to understand the priorities Lower Hutt residents had for Hutt City over the next 10 years. Environmental sustainability issues were rated the top priority, along with flood protection.

The concern about environmental sustainability was again raised in consultation on the 2006-2017 long term council community plan, where environmental sustainability issues were the top rated issues, along with flood protection and safety.



Huntly power station can use up to 3.5 million tonnes of coal every year – 875kg of coal per capita

Together, this indicates that Hutt City Council has a greater role to play in promoting environmental sustainability, and that Hutt City residents want us to. The development of the Environmental Sustainability Strategy forms Hutt City Council's response to these issues.

The seven areas chosen for attention in this strategy reflect where Council believes it can increase its contribution to environmental sustainability. In addition to being crucial areas of environmental concern, they are also areas within which Council is able to exercise more influence on environmental outcomes.

However, it is clear that Council is not responsible for – and is not able to achieve by itself – complete environmental sustainability. It will take many years of hard work at Council level, central government level, community level, and most importantly, at an individual level for environmental sustainability to be achieved within our community.

4.2 Current Council Investment in Environmental Sustainability

Council presently invests significantly in environmental sustainability related initiatives for the community. Details of these initiatives are listed in each section under the action plan. Many of these initiatives have dual purposes, such as beautification as well as promoting biodiversity or wastewater treatment, which protects public health and receiving waters.

The major initiatives planned over the 2008/2009 financial year, accounting for major items of the expenditure, are:

- \$112,000 for the environmental development team, managing corporate (internal) programmes and community wide programmes
- \$201,000 for pest plant and animal programmes and \$163,000 on the management and improvement of Percy's Scenic Reserve
- \$1.2 million for weekly kerbside collection of paper, cardboard glass, and plastic for recycling
- \$196,000 for other waste minimisation initiatives, including environmental programmes for schools and businesses

- \$8.6m for the operating cost of the Gracefield Wastewater Treatment plant, pipe networks, and wastewater detention facilities
- \$308,000 for the removal of contaminants from Waiwhetu stream (as part of longer term \$6 million upgrade)
- \$488,000 for pedestrian infrastructure maintenance or improvements
- \$150,000 for cycle network development
- \$50,000 for the insulation of pre-1978 homes

In addition to the above, Capacity (see Key Partners) are continually improving the wastewater and stormwater network in Hutt City, involving considerable investment from Council.

5 Funding and Costs

Many of the initiatives proposed in this strategy will be able to be undertaken within existing budgets and funding levels. However, other initiatives can only be undertaken if additional resources are committed. This has a cost to Council, and ultimately to Hutt City rate payers.

The approach taken in this strategy has been to stage the implementation of the initiatives over five years, to ease the costs. While no detailed costings have been undertaken, it is expected that the cost of the new initiatives within this strategy will rise from approximately \$203,000 in 2009/2010 to \$927,000 in 2013/2014 and per annum thereafter.

The total raw cost for all initiatives for each of the five years of the strategy is detailed in the following table. Also included is an estimate of what this would represent for a typical household, assuming half of the costs are recovered from households through rates.

Year	Overall Cost	Per Ratepayer
2009/2010	\$203,000	\$2.99
2010/2011	\$305,000	\$4.49
2011/2012	\$805,000	\$11.86
2012/2013	\$847,000	\$12.48
2013/2014 / ongoing	\$927,000	\$13.66

There are a range of options available to Council, in addition to rates, that will be used to help fund the strategy's implementation. Overall, it is expected that between 45%-55% of the additional costs will be able to be funded from the following sources:

- Savings from Council energy efficiency initiatives
- The waste minimisation bill before parliament at this time, if passed, will make available to Council a stream of funding for new waste minimisation initiatives
- Revenue from the proposed emissions trading scheme
- Central government and third party funding, where such funding is available

6 Key Partners

There are a large number of stakeholders involved in some way with one or more elements of environmental sustainability, all with potential to both contribute to and benefit from the successful implementation of this strategy. However, a smaller number of key partners have been identified as critical to the effective implementation of the strategy and in some cases play a dominant role. These partners, and the roles they play, are:

- Greater Wellington Regional Council (GWRC) is responsible for air and main water course discharges, plays a key role in planning transport and subsidising public transport across the region, and manages the Regional Parks of which there are two within Hutt City. Greater Wellington is also responsible for the Wellington region's drinking water catchment.
- Ministry for the Environment (MFE) sets nationwide policy and standards for waste activities and provides some funding. It also plays a role in promoting sustainability outcomes in urban design.
- Key Maori stakeholders such as Ngā Tekau o Pōneke – Wellington Tenth Trust, Te Rūnanganui o Taranaki Whānui ki te Upoko

o te Ika a Maui as mana whenua, Te Taurahere o Te Awakairangi and the seven Marae within Hutt City.

- Energy Efficiency Conservation Authority is the national agency responsible for promoting and encouraging energy efficiency, and has several energy efficiency schemes in place available to businesses, homes, and local authorities.
- Department of Conservation protects and manages significant and natural heritage sites. The Rimutaka Forest Park is the largest area within Hutt City under its control. The Department is responsible for the oversight of legislation governing the conservation and reserve estate.
- New Zealand Transport Agency is the government's main transport funding agency and builds and maintains state highways. It subsidises roading projects (including cycling infrastructure) and public transport, and has a key role in influencing local authorities' transport programmes.
- Capacity operates and manages the water supply, wastewater, and storm water systems in Hutt city and Wellington city.
- Valley Flyer is the Hutt Valley's primary bus operator, operating 20 services with most being subsidised by GWRC.
- Volunteers and volunteer groups contribute a lot of time and energy to improving and maintaining the natural environment in Hutt City, particularly in foreshore, stream and bush areas.
- Charitable trusts play a significant role, particularly in supporting energy efficiency within homes, and represent a potential source of funding or support for initiatives proposed in this strategy.

7 Vision and Goals

The vision for the strategy is:

A more environmentally sustainable city, every day

The environmental sustainability focus areas represent the major themes under which environmental sustainability objectives and actions will be advanced through this strategy. The focus areas, along with the overall goal for each area, are:

- **Waste – move towards zero waste**
- **Transport – transport infrastructure, technology, and choices that use less fuel and offer better health and safety**
- **Energy – for today and for tomorrow**
- **Water – a valued resource**
- **Urban Form – a city that sustains us and the environment**
- **Biodiversity – flourishing environments, thriving with local native plants and animals**
- **Council – an environmental sustainability leader within the community**

8 Action Plan

Included under each of the following sections is a brief outline of each area, why it is a concern, and a description of current Council activities in the area. These sections also include a brief summary of the key issues looking ahead, identifying areas where more attention is needed or opportunities exist for further advancement. The objectives for each focus area respond to these key issues, and the actions detail how the objective will be achieved.

Many of these actions are reasonably simple and will be able to be carried through without further investigation or assessment. However, several actions will need further investigation and assessment before the feasibility and desirability of the action can be determined, and consequently, whether or not it will be pursued.

Additionally, some flexibility is needed as new issues or opportunities arise, which Council may need to respond to with new or changed actions.

The actions are identified as primarily targeted at the community (C), business (B) or schools (S). This is to ensure and demonstrate a balance of activities across these groups.

8.1 Waste – move towards zero waste

Waste management and reduction is crucial to our ability to live sustainably. Waste can be bad for the environment, bad for our health and bad for our economy, and New Zealand's waste problem is large and growing. In 2007, 135,000 tonnes of waste was disposed of at Hutt Valley landfills.

Waste incurs substantial economic costs and producing unnecessary waste means we are not using resources sustainably. Approximately 93% of the materials we use never end up in saleable products at all but are discarded during the production process. Approximately 80% of what we produce is discarded after a single use.

Improper disposal of waste can pose significant risks to human health and the environment. Decomposing organic waste in landfills generates greenhouse gases. Landfills also produce leachate containing heavy metals and decomposing organic waste that can escape into the environment contaminating our water and soil. Burning wastes releases hazardous and toxic substances into the air.

Domestic wastewater and tradewaste can contain pathogens, heavy metals and hazardous wastes, which can pollute our land and waters. Hazardous wastes can persist in the environment and enter the food chain, harming future generations.

What is Council doing already?

- Waste reduction programmes for businesses and schools and regular Community awareness campaigns
- Support for the Earthlink programme, which collects and sells useable material from the landfill
- Free citywide kerbside recycling service, along with seven recycling stations
- Annual household hazardous waste collection where hazardous substances and items are collected free of charge
- Capturing a proportion of landfill gas at Silverstream landfill for electricity production

- Silverstream landfill undertakes best practice environmental management, including leachate capture and monitoring of groundwater quality

Key Issues

- Although residential collection of recycling reached 7,300 tonnes in 2007, and continues to grow, recycling per capita in Lower Hutt is lower than the average for New Zealand's main cities
- Estimates of waste going to Silverstream landfill indicates there is still 9,000 tonnes per year of recyclable material being land filled by Hutt Valley residents
- Approximately 15,000 tonnes of kitchen waste is disposed at Silverstream Landfill each year
- Approximately 14,000 tonnes of green waste is disposed at Silverstream Landfill each year
- Opportunities exist to reduce other material coming to landfill such as 3,000 tonnes of unpainted, untreated timber that could be used for firewood
- Organic material within landfills produces landfill gas (approximately 50% methane), which is a greenhouse gas
- Currently, 1,000 tonnes of methane is being produced at Wainuiomata landfill
- Currently 4,700-5,700 tonnes of methane is being produced per annum at the existing Silverstream landfill, with 50-60% of this gas being captured for electricity production
- The new landfill at Silverstream is expected to capture 80-90% of landfill gas for electricity production
- Landfill greenhouse emissions will be subject to the proposed emissions trading scheme from 2012, resulting in landfill cost increases
- The government's proposed waste levy will provide opportunities for Council to pursue additional waste minimisation activities without cost to ratepayers

Waste Objectives and Actions

Code	Objective / Action	C ²	B	S
WO1	Organic waste is reused			
W1	Investigate and consider options for composting green waste separated at Silverstream landfill	X	X	X
W2	Investigate and consider options for diverting commercial kitchen waste from landfills		X	
WO2	Reuse opportunities are maximised			
W3	Investigate and consider options for reuse and recycling of construction and demolition waste, such as unpainted and untreated timber, bricks, and scrap metal	X	X	
WO3	Waste management at public events and in public places			
W4	Develop a policy on recycling at public events at Council facilities (parks, reserves, and roads)	X	X	
W5	Investigate and consider options for public place recycling, including in parks and reserves	X	X	X
WO4	Improve waste awareness			
W6	Improve marketing and communication of waste performance and targets as part of establishing an environmental sustainability brand for Council	X	X	X
W7	Work with large producers of waste to improve their efficiency		X	
W8	Work with local schools to ensure that all schools in Hutt City have recycling facilities			X
W9	Work with the Hutt Valley District Health Board to ensure that the hospital works towards minimising waste.	X	X	

² The actions are identified as primarily targeted at the community (C), business (B) or schools (S). This is to ensure and demonstrate a balance of activities across these groups.

8.2 Transport – transport choices that reduce fuel use and offer better health and safety

The development and growth of motor vehicles has provided New Zealand and the world with a convenient, comfortable, and relatively cheap way of travelling almost anywhere, at any time. This has provided our society and economy with huge gains over the last 100 years. Yet, these gains have not been without costs, some of which we are only just starting to understand and come to grips with.

Some costs, such as the impact on the urban environment and people's health from increased vehicle use and roading, have been reasonably well understood for some time, if not always acted on. More recently, the impact on the global environment from increasing levels of greenhouse gas emissions, especially carbon dioxide (CO₂) emissions, has added a critical new element to the issue.

Increasing oil prices, and their impact on fuel prices, also has an affect on our economic and social well being, and will increasingly do so in the future. History shows that the cars we buy new today are likely to be around for 16-18 years, so it pays to think about their economic and environmental impact well into the future.

What is Council doing already?

- Well established and maintained local roading network, with generally low levels of congestion
- A bus only lane on The Esplanade, 615 bus stops, and 188 bus shelters city wide
- Extensive footpath network, provided to a high level of service
- 14 kilometres of cycleways and provision of cycle parking around the main centres
- Advancement of the Eastern Bays cycleway and walkway
- Implementation of several school travel plans, including walking school bus and cycle trains, with additional schools coming on board each year
- Community short trip reduction programme

Key Issues

Public transport

- Hutt City has good accessibility to public transport, with most people within 400m of a bus or rail stop
- Most gains to public transport use will be made through improving trip times, and through image and comfort improvements

Walking and cycling

- People are walking and cycling less, and more children are being driven to school
- Pedestrians and cyclists are the most vulnerable road users
- Walking infrastructure in the city is extensive and well maintained, although ad-hoc cases exist where improvements could be made
- Dedicated cycle infrastructure provision is low, and the proposed network has several key "choke" points that are costly to address

Vehicle transport

- NZ has the third highest transport emissions per capita in the world. Transport accounts for 18% of NZ's greenhouse gas emissions, and transport emissions are growing
- The engine size of NZ vehicles is increasing, and as a result, NZ vehicles are using more fuel (per 100 kilometres travelled)
- Using more fuel efficient vehicles offers huge potential for reducing greenhouse gas emissions. In the long run, most reductions will come from this
- Improving the fuel efficiency of the local vehicle fleet offers short and long term economic and social advantages to the city
- Vehicle fuel efficiency information provides opportunities for Council to influence residents' vehicle choices
- Scooters and motorcycles are the highest vehicle growth market
- Freight is the highest growth area for kilometres, energy and emissions

Transport Objectives and Actions

Code	Objective / Action	C	B	S
TO1	Improve active transport infrastructure			
T1	Accelerate cycle network development, address key choke points, and complete the strategic network within 10-15 years	X		X
T2	Improve cycle parking quality and quantity in the main centres and investigate and pursue the green parks concept for bikes (roadside parking for cycles in key locations)	X	X	
T3	Advance the school travel plan programme to include all schools within 10 years			X
T4	Local marketing to highlight health, economic and environmental benefits of active transport	X		X
TO2	Improve public transport supporting infrastructure			
T5	Improve walking and cycling access around rail stations in conjunction with Greater Wellington Regional Council (GWRC)	X	X	X
T6	Upgrade the CBD bus terminal as part of the CBD Master Plan upgrades	X		X
T7	Investigate possible bus priority measures with Valley Flyer and GWRC, and establish a programme of works from 2014/2015	X	X	X
T8	Advocate for more bus shelters in the city with Greater Wellington Regional Council	X		X
TO3	Influence the fuel efficiency of the Lower Hutt vehicle fleet			
T9	Investigate and consider the green parks concept for cars (parking advantages for ultra-fuel efficient vehicles)	X	X	X
T10	Promote use of motorscooters and motorcycles, by the provision of additional free parking in the main centres and transport hubs	X	X	
TO4	More efficient use of cars			
T11	Investigate and consider options for encouraging car pooling, particularly for weekday commuter trips to/from employment	X		
TO5	Improve freight transport efficiency			
T12	Pursue and support initiatives that improve freight movement efficiency, including roading projects		X	

8.3 Energy – for today and for tomorrow

The use of energy is fundamental to our economic and social wellbeing and development. Today's standard of living is underpinned by the availability of affordable energy for use at home, in commerce, and for transport. Most of this energy has been derived for use directly or to generate electricity from fossil fuels in the form of coal, petroleum, and natural gas.

However, fossil fuels are a finite resource, meaning their continued use is not able to be sustained in the long run. Their use today means future generations will not have access to these. While we should not necessarily forgo use of such fuels simply because they will be unavailable for later generations, we should ensure that we use such fuels efficiently to ensure these resources are not wasted. There is a growing body of evidence to suggest oil may soon reach peak production, if it has not already, becoming increasingly scarce thereafter.

Moreover, the use of fossil fuels imposes significant environmental costs. These costs have not generally been included in the price of fossil fuels, resulting in over-use. These costs were well known in some instances, such as the air pollution from Victorian factories, while others have only become more apparent recently. Climate change in particular has focused attention on the environmental impact of fossil fuel use, and the need for change.

What is Council doing already?

- Energy management of Council run facilities. Council is a major user of energy, using over \$3m in electricity every year. Council has an energy management and audit system to ensure cost-effective energy efficiency is maximised over the next few years.
- Healthy home programmes:
 - Council partly funds the Hutt Valley Healthy Homes Healthy People Programme which focuses on retrofitting homes and linking health and social services to low-income retrofitted home dwellers in the Hutt Valley.

- Council provides support to the Healthy Housing Project run by Energy Smart to help insulate 250 houses per annum.
- Direct funding for the insulation of pre-1978 homes.
- Discounts for building consent fees for solar hot water.

Key Issues

Energy Consumption

- Between 1995 and 2005, total consumer energy demand increased by 21%
- Reducing the demand for energy consumption is critical to reducing the need to develop new forms of energy
- New Zealand's transport fleet runs almost exclusively on petroleum products, and 27% of our electricity is produced by fossil fuels
- New Zealand's per capita greenhouse gas emissions are the 12th highest in the world
- Within cities such as Lower Hutt, almost all emissions result from transport and electricity consumption
- If we continue "business as usual", by 2030 energy related greenhouse gas emissions would rise a further 39%

Energy Conservation and Efficiency

- Historically low energy prices have created energy inefficient housing
- Addressing energy inefficiency often has greater benefit to cost ratios than generating new forms of energy
- Legislation is moving towards making energy efficiency design mandatory in new developments

Local Generation of Energy

- Local generation of power reduces the need for large scale production, and the resulting losses in transporting energy
- The Emissions Trading Scheme will make small renewable generation more economically viable

Energy Objectives and Actions

Code	Objective / Action	C	B	S
EO1	Influence significant funding and housing providers			
E1	Target and encourage local charities and trusts to make energy efficiency project funding a greater part of their funding portfolio	X	X	X
E2	Target Housing New Zealand and Urban Plus to ensure that their Lower Hutt properties are fully insulated by 2020	X		
E3	Target Housing New Zealand and Urban Plus to ensure that their Lower Hutt properties have efficient heating by 2020	X		
EO2	Reward home efficiency initiative			
E4	Investigate fast tracking and discounts for resource and building consent procedures for home energy efficiency initiatives, such as hot water heat pumps.	X	X	X
EO3	Encourage small scale local generation			
E5	Investigate fast tracking resource and building consents for small scale energy production, such as small business or home wind turbines, subject to controls concerning impacts.	X	X	X
E6	Work with local partners to develop pilot small scale local generation projects	X	X	
EO4	Reduce local energy use by high energy consumers			
E7	Identify with heavy power users and work with them to find ways in which these companies can reduce energy consumption	X	X	
EO5	Reduce transport energy needs			
E8	Pursue transport objectives TO1-TO5 and actions T1-T12	X	X	X

8.4 Water – a valued resource

Water is a life supporting resource – clean water is vital to our existence and the healthy existence of our supporting environment. Hutt City has many outstanding natural water resources including a number of rivers and a high quality artesian water source. However the health of these systems cannot be taken for granted – the community needs to be aware of how we use these systems and work to take appropriate actions to balance some of the negative effects our activities can have on these.

The urban areas in Hutt City are supplied with a reticulated water supply. Water is harvested and treated by Greater Wellington from sources in Hutt City and Upper Hutt City. It is then supplied via the bulk distribution system to the local supply networks of the four cities in the region.

In 2001 the Seaview Wastewater Treatment Plant was commissioned to treat wastewater for Hutt City and Upper Hutt City. This has markedly improved the quality of the wastewater being discharged to receiving environments. Prior to the commissioning of this plant, wastewater from the two cities received primary treatment only before being discharged.

Hutt City is built on the floodplains of rivers and streams and the hills surrounding these. The floor of the Hutt Valley has a history of well over a century of intensive human development and consequently has been significantly altered from its original form to mitigate the flooding risks this environment poses. The city has a stormwater network that is well equipped to deal with minor rainfall events, but the city still faces risks from more severe rainfall events. This poses significant risks to water quality and health as contaminated flood waters will drain into receiving streams and into the harbour. Appropriate structural measures, together with some work on controlling run off from source, will help lower this risk further.

What is Council doing already?

- Comprehensive asset management plans for upgrading and renewal of existing water, stormwater and wastewater infrastructure

- Seaview Wastewater Treatment plant and Silverstream Wastewater Detention facility
- Works to mitigate flooding risks from Black Creek Channel and Awamutu Stream
- Gracefield and Opahu Stream pumping stations installed
- Programme for removal of contaminants from Waiwhetu stream, along with improved flood protection
- Charges for large commercial users of water

Key Issues

Water Supply

- Elevated risk of water shortages generally over the drier summer months. As the region continues to grow, water conservation and security of supply will become important as the current bulk water system nears the limits of its designed capacity

Wastewater

- Trunk wastewater pipeline to the short outfall at Pencarrow is aging and pipeline failures can lead to treated effluent being discharged to the Waiwhetu stream for short periods
- Heavy rainfall can still lead to overflows of diluted wastewater at some points in the network
- High levels of infiltration have historically overloaded the wastewater network in areas surrounding the Waiwhetu stream where the water table is high

Stormwater

- “First flush” stormwater contains high levels of contaminants from roads and other impervious surfaces
- Older parts of the Stormwater network have been built to a 5-10 year Average Return Interval standard - meaning there is a 10-20% chance in any year of overloading
- Some points in the network have low elevations - requiring water to be pumped when water levels are high in the Hutt River

Water Objectives and Actions

Code	Objective / Action	C	B	S
WTO1	Reduce flooding and improve community awareness of stormwater issues.			
WT1	Upgrade Black Creek channel to increase capacity and further reduce the likelihood of flooding in the surrounding community	X	X	
WT2	Develop a stormwater strategy that takes into account holistic approaches to the management of stormwater in Hutt City and encourage public engagement with this	X	X	X
WT3	Review areas served by the stormwater network that are not currently scheduled for asset renewal or upgrade and where there are potentially elevated stormwater risks to the environment and community	X	X	
WT4	Install pumps on the Awamutu Stream outlet to reduce flood risk	X	X	
WT5	Contribute to Hutt River stormwater outlet upgrades as part of larger programme of works being undertaken by Greater Wellington Regional Council	X	X	
WTO2	Reduce pollution from wastewater			
WT6	Investigate methods for proactively detecting and repairing weak joints in the Main Trunk sewer from Seview wastewater treatment plant to Pencarrow outfall	X	X	
WT7	Require upgrade of private drains in selected catchments to reduce stormwater infiltration of the wastewater network	X		
WT8	User charges for large wastewater producers based on both quantity and quality of the wastewater requiring treatment		X	
WT9	Monitor private wastewater systems to detect problems with system leaks	X		X
WTO3	More effective usage of reticulated water supply			
WT10	Reduced unproductive water loss through leak detection programme	X	X	
WT11	Maintain per capita water consumption levels at current levels through public education on water conservation	X	X	X
WT12	Hutt City to lead by example through efficient use of water in high consumption activities (e.g. Parks & Reserves, Aquatics and Recreation)	X		
WT13	Identify and work with local businesses that are large water uses to minimise consumption		X	

8.5 Urban Form – a city that sustains us and the environment

The design of our city affects almost every aspect of our lives. It influences how we use our buildings, homes, streets, public spaces and infrastructure. Given its importance, it is vital that we build our city to help achieve sustainable outcomes, including environmental sustainability.

In the past century, the Hutt Valley has been radically changed by development. It has changed from a valley of kainga and gardens to a collection of villages and farms, to an almost continuous ribbon of urban development. We have straightened and contained the rivers and streams, cleared and heavily developed the valley floor, and terraced the hills. Our city form now resembles a long spine of development surrounded by satellite settlements in Wainuiomata, Stokes Valley and Eastbourne.

The types of building and development that occurs within the city are also important. Poor quality design and materials can diminish a building's energy efficiency. It can affect the buildings long term adaptability and usability, requiring renovations or demolition and replacement. Design quality affects how valued by society and how well used a development is and therefore if the development is an efficient and sustainable use of resources. All of which affects the quantity of material and energy needed by our buildings and urban development over time.

While these impacts are important, we should not necessarily forgo development because there is an impact. Instead, the key is to encourage urban growth that minimises environmental impacts. Quality urban development can help achieve these, and avoid some of the worst environmental problems experienced in the past.

What is Council doing already?

- Developing a strategy to guide development within the city
- Programme of Hutt CBD street upgrades as part of the CBD Master Plan
- Signatory to the New Zealand Urban Design Protocol

- Reviewing the District Plan to provide for and encourage residential development along key transport routes and around shopping centres
- Clarifying the status and processes for dealing with applications for alternative energy sources, such as microwind turbines and solar panels
- Reviewing permeable surface coverage requirements in the District Plan

Key Issues

Connections

- Hutt City's urban housing density is high for a "low" density city, and the city's linear form offers some advantages, but the use of motorised transport is likely to continue to dominate
- Current development patterns do not exploit the strengths of our current urban form.
- Some Hutt City suburbs do not have an urban form which enables walking, cycling or the provision of high frequency public transport as a practical alternative to private motor vehicle use.

Urban design

- Community concerns about safety and the perception of being unsafe when walking and cycling around key centres
- Hutt City's urban form does not always reinforce the viability, vibrancy, and safety of our key centres.

Planning and development

- Building controls tend to be more difficult to administer for "alternative" building materials and practices
- There is a gap between the technologies and practices provided for (expressly) in the District Plan and the range of building technology available on the market
- Taking a long term, more sustainable view of building developments, such as character and energy efficiency, can be more costly
- Little incentive for developers to build above minimum insulation, energy, materials requirements

Urban Form Objectives and Actions

Code	Objective / Action	C	B	S
UO1	Maximise the strengths of our current urban form			
U1	Work with our regional partners to implement the Wellington Regional Strategy	X	X	X
U2	Review planning provision and principles for the CBD and other suburban centres – to promote viable and vibrant business centres that attract local business and promote safety		X	
U3	Emphasise economic and social, as well as environmental advantages as part of the platform for encouraging employers to locate in the Hutt to provide jobs closer to housing, and minimise travel distances		X	
UO2	Create an urban form which is safe and well connected			
U4	Improve public transport supporting infrastructure, as proposed in the transport action plan	X	X	X
U5	Accelerate cycle network development, address key choke points, and complete the strategic network within 10-15 years, as proposed in the transport action plan	X	X	X
U6	Improve cycle parking quality and quantity in the main centres and investigate and pursue the green parks concept for bikes, as proposed in the transport action plan	X	X	
UO3	Ensure Council systems and policies provides for and supports environmentally sustainable choices			
U7	Clarify district plan processes and policies for sustainable technology options as technology develops	X	X	
U8	Up skill officers to enable Council to deal with environmentally friendly alternatives for buildings or developments – ensuring Council can work as an active partner in their deployment.	X	X	
U9	Investigate a rating system for the energy efficiency, water efficiency, and quality design that goes into Land Information Memorandums for all new residential developments	X	X	

8.6 Biodiversity – flourishing environments, thriving with local native plants and animals

People rely on biodiversity in their daily lives, often without realising it. Biodiversity contributes to many aspects of people's livelihoods and well being, providing products such as food and fibres, whose value are widely recognised. However, biodiversity underpins a wider range of services, many of which are currently undervalued. The bacteria and microbes that transform waste into usable products; insects that pollinate crops and flowers; coral reefs and mangroves that protect coastlines; and the biologically-rich landscapes and seascapes that provide enjoyment are only a few.

Ecosystems are being transformed, and in some cases, irreversibly degraded. A large number of species are becoming extinct and many more are threatened with extinction. In addition, many other species have only small isolated populations with limited genetic diversity – threatening their long term health as a species. It is well established that current changes to biodiversity on land and in the world's fresh and marine waters are more rapid than at any time in human history.

Although much more remains to be understood about the relationship between biodiversity and ecosystems, it is well established that if they are not managed effectively and sustainably, future options will become ever more restricted.

Lower Hutt has a significant area of land in conservation bush or regenerating bush of approx 20,000 hectares. 5,000 hectares of this land is owned by Hutt City Council. The value of this bush should not be underestimated.

What is Council doing already?

- Overarching strategy to reserves management (Reserves Strategic Directions) and reserve management plans
- Planning and development of parks and reserves places a high emphasis on protecting and enhancing existing natural ecosystems

- Pest plant and animal programmes, for example, an extensive possum control programme in partnership with GWRC
- Restoration and naturalisation projects at several key locations and support for community projects
- Extensive use of locally sourced native species in plantings to enhance habitat and amenity values
- Managing one of the largest collections of New Zealand threatened plant species – held at Percy's Scenic Reserve
- Fire mitigation of bush lands through firebreaks, a fire reservoir network, fire management, and rapid intervention

Key Issues

- Lack of data and monitoring of biodiversity
- Continued threat from existing and new pest species
- The continued impact of pollution on ecosystems, such as litter, leachate, stormwater, sedimentation, nutrification, and household dumping
- Lack of awareness of biodiversity issues within the wider community
- Climate change impacts on biodiversity, particularly coastal erosion, loss of ecosystems, and loss of species
- Protection and support of native ecosystem, especially on private land
- Impact of infill housing and development on biodiversity and mass within the city's urban footprint
- Lack of connection between existing reserve areas across the valley floor
- Low mix of native species within some reserves, particularly on the valley floor
- Impact of the proposed emissions trading scheme on the management of reserves

Biodiversity Objectives and Actions

Code	Objective / Action	C	B	S
BO1	Expand Council's fire mitigation programme			
B1	Establish fire resistant plant species along fringes of reserves and easily accessible areas, such as roadsides.	X		
BO2	Establish one or more ecological corridors across the valley			
B2	Develop and implement an urban forest strategy	X		X
B3	Identify ecological corridor route(s), including consideration of the river corridor	X		X
B4	Ensure a balance of species within the corridor(s)	X		X
BO3	Expand the Council's and community's ecological and pest knowledge and understanding			
B5	Undertake annual reviews of Council's pest plants strategy to ensure currency	X		
B6	Establish partnerships with the Department of Conservation and Victoria University of Wellington to improve knowledge of unique local species	X		
BO4	Create a premier facility at Percy Scenic Reserve			
B8	Recognise and develop Percy Scenic Reserve as a premium facility for banking rare and endangered flora	X		
B9	Develop educational information throughout the reserve and establish an education facility	X		X
BO5	Significant local natural resources are documented and protected			
B7	Scope the distribution and content of biologically significant areas in Hutt City	X	X	
B10	Review the District Plan provisions relating to Significant Natural Resources for efficiency and effectiveness	X	X	
BO6	Understand the implications and opportunities associated with the proposed emissions trading scheme			
B11	Investigate the emission trading scheme, its implications, and the biodiversity and financial opportunities it presents Council	X		
B12	Ensure any biodiversity and financial implications and opportunities of the emissions trading scheme are included in reserves management	X		

8.7 Council – an environmental sustainability leader in the community

This section covers the environmental sustainability actions that Hutt City Council undertakes as part of its own operations, and across all of the environmental focus areas.

It is important for Hutt City Council to ensure it is making progress on the environmental sustainability of its own operations if we are to establish ourselves as an environmental sustainability leader within the community. Moreover, Hutt City Council has found that improving the environmental sustainability of its operations has resulted in positive financial gains, and made Hutt City Council a more attractive place to work.

In addition, this strategy will create a need to manage and coordinate activities and actions across different areas of Council falling out of this strategy. Without this support, it is unlikely that Council will be able to make further advances towards environmental sustainability within its own operations, or within the community.

What is Council doing already?

- Dedicated environmental development team, managing corporate (internal) programmes and community wide programmes
- Undertaking an environmental accreditation system (Enviro-Mark), completing by 2010
- Monitoring energy consumption at all Council facilities and actively looking at ways to make these facilities more energy efficient
- Developing a workplace travel plan to ensure Council supports more environmentally sustainable transport options for staff



Hutt City Council operates a fleet of Honda Jazz's - which use only 55% of the fuel an average vehicle does

- Council's vehicle fleet includes a large number of highly fuel efficient vehicles
- Waste minimisation activities, such as recycling at Council facilities and having all printers default to double-sided printing
- Using permeable surfaces and rain gardens for many new developments

Key Issues

- Additional resources are needed to manage and coordinate the implementation of this strategy
- Additional resources will be needed to undertake many of the initiatives within this strategy – estimated to be \$203,000 initially, building to \$927,000 in 2013/2014
- No overarching environmental sustainability brand within which to pursue environmental sustainability initiatives, promote current activities, and raise environmental sustainability awareness within Hutt City
- Council and Council's contractors generate a significant amount of biomass waste which is presently disposed of in landfill
- Significant quantities of fuel and chemicals are required for standard parks & gardens management practices
- Council has poor information on energy use in some facilities
- Additional energy savings are possible from Council buildings, stricter fuel economy requirements for Council's vehicle fleet, and ensuring energy efficiency is a key component of ongoing asset and facility replacement
- Council travel survey indicates low use of environmentally friendly transport use for staff travel to and from work
- Not all Council procurement procedures specify minimum environment requirements or supplier credentials
- Council does not have a comprehensive approach to the environmental management of water used for Council pools

Council Objectives and Actions

Code	Objective / Action
CO1	Advance the strategy
C1	Employ environmental sustainability officers to manage and coordinate the implementation of this strategy
CO2	Raise profile of Council's environmental sustainability initiatives
C2	Develop an overarching environmental sustainability brand to pursue environmental sustainability initiatives and raise community awareness
C3	Investigate and pursue in conjunction with economic development and environmental expo for the city
CO3	Target key energy savings
C4	Implement energy saving measures at Huia Pool, Stokes Valley Pool and at the War Memorial Library
C5	Install additional energy meters to better monitor energy use and target energy saving initiatives, and investigate further energy saving opportunities by carrying out energy audits
C6	Ensure new developments implement energy conservation measures at the development stage (for example, redevelopment of McKenzie Pool)
CO4	Expand waste minimisation options
C7	Investigate and pursue initiatives to use options for biomass waste from parks, gardens and reserves
C8	Introduce monitoring of waste generation at all facilities
C9	Expand on current waste minimisation activities, for example, use of kitchen waste
CO5	Minimise fuel use and costs
C10	Incorporate systems to encourage staff to use sustainable transport for Council related business
C11	Introduce minimum fuel economy standards for all Council vehicle acquisitions
CO6	Support environmentally friendly products and services
C12	Update Council's purchasing policy to include minimum environmental requirements, and resource a single authority within Council to manage
CO5	Ensure resources are managed to minimise environmental impact
C13	Investigate and pursue alternative methods for parks and garden management

9 Key Performance Indicators

When assessing whether Council and our community have been successful in improving the environmental sustainability of Hutt City, performance against key indicators will be monitored. Each area, for example, transport, has a set of indicators specific to that area. Targets for these indicators have been set for 2013 and 2018.

2013 is four years into the life of the strategy, and has been adopted so that a review of performance can be made before the development of the next Environmental Sustainability Strategy in 2014/2015. Targets for

2018 have been established as “stretch” targets for the longer term.

It is important to note that the full range of indicators assume that all of the actions in the strategy are undertaken. As noted earlier, several actions will need further investigation and assessment before the feasibility and desirability of the action can be determined, and consequently, whether or not it will be pursued. Consequently, it is possible that performance against some indicators will not be met for this reason.

Waste

Indicator	Base	Target 2013	Target 2018
Waste to landfill per \$ GDP	34 tonnes per million GDP (2007)	33 tonnes per million GDP	32 tonnes per million GDP
Volume of recycling per capita	63.1 kg per capita (2007)	80 kg per capita	105 kg per capita
Greenwaste diverted from landfill ³	0 tonnes	5,000 tonnes p.a.	10,000 tonnes p.a.
Other waste diverted from landfill ³	500 tonnes p.a. (estimated 2007)	2,000 tonnes p.a.	5,000 tonnes p.a.

Transport

Indicator	Base	Target 2013	Target 2018
Proportion of newly registered light vehicles in Hutt City with fuel economy of 6L per 100 kilometres or better	3.7% (2005-2007 estimated from national data)	10%	20%
Fuel use per capita per annum	986 litres per capita (2005/2006)	908 litres per capita	852 litres per capita
Proportion of driver vehicle trips made to work	54.5%(2006)	50%	45%

³ These indicators apply only if an assessment of the social, financial, and environmental costs and benefits supports establishing such operations. These assessments will be undertaken in 2010/2011

Public transport composite indicator	To be established	10% improvement in index over 2008	15% improvement in index over 2008
Number of kilometres of cycleway	14 (2008)	50	80

Energy

Indicator	Base	Target 2013	Target 2018
Consents for solar hotwater heating	5 (2007 estimated)	20	30
Consents for small scale local electricity production per annum	5 (2007 estimated)	20	30
Proportion of Hutt city housing with floor and ceiling insulation	To be established	To be developed	To be developed
Proportion of Hutt City housing with heat pumps	To be established	To be developed	To be developed

Water

Indicator	Base	Target 2013	Target 2018
Hutt river water quality rating ⁴	MCI fair (2007)	Good	Good
	WQI good (2007)	Good	Good
Wainuiomata river water quality rating	MCI fair (2007)	Good	Good
	WQI fair (2007)	Good	Good
Residential water consumption per capita	338 litres per day (2006/2007)	340 litres per day	340 litres per day

Urban Form

Indicator	Base	Target 2013	Target 2018
Impervious surface coverage	To be established	To be developed	To be developed
City urban footprint	To be established	To be developed	To be developed
Proportion of dwellings within 5 min walk of commercial centres or	To be established	To be developed	To be developed

⁴ Macroinvertebrate community index (MCI) and water quality index (WQI).

main arterials			
Composite urban form index	To be established	To be developed	To be developed

Biodiversity

Indicator	Base	Target 2013	Target 2018
Council owned and administered land biomass	To be established	To be developed	To be developed
Urban (built up area) biomass	To be established	To be developed	To be developed
District biomass	To be established	To be developed	To be developed
Proportion of native forest to total biomass (district wide)	To be established	To be developed	To be developed

Council

Indicator	Base	Target 2013	Target 2018
Environmental Sustainability Strategy actions completed	n/a	70%	100%
Council environmental accreditation to ISO 14001	n/a	Achieved	Maintained
Energy consumption (electricity and gas)	22.8 million kWh (2007)	20.5 million kWh	19.4 million kWh
Kilometres travelled by car (Council business)	1,934 km per annum per FTE	1,740 km per annum per FTE	1,644 km per annum per FTE
Proportion of staff travelling to to/from work in sole occupancy car	58%	40%	30%

10 Action Plan Timelines and Costs

The timeline below provides an indication of when actions will be undertaken and the associated costs. Further detailed cost estimates will need to be undertaken as part of the development and approval of each action. Potential sources of external funding are noted in the comments column.

The timing of actions will need to be flexible to accommodate changes in priorities, take advantage of opportunities that present themselves, or reflect changes to Council's financial situation or management.

Waste

Action	09/10	10/11	11/12	12/13	13/14	Comment
W1	\$0	\$20,000	\$150,000	\$150,000	\$200,000	Funding potential from waste minimisation bill – which could advance programme
W2	\$0	\$0	\$0	\$0	\$15,000	Funding potential from waste minimisation bill – which could advance programme
W3	\$0	\$0	\$0	\$15,000	\$15,000	Funding potential from waste minimisation bill – which could advance programme
W4	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	Funding potential from waste minimisation bill
W5	\$0	\$0	\$0	\$25,000	\$25,000	Funding potentially available from central government for first three years
W6	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
W7	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	Funding potential from waste minimisation bill
W8	\$10,000	\$10,000	\$5,000	\$5,000	\$5,000	Funding potential from waste minimisation bill
W9	\$1,000	\$1,000	\$0	\$0	\$0	Funding potential from waste minimisation bill

Transport

Action	09/10	10/11	11/12	12/13	13/14	Comment
T1	Existing budget / baseline	Existing budget / baseline	\$350,000	\$180,000	\$180,000	Capital spend, subsidised at 57% by the New Zealand Transport Agency. Significant increase is because of the planned timing the Wainuiomata hill cycle/footpath
T2	\$5,000	\$0	\$0	\$0	\$0	
T3	\$0	\$10,000	\$10,000	\$20,000	\$30,000	Subsidised at 75% by the New Zealand Transport Agency
T4	n/a	n/a	n/a	n/a	n/a	Refer to Council timeline C2
T5	Existing budget / baseline	\$0	\$0	\$0	\$0	
T6	\$40,000	\$0	\$50,000	\$0	\$0	Half share of cost of study in 09/10 and capital spend in 11/12 (with GWRC). Costs subsidised at 57% by

						the New Zealand transport Agency. Potential for some work and funding to be undertaken as part of the CBD master plan programme
T7	\$0	\$20,000	\$0	\$0	\$0	Half share of cost of study in 10/11 with GWRC. Cost subsidised at 57% by the New Zealand transport Agency.
T8	\$0	\$0	\$0	\$0	\$0	
T9	\$0	\$0	\$0	\$0	\$20,000	
T10	Existing budget / baseline	\$0	\$0	Existing budget / baseline	\$0	
T11	\$0	\$0		\$5,000	\$0	
T12	\$0	\$0	\$0	\$0	\$0	Assess costs when opportunities present themselves

Energy

Action	09/10	10/11	11/12	12/13	13/14	Comment
E1	\$0	\$0	\$0	\$0	\$0	
E2	\$0	\$0	\$0	\$0	\$10000	
E3	\$0	\$0	\$0	\$0	\$10000	
E4	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
E5	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	
E6	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	
E7	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	
E8	n/a	n/a	n/a	n/a	n/a	Refer to transport timeline

Water

Action	09/10	10/11	11/12	12/13	13/14	Comment
WT1	0	Existing budget / baseline	Existing budget / baseline	0	0	
WT2	Existing budget / baseline	0	0	0	0	Additional expenditure could be recommended if significant stormwater gaps are identified
WT3	0	0	Existing budget / baseline	0	0	Potential requirement for additional capital expenditure if areas of unacceptable risks identified
WT4	Existing budget / baseline	0	0	0	0	
WT5	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	0	Existing budget / baseline	
WT6	0	0	0	Existing budget / baseline	0	
WT7	0	0	0	0	0	Additional expenditure could be recommended if Council targets

						additional areas
WT8	0	0	0	0	0	
WT9	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
WT10	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Annual operating expenditure of approximately \$300,000 on pressure testing, CCTV etc.
WT11	0	0	0	0	0	Additional expenditure could be incurred if Council develops a significant new water conservation programme.
WT12	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
WT13	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	

Urban Form

Action	09/10	10/11	11/12	12/13	13/14	Comment
U1	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
U2	Existing budget / baseline	\$0	\$0	\$0	\$0	
U3	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
U4	n/a	n/a	n/a	n/a	n/a	Refer to transport timeline
U5	n/a	n/a	n/a	n/a	n/a	Refer to transport timeline
U6	n/a	n/a	n/a	n/a	n/a	Refer to transport timeline
U7	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
U8	\$10,000	\$12,000	\$18,000	\$25,000	\$25,000	
U9	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	

Biodiversity

Action	09/10	10/11	11/12	12/13	13/14	Comment
B1	Existing budget / baseline	\$20,000	\$20,000	\$20,000	\$20,000	
B2	Existing budget / baseline	\$0	\$0	\$0	\$0	
B3	\$0	Existing budget / baseline	\$0	\$0	\$0	
B4	\$0	\$10,000	\$10,000	\$10,000	\$10,000	
B5	Existing	Existing	Existing	Existing	Existing	

	budget / baseline	budget / baseline	budget / baseline	budget / baseline	budget / baseline	
B6	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
B7	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
B8	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
B9	\$0	\$10,000	\$0	\$100,000	\$140,000	12/13 and 13/14 years are capital spend. Strong potential for partial funding from third parties.
B10	Existing budget / baseline	Existing budget / baseline	\$0	\$0	\$0	
B11	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
B12	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	

Council

Action	09/10	10/11	11/12	12/13	13/14	Comment
C1	\$60,000	\$120,000	\$125,000	\$130,000	\$135,000	
C2	\$25,000	\$25,000	\$25,000	\$35,000	\$35,000	
C3	\$0	\$0	\$0	\$75,000	\$0	
C4	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	To be funded from energy cost savings
C5	\$5,000	\$0	\$0	\$0	\$0	
C6	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
C7	\$0	\$0	\$0	\$10,000	\$10,000	
C8	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
C9	\$5,000	\$5,000	\$0	\$0	\$0	
C10	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
C11	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	This should provide some savings to Council
C12	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	
C13	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Existing budget / baseline	Also to be funded from energy and chemical use cost savings



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